



TVA's Approach to Knowledge Retention

Learning from OUR Mistakes

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Agenda



- The Attrition Challenge
- Talent Management and “That Little Something Extra”
- Identifying and Retaining Critical Knowledge
- Lessons Learned
- Available Tools & Support
- Questions



The Attrition Challenge



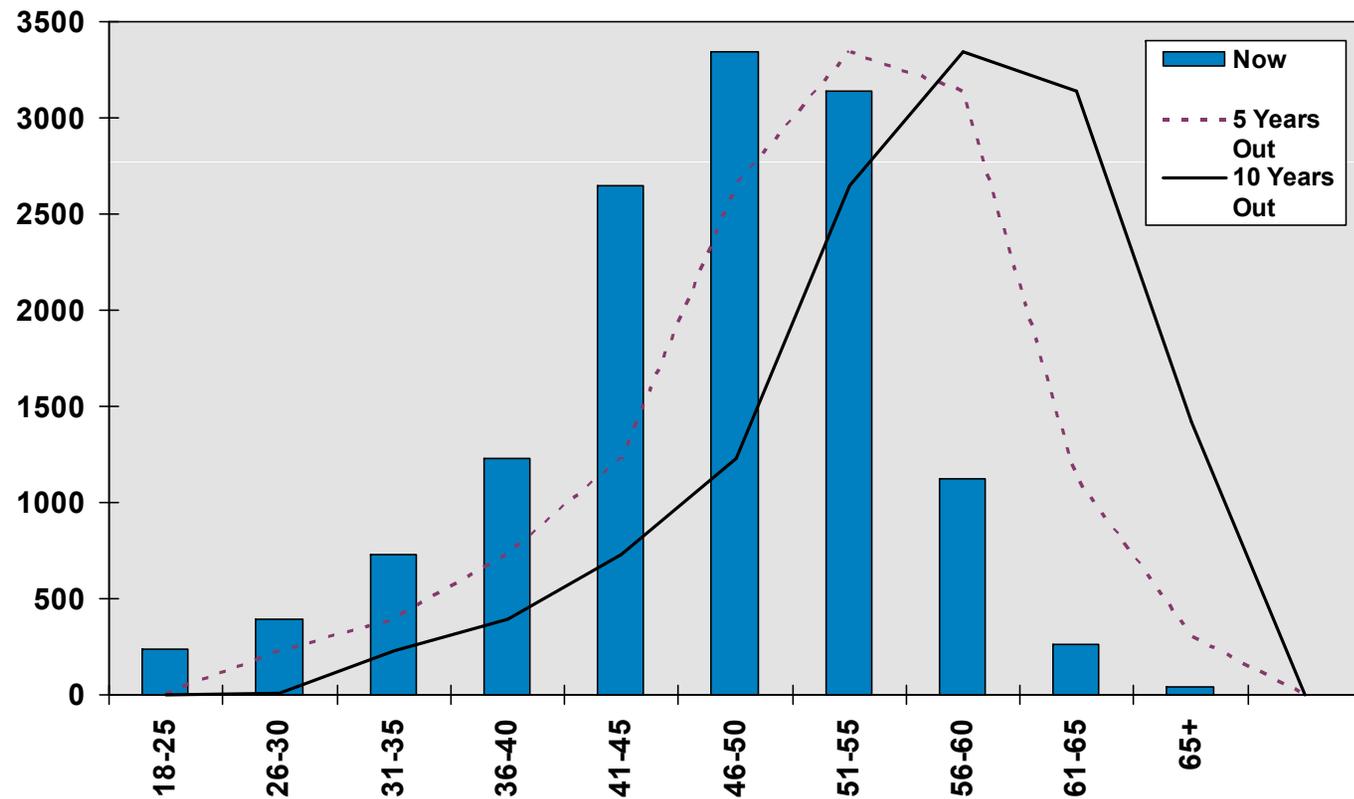
- Significant downsizing over 15+ years
- Various Retirement Incentives to Aid Downsizing
- 10 + Years of Very Limited Entry Level Recruiting
- Average Age – 47+
- 1/3 of work force eligible to retire within 5 years
- Pressure to Reduce Labor Cost = Not all retirees will be replaced



The Attrition Challenge



An Aging Work Force Nearing Retirement





The Attrition Challenge



Utility Industry-wide Issue

- Average utility worker is 44 years old. Average craft worker is 50. (Average U.S. worker is 37.)
- By 2010, as many as 60 percent of today's experienced utility workers will retire
- Shrinking labor force = Increased competition for talent
- 80% utility HR Executives identified the aging work force as their biggest worry. Less than 50% have a plan.



