

**ETRAP 2009**

**Lisbon, Portugal, November 2009**

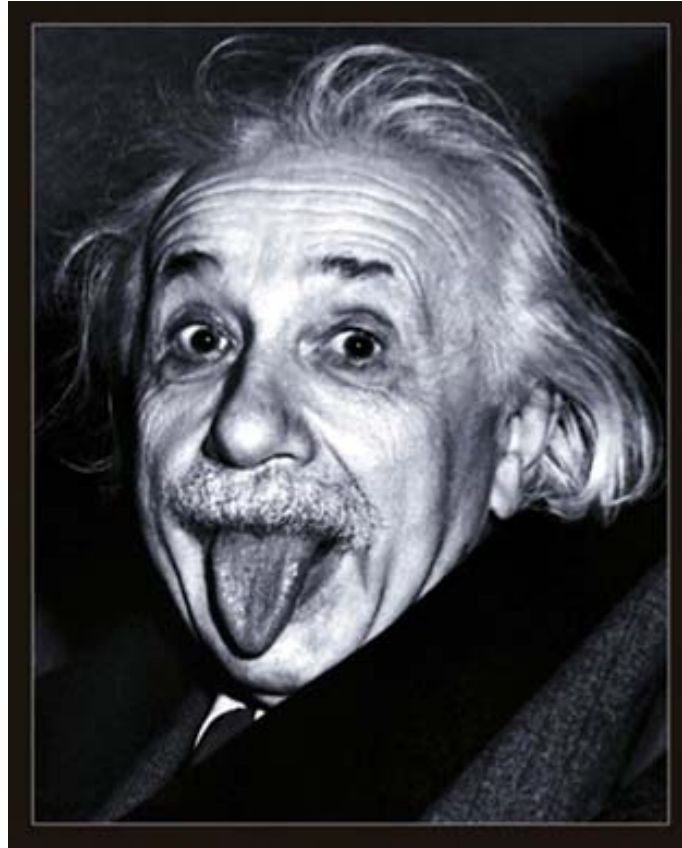
**Education and Training of Radiation Protection  
Officers in Sweden**

Virva Nilsson, Forsmarks Kraftgrupp AB

# Contents

- ✓ Setting the goal of E&T
- ✓ Background
- ✓ The levels of E&T for RPO's in Sweden
- ✓ Work still needed to be done

# The Goal of Education and Training ?



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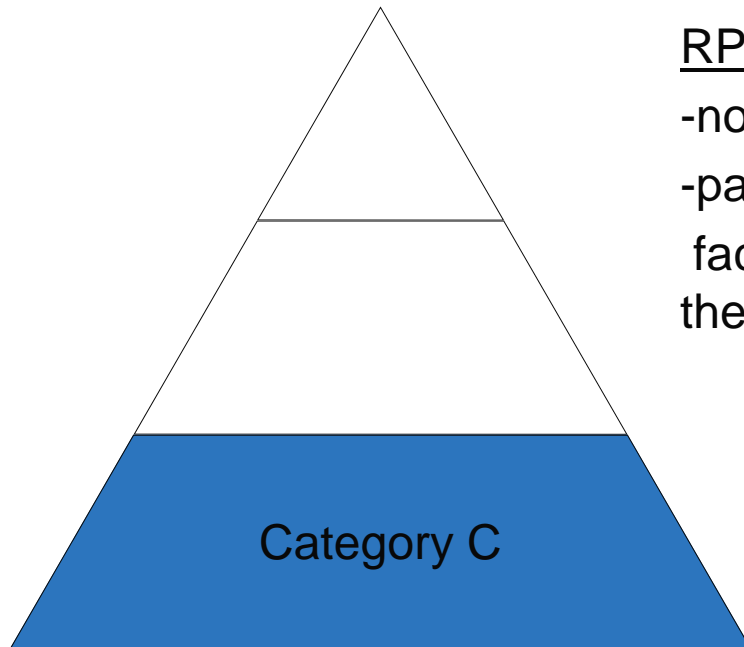
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# Background

- A need to co-ordinate the whole chain of E&T of RPO's and technicians was identified
- Traditionally the lower levels of E&T of RPO's were executed by the external companies without any more specific co-ordination together with the facilities
- A joint work group was started in 2003
- A task analysis was performed in order to identify the different demands of the profession



