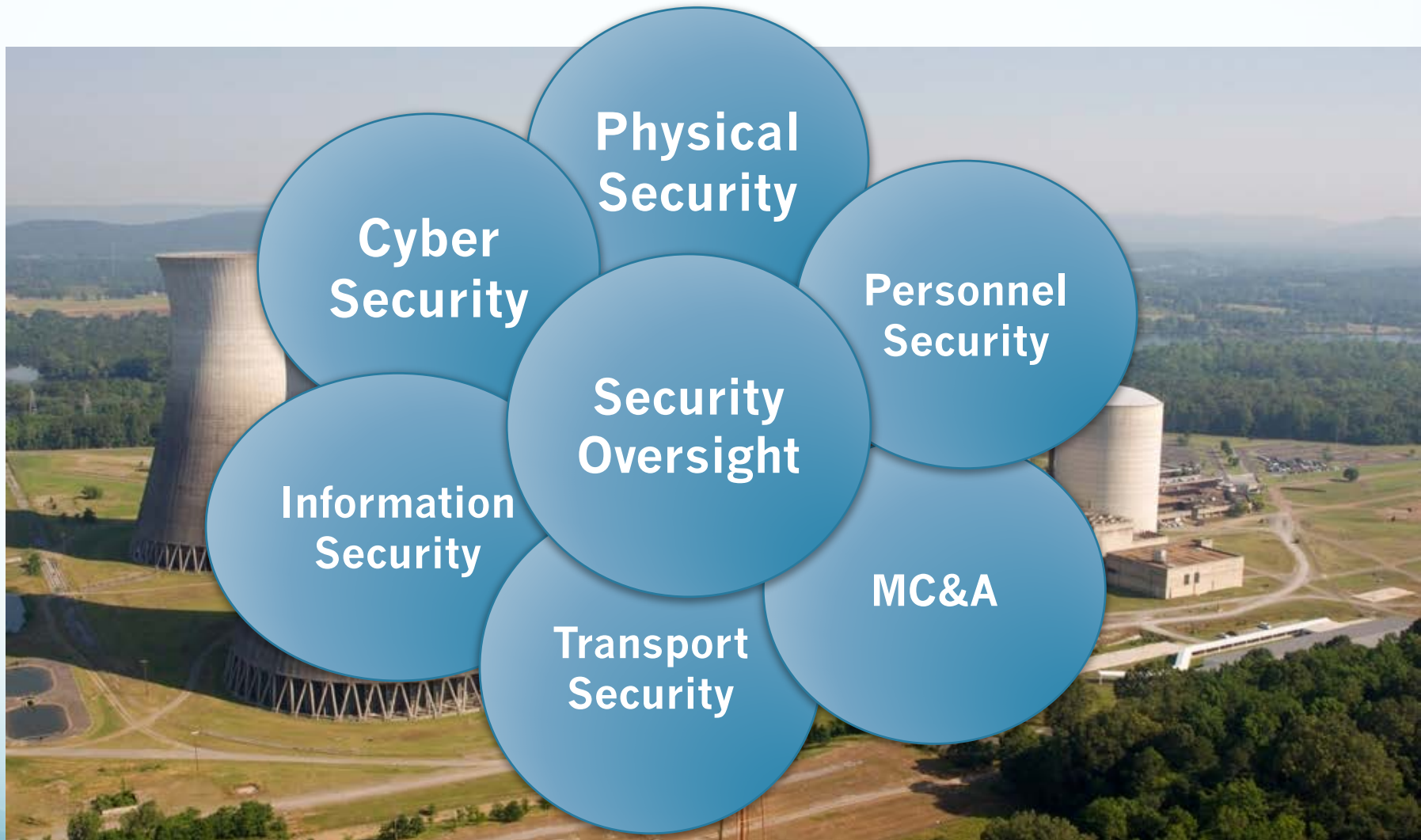


# Assessing the Performance of Security Arrangements Against Insider and VE Threats

December 5, 2019



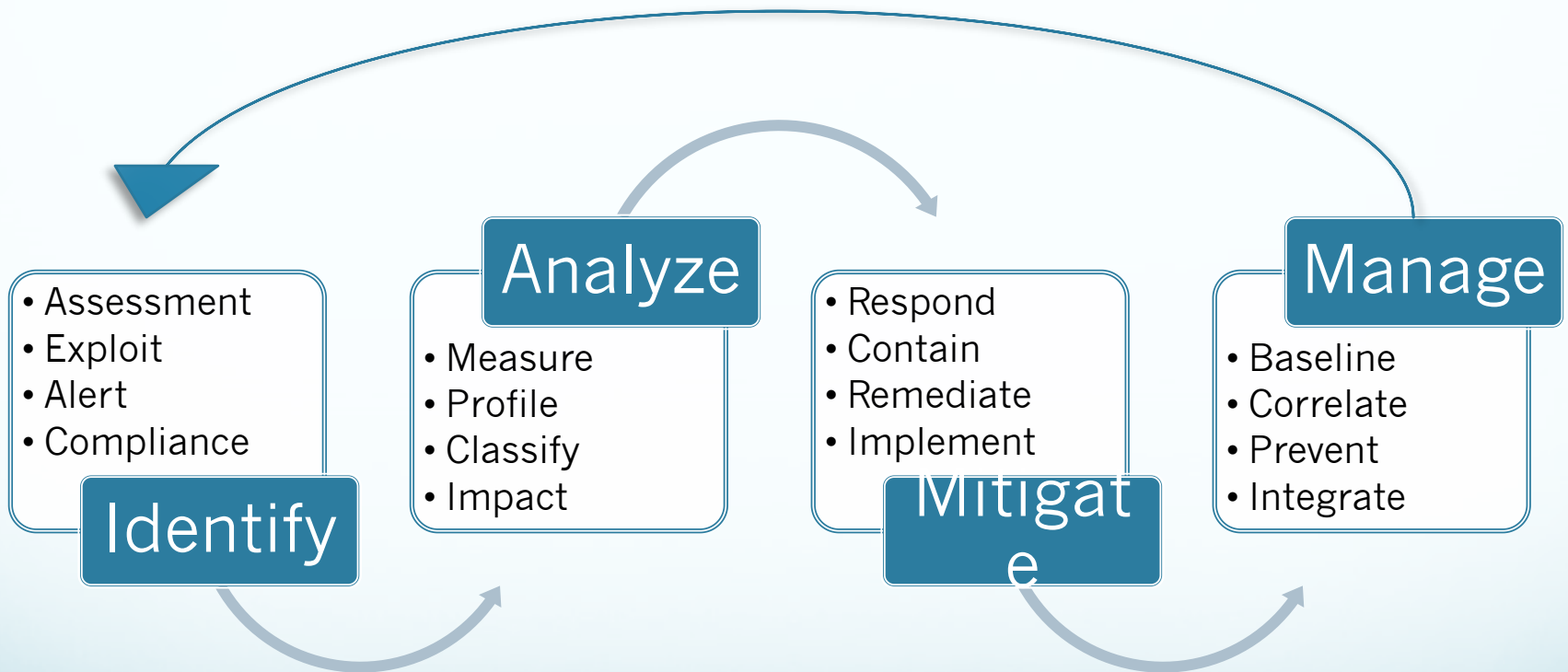
# What is security?



