

Regulatory Framework Belgium

Use of IAEA Standards

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Federal Agency for Nuclear Control (FANC)
NUSSC Meeting 60

Legal And Regulatory Framework Belgium

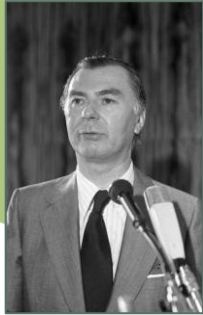
- Belgian Regulatory Body
- Regulatory Framework
- Facilities & Activities Regulated
- Use of IAEA Standards
 - Participation Safety Standards Committees
 - International Peer Review Activities
 - Development of Regulations

Belgian Regulatory Body

“Together we protect”



Our history



16 July 1976

“Independent
body”



26 April 1986
Chernobyl



15 April 1994
FANC-Law

28 March 1979
Three Mile Island
(USA)
=> Belgian
“coordination
structure”



1987
Case SCK-
Transnuklear



1 September 2001
Creation
‘National Agency’



Our mission

“ The Federal Agency for Nuclear Control promotes the effective **protection** of the **general public, workers** and the **environment** against the hazards of **ionizing radiation**. ”





Ensuring a high level of **safety**



Taking care of **nuclear security**

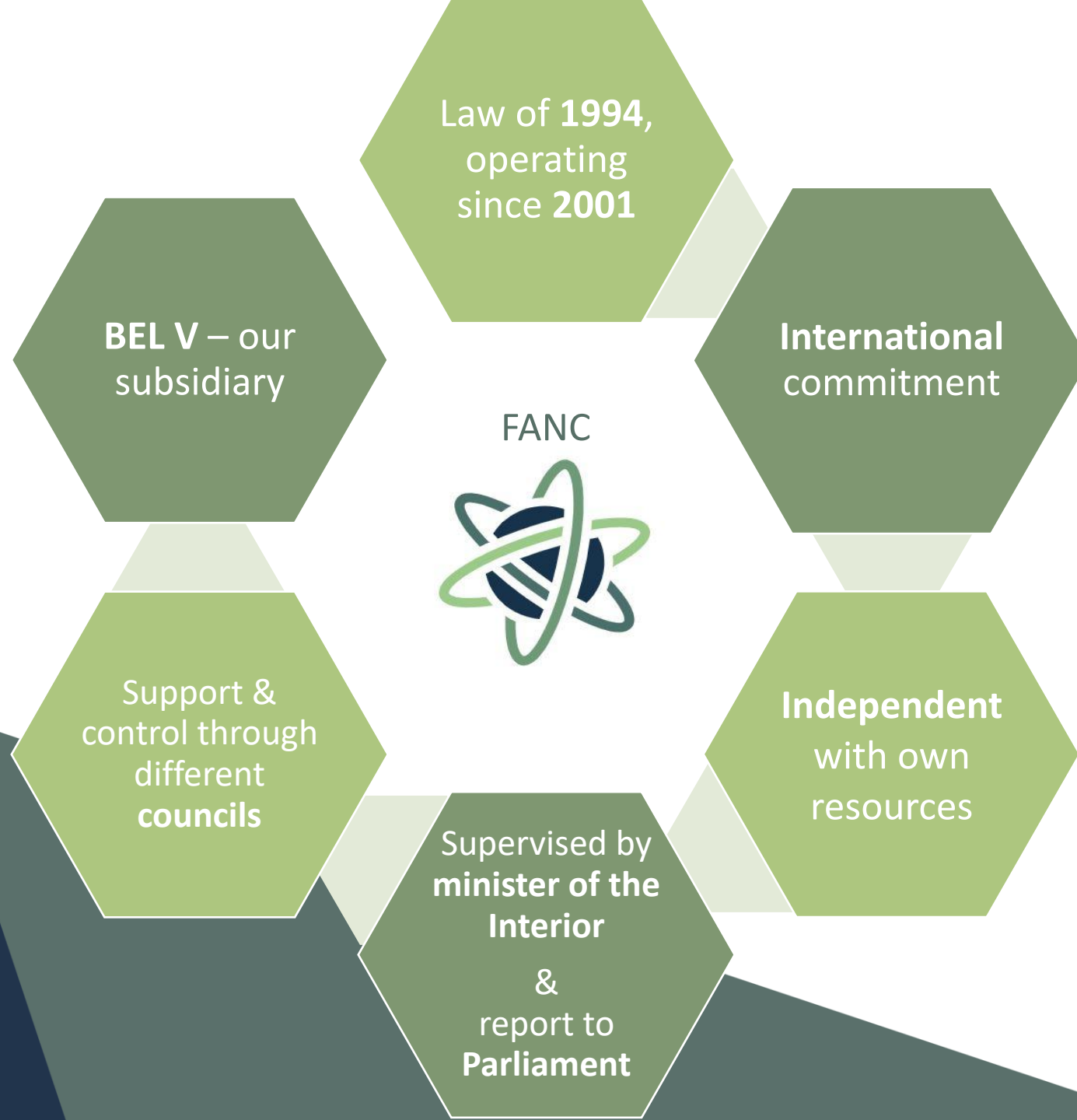


Enhancing **radiation protection**

Our priorities



Our structure





Protection
of
health



Medical
