Panel

eKnowledge and eLearning in the Digital Era:
Needs and Resources

Thursday, February 25th, 2011

Panelists: Peter Bellström, Karlstad University, Sweden

Dumitru Dan Burdescu, University of Craiova, Romania

Pierre Hadaya, University of Quebec in Montreal, Canada

Göran Karlsson, KTH, Sweden

Dirk Malzahn, OrgaTech GmbH, Germany

Stephen White, University of Huddersfield, UK

Moderator: Bernd Krämer, FernUniversität in Hagen, Germany

Summary: After introducing the distinguished panelists, the moderator presented definitions of the concepts "eLearning" and "eKnowledge" and contrasted controversial positions from literature about the relationship between both. He concluded with a list of possible impact factors that might change the nature and perception of eLearning and eKnowledge in the future including: e-Publishing, open access, open learning, open educational resources, open content; the integration of 3G, social networking, video, VoIP, and new mobile devices; the convergence of on-demand-learning, social learning, informal learning, knowledge management; a growing sharing culture and raise of peer-production, open innovation the expansion of the web of information into a web of computational services and further into a web of people based on social software.

Dirk Malzahn then reported on his experience in mining and analyzing companies' databases for hidden knowledge. His concern was that companies often rely on information in the decision-making processes whose meaning is not well understood. He emphasized the need for checking the consistency and correctness of data maintained and build trust in its meaningfulness.

Pierre Hadaya also contributed to the discussion about information integration and sharing based on practice-based research in the field of supply chain collaboration (SCC). He also put SCC in the context of related context such as virtual enterprises, collaborative development and enterprise architecture.

Dumitru Burdescu's position statement addressed the question how eKnoledge management might improve eLearning. Viewing content, pedagogy and learning (management) tools as key components of eLearning, he presented three challenges and provided responses based on his university's own R&D activities. He concluded by going into the issue of acceptance and current inhibitors.

Göran Karlsson considered two issues: Net based support with peer counseling in campus courses and the need for regular benchmarking of elearning and net based learning. Göran provided possible answers to theses issues by referring to different components of his university's eLearning strategy, which includes a learning management system (LMS), a content repository, a social network interfaced with the LMS, and course authoring tools. In his conclusion he emphasized the need to raise awareness, introduce regular benchmarking, impose quality assurance procedures, and aim at the accreditation of eLearning at a global or, at least, European level.

Peter Bellström compared eKnowledge with schema integration an understood eKnowledge as a set of tools to automate the process of integrating a company's disparate information systems and databases. By the term "eKnowledge" he referred to a range of concept classification systems including controlled vocabularies, taxonomies, thesauri, and ontologies. Challengies he sees in this context are: the customization of eKnowledge sources to accommodate the intricacies of individual integration projects, develop unexplored areas in which eKnowledge can be applied, and – most importantly – thereby take stakeholder interests into account.

Stephen White focused his position on social networks starting from the fact that learning has always been a social activity. He listed a range of educational goals for which social networks can be usefully employed, presented examples of use and concluded with some challenges culminating in the recommendation that social networks should become a subject of school education, thus reflecting current practices of today's living context.

The discussion with the audience largely narrowed down to a debate about social networks, whether personal and education objectives should be supported by the same or different networks, whether a widely used social network like Facebook should be used in learning scenarios or rather a home-grown network that enforce a university's etiquette, regulations and policies. An interesting statement from a participant with a legal background raised the issue that commercial providers like Facebook may decide to raise fees in the future or change their policies. The audience largely shared the position that the inner working and targeted engineering of social networks are still white areas on the research agenda.

FernUniversität in Hagen

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February 24, 2011

Bernd Krämer

FernUniversität in Hagen, Germany

Panelists

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Stephen White, University of Huddersfield, UK

eLearning

- Technology-enhanced learning

Neanderthal Institute of Technology

© Wolfgang Halang, FernUniversität in Hagen, Germany

eLearning

- Technology-enhanced learning
- Home Alone

Kid to parents:
"You don't have to worry about my future any more- I just downloaded an entire college education."

