Second-Generation Knowledge Management

Mark W. McElroy
Macroinnovation Associates, LLC
Knowledge Management Consortium Int’l

KM World
October 30, 2001
Our Agenda

- What is KM? — An Industry Standard Reference Model
- Strategy Implications
- 10 Key Principles of Second-Generation KM
Let’s begin by acknowledging the role and influence of knowledge in organizations...
Knowledge and the Business Process Environment

Business Processes Reflect Mutually-Held Knowledge In Practice

Organizational Knowledge Is Embodied In Agents and Artifacts

Continuous Exposure to Events in the (Business) Environment To Which Organizations React and Adapt By Drawing on Their Mutually-Held Knowledge

Business Process Environment

- Business Process Behaviors of Interacting Agents (Knowledge Use)
- Internal/External Events
- Organizational Knowledge ‘Containers’
  - Artifacts & Codifications
  - Individuals and Teams
But What Happens When Problems Arise?

Feedback (Including the Detection of Problems)

Individuals and Groups Learn

Learnings and Innovations Are Then Adopted

Business Process Environment

- Business Process Behaviors of Interacting Agents (Knowledge Use)
- Organizational Knowledge ‘Containers’
  - Artifacts & Codifications
  - Individuals and Teams

Internal/External Events

Individuals and Groups Learn

Learnings and Innovations Are Then Adopted
10 Key Principles of Second-Generation KM

1. Learning and innovation is a social process, not an administrative one (strong affinity with organizational learning theory)

2. Organizational learning and innovation is triggered by the detection of problems
Industry-Standard Reference Model For KM: The ‘KLC’

Knowledge Production

Individual And Group Learning

Knowledge Claims

Knowledge Validation

Organizational Knowledge

Knowledge Integration (Diffusion)

- Sharing
- Broadcasting
- Searching
- Teaching

Business Process Environment

Internal/External Events

Feedback (Including the Detection of Problems)

Business Process Behaviors of Interacting Agents (Knowledge Use)

Organizational Knowledge ‘Containers’
- Artifacts & Codifications
- Individuals and Teams

*Source: Knowledge Management Consortium Int’l (www.kmci.org)
Not How ‘First-Generation’ KM Has Seen It

Business Process Environment

- Business Process Behaviors of Interacting Agents (Knowledge Use)
- Internal/External Events
- Organizational Knowledge ‘Containers’
  - Artifacts & Codifications
  - Individuals and Teams

Distributed Organizational Knowledge

Begins with the convenient assumption that valuable organizational knowledge simply exists

‘All we need to do is capture, codify, and share it’
1. Learning and innovation is a social process, not an administrative one (strong affinity with organizational learning theory)

2. Organizational learning and innovation is triggered by the detection of problems

3. Valuable organizational knowledge does not simply exist – people in organizations create it

4. The social pattern of organizational learning and innovation is largely self-organizing, and has regularity to it – a form of capital (SIC)
Knowledge Processing and Knowledge Management Versus Knowledge Processing

**Knowledge processing** is what organizations do to create and operationalize (use) knowledge.

**Knowledge management** is a management discipline that focuses on enhancing knowledge processing.
1. Learning and innovation is a social process, not an administrative one (strong affinity with organizational learning theory)

2. Organizational learning and innovation is triggered by the detection of problems

3. Valuable organizational knowledge does not simply exist – people in organizations create it

4. The social pattern of organizational learning and innovation is largely self-organizing, and has regularity to it – a form of capital (SIC)

5. KM is a management discipline that focuses on enhancing knowledge production, integration, and use in organizations
Some KM strategies focus on knowledge making (demand-side) while others focus on knowledge sharing and use (supply-side).
Second-Generation KM

First-generation KM strategies were supply-side only — second-generation KM focuses on the whole knowledge life cycle.
The IT Side of KM

Demand-Side KM

Knowledge Production

Knowledge Claims

Knowledge Validation

Knowledge Integration (Diffusion)

- Sharing
- Broadcasting
- Searching
- Teaching

Organizational Knowledge ‘Containers’
- Artifacts & Codifications
- Individuals and Teams

Business Process Environment

Business Process Behaviors of Interacting Agents (Knowledge Use)

Internal/External Events

Supply-Side KM

IT Applications of KM Can Support Multiple Facets of Knowledge Processing
The People/Process Side of KM

Demand-Side KM

Knowledge Production

Individual And Group Learning

Knowledge Claims

Knowledge Validation

Business Process Environment

Business Process Behaviors of Interacting Agents (Knowledge Use)

Organizational Knowledge ‘Containers’
- Artifacts & Codifications
- Individuals and Teams

Internal/External Events

Knowledge Integration (Diffusion)

Supply-Side KM

- Sharing
- Broadcasting
- Searching
- Teaching

Distributed Organizational Knowledge

Focusing on knowledge processes and related social conventions, such as individual learning and communities of practice policies and programs is also important.
10 Key Principles of Second-Generation KM

1. Learning and innovation is a social process, not an administrative one (strong affinity with organizational learning theory)
2. Organizational learning and innovation is triggered by the detection of problems
3. Valuable organizational knowledge does not simply exist – people in organizations create it
4. The social pattern of organizational learning and innovation is largely self-organizing, and has regularity to it – a form of capital (SIC)
5. KM is a management discipline that focuses on enhancing knowledge production, integration, and use in organizations
6. KM is *not* an application of IT – rather, KM sometimes uses IT to help it have impact on the social dynamics of knowledge processing
What Investments in KM *Cannot Do*...