applications

Nuclear
facilities &
activities



Waste
management
& disposal



Transport



Industrial
applications



Security
&
Safeguards



Radiological
monitoring
of the
territory

Oversight

Our activities



>150 missions
abroad

Anticipate, inform
&
raise awareness



861 mentions in
traditional media

Continuous
improvement

Share &
exchange

Regulate,
license &
monitor



> 500
inspections



15 Crisis exercises

Manage the
unexpected



> 10.000 licences

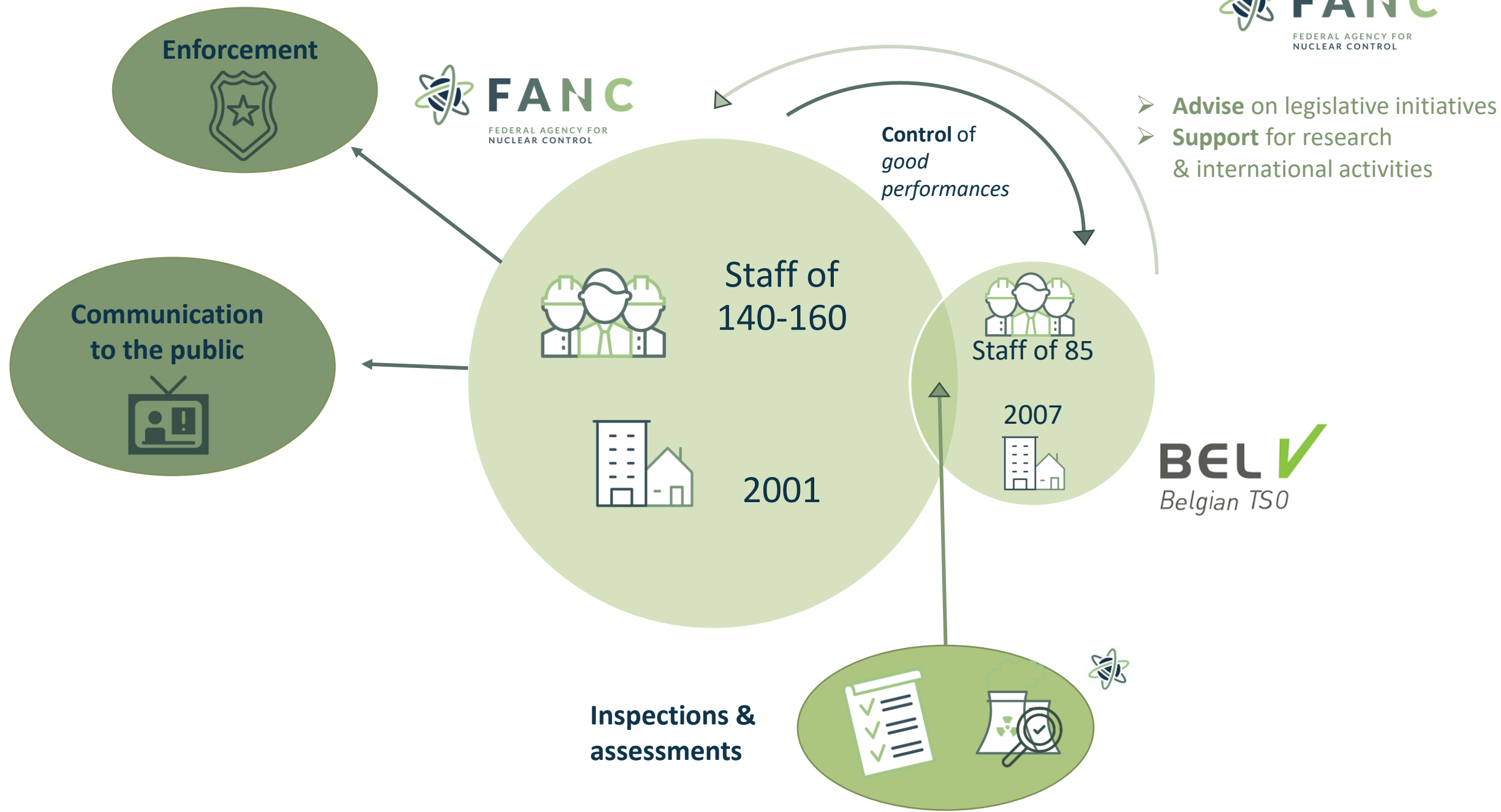


40.000 transports/year



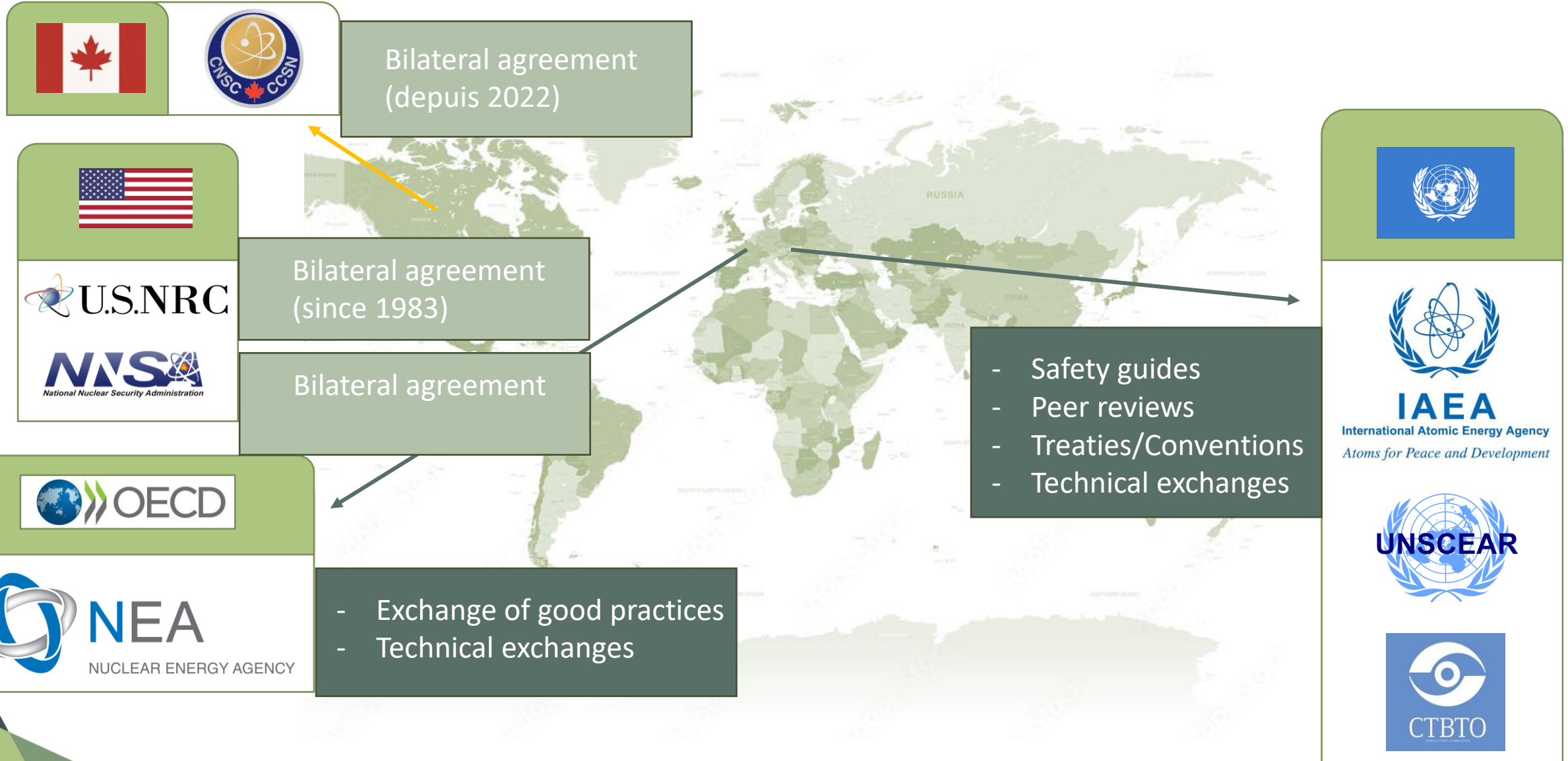
33 regulations

[2023]

