

How to Operationalize KM

A Presentation by
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Three Parts

1. What is KM?
2. Requirements for Operationalizing a *KM Program of Activities*
3. KM Methodologies and K-STREAM™ -
A Representative Methodology

What Is KM?

- Most definitions speak in terms of a “systematic” approach of some kind for....

- Identifying
- Capturing
- Codifying
- Sharing
- etc.

.....information “to get the right information
to the right people at the right time”

This is vintage first-generation, or “supply-side,” KM

Problems With First-Generation KM

- Doesn't really distinguish between information and knowledge
 - For example, at KMCI we define knowledge as a type of information, consisting of beliefs or claims that have survived our tests and evaluations and which help us to adapt and improve our performance (i.e., because they may actually be true!)
- Doesn't really address knowledge creation...seems to come into play only *after* information or knowledge has been created (“supply-side” KM)
- Doesn't distinguish between KM and “knowledge processing,” and thereby invites us to confuse the two

Is there really any difference between first-generation KM and IM?

Second-Generation KM

- Starts with the view that there is a difference between producing and integrating knowledge in business (Knowledge Processing) and the systematic attempt to enhance related processes and outcomes (Knowledge Management)
- The purpose of KM is to enhance the quality of KP and its outcomes, and the two are not the same thing



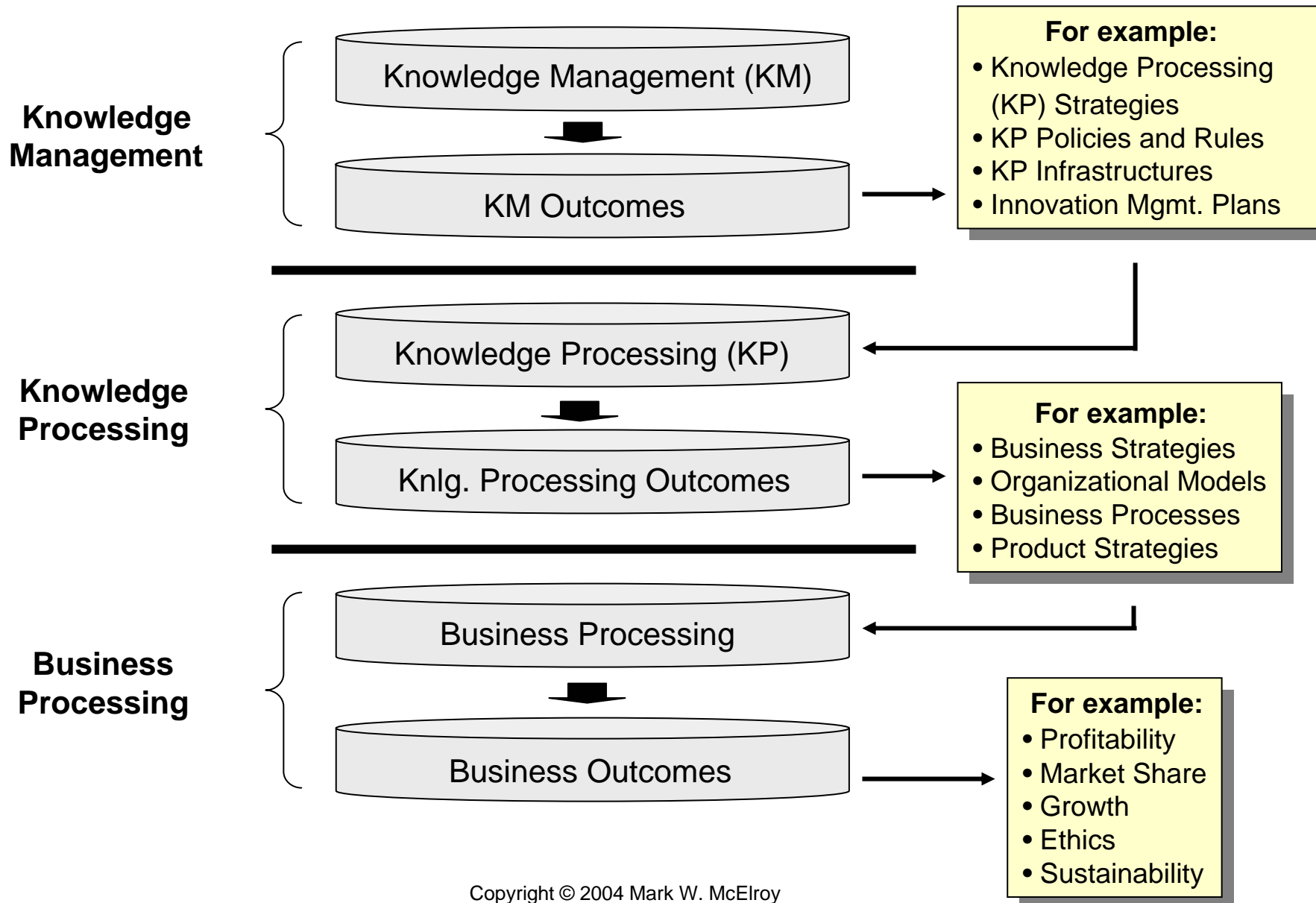
**People at Work in a Firm
Doing Knowledge Processing (KP)**

