

# ATSEP Competence Assessment

SASI Workshop 4/08 ATSEP Competency

Zagreb 22 – 24 October 2008

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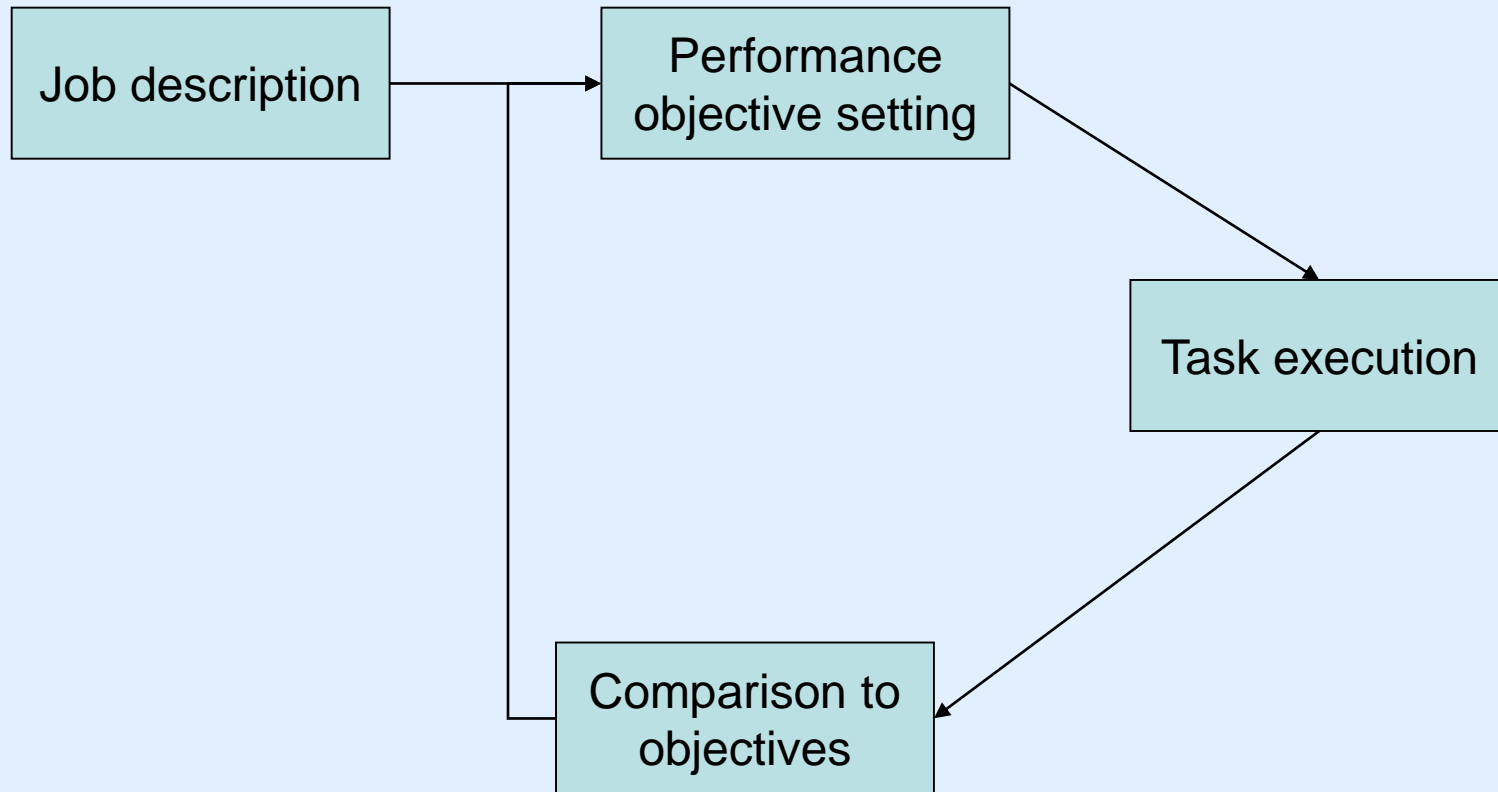
# Overview

