



Industry HR Best Practices for managing an aging work force

***School of Nuclear Knowledge Management
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Agenda

- 1 HR Issues
- 2 Aging Work Force
- 3 Access to Best Practices
- 4 Examples of Best Practices
- 15 Observations

HR Issues

Playing a Strategic Role

Competitive Business Focus

Recruiting and In-processing

Human Resource
Organizations

Aging Work Force

Leading Change Management

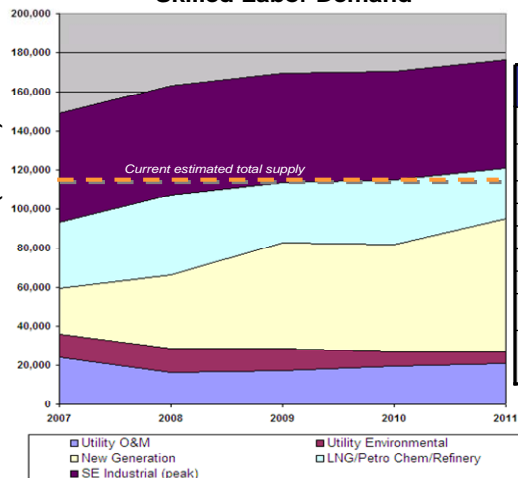
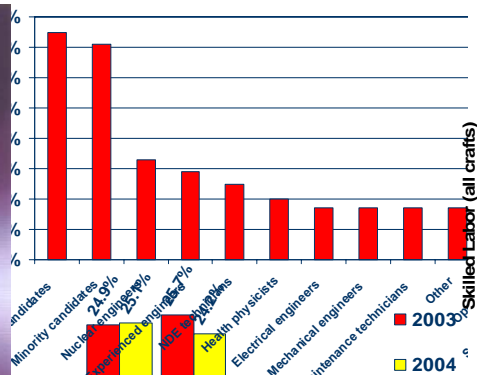
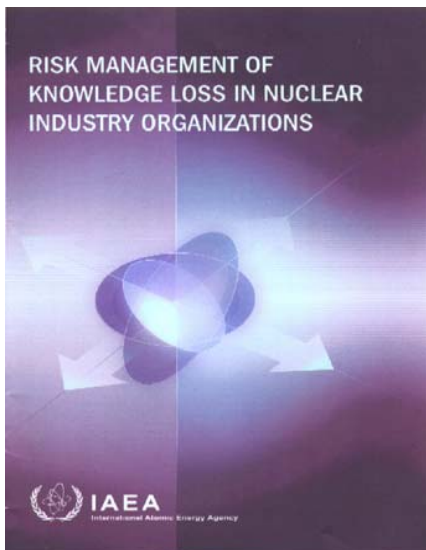
Mergers and Acquisitions

Outsourcing low value functions

The Aging Work Force

- ❖ The aging nuclear work force is a well recognized challenge in the industry.
- ❖ The 2005 work force survey by the Nuclear Energy Institute projects approximately 40 percent over 5 years for the U.S. nuclear work force.
- ❖ The aging work force is a major impact on the *international* nuclear industry, however, other factors should also be considered, for example:
 - Rapid growth and experience dilution
 - Political decisions to reduce reliance or to phase out nuclear power
 - A combination of aging work force and future growth
- ❖ Many nuclear organization are in various stages of efforts to address the challenge.
- ❖ Many HR organizations are not prepared.