eLearning

- Technology-enhanced learning
- Home Alone
- Learner Educational Processes that are supported by ICT and use digital media (information, activities, processes, technology, … human interaction)
- Development of knowledge & skills for building competences

http://www.clker.com/clipart-15319.html
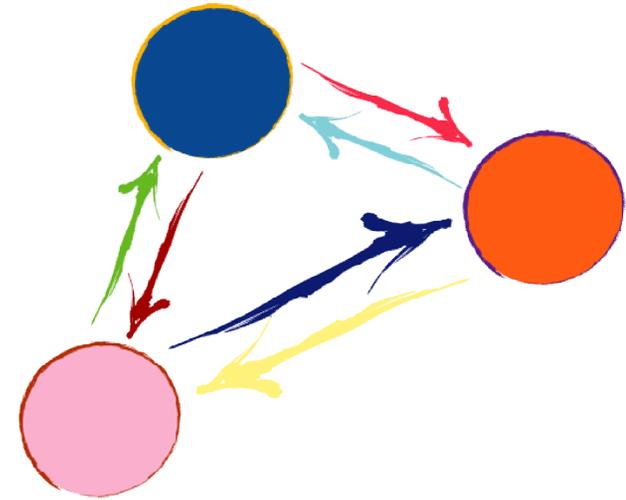
eKnowledge

- Information that is presented within a particular context, yielding insight on application in that context (setting & conditions), by members of a community. (Source: Transforming e-Knowledge)

- Digital representations of content and context become e-knowledge through the dynamics of human engagement with them. (Transforming e-Knowledge)

- What about:
  - e-Knowledge Management?
  - Collective Intelligence?

eLearning & eKnowledge

- Hermann Maurer, ED-Media 2001: E-Learning Has to be Seen as Part of General Knowledge Management
  - Key aspects of KM essential for making eL successful
  - Good KM needs a plethora of communicative mechanisms
  - Assured information delivery

- Verna Allee: eLearning is Not Knowledge Management
  - eL companies offer training management
  - Not just about ROI but more about building intellectual capital
  - Learning communities

- Macro Pedroni: e-Learning & Knowledge Management: Context Structuration
 - Functions for reconstructing Knowledge Context
  - Concept mapping

Possible Impact Factors

- e-Publishing, open access, open learning, open educational resources, open content

- convergence of 3G, Social Networking, Video, VoIP, and new Mobile Devices

- On-demand-learning, social learning, informal learning, knowledge management

- Growing sharing culture

- Peer-production

- Information systems no longer confined to the limits of a single organization but are moved into the cloud