- Competence Assessment – Generic Competence Management Model
- Competence Assessment Methods
- Organisational Issues
- ATSEP Competence Scheme - EUROCONTROL

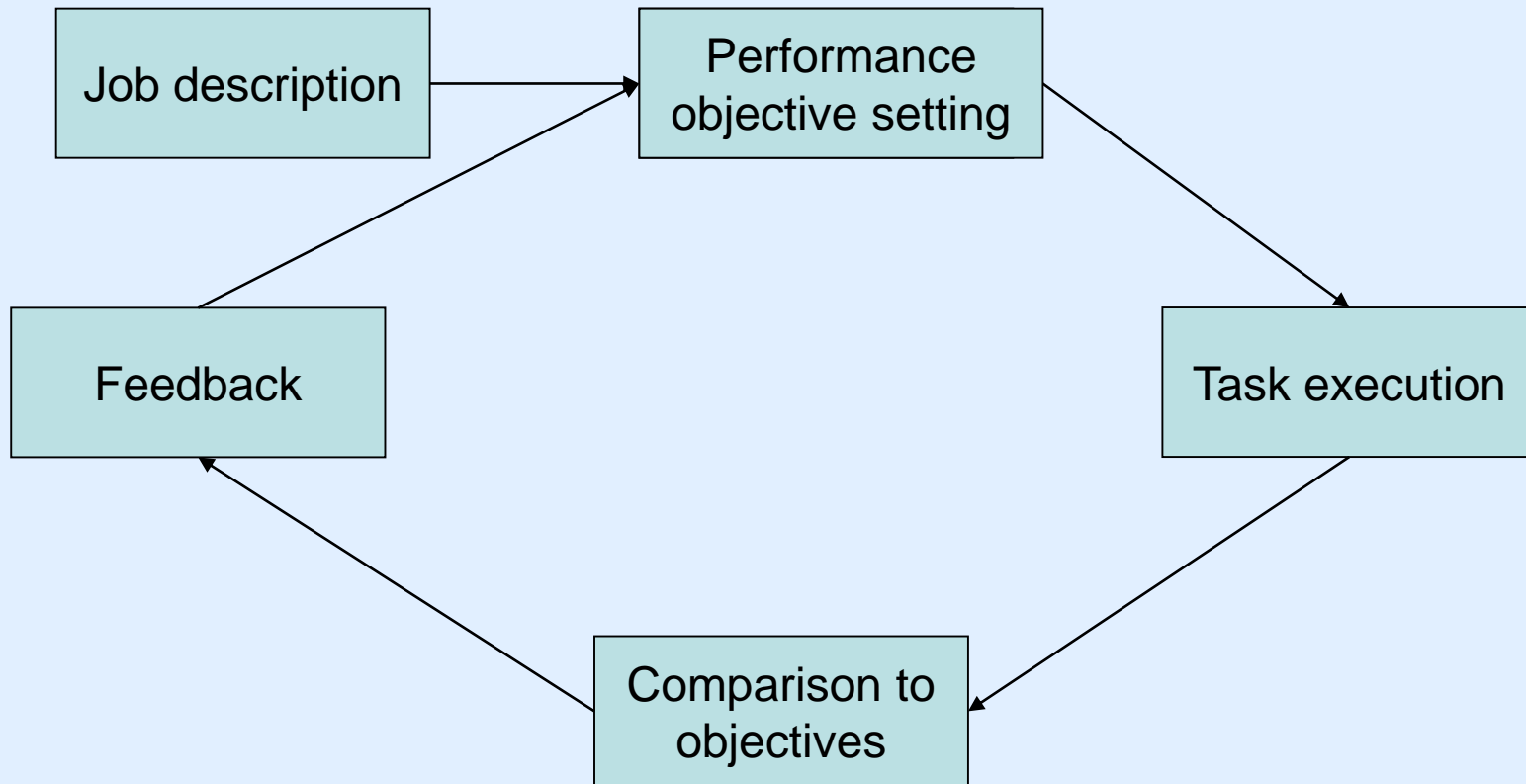
# Part 1

- Competence Assessment – Generic Competence Management Model
- Competence Assessment Methods