# Manage and Improve



# The Assessment Process



# The success of every security system depends upon personnel



# How do we ensure reliable, trustworthy, capable staff?

Human reliability programs (HRP)

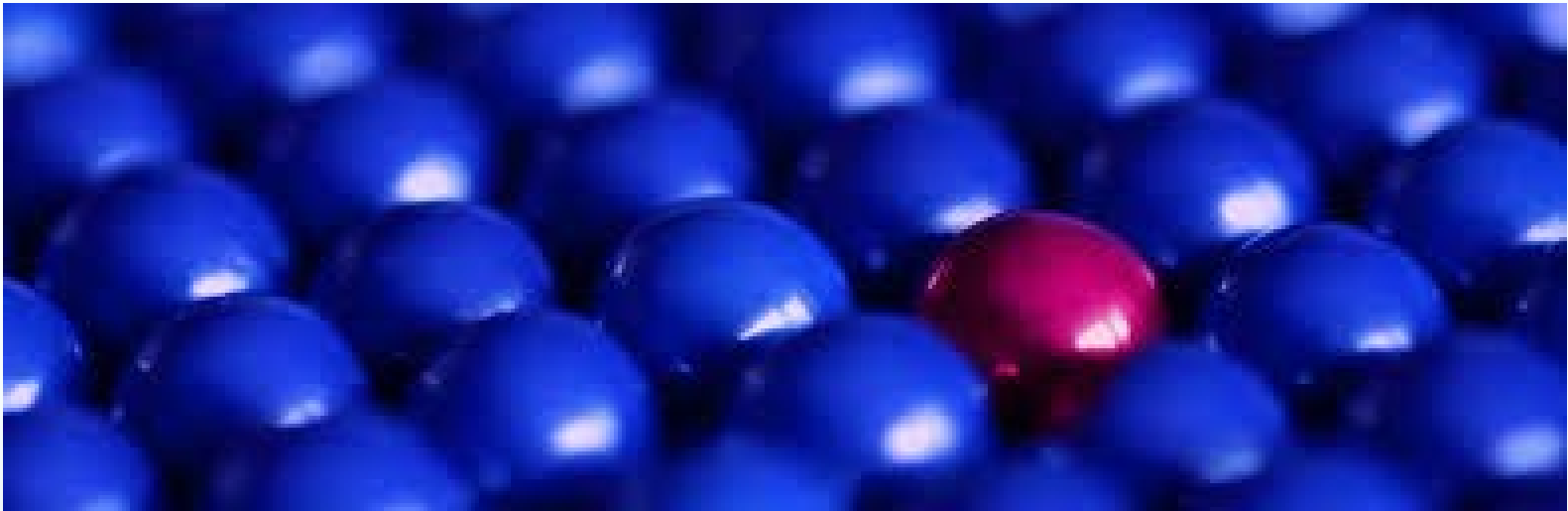
Trustworthiness programs (TWP)