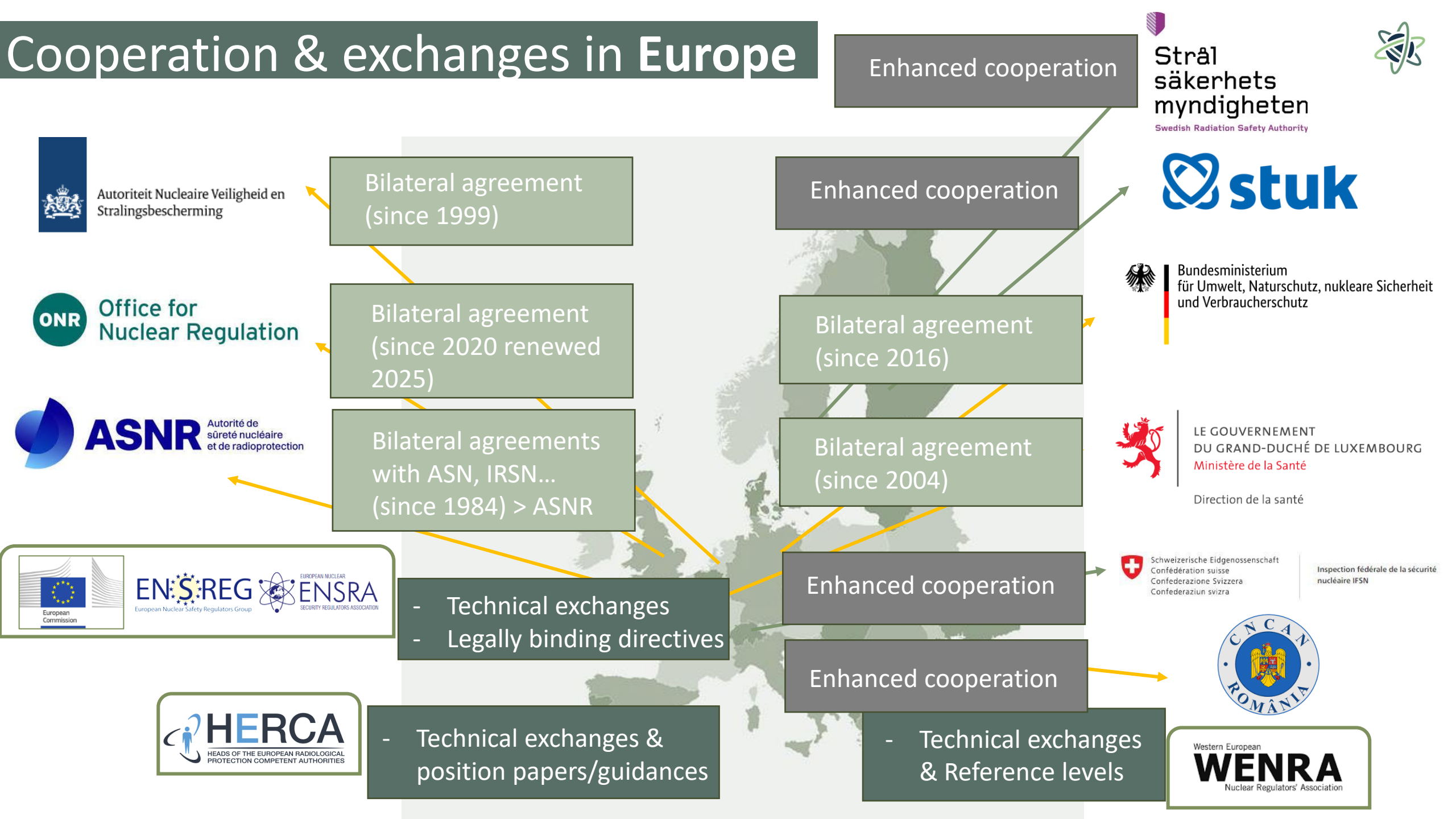


- FANC (Art. 30bis of FANC-Law)
 - Annual taxes from the operators of licensed facilities
 - Punctual fees (linked to administrative acts : license, fines ..)
 - Particular agreements with (future) licensee for pre-licensing activities
- Bel V (Art. 38.4 of GRR-2001)
 - Hourly charges
 - According annual plan, approved by FANC

