

Date

Client's Name Goes Here

- Discussion
- Introduction to LearnerFirst Technology
- Knowledge Harvesting Exercise
- Examples of Action Learning Software
- Team Roles & Actions

LearnerFirst



21 May 1999

- Discussion
 - Introduction to LearnerFirst Technology
 - Knowledge Harvesting Exercise
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 - 10:00 to 10:30
 - 10:30 to 11:00
 - 11:00 to 12:00
 - 12:00 to 12:15
 - Lunch
- LearnerFirst



The Knowledge Equation

$$\begin{array}{ccc} \text{(Support Information + Guidance)} & * & \text{Interpretation} = \text{Knowledge} \\ \text{why what who when} & \text{how} & \\ \text{Information technology} & & \text{Individual's} \\ \text{is the medium} & & \text{thinking occurs.} \\ \text{for these messages.} & & \text{Meaning is achieved.} \\ & & \text{Capability} \\ & & \text{for action} \\ & & \text{is enhanced.} \end{array}$$

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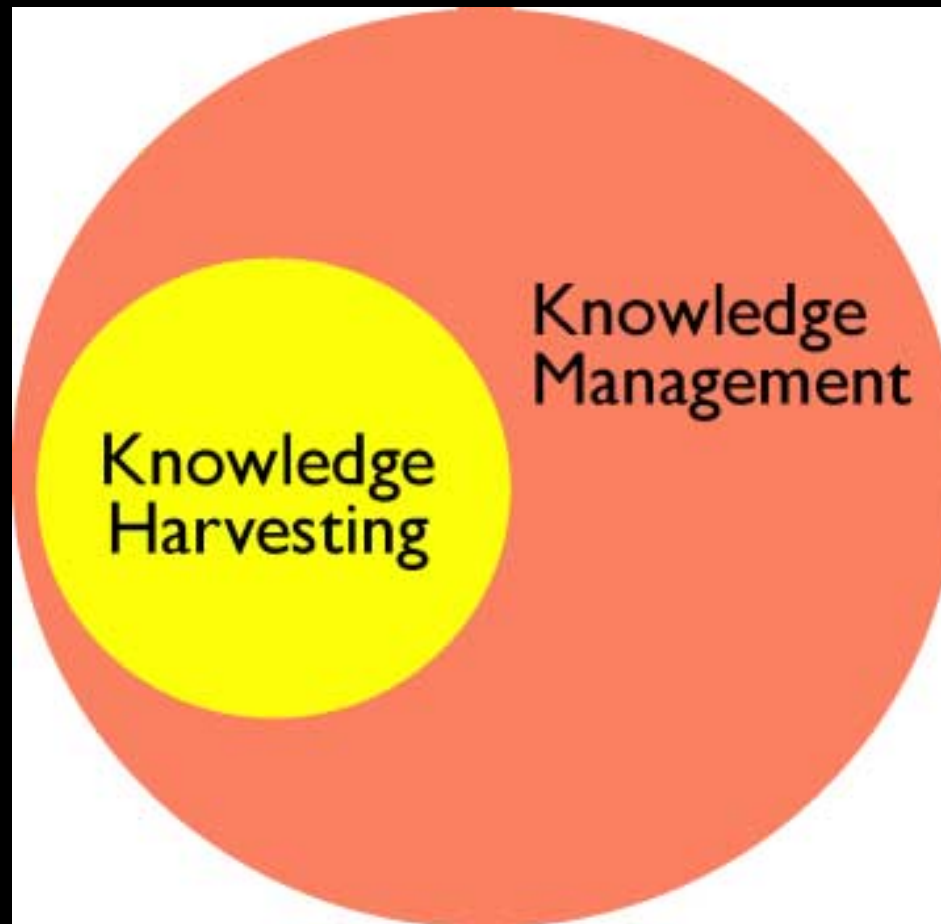
Framework



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KM & KH



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Knowledge Harvesting



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Language



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Language: Results & Action

Actions are processes of varying complexity that exist to create results. Actions may be performed individually or collaboratively. Accurate knowledge (“knowing how”) is the basis for action.

