

“An investment in knowledge pays the best interest” Benjamin Franklin

What’s this workshop about?

It isn’t about technology, data and computers, software and databases

It’s about creating a dynamic knowledge cycle in your agency, organization or group, using business knowledge management principles.

© June 2006 Randy McCall

“An investment in knowledge pays the best interest” Benjamin Franklin

The specialized knowledge your organization needs to succeed resides in the insights, experience and skills of your people; it’s both an organizational resource and an ever-improving product.

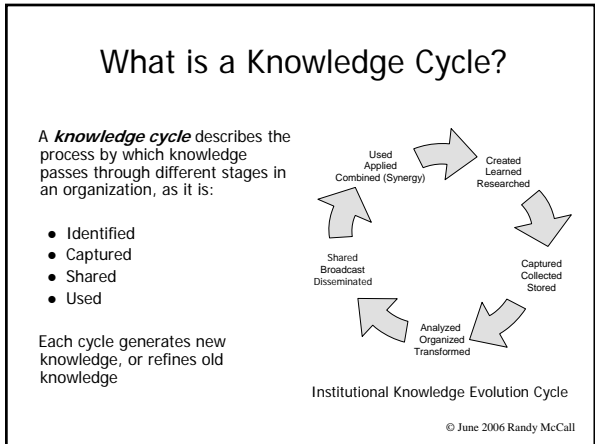
This workshop focuses on individuals and groups as the stewards of your organization’s knowledge, and provides an introductory overview to the concepts and steps required to create a knowledge project.

© June 2006 Randy McCall

- We will look at:**
1. Basic Concepts on Knowledge and Information
 2. An Introduction to Knowledge Management Principles
 3. The Social Aspects of Knowledge Management
 4. Eight Steps for Developing a Simple Knowledge Management or Knowledge Cycle Project
- © June 2006 Randy McCall

Concepts and Terms

© June 2006 Randy McCall



The Elements of Knowledge

Data = individual, unconnected facts

Information = Data organized in a particular way, for a particular purpose (structured data).

Knowledge = Information in action, in the context of personal experience

Information sits on a shelf. **Knowledge** is based on information, but primarily exists in the continually evolving skills and learned experiences of:

- individuals
- collective groups

© June 2006 Randy McCall

Types of Knowledge

When we speak of *knowledge*, we are referring to something which can consist of two interactive and interdependent elements (Nonaka, Takeuchi 1995)

Explicit Knowledge: Hard, factual information which can be easily written down, documented, analyzed and transmitted to others

Tacit Knowledge: Knowledge based on experience which cannot easily be written down. It can be shown by example (apprenticeship), or expressed by inference (storytelling) to someone with a similar background (in context)

© June 2006 Randy McCall

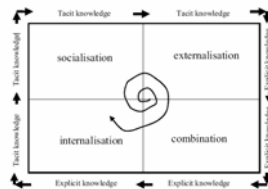
The Knowledge Spiral

Socialization: the sharing of experience-based knowledge between like individuals (tacit-to-tacit)

Externalization: applying learned experience-based knowledge to practical purposes (tacit-to-explicit)

Combination: transmitting practical knowledge to others (explicit-to-explicit)

Internalization: converting practical knowledge through use to experience-based knowledge (explicit-to-tacit)



(Nonaka, Takeuchi 1995)

© June 2006 Randy McCall

Organizational Resources for Knowledge Management

Equally important organizational resources for *identifying, capturing, sharing and generating* knowledge are:

- Functional processes / infrastructure
- Information repositories
- Individual knowledge and expertise
- Informal social networks

A properly planned, implemented and supported KM project leverages all of these resources to help create a self-sustaining knowledge cycle

© June 2006 Randy McCall

Four Benefits of a Basic Knowledge Cycle

- 1) It collects both tacit knowledge and explicit information from organizational processes and individual/group knowledge.
- 2) It organizes and transforms the collected knowledge into forms usable by other members of the organization

© June 2006 Randy McCall

Four Benefits of a Basic Knowledge Cycle

- 3) It transmits the new knowledge to the organizational staff through the mediums and in the formats most useful to them.
- 4) It allows stored knowledge to be refined through comparison and correction, and allows users to generate their own new knowledge by combining shared knowledge with their own personal experiences/insights

© June 2006 Randy McCall

Knowledge Management Principles

© June 2006 Randy McCall

Knowledge Management Concepts

"Knowledge management is viewed as a central 'management activity' to capitalize on the intellectual assets held by employees, databases, process knowledge, and other organizational expertise"
(Chavez, Pendelton, Bueerman 2005)

"Knowledge is inextricably bound up with human cognition, and the management of knowledge occurs within an intricately structured social context"
(Thomas, Kellogg, Erickson 2001)

