The KMS Road Map

The first phase: evaluation of the infrastructure and aligning knowledge management and business strategy.
- Knowledge audit and analysis.
- Designing the KM team.
- Creating the KM system blueprint.
- Selecting KM technology
- Developing the KM system.

The second phase: KM system analysis, design, and development.
- Knowledge audit and analysis.
- Designing the KM team.
- Creating the KM system blueprint.
- Selecting KM technology
- Developing the KM system.

The third phase: KMS deployment.

The final phase: measuring ROI and performance evaluation.

Amrit Tiwana, 2002

Why Knowledge is Important

- "In the post-Capitalism, power comes from transmitting information to make it productive" - P. Drucker
- Modern organisations are engaged in knowledge work
- In a complex business environment, organisations "need to know" and "make sense" of a changing world
- Best practice and competences need to be retained and managed
- Business environment changes in terms of where, what, and when and with whom business is done
- The drivers are:
  - reconceptualisation of geography (globalisation)
  - an alternate temporal paradigm (24/7)
  - the dynamics of business relations
  - wide availability of convergent technologies
Knowledge as action

"Knowledge consists of truths and beliefs, perspectives and concepts, judgments and expectations, methodologies and know-how and is possessed by humans, agents, or other active entities and is used to receive information and to recognize and identify; analyse, interpret, and evaluate; synthesize and decide; plan implement, monitor, and adapt – i.e. to act more or less intelligently.

... knowledge is used to determine what a specific situation means and how to handle it."

Wiig, 1999

Alternative views on knowledge

- Knowledge as a subjective view on reality;
  - Knowledge as state of mind – experience, know-how
  - Knowledge as practice – can’t be stored, constantly evolves through social practice and application

- Knowledge as object:
  - Reality is independent of our perceptions and can be structured and described objectively
  - A set of justified beliefs that can exist in multiple locations
  - Knowledge as access to information – accessibility is core
  - Knowledge as capability – can be applied to influence action

Becerra-Fernandez et al, 2004

Dimensions of Work

Thinking (KM?)

Communicating (IM?)

Doing (IS?)
Changing the Perspective

From Data to Document
From Report to Meaning
From Information to Knowledge

What is ....?

- Document
  - An item of text - information captured or purposely recorded on or in a medium
  - Document is characterised by physical form, logical structure and data content - even if these are hierarchical, relational or modular
  - Documents are the basis of the currently maintained records required for the effective conduct of a business

- Knowledge
  - the body of understanding and skills that is mentally constructed by people. Knowledge increased through interaction with information (typically from other people)

Transforming Documents into Records

- Metadata is
  - Data used to identify, represent and describe documents in any collection, organisational domain, or information system
  - Useful in handling electronic documents in particular
  - In electronic networked environments coherent information architecture and metadata regimes support:
    - Document management
    - Document discovery
    - Document delivery

Mckemmish, 2001
Adapted from Bernard (1996)

A Communications Model

- Corporate
- Suppliers
- Partners
- Customers
- Employees

Communications Environment

Phone, FAX, paper, EDI

Phone, FAX, paper

Browser

Internal Applications

Phone, FAX, paper, EDI

Adapted from Bernard (1996)

The Value Proposition

Knowledge

Data

Value

Information

Low

Medium

High

Very High

(Revere-Fernandez, Gonzalez and Sabherwal, 2004)

Changing Work Practices

- To create value through knowledge requires work:
  - to be performed collaboratively
  - to have a task/activity focus
  - to integrate “doing” and “planning”
  - learning from experience
- Work practices have changed from structured operation to knowledge work:
  - the focus is on work practices that require expertise and knowledge to be applied and used to perform activities.
  - the activities need to produce tangible outcomes as well as contributing to the creation of knowledge.
  - work practices combine productive and cognitive work.
Knowledge Work Support

- Task performance needs to be supported by a technological system (ICT) that enables actors to produce tangible outputs.
- Much of IT development effort is directed to support the doing aspects of knowledge work. Less common is support for the thinking aspects.
- Knowledge work support systems allow actors to engage in a joint cognitive process to evaluate, review and reflect on task performance as well as access and re-use past knowledge stored in memory.
- Memory can be deployed in processes that allow actors to understand and make sense of the task as well as explore, innovate and learn.