Personnel security programs (PSP)

Access authorization(AA)/Fitness for duty (FFD) programs

# Preemployment Checks



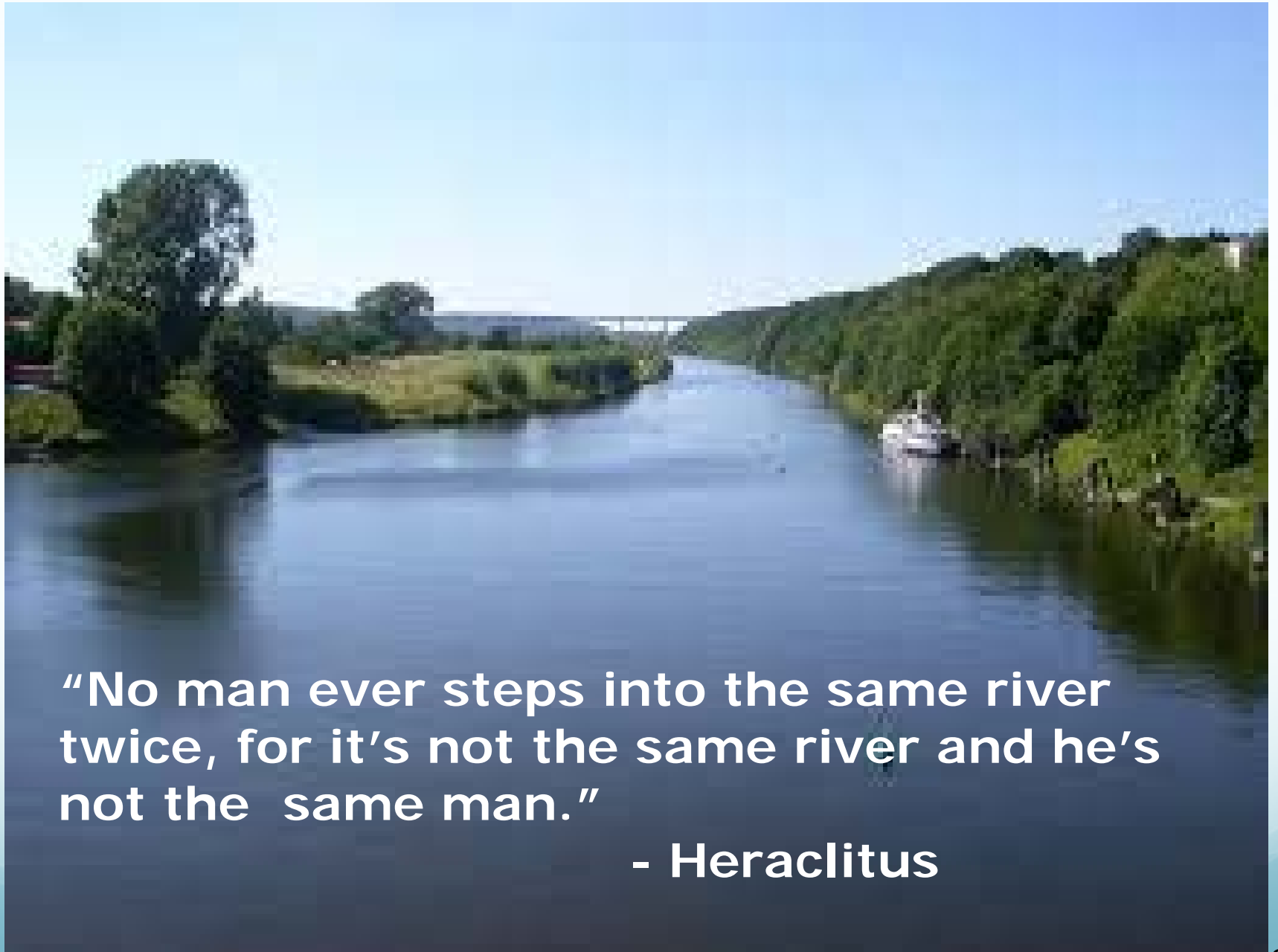




**What is one thing that we  
can be sure people will  