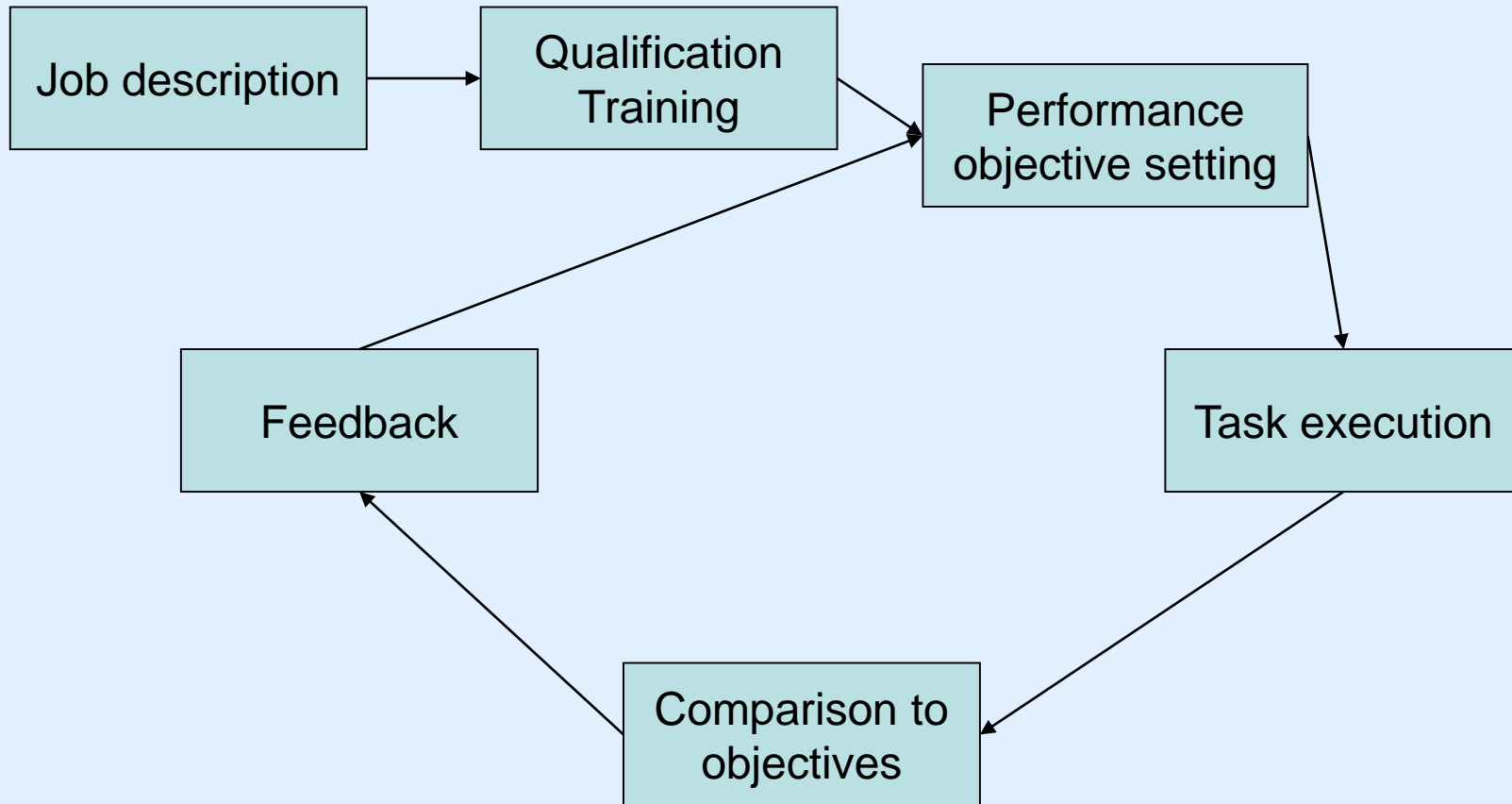
# Competence Management Model



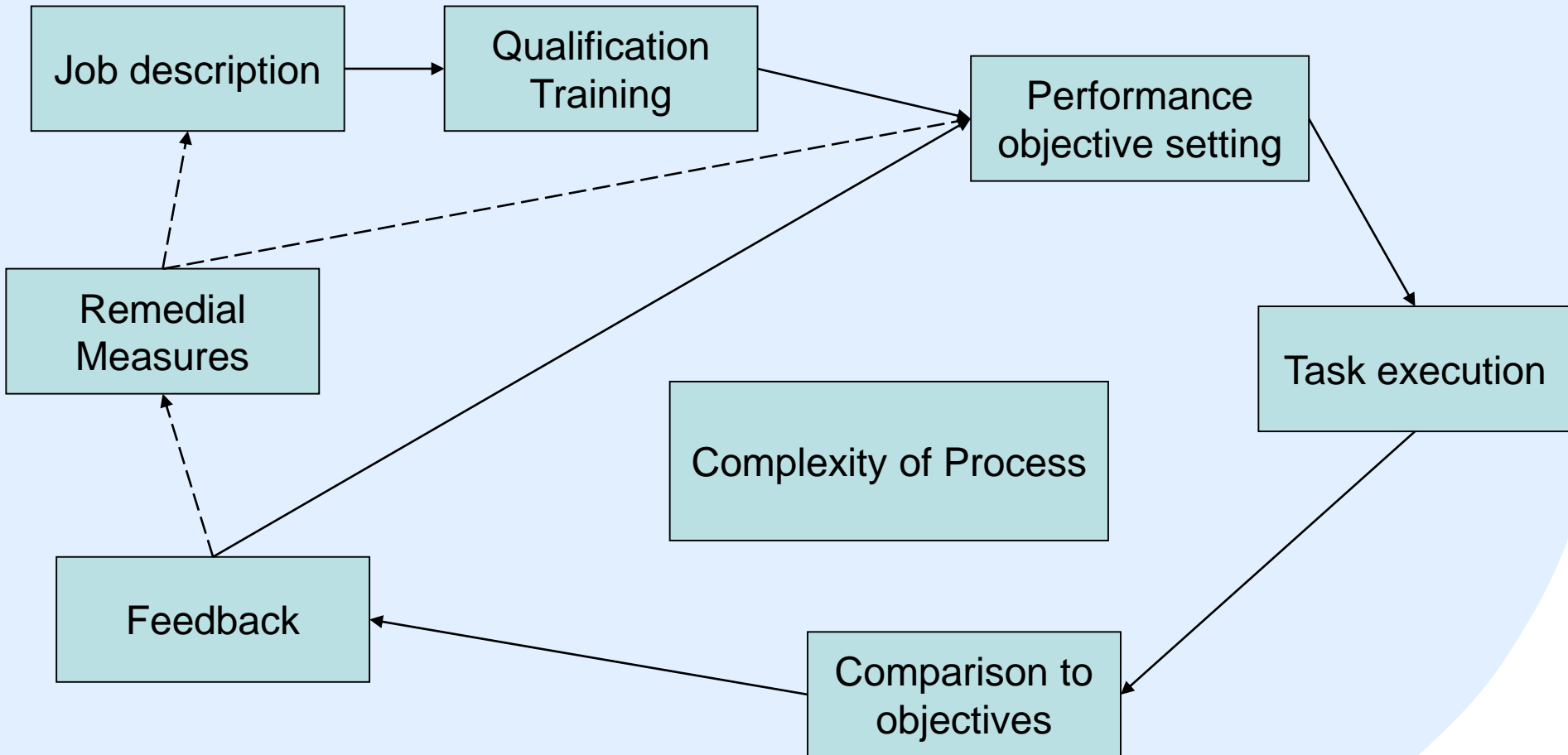
# Competence Management Model



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# Competence Management Model



# Job Description

- Stripping down jobs into detailed tasks, into their components
- Task analysis
  - Objective and Task
  - Organisation of tasks
    - Mechanical level
    - Cognitive level
      - Inputs
      - Processing
      - Output
  - Control of result
- Joint effort job holders and human factors specialists



# Qualification Training

- Job relevant
  - ATSEP Working Group

# Objective Setting

- Quality and quantity
- SMART
  - Specific – clarity, details
  - Measurable
  - Achievable – tools, conditions
  - Relevant – linked to job description
  - Time bound

