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

Amrit Tiwana, 2002
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
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.”
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

Van Scoy, 1992
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

Communicate and consult

Establish the context
- Objectives
- Stakeholders
- Criteria
- Define key elements

Identify the risks
- What can happen?
- How can it happen?

Analyze the risks
- Review: criteria
- Likelihood
- Consequences
- Level of risk

Evaluate the risks
- Evaluate risks
- Rank risks

Treat the risks
- Identify options
- Select the best option
- Develop risk treatment plan
- Implement

Monitor and review

Australian and New Zealand model AS 4386 (1997)
Continuous Risk Management Process: SEI RM Paradigm

- **Identify**: search for & locate 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**

<table>
<thead>
<tr>
<th>Global Perspective</th>
<th>Recognizing both the potential value of opportunity and impact of adverse effects in a broader context</th>
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<tbody>
<tr>
<td>Forwarding-looking perspective</td>
<td>Identifying and anticipating uncertainties and potential outcomes in the future</td>
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<tr>
<td>Open communications</td>
<td>Encouraging free-flowing, formal, informal and impromptu communications and valuing the individual voice</td>
</tr>
<tr>
<td>Integrated management</td>
<td>Making RM an integral part of management, infrastructure and culture</td>
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<td>Continuous process</td>
<td>Sustaining constant vigilance to identify and manage risk routinely</td>
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<td>Shared product vision</td>
<td>Outcomes are based on common purpose, shared ownership and collective communication</td>
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<td>Teamwork</td>
<td>Working cooperatively to pool talent, skills and knowledge to achieve common goals</td>
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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
Risk Assessment

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

(Jones, 1998)

- The SEI Risk Taxonomy
- SWOT Analysis
  - Strengths
  - Weaknesses
  - Opportunities
  - Threats

Some Risk Measurement Techniques

Level uncertainty

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>No</th>
<th>Discrete</th>
<th>Continuous</th>
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<tr>
<td>Project Evaluation</td>
<td>DCF*, Sensitivity Analysis</td>
<td>Scenarios, Decision trees, real options</td>
<td>Monte Carlo simulation, real options</td>
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<tr>
<td>Project Problems</td>
<td>Optimisation</td>
<td>Stochastic programming</td>
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</table>

* DCF=Discounted Cash Flow

(Vlahos (2001))
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 no sharing, co-operation and hoarding
  - Process/Cultural obstacles to KM
    - eg KM not understood; no leadership or criteria for KM
  - Trust

Obstacles to knowledge use

- Technology orientation
- Strategy conflict
- Silos
- Foreign control
- Staffing constraints
- Query ROI
- Philosophy not understood
- Knowledge is power
- Finance
- Conflict of priorities
- Management culture

Percentage of obstacles:

- Technology orientation: 0%
- Strategy conflict: 5%
- Silos: 10%
- Foreign control: 15%
- Staffing constraints: 20%
- Query ROI: 25%
- Philosophy not understood: 30%
- Knowledge is power: 35%
- Finance: 0%
- Conflict of priorities: 5%
- Management culture: 10%
Knowledge Alignment
- Context
- Analysis
- Planning

Knowledge Processes
- Sharing
- Acquisition
- Creation

Knowledge Foundation
- Culture
- Technology
- Sustaining Systems

Standards Australia: Interim KM Framework

Establish the knowledge processes needed to achieve organisational objectives
Establish the foundation needed to support required knowledge processes


The Knowledge Management Framework

Establish priorities and set goals
Analyze knowledge processes

Necessary processes
Sub Phases, Tasks, or activities

Adapted from Standards Australia, HB275 (2001)
Sustaining Systems for KM

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