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Graded Approach in Switzerland

A few examples in medicine and workplaces

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Revision of the Radiation Protection Ordinance (RPO)



To ensure a high level of radiation protection in Switzerland (also avoid unnecessary/unintended exposures)



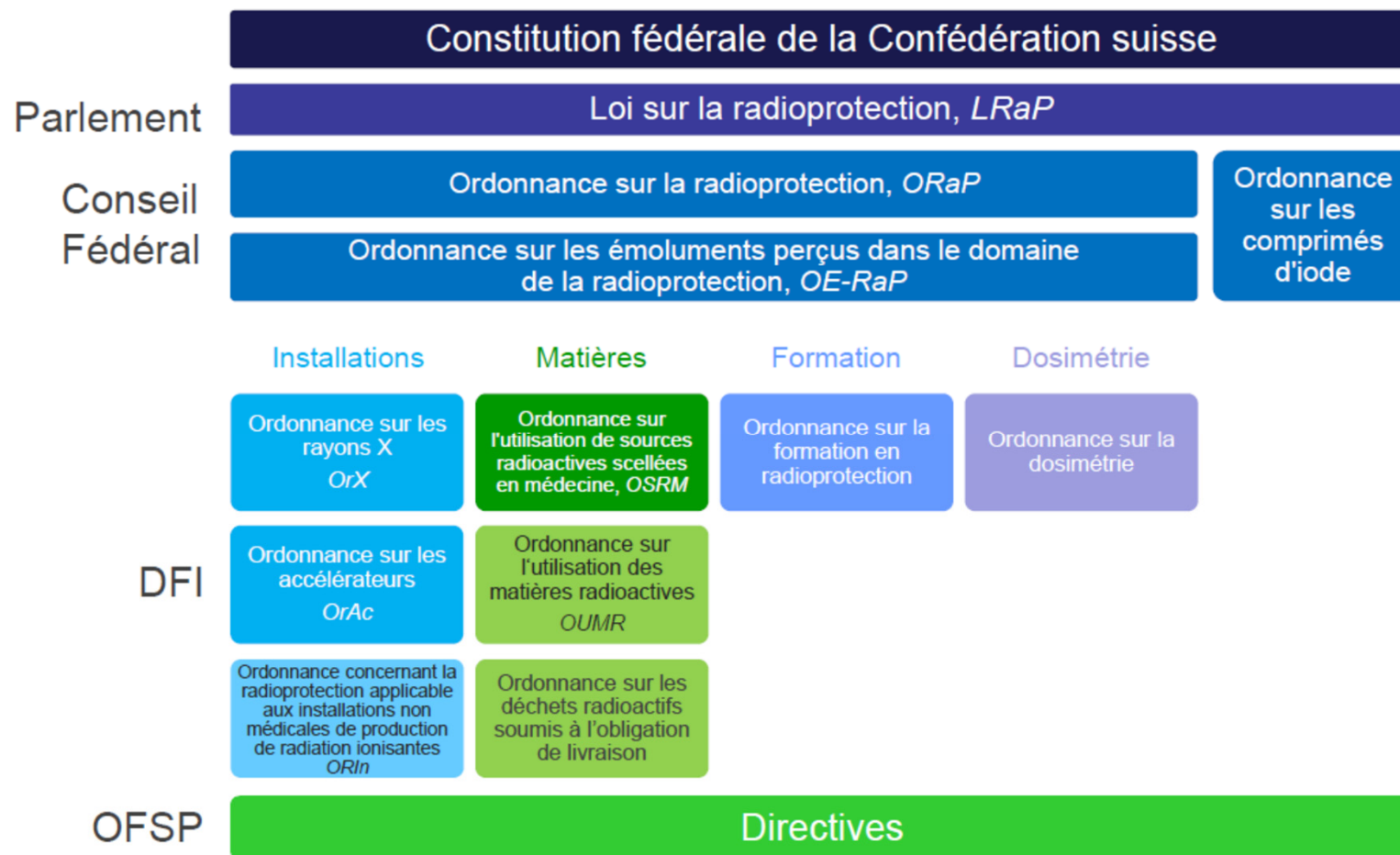
Stakeholder involvement