"eWorkplace"

IBM Vision:

- "Use of e-business technology and techniques to optimise the employee-to-employee, employee-to-business, employee-to-customer and employee-to-supplier business relationships, effectiveness and productivity"

Microsoft's vision:

- "Empower people through great software any time, any place, and on any device"

Why Build the eWorkplace: the IT Vision

- Increase revenue
- Increase productivity
- Maximize process efficiency
- Improve agility
- Provide quality and consistency in service
- Maintain 'brand name'
- Reduce costs
- Mine organisational knowledge
- Leverage existing IT infrastructure
- Minimize travel and physical events
- Reduce deployment cost/time
- Reduce training cost/time
KMS in Context

Socio-Cultural Issues

Knowledge Creation/Acquisition ➔ Knowledge Storage/Organization ➔ Knowledge Distribution ➔ Knowledge Application

Technology

KMS Infrastructure

- Organizational culture:
  - Aims and value
  - Management settings
  - Reward and measurement
- Organizational structure:
  - Organising principles
  - Information access and dissemination management
  - Communities of Practice
  - The KM function
- IT infrastructure
- Common language
- Physical environment

Becerra-Fernandez et al, 2004

KMS – a systems perspective

- Work today is not where you go, work is what you do (employee in a KM enabled ecosystem)
- KM tools, broadly defined, should enable knowledge generation, codification and transfer
- KMS is not a piece of software, it is a way of working
KMS

- Aims
  - Leverage components already in place
  - Integrate various systems
  - Link the outputs from one activity as inputs of the others
  - Bring together content and context of the work
  - Ensure consistency in the processes
  - Take user-centered approach:
    - Right knowledge to the right people in the right time
  - Security and personalisation is important:
    - Personalisation (what I need)
    - Customisation (how I like it)

Components for Managing and Supporting Knowledge Work

- Organizational memory
- Collaboration infrastructure
- Human assets infrastructure
- Knowledge transfer and dissemination
- Business intelligence infrastructure

adapted from Wickramasinghe, Fadalla, Sharma, 2004

Exploiting (Intangible) Assets

- Human Capital:
  - Employee competence
- Organisational Capital:
  - Internal structures and processes
- Relationship Capital:
  - External structures including the network of relations with customers, suppliers, partners and regulatory authorities
KMS - Supporting Action

Knowledge → Exploration
Information → Exploitation
Data → Performance

Organisational Work

Focus Object of Work
Organisation → Capability
Group → Collaboration
Individual → Activity

Technology components for KM
- Technology plays a role of the enabler for KMS
- Consider constraints (time/cost)
- Balance "must have" tools and "should have" tools
- Support knowledge processes
- Must provide:
  - Storage and retrieval
  - Communication
KMS architecture

- Comprises several sub-components:
  - Repositories
    - Store formal and informal (explicit) knowledge;
  - Collaborative platforms
    - Support knowledge sharing, pointers to experts and other knowledge sources;
  - Networks
    - Physical and logical channels for communication and conversation;
  - Organisational culture
    - Major enabler;
    - Nothing can be done if this goes wrong!

A KMS Architecture?

The Standards Australia KM Framework

Knowledge Alignment
- Context
- Analysis
- Planning

Knowledge Processes
- Sharing
- Acquisition
- Creation

Knowledge Foundation
- Culture
- Technology
- Sustaining Systems

Establish the knowledge processes needed to achieve organisational objectives

Establish the foundation needed to support required knowledge processes
Australian Government Better Practice Checklist

- Checkpoints
  - Consider stages of knowledge processes
  - Identify and consider ways to manage knowledge risks
- Balance between people, process, content and technology issues;
- KM progress measurement
- KM Enablers:
  - disciplines
  - tools
  - techniques

Dimensions of KMS

- Space/time
- Level
- Agency
- Modality
- Purpose
- Dimension

Dimensions

- Time
- Space
- Agency
- Purpose
- Level
- Modality
- Creation
- Capture
- Dimensions
References