**KM Strategies &
Interventions**



**Different People Trying to Help
The Others Do KP Better (KM)**

The 3-Tier “New KM” Reference Model



Second-Generation KM (cont.)

- Unlike first-generation KM, second-generation KM addresses knowledge production....
- Which it must do if it is to address another of first-generation KM's problems: *the failure to distinguish between information and knowledge*
- For how can we say that knowledge has been created unless we have defined it and differentiated it from “just information” or “data”?
- Result of this expansion of KM is a view of Knowledge Processing that we call the **Knowledge Life Cycle**
- A map of the knowledge processing territory that KM tries to have impact on

Some Quick Cases

- First-Generation KM (Supply-Side)
 - KPMG (and most other professional services firms)
 - Built a centralized repository of “Best Practices” and document templates starting in 1996
 - All supply and no demand
 - All IT-based
 - McKinsey & Co.
 - Stressed taxonomy issues to enhance knowledge sharing
 - Rejected a single, shared taxonomy in favor of local individual ones, but still a supply-side mindset
 - Chevron*
 - Best practices system using technology
 - Stressed ‘demand-pull’ instead of ‘supply-push’ environment

Some Quick Cases (cont.)

- First-Generation KM (cont.)
 - Hughes Space and Communications*
 - Launched HSC 'Knowledge Highway' (KH) to address:
 - People not wanting to share their knowledge
 - The 'Not Invented Here' syndrome
 - Resulted in supply-side KM solution (capture, codify, share)
 - Lowered costs by 20 - 30 percent per year
 - e.g., saved \$7 - 25 M per aircraft built
 - Internal advertising of system and its successes helped
 - Kaiser Permanente*
 - Focus was on best practices sharing and transfer
 - Have sharing conferences every year w/strong attendance
 - High visibility and marketing critical

Some Quick Cases (cont.)

- Second-Generation KM (Supply- *AND* Demand-Side)
 - Partners HealthCare in Boston*
 - A Boston-based umbrella organization of hospitals
 - Focused on problem of too much knowledge in healthcare for physicians to keep up with, leading to errors in practice
 - Cited 1999 report by Institute of Medicine highlighting cost of errors in healthcare: *More than a million injuries and over 98,000 deaths per year caused by medical errors*
 - At Partners, more than 5% of patients suffer adverse effects from drug prescriptions
 - Established a knowledge production system around the Order Entry process for physicians to use (knowledge production and sharing)
 - Enhances quality of knowledge by subjecting orders to scrutiny
 - Allows disputes over orders entered to occur, followed by vetting
 - Competing claims that survive the process survive as “knowledge”

