EIS

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Accelerated Innovation and KM Impact

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The Beginning, or Is It the Middle?

- You've just learned about the KLC Model and its relationship to innovation, but we also need to broaden the conceptual framework to help formulate ideas about the impact of KM on accelerating innovation, and to place the Extreme Innovation™ (EI) technique in the KLC context. So here we'll discuss:
- KM Definition and Specification
- KM Impact on the Components of the KLC Model and on Innovation relevance, innovation velocity, and innovation acceleration,
- Metrics needed for measuring the Impact of KM, and
- The Metaprise, KM Impact, and the context of EI.

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Knowledge Management

- KM is human activity that is part of the Knowledge Management Process (KMP) of an agent or collective.
- This reduces KM to the definition of KMP.

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The Knowledge Management Process

- The KMP is an
  - ongoing, persistent, purposeful interaction among human-based agents through which the participating agents aim at:
  - managing (handling, directing, governing, controlling, coordinating, planning, organizing) other agents, components, and activities participating in the basic knowledge processes (knowledge production and knowledge integration) to attain
  - a planned, directed, unified whole, producing, maintaining, enhancing, acquiring, and transmitting the enterprise's knowledge base.

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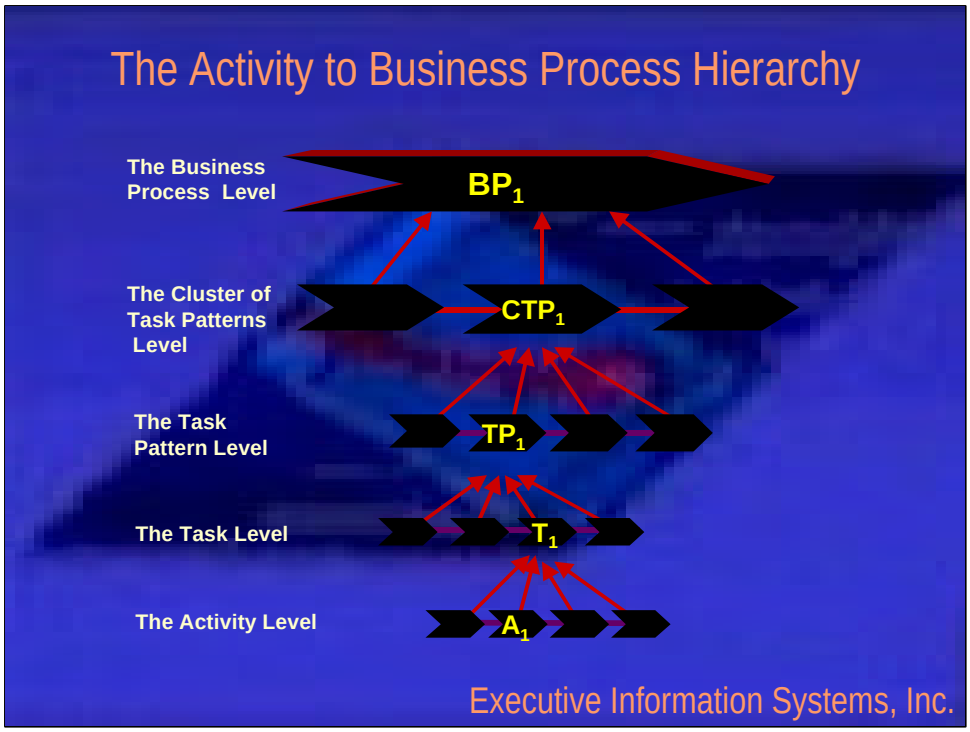
The Activity to Business Process Hierarchy
The Business Process Level
BP1
The Cluster of Task Patterns Level
CTP1
The Task Pattern Level
TP1
The Task Level
T1
The Activity Level
A1
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KM Task Clusters and Task Patterns in the KMP

- There are three task clusters in the KMP: interpersonal behavior; knowledge processing behavior; and decision making
  - Interpersonal behavior includes three task patterns:
    - figurehead,
    - leadership, and
    - external relationship-building activity.
  - Knowledge processing behavior includes two task patterns:
    - KM knowledge production; and
    - KM knowledge integration.

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KM Task Clusters and Task Patterns in the KMP (TWO)

- Decision Making includes four task patterns:
  - changing knowledge process rules;
  - crisis handling;
  - allocating KM and knowledge processing resources; and
  - negotiating agreement with representatives of other business processes.