- Open innovation

- Web evolution

Evolution of the Web of Information
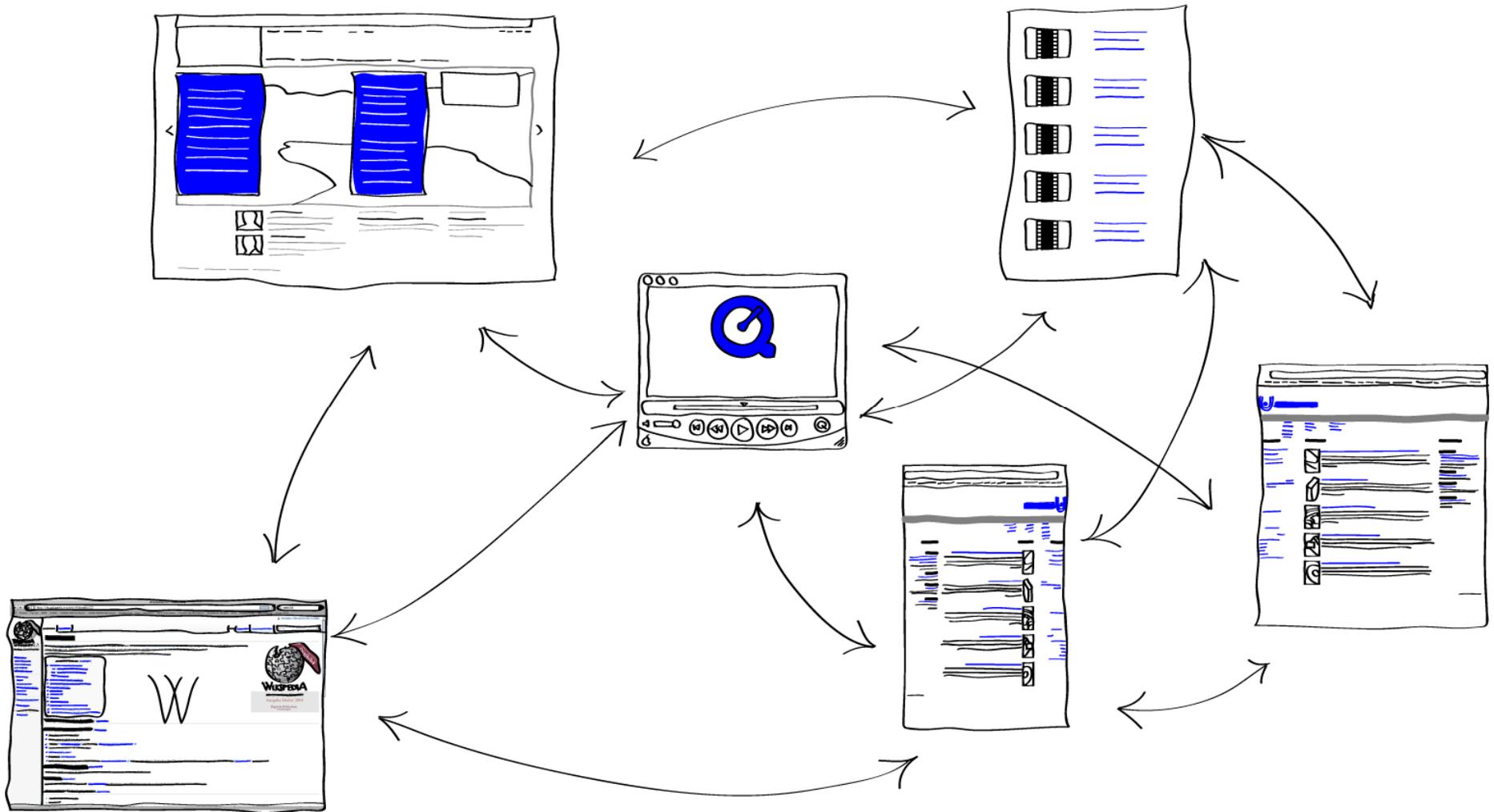
... over a Web of Services