Results are produced, delivered, or provided by work; they may be tangible or intangible. Results contribute to the organization’s reason for existence.



Learning is required when actions do not produce desired results.

Knowledge assets allow learning at the speed of change.



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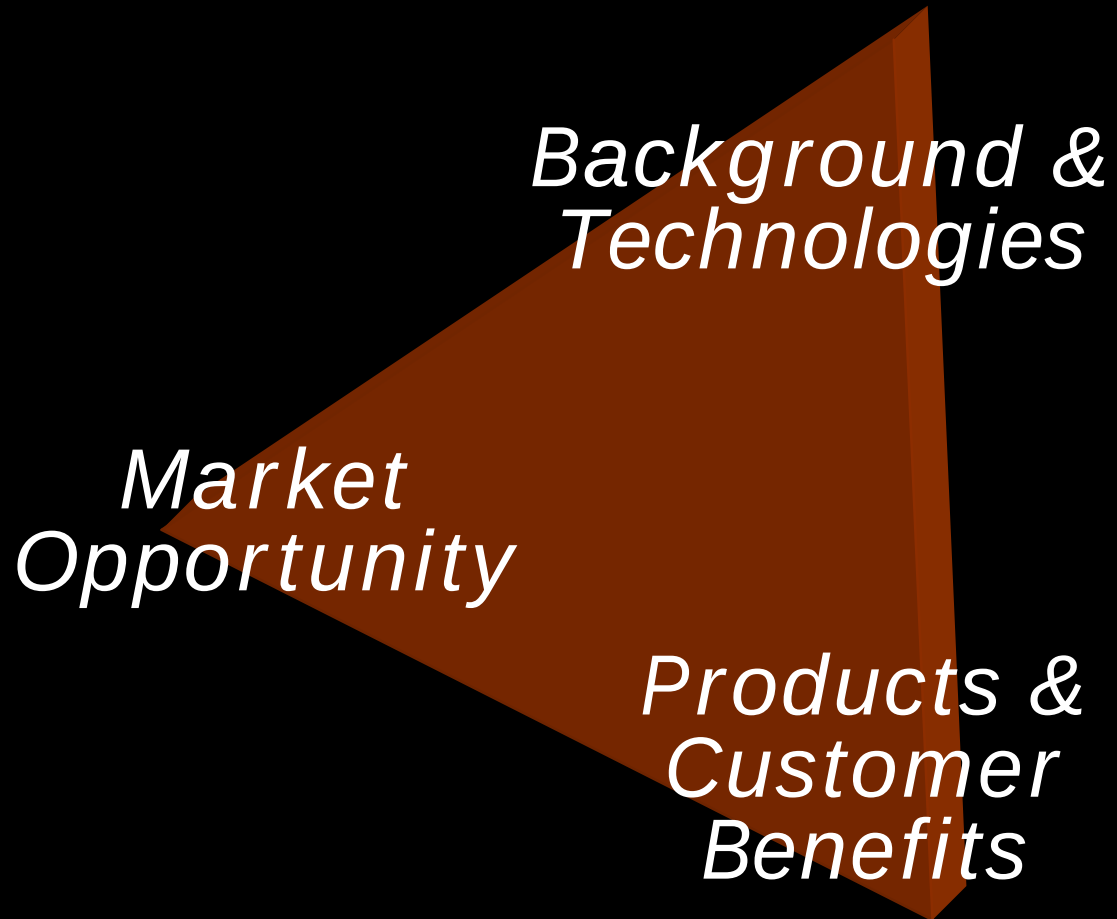
Introduction to LearnerFirst Technology

Larry Todd Wilson

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Introduction



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LearnerFirst Vision

- **LearnerFirst is dedicated** to the assertion that expert knowledge can be captured, embedded in “learning while doing” software, and commercialized as products.
- **The market potential** is enormous. Very early in the 21st Century, the largest value component for virtually all products will be knowledge.