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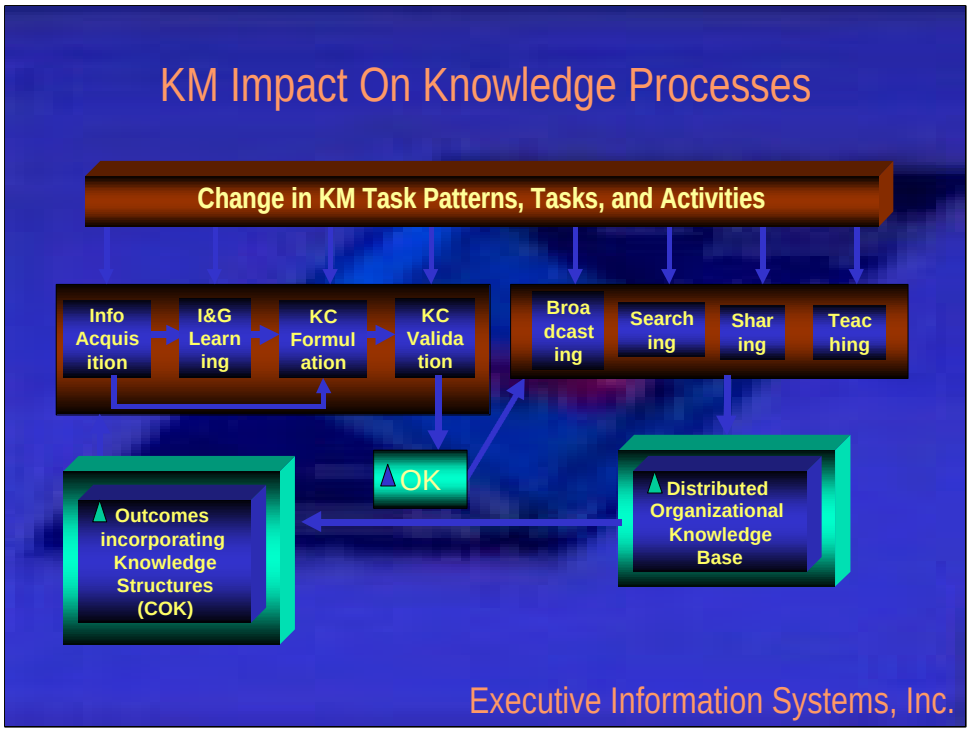
KM Impact On Knowledge Processes
Change in KM Task Patterns, Tasks, and Activities
Info Acquis ition
I&G Learn ing
KC Formul ation
KC Valida tion
Broa dcast ing
Search ing
Shar ing
Teac hing
OK
Outcomes incorporating Knowledge Structures (COK)
Distributed Organizational Knowledge Base
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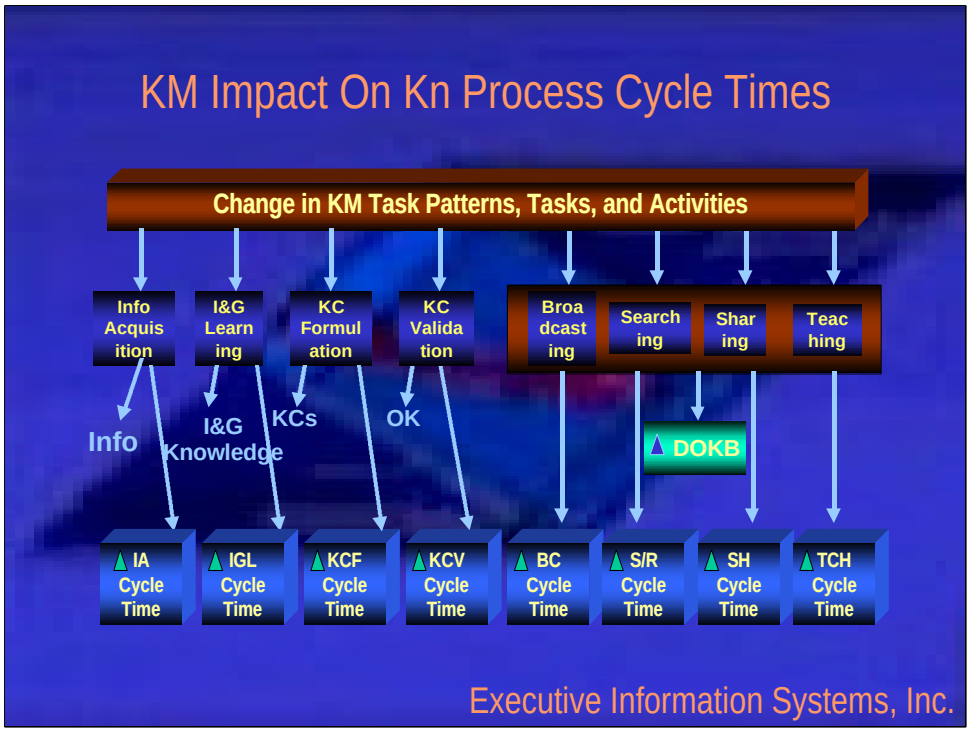
KM Impact On Kn Process Cycle Times
Change in KM Task Patterns, Tasks, and Activities
Info Acquis ition
I&G Learn ing
KC Formul ation
KC Valida tion
