

# **EUTERP Workshop 26-27 June 2023**

## **Developing competence standards for training(?)**

### **Feedback to ETRAP Conference**

- ❖ Varied content for the “same” training
- ❖ Inadvertent creation of
  - misunderstanding, apprehension, fear
  - Overconfidence
- ❖ “inadequate” or “inappropriate” training often cited as a contributory factor to incidents/accidents
  - or perhaps identified in regulatory inspection
- ❖ Weaknesses in training perhaps not apparent until something goes wrong
- ❖ Best use of resources ?

# Discussion at EUTERP, Malta 2019 ..

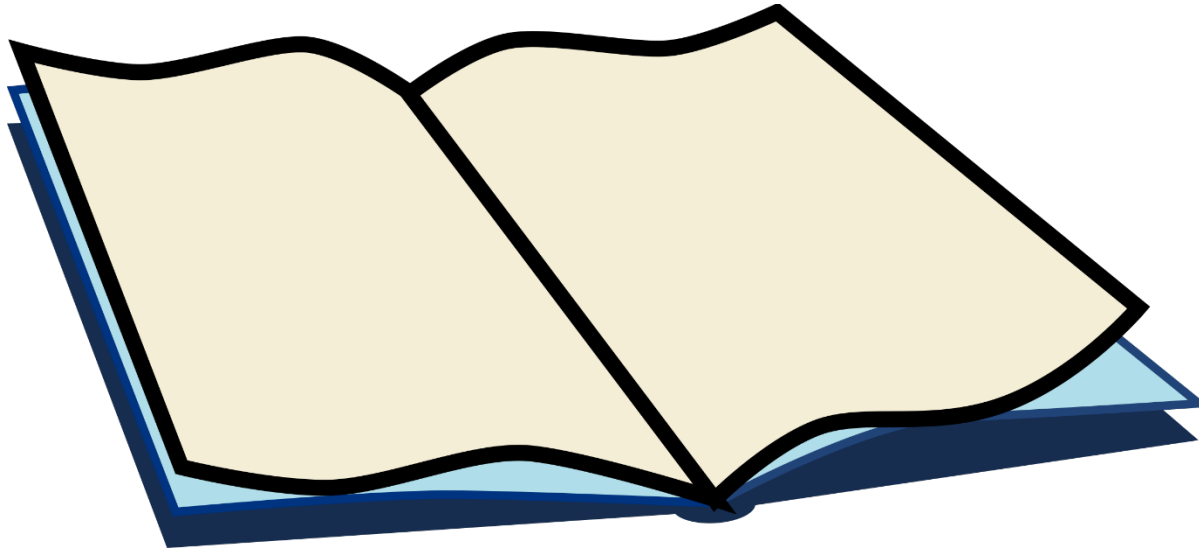
- A previous recommendation was that those who wish to be radiation protection trainers should adhere to /observe agreed “professional” standards !
- Trainers are influencers ..... Is there a gap in regulatory control ?
- The TTT approach has many benefits eg, resource management, encouraging a consistent approach
- There are many trainers ---- all effective ?
- Are there dangers in trainer self assessment ?
- Is it a “buyers’ market” ?
- Is the small user poorly served ?

- ❖ **Authorative guidance on necessary competence for trainers would be of value**
- ❖ Consideration of training of workers has risen up the agenda
- ❖ Resource pressures fostering novel thinking
- ❖ Responsibility for adequate training lies with the license holder
  - They would benefit from guidance
- ❖ Progressing a graded approach to required level of training would be of value
  - There are models in other areas of H&S
- ❖ A level of understanding is always needed.

# Workshop Objectives

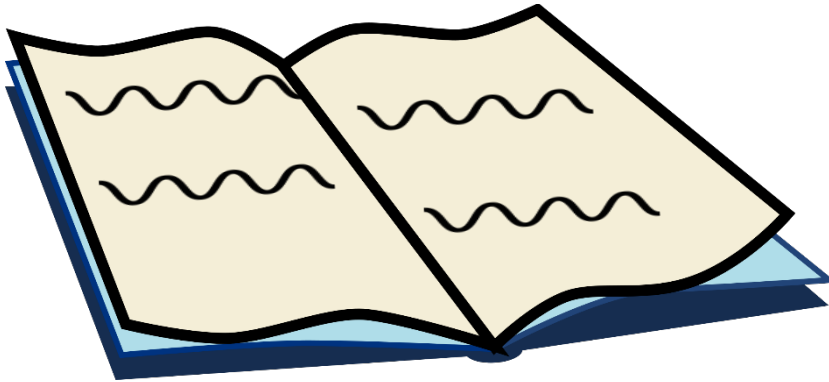
The vision is to have a published guidance document presenting :

- a) Expected competence(s) for RP Trainers
- (b) "good practice" guidance to the development of RP training



# Workshop Objectives

## Specific objectives of this workshop :



1. Define
  - “radiation protection training”
  - target audience for guidance
2. Consider/refine the structure & format of the guidance
3. Identify topics and content
  - chapters ?
4. Some substantive content