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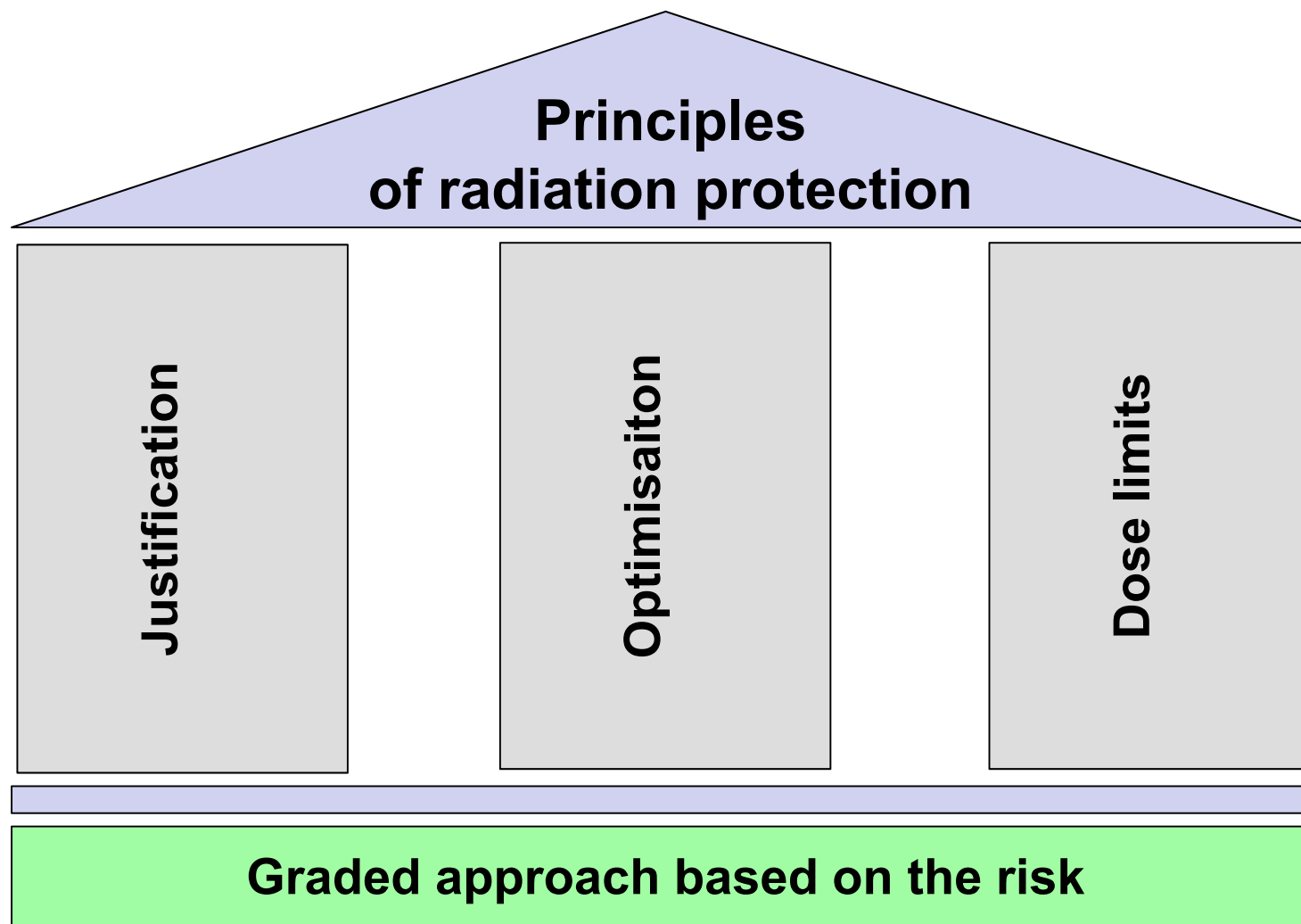
Legal basis for the graded approach





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Licence requirement in the RP Act 1991 (LRaP)

All application of ionizing radiation to **human** is **subjected** to **licence**.
No exemption, registration or announcement are possible with the radiation protection act for this kind of practice to human kind.