Broa dcast ing
Search ing
Shar ing
Teac hing
Info
I&G Knowledge
KCs
OK
DOKB
IA Cycle Time
IGL Cycle Time
KCF Cycle Time
KCV Cycle Time
BC Cycle Time
S/R Cycle Time
SH Cycle Time
TCH Cycle Time
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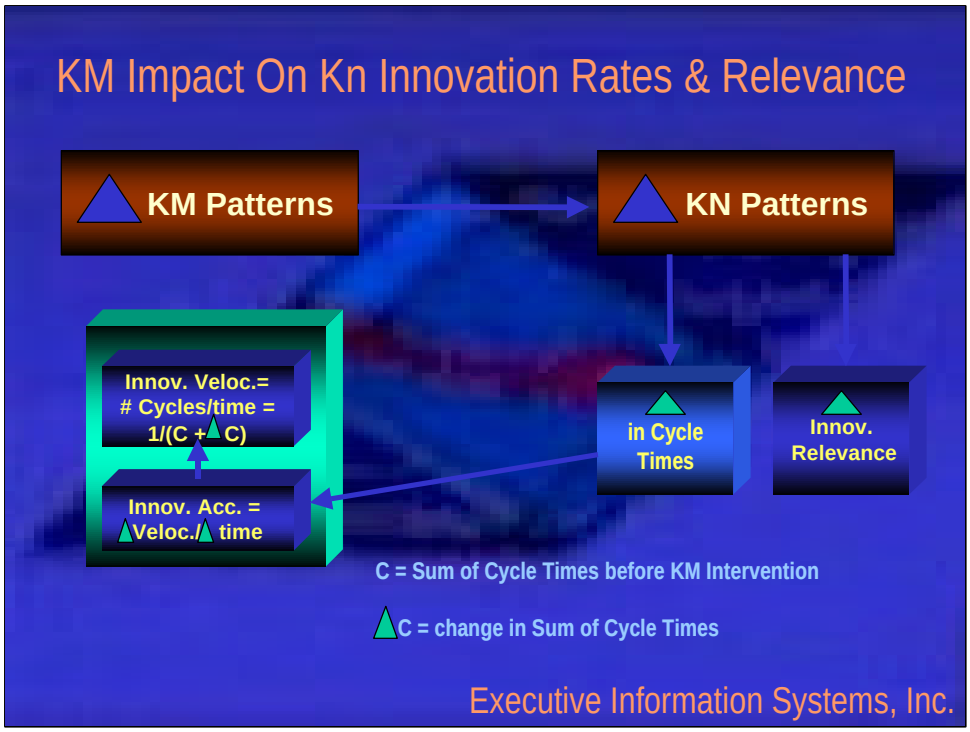
KM Impact On Kn Innovation Rates & Relevance
KM Patterns
KN Patterns
Innov. Veloc.= # Cycles/time = 1/(C + ΔC)
Innov. Acc. = ΔVeloc./Δ time
Δ in Cycle Times
Innov. Relevance
C = Sum of Cycle Times before KM Intervention
ΔC = change in Sum of Cycle Times
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KM Interventions, Impact and Innovation

