KNOWLEDGE MANAGEMENT

A COMPETITIVE STRATEGY

OR

A RISK MANAGEMENT CHALLENGE?

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What is KM?
A new discipline in management whose objective is to systematically manage Knowledge

- **What:**
  Set of cross-disciplinary organizational processes that seeks the on-going and continuous creation of new knowledge

- **How:**
  By leveraging the synergy of combining the creative and innovativeness capacity of human beings and information technologies

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-> **IT governance (ISO/IEC 38500:2008), CobiT**

-> Controls should be based on risk assessment/management policies and procedures:
  - Systems development life cycle (SDLC)
  - Controls development life cycle (CDLC)
  (Control life cycle processes: Design, Implementation, operational effectiveness, monitoring)
Knowledge management refers to emerging set of strategies and approaches to create, safeguard, and use knowledge assets - including people and information - which allows knowledge to flow to the right people at the right time so that these assets create more value for the enterprise and meet organizational objectives (APQC, 2001).

1. Knowledge Assets = Intangible Assets

-> Valuation?

1.1. Google – What are their assets? -> Search Algorithm (now ICANN has increased NW addressing from 0.0.0.0 to 0.0.0.0.0.0 to accommodate the exponentially increasing networks and Bluetooth software embedded applications and equipment)

1.2. Coca Cola, Microsoft, previously Dell

2. Introducing VAL IT shifts the business’s focus toward value creation and retention
Knowledge Management Practices

- **Knowledge acquisition** - knowledge creation and content development through the distillation of experiences and lessons learned from the operations, by collecting, synthesizing and interpreting a variety of information *(Holsapple & Joshi, 2002)*

- **Knowledge filtering** - After information has been created, it is interpreted and evaluated from a contextual mental model to filter knowledge that is important and useful for the firm; individuals and companies have different mental models *(Senge, 1994)*

- **Knowledge configuration** - When acquired knowledge has been filtered for its strategic and practical usefulness, it is organized and stored for present and future use *(Gupta & McDaniel, 2002)*.

1. Relevancy, Accuracy, Completeness, Integrity

Knowledge Management Practices (cont)

- **Knowledge sharing** - Knowledge sharing process enables the flow of knowledge among and between individuals, groups and organisation, whereby one unit is affected by the experience of another (Argote & Ingram, 2000; Egbu et al., 2005; Hoon, 2003).

- **Knowledge application** - Knowledge application is the use of knowledge assets - including people and information – to get knowledge to the right people at the right time to create more value for the organisation and solve client problems while meeting organisational objectives (APQC, 2001; Payne & Sheehan, 2004; Tiwana, 2004).

Communications, Mobile Computing, Networks, ERPs = Security issues

- Encryption
- Digital signatures and key Management
- Biometric controls
- Intrusion protection
- Authorization and Access
- Viruses
2 MAJOR SCHOOLS OF THOUGHT

People Vs ICTs

- **Organic perspective** *(Brown and Duguid, 2001)*:
  
  Knowledge, know-how and skills as well as their management from the perspective of the management of people and organizations

  \[\rightarrow\text{ process centers on individuals and K is shared via face-to-face contacts, using IT systems primarily for communications not storage}\]

- **IT and information control** *(Cole-Gomolski, 1997)*:
  
  Using IT tools and business processes

  \[\rightarrow\text{ codification centering on computers; storage in databases for access and retrieval by those authorized}\]
KM DEFINITIONS

Given the multidisciplinary nature of KM, definitions come from different perspectives:

- Information systems perspective (Mertins et al., 2000)
- HR perspective (Skyrme, 1999; Swan et al., 1999)
- Strategic management perspective for gaining competitive advantage (uit Beijerse, 2000; Newell et al., 2002)

Recommendation: Adopting an integrated (Davenport and Prusak, 1998), interdisciplinary and strategic approach
THE PARADIGM SHIFT IN THE 21ST CENTURY GLOBAL ECONOMY

Shift from the Industrial, then to the Service, and to the 21st century Knowledge Economy requires:

- Strategies designed for knowledge-based competition (Kaplan & Norton, 2001)
- Knowledge workers
- ICT enabled business processes

1. Knowledge workers may walk away with the K in their heads

2. ICT enabled processes create risk management nightmares (e.g. networks, Internet, E-commerce applications, EFT)

3. Traditional auditing techniques and skills are not effective thus increasing risk and exposure e.g. what audit trails provide visible evidence?
THE MAIN PRAGMATIC OUTCOME OF IMPLEMENTING KM

is

Leveraging Knowledge to develop competitive strength in an organization (Earl and Scott, 1999) leading to the attainment of numerous benefits to the organization
POTENTIAL BENEFITS OF KM
( Ahmed et al., 2002)

- Improved innovation leading to improved products and services
- Improved decision making
- Quicker problem solving and fewer mistakes
- Reduced product development time
- Improved customer service and satisfaction
- Reduced R & D costs

Requires the development of performance metrics
e.g. Balanced scorecard:
1. Financial metrics (historical)
2. Customer satisfaction metrics (current)
3. Learning organization metrics (future)
WHAT IS COMPETITIVE ADVANTAGE?