The Attrition Challenge

National Issue: Graying of America

- “Baby Boomers” reaching retirement age
- Median age of the US worker is 41
- Number of workers over 55 is growing 4 times than the workforce as a whole
- Retiring Earlier and Working Longer
- “Echo Boom” significantly smaller
- Widening Skills Gap
- What do NASA, Nuclear Weapons, the EPA, and your local hospital have in common?





Getting to Tomorrow's Workforce



*Critical
Undocumented
Knowledge !*





Early experiments in transportation

Lessons Learned



Lessons Learned



10. Start. Somewhere.



Knowledge Retention

“Knowledge Loss Risk Assessment”





Knowledge Retention

“Knowledge Loss Risk Assessment”

$$\text{Retirement Factor} \times \text{Position Risk Factor} = \text{Total Attrition Factor}$$

Total Attrition Factor -- An estimate of the effort and urgency necessary to effectively manage the attrition.

- 20-25 High Priority - Immediate action needed. Specific replacement action plans with due dates will be developed to include: method of replacement, knowledge management assessment, specific training required, on-the-job training/shadowing with incumbent.
- 16-19 Priority - Staffing plans should be established to address method and timing of replacement, recruitment efforts, training, shadowing with current incumbent.
- 10-15 High Importance- Look ahead on how the position will be filled/ work be accomplished. College recruiting, training programs, process improvements, reinvestment
- 1-9 Important - Recognize the functions of the position and determine the replacement need.



Knowledge Retention



“Knowledge Loss Risk Assessment”

		Position Risk Factor				
		1	2	3	4	5
Retirement Factor	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5



Lessons Learned



- 9. Not all knowledge is created equal.
- 10. Start. Somewhere.



Assessing Knowledge Criticality



– Importance

- Impact on safe, reliable, and efficient operations
- Localized vs. system-wide impact
- Existence of alternative methods
- Frequency and timing of need