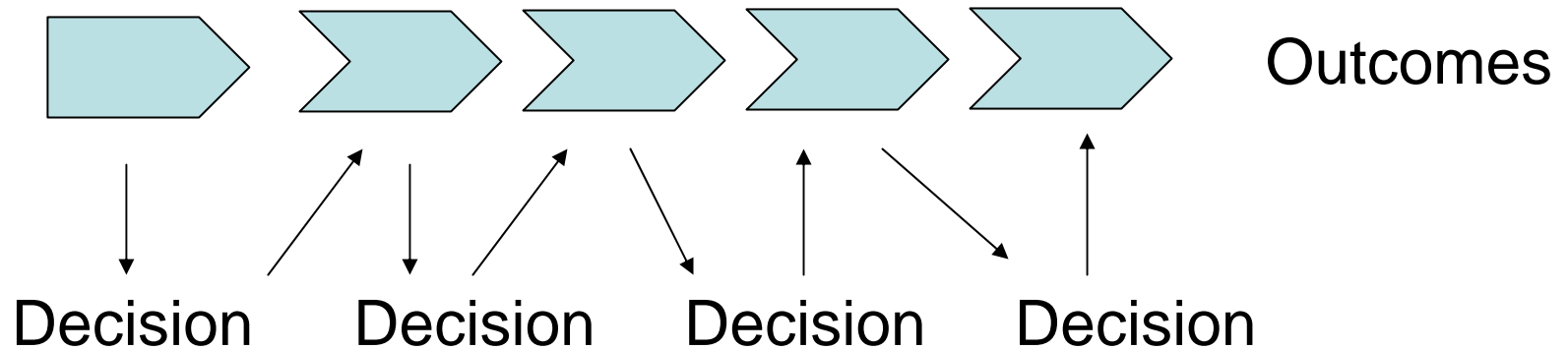
*Source: Davenport and Glaser, Harvard Business Review, July, 2002

Some Quick Cases (cont.)

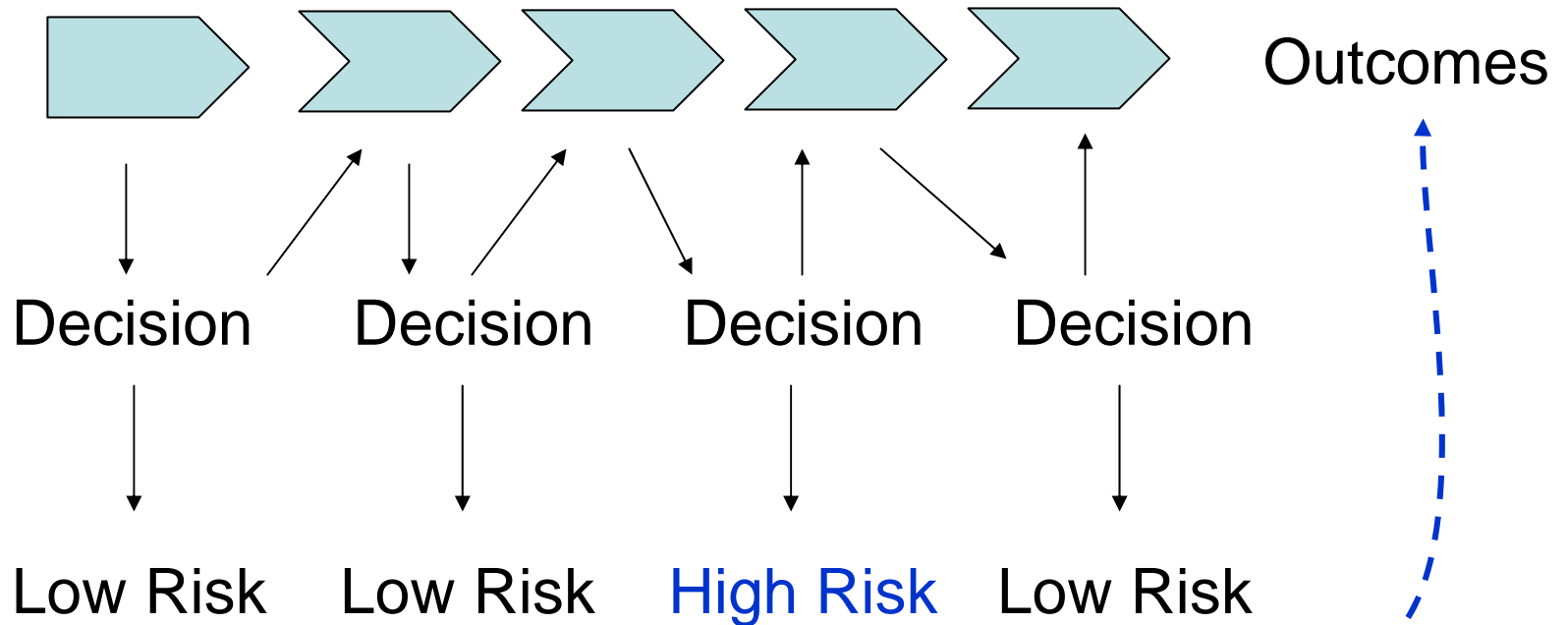
- Second-Generation KM (cont.)
 - Halliburton, Inc.
 - A first-generation KM shop explicitly based on strategy of *“getting the right information to the right people at the right time”*
 - Very (business) strategy driven, aim is to improve “service quality,” since they’re a service company
 - Motivating question is, *“How do people get the information they need in order to fulfill strategy?”*
 - “Every KM project always starts with a business issue”
 - What is their weapon of choice?
 - Communities of Practice
 - But only when business case to have one has been established
 - Now expanding KM strategy to focus on Demand-Side issues