# Task Execution

- work

# Comparison to Objectives

- Method
  - Continuous assessment
  - Dedicated practical check
  - A combination and
  - Oral examination
  - Written examination
  - Computer-based training test
- Frequency
  - Once per period
  - Continuous

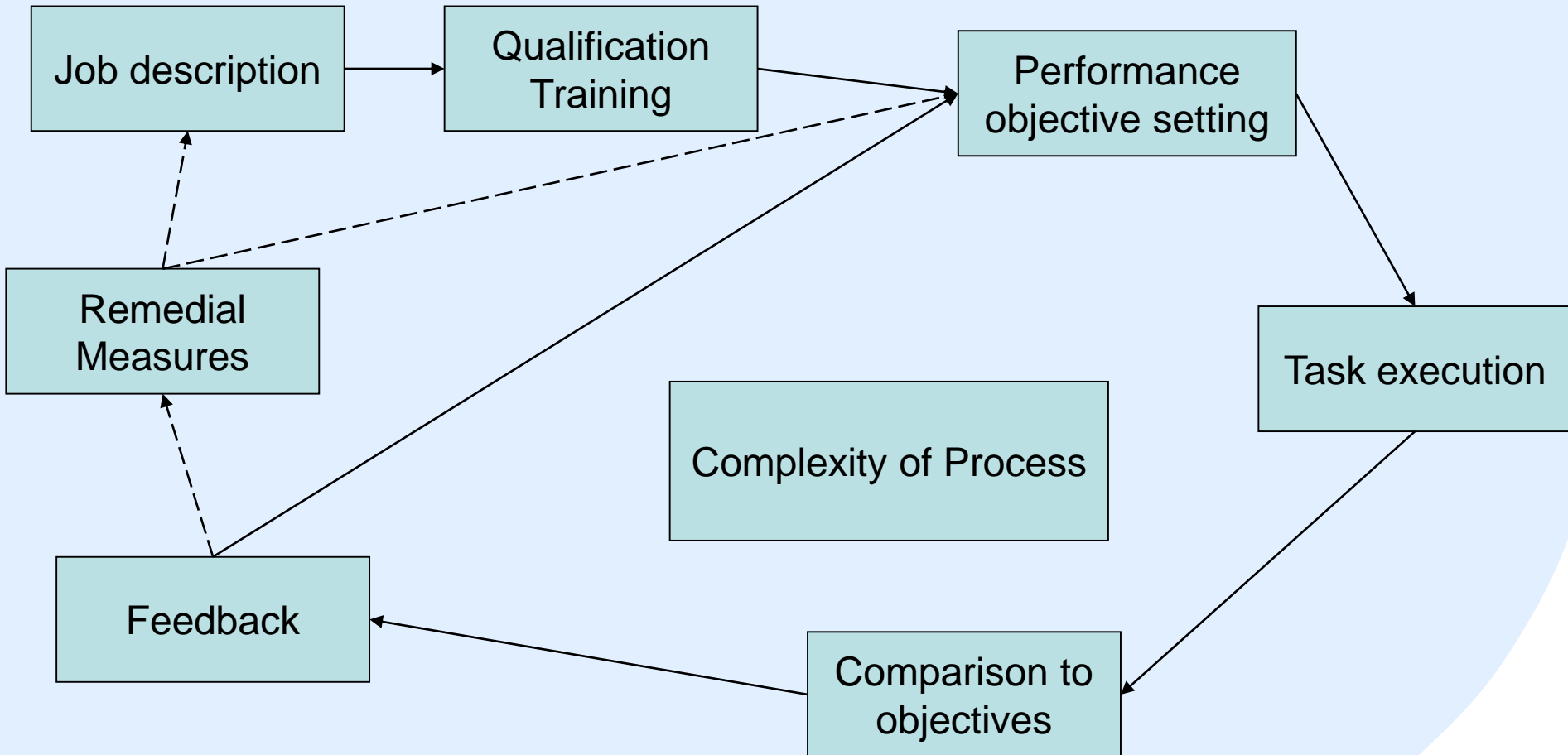
# Feedback

- Direct
- Indirect

# Remedial Measures

- Retraining
- Reduction or increase of the complexity of the job
- Adaptation of objectives
  