The aging work force is now

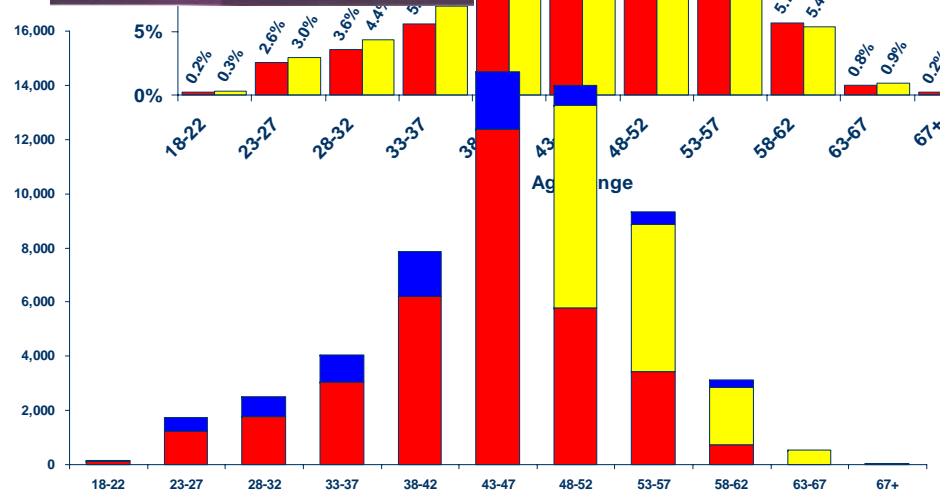


An Emerging and Critical Problem of the Science and Engineering Labor Force

Skilled Labor Classification	Union	Non-Union*	TOTAL
Boilermakers and Tube Welders	9,500	12,498	21,998
Pipefitters and Combo Welders	10,100	28,050	38,150
Iron Workers	6,500	6,622	13,122
Millwrights	7,600	7,385	14,985
Electricians	10,300	11,394	21,694
Carpenters	2,306	3,037	5,343
Insulators	874	333	1,207
Heavy Equipment Operators	1,144	932	2,076
Total Estimated Workforce	48,324	70,251	118,575

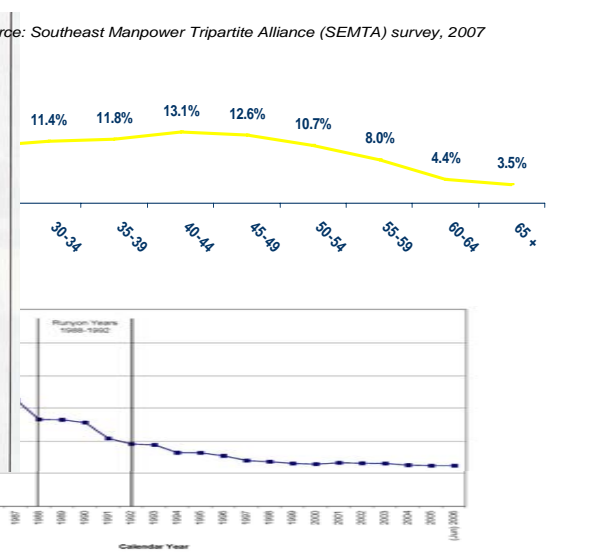
*Non-union estimates reflect an adjustment for workers counted in both union and non-union pools

NATIONAL SCIENCE BOARD



In Five Years 40 Percent Of Your Skilled Workforce Will Retire.

What Are Your Plans For Plant Maintenance?



Industry Best Practices

- ❖ Agencies and support groups such as the IAEA, NEI, and WANO have been actively engaged in assisting the nuclear industry in finding ways to meet the challenge.
- ❖ Through workshops, technical meetings, taskforce activities, and project team assignments - many best practices have been identified, documented, and made available to the industry.
- ❖ In addition, KM assist visits by IAEA and WANO provide valuable expert resources to NPP's – including access to best practices.

Sources of Best Practices

Networking

Outside Consultants

**Nuclear Energy
Institute
Workshops and
Reports**

**IAEA
INIS and NKM Section
Assist Visits
Portals
Tech Docs and Reports
Workshops**

Internal and
external
Benchmarking

**Reports and
White Papers**

EPRI
APQC
Etc.

Definitions

- ❖ **Benchmarking – The practice of comparing features and performance of an organization, department or function with those of other organizations and standards. (IAEA definition)**
or
- ❖ **Benchmarking - The process of identifying, analyzing, and adopting as appropriate the best practices utilized by high performing organizations that produce superior results (often focused on metric comparisons).**
- ❖ **“Process Benchmarking,” generally higher-level studies that demonstrate how high performing organizations accomplish the specific process and achieve superior results. This can be accomplished by surveys, workshops, sites visits, etc.**
- ❖ **Through the process of benchmarking best practices, organizations can compare how the same functions/task are performed by others thus gaining insight and ideas on changes or enhancements that can improve their performance.**