Cooperation & exchanges in the world



Cooperation & exchanges in Europe



Regulatory Framework

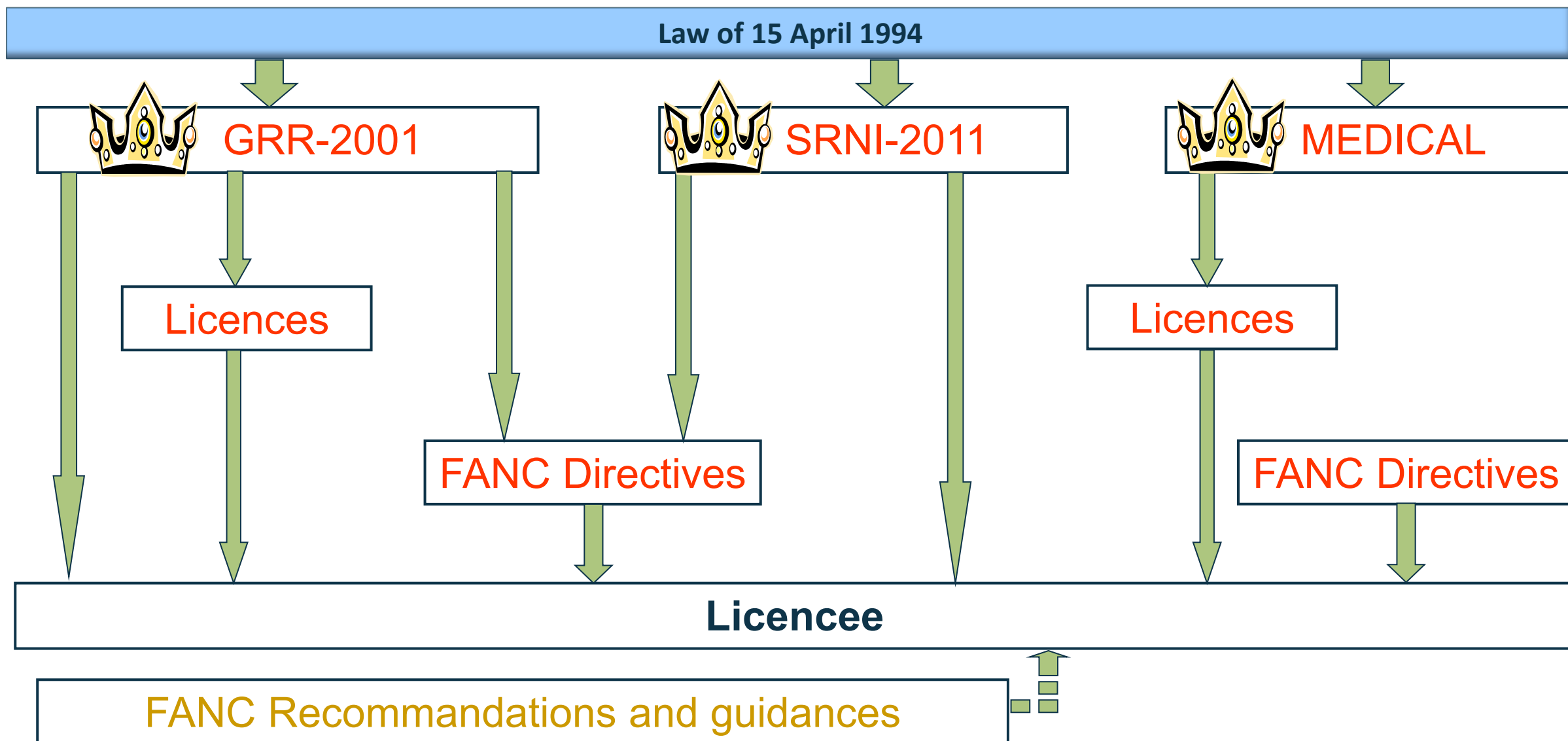
Regulatory Documents

- **Binding** documents
 - Laws (approved by Parliament)
 - Royal Decrees (signed by the King on government proposal)
 - Licenses :
 - Licenses of **class I facilities are Royal Decrees**
 - Licenses of class II and III are issued by the FANC
 - Licenses for medical practitioners, transporters, ... are issued by FANC
 - FANC **Technical Regulations** explicitly foreseen in RD or Laws
- **Non binding** documents : FANC Guidance (Guidance, strategy documents, concept document, ..), Bel V Guidance