## Challenges

- ❖ Reaching agreement on scope and boundaries
- ❖ Creating a "product" that engages and is respected
  - Guidance of little value if not referred to !
- ❖ Getting consensus on "good practice"
- ❖ Encouraging the development of effective trainers
  - ... and not creating obstacles !
- ❖ Establishing the momentum needed to progress to a finished product

## Opportunities

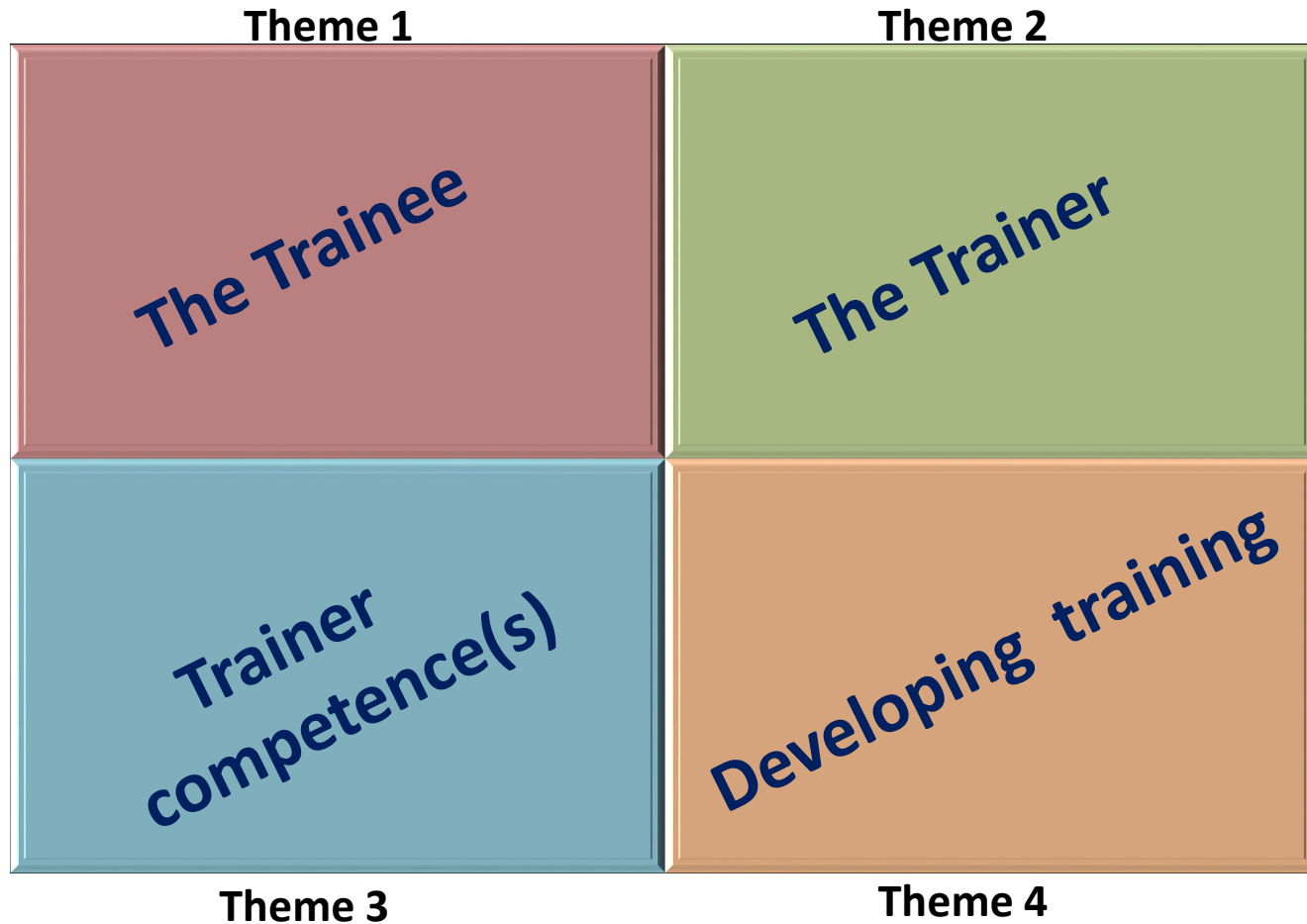
- ✓ To be a positive influence
  - Consistency & good practice
  - Improving effectiveness
- ✓ Create (be the creators of !) a valued resource
- ✓ Capture the lessons learned during the pandemic
- ✓ Support stakeholders
  - ✓ Trainers
  - ✓ RP professionals
  - ✓ Employers (+employees)
  - ✓ Regulators



- Mr Mark Gerritson -Head of Training : KLM Flight Academy**
  
- A different perspective: how to train airline pilots**
  
- Instructor/examiner framework**
  - **Observable behaviours**
  - **Technically experienced (assumed)**
  
- “conducting training to develop competence”**
  - **Reactive & proactive**
    - **“startle and surprise”**



# Plenary discussion



- We need (?) a definition/description of what we mean by “radiation protection training”
  - “education” vs “training” : not the same thing
  - there good definitions of “training” : can we make use if those ?
  - radiation “protection” not radiation “science”
    - But is there an overlap ? Always ? Sometimes? Never ?
  
