Elements and Traits of a Radiation Protection Culture

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Elements and Traits of an Radiation Protection Culture

- **Culture comes from three sources:**
  - (1) beliefs, values, and assumptions of the founders of an organization,
  - (2) learning experiences of group members as the organization evolves, and
  - (3) beliefs, values, and assumptions brought in by new members and leaders.

What is meant by Culture?

- The ideas, beliefs and customs that are shared and accepted by people in a society.
- That complex whole, which includes knowledge, belief, art, morals, law, customs, values, symbols, rituals and any other capabilities and habits, acquired by people as members of society that determine appropriate attitudes and behavior

Features of a Culture

- **Central value**
- **Typical and specific structure**
- **Strong ethos kept in leaders** (ethos: *the fundamental and distinctive character of a group, social context, or period of time, typically expressed in attitudes, habits, and beliefs*)
- **System of continuation (education) – transfer of knowledge and expertise**
- **Endurance**
- **Combination of innovation and conservation**

Passing on Culture

- **Culture is learned, passed on and changed by:**
  - A pattern of basic assumptions
  - The cultural paradigm
  - Groups of people who have shared significant problems, solved them, observed the effects of their solutions, and who have taken in new members
  - Basic assumptions that serve to stabilize a group and are highly resistance to change
- **Culture is a stabilizing function when taught to new members**

Organizational Culture

- Organizational structure institutionalizes how people interact with each other, how communication flows and how power relationships are defined. It also reflects the value based choices made by the company
- In a total safety culture, employees not only feel responsible for their own safety, they feel responsible for their peers' safety, and the organizational culture supports them acting on that responsibility.

Evolution of a Safety Culture

- **Three main developmental systems:**
  - Basic compliance system –safety training programs, work conditions, procedures and processes comply with regulations. This is passive compliance.
  - Self-directed safety compliance system –workers ensure regulatory compliance and take personal responsibility for training and other regulatory provisions. This emphasizes active compliance with the regulations.
  - Behavioral safety system –teaching individuals to scan for hazards, to focus on potential injuries and the safe behavior(s) that can prevent them, and to act safely.

Safety Culture and Radiation Protection

- Safety focuses on the system design to permit hazardous equipment to be used without harming the worker.
- Protection focuses on people and behavior (culture) to prevent harm to the worker and others when hazardous equipment is being operated.

Safety Culture and Radiation Protection

Leadership Safety - Values and Actions	Problem Identification and Resolution	Personal Accountability
Leaders demonstrate commitment to safety in their decisions and behaviors	Potential impacts on safety - promptly identified, evaluated, prioritized, addressed and corrected	All individuals take personal responsibility for safety
Work Processes	**Continuous Learning**	**Environment for Raising Concerns**
Maintain & enhance safety when planning and controlling work activities	Seek opportunities to learn & Implement safety methodologies	Personnel feel free to raise safety concerns without fear
Effective Safety	**Communication**	**Respectful Work Environment , Questioning Attitude**
Communications focus on safety	Trust and respect permeate the organization	Individuals identify discrepancies in existing conditions & inappropriate actions

Why are we interested in a specific Radiation Protection Culture?

- **Embedding RP at a cultural level within an organization is by far the most effective way of delivering the performance to which we all aspire.**
  - To give visibility to the fundamentals of RP (science and values)
  - To promote radiation risk awareness
  - To promote shared responsibility among practitioners, operators, management and regulators
  - To maintain the RP heritage
  - To facilitate its transmission
  - To improve the quality and effectiveness of RP
  - To contribute to the general safety

Elements or Traits of RP Culture

- **A pattern of knowledge and behaviors**
- **Science, Values, Ethics** (i.e. Equity) **and Experience**
- **No basic differences between sectors** (medical, nuclear, industry)
- **A narrative in common language**
  - The local and regional contexts are part of the narrative, not the elements structuring RP culture
- **RP Principles :** Justification, Optimization, Dose Limits
- **History of RP and Feedback Experience**
- **Competence** (training and education)

Position of the Radiation Protection Professional

- **Approach to management is from the professionals and includes engagement with management on developing the Culture within the facility or institution**
- **Need to develop:**
  - Relationship with management and the workforce
  - Relationship with the regulators
  - Involvement with other relevant stakeholders