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The Business Problems Addressed by LearnerFirst

- Expert knowledge is always in short supply, the problem continues to grow, and the danger of key personnel losses is increasingly high.
- Sharing expertise via conventional training and professional-service consultants is costly, slow, and severely limited in access and timeliness.
- Experts generally don't know how to share their knowledge, plus they are not motivated to “give away” their power and mystique.

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The LearnerFirst Solution

- The LearnerFirst product strategy is to provide a complete suite of product tools that enable:
 - Capturing the expertise of top performers.
 - Sharing that know-how via web-enabled software that is integrated into our customers' information-management systems.
 - Providing “learning while doing” capabilities for worldwide employees via intranet/Internet, on demand, and tailored to individual learning styles.

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LearnerFirst Origins

- The origin is cognitive-science master's research by Larry Todd Wilson at Auburn University with Professor Charles Snyder.
- Focus of attention is the intersection of knowledge science and commercialization.
- Premise over 10 years: expert knowledge can be captured, converted into software, and sold.
- R&D company formed in 1992 to develop the concept, prove the theory, and test the market.

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Underlying Discovery by LearnerFirst

- It is well-known that complex information can be reduced to minimum-size data elements (bits, bytes) for manipulation by computers, then reassembled into meaningful information.
- We now know that expert knowledge can also be reduced to minimum-size elements for manipulation by computers, then reassembled and distributed on demand.

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Categories of Information

- **“Guidance” information** provides specific “how-to,” coaching, and mentoring information for directly enabling decision-making and action-taking. Includes both instructions and advice.
- **“Support” information** provides supplementary data, documents, examples, definitions, etc. that improve understanding and enable a wide range of learning styles.

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Corporate Memory Management

- The *Knowledge Harvesting*® process extracts expertise from top performers.
- The *Knowledge Schema*™ organizes extracted expertise into a specific database repository.
- The *Knowledge Builder*™ software-development engine converts expertise into modules and programs.
- *Action Learning Software*™ programs enable step-by-step “learning while doing,” on demand.

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LearnerFirst *Knowledge Harvesting*®

- *Knowledge Harvesting* is a sophisticated, interview-based methodology for extracting explicit knowledge from experts--plus their tacit insights and intuitions as well.
- Interview results are analyzed and sorted into computer-ready input categories.
- Experts who share their expertise are building knowledge assets, and deserve to be rewarded.

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Knowledge Harvesting Business Experience

- *Knowledge Harvesting* has been perfected through application to more than 300 business processes to date, in a diversity of environments.
- "LearnerFirst's *Knowledge Harvesting* is significantly more efficient than a team of knowledge engineers, or any other methodology I know about."
 - Karl M. Wiig -- Chairman and CEO, Knowledge Research Institute, Inc.

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LearnerFirst Schema is a Knowledge Repository

- The LearnerFirst Schema is a knowledge-specific universal database organized to serve as a corporate knowledge repository.
- We are planning to publish our Schema structure and promote it as the industry standard. Delphi Group will be co-sponsoring a new AIIM* standard with LearnerFirst.
 - *Association for Information and Image Management.

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The *Knowledge Builder* Conversion Engine

- *Knowledge Builder* is a knowledge-conversion engine that embeds expertise into software.
- Builder v. 2.0 converts both Guidance and Support information into Windows software.
- Builder v. 3.0 is an upgrade of desktop to web-enabled capability. Will be completed in 99.
- The *Knowledge Builder* creates and updates *Action Learning Software* applications--quickly and easily.

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Action Learning Software™

- *Action Learning Software* applications are work-specific software programs, accessible to everyone.
- The applications are experienced by users in four simultaneous dimensions (4D):
 - Learning the relevant, just-in-time Support information for understanding. Assimilating the Guidance process steps.
 - Doing the actual decision-making and action-taking.
 - Recording the inputs, decisions and results.
 - Metaknowledge about user patterns, for analysis leading to ongoing improvements.