- KM process Interventions are changes made in the nine task patterns and their relationships, and even more concretely,
- in tasks comprising the task patterns.
- These changes impact knowledge process components such as information acquisition, knowledge validation, knowledge sharing, and their relationships, and therefore also impact the
- relevance
- acceleration, and
- velocity of innovations, where an innovation is defined as a completed knowledge process life cycle event, beginning with knowledge production and ending in incorporation of knowledge structures within business or organizational structures.

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KM-Related Metrics For Evaluating Interventions

- Three Categories of Process and Product Metrics
  - Internal Metrics measuring changes in: the Task Clusters, Patterns, Tasks, and Activities of the KM Process, and the products of the KMP
  - Knowledge Life Cycle Metrics needed for measuring the impact of changes in KM on: KLC process components and relationships, Innovation Velocity (IV), Innovation Acceleration (IA), and Innovation Relevance (IR)
  - Metrics for measuring the impact of changes in IV, IA, and IR on the Enterprise

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The Metaprise and KM Impact

- An organization that implements an authoritative and formal Knowledge Management Process.
- Not only manages its knowledge processes, but also manages itself and its own rate of innovation.
- Contains at least two legitimated levels of process activity above the knowledge process level.
- The first analyzes and manages what occurs at the fundamental knowledge process level of interaction, and
- the second does the same at the knowledge management process level of interaction as well.
- In short, the Metaprise is the 21st century knowledge-managing, knowledge-innovating organization, specialized to produce maximum KM impact

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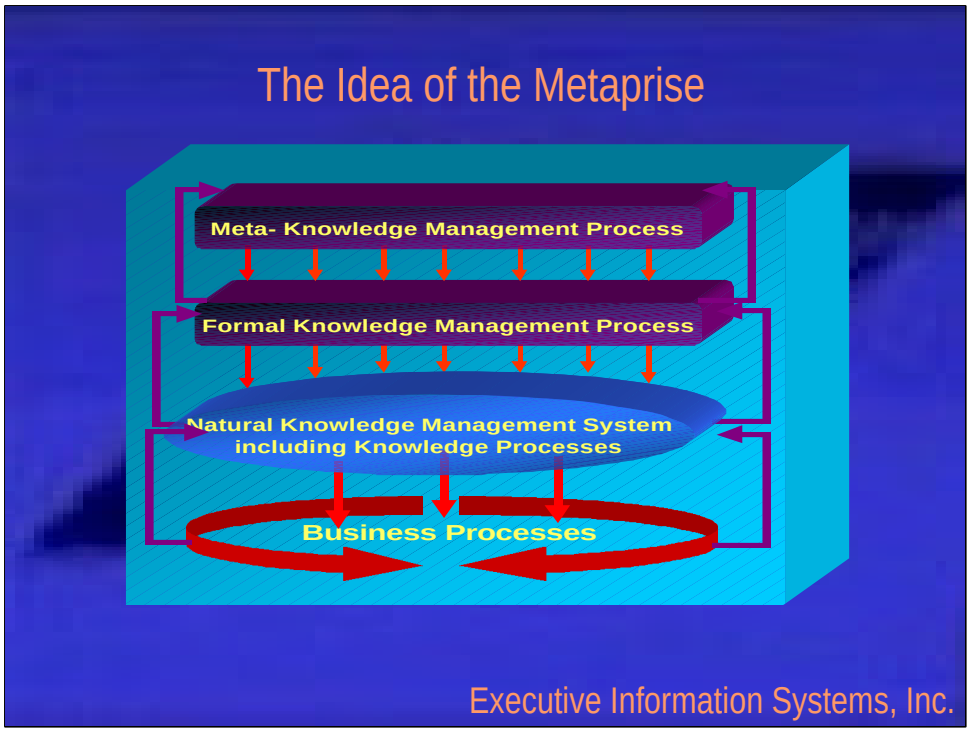
The Idea of the Metaprise
Meta- Knowledge Management Process
Formal Knowledge Management Process
Natural Knowledge Management System
including Knowledge Processes
Business Processes
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The Metaprise, EI, and KM Impact

- But to implement the Metaprise we need effective KM techniques. EI is a KM technique aimed at implementing the Metaprise and maximizing impact on innovation and ROI. This is EI's application context.
- To validate EI, or any other KM intervention, one needs, in part, to develop and analyze
  - internal KM process metrics describing KM changes produced by applying EI;
  - KLC metrics measuring the impact of EI-attributable changes in KM on all KLC process components, relationships, Innovation Velocity (IV), Innovation Acceleration (IA), and Innovation Relevance (IR); and
  - metrics for measuring the impact, attributable to EI, of changes in IV, IA, and IR on the Enterprise.