Definitions

- ❖ **Best Practice – A process or methodology that has been shown to work well and produce good results and is, therefore, recommended as a model. Also termed Good Practice (IAEA definition).**
- or
- ❖ **“Best Practice Process” are documented processes, approaches or tactics used by successful companies. These companies may not be “Top Decile” in all areas, but have developed well defined and successful practices in specific areas.**
- ❖ **This presentation will cover selected “HR process best practices” with focus on the aging work force.**
- ❖ **These best practices are offered as possible aids that can be modified or adjusted to fit the requirements of an organization.**
- ❖ **Often an organization’s culture, business needs, demographics, and future direction dictate which processes (best practices) work best for specific situations.**

Industry Best Practices

Examples of Recent Best Practices

- ❖ **IAEA Technical Reports**

- ❖ **EPRI Reports**

- ❖ **NEI and INPO Benchmarking Initiatives**
 - Recruiting and building pipelines - Exelon
 - Human Capital Planning – Palo Verde NPP

- ❖ **TVA New Employee Experience**

IAEA Technical Reports

“Risk Management of Knowledge Loss in Nuclear Industry Organizations

- Three Step Process
- Employee self-assessment
- Institutional knowledge loss risk management

❖ Knowledge management for nuclear operating organizations

❖ Handbook of Nuclear Knowledge Management

EPRI Report

Real-Time Expert Knowledge Acquisition and Transfer - Needs and Technology Assessment (1009581, November, 2004)

Toward Self-Elicitation and Automated Knowledge Capture Methods

Knowledge Type drives Method Selection



NEI and INPO Benchmarking Initiatives

- **Recruiting and building pipelines -
Exelon**
- **Human Capital Planning – Palo Verde
NPP**

Shared at benchmark meeting “Practical Approaches to Retaining Critical Knowledge”, Atlanta, Georgia – November 2005 and April 2006 (NEI and INPO)

Recruiting and building pipelines

- ❖ **Exelon program to recruit operations and engineering pipeline employees**
 - Increased education requirements of new hires
 - Upgraded screening process
 - Established partnerships with universities (both 2 and 4 years)
 - Utilize alumni to build relationships
 - Utilized engineering intern program
 - **Established “Bench strength Budgets” to cover cost**
 - Began recruitment nation wide
- ❖ **Pilot program was expanded into other disciplines**

