



Present and future challenges in radiation protection by the young generation – perspective from Electrabel

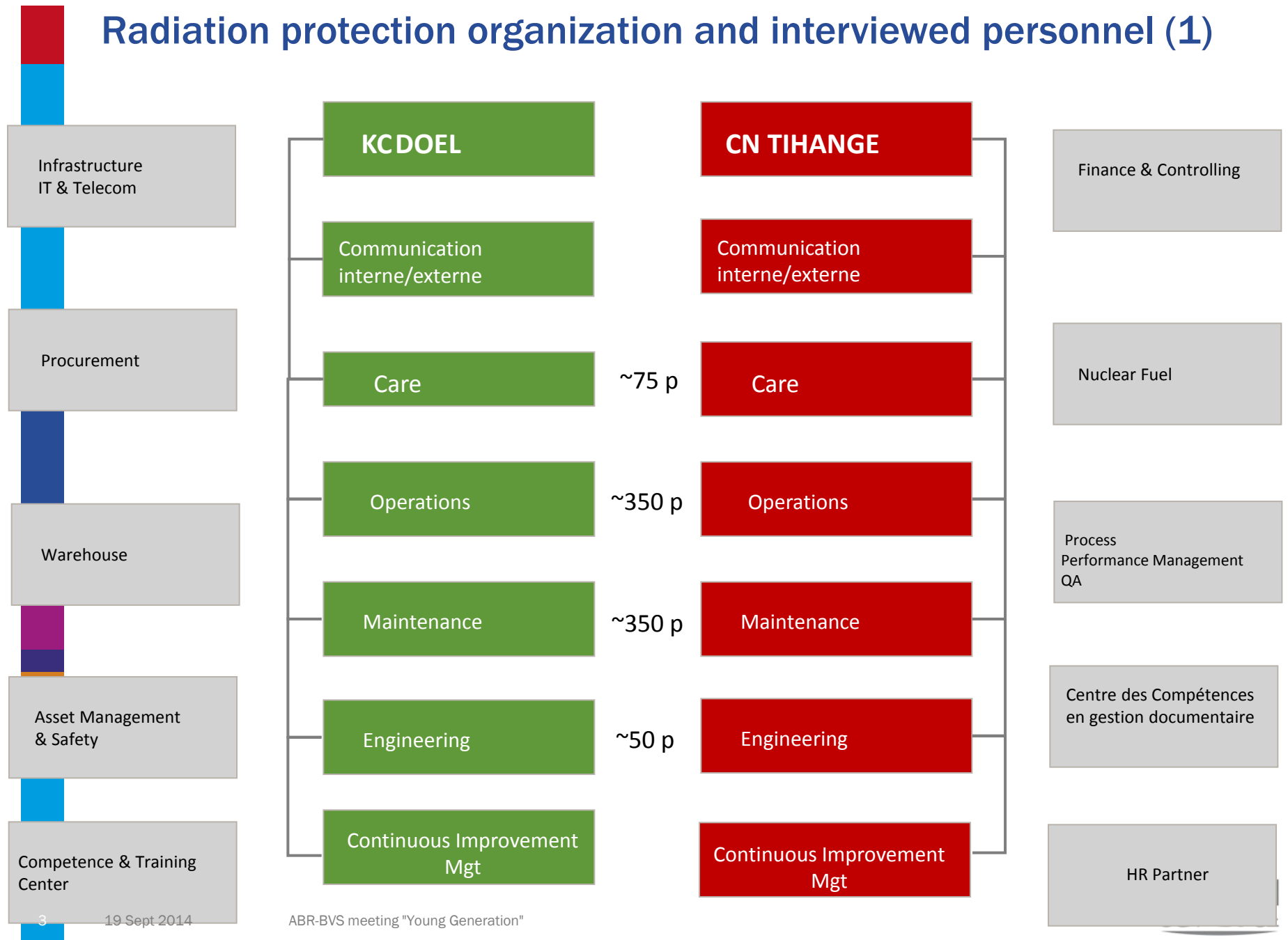
Benoit Lance (GDF-SUEZ), ABR-BVS, 19th September 2014

