



From Technical Writer to Knowledge Worker

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Overview

- Knowledge workers: two stories
- What is knowledge and how do we manage it?
- Knowledge worker roles
- KM tools and processes
- What knowledge workers do (sound familiar?)
- References



My Career Transitions at DuPont

- Scientist
- Technical Writer
- Information Designer
- Knowledge Worker



Technical Writer

- Focus on generating content for business I had worked in
- Document design set by internal or external groups
- Began to define business value of my work



Information Designer

- Began projects in another business (not in my technical background)
- Task team approach
- Experts provide the content
- Paper-based long documents
- E-mail for short documents



Knowledge Worker–Part I

Knowledge generation processes

- Face-to-face meetings
- Online, real-time meetings (NetMeeting)
- Online documents (e-mail and servers)
- “Front-end loading” analysis
- Creative thinking/problem solving techniques



Knowledge Worker–Part II

Knowledge organization and transfer

- Develop Lotus Notes databases
- Allow the business to capture, organize, and disseminate useful technical and business knowledge
- Central repository → active collaboration tool

**** Major culture change ****



What Success Will Look Like

- Databases are:
 - Usable
 - Useful
 - Evergreen
 - Active
- Databases easily accessible for:
 - “Stress-free” learning curves
 - Step change in work practices



“Document the Expert” Project

- Knowledge transfer from a DuPont Fellow from his 35-year career
- 50+ file drawers of partially documented work
- Technical content deep and broad
- Part-time effort



Approach to the Project

- Prioritize the knowledge of greatest value to the business (FEL analysis)
- Summarize the highest value knowledge
- Include in Lotus Notes database
 - Annotated bibliography
 - Links to other reports
 - Essential paper files
- Engage information scientists to catalogue, preserve (microfilm?), and provide access to all retained files

*Knowledge
map*



Angela's Story

- Technical Communicator
 - Online help systems
 - Web sites
- Director of Information Engineering
 - Goal: To build online information products that enhance the bottom line



Evolution of Knowledge Products

- Paper → Online → CD ROM → HTML → Knowledge base on Web
- Results
 - Significant drop in overall call volume
 - 30% → 80% of customers went online before calling support center in 2 years
- Dynamic knowledge that users can put into action



Backgrounds of Knowledge Workers

- Technical communicators
- QA engineer
- Knowledge base developers
- Instructional designers



Value Added by Knowledge Workers

- Synthesized knowledge
- Added clarity to the knowledge base
- Provided effective access to customers and internal users with the right technologies



Skill Sets of Knowledge Workers

- Content analysis
- Writing skills
- Indexing skills
- Usability
- Tools knowledge
- Human-computer interactions
- Self-managing
- Cross-functional teams
- Understanding of business models and goals



Data/Information/Knowledge Continuum

■ Data

- Observed states of the world

■ Information

- Data endowed with relevance and purpose

Peter Drucker

■ Knowledge

- Information given context, meaning, interpretation, and implications

Thomas H. Davenport



Knowledge Management (KM)

“The conscious strategy of putting knowledge into action by creating context, infrastructure, and learning cycles”
Thomas Davenport

“The intersection of search and groupware, a way of making corporations “learning organizations”
Nicholas Shelness, Lotus Corp.



Valuable Knowledge for Businesses

- Customers
- Competitors
- Products and processes
- How to get things done here
- Rules of thumb (heuristics)
- Skills, experience, know-how

American Productivity and Quality Center Consortium Study, 1997



Common KM Content

- Expert directories
- Corporate yellow pages
- News Groups/List Servers/e-mail
- Best practices
- Procedures (how to)
- Factual knowledge (business-wide)
- Discussions (threaded, archived)



Types of Knowledge

■ Explicit

- Data, objective, systematic, known
- Ex.: process maps, procedures, directories

■ Tacit (implicit)

- Context-specific, dynamic, personal
- Ex.: know-how, insights, judgments



KM Tools/Environments

Knowledge Transfer

- Groupware (Notes, Exchange)
- Inter/Intranets
- E-mail
- Online meetings (videoconference)

Document repositories

Discussion databases

Pointers to knowledge

Document exchange



KM Tools/Environments (cont'd.)

Data Analysis and Performance Support

- Data to knowledge conversion
 - Data mining (neural networks)
 - Decision support (expert systems)
 - Real-time intelligent data analysis
- Performance support systems
- Problem resolution
 - CBR expert systems



Main KM Roles

- User communities
- Knowledge workers
- Chief Knowledge Officers (CKO)

Working Knowledge, Davenport and Prusak



Knowledge Worker Roles

■ Technical

- Structure databases
- Design appealing content prototypes
- Install and maintain KM applications
- Encourage user community to populate databases

■ Management

- Work with self-managed teams
- Develop infrastructure and justify economics



KM Processes

- Knowledge generation (innovation)
- Knowledge organization
- Knowledge transfer



Knowledge Generation

- Acquire external resources
- Dedicate internal resources (R&D) *
- Adapt to changes in environment
- Form temporary, diverse teams *
- Form networks with common interests *

* Knowledge workers can influence knowledge generation process



Our Impact on Knowledge Generation

- Identify issues and boundaries
- Facilitate actual and virtual meetings
- Capture ideas
- Provide initial scaffolding for knowledge

“Serendipity can play a big role in acquiring knowledge.”

Angela McAlister



Knowledge Organization

Putting relevant knowledge into a usable, accessible form

- Categorize
- Map
- Model
- Simulate
- Embed (procedures)



Our Impact on Knowledge Organization

- Identify types of knowledge and develop strategy for capturing it (explicit/tacit)
- Establish criteria for usefulness of knowledge (FEL analysis)
- Develop knowledge maps (pointers to people, documents, and databases)
- Develop dynamic models of knowledge flows integrated with process flows



Our Impact on Knowledge Organization (cont'd.)

- Translate expert knowledge to operational procedures
- Provide consistent and shared terminology
- Provide context for and guidance to knowledge subsets
- Define software applications for knowledge organization



Knowledge Transfer

- Transfer = Access + Use
(Computer networks) (Human behavior)
- Need both actual and virtual meetings
- Knowledge fairs (choice of topics and time to talk)
- Tacit knowledge is hard to transfer
 - Mentoring (apprenticeship)
 - Aerial photography expert system story



Our Impact on Knowledge Transfer

- Develop knowledge maps
- Set up knowledge fairs
- Be a boundary spanner and develop a common language among users
- Help to establish organizational cultures that value knowledge sharing



Knowledge Workers (Pick a title)

Knowledge

- Architect
- Editor
- Engineer
- Designer
- Co-ordinator
- Librarian
- Integrator
- Developer
- Manager
- Synthesizer
- Administrator
- Reporter

Knowledge activist



Reference Books

*Working Knowledge: How Organizations
Manage What They Know*

Thomas A. Davenport and
Laurence Prusak

Harvard Business School Press, 1998

*Innovation Strategy for the Knowledge
Economy: The Ken Awakening*

Debra Amidon, Butterworth, 1997



Selected Web References on KM

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<http://www.entovation.com/>
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<http://www.skyrme.com/>
- The Montague Institute (Jean Graef)
<http://www.montague.com/>
- Eloquent, Inc. (Clifford Reid)
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Comments/Follow-up

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