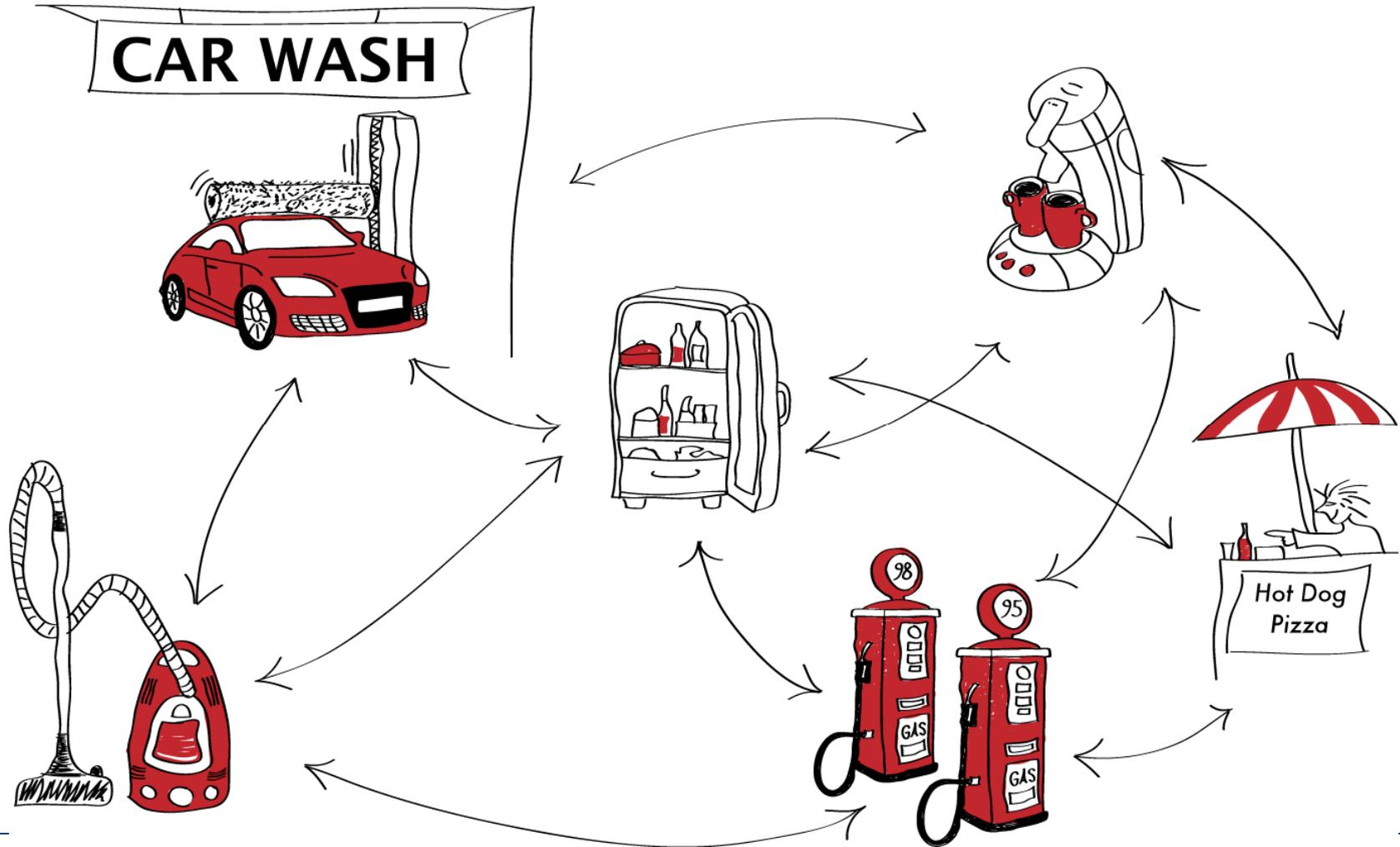
... into a Web of People
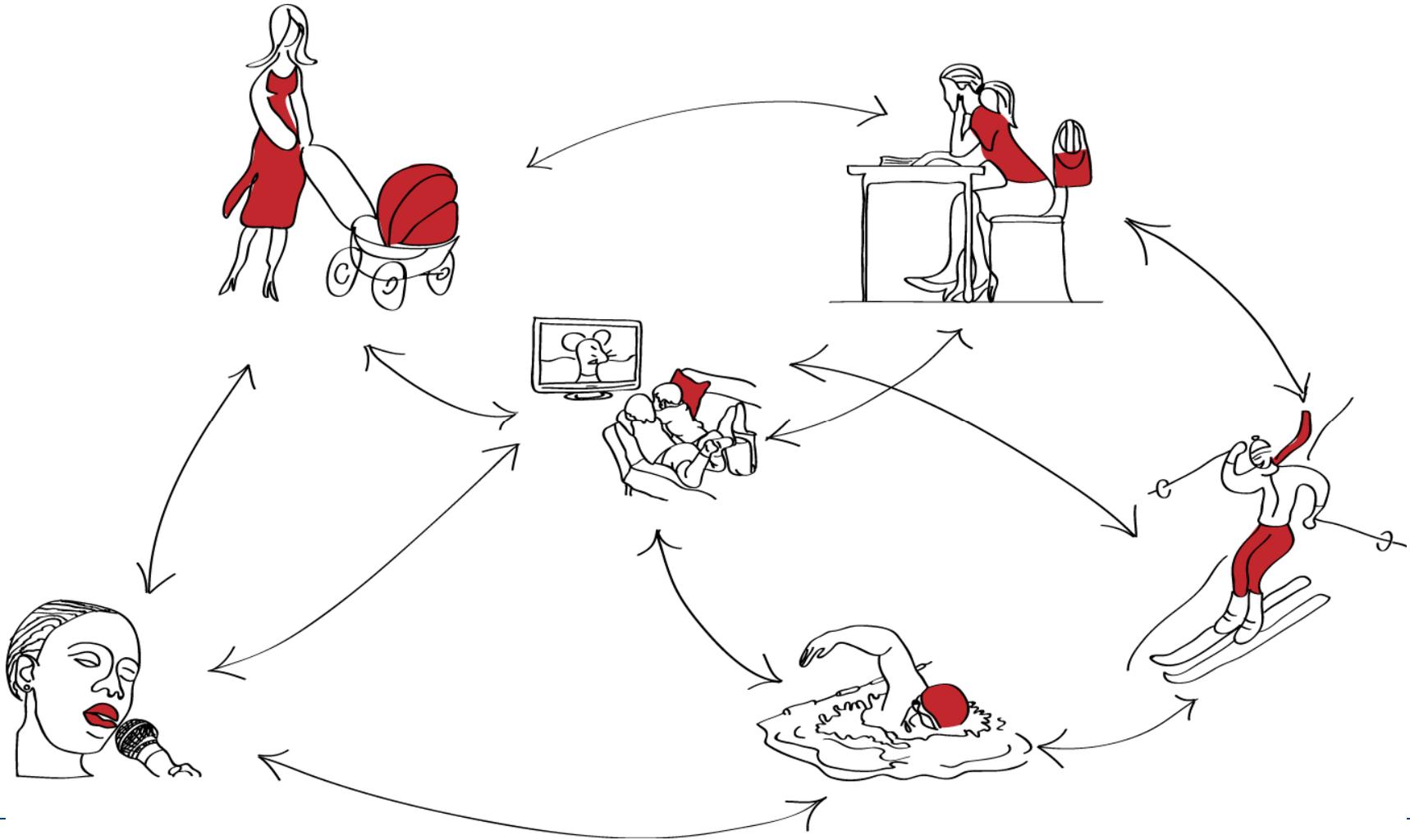
All in all it's just another BREAK in the wall. Pink Floyd*