Knowledge Process Integration (1 of 3)

A Business Process



Knowledge Process Integration (2 of 3)



**Where quality of knowledge put into
action can have dramatic impact!**

Knowledge Process Integration (3 of 3)

- Practice Implications
 - Create a bottom-up KM strategy, not a top-down one
 - Focus *not* on helping to achieve strategy in general terms, but on helping to improve the quality of knowledge as a basis for making decisions, especially where the cost of errors in decision-making is high!
 - Stress *integration of enhanced knowledge processing* in business processes where high-risk decisions occur
- A classic second-generation KM approach because it focuses on enhanced knowledge making, not just sharing
- A new metaphor – It's not *Push* versus *Pull*, it's *Push or Pull and Pull Back!*

Part 2 - Requirements for Operationalizing a *KM Program of Activities*

Key Issues to Consider

- What is KM in your organization?
 - First-Generation KM?
 - Second-Generation KM?
- What are its value propositions?
- Where does it logically belong, or fit, in the value chain, or in the organization chart?
- Staffing?
- Budget?
- Tools and Methods?

I'll Focus on Second-Generation KM

- Future of KM is in second-generation arena, not first
- What KM is, according to second-generation thinking, is:
 - A management discipline that seeks to enhance performance in business by enhancing the capacity of its people to produce and integrate knowledge (i.e., that seeks to enhance their performance by enhancing their capacity to learn and adapt!)
- Another way to think of it:
 - What we need in business are knowledge quality control systems, that enhance the quality of our actions by enhancing the quality of the knowledge we use to take them
- Has an obvious performance improvement focus, but also a risk management one (low quality knowledge)
- These are KM's ultimate value propositions!

Where Does KM Belong?

- Raging debate now underway between two camps:
 - The traditional “KM is about *fulfilling strategy*” camp
 - The KM is about “ensuring the quality control of knowledge” camp
- If you fall into the first camp, KM should report to the executive function and be placed in the chain of command
- If you fall into the second camp, KM should report to the governance function, outside of the chain of command
 - Because quality controlling knowledge is a fiduciary duty
 - Has oversight implications – points to the Board function
 - Even CEOs conflicted from “overseeing themselves”
 - And while the “fulfillment of strategy” is important, it is a function that belongs somewhere else (i.e., where it’s always been)

Staffing, Budget, Tools, Methods?

- These are the components of the KM function
- But what is the overall program of the KM function?
- Staffing for what?
- Budget for what?
- Tools and Methods for what?
- What KM needs is a program
- And a program is determined by a strategy
- When we speak of *operationalizing KM*, what exactly is it that we are operationalizing?
- A KM strategy!