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Action Learning Software Building-block Components

- *Action Learning Software* applications are based on a core of off-the-shelf reusable modules.
- More than 50 modules are now in the LearnerFirst library, with estimated addition of 25-30 per year. More custom projects spawn more standard modules.
- ALS modules are knowledge assets that can be used, enhanced, sold, rented, traded and licensed. “LearnerFirst Compatible” is the key. LearnerFirst



“At LearnerFirst, Learners come first.”

- *Action Learning Software* focuses on the learning needs of individuals, who determine their own tasks, select their own style, set their own timing and pace, and assess their own results.
- Standard computer-based training (CBT) involves learning and testing, then performing.
- *Action Learning Software* applications involve performing while learning.

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Intellectual Assets on the Balance Sheet

- *Action Learning Software* applications add to the sum of knowledge assets and intellectual capital.
- Well-defined knowledge assets can contribute to analyst assessments of corporate valuation.
- Arthur Andersen 1998 study indicates that 65% of European companies expect to report intellectual capital to stockholders within five years (vs. 35% of North American companies).

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Commercialization of Packaged Software Products

- As an R&D company, LearnerFirst early focused on published products as learning opportunities for ourselves, with revenue to underwrite costs.
- Marketing outlets have been technical publishers with limited marketing resources available for LearnerFirst software products.
 - American Society for Quality.
 - IEEE-Computer Society.
 - Productivity Press
 - More than 4000 customer companies to date.

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LearnerFirst Professional Services

- Completed 18 major custom projects creating knowledge assets, including:
 - State of Florida, with Encyclopedia Britannica, Tallahassee (Public education, 1994-95)
 - Steelcase, Grand Rapids (Office environments, 1998)
 - Hoffman-LaRoche, Berne (Pharmaceuticals, 1998)
 - Buckman Labs, Memphis (Chemicals, 1997)
 - British Petroleum, London (Petrochemicals, 1998)

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The Buckman Labs Case History

- Corporate need for an individualized work profile or job description to clarify roles, and to describe key results and essential actions.
 - *Knowledge Harvesting* process was used to extract expertise and create work-profile software.
 - Work profiles for all worldwide employees are stored on intranet and accessible to all employees. Easy to update as expectations change.
 - Linked directly to performance-review process.

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Buckman Labs Customer Testimonial

- “Larry Wilson has made a profound discovery. With his knowledge schema, it is possible to lay the foundation for the science of knowledge.”
 - *Mark S. Koskiniemi, VP Human Resources, Buckman Laboratories International*

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The British Petroleum Case History

- In developing North Sea oil, better risk-assessment and risk-management was required.
 - *Knowledge Harvesting* process was used to extract intuitive knowledge from BP experts.
 - Drilling operations were provided with online, interactive training simulations on site, at sea.
 - New best practices were integrated into BP standard practice.

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British Petroleum Customer Testimonial

- “LearnerFirst people are among the 20 or so individuals in the world who really understand how to transfer knowledge. Their approach allows learning at the speed of change.”
 - *Kent A. Greenes, Director of Knowledge Management, British Petroleum*

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Corporate Memory Management

Major Customer Benefits

- Expertise is secure company property, available everywhere, easily updateable, and expandable.
- Consistent corporate performance is a step closer to the level of top performers.
- Employees make better decisions, faster and at lower levels.
- Improved productivity, lower costs.
- Cross-collaboration among work teams. **LearnerFirst**
- Training expense can become supplementary.



Current Status of LearnerFirst Technology

- LearnerFirst technology is based on in-depth, original research concerning the fundamentals of learning theory.
 - A comprehensive knowledge model has been constructed which applies to all intellectual activity involving the Guidance functions of decision-making and action-taking.
 - The model has been rigorously field-tested in application to more than 300 processes in a variety of functions, industries, geographies and cultures.