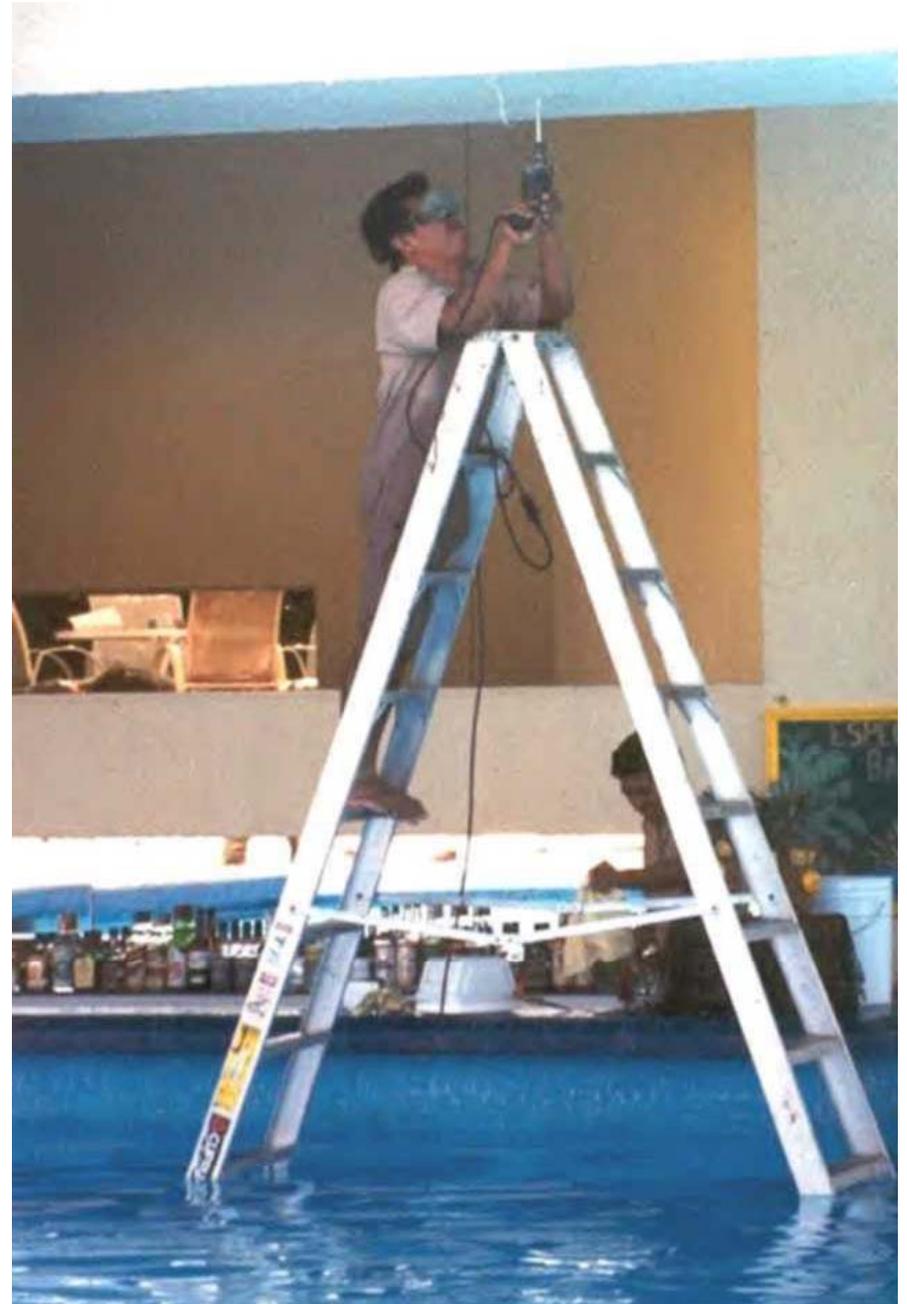
– Rarity of Knowledge

- Redundancy of knowledge internally and externally
- Company-specific knowledge
- Existence & cost of outside resources
- New hires with this knowledge available
- Loss gradual or abrupt

– Difficulty of Recovery

- Recovery possible
- Documentation or records exist
- Lead time needed to document or transfer

*Some knowledge
deserves to be lost.*





Lessons Learned



7. Variety of methods to capture knowledge (or survive its loss).
8. “Unique” knowledge isn’t something to be proud of.
9. Not all knowledge is created equal.
10. Start. Somewhere.



Knowledge Retention

Now What?



ID Options to Retain or Mitigate Knowledge Loss

Codification

- Documentation & Procedures
- Checklists, Inventories, etc.
- Performance Support Systems
- Concept Mapping

Alternative Resources

- Agency/site/department expert
- Rotational or “Visiting” Staff
- Multi-skilling or Cross-training
- Contractors, part-timers, retirees

Engineer It Out

- Process Improvement
- Update Equipment
- “Smart” tools and technology
- Eliminate task, product or service

Education & Training

- Classroom and Simulator Training
- CBT, Video-based, and alternative delivery
- Coaching and Mentoring
- OJT and Targeted Work Assignments
- Coaching, Shadowing & Mentoring
- Apprenticeship Programs



Lessons Learned



6. Start with the end in mind.
7. Variety of methods to capture knowledge (or survive its loss).
8. “Unique” knowledge isn’t something to be proud of.
9. Not all knowledge is created equal.
10. Start. Somewhere.



What Transfer Method?

Capture

→ Storage

→ Retrieval

→ Use

Start with the end in mind





Lessons Learned



5. Be careful of age-related assumptions.





Lessons Learned



1. Start. Somewhere.
2. You get what you expect ...
and measure.
3. Redefine “done.”
4. Often, it is about who you know.
5. Be careful of age-related
assumptions.



A Culture of Knowledge Sharing

The Role of Managers

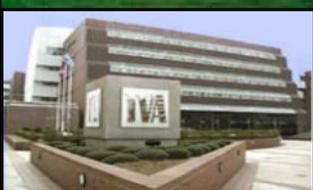


- Recognize observation and “tagging along” can be an investment.
- Facilitate development plans with specific learning objectives.
- Make knowledge transfer an expectation -- not just an option. Evaluate learning, teaching, and sharing.
- Provide an infrastructure (procedures, processes, documentation, lessons learned databases, shared folders) for employees to capture and share knowledge.
- Encourage formal cross-training and rotational assignments. Go beyond a single heir apparent.
- Fund job aids, signage, and “smart tools.”
- Encourage “Brown bag” lunches and story telling.
- Develop a pipeline of experts and leaders.



A Culture of Knowledge Sharing

The Role of the Experienced Worker



- Look for opportunities to teach & coach tomorrow's workforce
- Involve tomorrow's workforce in infrequent, specialized projects
- Tell some stories. Explain "the why" -- or history -- of the way things are done.
- Introduce tomorrow's workforce to customers, suppliers, consultants, user groups, other regions, etc.
- Update your records, processes and procedures.
- Develop job aids, signs, checklists, etc.
- Develop and deliver training.
- Consolidate and organize your files (including electronic records).
- Don't focus on a single "heir apparent" -- seek to develop a cluster of skilled employees



A Culture of Knowledge Sharing

The Role of Tomorrow's Workforce



- Ask questions. Ask to go along. Ask for more details. Ask.
- Seek out rotational and temporary assignments and cross-training opportunities.
- Volunteer to write-up the procedure or develop the website. Have seasoned employees review.
- Have a written development plan. List specific things to learn, experiences to have, people to meet, etc.
- Visit new locations and expand your network.
- Recognize that understanding and honoring the past doesn't limit your future.



Resources



www.tva.com/knowledgeretention



Questions?