IMS5330 Knowledge Management System Development

Lecture
Governance and Risk in KMS Development

Dr. Henry Linger

The KMS Road Map

The first phase: evaluation of the infrastructure and aligning KM and business strategy.
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

Governance Principles

Governance is concerned with the operationalisation of an organisational strategy that is executed in an authorized and regulated manner
  - the governance process
    - is a framework of authority to ensure the delivery of the defined benefits of a service or process
    - defines the authority of the KM team
    - identifies the regulatory regime for KMS deployment
    - establishes the boundaries for the KM strategy
KM Governance

- Authority
  - defines the decision making authority and control
  - establishes the checks and balances for implementation
  - ensures feedback into strategy
  - ensures stakeholder needs and expectations are met
- Risk Management (includes change management)
- Evaluation
- Measurement

KM Governance Model

Adapted from Zyngier, 2005

What is “risk”

- Risk is defined as an "exposure to the possibility of economic or financial loss or gains, physical damage or injury or delay as a consequence of the uncertainty associated with pursuing a course of action”
  - Chapman and Cooper (1983)
- "The possibility of loss, injury, disadvantage or destruction”.
  - Chester Simmons, Risk management (2003).
- "Risk is a measure of the inability to achieve overall program objectives within defined cost, schedule, and technical constraints and has two components: (1) the probability of failing to achieve a particular outcome and (2) the consequences of failing to achieve that outcome.”
  - Systems Engineering Community Of Practice (US CACM SC CACM), 2004
Types of Risk

- Risk can be associated with:
  - lack of knowledge and prior experience
  - risky and/or uncertain environment
  - ill-defined outcomes
  - use of resources (cost/time)
  - actions
  - goals of the project
  - staff turnover
  - other "people factors"

- Risk considerations
  - some risks are too small to consider
  - can't predict or control all risks
  - need to differentiate risks from problems
  - not all risks affect all operations

Risk and Opportunity

- Risk is not always negative
- Risk is necessary for progress
  - Risk taking is essential to exploiting opportunities
  - Failure is a key to learning
  - Need to balance the negative consequences of risk with the potential benefits of its associated opportunity

Approaches to Risk

- Avoidance
  - activity is not performed if there are insufficient resources to conduct it "safely"

- Modification
  - change the activity to make it "safer"

- Retention
  - a conscious, rational and appropriate decision to undertake activity without modifying its risk
  - Unintentional retention of risk can be catastrophic

- Sharing
  - the risk is spread across more than one entity
What is Risk Management?

- Risk Management (RM) is a discipline that enables people and organizations to cope with uncertainty by taking steps to protect vital assets and resources.
- Risk Management is:
  - a process that needs to be integrated into organizational management
  - a framework for identifying risks and deciding what to do about them
  - weighing (assessing) situations and making decisions about which risks need immediate attention
- Management of risk is an integral part of good management.

Risk Management Definitions:

- RM is a systematic approach to identifying, analysing, and controlling areas or events with a potential for causing unwanted change. It is through risk management that risks to the program are assessed and systematically managed to reduce risk to an acceptable level.
- Risk Management is the act or practice of controlling risk. It includes risk planning, assessing risk areas, developing risk-handling options, monitoring risks to determine how risks have changed, and documenting the overall risk management program.

Obstacles to Risk Management:

- Difficult to measure success in RM
- Risk management can be costly
- Risk is abstract and subjective concept that is difficult to understand
- RM relates to and is defined by organisational culture
- Sometimes risk is managed implicitly only at the individual level
The RM Process

- Establish the context
  - set goals for the RM program and identify barriers to its implementation
- Identify risk
  - acknowledge risk by establishing a framework or strategy to facilitate major risks to critical assets
- Evaluate risk
  - create a priority list that addresses the RM program goals
- Implement RM plan
  - select appropriate techniques to address each item on your priority list
- Monitor the RM plan
  - RM plans and techniques need to be reviewed in light of the dynamic environment and new challenges and opportunities

A Risk Management Model

- Australian and New Zealand model AS 4366 (1997)

Continuous Risk Management Process: SEI RM Paradigm

- Identify: search for incipient risk before it is a problem
- Analyze: transform risk into decision making info, evaluate impact, probability, timelines, classify and prioritize
- Plan: translate risk info into decisions and actions and implement actions
- Track: monitor risk indicators and mitigating actions
- Control: correct deviations from plans
- Communicate: provide info and feedback, internally and externally, on all aspects of the risk program

http://www.sei.cmu.edu/programs/sep/risk/paradigm.html
Risk Principles

Global Perspective
- Recognizing both the potential value of opportunity and impact of adverse effects in a broader context

Forward-looking perspective
- Identifying and anticipating uncertainties and potential outcomes in the future

Open communications
- Encouraging free-flowing, formal, informal and impromptu communications and chasing the individual voice

Integrated management
- Making RM an integral part of management, infrastructure and culture

Continuous process
- Sustaining constant vigilance to identify and manage risk routinely

Shared product vision
- Outcomes are based on common purpose, shared ownership and collective communication

Teamwork
- Working cooperatively to pool talent, skills and knowledge to achieve common goals

Risk Management - a historical view

- The potential for risk has led to the concept of chance and probability, concepts the insurance industry used when it began in shipping in the late 17th century
- Hazard analysis and critical control point (HACCP) concept initiated during the manned space flights days at NASA in the 1960s
- USA National Research Council developed a model in 1983 that integrated risk assessment, risk management and risk communication

USA National Research Council Risk Analysis Model

Risk Management
Risk Assessment
Risk Communication

Lecture 10  IMS5330  Semester 2, 2005  16

Lecture 10  IMS5330  Semester 2, 2005  17

Lecture 10  IMS5330  Semester 2, 2005  18
Lecture 10

Why is risk assessment important

Most organisations believe that "... good business is all about risk, business growth cannot occur without introducing new risks [and] business objectives cannot be achieved without placing assets at risk [while] business rivalries cannot be won without out-risk-taking the competition ..."

Chapman, 2001

Risk identification techniques

- Risk analysis graphs (Riskit)
- Checklists and brainstorming
- Questionnaires
- The SEI Risk Taxonomy
- SWOT Analysis
  - Strengths
  - Weaknesses
  - Opportunities
  - Threats
Risk Management in KM

- Risks in KM implementation arise from and relate to obstacles, which prevent successful KM deployment
- There are different types of obstacles:
  - External obstacles to KM
    - eg foreign control; economic/political impact
  - Structural obstacles to KM
    - eg hierarchy that does not share knowledge; mergers and acquisitions; conflict over priorities; resource constraints
  - Cultural obstacles to KM
    - eg KM not understood; no leadership or criteria for KM
  - Trust

Obstacles to knowledge use
Knowledge Alignment
Context
Analysis
Planning

Knowledge Processes
Sharing
Acquisition
Creation

Establish the knowledge processes needed to achieve organisational objectives

Establish the foundation needed to support required knowledge processes

Knowledge Foundation
Culture
Technology
Sustaining Systems

Standards Australia: Interim KM Framework


Knowledge Management Framework

Adapted from Standards Australia, HB275 (2001)

Manage Opportunities and risks

Adapted from Standards Australia, HB275 (2001)
“KM initiatives should be integrated with other managerial systems to ensure that they are implemented in a sustainable manner.”

(Standards Australia, 2001)

References