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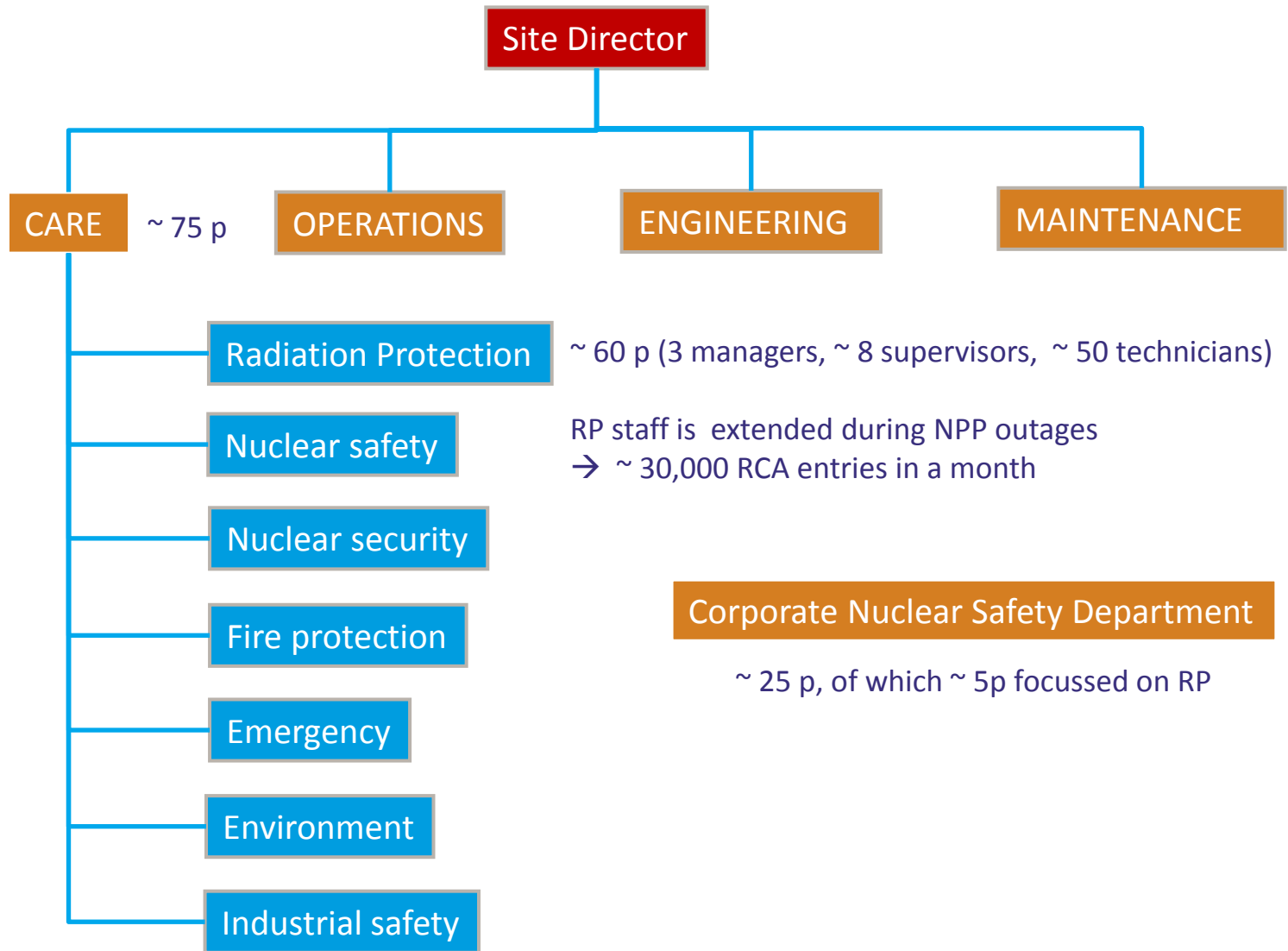
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Radiation protection organization and interviewed personnel (1)

