# Knowledge Work & Knowledge Management: Integrating IT & Human Capital in the 21st Century Corporation

**Managing Transformations**
**in Work, Organizations, & Society**

**15.343 – Spring 2002**

# Check In:  Action Assignment

- Here is last week's action assignment:
  - Identify a policy in your organization that has been designed to address work/life issues – educate your self on the specific provisions or intent of the policy
  - Interview 2-3 people who should be able to benefit from the policy – in order to better understand how the policy works in practice (at least for this limited sample)
  - Be prepared to discuss lessons learned
- What did you observe?

# Welcome to Today's Guests & Industry Participants

- Our Expert Panel
  - Larry Prusak, Exe. Dir., IBM's Institute for Knowledge Management
  - Wanda Orlikowski, Professor, MIT Sloan School
- Industry Teams from:
  - Ford
  - Qualcomm

# Objectives: Key Learning Points

- A Deeper Understanding of:
  - Role of Knowledge in the Economy and your Firms
  - What Types of Knowledge are Critical to Success
  - Role of IT in Knowledge Management
  - Organizational Strategies for Using, Capturing, & Sharing Knowledge
  - Your Role as a Knowledge Manager
- Food for Thought: Will human capital challenge finance capital's power in the 21st Century Corporation?

# Strategic Corporate Assets: A Brief Historical Tour

- Pre-Industrial
- Industrial Revolution
- Expanding Markets
- Information Economy

- Land, Minerals, Water
- Large Pools of Capital
- Marketing, Management
- Human Capital, Knowledge

# A National Policy Issue: 21st Century Literacy

**"The ability to read, write, and compute with competence, think analytically, adapt to change, to work in teams and use technology"**

**Source:** ***A Nation of Opportunity.*** **Report of the 21st Century Workforce Commission, 2000.**

# What Knowledge?

- Physical:  Healthy Bodies, Minds, & Families
- Technical:  Today's "Basic Skills"
- Analytical:  Ability to Solve New Problems
- Communications:  Read, Write, Speak, Teach
- Group/Team:  Ability to Lead & Participate
- Interpersonal:  Interact with "Customers"

# Three Puzzles from GM

- 1980s: $50 Billion High Technology Strategy:
  - Only to still be the high cost manufacturer
- 1982: NUMMI as a Learning Strategy
  - 20 Year Knowledge Transfer Path from California:
    - To Eisenacht, Germany in 1996
    - To Lansing, Michigan in 2000
- Saturn: 1985 Learning Laboratory
  - 2000: Isolated island of innovation; now getting reintegrated with GM

# Lessons Learned

- High Performance comes from Integration of Technology & Human/Organizational Systems
- Learning/Transfer Occurs in Networks
- Life Long Learning:  Going Beyond Rhetoric Requires
  - Stable Funding—Boeing/IAM Fund
  - Partnerships Across Education & Industry
  - Supportive Organizations & Families
  - Learning Communities
- Open Question:  Will Human Capital Challenge the Power of Finance Capital in Knowledge Based Firms?

# Knowledge Management: The Next Frontier

Larry Prusak & Wanda Orlikowski

# Value of Knowledge Management

Value of knowledge management depends not on knowledge or on IT, but on the ***use of knowledge*** by an organization's members

# Use of Knowledge in Organizations

Use of knowledge in organizations raises important issues, such as:

- ***power***
- ***culture***
- ***control***
- ***visibility***
- ***dependence***

# Issues in Use of Knowledge: *Power*

*Power in this firm is your client base and analytical ability. ... That is definitely the case in professional service firms. Now if I put all my information in a Notes database, I lose power… I'm trying to develop an area of expertise that makes me stand out in this firm. If I shared that with you, you'd get the credit not me, and I would lose.*

# Issues in Use of Knowledge: *Culture*

*What we hear is "The information is on Lotus Notes. It's your responsibility to find it." But two things predominate our culture. Everybody is very busy, we haven't any time to think, let alone search through hundreds of databases. And we are a research culture, where the real work is "bench work." So the perception is that if you are using IT, you are not doing something important.*

# Issues in Use of Knowledge: *Control*

*What makes me worried about using Notes is that I might be cited by someone who hasn't talked to me first. I'm worried my information will be misconstrued, that it will end up in say, Wichita, Kansas, being cited "... as per Paul Brown in New York," and used and relied on inappropriately. In Notes, I can't retain personal control over how people use my information.*

# Issues in Use of Knowledge: *Visibility*

*There is a hesitancy in putting information in a Notes database because it becomes very public information. I'd be fearful that I'd put something out there and it was wrong, and somebody would catch it, and it would reflect badly on me.*

# Issues in Use of Knowledge: *Visibility*

*People are uncomfortable putting out their ideas because they're afraid of having them shot down. There was one early incident where a scientist put an idea out on an R&D discussion database, and a VP wrote back something like "That's inappropriate ..." The scientist was publicly embarrassed and this has intimidated others from posting their ideas.*

# Issues in Use of Knowledge: *Dependence*

*There is a lot of dependency on the knowledge databases and that's not entirely good. Sometimes you go into these databases, search for something, not come up with anything, and then feel like: "Oh god, what do I do now?" It can be paralyzing.*

# Knowledge Management in Practice

- Value of knowledge management depends on how well an organization supports ***effective use of knowledge***
- How does an organization deal with issues of power, culture, control, visibility, dependence?
  - ***incentives, rewards, norms, work designs, resources, processes, training, etc.***

# The Global Diffusion of Knowledge-Driven Work Systems

- **Structure**
  - Primary, Secondary, Reverse
- **Strategy**
  - Piecemeal, Imposed, Negotiated
- **Process**
  - Knowledge Creations -- Virtual Knowledge as the Fragile Foundation for Global Diffusion

Source: "Knowledge-Driven Work: Unexpected Lessons from Japanese and United States Work Practices" (Oxford University Press, 1998)

# Discussion Task: Enhancing Building Knowledge Mgmt. System

- Brainstorm: What are the top three critical knowledge bases/skills needed for success in your operation in the next five years?

- Do a Strategic Analysis
  - What IT resources are needed to support use of this knowledge?
  - What organizational & human resources are needed?
  - How well is this knowledge being used today?
  - What are the key barriers to use/capture of this knowledge?
  - What changes are needed to overcome these barriers?
  - Potential Partners: What external partners do you need to work with in order to be successful?

# Summing Up: Becoming a Knowledge Leader & Manager

- Redefine & Broaden Definition of Knowledge
- Insisting on Basic “Literacy” in Education
- Opening New Portals to Jobs--Career Planning
- Life-Long Learning, NOT “School to Work”
- Redefining Labor Costs as Human Capital?
- Capturing, Sharing, Using Knowledge of Others
- Building & Managing Partnerships

# Action Assignment

- Identify a two examples of knowledge resources that are critical to the operations in your workplace
  - One should be a critical knowledge resource that is well supported by the Information Technology infrastructure and valued in tangible ways by the organization
  - One should be a knowledge resource that is equally critical knowledge resource that is not well supported or valued
- Analysis what would account for the differences observed

# Next Step-Next Week

**Going from Knowledge Workers & Knowledge Management to:**

**Integrating Technology and Social Features to Build**

***Knowledge-Driven Work Systems***