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Validating EI and Its Impact

- Still more specifically, to validate EI one needs to analyze the impact, attributable to it, of changes in KM patterns on changes in metrics related to:
  - Information Acquisition, Individual and Group Learning, Knowledge Claim Formulation, Knowledge Validation;
  - Broadcasting, Searching, Teaching, Sharing;
  - Innovation Velocity; Innovation Acceleration, Innovation Relevance; and
  - Indicators *external* to the Knowledge Life Cycle such as Return On Capital Employed (ROCE), ROI, Operating Margin, and numerous balanced scorecard-type measures of organizational performance.
- This is the validation context of EI, and of all other techniques designed to accelerate innovation and to implement the Metaprise.

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The End
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KMP Internal Metrics

- Some KM Process Metrics. Change in:
  - KM knowledge production cycle times
  - KM knowledge integration cycle times
  - Frequency of change in knowledge production rules
  - Intensity of collaboration among KM agents, teams, and groups
  - cycle time in responding to requests for competitive intelligence
- Some KM Product Metrics.
  - Change in breadth of distribution of KM knowledge within KM community of practice
  - Increase/decrease in extent of validation of various components of the KM organizational Enterprise Knowledge Model

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KM-Related KLC Metrics

- Some KLC Process Metrics
  - Change in KLC Component Cycle Times
  - Change in Innovation Velocity
  - Change in Innovation Acceleration
  - Change in intensity of Collaborative Activity in Knowledge Production
- Some KLC Product Metrics
  - Change in extent of Innovation Relevance
  - Change in average value of attributes in the knowledge base within and across domains
  - Change in validation profile of various components of the knowledge base

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KM-Related Enterprise Metrics

- Some Enterprise Process Metrics for measuring the impact of changes in IV, IA, and IR on the Enterprise
  - Change in Manufacturing Production Cycle Times
  - Change in Customer Service Cycle Time
  - Change In intensity of collaboration in enterprise business processes
- Some Enterprise Product Metrics
  - Change in ROI
  - Change in Profitability
  - Change in Market Share
  - Change in Customer Retention
  - Change in Employee Retention

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Examples of KM Interventions

- **Knowledge Production Interventions (From Mark McElroy with a few additions)**
- **Individual and Group Learning Interventions**
  - Formalized feedback mechanisms between knowledge integration phase and individual and group learning activities (e.g., broadcasts to communities of practice).
  - Formalized feed-*forward* mechanisms to knowledge claim formulation (broadcasts from communities of practice to CKO).
  - User-driven desktop environments (Demand-side KM technologies, such as Enterprise Knowledge Portals).

- **KM Task Patterns Associated with the Interventions**
  - Allocation of KM Resources
  - Changing Knowledge Processing Rules
  - Allocation of KM Resources
  - Changing Knowledge Processing Rules
  - Allocation of KM Resources

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Examples of KM Interventions

Knowledge Production Interventions (From Mark McElroy)	KM Task Patterns Associated with the Interventions
Information Acquisition Interventions	
Significant involvement in outside initiatives, consortia, think tanks, etc.	Building External Relationships
Research initiatives.	Allocation of KM Resources
Industry conferences and outside training programs.	Allocation of KM Resources
Targeted subscription services (Gartner, etc.).	Allocation of KM Resources
In-house IA functions (library services, etc.).	Allocation of KM Resources
Highly customized desktop systems that enable self-styled research on an individual basis.	Allocation of KM Resources

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Examples of KM Interventions

- **Knowledge Production Interventions (From Mark McElroy with a few changes and additions)**
- **Knowledge Claim Formulation Interventions**
- Create formalized procedure for receipt and codification of individual and group innovations at an enterprise level.
- Formalize processes allocating people, process, and technology resources to KM and Kn processes.
- Decentralize innovation using communities of practice, portal technology and explicit innovation techniques.

- **KM Task Patterns Associated with the Interventions**
- Allocation of KM Resources
- Changing Knowledge Processing Rules
- Leadership
- Allocation of KM Resources
- Changing Knowledge Processing Rules
- Allocation of KM Resources

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Examples of KM Interventions

- **Knowledge Production Interventions (From Mark McElroy with a few changes and additions)**
- **Knowledge Validation Interventions**
- Institutionalize validation process as a formalized way of processing new knowledge claims.
- KM practitioners must establish validation criteria (i.e., the rules by which new rules will be evaluated: "meta-rules").
- Requires the maintenance of codified organizational knowledge for use as a backdrop in assessing newly formulated knowledge claims ("knowledge structures").
- Initiating Corporate "Memome" projects.