Human Capital Planning

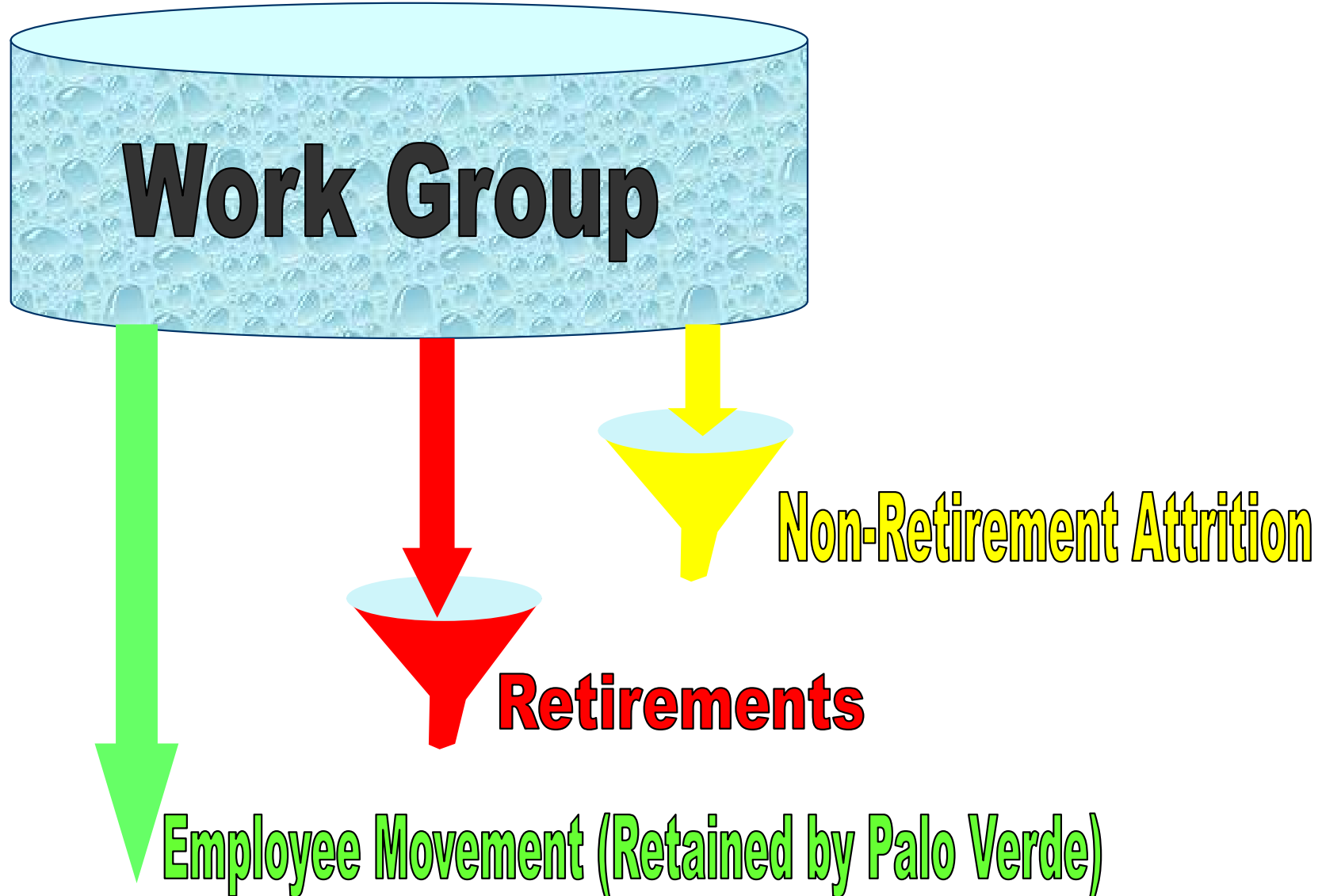
Palo Verde NPP

- ❖ **An integrated work force planning process based on in-depth work force analysis.**
- ❖ **Considers a variety of work force gain (new hires, movement or promotion and developmental programs) and loss factors (retirement, movement, non-retirement attrition).**
- ❖ **In the past staffing needs projected based on individual department initiatives - assumptions varied - employee migration impacts were not fully considered - difficult to integrate the findings into a coherent plan**

