

What should be the role of higher education in the future of radiological protection?

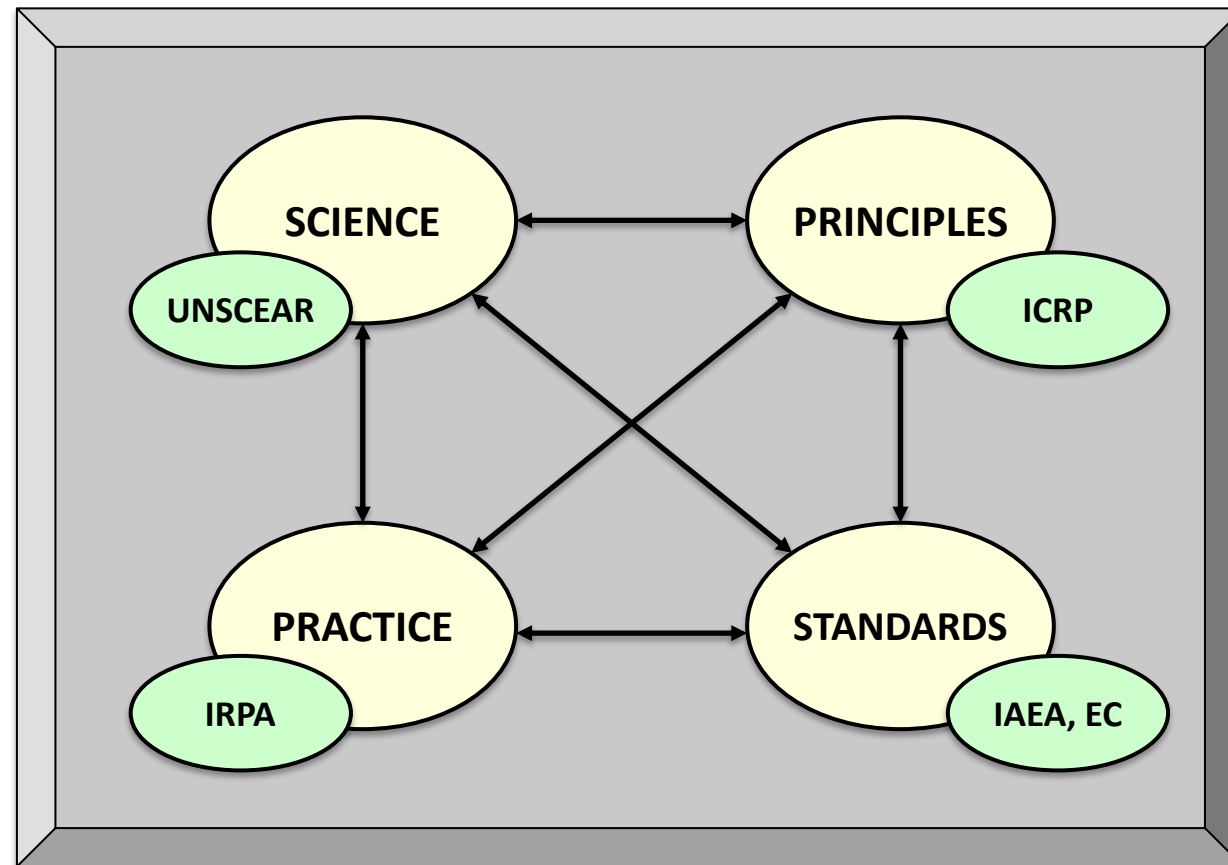
Kathryn A. Higley ;Joshua T. Hargraves; Jillian Newmyer; Stephen M. Kustka;
Brockway F. Elmore, III; Adam J. Stricker