Main Regulatory Documents

- Laws
 - FANC-Law (15 April 1994) : Creation of FANC as the Regulatory Body
 - Nuclear Phase-out (31 januari 2003) : gradual phase-out of nuclear energy by 2025
- Royal Decrees
 - GRR-2001 (20 July 2001) : General Regulation on the protection of the workers, the public and the environment against the dangers of ionizing radiation
 - SRNI-2011 (30 November 2011) : Regulation on the Safety of Nuclear Installations
 - TRANSPORT (22 November 2017): Regulation on the transport of dangerous goods Class 7, complemented (24 January 2024) for transport of dangerous goods Class 7 by rail
 - MEDICAL (2 February 2020) : Regulation on Medical Exposure
 - DOSIMETRY (20 July 2020): Regulation on Dosimetry
 - EPR (16 June 2024): Nuclear and Radiological Emergency Plan
 - SECURITY (17 March 2024): Regulation on security and (30 June 2024) on cybersecurity
 - Authorization regime (22 April 2024) for disposal facilities of radioactive waste

Safety Framework for Licensed Facilities



Nuclear landscape in Belgium

Regulated Facilities and Activities





40 years
No new builds

31 January 2003
Phase-out Law



25 June 2015
LTO Doel 1 & 2

18 December 2013
Long term operation (LTO)
Tihange 1



October 2022 & February 2023
Definite shutdown for Doel 3
and Tihange 2

January 2024
LTO Doel 4 & Tihange 3



May 2025
New nuclear policy



New builds
No fixed
end time

Nuclear energy policy in Belgium



LEGEND



Reactor in shutdown/
decommissioning



Power reactor



Research reactor



Nuclear research centre (SCK CEN)



Radioactive waste treatment
& storage facility (Belgoprocess)



Radioisotope producer (IRE)