...Make Decisions *On Behalf* Of People Operating On The ‘Front Lines’

**Knowledge Production**
- Individual And Group Learning
- Knowledge Claims
- Knowledge Validation

**Knowledge Integration (Diffusion)**
- Organizational Knowledge ‘Containers’
- Artifacts & Codifications
- Individuals and Teams
- Sharing
- Broadcasting
- Searching
- Teaching

**Business Process Environment**
- Business Process Behaviors of Interacting Agents (Knowledge Use)

**Internal/External Events**

KM Has *Direct* Impact On Knowledge Processing Outcomes, But Only *Indirect* Impact On Business Outcomes
KM Is An Industry That Often Overpromises

- One vendor of KM-related software asks in its ads:
  
  Did Knowledge Management deliver on its promises for you?
  
  - Are your people more productive?
  - Is your organization more efficient?
  - Has KM reduced costs?

- KM can help enable and support these things, but it cannot ‘deliver’ them – what KM has impact on is knowledge processing, not business outcomes

A necessary but *insufficient* condition for performance
10 Key Principles of Second-Generation KM

7. KM interventions can only have direct impact on knowledge processing outcomes, not business outcomes – impact on business outcomes is indirect

8. KM’s value proposition? KM enhances an organization’s capacity to adapt by improving its ability to learn and innovate, and to detect and solve problems

[Note: Enhancements in knowledge processing (KP) will not necessarily lead to improvements in business performance, but improvements in business performance rarely occur without them. Here, KM has a crucial role to play – KM makes high-performance KP possible!]
But Most KM Strategies Are Only Supply-Side In Scope

Supply-Side KM Strategies Are All About Knowledge Capture, Codification, Distribution, and Use

Business Process Environment

Organizational Knowledge ‘Containers’
- Artifacts & Codifications
- Individuals and Teams

Knowledge Integration (Diffusion)
- Sharing
- Broadcasting
- Searching
- Teaching

Distributed Organizational Knowledge

Business Process Behaviors of Interacting Agents (Knowledge Use)
Also IT-Centric and Transaction Oriented

Tend To Be Technology-Centric And Focus On Getting ‘The Right Info To The Right People At The Right Time’

Business Process Environment
- Business Process Behaviors of Interacting Agents (Knowledge Use)

Organizational Knowledge ‘Containers’
- Artifacts & Codifications
- Individuals and Teams

Knowledge Integration (Diffusion)
- Sharing
- Broadcasting
- Searching
- Teaching

Distributed Organizational Knowledge
But Most So-Called KM Applications Are Not KM

**IT Applications that are not KM:**
- Enterprise Information Portals
- Document Management
- Content management
- Data Warehousing
- Imaging

*These may be associated with KM, but they’re not the same as KM*

**Business Process Environment**

**Organizational Knowledge ‘Containers’**
- Artifacts & Codifications
- Individuals and Teams

**Knowledge Integration (Diffusion)**
- Sharing
- Broadcasting
- Searching
- Teaching

**Distributed Organizational Knowledge**

Copyright © 2001 Macroinnovation Associates, LLC
Why? What Are The Critical Differences Between Information Management and KM?

- Two major differences:
  - KM concerns itself with statements or claims made about the value, veracity, or context of beliefs or actions
  - Also with the production of related claims ('knowledge claims') and ways they are validated, shared, and used

- Information management:
  - Tends to be aimed at managing work products and their informational content and/or attributes (production-related descriptive data), not claims about value, veracity, or context
  - Nor the business processes and supporting systems that accompany the production, distribution, and use of related 'knowledge' (i.e., not with 'knowledge processing')

IM can support KM strategies – not the same as KM
10 Key Principles of Second-Generation KM

7. KM interventions can only have direct impact on knowledge processing outcomes, not business outcomes – impact on business outcomes is indirect

8. KM’s value proposition? KM enhances an organization’s capacity to adapt by improving its ability to learn and innovate, and to detect and solve problems

9. If it doesn’t address **value, veracity, or context**, it’s not ‘knowledge management’
Other Applications of IT That *May* Be KM

• **Groupware systems**
  – Virtual teaming and collaboration, if associated with the production or distribution of knowledge (supply- and/or demand-side KM initiatives)
  – But only if they deal with the production, distribution, or use of claims related to the value, veracity, or context of work products or their informational content

• Any other application, as long as it deals with claims related to the value, veracity, or context of intellectual objects or content
KM Strategy Implications
Remember, The Target Domain Is A ‘Social System’

