

# Challenges seen by the Nuclear Industry

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# Outline

Management perspective of the challenges facing the nuclear power industry

Identification of strategic approaches to cope with the challenges facing the nuclear sector

Improvements to coping strategies?

# Challenges to the Nuclear Industry

Workforce and Competence Challenges

Environmental Challenges

Systematic and Procedural Challenges

Economic and Financial Challenges

Technological Challenges

# Challenges to the Nuclear Industry

## Workforce and Competence Challenges

- Generation turnover and maintaining suitably qualified and educated personnel (SQEP)
- Personnel management and policies
- Recognition of the importance of human factors
- Attitudes and health

## Environmental Challenges

- Maintaining the attractiveness of the nuclear Industry
- Regulator
- Political climate
- Public opinion
- Tension in the sector
- Sabotage and terrorism
- Distrust and hostility
- Global perception

# Challenges to the Nuclear Industry

## Systematic and Procedural Challenges

- Management priorities
- Inefficiencies and difficulties
- Excessive procedures
- New requirements
- Responsibility
- Modernisation

## Economic and Financial Challenges

- Management of resources
- Lack of resources
- Deregulation and competition
- Corporate pressures
- Reduction in costs
- Decommissioning
- Mergers and acquisitions
- Shorter outages

# Challenges to the Nuclear Industry

## Technological Challenges

- Ageing technology
- Safety and maintenance
- New technology
- Competence to operate new technology



# Coping with the Challenges

**Workforce and Competence** - Investment in training, career planning, interesting tasks, pay fair salaries, provide clear expectations, frequent feedback, competency surveys

**Environmental** – Increased contact with stakeholders, broad networking, avoid isolation, understand trends, react when changes are emerging

**Systems and Procedural** – Leadership, priorities explicit in strategies and plans, open communication, conservative decision making, rapid reactions to malpractice

**Economic and Financial** - personnel cost awareness, share costs with partners, efficient work practices, careful planning of investments and outages, best practices

**Technological** - Long term technical development plan, good housekeeping, invest in R&D, keep plant documentation up to date

# Improvements?

**Nuclear power plants** – Systemic thinking to enhance awareness of situational needs and opportunities, communication skills, prioritisation and planning, slack in resources

**Power utilities** – Appreciation of the business risk of degraded safety, rapid reaction to signs of degraded safety, innovative thinking to ensure motivation and commitment during decommissioning, networks to share experiences and good practices

**Regulators** – Harmonisation of safety requirements, understanding of development needs, networking and co-operation

**International organisations** – Continued support and engagement, improvements in the storage of information and search tools, target information to all users, initiate comparisons between national requirements

**Society** – co-operation and networking, publicly national/ international research programmes, centres of excellence in risk and safety research



# Summary

Generation of a NPP management perspective of the challenges facing the industry;  
Identification of strategic approaches to cope with the challenges facing the nuclear sector; and  
Highlight possible improvements to coping strategies.