BENEFITS AND CHALLENGES OF KNOWLEDGE MANAGEMENT

WLE
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"I think there is a world market for maybe 5 computers"
Thomas Watson, chairman of IBM, 1943

“People are difficult to govern because they have too much knowledge”
The Way of Lao-tzu, (604 BC - 531 BC)

“Technology is dominated by two types of people: those who understand what they do not manage and those who manage what they do not understand.”
Putt’s Law
AGENDA

KNOWLEDGE MANAGEMENT (KM) DEFINITION

BENEFITS FROM USING KM

CHALLENGES IN KM IMPLEMENTATION
WHAT IS KNOWLEDGE MGMT?

“KM IS A CONCEPT IN WHICH AN ENTERPRISE GATHERS, ORGANIZES, SHARES, AND ANALYZES THE KNOWLEDGE OF INDIVIDUALS AND GROUPS ACROSS THE ORGANIZATION IN WAYS THAT DIRECTLY AFFECT PERFORMANCE”

- Robert S. Seiner
WHAT IS KNOWLEDGE MGMT?

“KM IS THE PROCESS THROUGH WHICH ORGANIZATIONS GENERATE VALUE FROM THEIR INTELLECTUAL AND KNOWLEDGE-BASED ASSETS”

- Meridith Levinson
WHAT IS KNOWLEDGE MGMT?

“KM INVOLVES THE IDENTIFICATION AND ANALYSIS OF AVAILABLE AND REQUIRED KNOWLEDGE ASSETS AND PROCESSES...SO AS TO FULLFILL ORGANIZATIONAL OBJECTIVES.”

- Dr. Carl Sveiby
WHAT IS KNOWLEDGE MGMT?

“SIMPLY THE TRANSFER OF KNOWLEDGE FROM ONE PERSON TO ANOTHER, THE RESULT OF WHICH ENABLES THE RECIPIENT TO BENEFIT FROM THE COLLECTED WISDOM OF THE MORE EXPERIENCED MEMBERS OF AN ORGANIZATION OR GROUP.”

- Robert Villegas
WHAT IS KNOWLEDGE MGMT?

COMPUTATIONAL INPUTS

ORGANIZATIONAL INPUTS

POSSIBLE MEANINGS

POSSIBLE ACTIONS

POSSIBLE RESULTS
WHAT IS KNOWLEDGE MGMT?

- DATA
- RULES
- INFORMATION
- PROCEDURES, POLICIES, BEST PRACTICES

POSSIBLE MEANINGS

POSSIBLE ACTIONS

POSSIBLE RESULTS

PUBLICATIONS, RESEARCH
BEST PRACTICES, EXPERIENCE
INDUSTRY EXPERTS, CONFERENCES, ON-GOING PROJECTS, PROCESSES
WHAT IS KNOWLEDGE MGMT?

“A CYCLICAL SYSTEM THAT ENABLES AN ORGANIZATION TO EFFICIENTLY ACHIEVE ITS OBJECTIVES BY HAVING THE ABILITY TO TRANSFORM TACIT AND EXPLICIT LEARNINGS INTO HABITS, BETTER PLANNING, AND EXECUTION”
"What good is technology if it takes six seconds to send a message but six months to get someone to act on it?!"
EXAMPLES OF APPLIED KM

MANUFACTURING / INDUSTRY BENCHMARKING
OPERATIONAL INDUSTRY INDICES
BEST PRACTICES
STRATEGIC COST MGMT
PARTNERSHIP
TECHNOLOGY ADVANCEMENT

SW DEVELOPMENT KITS / API, SW MGMT
JDBC, GOOGLE API, iODBC, OOP
CODE LIBRARIES
SEI IMPLEMENTATION AND CERTIFICATION
CALL CENTER’S (HELPDESK) EXPERT SYSTEM
WORLD WIDE WEB
EXAMPLES OF APPLIED KM

DOCUMENT MGMT SYSTEM VIS-A-VIS
WITH BENCHMARKINGS, SPECS, RULES,
FINDINGS, DOE, PROJECT MGMT

- HIERARCHICAL AND
  GROUP SECURITY

- CHANGE
  MANAGEMENT SYSTEM

- OBsolescence
  MGMT
EXAMPLES OF APPLIED KM

WIKIWIKIWEB

INFORMAL INFORMATION
SHARING WITH RELATIVE EASE

• WIKIPEDIA VERSION
• INITIALLY FOR DESIGN ENGRS
• MOUSE USER CAN SHARE BRAINS
• AI AND RULES BUILT-IN
QUICK QUIZ:

WHAT IS KNOWLEDGE MANAGEMENT?
BENEFITS OF KM

COMMON AND GENERIC
- HELPS ENSURE THE RIGHT INFORMATION GETS TO THE RIGHT PEOPLE AT THE RIGHT TIME TO MAKE THE RIGHT DECISIONS

WRITTEN THEORIES
- ORGANIZATIONAL AGILITY
- OPERATIONAL EFFICIENCY
- INNOVATION RATE
- EMPLOYEE GROWTH AND LEARNINGS
- CORE GROWTH AND IMPROVEMENT
KM IN CYPRESS (IT)

Q1 2000: SHARED SERVICE CENTER (SSC) OPERATIONALIZED

• PAYROLL PROCESSING FOR ALL U.S. SITES
• INVENTORY, A/P, A/R, ABC TO MAJOR CY SITES WORLDWIDE
• CORE SYSTEMS SW DEVELOPMENT

IMMEDIATE BENEFITS:

• COST REDUCTION OF AT LEAST US$1M/yr
BENEFITS OF KM (IN CY)

Q1 2004: GLOBAL HELPDESK KM INSTITUTED
SUPPORTS ALL 23 CY SITES WW (EXCLUDING
SALES AND MARKETING OFFICES)

BENEFITS:
• COST AVOIDANCE OF US$0.6M / YEAR
• IMPROVED CALL RESOLUTION TIME (CRT)
  FROM DAYS TO HOURS
BENEFITS OF KM (IN CY)

Q3 2003: IT TECHNICAL REVIEW BOARD
UNIFIED SW AND HW DEVELOPMENT PROCESS
SHARING OF MINDS, ARCHITECTURE, RULES,
MATRIX, MEMO’S, SCORECARDS, PROCESSES

BENEFITS:
• ON-TIME DELIVERY IMPROVEMENT FROM 70% TO 16%.
• SW DEFECTS FROM 8/DEV TO 2/DEV
• SARBANES-OXLEY READY
BENEFITS OF KM (IN CY)

TACIT BENEFITS

- IMPROVED TEAM COMMUNICATION
- REDUCED PROBLEM SOLVING TIME
- IMPROVED PROFITABILITY
- CONSISTENCY
- IMPROVED PROJECT MGMT
- CUSTOMER PARTICIPATION
- REDUCED DESIGN CYCLE TIME
- CLOSE TO MARKET
- BUSINESS PROCESS IMPROVEMENT
IMPACT OF KM TO PROJECT DEVT

WTD UNITS

PROJECT DEFECT

Q304  Q404  Q105  Q205  Q305  Q405  Q106
0%  10%  20%  30%  40%  50%  60%  70%  80%
"The hardest thing in the world to understand is the income tax."

— Albert Einstein
Photovoltaic Finesse

Better solar cells—with wires where the sun don’t shine

By Daniel Cho

First to Market
CHALLENGES IN KM IMPLEMENTATION

CULTURE

MANAGEMENT SUPPORT / SPONSORSHIP
DEMONSTRATING BUSINESS VALUE
CHANGE MANAGEMENT IMPLICATIONS
KEEPING UP WITH NEW TECHNOLOGIES
SECURITY
CHALLENGES IN KM IMPLEMENTATION

TECHNOLOGY INFRASTRUCTURE

INTEGRATED DATABASES
INTEROPERABILITY
NAVIGATIONAL TOOLS

“What good is technology if it takes six seconds to send a message but six months to get someone to act on it?!”
CHALLENGES IN KM IMPLEMENTATION

PROCESS AND ARCHITECTURE

BUSINESS PROCESS / MODEL
DOCUMENTATION / NO-TRASH MGMT
INTEGRATING INTO PLANNING SYSTEMS
EXECUTION
MEASUREMENTS
IRONY OF KNOWLEDGE

HMPH... NOBODY TOLD ME...

THE SEMINAR ON EFFECTIVE COMMUNICATION HAS BEEN CANCELED