Oregon State University

19 October 2021



The Four Pillars of Radiation Protection

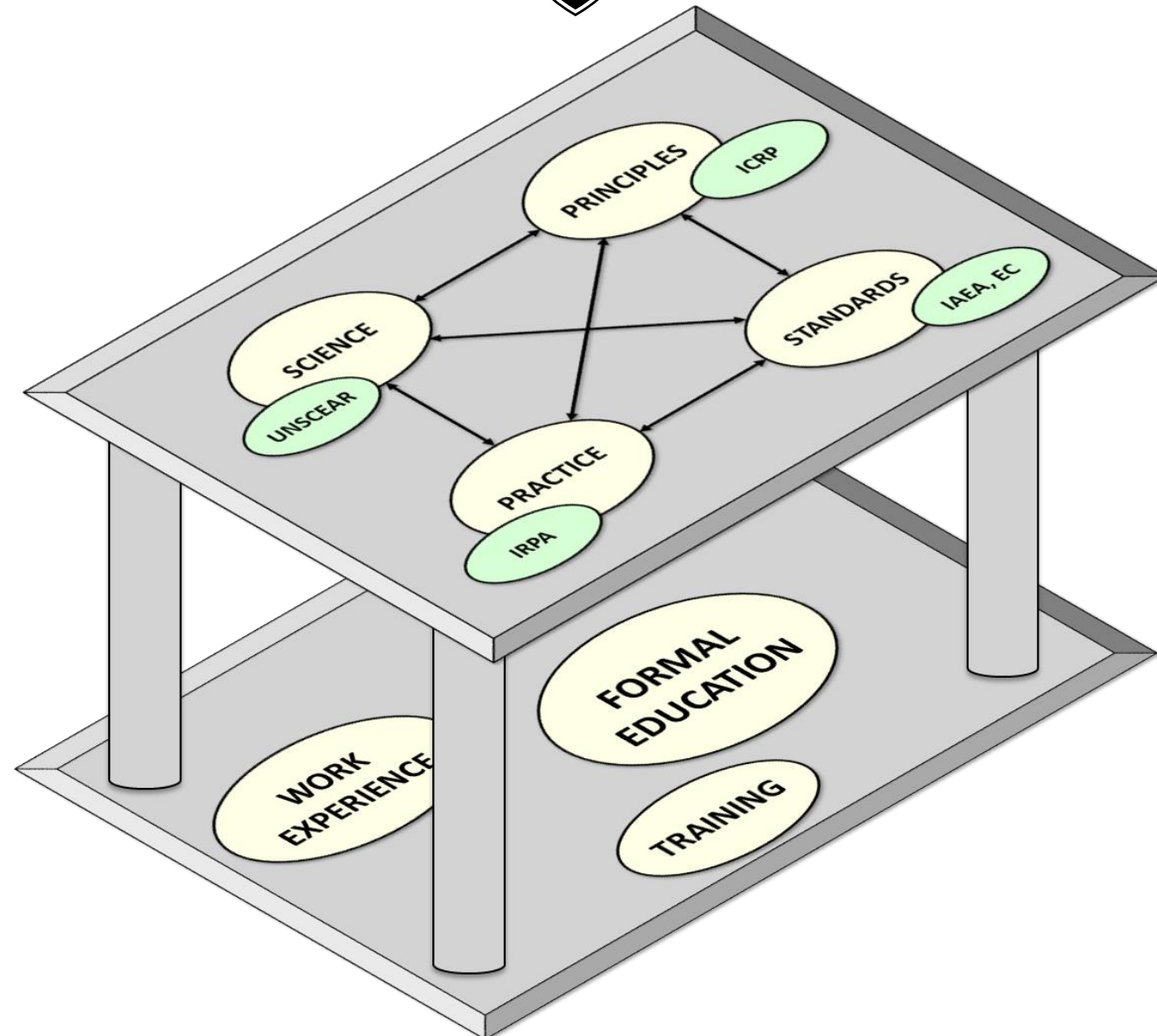


Simplified from IRPA 13-12/04, IRPA – Present and Future



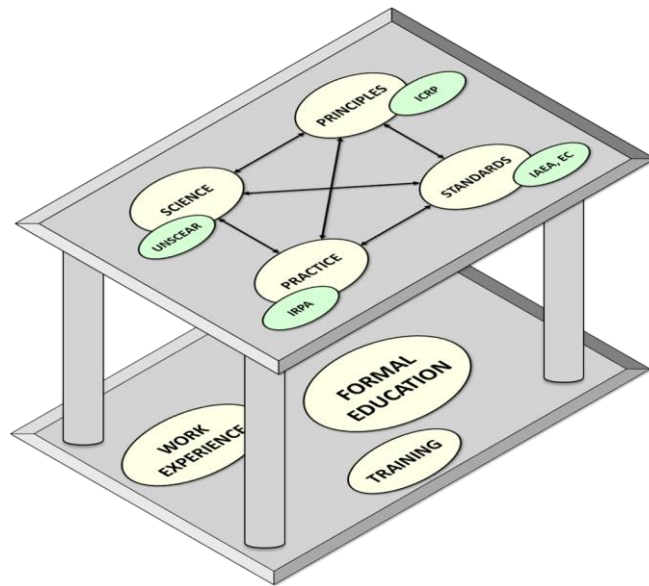
There's more to it