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Recent Thought-leader Papers at Industry Conferences

- 40+ papers and articles on www.learnerfirst.com.
- Chemical Mfgrs. Institute, Washington, D. C., 4/99.
- Bridgeman Institute, Orlando, 3/99.
- Intl. KM Summit, Delphi Group, San Diego, 3/99.
- McMaster Business Conference, Ontario, 1/99.
- KM Expo, Chicago, 10/98.
- Banff Centre for Management, Banff, Alberta, 10/98.
- Intl. KM Conference, Basel, 10/98.
- Productivity and Quality Center, Houston, 6/98
- Intellectual Capital Management Group, Helsinki, 6/98.

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Recent Press Coverage

- “LearnerFirst has one of the first turnkey solutions for making tacit knowledge explicit.” *Knowledge Management* magazine, 10/1998
- “Putting Quality in Knowledge Management.” Cover article, *Quality Progress* magazine, 1/1999.
- “How Knowledge Management Relates to Quality” *Singapore Productivity and Standards*, 6/1999.

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Industry Awards and Recognition

- “1998 Most Innovative Application of Knowledge Management,” by The Delphi Group at the International Knowledge Management Summit. Co-awardee was Buckman Labs.
- “1999 Codie Award Finalist, Best Application Development Program,” by Software and Information Industry Association (SIIA). Co-finalist (top five of 900+ nominees) was IEEE-Computer Society.



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Brokering Knowledge As a Business

- LearnerFirst will broker a growing number of *Action Learning Software* programs and modules:
 - Available for sale, trade or license from LearnerFirst's custom customers, and then brokered through LearnerFirst.
 - Custom customers would be able to underwrite all of their original project costs, over time.
 - Existing custom customers are participating.

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Competitive Advantages

- *Action Learning Software* applications have significant cost, time, access and effectiveness advantages over conventional training and consulting methods.
- LearnerFirst has lead-time advantage over competitors moving into Guidance software.
- LearnerFirst is first in the market space, with opportunity to set defacto industry standards for “LearnerFirst Compliant” software applications.

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Bonus Result: Ubiquitous Impact on Society

- Revolutionary technology enables the sharing of “how-to” knowledge, and thus has the power to change how society thinks and works.
- Eventual positive impact on underdeveloped neighborhoods and nations who will have access to best-practice expertise from around the world, available in their own cultural learning styles.
- Ubiquitous impact on society will be a natural result of successful commercialization.

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Make an Important Decision

Hands-on Exercise



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Examples Demonstration



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Focus

- Of the critical know-how that is necessary to operate your organization, what percentage is actually documented?
- How would you describe the remaining percentage? Is it "in people?" Is it anyplace else?
 - *What is the most important work that we do?*
 - *Where is the organization most vulnerable?*
 - *Where does "lost expertise" occur?*
 - *Where is the cash flow of the organization generated?*
 - *What are the barriers and obstacles in the organization?*

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Find support information.