*Inspired by Peter Baumgartner: http://www.peter.baumgartner.name/material/slides/web2-0_bw-hamburg.pdf

Supply Chain Collaboration (SCC):
contributions, limits and
future research directions

Pierre Hadaya

UQÀM ESG

Definition

SCC is two or more autonomous firms that form long-term relationships and work closely to plan and execute supply chain operations toward common goals, thereby achieving more benefits than acting independently

(Simatupang and Sridharan 2005)

UQÀM ESG

Contributions

- SCC can improve performance (Burgess et al., 2006)

- Various SC methods analyzed (VMI, CPFR) (Vanpoucke et al., 2009)

- Diversified contributions in both SCM (Simatupang and Sridharan, 2005) and IS litterature (Wang et al, 2006)

Limits

- Collaboration = integration ?
- Mostly practiced-based research (ex. information sharing)
- Primarily in dyadic contexts (Foslund and Jonsson, 2009)
- Empirical data generally gathered through case studies (Danese, 2007)

Future research directions

- Investigation of the various elements of SCC (ex. SCP, EM, PM)
- (Re)-conceptualization and operationalization of SCC
- More theory-based research (ex. RV, path dependency)
- SCC co-creation of value (Hopkins, 2010; Kohli and Grover, 2008)
- Dyadic and network contexts
- SCC vs virtual enterprise
- SCC vs collaborative product development (CPD)
- SCC and enterprise architeccture (EA)
- SCC and sustainable development (SD)

UQÀM ESG

Supply Chain Collaboration (SCC):
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Pierre Hadaya

UQÀM ESG

Panel
eKnowledge and eLearning in Digital Era: Needs and Resources

or

is Kylie Minogue just a variant of Celine Dion?

Dirk Malzahn

OrgaTech GmbH, Germany

OrgaTech

Status

An industrial view and history


Expert Knowledge
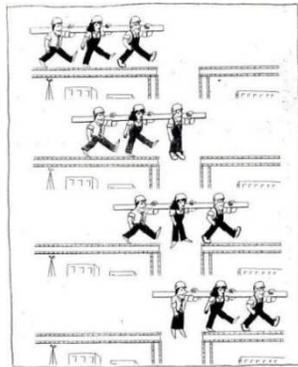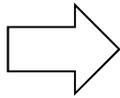
Team Knowledge
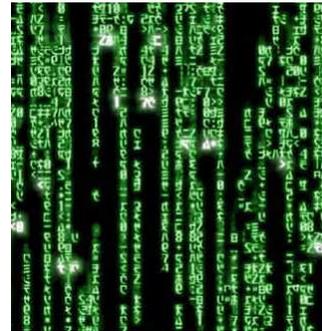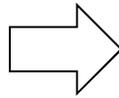
Show me your data!
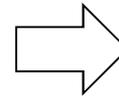
Do we know what we know?

Syntax

Semantics

Scalability

OrgaTech
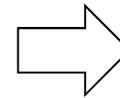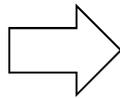
Status

What do we need to know to really understand what we want to know and what we really need?

