**Why We Were Wrong**

- The machine in the real world is not the same as the machine in the lab.
- Consequently, many problems are not anticipated by our model.
- The optimal path for identifying the cause of a problem, and reasoning about a solution, can't be determined in a hypothetical environment.

**Eureka!**

- The Community is the Expert System!

**The “Real World”**

- Different Environment
- New Machine
- Ageing Machine
- Problem Interaction

**Growing Community Knowledge**

- People around the world have insights.
- Peer review validates and warrants the insights.
- Technology captures the insights into a database.
- Accurate answers to help.

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Observing Work Practice

- Necessity is the mother of invention
  CSEs frequently invent new solutions
  They keep cheat sheets of solutions to jog their memories
  They share war stories with their local work groups (although migration of solutions between groups is slow and incomplete)

- In designing a system for sharing through documents, PARC built on these practices

What's in a Tip?

- Diagnosing obscure, costly failures
- Workarounds
  Paper curl in a dry environment causes excessive jams on baffle Q. Putting mylar tape from tool kit on edge will ease problem
- Making the job easier
- Comments on documentation

Knowledge Sharing with Significant Results

- Six months controlled test, two year field deployment
- 10% reduction in Hours/call
- Time in learning slope

- 10% Reduction in Service Time and Parts Used
- Fewer Long/broken Calls
- Increased Customer Satisfaction
So, What's New?

- It is not simply the building of a database of the latest technical information.
- It is a socio-technical system to capture practical know-how and individual inventions in online documents, which are then shared with the entire community. **Communities of Practice**
- Design includes no more than what's needed, and only uses what's readily available.

Creating a Knowledge Sharing Company

- Identify and nurture existing communities to foster knowledge sharing.
- Communicate and promote benefits and results of knowledge sharing.
- Align resources to accelerate knowledge use, reuse, and transfer.
- Enable sharing through tools and technology.
- Learn, reflect, and share insights, learning, and innovations.
- Build new communities and knowledge sharing infrastructure.
Internal Knowledge Tools and Resources
- DocuShare
- askOnce
- Placeware
- Inxight
- Multi-lingual
- PaperPort
- Digital Resources

DocuShare applications within Xerox...
- Extensive internal use, more than 50,000 users
- Knowledge and information sharing for wide range of communities
  - Field
  - Customers
  - Business Groups
  - Engineering
  - Marketing
  - Communication
  - Corporate
  - IM
  - Human Resources

Leading by Example
- Led by Our senior Team (Lighthouse Projects)
  - Governance
  - Strategy Committee Process
  - Intellectual Properties
  - Global Accounts Management
  - "Use Knowledge Sharing Tools"
  - "Encourages further Collaboration"
  - "Streamlines Process"

Corporate Web Sites Refocused
- Knowledge Universe
- Knowledge Sharing Network database
- Field Information Centre
  - "Sends strong Corporate message"
  - "Encourages further Collaboration"
  - "Shares Knowledge with Customers"
Another Initiative: DocuShare in Education

- Goal: A web-based collaborative work environment
- Simplify the Sharing of Knowledge
- Make it easy to use and organise
- Case study: Wayne Finger Lakes BOCES

DocuShare...Helping you share your Knowledge
Knowledge Sharing

NCISA Barossa Valley Adelaide July 15th 2000

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Why Share?

- It can make our work life easier, more effective and much more rewarding.
- "80% of the information that companies need to know about their competitors is already known to their own employees, suppliers, or customers."
  - Don Tapscott, Blueprint for the Digital Economy

Why Knowledge Sharing Is Not a Fad

"Innovation is everywhere. The problem is learning from it. Where employees confront problems, deal with unforeseen contingencies, or work their way around breakdowns in normal procedures, the problem is few companies know how to learn from this local innovation and how to use it to improve their overall effectiveness."

- PARC, Palo Alto, California
- John Seely Brown, Former Chief Scientist
Developing an Organisational Strategy

Critical Four Questions to start with:
2. Where is the knowledge? Individual? Communities? Is it Tacit? Explicit? What are the gaps?
3. How will you measure and track the impact? Internally? Externally?

What are the critical success factors to sustain a culture that shares knowledge? New Skills to develop? New Roles? What Resources are needed, tools and technology? Does it have Council support? What are the attributed Values?

Our own Xerox Knowledge Goal

…is to be strategically relevant to our customers… by helping them create a thriving work and learning environment that fosters the continuous creation, aggregation, use and re-use of both organisational and personal knowledge in pursuit of new business values.

Summary

Knowledge is driving the new economy.
Everything changes: communities, learning and commerce.
Documents convey knowledge.
It must begin with the People.
Technology is an Enabler.
Identify and leverage community knowledge for business value.
Develop a strategy to "win".

It's a Knowledge Based Economy.

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