do over time?**

**Change**

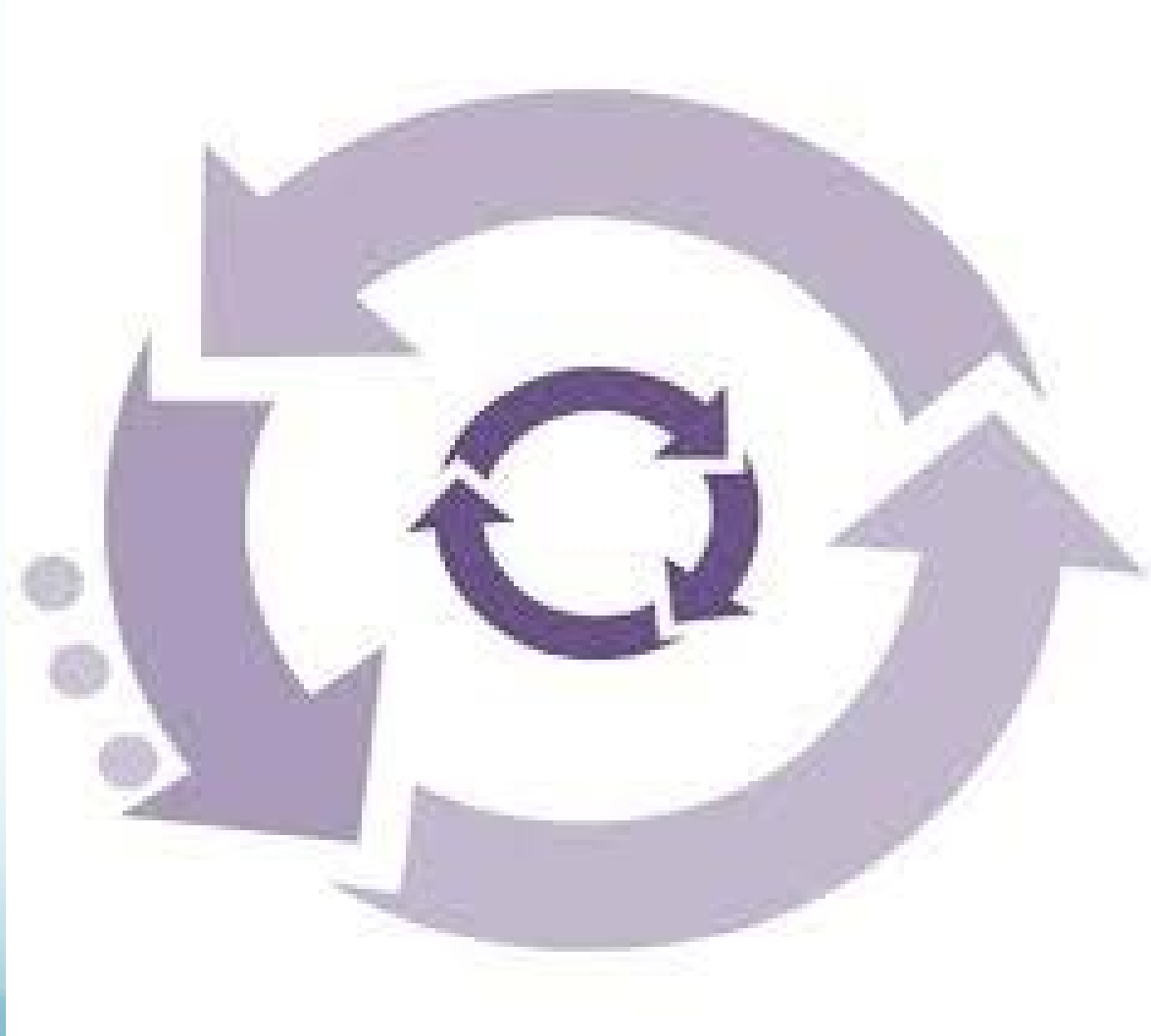




**"No man ever steps into the same river twice, for it's not the same river and he's not the same man."