DOEL



MOL - DESSEL



TIHANGE



FLEURUS



Nuclear sites

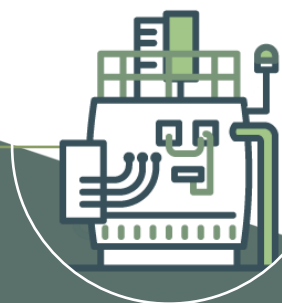
Other (nuclear) facilities & activities



6.400
Medical
facilities/
activities



75%



26 Class IIa-
facilities

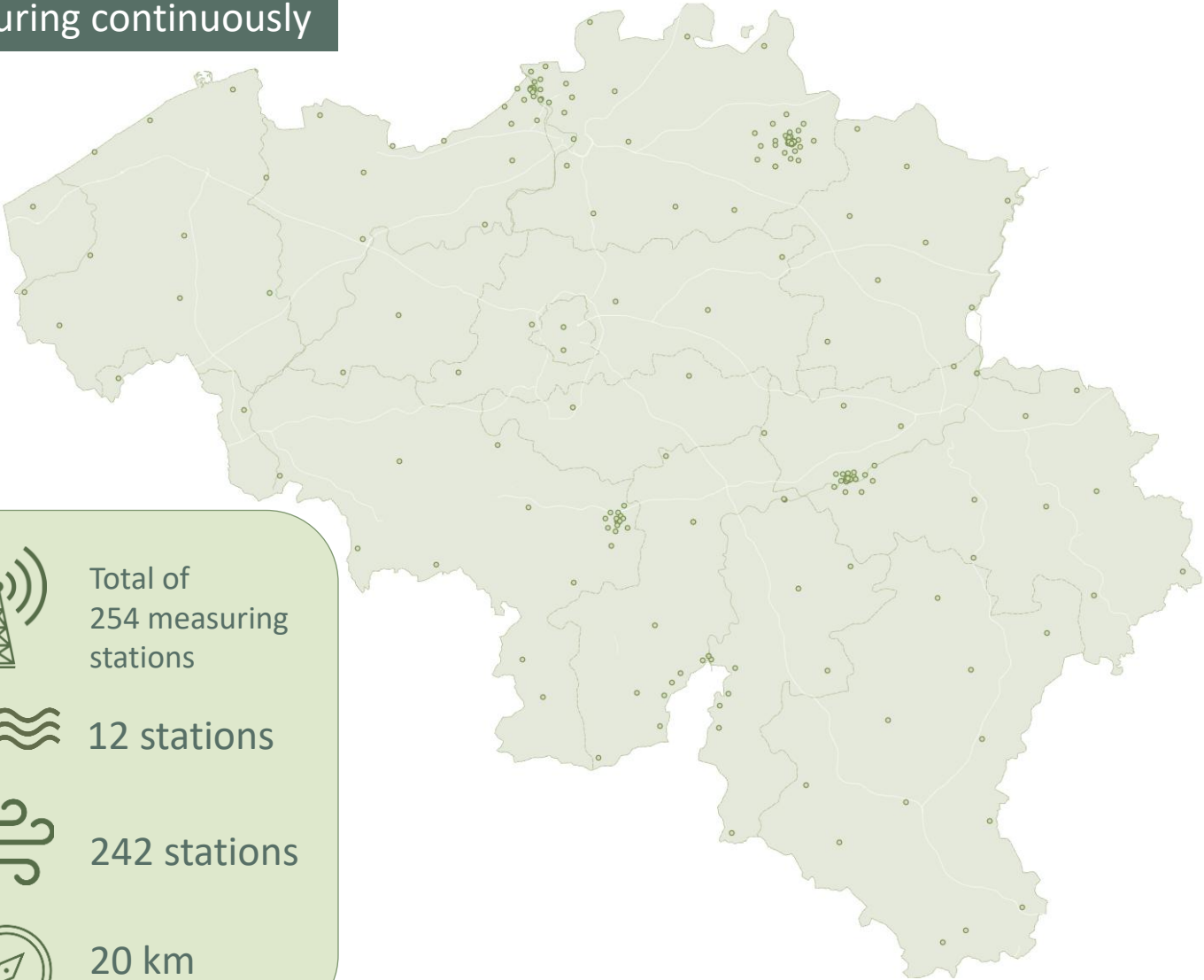


238
Industrial
facilities



Radiological monitoring on the territory

Measuring continuously



Total of
254 measuring
stations



12 stations



242 stations



20 km

Analyses



soil

Fruit, vegetables
& dairy products



Water, marine
fauna & flora,

Meat



~ 30.000 analyses/year

Recent changes



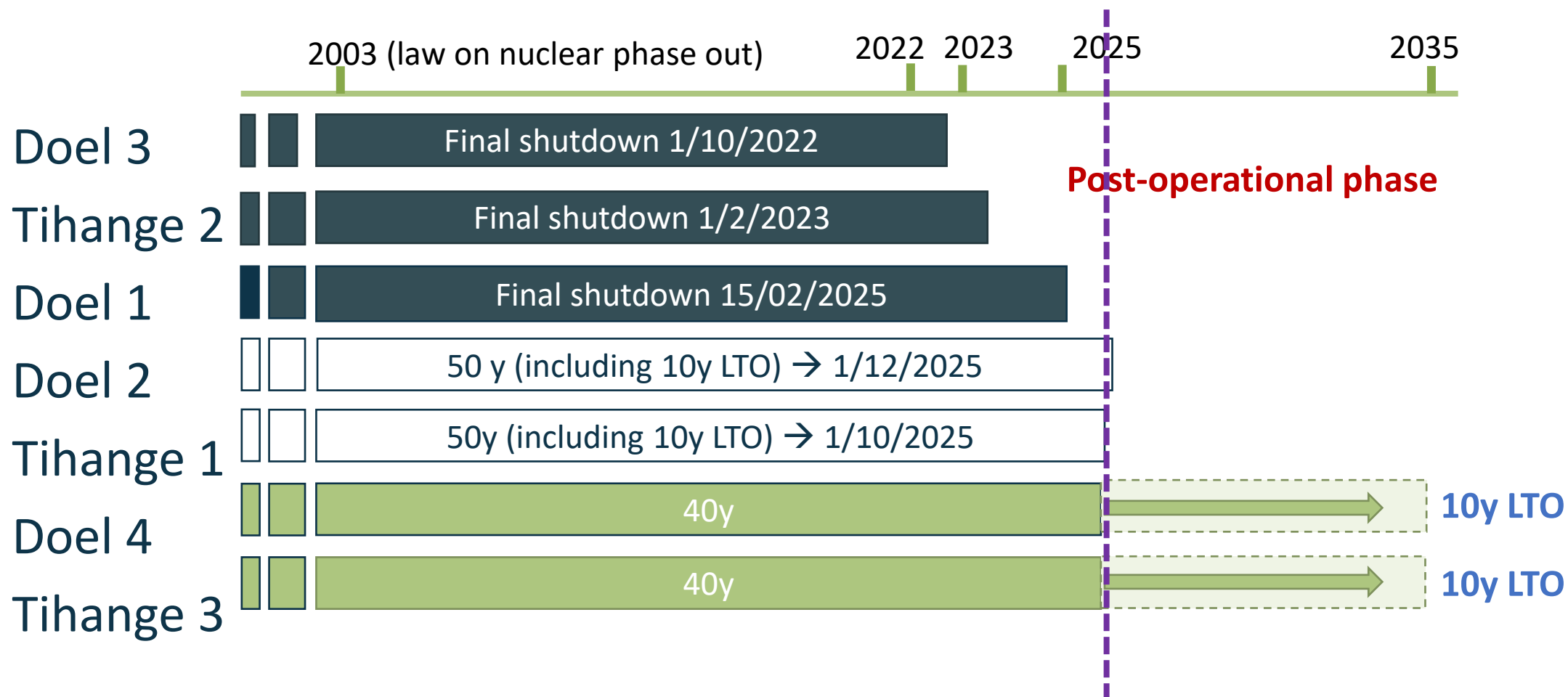
Government Agreement

- Reintroduce nuclear power in electricity mix
- Goal: 4 GWe nuclear
 - Long term operation of existing reactors
 - New build
- Nuclear phase out law to be cancelled
- Doel 4 – Tihange 3: 20 years LTO (2045) instead of 10
- Government to start discussions with licensee on LTO of other units
- SMR development plan
- FANC benchmarking study on nuclear safety regulations



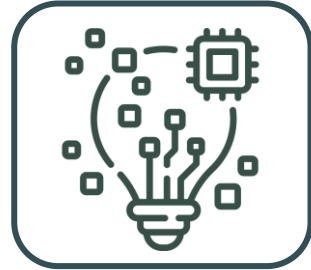
Status as Is (October 2025)

- Nuclear phase out law cancelled





Adapt to **changing nuclear sector**



Evolutions & new **technologies**



Preserve **expertise & knowledge**



Optimise our **resources**

Our
challenges

Use of IAEA-Standards

IAEA Safety Standards Committees

- Representatives of FANC in
 - NUSSC,
 - WASSC,
 - TRANSSC,
 - RASSC,
 - EPRReSC,
 - NSGC
- Participation of FANC/Bel V experts in drafting IAEA Standards

International Peer Review Activities

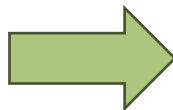
- IRRS
 - Initial Mission : 2013, 2023
 - Follow-Up Mission: 2018, 2026
- IPPAS
 - Initial Mission: 2014
 - Follow-Up Mission: 2019