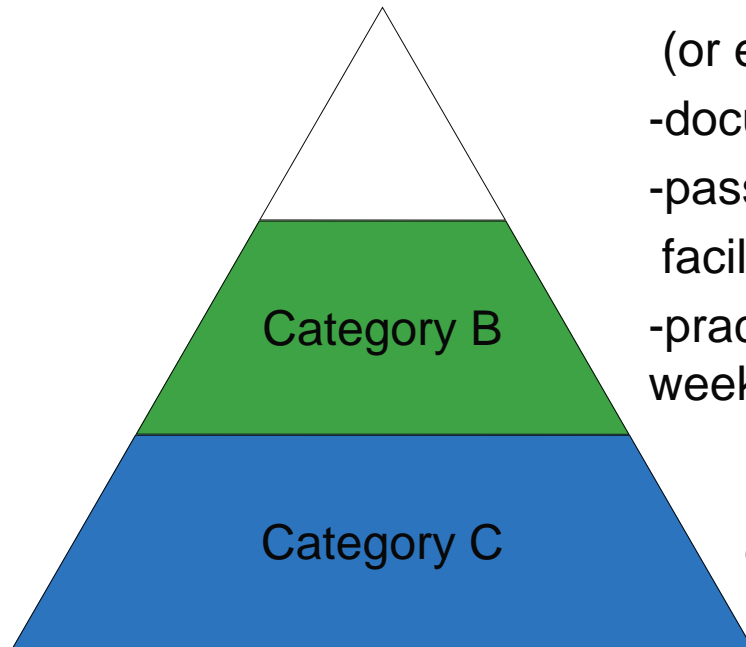
## The levels of E&T for RPO's in Sweden – Category C



### RP-Technician Category C

-no formal education needed before "C-education"  
-passed "C-education" (common for all the nuclear facilities in Sweden) including practice at some of the facilities (1 week)

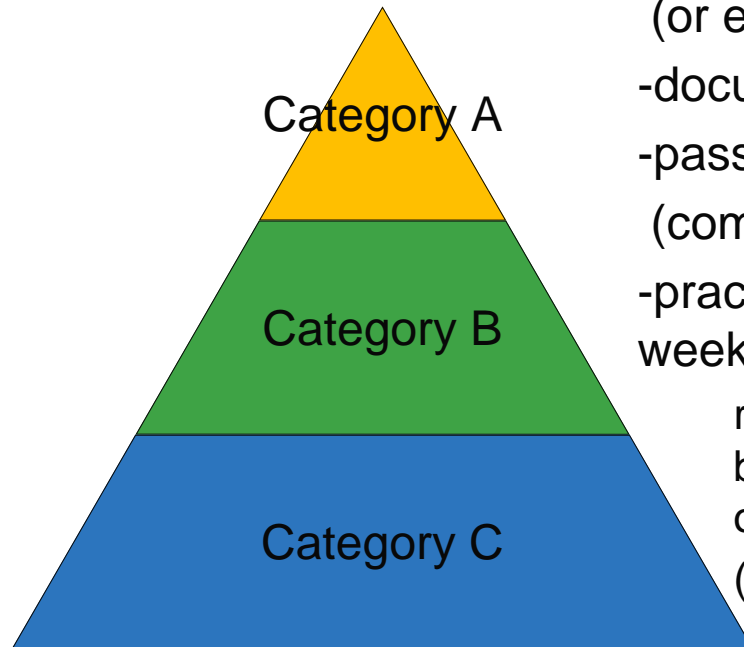
## The levels of E&T for RPO's in Sweden – Category B



### RP-Technician Category B

- basic education: upper secondary level / high school (or equivalent)
- documented competence Category C
- passed "B-education" (common for all the nuclear facilities in Sweden)
- practical experience at the facility at least 16 work weeks including at least 2 of the following areas:
  - reactor hall, containment, reactor building, turbine building, waste management, active workshop, CLAB or transport of spent nuclear fuel(minimum 2 weeks per area, documented)

## The levels of E&T for RPO's in Sweden – Category A



### RP-Technician Category A / RP Officer

-basic education: upper secondary level / high school (or equivalent)