- What is the primary objective in radiation protection training ?
  - Can be captured in a simple statement - or does it depend on circumstance ?

☐ Can we capture generic trainee profiles - role /context ?

- **Exposure situations**

*Planned*

*Existing*

*Emergency*

- **Sectors**

*Nuclear Industrial Medical R&D “Existing” .....*

- **Personnel**

*Workers Emergency Responders RPOs RPEs Ancillary workers .....*



- We need (?) a definition/description of what we mean by a “radiation protection trainer”
  - Does this include eg “educators” “lecturers” “presenters”
  - Is there a graded approach ?
  
- For individuals operating as trainers what are the expected attributes/attitudes ?
  - Are there headline attributes applicable to all trainers ?
  - Are there more specific attributes that might apply to specific categories of trainers?
    - Can we categorise trainers
    - Is there a trainer matrix ?

## Knowledge

- What does a trainer need to know
- what information does a trainer need – what needs to be found out ?

## Skills

- Technical/operational
- “soft skills”
  - Communication, etc
  - Appraising the training audience
- In-person vs online(remote) skills sets – are they the same ?

## Training a trainer ?

- What are the necessary competences ?

- Needs analysis for any trainee group
  - Confirming the sector/application
  - Identifying hazard/risk – in context
  - “What do trainees need to be able to do/know in order to ensure their radiation protection”?
  - Determine where the emphasis should be
  
- Consideration of constraints
  - Venue ? Time? Budget ? Remote ?
  
- Structuring a programme
  
- Training resources
  - What should a trainer provide ?
    - Simulators(why ?what ?)
    - Etc





# Working Groups

## Working Group A

- Draft a definition/description of “radiation protection training”
- .....draft some supporting text that makes clear scope, and boundary, of the guidance with respect to “training” . It should be clear what is not considered to be radiation protection training.
- Attempt to build a tool (eg matrix (s) and/or an algorithm) that could support  $\leftrightarrow$  in identifying in generic terms
  - Amount /level of scientific or technical content
  - Degree of inclusion of legislative/regulatory matters
  - Optimum format
  - The training emphasis

## Working Group B

- Draft a definition/description of a “radiation protection trainer” – make it clear who/what is not considered to be a radiation protection trainer.
- Define or describe categories of radiation protection trainers ( by exposure situations, applications , level of hazard, combinations of these etc ). If feasible, construct a matrix to illustrate the categories.
- For each category of trainer identified describe the expected “high -level” (or overall) competence in general (descriptive) terms



## Working Group C

- Draft the detailed competences, ie K,S and A for
  - (i) Radiation protection trainer in the field of NDT,
  - (ii) “ “ “ in academic R&D
- Define the competences, again K,S and A for an individual who trains trainers (ie involved in TTT).

## Working group D

- Build an algorithm (or describe the process in text) that could be used by trainers to put together appropriate training for any given training audience. The algorithm (or description) should include consideration of needs analysis (reflecting the trainee context), possible constraints, and optimum format.
- Draft guidance (text) on how to structure a training course in radiation protection. This guidance should be applicable in any context .





## □ “Radiation Protection Training”

- ... a combination of activities, including coaching and instruction, that has the objective of preparing an individual (team..) to “operate” in manner that ensure their radiation safety and the safety of others....
- Ionising radiation only !
- Didn’t quite manage to draft a matrix, but a useful discussion on identifying generic trainee needs that helps to start to “match” to a trainer profile in terms of high level K,S and A.
  - Complexity of application, potential exposure, risk of exposure, circumstances, environment , trainee profile etc
  - Scientific/tech knowledge, understanding of circumstances, important messages, emphasis, communication techniques, format....



## ❑ “How to develop training(s)”

Systematic approach – analysis, design ,develop ,implement,

## ❑ But noted ... Perhaps little awareness of existing guidance eg,

- IAEA
- ARPANSA-ORE: Occupational Radiation Exposure online modules  
<https://content.arpansa.gov.au/ore>
- Strahlenschutz-Ausbildungsverordnung (detailed RP topics)
- EC VET,EU Qualification Framework : Bloom, Kirkpatrick
- Radiation protection 174+175 (learning outcomes for medical)
- (ENETRAP) guidance (E&T framework, methodology and necessary competence for RPE and RPO)

## ❑ “Simpler” guidance with examples would be useful ?



# But valuable discussion..

## Format ?

- Face to face ?
- Hybrid ?
- Remote only ?

## Skill set

- Already an “industry” re soft/communication skills
- Perception awareness + situational awareness
- Existing technical skills
- Dealing with challenging circumstances in the (varied) real world
- Identifying resources

## Do we really need guidance ?

## Shelf-life ? Future proofing ?

- Yes – there is value in progressing the development of properly scoped, practical guidance**
  - That would ofbe value “as is” but that could be used/adapted on (smaller) national basis.
  
- EUTERP intent :**
  - To draft ToR for a workstream to take this further
  - Establish a working group
    - Interested individuals ?
    - International organisations
      - HERCA ?, IAEA ?, IRPA ? Other ?

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