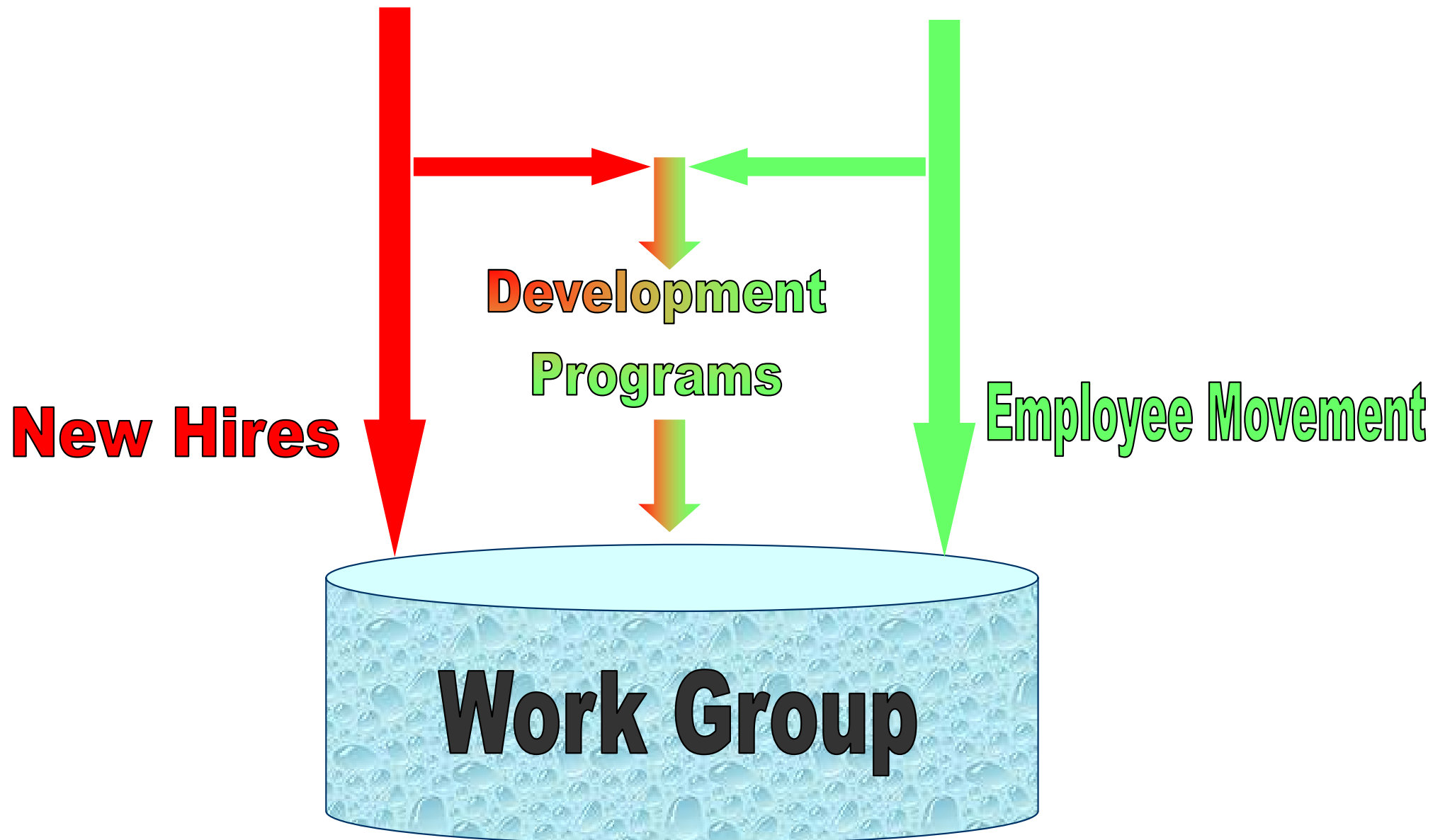
Human Capital Planning

- ❖ **Integrated site-wide approach**
- ❖ **Built around talent, not departments**
- ❖ **Consistent assumptions for losses and needs**
- ❖ **Calculates 6 workforce dynamics**
 - 3 different types of work group **losses**
 - 3 different types of work group **gains**

Human Capital Planning



Human Capital Planning



Other Examples

- ❖ **College of Experts – Areva**
- ❖ **Knowledge Elicitation using Concept Maps – Exelon**
- ❖ **Phased Retirement – Southern California Edison**

New Employee Experience at TVA

- ❖ A new process to orient new employees to TVA and their specific business unit
- ❖ Process includes introduction to TVA culture model (Star 7)
- ❖ Based on benchmarking best-in-class companies
- ❖ Utilized a private consulting firm to facilitate process
- ❖ Modified the recommended best practices to best fit TVA culture and based on feedback from new employees

New Employee Experience at TVA

Goals

- ❖ **Improve Services**
 - for new employees & managers
 - related to pre-employment
 - screening, hire-in, orientation.

- ❖ **Reduce Costs**

- ❖ **Reduce overall line HR time spent on administrative/transaction work to enable more time on other high-value activities.**

- ❖ **Supports HR and enterprise goals**

New Employee Experience at TVA

Benefits

- ❖ Combined hiring, orientation and STAR 7 experience results in annual cost savings of approximately \$300,000.
- ❖ Centralized and standardized hiring process yields efficiency gains.
- ❖ Ensures new employees have passed security clearance and medical exams prior to hire and they understand key policies and practices.
- ❖ Productivity ratios will increase due to higher and sustained levels of employee engagement.
- ❖ Manager receives “ready-to-work/train” employee(s).
- ❖ New employees will be fully equipped to be productive first day on the job.
- ❖ Alignment with “Best in Class” to become “Employer of Choice.”

Observations

- ❖ A wealth of information exist related to Human Resource Process Best Practices for managing the aging work force.
- ❖ Agencies and institutes such as IAEA, INPO/WANO, NEI, and EPRI are actively engaged to support the nuclear industry.
- ❖ The nuclear industry has been progressive in addressing the demographic challenge and in sharing best practices.
- ❖ While the aging work force impacts a large segment of the industry, other factors (e.g., rapid growth, etc.) play a role and should be considered.

Observations

- ❖ **Most best practices can and should be modified or adapted to meet the needs of a specific organization or department.**
- ❖ **Organizations should consider business needs, culture, demographics and future direction when implementing change.**
- ❖ ***Now is the time for HR organization to prepare.***

Industry HR Best Practices

Thank you
Questions?

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