Must Have a Strategy in KM

- A KM strategy is *the thing* we operationalize, and it has several dimensions to it:
 - Overall goals and objectives, which in second-generation KM is:
To enhance performance in business by enhancing the capacity of its people to produce and integrate knowledge (i.e., that seeks to enhance their performance by enhancing their capacity to learn and adapt!)
 - A program of projects to fulfill its goals and objectives
 - Staffing to perform its projects
 - Tools and methods for its staff to use
 - A budget and a forecast of ROI from investments in KM
 - Clearly defined position in the organization, consistent with its goals and objectives

A Specification for KM Methodology (1 of 5)

To be comprehensive and fit the need, a KM method:

- Must support the specific mission of KM to improve business processing outcomes by enhancing knowledge processing and KM itself
- Must support the persistent and iterative nature of KM (i.e., KM plans, acts, monitors, and evaluates its impacts, and then it plans *again* and *repeats* the cycle endlessly) – KM is *itself* a trial and error process, *it works through a learning cycle*
- Must address KM programs from "cradle to grave" – from strategy to maintenance

(cont.)

A Specification for KM Methodology (2 of 5)

To be comprehensive and fit the need, a KM method:

- Must address knowledge production, not just knowledge integration
- Must reflect the emergent, non-deterministic nature of organizational phenomena (orgs. are social systems)
- Must reflect the social and organizational aspects of KM issues and solutions in business, not just individual or personal knowledge needs
- Must be suitable for use over long periods of time consistent with the positioning and role of corporate KM functions

(cont.)

A Specification for KM Methodology (3 of 5)

To be comprehensive and fit the need, a KM method:

- Must be suitable for use on multiple projects, not just individual or isolated ones
- Must be flexible and scalable, so that
 - The same overarching methodology can be used for projects of all sizes, as well as in conjunction with different tools and techniques for different projects, as needed, and
 - Risk in applying the methodology is minimized
- Must address KM strategies and interventions in all of their dimensions, including not just IT solutions, but human resource and social system interventions too

A Specification for KM Methodology (4 of 5)

To be comprehensive and fit the need, a KM method:

- Must make explicit provisions for the use of third-party tools and methods as part of the methodological framework (for CoPs, portals, etc.)
- Must be vendor-, solution-, tool-, and method-independent
- Must support the use of any third-party tool or method, without having to abandon the methodology when changes in preferences occur
- Must provide for the measurement of impacts and benefits, both at the levels of knowledge and business processing outcomes

A Specification for KM Methodology (5 of 5)

To be comprehensive and fit the need, a KM method:

- Must be compatible with a broad range of existing business performance metrics and measurement schemes, such as the Balanced Scorecard, so that the impact of KM interventions can be expressed in terms of legacy performance measurement systems already in use
- Must make it possible to measure and report on “hard” dollar and “soft” benefit impacts of KM interventions in a consistent and compelling way across project- and intervention types using one scheme, not many

A Tall Order...Do Any Such Methodologies Exist?

Part 3 - KM Methodologies and K-STREAM™ - A Representative Methodology

Some KM Methodologies in Existence

- APQC's "Road Map" Methodology
- KM Toolkit by A. Tiwana
- CommonKADS Methodology
- Methodology for Building Ontologies by M. Uschold and M. King
- On-to-Knowledge Methodology
- CORMA
- VITAL Knowledge Engineering Methodology
- MOKA
- K-STREAM™