-documented competence Category B

-passed "A-education" held by University of Uppsala (common for all the nuclear facilities in Sweden)

-practical experience at the facility at least 32 work weeks including at least 4 of the following areas:

reactor hall, containment, reactor building, turbine building, waste management, active workshop, CLAB or transport of spent nuclear fuel

(minimum 2 weeks per area, documented)



# The levels of E&T for RPO's in Sweden

External companies

Nuclear facilities

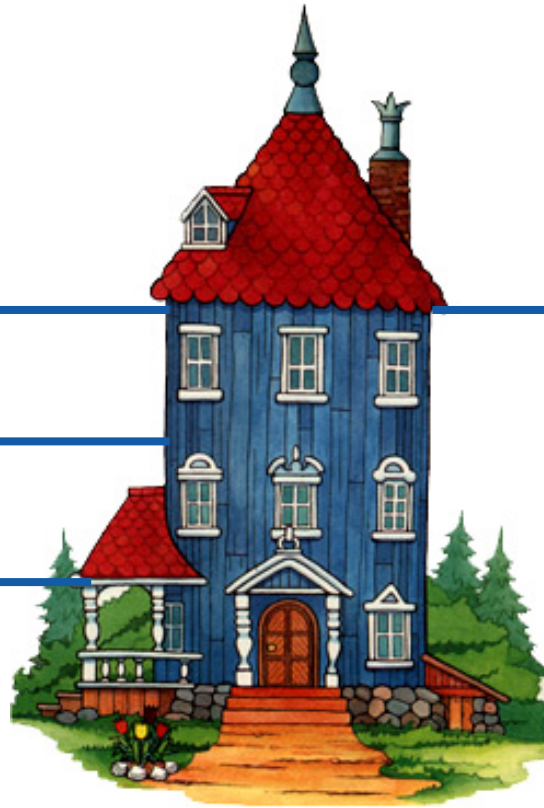