- None of the science, principles, practice or standards would exist without:
 - Educated professionals
 - Workplace experience
 - Additional training





It should be viewed as a... “*system*”

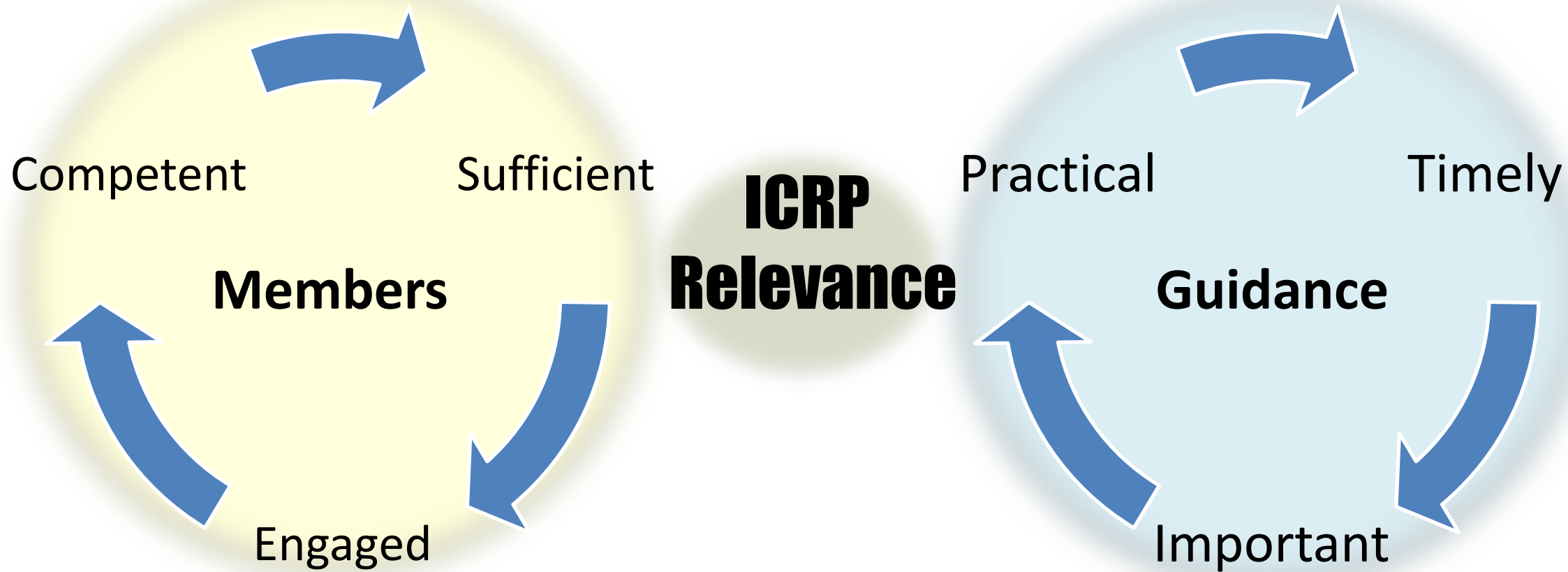


And systems are not static

Systems include feedback loops.....



