



**Exploring a better tomorrow** 





# At Europe's heart

Our Belgian Nuclear Research Centre is based in Mol and Brussels. Our pioneering research is **internationally renowned** 

# At the forefront of progress

In 1952, we started to explore the possibilities of nuclear science and applications that could **significantly change the world** 

# SCK CEN in figures







**39%** with an academic degree



# SCK CEN in figures









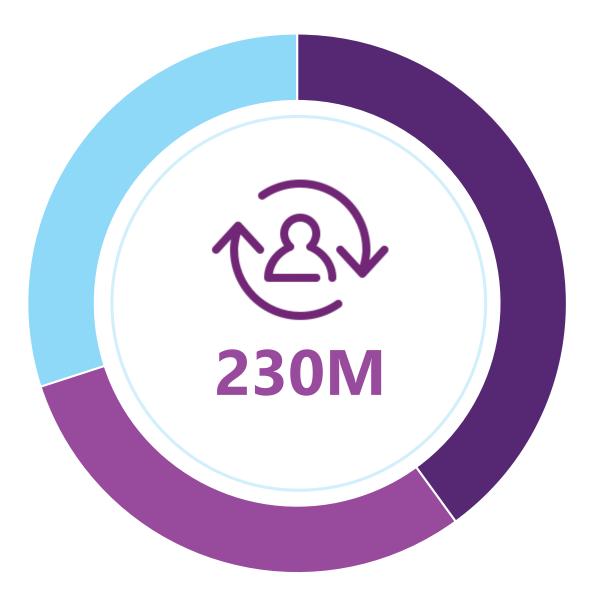


523
scientific
publications and
presentations

92 doctoral students

27 PhD's started 108 training courses for third parties

85 countries



- Market revenues
- Direct governmental funding
- Labeled governmental funding

**Annual turnover** 

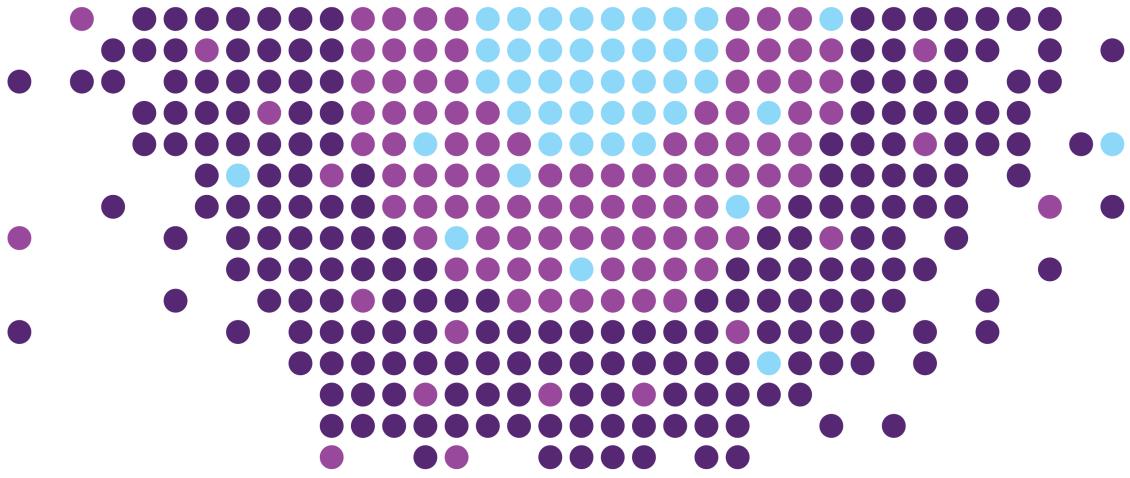
2022

### **Exploring 2040**

Focus on three priorities

- Climate change
- Circular economy
- Fight against cancer







**Low Level Radioactivity Measurements** 

New organigram since April 2023

#### General Management

Peter Baeten Christophe Bruggeman Kathleen Overmeer

Academy **ACA** 

Business Development & Support BD&S

Communication COM

External Medical Surveillance EMS

Internal Service for prevention and Protection at Work IDPBW

Nuclear Science and Technology Studies NST

RECUMO Management Team RMT

Sustainable Waste & Decommissioning

SWD

Christophe Bruggeman

EUR Euridice DDW

Dismantling, Decontamination and Waste

W&D

Waste and Disposal ISR

Impact & Site Remediation

MINERVA Design & Build

MDB

Adrian Fabich

SHE Safety Environment & Health MMO

Management Office

Target Facilities

ICS Control System

**TCO** Technical Co-ordination

Accelarator Technologies and Systems

> NFS Nuclear Facilities

Nuclear Medical Applications

NMA

Koen Hasaers

RPR

RadioPharma Research **TRY** 

TRT-Radiochemistry RDC

RP Dosimetry and Calibration

TRO TRT-Operations

OP Operations Nuclear Energy Technology

NET

Joris Van den Bosch

SMA

Structural Materials FMA

Fuel Materials

Radiochemistry HLB

LRM

Low-level Radioactivity Measurements

NEG

Nuclear Engineering
Group
(Recumo
exploitation)

Belgian Reactor 2

BR2

Steven Van Dyck

ROM

Reactor Operational Management RCE

Reactor Control and Experiments

PMH

Production Management and Materials Handling

IOP
Infrastructure Operation

Innovative Nuclear Systems

INS

Marc Schyns