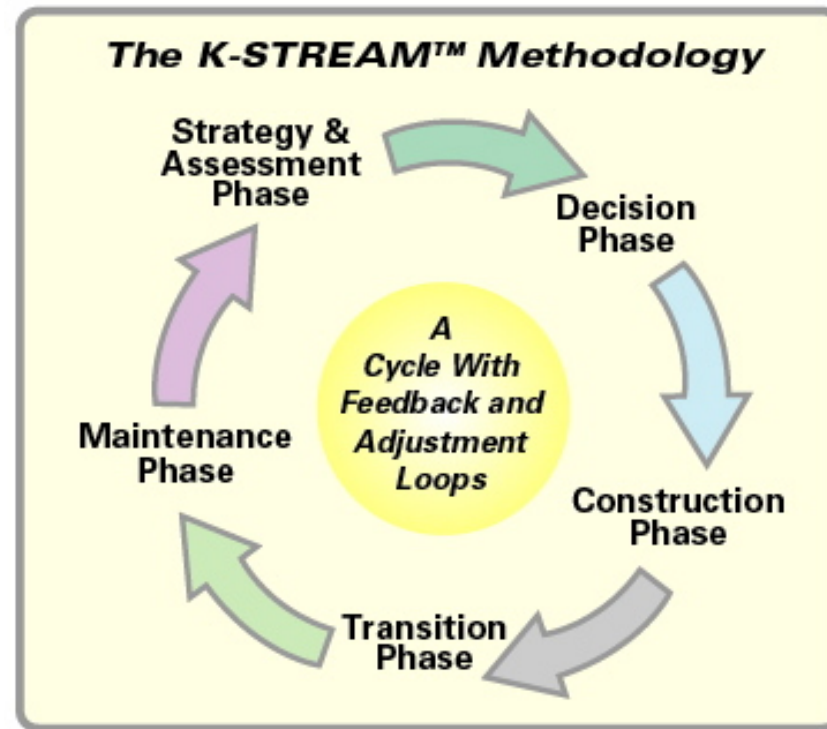
*Note: Compiled, in part, from data published by an EU project at <http://www.icons.rodan.pl/>

What Is K-STREAM™

- A comprehensive KM methodology developed by KMCI (Knowledge Management Consortium International)
- It's the methodology component of KMCI's "New KM" conceptual framework, developed by KM practitioners over the past seven years
- A leading second-generation KM methodology
- Offered to KM practitioners and their organizations through free and perpetual licenses (by KMCI)



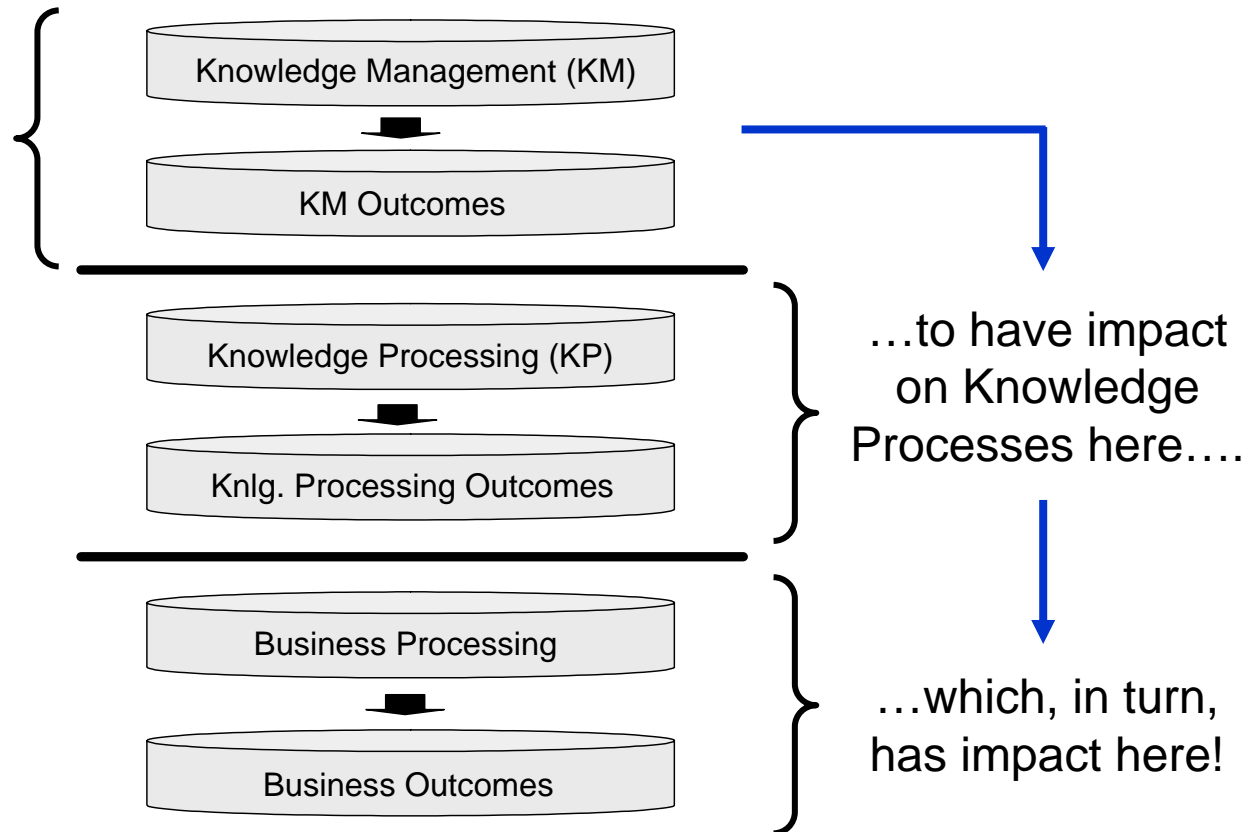
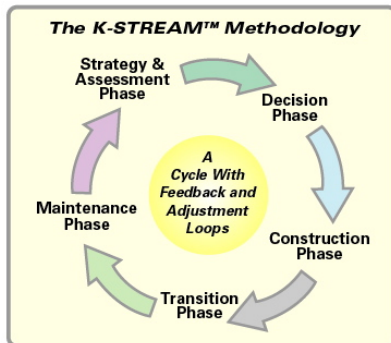
K-STREAM™ Process View