- Eliminate errors in process – comparison to objectives
  - Double loop learning

# Competence Management Model



# Summary - Purpose of competence assessment

- Affirm competence and identify areas in need of improvement either in the individual or in the system within which the individual works



# Methods of competence assessment

- Continuous assessment
- Dedicated practical check
- A combination of the two above - and
- Oral examination
- Written examination
- Computer-based training test

# Assessment and examination

- Definitions - Assessment
  - The procedure of observation by which the professional qualities currently being demonstrated by an individual are determined
- Definitions – Examination
  - An in-depth inspection of a person's knowledge. It is a highly formalised test for a qualification using written or oral questioning

# Continuous assessment

- Observing the standard of the service provided during normal duties
- With insufficient opportunity for observation, a dedicated practical assessment can be requested

# Dedicated Practical Check

- Sole purpose of observing quality of work and checking against the standard
- Ethical behaviour
  - Individual needs to be aware that check is conducted
  - Relevant feedback within reasonable delay

# Oral and Written Examinations; Computer Based Tests

- Oral examinations to complement assessments
  - To confirm understanding of key performance objectives
  - To gather evidence for scenarios not assessed
  - To clarify actions observed
- Written examinations
  - To test knowledge of procedures and material

# Advantages and Disadvantages of Methods of Competence Assessment

# Weaknesses of Competence Assessment Model Presented So Far

- Quality of process depends on quality of assessors
  - Consistency
  - Remedial actions
  
- As a consequence: Qualification programme for competence assessors
  - Profile
  - Training
  - Competence maintenance

# End of Part 1

- Questions?
- Comments?



# Part 2

- Organisational Issues

# Why does an ANSP do competence assessments

- Legal obligation – ESARR 5 and EC legislation
- Business sense
- Efficiency and effectiveness

# Safety Requirements EC Regulation 2096/2005

- Art 8
- With regard to the provision of air traffic, communication, navigation or surveillance services, the national supervisory authority ... shall
  - Issue appropriate safety rules for engineering and technical personnel who undertake operational safety-related tasks
  - Ensure adequate and appropriate safety oversight of the engineering and technical personnel assigned by any operation organisation to undertake operational safety-related tasks
  - On reasonable grounds and after due enquiry, take appropriate action in respect of the operating organisation and/or its technical and engineering personnel who do not meet the provisions of Annex II part 3.3

# Annex II part 3.3

- With regard to the personnel involved in safety related tasks ... the provider of air traffic services shall document
  - The adequacy of the competence of the personnel;
  - The rostering arrangements in place to ensure sufficient capacity and continuity of service,
  - The personnel qualification schemes and policy
  - The training policy
  - Training plans and records
  - As well as arrangements for the supervision of non-qualified personnel

# Business Sense

- Purpose of the organisation
  - Exe: Write down what is the purpose of your organisation
- Organisations out there to make money because this means survival of the organisation – our organisations out there to provide safety to the public and ensure so its survival
- Safety is a fragile good – take care of it
- Balance between safety and production

# Efficiency and Effectiveness

- Difference efficiency and effectiveness
- Achieve objective of organisational strategy, no waste

# Organisational Competence Scheme

- Questions such a scheme has to answer

# Organisational Competence Scheme

- Questions such a scheme has to answer
  - What does competence mean?
  - Who is subjected to such a scheme?
  - Who are the accountable managers for safety related functions?
  - Who owns the scheme?
  - Who is responsible for the quality of the scheme?
  - How to record?
  - How frequent?
  - What methods?
  - How to gain competence?
  - How to maintain competence?
  - How to ensure the competence of the competence assessors?