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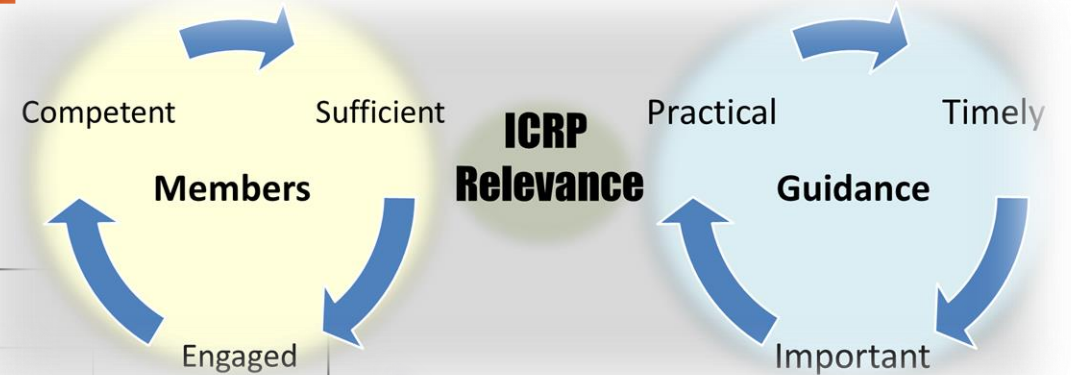
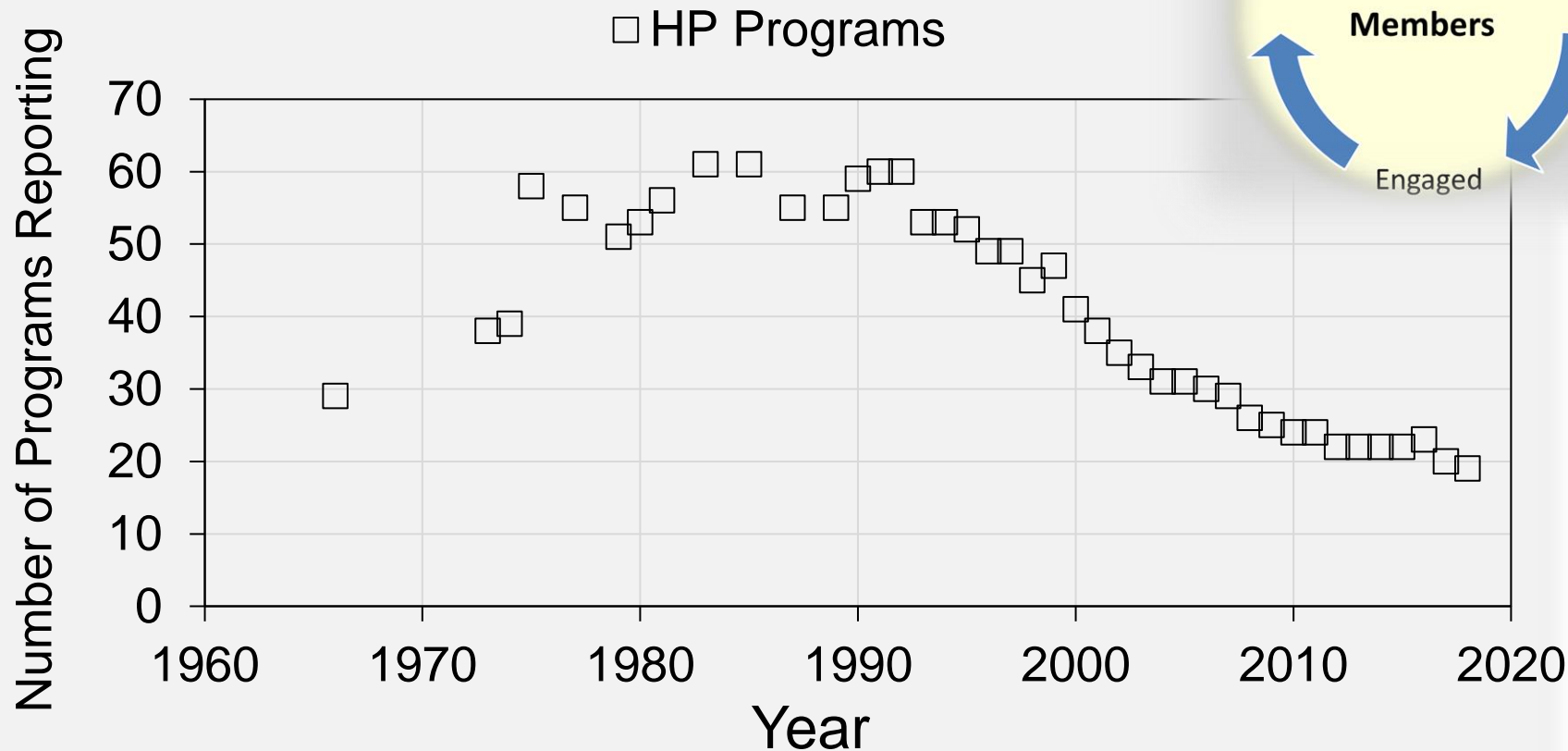