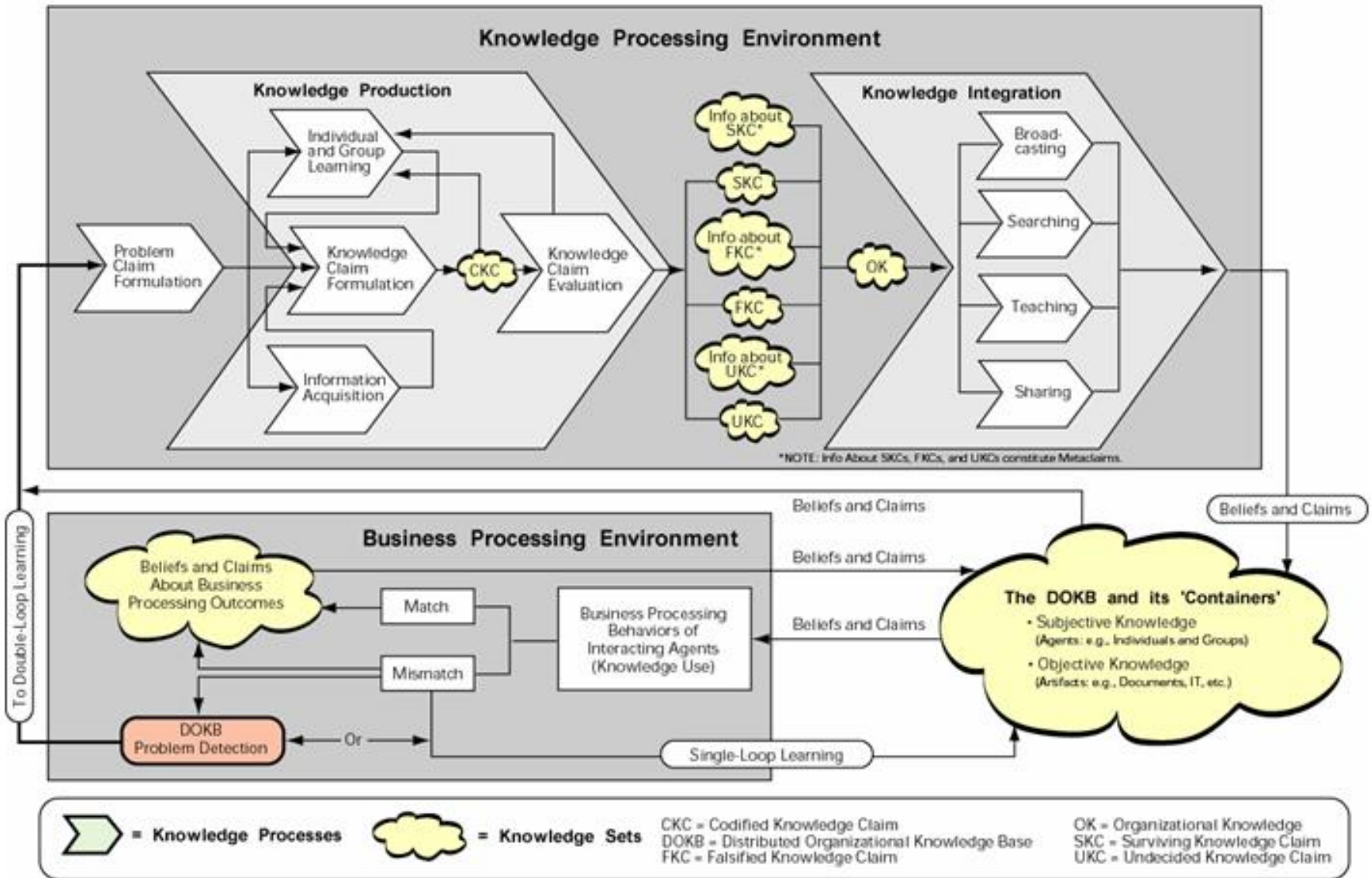
A Cyclical, Iterative Process of Enhancing Knowledge Processing!