- **KM Task Patterns Associated with the Interventions**

- Changing Knowledge Processing Rules
- Changing Knowledge Processing Rules
- Allocation of KM Resources
- Changing Knowledge Processing Rules
- Allocation of KM Resources

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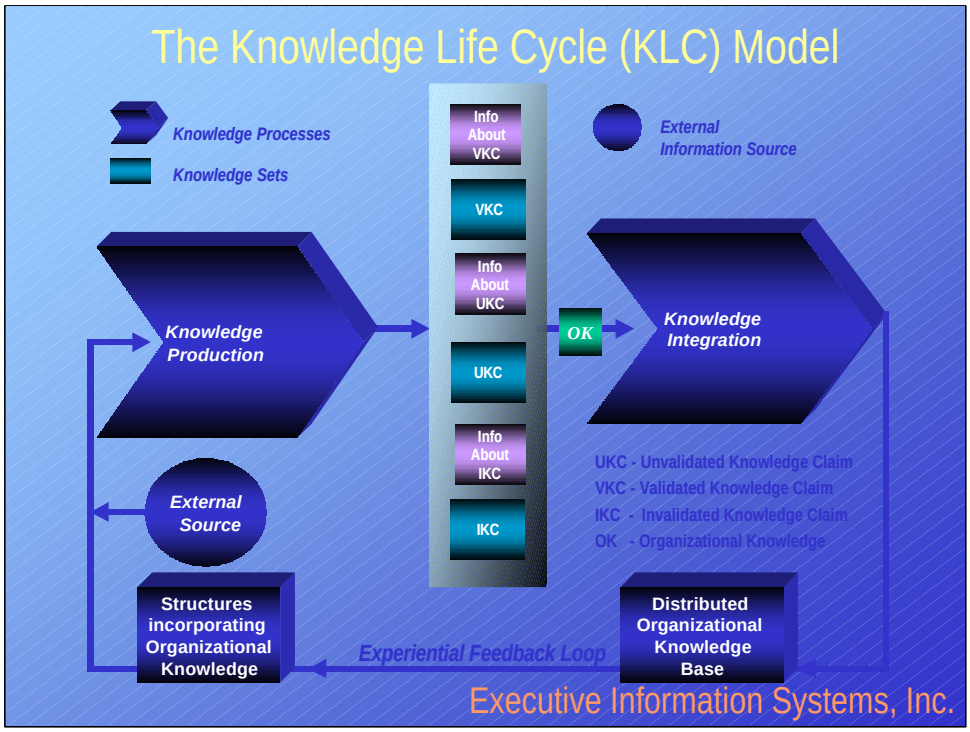
The Knowledge Life Cycle (KLC) Model
Knowledge Processes
Knowledge Sets
Info About VKC
VKC
Info About UKC
UKC
Info About IKC
IKC
External Information Source
Knowledge Production
OK
Knowledge Integration
External Source
UKC - Unvalidated Knowledge Claim
VKC - Validated Knowledge Claim
IKC - Invalidated Knowledge Claim
OK - Organizational Knowledge