What we found in the data of a multinational retail company

is a variant of

Product category

Packaging

OrgaTech
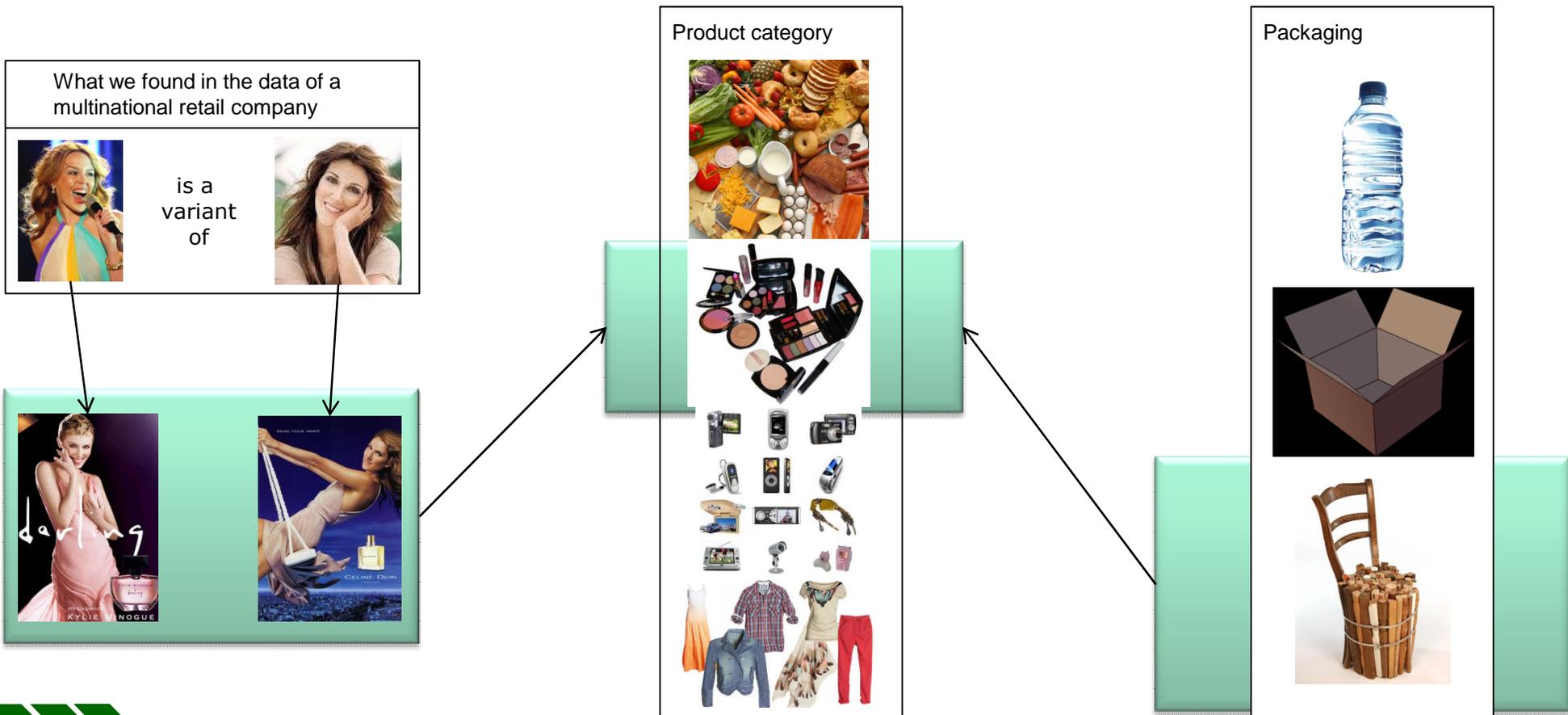
Vision

Consistency, Correctness and
Trust on semantical level

Harmony and understanding
Sympathy and trust abounding
No more falsehoods or derisions
Golden living dreams of visions
Mystic crystal revelation
And the mind's true liberation
"Age of Aquarius", 2nd verse, musical Hair

Automize non-value-adding
activities

What is the price
of this scaffolding?

Is there
something
missing?

OrgaTech
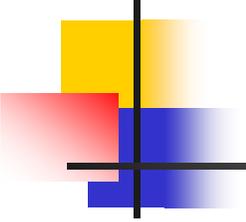
Knowledge Management in e-Learning

How knowledge management may improve e-Learning?