.....which can be positive or negative

Where do educational programs fit in this system?



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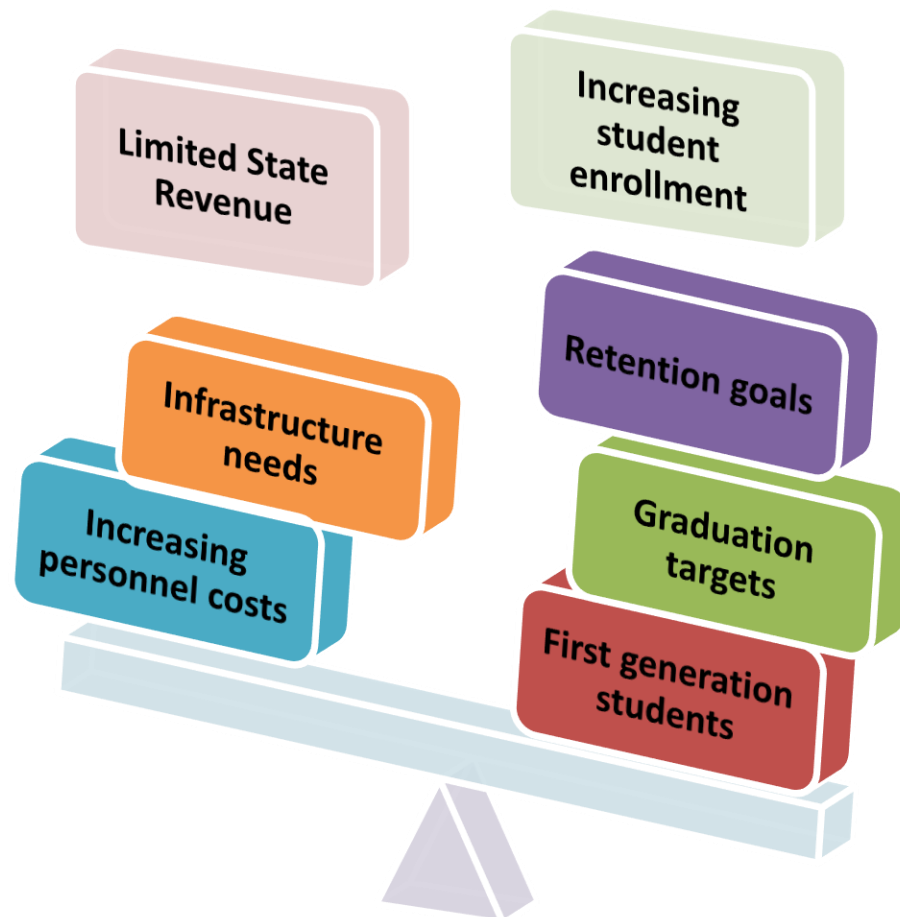


- ICRP members start from academia.
- But many U.S. programs are declining

See, for example: Peter Bryant *et al* 2021 *J. Radiol. Prot.* **41** S329



Academic programs are threatened by resource constraints & competing needs



Tough decisions about priorities

- What investments are needed?
- What spending cuts limit harm?
- ***Which programs are essential?***





The Reality for RP Academic Programs (at least in the USA)

- Programs need to continually demonstrate their value to
 - Deans
 - Oversight boards
 - Industry
 - Government and other institutions
- Simply seeing an uptick in RP jobs is not enough to ensure program continuity
- Is there a solution within the RP system?



