NEA International School for Radiation Protection

A proposal for an educational certification project

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ISOE Topical Session – 30 November

Justification and Background for ISRP

- The system of radiological protection built principally by the ICRP with significant input from the NEA, national governmental and industrial organisations, the IAEA, the WHO, and others.
- Details of today's system maybe understood, but not the history and nuance of the system's development and implementation
- Need to understand the "spirit" of the system to apply it to diverse circumstances
- Numerous educational RP programmes exist, but with gaps

ISRP seeks to close these gaps

- NEA qualified to develop successful programme

ISRP Project Concept

2015 CRPPH Bureau meeting proposed that the NEA Secretariat should explore the added value of developing an international school to:

1. Capture knowledge and nuances of <u>why</u> and <u>what</u> the RP system is today

   → **transfer the "spirit"**

2. Present the history of the RP system

   → **transfer the "meaning"**

3. Provide a critical view of different national regulations and approaches

4. Evaluate and discuss how the RP system may evolve

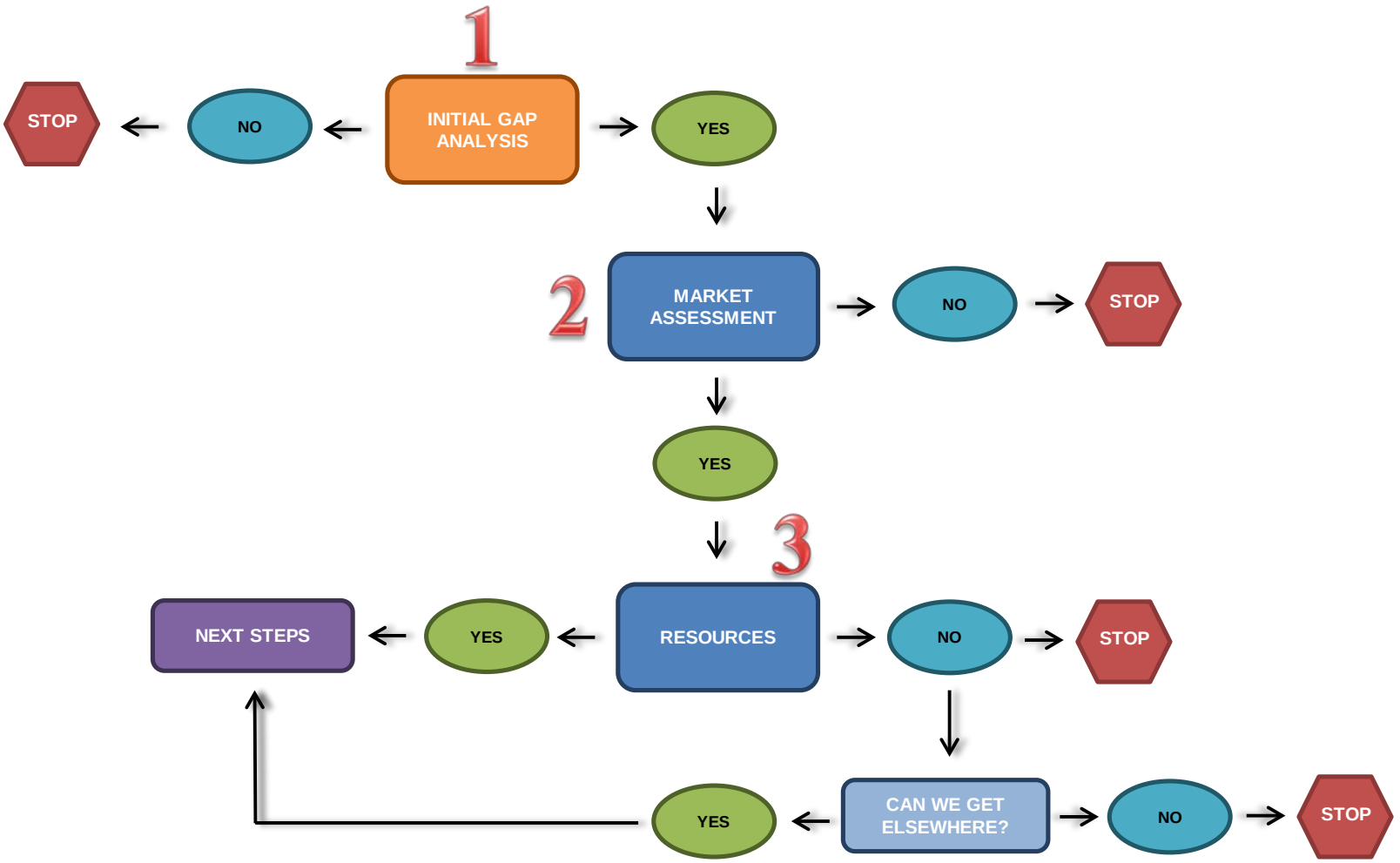
   → **state-of-the-art in RP**

5. Put the RP system into the context of RP culture

   → **critical understanding of the system**

6. **<u>Develop a network of RP excellence among participants</u>**

Preliminary Actions - Process Flow



Initial Concept

- Two-weeks (10-days)
  - Lectures
  - Coursework
  - Case studies
  - Technical training
- Associated with a university programme (such as ECVET is)
- Would offer a diploma or certificate in radiological protection
- Would offer credits towards national professional certification programmes (such as the CHP process in the USA)