Structures incorporating Organizational Knowledge
Experiential Feedback Loop
Distributed Organizational Knowledge Base
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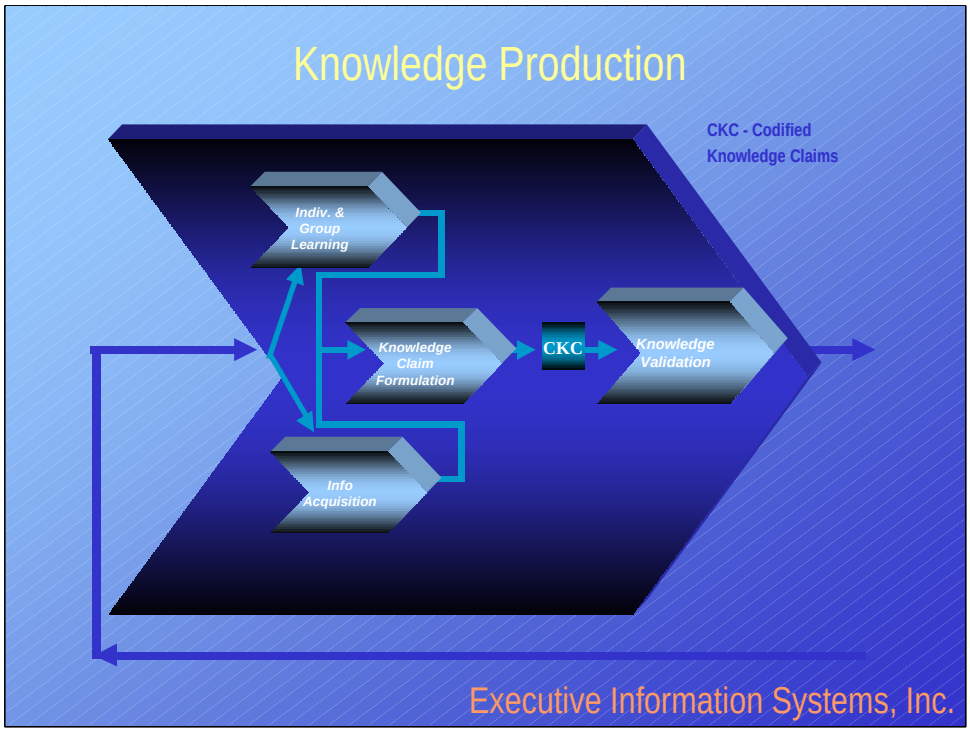
Knowledge Production
CKC - Codified
Knowledge Claims
Indiv. &
Group
Learning
Knowledge
Claim
Formulation
CKC
Knowledge
Validation
Info
Acquisition
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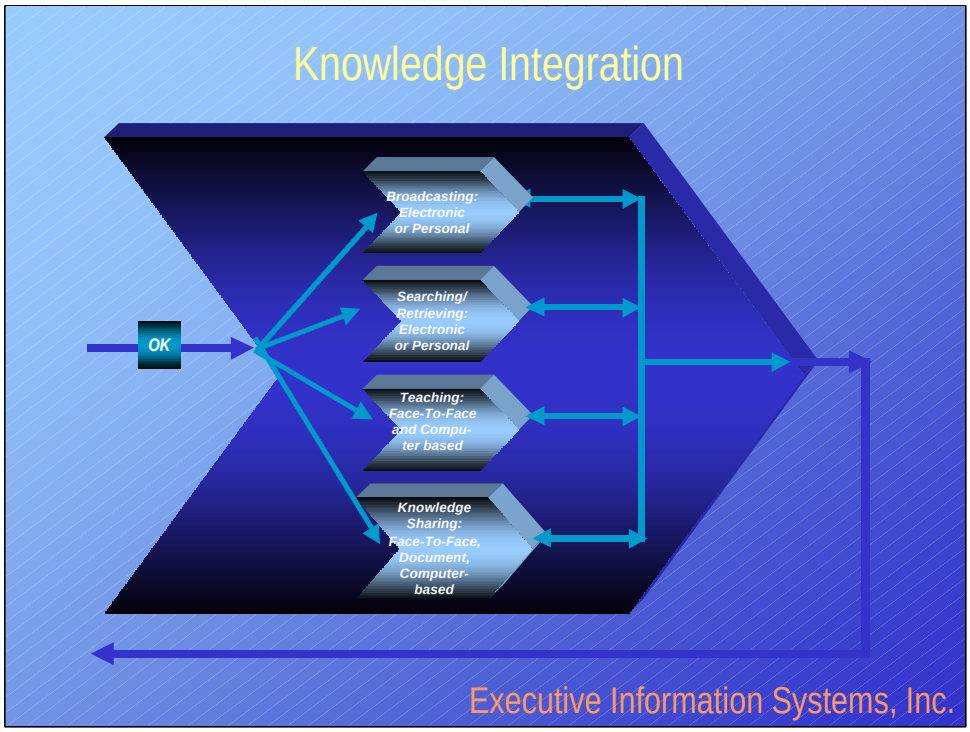
Knowledge Integration
OK
Broadcasting: Electronic or Personal
Searching/ Retrieving: Electronic or Personal
Teaching: Face-To-Face and Compu-ter based
Knowledge Sharing: Face-To-Face, Document, Computer-based
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