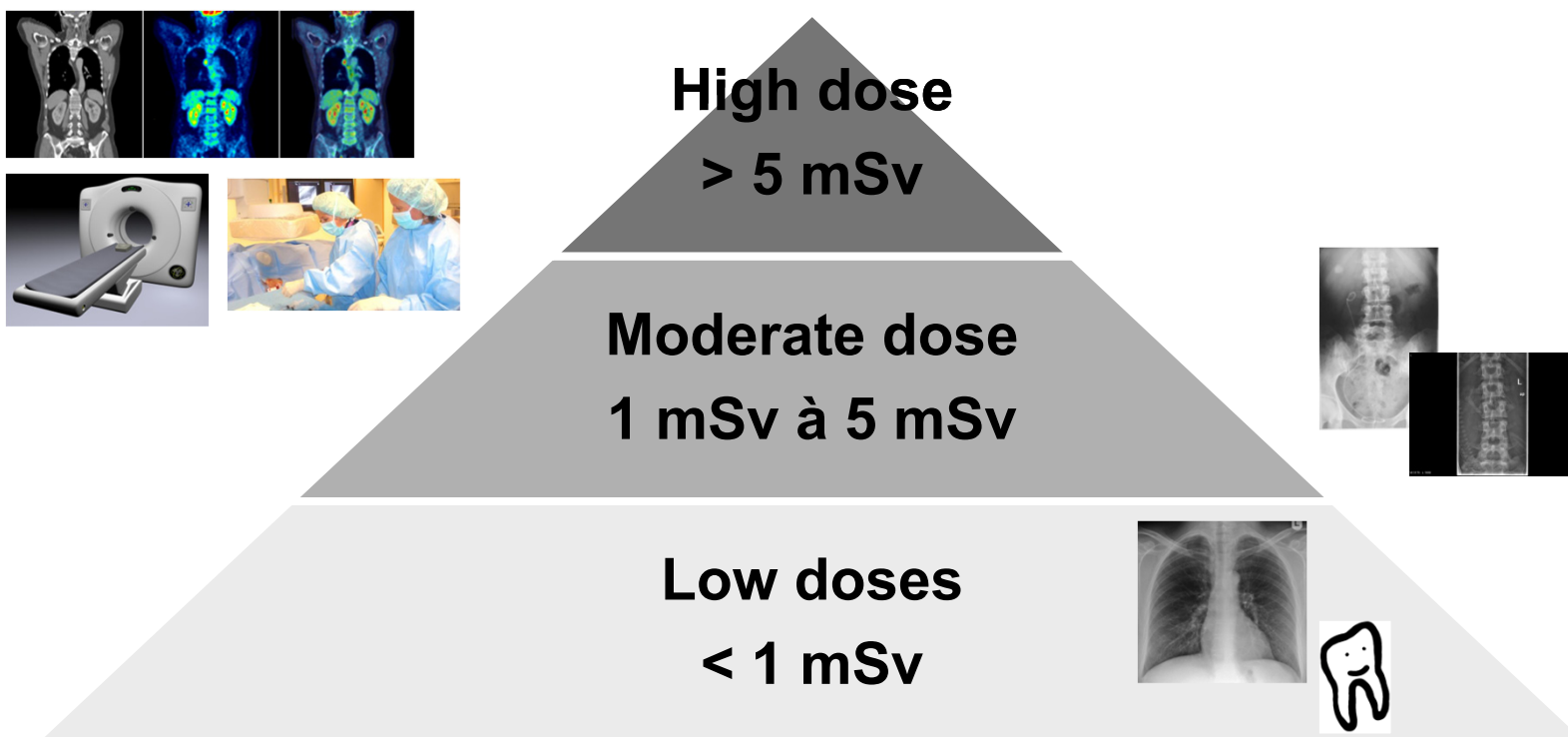
- Dental X-rays
- X-ray units in radiology (conventional or fluoroscopy)
- CT Units
- Nuclear medicine gamma camera (hybrid system)
- Radio-oncology
- Etc.