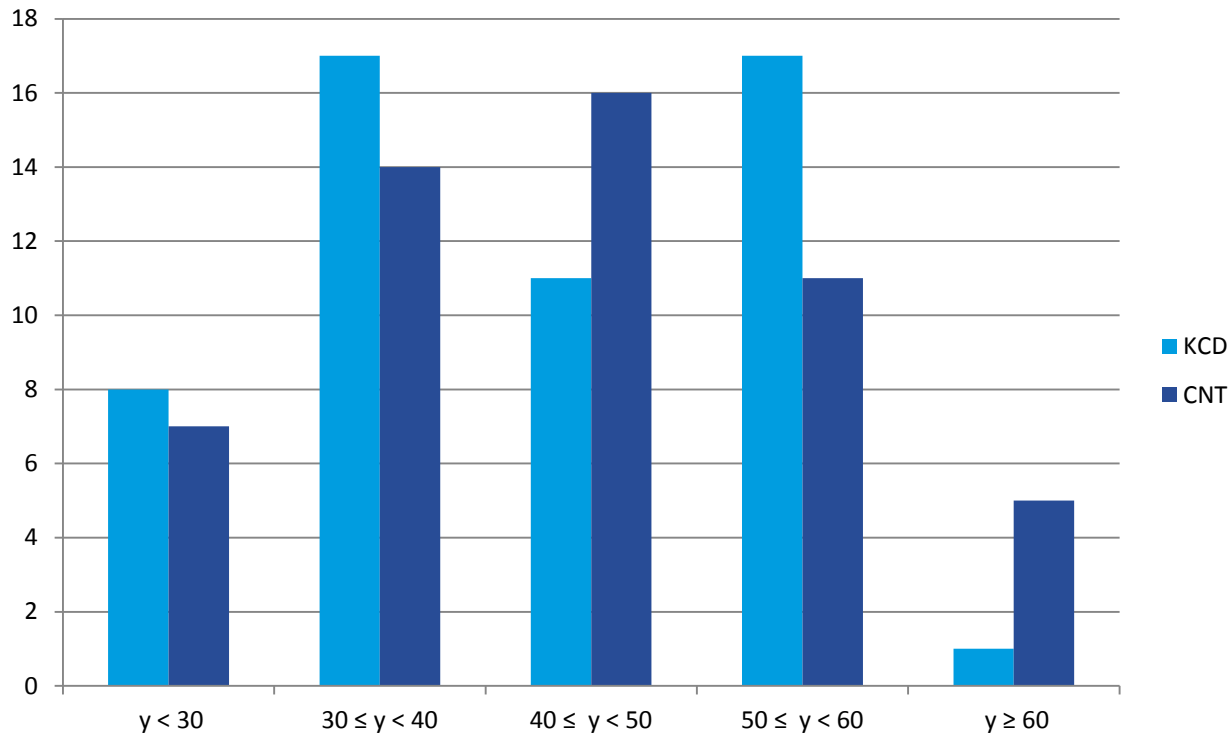


Radiation protection organization and interviewed personnel (2)



Radiation protection organization and interviewed personnel (3)

- Age distribution @ CNT and @ KCD for the RP staff
 - less than 10 persons per site belonging to the category “< 30y”



- Gender distribution @ CNT and @ KCD for the RP staff
 - 20% female representation @ KCD >> only 4% @ CNT

Radiation protection organization and interviewed personnel (4)

	Doel	Corporate	Tihange
Managers	F, 29y	F, 30 y M, 42 y	F, 34y
Supervisors		*	M, 55y M, 54y M, 31y
Technicians	M, 27y M, 26y	*	M, 28y

- 9 interviews + myself

Outcome from Q1 “How you came into contact with RP ?”

- Majority of answers tend to show that **working in RP is a deliberate choice**, driven by technical / scientific interest
 - “What about radiation protection ?”
 - “What about radiologically controlled areas ?”
 - “What about the working of measurement devices ?”
- Furthermore, **working in a nuclear power plant is also a deliberate choice**
 - Want to do a job that differs as compared to the others
 - Motivated by producing electricity in a safe way
- Various ways towards RP :
 - In contact with RP working as a contractor
 - Friends or family members already working for EBL
 - First job and deliberate choice
 - Carreer reorientation
- Background of our RP personnel :
 - Managers : industrial / civil engineers (chemistry, electro-mechanics, physics)
 - Technicians : technical degree (chemistry, electro-mechanics)

Outcome from Q2 “What are you doing & why you like it ?” (1)

- What are you doing ?
- Sites RP people managers / supervisors : work coordination, coaching, supervision, procedures, ...
- Sites RP technicians : RP maps, RP measurements & controls, check of transport of radioactive material, calibration of devices, support of personnel leaving the RCA, tracking of the contamination, etc...
- Corporate RP experts :
in charge of RP “governance”



Outcome from Q2 “What are you doing & why you like it ?” (2)

■ Why you like it ?