**

**- Heraclitus**

**HRPs are designed to be cyclic.**

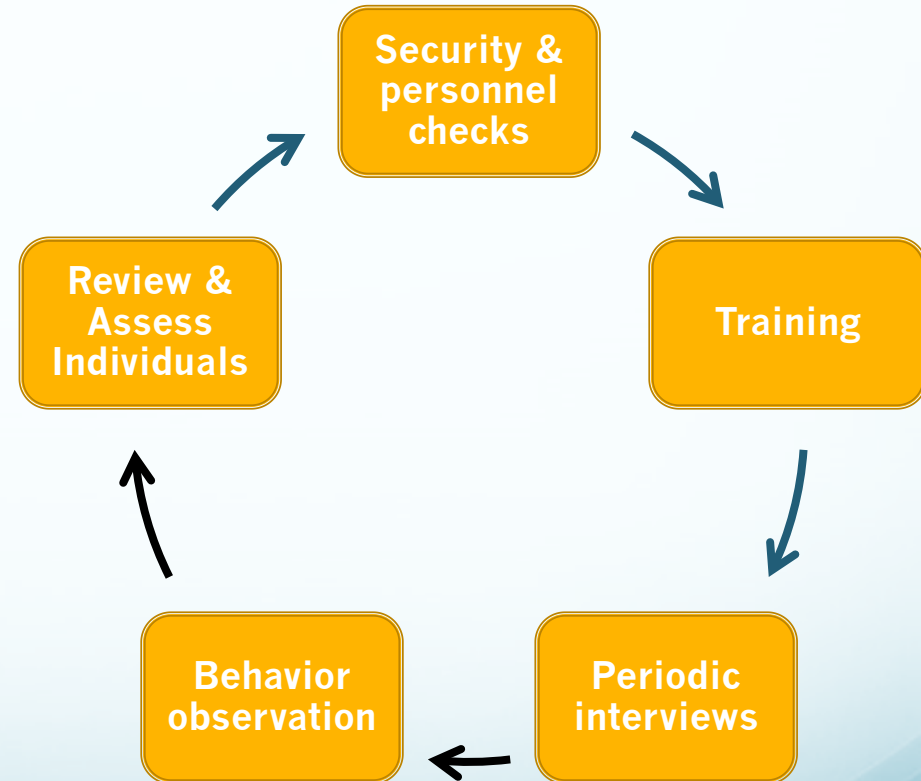


# Assessing Change



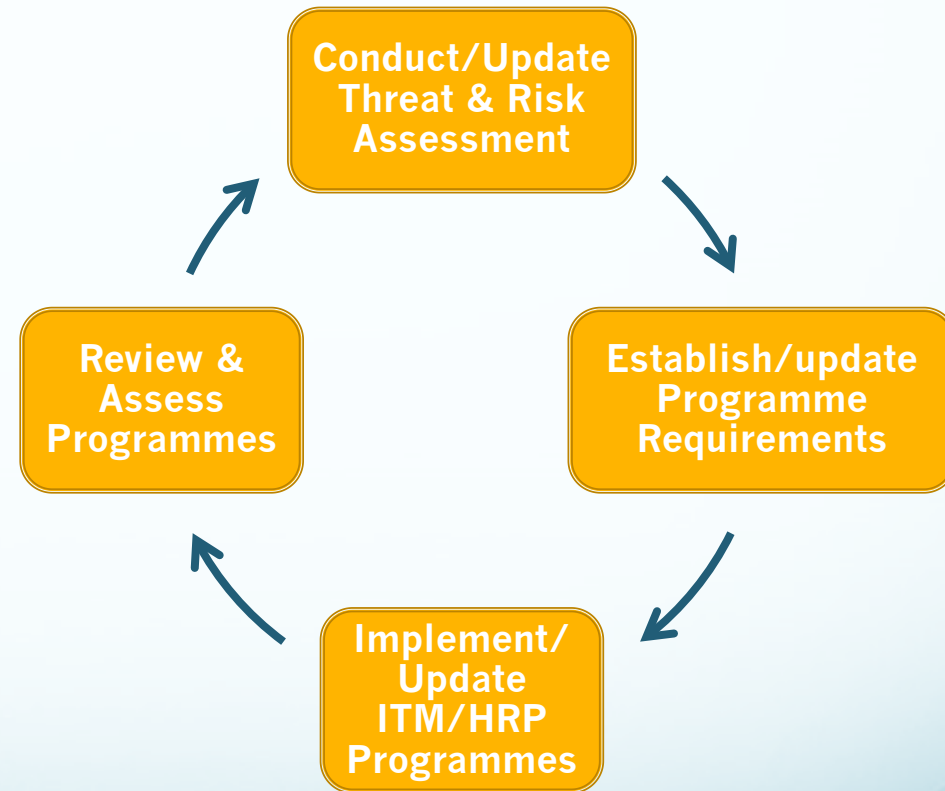
# Review & Assessment of Staff in an HRP