"It is essential for those designing knowledge management systems to consider the human and social factors at play in the production and use of knowledge" (Thomas, Kellogg, Erickson 2001)

© June 2006 Randy McCall

Functions of a KM Project

1. It supplies tools to assist in identifying information and knowledge useful to the organization and its strategic goals
2. It suggests processes to capture and retain this information and knowledge before it is lost, erased, forgotten, walks, retires, moves
3. It suggests channels and methods through which to share it with staff, allowing for new knowledge development, as well as the refinement of old knowledge
4. It provides metrics with which to measure gains and effectiveness

© June 2006 Randy McCall

An Advanced KM Project Will:

- a) Work to identify / modify organizational blockages to effective knowledge transfer (functional processes, information flows and organizational culture)
- b) Create multiple channels of rich communication, involving every member of an organization in the process of identifying, capturing, sharing and creating knowledge (learning organization)
- c) Seek to embed gathered knowledge within daily functional processes and organizational memory via social networks

© June 2006 Randy McCall

Knowledge Management Enablers



Knowledge Management Framework, APQC

© June 2006 Randy McCall

KM Principles: APQC KM Project Enablers

Strategy and Leadership

- Organizational Goals
- Top-down Support
- Trust and Openness

Technology and Infrastructure

- Functional Processes
- Hardware and Software
- Communication channels

Organizational Culture

- Support sharing
- Support risk-taking
- Trust and Openness

Measurement

- Baseline measurements
- Linked to strategy/goals
- Recurring measurement

© June 2006 Randy McCall

General KM Principles

1. Knowledge originates and resides in people's minds
2. Knowledge sharing requires trust
3. Knowledge sharing must be encouraged and rewarded

(Davenport, Prusak 2000)

© June 2006 Randy McCall

General KM Principles

4. Management support and resources are essential
5. Both quantitative and qualitative measurements are needed to evaluate programs
6. Knowledge is creative and should be encouraged to develop in unexpected ways
7. Technology enables new knowledge behaviors

(Davenport, Prusak 2000)

© June 2006 Randy McCall

KM Technology Principles

- a) If more than one-third of a project's budget or resources are going towards technology, it's not a KM project, but a technology project.
- b) The more valuable the knowledge is, the less sophisticated the technology that supports it
- c) Tacit knowledge is shared through people, explicit knowledge is shared through machines.
- d) IT and KM have a symbiotic relationship

(O'dell, Grayson Jr., Essalides, 1998)

© June 2006 Randy McCall

KM Technology Principles

- e) Don't create inaccessible information repositories ("silos"). Make knowledge accessible, and accessing it part of the daily routine.
- f) Realize the effectiveness of information "push" rather than "pull"
- g) The Internet is a powerful, cost-efficient tool for collecting/sharing information and for maintaining communications/contacts in networks of people.
- h) Software isn't always complicated and expensive:
 1. Freeware (Sourceforge.net)
 2. Shareware

© June 2006 Randy McCall

Victim Services, Volunteers and Knowledge Management

Agencies using knowledge management principles to capture lessons learned in the field include:

- USAID
- Red Cross
- World Bank
- United Nations
- FEMA
- Police and Emergency Services
- Capacity builders in all fields

© June 2006 Randy McCall

Victim Services, Volunteers and Knowledge Management

Why is knowledge equated with experience?

"It has long been recognized that the most valued police knowledge has been acquired around situational or street experience" (Rubenstein, 1973)

"Moreover, in abnormal and unforeseen situations the knowledge and experience that exists among volunteers are crucial. Knowledge and experience is often embedded in practice and virtually impossible for managers to institutionalize." (Hildreth, Kimble ed., p. 76, 2004)

© June 2006 Randy McCall

Victim Services, Volunteers and Knowledge Management

Why capture this knowledge?

"Practitioners learn constantly on the job. They invent new solutions, refine their skills, and learn from mistakes. They receive customer feedback, experience unexpected pitfalls, and discover new opportunities. They gain a unique perspective on the work of the organization and its relationships with the market. All this learning needs to be captured into refined practices that incorporate the lessons of the field."

(Wenger, 2004, "Knowledge Management as a Doughnut")

© June 2006 Randy McCall

Organic and Adaptive Knowledge Management

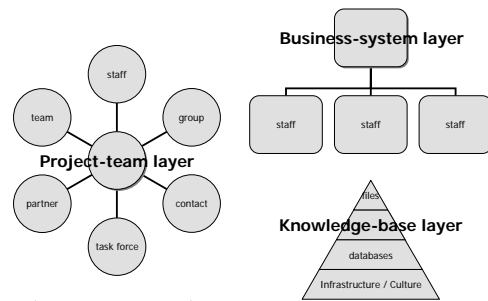
- Knowledge management theory views an organization as a complex system made up of both processes, groups and individuals
- An organization is often compared to a living organism, being made up of many independent part, which must feed, learn, evolve and react to changes its environment, or die.
- The perception of the professionalism of an organization is often based on the speed and effectiveness of its response to needs or changing conditions.