- ♥ Coaching of young RP colleagues (e.g. measurements)
- ♥ It is a different job as compared to others (but complex to share with your neighbourhood)
- ♥ RP personnel manages all works performed in the RCA (risk management in the RCA)
- ♥ **Diversified work** – a different job from day to day
- ♥ Transport of radioactive material : “each transport is different”
- ♥ Much **contact** with the workers of all departments and other companies
- ♥ Striving for the reduction of the radiological impact
- ♥ RP is not an exact science ; human being is at the core of the business
- ♥ **Scientifically grounded** and challenging

Outcome from Q3 “Challenges for the young generation ?” (1)

- What is working good or bad with RP ?

Working good for RP	Working bad for RP
Good evolution of the RP results for the EBL NPP’s, as well as for foreign NPP’s	No RP school for technicians
Better management of the work in RCA	Too procedural approach
RP personnel welcomed by NPP workers (radiation risk awareness)	Additional regulatory constraint for which the perceived added value is low
Knowledge progress in radiological data (ICRP, UNSCEAR)	No RP education for the public (“10,000 Bq ! It’s frightening !”)
Improvements in medical devices (less exposure)	Much RP routine work > < RP analysis (consideration of REX)
Acknowledgement of the RP personnel competence	Difficulty to recruit young RP’s, because RP is unknown and poor perspective for nuclear plants
	No view on RP practices elsewhere (technicians)
	RP requirements medical sector << NPP

Outcome from Q3 “Challenges for the young generation ?” (2)

- Challenges for / **and perceived by** the young generation

Changing context impacting EBL

- Engagement, training and knowledge transfer of young RP technicians
- Dismantling of NPP’s (incl. clearance of waste), new projects (LTO)

Continuous improvement at EBL

- Harmonization of the regulations for transport of radioactive material at the European scale (no national particularities, please)
- Keep RP practicable (>< regulations ?)
- Harmonization of the RP practices
- Broader view on RP for technicians (or enlarged RP culture)
- How to increase the performance when you are already good ?
- RP responsibility of the non RP specialists

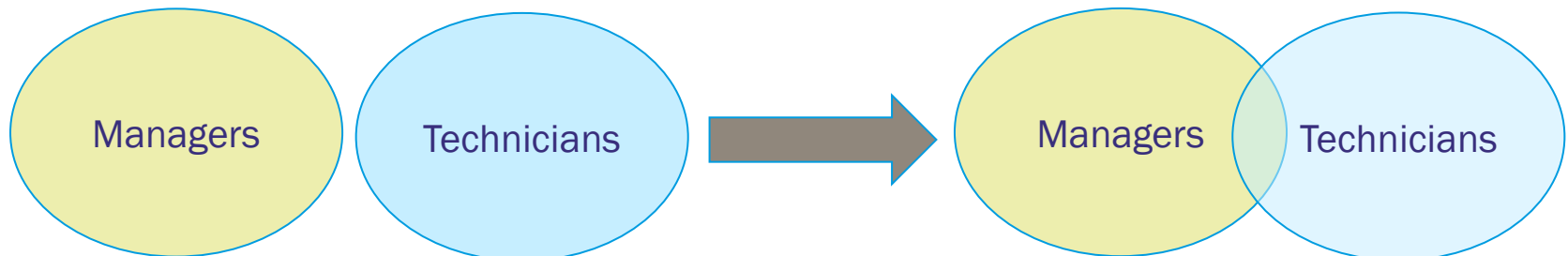
Outside EBL

- Better communicate about radioactivity and RP
- Make the RP public perception more objective