- Periodic personnel/security checks for unreported changes
- Refresh/update training
- Periodic interviews/assessments
- Behavior observation programs
- Each individual should be regularly interviewed/assessed to ensure his/her support to the programme



# Review & Assessment of HRP's

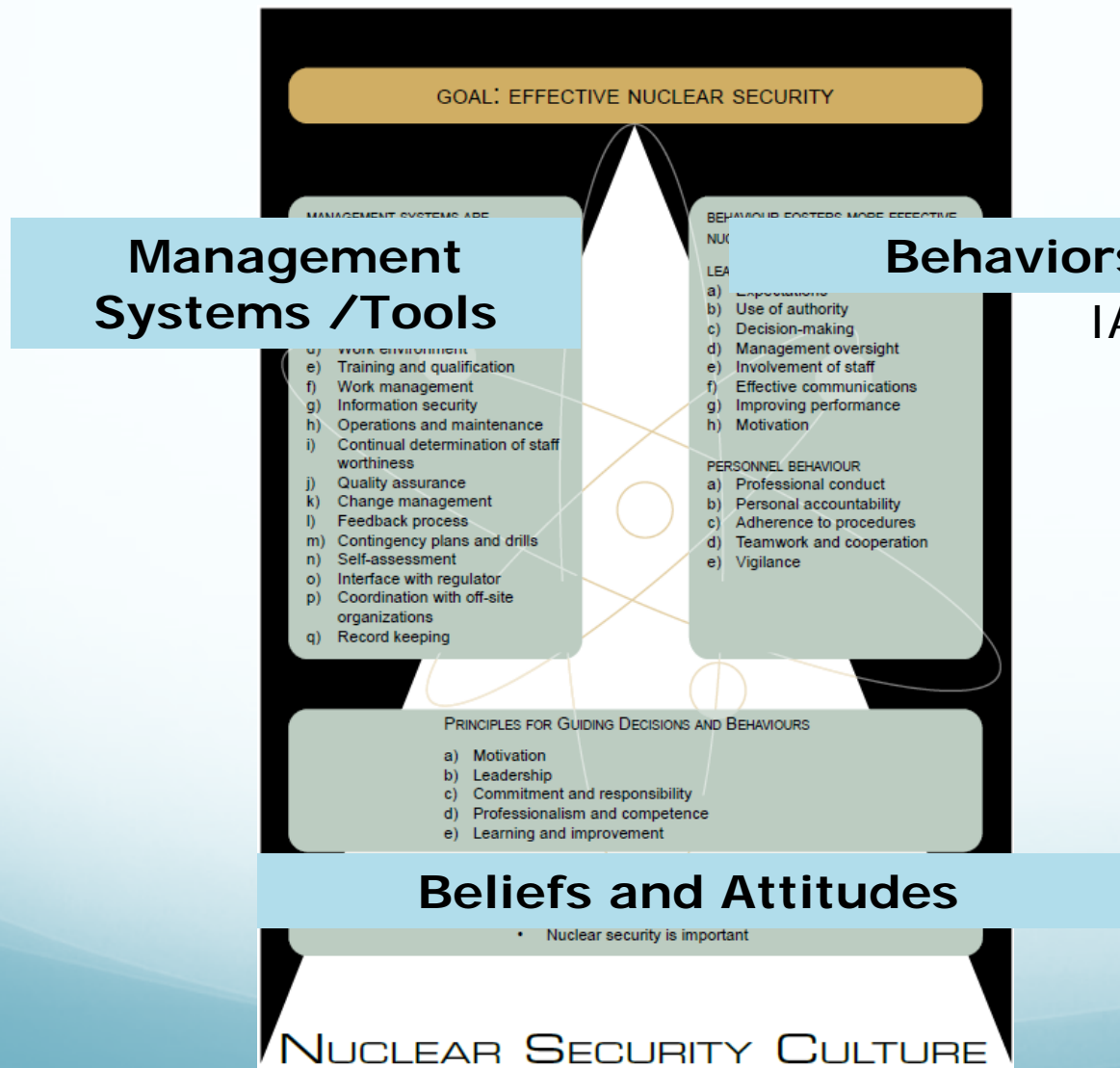
- Implementation of any insider threat mitigation (ITM)/ Human Reliability Program (HRP) is an ongoing process.
- The environment in which the programme is implemented is constantly changing, due to:
  - New threats
  - New facilities
  - New personnel
- The programme should be regularly reviewed and assessed to ensure its effectiveness.