But, License procedures, the documents, requirements needed to apply for a licence as well as the RP requirement follow the graded approach



Graded Approach in medical imaging

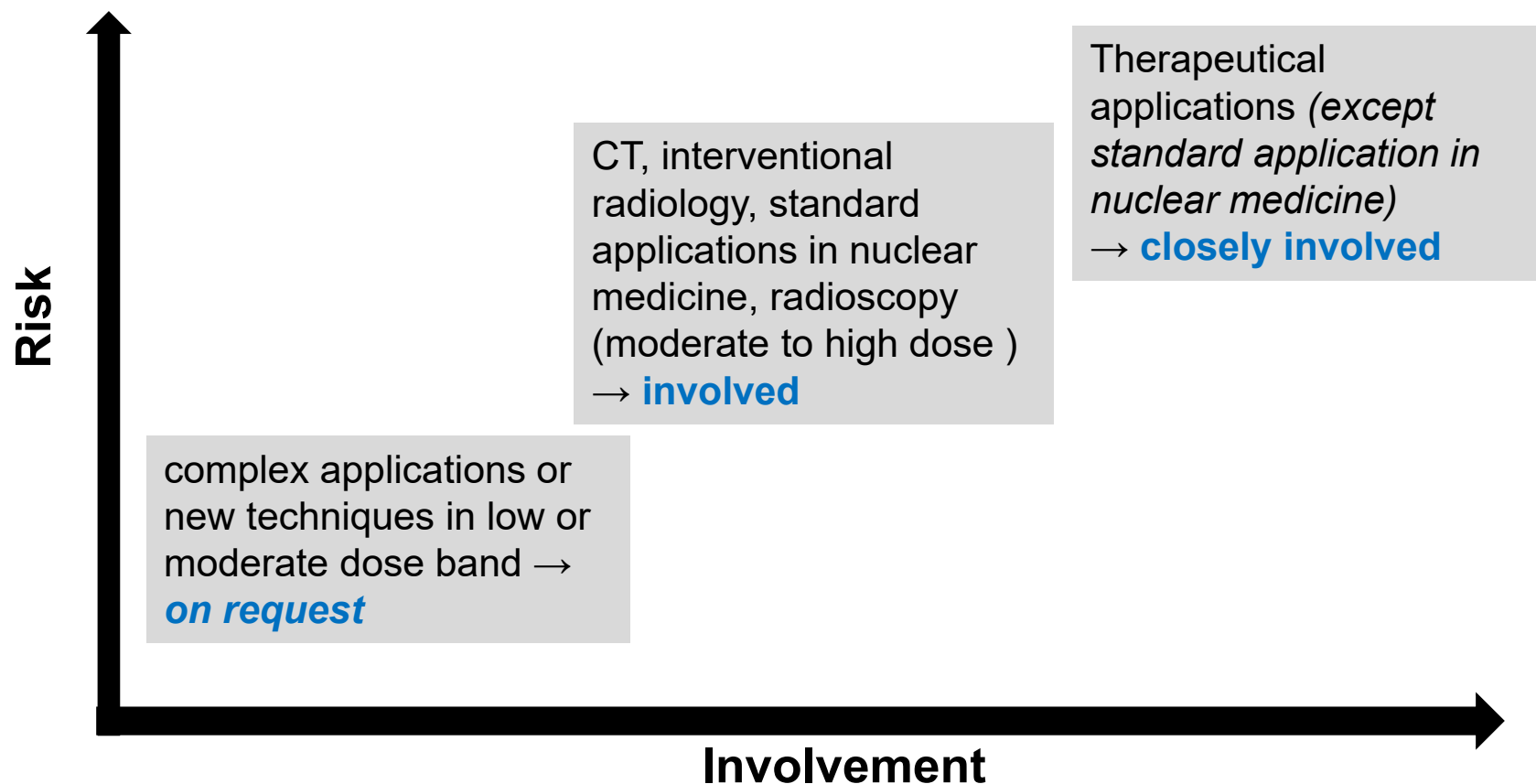
Requirements adapted according to the dose bands (RPO art. 26)