A-Technician

RP-Officer

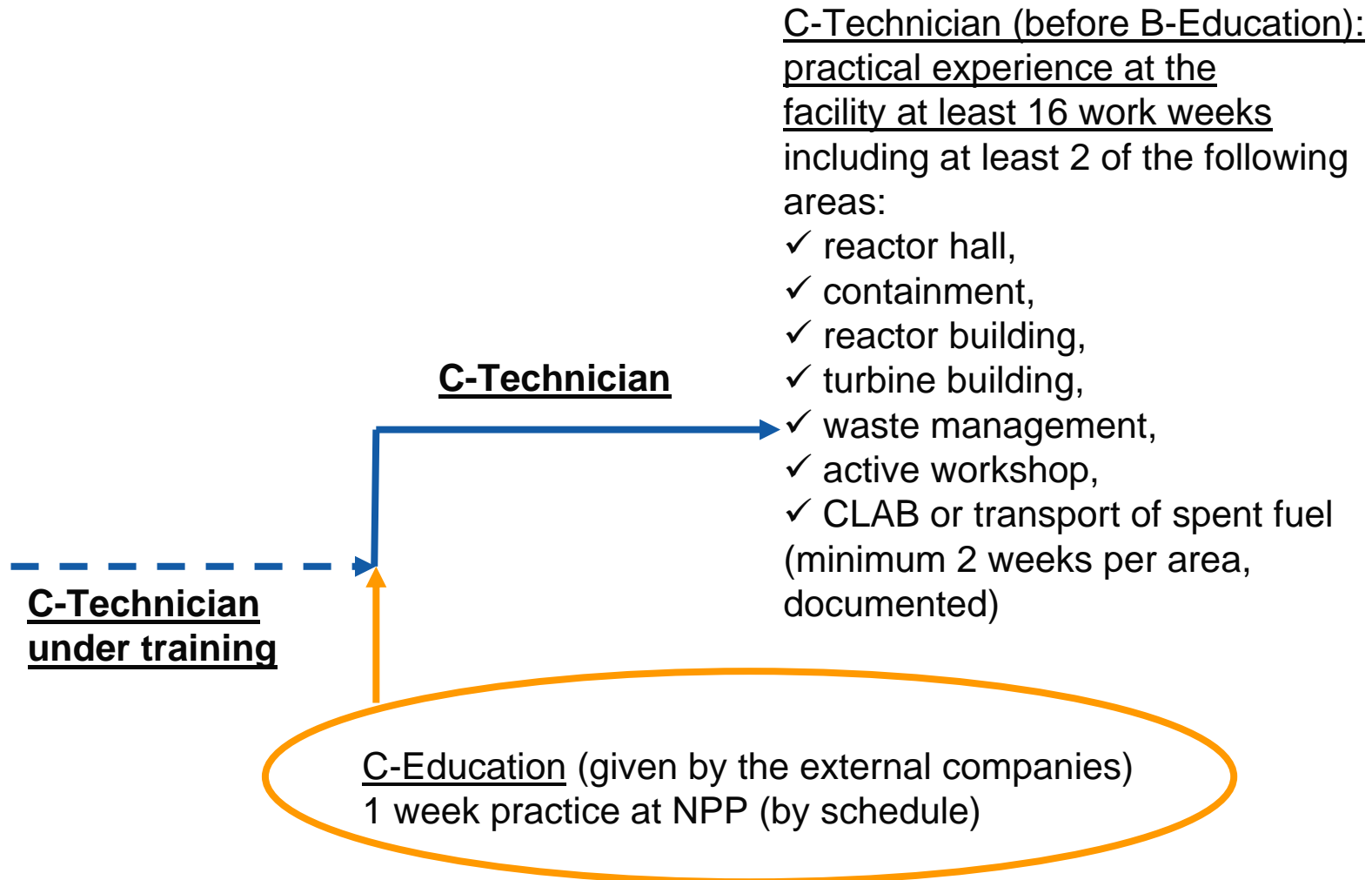
B-Technician

C-Technician

RP-Technician



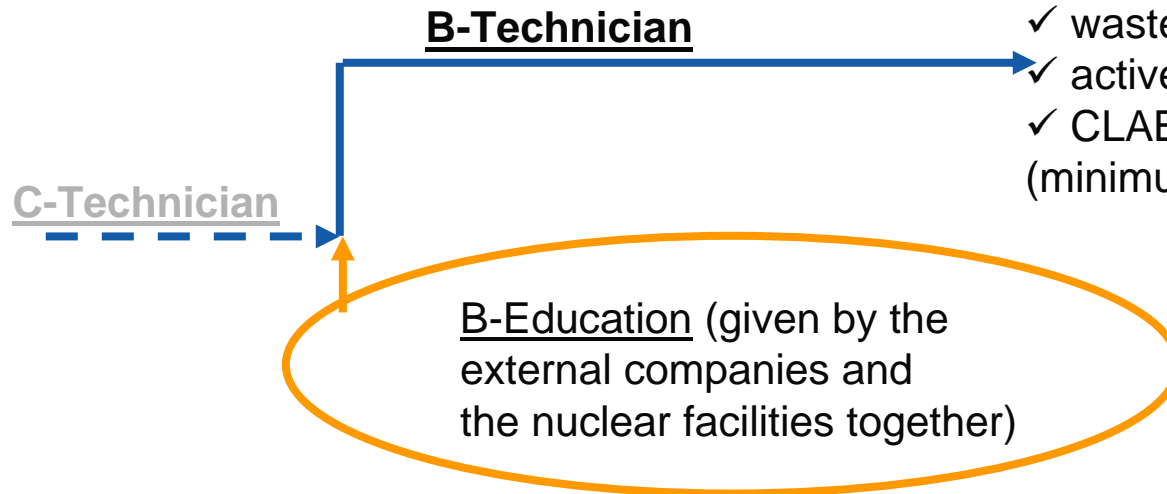
# E&T of the RPO's in Sweden



# E&T of the RPO's in Sweden

C-Technician (before B-Education):  
practical experience at the facility at least 16 work weeks  
including at least 2 of the following areas: reactor hall, containment, reactor building, turbine building, waste management, active workshop, CLAB or transport of spent nuclear fuel (minimum 2 weeks per area, documented)