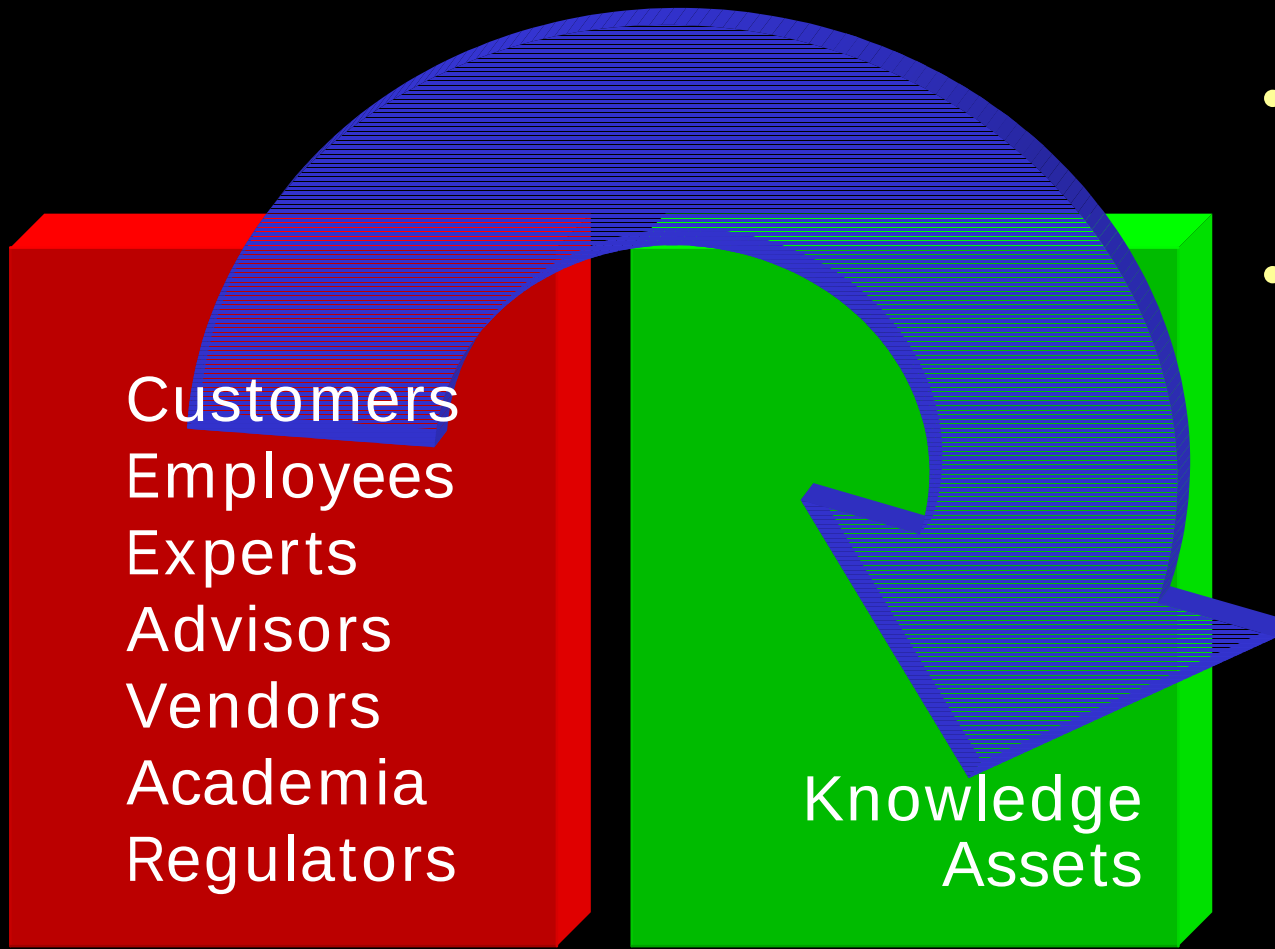
- Information Retrieval
 - Documents
 - Definitions
 - Examples
 - Descriptions
 - Measures
 - Explanations of “Feelings”

*Find
documented
methods,
processes, and
procedures,
SOPs, process
maps, policies,
workflow
descriptions.*

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Find expertise.



- *Who's an expert?*
- *How will contributors be rewarded?*

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Elicit guidance.

- Setting
 - Tools
 - Dialogue
 - Structured
 - Unstructured
 - Organize
 - 3:1
- *One knowledge asset = one process*
 - *Asset has four levels of guidance (for action):*
 - *Process*
 - *Module*
 - *Task*
 - *Thought (Element)*

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Knowledge Harvesting

- Characteristics
 - Is an experienced interviewer.
 - Has a genuine interest in people.
 - Establishes rapport quickly.
- Results
 - Process: logical, complete, accurate.
- Actions
 - Conduct focused interviews.
 - Organize harvested information.
 - Optimize the process / user interface.

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