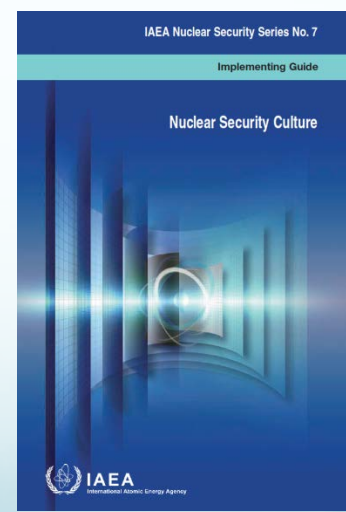
# How do we disrupt the negative change processes?



# IAEA Model for Nuclear Security Culture



IAEA Nuclear Security Series NSS-7





# Assessment Areas

1. Programme requirements and employee eligibility criteria
  - Do they remain appropriate given the current threat and risk environment?
  - Do they remain appropriate given the activities and assets currently taking place at secure facilities?
2. Programme implementation
  - Is the programme being consistently implemented across all relevant organizations and facilities?
3. Threat mitigation
  - Are potential insider threats being successfully identified (and removed) through screening and behavior observation processes?
4. Nuclear Security Culture
  - Do relevant organizations and individuals continue to understand and reinforce the importance of ITM/HRP?

# Threat Mitigation

- HRPs are only effective if insider threats, or behaviors that suggest a potential insider threat, are identified and removed before harm/damage can occur.
- Vigilance is required throughout the organization to ensure that the programme remains effective.



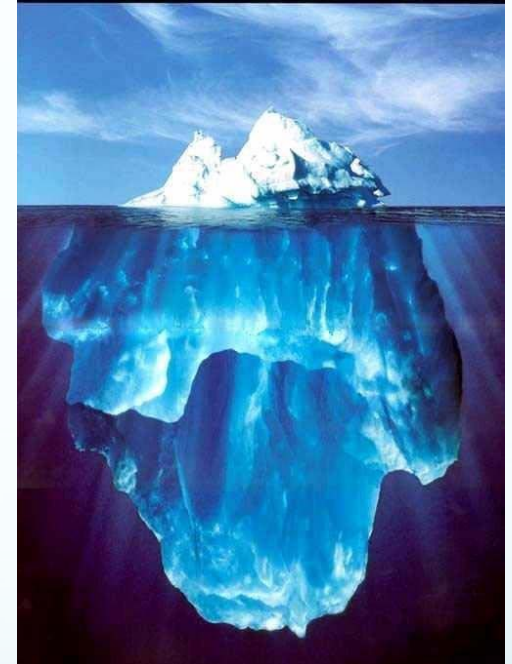
# Unusual Behavior Observation

- The success of a behavioral observation programme as part of an HRP in protecting the security and safety of your facility depends on two assumptions:
  - A serious security or safety infraction can be averted if concerns are recognized early and reported
  - Staff are in the best position to observe and report changes in the behavior of coworkers