Dumitru Dan Burdescu

Software Engineering Department
University of Craiova
Romania
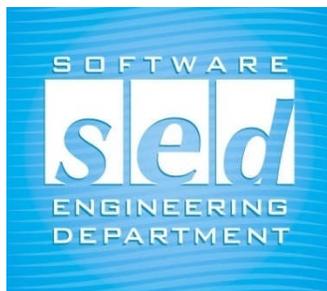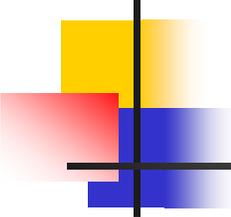
E-Learning Main Components

- CONTENT – having proper information in e-Learning format

- PEDAGOGY – having a proper structure and information flow

- LMS – deployment and quality tools
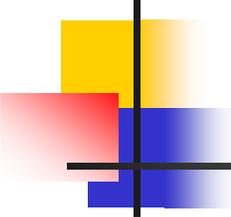
LMS – Learning Management Sytems

Tesys e-Learning platform

– as professor/secretary administration:

http://apps.software.ucv.ro/tesys/servlet/tesys?admin=1

- as learner at:

http://apps.software.ucv.ro/tesys/servlet/tesys
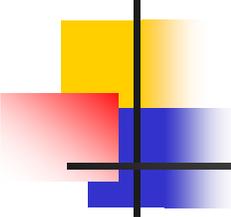
Core Challenges

1. REPLACE classical learning

2. Offer SAME/HIGHER quality

3. Integration = **LMS+DATA+ALGORITHMS+TECHNOLGIES**
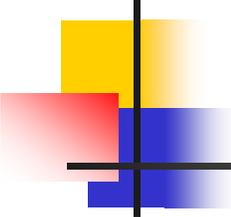
Solution to challenge 1

REPLACE classical learning

- High quality content -> STRUCTURE
- High pedagogical quality
- High quality data deployment/management tool -> LMS
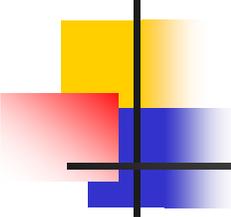
Solution to challenge 2

Offer SAME/HIGHER quality as classical learning

- Monitoring activity -> DATA
- Building optimal learning paths
- Assign quality metrics   -> ALGORITHMS
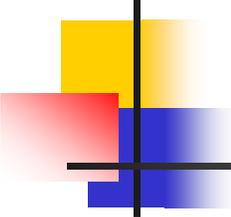
Solution to challenge 3

INTEGRATION

  +CONTENT   - **structure/pedagogy**

  +LMS   - **data deployment/management**

  +DATA   - **performed activities**

  +ALGORITHMS – **machine learning/data mining**

  +TECHNOLGIES – **web services**
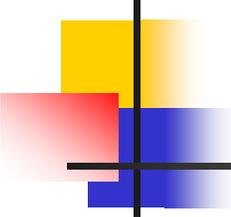
Finally, the main issue is:

- Acceptance by universities/companies
  - At least within a blending environment
  - Predict/estimate the aspects that influence acceptance/rejection of universities/companies
  - Define/establish infrastructure
  - Define/establish standard quality assurance policies
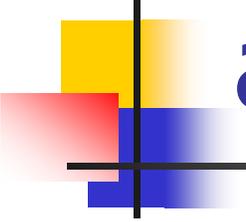
What slows the process of acceptance?

- Poor pedagogy
- Lack of specialists
- Lack of business planning
- Institutional inertia
- Poor standardization – too many technologies that are constantly changing
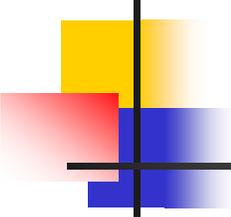
Reasons to believe e-L will succeed

- Knowledge based society
- Employees need to be lifelong learners
- Knowledge-base is constantly changing
- New and more efficient teaching methods : from information transmission to knowledge construction

eKnowledge and eLearning in the Digital Era: Needs and Resources

Peter Bellström, Karlstad University, Sweden

eKnowledge From My Point of View: A Knowledge Resource in Schema Integration

- ▶ Companies are merging and collaborating

- ▶ New information systems and databases are developed

- ▶ The integration process is complex and time consuming

- ▶ We therefore need **eKnowledge** (tools) to automate parts of the process

- ▶ In other words, we need knowledge resources, such as taxonomies, ontology and/or lexicons → **eKnowledge**

Challenges

▸ The **eKnowledge** research field has now for some time been strong and stable.

▸ However, one of the big challenges within the integration research field is to fine tune and put together **eKnowledge** resources to produce a good and reasonable integration process.