Analysis of the interviews

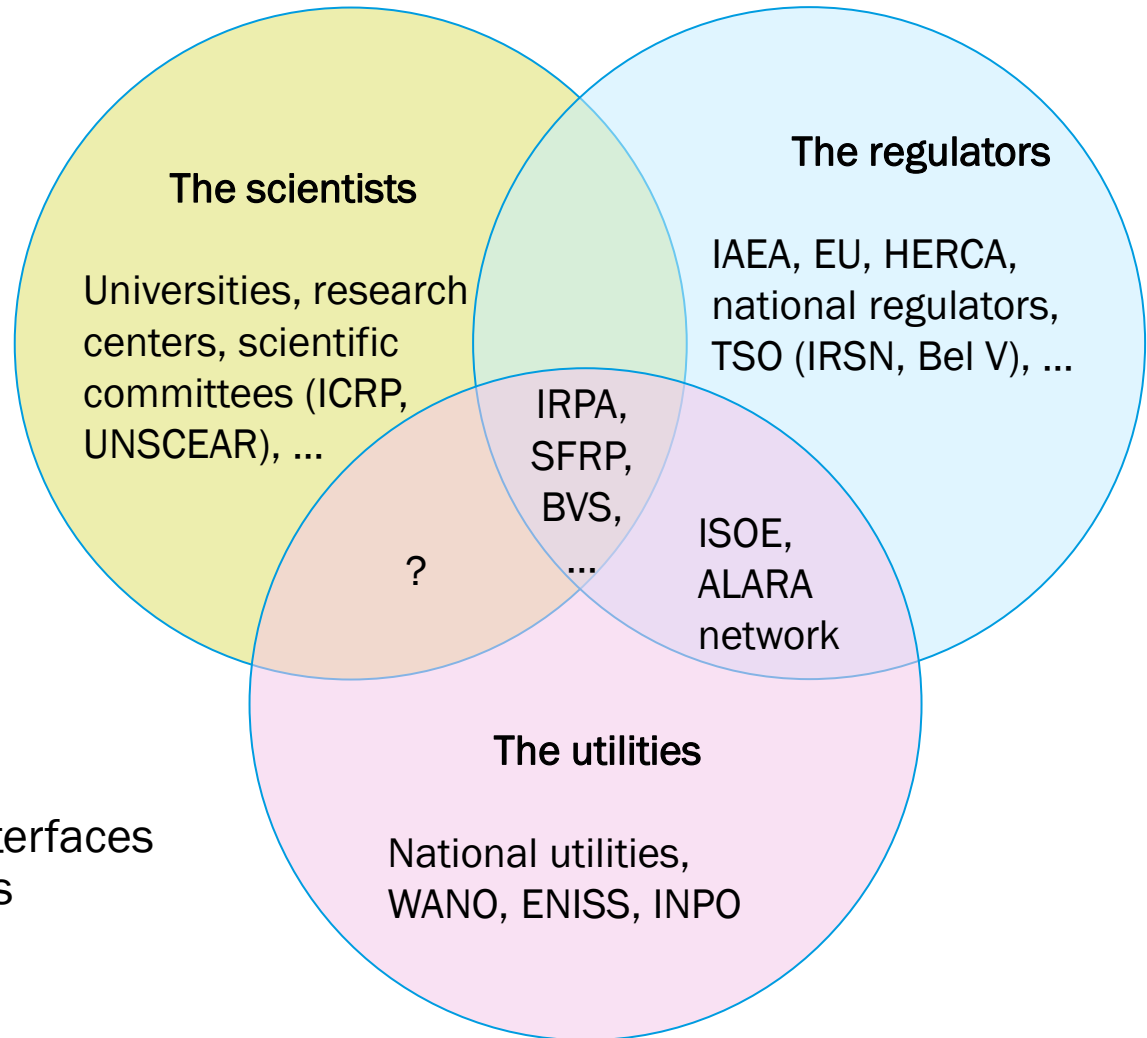
- Experienced RP personnel identifies promptly the fundamental overall problems of RP
 - But no significant disagreement between age categories (“ < 30y ” and “ > 50y “)
- However significant gap between technicians and managers

Managers	Technicians
Know “why”	Know “how”
Know foreign practices	Know only their unit / site
Few presence in RCA, because of project / people management	Moderate to high presence in RCA, depending on hierarchy position



A personal thinking

- 3 different worlds...



- Personal viewpoint :** importance of the interfaces between the 3 worlds

→ RP associations !

Conclusions

- Working in RP is a deliberate choice and RP staff is made of people having typical backgrounds
- ♥ : diversity, technique / science, social dimension
- Challenges for the young generation :
 - Changing context in Belgium → dismantling of NPP's
 - Recruitment, training and knowledge transfer of young RP technicians
 - Enhanced exchange between the various RP practitioners
 - ✓ Harmonization of RP practices
 - ✓ Enlarged RP perspective
 - ✓ Better matching between relevant regulations and industrial constraints
 - Public education



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got the
energy

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