- ARTEMIS
 - Initial Mission 2023
- OSART-missions and Follow-Up Missions
 - Doel: 2010
 - Tihange: 2007, 2023
- INSARR – BR2
 - 2023
- SALTO
 - Tihange: 2015
 - Doel 2017

- Within each department, one senior expert scrutinizes national and international developments with respect to
 - Regulations in development that could impact our activities and regulations (e.g. NUSC Standards, EC-directives, ...)
 - Technological developments that are not fully covered within our regulation and would need some particular attention (e.g. SMR, new isotopes in nuclear medicine, ...)

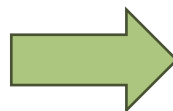
Process for Developping Regulations



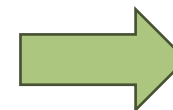
New Regulatory Initiative (RI)



Investigation of RI by
Project Group
Regulations (PGR)



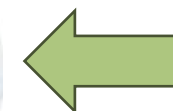
Approval of RI by
Senior Management



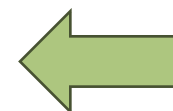
Writing of basic text



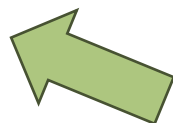
Stakeholder
Consultation



Public Consultation



Official Advice bodies
Consultation



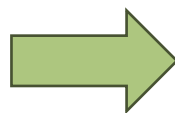
Final Tekst to Ministry



Process for Developping Regulations



Final Approval



Publication &
Dissemination to
Stakeholders

Belgium will be facing some challenges

- “Revival” of nuclear industry announced by government
 - Abrogation of nuclear phase out law
 - Possibility for new built (NPP and/or SMR)
 - Nuclear energy is part of electricity mix
- The regulatory body is preparing for these challenges
 - Be prepared for the future
 - Specific task force to re-arrange workforce
- IAEA Standards and Guides are used at various levels within our activities

Thank you!