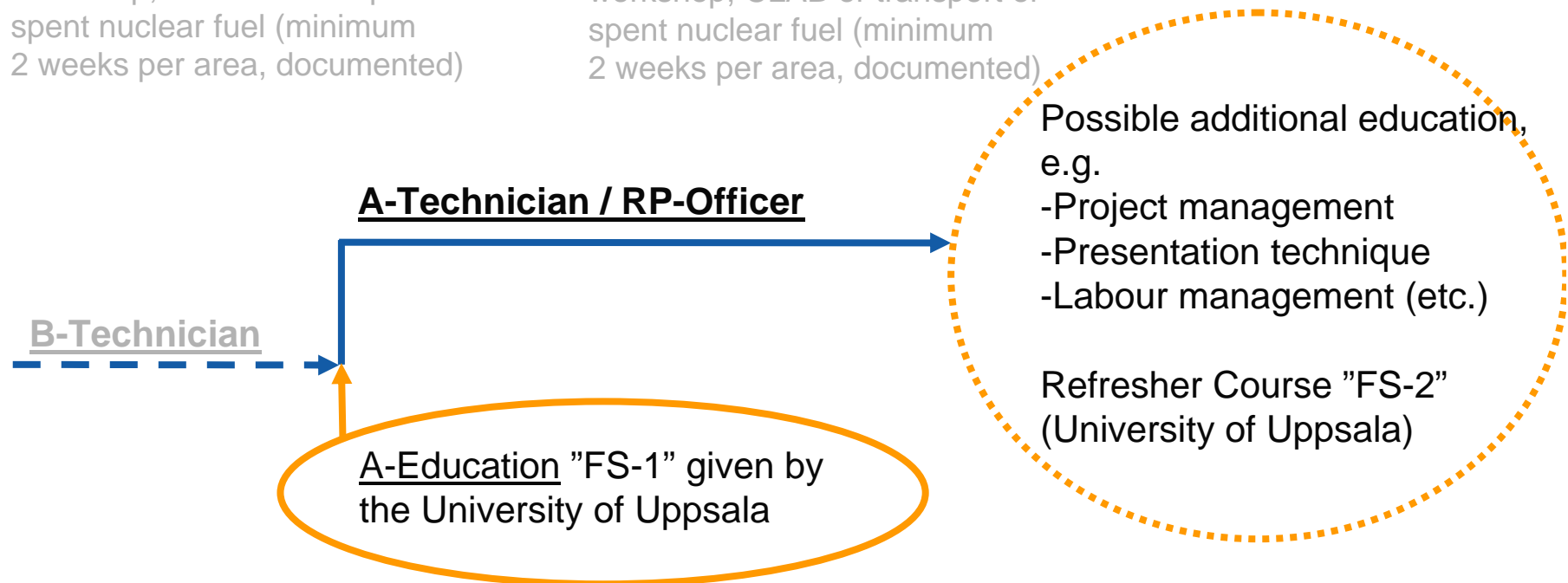
B-Technician (before A-Education):  
practical experience at the facility at least 32 work weeks  
including at least 4 of the following areas:  
✓ reactor hall,  
✓ containment,  
✓ reactor building,  
✓ turbine building,  
✓ waste management,  
✓ active workshop,  
✓ CLAB or transport of spent fuel (minimum 2 weeks per area, documented)



# E&T of the RPO's in Sweden

C-Technician (before B-Education):  
practical experience at the facility at least 16 work weeks including at least 2 of the following areas: reactor hall, containment, reactor building, turbine building, waste management, active workshop, CLAB or transport of spent nuclear fuel (minimum 2 weeks per area, documented)

B-Technician (before A-Education):  
practical experience at the facility at least 32 work weeks including at least 4 of the following areas: reactor hall, containment, reactor building, turbine building, waste management, active workshop, CLAB or transport of spent nuclear fuel (minimum 2 weeks per area, documented)



# Work still needed to be done

It's essential not to let the quality to degrade!

Education could be held in an authentic environment – Barsebäck NPP (in service operation prior to decommissioning).

The heads of RP-units at the facilities constitute the steering group. The joint group continues it's work being responsible for the work in practice.

The goal is to transfer the main responsibility from the external companies to the nuclear facilities – this in order to guarantee an equal level of E&T with every separate course.



# The Goal of Education and Training ?



**Thank you for your attention!**