Competitive advantage refers to the attributes and resources of an organization that allow it to outperform others in the same industry or service market (Christensen & Fahey, 1984; Kay, 1994; Porter, 1980).
“This is the ultimate vision for KM – an organization that, at all levels, guards what it knows, learns what it needs to learn, and applies that knowledge to overwhelming competitive advantage. In competition there’s little you can do against an organization like this, except to try and learn even faster” (KM REVIEW)
### IMPORTANT TO NOTE DISTINCTION BETWEEN:

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<tr>
<th><strong>Data</strong></th>
<th><strong>Information</strong></th>
<th><strong>Knowledge</strong></th>
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1. **Data** - symbolic representation of numbers, letters, facts and magnitudes and are the means through which information and knowledge are stored and transferred.

2. **Information** - data arranged in meaningful patterns, embedded with relevance and purpose. It requires a unit for analysis, necessary to achieve consensus about its meaning and requires human intervention.
3. Knowledge - 2 types of knowledge:

- **Tacit knowledge** which is stored in people’s heads and includes insights, intuition, and hunches – which are often built by experience and training and cannot be easily formalized and shared (*Polanyi, 1964; Nonaka, 1998; Carrillo & Chinowsky, 2006*).

- **Explicit knowledge** that is easily documented, and physically or electronically stored. It is normally captured in manuals, knowledge bases, technical notes, databases, best practice guides, standards and procedures, filing cabinets and organizational processes and policies (*Carrillo et al.; 2000; Nonaka, 1998; Andreasson & Svartling, 1999*).

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1. **Tacit Knowledge** - how does an organization protect K in peoples’ heads from abuse or loss?

2. **Explicit Knowledge** – Security of databases and applications
Knowledge, unlike other assets which depreciate, appreciates with usage

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<tr>
<td><strong>1. K sharing and K application</strong></td>
<td><strong>Value Appreciation</strong></td>
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<td><strong>2. Valuation?</strong></td>
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WHAT IS KNOWLEDGE?

- What K is needed in the organization?
- What is the high value K?
- What K gives a competitive edge?
- What K gives first learner advantage?
A SUCCESSFUL KM PROCESS DEPENDS ON FOCUSING THE KM STRATEGY, PRIORITIZING THE ORGANIZATION’S KNOWLEDGE AND MAXIMISING ITS EFFECTIVENESS (Milton, 2007)
THEREFORE THERE IS NEED TO FOCUS KM STRATEGY

Organizations may have:

- **Unfocused KM** – processes and technologies put in place for general K sharing, without high-grading the K
  
  - passive and reactive approach
  
  - no advanced planning to capture high-value K
  
  - learning after the fact

Relevancy issues
Semi-focused KM

A somewhat more focused KM system is a network-led system

- various key knowledge areas are identified
- networks are set up to manage each area
- reactive and unfocused exchange of knowledge
  (i.e. a problem has to occur before the sharing happens -> Fire fighting)
Focused KM

Knowledge of greatest value is defined by organization

- focuses on this knowledge
- proactively set up learning systems to acquire the knowledge
- protects that knowledge

→ proactive and active learning, problem avoidance thus maximizing the rate of return (ROI) on the KM investment
Categorization of areas of key K focus so that correct KM tactics can be brought into play

*(Gorelick, April, Milton. 2004)*

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<tr>
<th>New emergent Knowledge</th>
<th>Strategic Competence</th>
<th>Competitive Competence</th>
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<tr>
<td>Old established Knowledge</td>
<td>Low level of in-house Knowledge</td>
<td>High level of in-house Knowledge</td>
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<td>Non-core Competence</td>
<td>Core Competence</td>
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Strategic Competence

Areas of new evolving K of future importance

- Organization knows little about it and how it may be applied

→ knowledge acquisition processes

As more and more proficiency and expertise are gained, this knowledge moves to the competitive competence box
Competitive Competence

Areas of new evolving knowledge

- Organization knows a lot about it

→ continuous capture of Knowledge from practice and development of best practice

As more and more best practice is gained, the knowledge will mature until the area is well known and established, and it moves to the core competence box.
Core Competence

Clear areas of established Knowledge

- Organization knows a lot about it
- Knowledge is core to the business processes for efficiency and effectiveness
- Core knowledge to be protected and managed as well as strategic and competitive knowledge

→ Knowledge area mature and established, best practice can be codified into standards and routines and embedded in work practices and procedures, in some cases embedded in software.
Non-core Competence

Areas of knowledge where an organization has chosen not to apply this knowledge itself as a strategic decision

→ outsourcing (not a buzz word but a strategic decision!)

Outsourcing presents another set of Risk Management issues:

Effect of 3rd parties on the organization’s internal control system
CHALLENGES

How do we develop ISACA Kampala Chapter as a Knowledge organization?

Are our organizations positioned to compete in the Knowledge economy?

How about issues related to the valuation and risk management aspects of the Knowledge assets?

How are we positioned to compete with Knowledge workers in the EAC job market?
Thank you