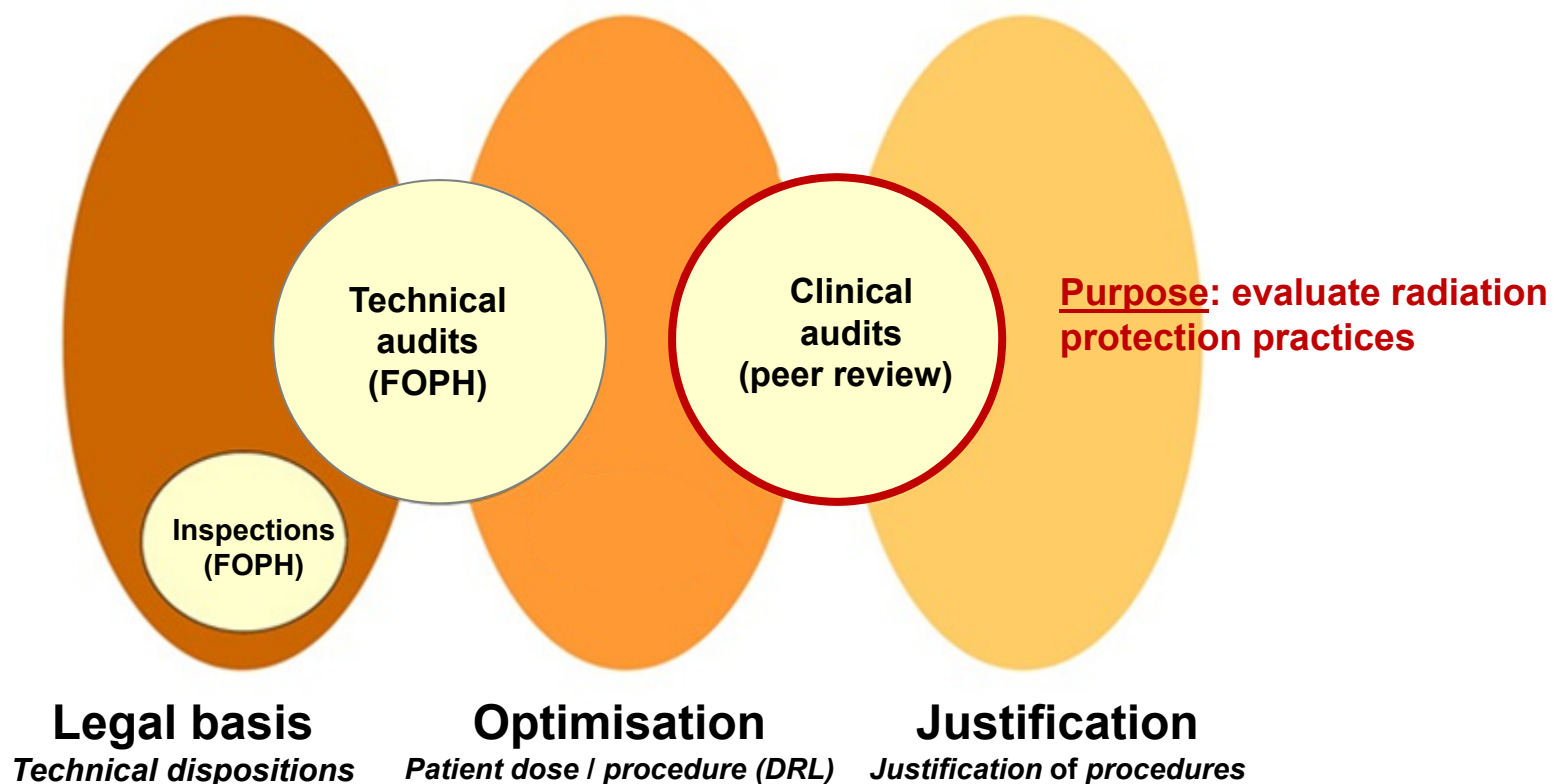
Involvement of Medical Physicists

(RPO art. 36)





Graded approach for supervision in medicine





Clinical Audits: definition and principle

«Systematic examination or review of medical radiological procedures, which seeks to improve the quality and the outcome of patient care, against agreed standards (...).»

59/EURATOM

Introduction of clinical audits in the high dose domains such as :

Radio-oncology

Nuclear medicine

Radiology (CT)

Interventional radiology

Modifications
necessary?