© June 2006 Randy McCall

Social Aspects of Knowledge Management

© June 2006 Randy McCall

Hypertext Organization Concept



(Nonaka, Takeuchi 1995)

© June 2006 Randy McCall

Social Factors Leveraged in KM

1. Group / Organizational Memory
2. Social Capital

© June 2006 Randy McCall

Defining Organizational Memory

- The sum of all information or knowledge held by members of the group
- Includes both explicit and tacit knowledge
- Includes formal and informal organizational process and social network knowledge
- Is spread by both official and unofficial communications channels, such as:
 - Water-cooler talk
 - Group lunches, dinners, parties, social outings

© June 2006 Randy McCall

Uses of Organizational Memory

- Improves individual function, as people do not have total recall to perform their job, but can ask members of the group for advice / best practices
- Allows effective but unrecognized/unofficial processes to be retained (the disconnect between "how it's supposed to be done" vs. "how it really works")
- Allows knowledge retention. Once shared with the group, effective knowledge will be shared with new members, and so remains in group memory even if the initial knowledge holder leaves

© June 2006 Randy McCall

Defining "Social Capital"

"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit." (Nahapiet, Ghoshal 1998)

"It is commonly known that if you recruit one talented technician, you will get twenty for free" (Rogers, 1962)

© June 2006 Randy McCall

Dimensions of Social Capital

Structural:

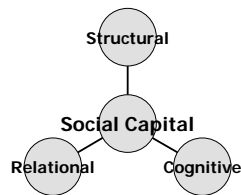
Formal / informal relationships within the organization

Relational:

Informal contacts outside the organization

Cognitive:

Culture, norms, practices, styles, artifacts and other elements that allow people to identify with each other.



(Lesser, Prusak 1999)

Social capital belongs to an individual or group

© June 2006 Randy McCall

Formal Social Structures

Formal Departments

- Deliver a product
- Assigned membership
- Clear boundaries
- Assigned goals
- Permanent

Project Teams

- Accomplish a task
- Assigned membership
- Clear boundaries
- Assigned goals
- Predetermined end

Operational Teams

- Manage operation
- Assigned Membership
- Clear boundaries
- Assigned goals
- Ongoing

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Informal Social Structures

Informal Networks

- Share information and contacts
- Friends, acquaintances
- Fuzzy boundaries
- Bound by need/interest
- Never really start or end

Communities of Interest

- Inform members on the topic of interest
- Those interested in topic
- Fuzzy boundaries
- Bound by interest
- Evolve and end organically

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Informal Social Structures

Communities of Practice

- Create, exchange, expand knowledge
- Develop each individual's capabilities
- Membership self-selected, based on expertise or passion
- Fuzzy boundaries
- Bound by passion, commitment and identification with the group
- Evolve and end organically

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Definition of a CoP

“Communities of Practice are groups of people who share a concern, a set of problems, or a passion on a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.”

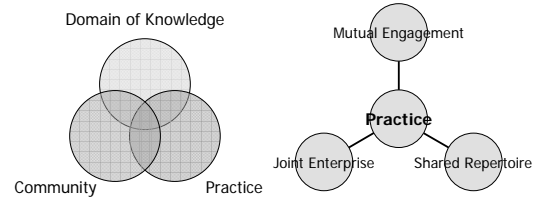
(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Theoretical Structures of CoPs

Structural Model of CoPs

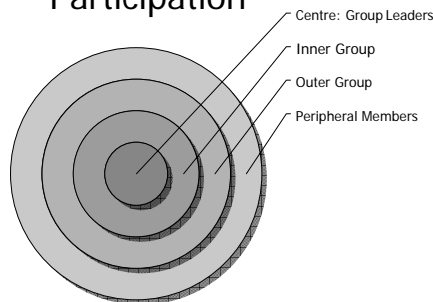
Dimensions of Practice



(Wenger, 2005)

© June 2006 Randy McCall

Legitimate Peripheral Participation



(Lave, Wenger 1991)

© June 2006 Randy McCall

Lessons Drawn from LPP Theory

- 1) CoPs spring up organically, by self-selecting groups of interested/passionate people. A CoP cannot be created by decree, but can be encouraged.
- 2) Engagement and openness is dependent on passion and commitment, which cannot be forced or assigned.
- 3) Immersion in the practice and interaction with the community creates identity, which reinforces trust, commitment and passion within the group, thus increasing engagement.