Target Audience: early/early-mid career regulatory authority, utility or consultant experts in radiological protection (some students)

Gap Test: Methodology and Results

- Reviewed 10 existing programmes in RP Training around the world
- These included the more prominent education and training courses hosted by:
  - *Industry*
  - *Not-for-profit or international organisations*
  - *Universities with pre-existing RP focus*

Gap Test: Findings

1. A number of programmes include the presentation of ICRP recommendations and their use, but do not discuss the evolution of ICRP *intent* in the context of historical development

2. Specific RP/ICRP knowledge transfer from current or experienced professionals to new/early-career professionals: not covered

3. State-of-the-art concepts in RP science/biology/technology: covered

4. RP decision-making, stakeholder involvement, and the evolution of key areas within the RP system: not covered at length

Goal: find a way to best combine some of the harder science topics with these policy and social topics

Latest discussion with CRPPH Bureau

- If project is to continue, **three potential concepts for ISRP** should be considered.

Option 1 (10-Day Programme):

Covers the following areas of RP: the evolution, meaning and intent of ICRP, regulatory perspectives, emergency and recovery management, RP science, exposure/dose, nuclear law, interfaces with nuclear safety, etc.

Organizer: NEA and University

Host location: University

Outcome: Certificate/Diploma for long course

Ownership of organisation plus event: FULL

Latest discussion with CRPPH Bureau

Option 2 (3-Day Programme):

Covers the following areas of RP: ICRP, legal, regulatory, nuclear safety, emergency preparedness, international and national programs, state-of-the-state of RP, challenges, etc.

Organizer: NEA and University or NEA jointly with IAEA/EC

Host location: University or NEA Paris

Outcome: Certificate/Diploma for short course

Ownership of organisation plus event: PARTIAL

Option 3 (Half- to 1-Day Programme):

Covers the following areas of RP: ICRP-specific (meaning, legacy, challenges, future)

Organizer: Already existing

Host location: Existing programme

Outcome: Based on existing programme

Ownership of organisation plus event: LITTLE

Decision

Focus attention on planning for:

Option 1 (10-Day Programme):

Covers the following areas of RP: the evolution, meaning and intent of ICRP, regulatory perspectives, emergency and recovery management, RP sciences, exposure/dose, nuclear law, interfaces with nuclear safety, etc.

Organizer: NEA and University

Host location: University

Outcome: Certificate/Diploma for long course

Ownership of organisation plus event: FULL

TIMELINE: ***Project Development 2017-2018***
Project Delivery Summer 2018

Provisional Programme

The following areas could be addressed (5-10 day programme):

Brief Overview of the Radiological Protection System

- introduction to radiological protection;
- international institutions and organisations;
- international radiological protection standards;

Historical Development of the RP Framework and System;

- UNSCEAR, ICRP, IAEA and the International BSS, European Commission and the BSS Directive, NEA

Provisional Programme

The "Meaning" of the System's Framework Elements

- Justification, Optimisation,
- Application of Dose Limits
- Exposure Situations, Types of Exposure
- Radiological Protection of the Environment
- Numeric Criteria

Case studies to illustrate interpretational difficulties

Evolving areas of radiological protection application

- Emergency Management, Medicine, Radioactive Waste Management, NORM

Provisional Programme

State-of-the-Art radiological protection biological science

- Epidemiology
- Radiation Biology

Evolution of the system

- Individualisation of Risk
- Post-Accident Psychological Detriment
- Prevailing Circumstances
- Stakeholder Involvement
- Holistic Approach to Radiological Exposure: Public, Medical, Occupational

Next Steps

NOTE: Bureau approved steps forward in October

NOW:

- Identification of Programme Committee and key partners
- Resource Assessment (staffing/finances)
  - *Internal and support from other potential partner organisations?*

THEN:

- Work within RP community to identify further areas to address
  - *Survey to RP specialists to ensure "desire" and "attractiveness" of topics, location, etc.*
- Identify willing/appropriate university partner *(2 in consideration)*
- Coordinate with relevant international organisations / assure all relevant radiological aspects are addressed
- Reconfigure internal and external resources based on findings

The H… Nuances of Radiol… Protection

Thanks a lot for your attention!