K-STREAM™ in Context

A KM methodology
that practitioners
use here....



The Knowledge Life Cycle (KLC)



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Primary Tools Used in K-STREAM™

- Expert Choice™
 - An application of the Analytic Hierarchy Process (AHP)
 - Outstanding tool for taking measurements in systems in which measurement is difficult (e.g., social systems)
 - Uses group judgment method for assessing the quality of current knowledge processes and prioritizing future ones (target env.)
 - Also for specifying and prioritizing *probable* and *actual* impacts of alternative KM interventions (when developing strategy)
 - Makes empirical ROI computations possible in KM!
- *ithink*
 - System dynamics tool used for development of causal models
 - Makes simulation of alternative KM strategies and interventions possible before they occur (for testing and evaluating options)

Operationalizing KM?

- Again, what gets operationalized in KM is a program of activities specified by a strategy
- Strategy must be the first step (step 1 in methodology)
- Next is a *systematic process* of identifying a portfolio of projects to be done in order to meet goals and objectives
 - Which in 2nd-generation KM is generally to enhance Knowledge Processing...
 - ...in order to enhance individual and organizational performance and learning in the business domain
- Can't do this “systematic process” unless you have a methodology that helps you do so!

(cont.)

Operationalizing KM? (cont.)

- Once projects are defined, must then have staffing, tools, and methods in order to carry them out
 - Staffing needs comes from project plans
 - So do tools and methods, which are otherwise indicated by your methodology
 - Other tools and methods are indicated by the types of projects you'll be doing, and may come from third-party vendors or consultants (e.g., tools required to plan and implement CoPs, portals, or what have you)
- Tools and methods also imply skill sets required to perform projects, which in turn help specify staffing needs

(cont.)

Operationalizing KM? (cont.)

- Tools and methods also lead to software training and licensing fees
- All of this, then, drives budget requirements:
 - Cost to initialize KM function by developing a strategy
 - Subsequent staffing needs to carry out projects defined in strategy
 - Tools and methods training and software licensing
 - 3rd-party vendor and consulting support
 - Ongoing 'maintenance' costs associated with follow-on impact analyses

Operationalizing KM boils down to activating a program of action specified in a strategy, with people, tools, methods, and 3rd-party support!

Final Note

- Foregoing slides largely left out costs associated with actual Knowledge Processing systems, such as CoP programs, portals, other IT applications, etc.
- Reflects a bias (of mine and KMCI's) which distinguishes between costs that KM ought to bear versus costs that users ought to bear (not KM's job to do K Processing!)
- KM helps specify, design, and implement Knowledge Processing enhancement solutions, but the solutions it specifies, designs, and helps implement logically belong to the user organizations whose users are using them!
- Note also that ongoing maintenance for such systems are not a KM responsibility, according to this view

Thank You!

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