# End of Part 2

# Part 3 – The ATSEP Competence Scheme

- Guidelines for the competence assessment of air traffic safety electronics personnel
  - EUROCONTROL Ed. 1.0 04 Apr 2006
- Current EC legislation leads to divergence in harmonisation
  - Need to amend to achieve required level of harmonisation
- Request for support from European Commission under SES framework agreement
  - Upgrade Guidelines (for competence assessment and training) to EUROCONTROL specifications



# ATSEP

- Personnel who operate and maintain ATM equipment approved for operational use. ESARR 5
- Technical and engineering personnel including personnel of subcontracted operating organisations who operate and maintain ATM equipment approved for its operational use  
EC Regulation 2096/2005 Annex 2, Art. 3.3

# Specifications for Competence Assessment of ATSEP

- Draft exists
- Little exposure to ATSEP community
- Deadline Jan 2009 (EC deadline 31 Dec 2009)
- Slow, thorough process (EUROCONTROL Regulatory Framework)

# Presentation of Draft (1)

- Operating organisations need unit competence assessment scheme
  - *Allows for variations between units*
- Scope
  - Unit competence assessment scheme should be fully documented and include the following information:
    - A clear definition of the roles and responsibilities of staff involved in assessing ATSEP ongoing competence
    - The process for assessing ongoing ATSEP competence
    - Process for the selections and training of the unit competence assessors
    - The process for recording ATSEP ongoing competence
    - The process for maintaining ATSEP competence records; and
    - The process for the review of the Unit competence assessment scheme.
  - *Minimum scope, could have more – if so, what?*

# Presentation of Draft (2)

Introduction of “mentors” in the definitions

Mentored training: during the whole system/equipment rating training process, and in particular during the OST phase, the ATSEP is under the guidance of a qualified ATSEP. The mentors can be instructors or experienced colleagues

*Is this ok? Should an experienced colleague be allowed to supervise? Or what does qualified ATSEP with regard to OST (on site training) mean?*

# Presentation of Draft (3)

## Assessments:

- Before working unsupervised
- After conversion training (change in job category, environment or system)
- Development training – OSTI
  
- Ongoing competence maintenance – every 3 year
- OSTI and CA – ongoing competence assessment – every 3 years suggested
- *Is every three years sufficient*



# Presentation of Draft (4)

To maintain competence: provision of continuation training

- Refresher training – existing knowledge and skills
- Degraded system training – unusual situations
- Conversion training – change in job category, environment, system
- Training topics
  - Just culture
  - Human factors
- Assessment after refresher and conversion training, feedback after degraded system training

# Presentation of Draft (5)

## Medical fitness

- Not to undertake safety-related tasks if they know or suspect that their physical or mental condition renders them unfit to undertake such tasks
- *Should a link to psycho-active substances be made? Can you still consider yourself fit?*

## Language Proficiency

- ESARR 5 – proficient in English where required
- *Examples?*

# Presentation of Draft (7)

- Ongoing competence assessment
  - Carrying out minimum amount of time on system/equipment they are rated on. Minimum time determined by OO for each system/equipment and approved by NSA
  - Appointment of competence assessors
    - Need to have ratings themselves
    - Number depending on ATSEP to be checked and number of ratings at unit
  - Method of assessment
    - CA may request dedicated practical check
  - Oral or written or computer based check every three years
  - Procedure in case of insufficient result
  - Declining performance – *discuss with ATSEP, determine remedial action? Dedicated check?*

# Presentation of Draft (8)

- Suspension from specific task
  - OO expected to withdraw ATSEP from performing safety related tasks
  - Review – remedial action
  - Safety related tasks only under supervision of qualified OSTI
  - New competence assessment

# Presentation of Draft (9)

- Development training
  - System Monitoring and Control (2 paths)
  - On-Site training instructor
    - Course and course content
    - Assessed performance at end of course
    - Training competence assessed by OSTI-CA 3 years *or more?*
  - Competence assessor
    - Course and course content
    - Assessor competence assessed by qualified person
    - *Time frame of assessment?*

# Presentation of Draft (10)

- Administration and records
  - Legal requirement
  - Recording system demonstrating the process
  - Maintain records, safely and securely filed and stored
  - Made available for audit
  - CA should keep personal comprehensive records. Security! Used for continuous assessment.
  - Example of ATCO licensing data base – presentation next day.

# Open Issues

- How prescriptive should the specifications be? Should vs shall
- What needs to be shall? What can be should?
- How to deal with small units – 1 person doing all. Who should check his competence?
- What is the role of the individual staff member's manager?
- What is the role of the safety manager?
- Missing points?

# Thank you

- Updated draft sent to people present
- Similar process to here with ATSEP Training WG 18 December
- Release of Draft Specification end Jan 09 – formal consultation