Proposal: enhance RP academic programs through international engagement with ICRP (and other organizations)



**This is
beneficial to
ICRP as well**



One possible way forward – An association of academic RP Programs

Create an academic RP association

- Open to all RP academic programs
- Define rules and structure

Recognize the Association by ICRP as a Strategic Liaison Organization (SLO)

- Formal recognition established between entities

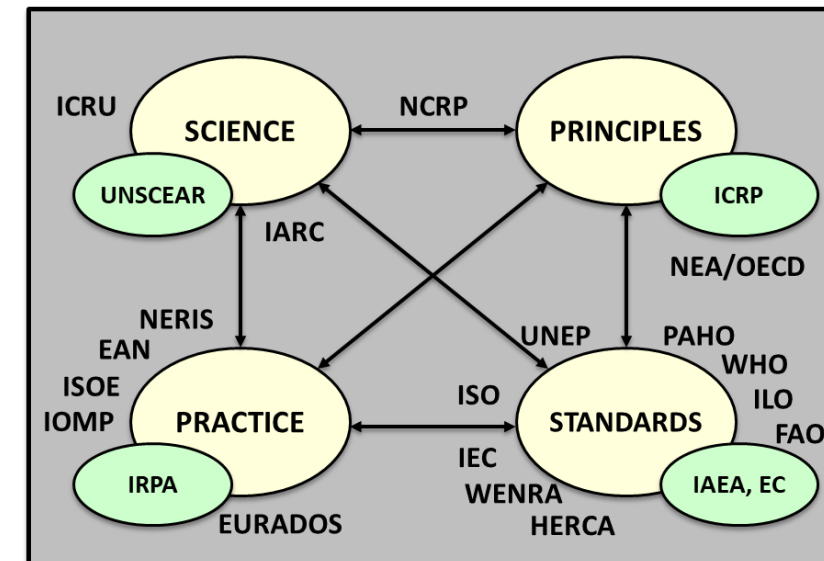
Build out the Association

- Inclusive process for participation
- Low barrier to join & participate

Have ICRP formally engage with the Association

- Regular consultations scheduled
- Two-way dialogue

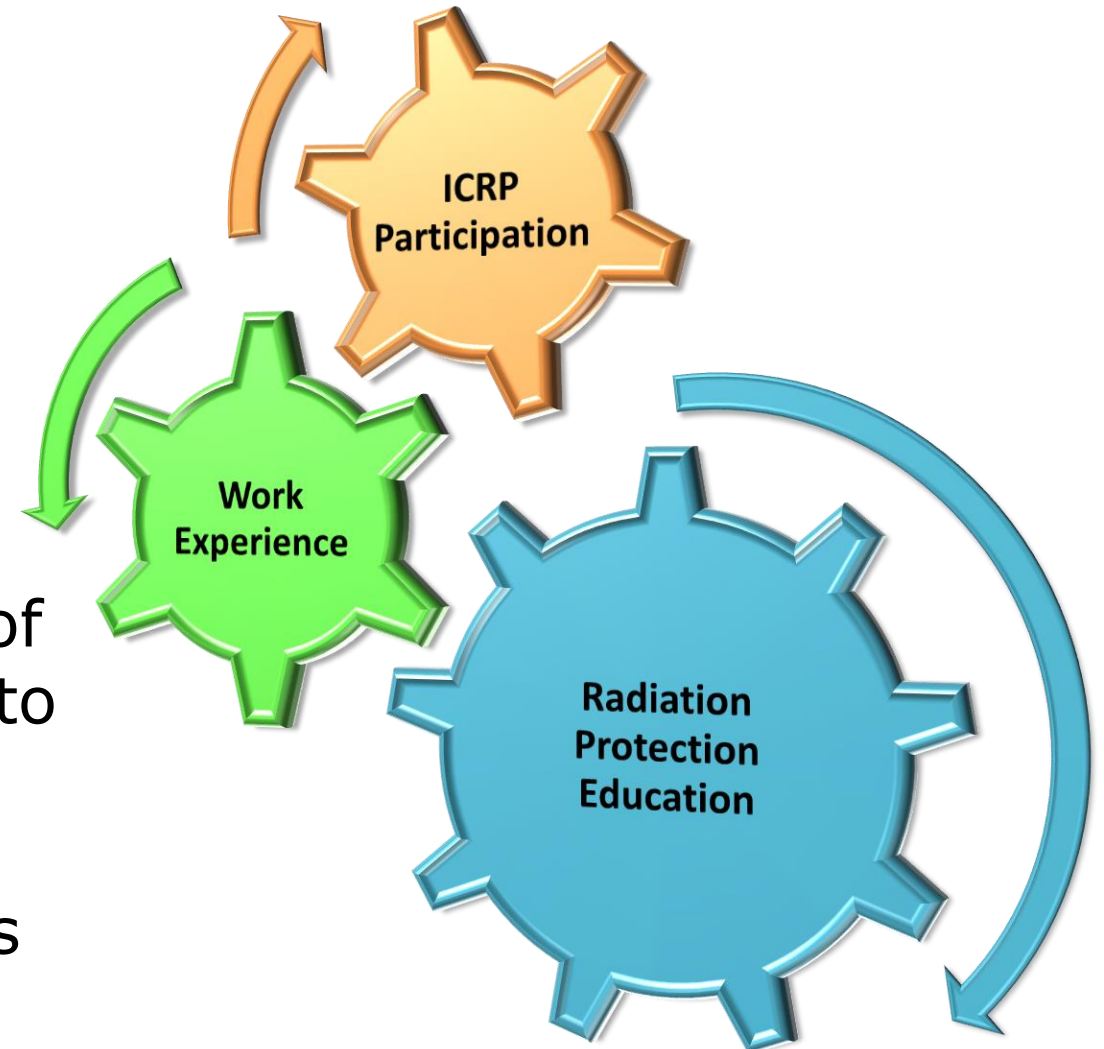
ICRP already engages
with many, many SLOs





Why should ICRP invest in sustainability of academic programs?

- Enlightened self interest?
- An ethical obligation?
- ICRP is a “consumer” of radiation professionals
- It needs a continuous throughput of educated, experienced individuals to
 - Develop,
 - Communicate, and
 - Implement its recommendations



Benefits of this arrangement



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- For ICRP
 - Builds constituency from early stage
 - Broader and more inclusive access to interns and members