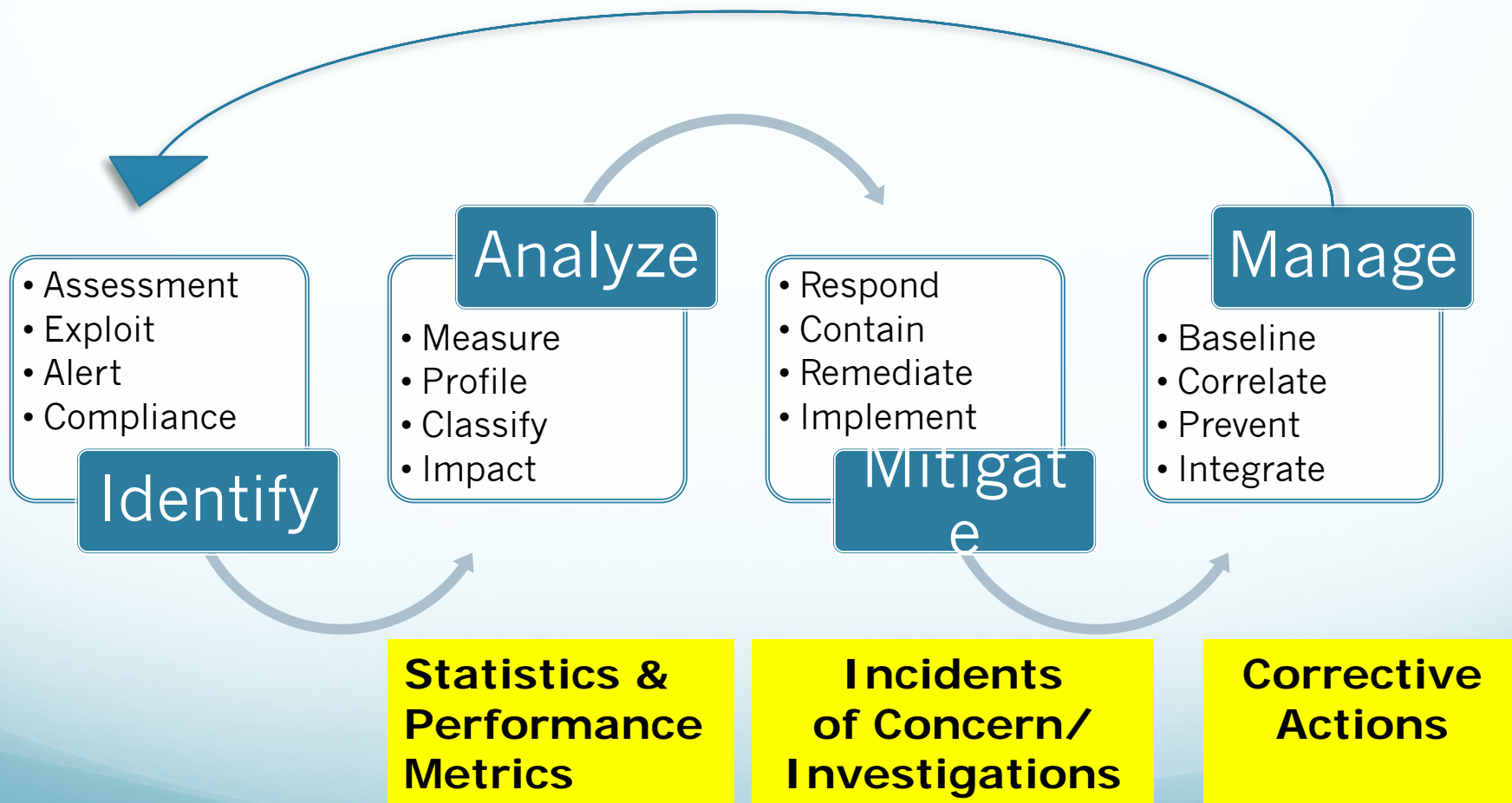


# Behavior Observation Programmes

- Workers and supervisors are required to be attentive to the behavior of coworkers and report safety or security reliability concerns
- Observation will help to identify workers whose judgment may be impaired
- Self-reporting of certain conditions is required



# The Output of HRP Assessment Process



# Summary

- It is important to assess the effectiveness of your HRP on a regular basis.
- Continuous improvement should be a goal for all such programmes.
- Taking action to implement improvements should be formally addressed through the appropriate channels.



# Comments/Questions

# Example Metrics

## Metric

Analysis of the consistency of organizational HRP implementing policies and procedures with legal and regulatory requirements.

Percentage of employees whose current access authorization is consistent with the access authorization actually required for work.

Number of employees with access authorizations compared to the number needed to meet facility staffing requirements.

Average length of background investigations compared to ideal or required length.

Percentage of background investigations that meet minimum requirements for completeness.

Number/percentage of post-employment terminations for behavior that should have been detected through pre-employment investigation.

Change over time in the number of post-employment terminations or other HRP incidents of concern.

Qualitative analysis of known insider threat incidents over time and the role played by HRP in either enabling or mitigating the threat.

Percentage of management and employees whose surveyed threat perceptions are consistent with threat assessments.

Percentage of management and employees whose survey responses indicate that HRP is implemented efficiently, effectively, and fairly.