KM Strategies Should *First* Be About Social Interventions and Only Secondarily About IT
## Four Areas of Focus For KM

<table>
<thead>
<tr>
<th></th>
<th>Demand-Side KM</th>
<th>Supply-Side KM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Dimension (People and Process)</strong></td>
<td>Demand-Side Social KM</td>
<td>Supply-Side Social KM</td>
</tr>
<tr>
<td><strong>Technology Dimension (IT)</strong></td>
<td>Demand-Side Technology KM</td>
<td>Supply-Side Technology KM</td>
</tr>
</tbody>
</table>

Copyright © 2001 Macroinnovation Associates, LLC
## Some Examples of Common KM Initiatives

### Social Dimension (People and Process)
- Individual Learning
- Group Learning
- Innovation & IC Mgmt
- Communities of Inquiry
- KAIZEN Events in Mfg
- Think Tanks
- Management Planning

### Technology Dimension (IT)
- Knowledge Portals
- Innovation Mgmt Tools
- Groupware
  - Collaboration Apps
  - Virtual Teaming Tools
  - E-mail
- Listserv Discuss’n Grps

### Demand-Side KM
- Knowledge Portals
- Innovation Mgmt Tools
- Groupware
  - Collaboration Apps
  - Virtual Teaming Tools
  - E-mail
- Listserv Discuss’n Grps

### Supply-Side KM
- Training Programs
- Communities of Practice (CoP)
- Knowledge Capture
- Storytelling
- KM Cultural Initiatives
- Operations Mgmt

- Information Portals
- Intranets
- Information Mgmt
- Work Product Mgmt
- Content Mgmt
- Imaging
- Groupware
Interventions Are of Two Types – Both Very Important

Total of 8 dimensions to a KM strategy, but most fail to address policy issues
Example: 3M Company’s ‘Demand-Side Social KM’

"Policies": Employees shall have meaningful opportunities to engage in self-directed learning.

"Program": 3M’s ‘Fifteen Percent Rule’ – employees may spend up to 15% of their time on self-chosen, self-managed learning, with full management support.

Supply-Side Social KM

Supply-Side Technology KM

Demand-Side Social KM

Demand-Side Technology KM

Synchronization very important!
Most KM Interventions (1st Gen) Focus Only On SS Issues

Most KM initiatives fail to address 75% of their scope!
So, What’s The Proper Scope of a KM Strategy?

Begin by choosing areas of focus – if not all, why?
Proper Scope of KM Strategy (cont.)

Scope should include treatment of both policies and programs – alignment is key.
I. Makes sense to start with supply-side issues:
   – Can focus on information needs of workers engaged in business processes
   – Barrier-free access to people and information needed to get the job done
   – Related technology infrastructures and information management tools and systems, as needed
   – But also the people/process side: teaming and community infrastructures, processes, standards, and supporting programs

(Continued)
II. Then don’t forget the demand-side:

- Valuable knowledge comes from somewhere – people ‘on the job’ create it
- Need to provide for that, too
  - Individual learning and innovation
  - Group learning and innovation
  - Support for ‘whole firm’ L & I, too
- It’s the front-end of ‘knowledge processing’
- Has its own set of people, process and technology issues
- Takes KM into the realm of innovation management where very much belongs
III. Next is operationalizing KM:

– KM warrants its own operations
– Not just a by-product of ‘knowledge work’ by knowledge workers
– And not just a part of IT
– Need to ask: “Will we institutionalize KM or not?”
– What are the organizational issues associated with its permanent implementation?
  • Staffing
  • Budget
– Where does KM fit in the organizational model of the firm?

(Continued)
IV. Finally, reconciling KM vs. ‘business strategy’:

- Most KM methodologies begin with commission of a first-generation sin
  - ‘Business strategy knowledge exists’
  - ‘Purpose of KM is to serve the supply-side interests of existing business strategy knowledge’
- KM reduced to a knowledge capture, codification, and sharing plan for a set of existing knowledge (this is IM; supply-side KM at most)
- Begins by granting ‘strategy’ special dispensation from the social learning and innovation process – an Orwellian flaw
- Fails to acknowledge business strategy as, itself, a product of organizational learning and innovation
10 Key Principles of Second-Generation KM

7. KM interventions can only have direct impact on knowledge processing outcomes, not business outcomes – impact on business outcomes is indirect

8. KM’s value proposition? KM enhances an organization’s capacity to adapt by improving its ability to learn and innovate, and to detect and solve problems

9. If it doesn’t address value, veracity, or context, it’s not ‘knowledge management’

10. Business strategy is subordinate to KM strategy, not the reverse, because business strategy is, itself, a product of knowledge processing – KM is not an implementation tool for strategy; strategy follows from KP and is, therefore, downstream from KM
Remember

Getting this thing to run well is the end-game – indeed, the fundamental purpose – of knowledge management!
Thank You!

Contact Information

Mark W. McElroy
Macroinnovation Associates, LLC
10 Ogden’s Mill Road
Windsor, VT  05089

mmcelroy@vermontel.net

(802) 436-2250

www.macroinnovation.com