Comparison with
standards

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tices



- **Pe**
- Neither control nor inspection of a FOPH

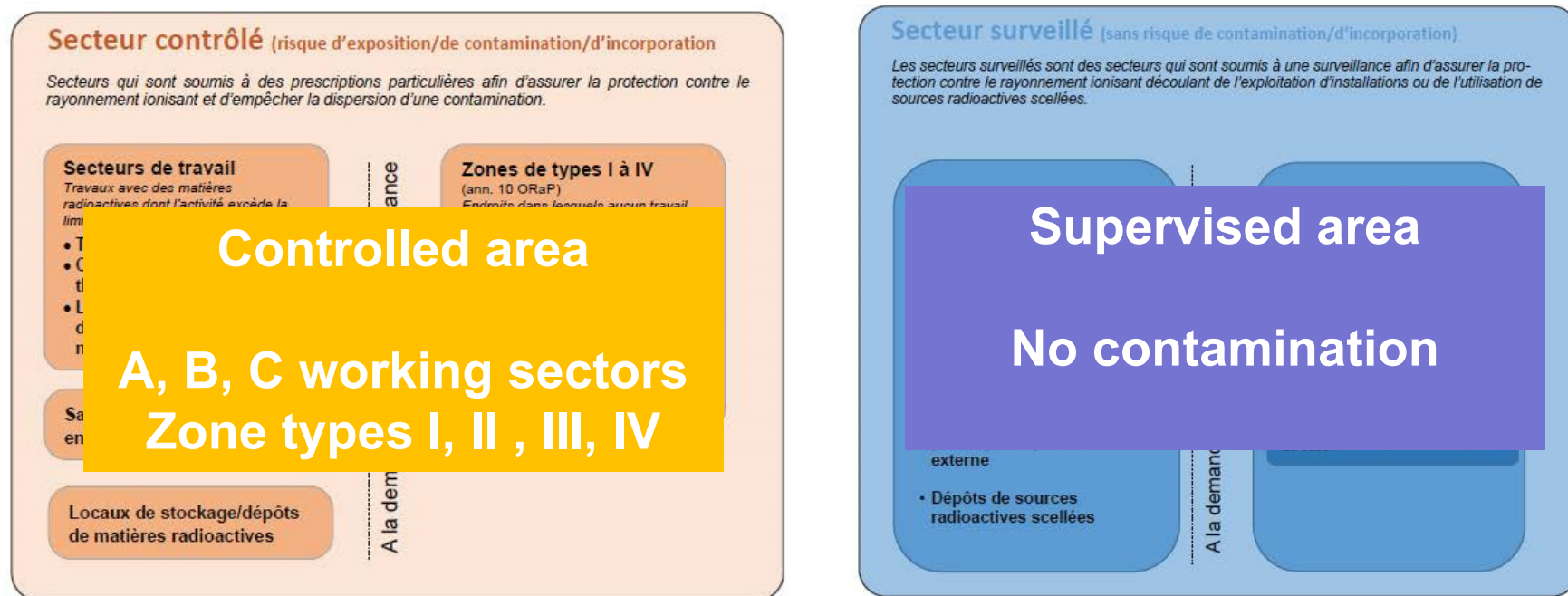


Education in radiation protection

- Content related to competences and authorized tasks
- Introduction of mandatory continuous education
 - Every 5 years, duration according to the risk (8 to 16 hours)
 - Internal concept for continuous education, under the responsibility of the radiation protection expert
 - Courses, seminars, e-learning, internal training, congress
 - Recognition by FOPH only in specific areas with higher risks (unsealed source)



Graded approach for workplaces (X-ray units and unsealed sources)



Categories of working sector for example for the use of unsealed sources A, B, C depending on the activity or on the risk and the maximal dose rate foreseen

Requirement for the different sectors like shielding, entrance, fire resistance, ventilation, etc. depend on the risk and is define in several technical ordinances



Other examples of graded approach for workers

- Dosimetry:
 - in dental case no mandatory dosimetry except (DVD)
 - double dosimetry in interventional radiology,
 - Unsealed sources, extremity dosimetry mandatory if activity manipulated greater than 200 LA per year
- Radon, workers only exposed to radon are considered as exposed workers if the dose per year exceed 10 mSv
- Pregnant women dealing with the manipulation of unsealed sources have the right to stop their activity with ionizing radiation if the risk is high
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Thank you for your attention, any questions