 - Additional feedback on developing / emerging guidance
- For academic programs
 - Creates a truly global academic community
 - Elevates their visibility to stakeholders
 - Improves academia's understanding of ICRP
 - Gain insight and guides scientific inquiry



Will This Work?

- What are the barriers to success?
- Are there existing/competing associations?
 - HPPDO* hasn't really taken off
 - Others?
- Who participates in the association?
- Who pays for the association's organization efforts?
- What are the costs to ICRP?
- These questions will need to be addressed



*U.S. based Health Physics Program Directors

The System of Radiation Protection



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- Is more than simply good guidance
- Consists of interdependent organizations
- Health of the 'system' requires
 - Recognition of the component pieces
 - Focus on sustainability
 - Consideration of inclusivity
- Academic programs are an integral part, and have a role to play
- But need ICRP's support to make it work

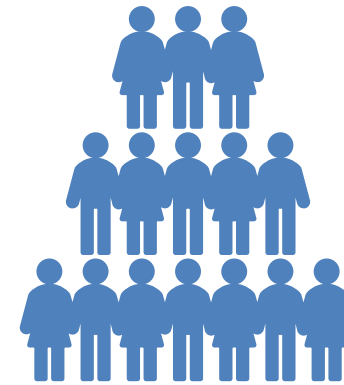




Next Steps?



ICRP considers this proposal



HPPDO (informally) takes it forward,
perhaps with NEA?



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Thank you!