© June 2006 Randy McCall

Lessons Drawn from LPP Theory

- d) Transfer of knowledge takes place continually in:
 - a) situated learning environments
 - b) during social engagement outside these environments
 - c) in the relationship dynamics between members
- e) Members on the periphery are just as important as core members, and members will continually shift from periphery to core and back
- f) The Weak and Strong Ties theory applies. A single organization may have a constellation of CoPs
- g) There will be an ecology of leadership with different roles, not a single leader

© June 2006 Randy McCall

Common Leadership Roles in a CoP

- Inspirational leadership (experts, champions)
- Day-to-day leadership (moderator, organizer)
- Classificatory leadership (information organizers)
- Boundary leadership (connecting the community to others)

(Kelleher, Sponsoring Communities of Practice)

© June 2006 Randy McCall

The Goose and the Golden Egg

"The strength of communities of practice is self-perpetuating. As they generate knowledge, they reinforce and renew themselves. That's why communities of practice give you not only the golden eggs but also the goose that lays them."

(Wenger, Snyder 2000)

© June 2006 Randy McCall

Advantages of CoPs

- Decreasing the learning curve of new volunteers/staff
- Responding more rapidly to client needs and inquiries
- Reducing rework and preventing re-invention of the wheel
- Spawning new ideas
- Retaining/stewarding knowledge in group memory

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Barriers to Sharing Knowledge which CoPs Help Overcome

Awareness:

Making seekers and sources aware of their respective knowledge

Access:

Allowing seekers and sources to connect

(Hildreth, Kimble ed., p. 16, 2004)

© June 2006 Randy McCall

Barriers to Sharing Knowledge which CoPs Help Overcome

Application:

Ensuring that the knowledge seeker and source have common content and understanding necessary to share their insights.

Perception:

Creating an atmosphere where knowledge sharing behaviors between seekers and sources are respected and valued.

(Hildreth, Kimble ed., p. 16, 2004)

© June 2006 Randy McCall

14 Indicators of a CoP

- 1) Sustained mutual relationships – harmonious or conflictual
- 2) Shared ways of engaging in doing things together
- 3) The rapid flow of information and propagation of innovation
- 4) Absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process
- 5) Very quick setup of a problem to be discussed

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

14 Indicators of a CoP

- 6) Substantial overlap in participants' descriptions of who belongs
- 7) Knowing what others know, what they can do, and how they can contribute to an enterprise
- 8) Mutually defining identities
- 9) The ability to assess the appropriateness of actions and products
- 10) Specific tools, representations, and other artifacts

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

14 Indicators of a CoP

- 11) Local lore, shared stories, inside jokes, knowing laughter
- 12) Jargon and shortcuts to communication as well as the ease of producing new ones.
- 13) Certain styles recognized as displaying membership
- 14) A shared discourse reflecting a certain perspective on the world.

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Cultivating a CoP

“Cultivation is an apt analogy. A plant does its own growing, whether its seed was carefully planted or blown into place by the wind. You cannot pull the stem, leaves, or petals to make a plant grow faster or taller.

However, you can do much to encourage healthy plants: till the soil, ensure they have enough nutrients, supply water, secure the right amount of sun exposure, and protect them from plants and weeds”

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Sponsoring a CoP

- Identify communities of practice that influence critical goals within the organization
- Provide communities with the means to regularly meet face-to-face, exchanging stories and developing trust.
- Provide tools (technology) that enable the community to identify new members and maintain contact with existing members.
- Identify key “experts” and “boundary spanners” within the community and enable them to provide support to the larger group. (Lesser, Prusak 1999)

© June 2006 Randy McCall

Roles in a Sponsored CoP

Members: focused on participation

Champion: focused on content and engaging members

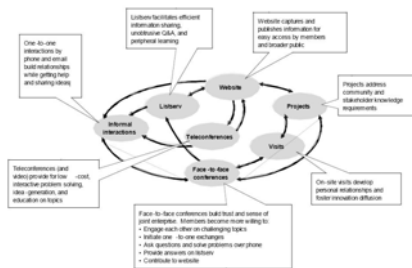
Facilitator: focused on process, aiding, clarifying, capturing, rewarding

Sponsor: supplies support

(Kelleher, Sponsoring Communities of Practice)

© June 2006 Randy McCall

The Ecology of a fully Interactive CoP



(Wenger, Snyder 2004)

© June 2006 Randy McCall

Organizational CoPs

“The most successful communities of practice thrive where the goals and needs of an organization intersect with the passion and aspirations of participants”

(Wenger, McDermott, Snyder 2002)

© June 2006 Randy McCall

Interested in More Information?

Contact:

Randy McCall

President, Victim Assistance Online

<http://www.vaonline.org/>

info@vaonline.org (general inquiries)

km@vaonline.org (KM inquiries)

Bibliography/Resources Handout

<http://www.vaonline.org/km/handout.pdf>

© June 2006 Randy McCall