▸ Another challenge is to find new application areas for **eKnowledge** and adjust existing **eKnowledge** sources to these.

▸ Finally, in the integration process it is important that the end users are not forgotten. It is the end users that verify and/or decline the integrated schema (the product).

  ▸ How does this influence the **eKnowledge** research field?

PANEL on Knowledge and Learning Society [eKNOW, eLmL

eKnowledge and eLearning in Digital Era:
Needs and Resources

Göran Karlsson

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Net based support with peer counseling in campus courses giving a blended learning paradigm

The need for regular benchmarking of elearning/net based learning

Net based support with peer counseling in campus courses giving a blended learning paradigm

Status (KTH)

- LCMS (PingPong)
- Wiki course development
- Youtube films
- Film and file repository
- KTH Social (Facebook similarity) – PingPong coupled
- Bridging courses (5000 simultaneous students); semi-automatic examination
- 30 years delay for management and faculty absorption

Net based support with peer counseling in campus courses giving a blended learning paradigm

Vision

- Administration and <u>faculty</u> awareness (yes, now after 30 years)
- KTH Social and LCMS peer counseling
- Net based elearning continuous support; semi-automatic examination
- OER, Cloud use (mash up), Consortia development – Peer production
- Regular benchmarking (Pick&Mix, Matic Media Ltd.)
- Quality Assurance (*e.g.* ENQA)
- European/Global accreditation of elearning

Social Networks for Learning

The Challenges for the Tutor

Stephen White
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"Understanding social networks has become a must for information-fluent students, staff, and faculty. Issues of trust, risk, copyright, liability, and privacy may be as important as understanding how the Web works…."
Lorenzo, G., Oblinger, D. and Dzluban, C. (2006)
http://www.educause.edu/EDUCAUSE+Quarterly/EDUCAUSEQuarterlyMagazineVolum/HowChoice CoCreationandCultureA/157434

- Social networking is a pretty broad term in the technology community – it can encompass things like Facebook, Flickr, and Twitter.

- When has learning not been social?

- Within the family setting, socialisation, is a large part of most children's learning experiences, where they first learn about roles, relationships and responsibilities.

- We also learn through social groups and through work, by experience and social interaction.

- Before the web became a communication tool, we "hung out on street corners."

Why Use Social Networks for Learning?

- Why do you rob a bank? Because that's where the money is…..

- Minocha (2009) found that educational goals for employing social networking included:

Initiating new ways of learning	Giving control to students
Providing transferable skills	Supporting peer-to-peer learning
Enhancing reflective learning	Creating a digital identity
Fostering social engagement	Retention
Socialisation	Collaborative working
Student engagement	Sense of control and ownership
Problem-solving and sense of achievement	Visibility of artifacts created
Integration of multimedia	Adding novelty and excitement
Overcoming isolation and geographic differences	Students' positive perceptions of the educator

Minocha, S. (2009) A Study on the Effective Use of Social Software by Further and Higher Education in the UK to Support Student Learning and Engagement

Examples of Use

- Announcements
  - Administrative – snow closure
  - Facilitative – read chapter…

- Field Trips

- Social Sciences – role play

- Live tweeting

- Following experts

The Challenges

- To use or not to use? Obvious, but the biggest challenge of all…

- Coping with change - student-centric learning i/c access to experts

- Focus on tutor's abilities and experience - online identity / presence

- Separate learning social networks?
  - Creepy treehouse effect*
  - Blurring the boundaries
  - 'Friends'

- Seems to be a disconnect from 'real world' – need education on etiquette - for both staff and students – who can deliver this?

- Policies, restrictions – changes dynamic? Can lead to inequality if some children are prevented from access by parents.

- Using social network content for Admissions / disciplinary / employment decisions – is this acceptable?

* http://flexknowlogy.learningfield.org/2008/04/09/defining-creepy-tree-house/

- "Schools should reflect the world we live in today. And we live in a social world. We need to teach students how to be effective collaborators in that world, how to interact with people around them, how to be engaged, informed twenty-first-century citizens. We need to teach kids the powerful ways networking can change the way they look at education, not just their social lives. We don't talk enough about the incredible power of social-networking technology to be used for academic benefit. Let's change the terms. Let's not call it social networking. Let's call it academic networking"

(Smith, F. (2007) How to use social networking technology for learning)

The End

Thank You