NSE Nuclear Systems Exploitation

NSP
Nuclear Systems Physics

Reactor Research & Engineering

Physics and Target Research Corporate Services

COR

Kathleen Overmeer

HRM nan Resc

Human Resources Management

ICT

Information and Communication Technology

FIN Finance CTS

Corporate Technical Services

sck cen

### Radiometric techniques at LRM

## Liquid Scintillation Counting

H-3, C-14, Sr-89/90, Tc-99, Rn-222 Cl-36, Fe-55, Ni-63, P-32, Pm-147, S-35

### Gross Counting & Ra/Rn

Global alfa and/or beta activity Residual beta activity

- ZnS counters
- Proportional counters

Rn-222, Ra-226 via emanation

#### Gamma Spectrometry

Activation & Fission products NORM

• 18 HPGe detectors

#### Alpha Spectrometry

U, Th, Pu, Po, Am, Cm, Cf, Np

· 64 PIPS detectors









# **Quality & Environment Management Systems of LRM**

#### **Accreditation ISO 17025:2017**

for laboratory analyses (accreditation since 1995)

- > > 20 methods in scope
- > Flex scope for alpha spectrometry



#### **Certification ISO 14001:2015**

(since 2016 only applicable to LRM)

#### Scope:

Dienstverleningsactiviteiten door monstername, –ontvangst, en - voorbereiding,

laboratoriumanalyses en metingen met betrekking tot de aanwezigheid van lage

radioactiviteitsniveaus in monsters afkomstig van het menselijk lichaam, uit de omgeving,

NORM en TE-NORM materialen, de menselijke en dierlijke voedselketen, evenals in het

kader van nucleaire R&D projecten



### Main Projects/Customers of LRM

- Partner of FANC in Radiological Monitoring of the Belgian territory (Flanders) -> 4000 analyses/year
- Monitoring of drinking water (in support to water-analysis laboratories)
- Partner of FAVV and BFA for radioactivity of food and feeding stuffs
- Bio assay of workers in nuclear industry (EC (JRC), Belgoprocess, SCK CEN)
- Nuclear measurements for third parties
  - NORM, nuclear industry (NIRAS/Belgoprocess)
  - Export certification of food and feeding stuff
- Nuclear measurements for research purposes
- Education and training on nuclear measurements
- Sampling / analysis in nuclear emergency
- Research: following needs and opportunities
  - Difficult to measure radionuclides (waste characterisation)

# Thank you for your attention



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#### **SCK CEN**

Belgian Nuclear Research Centre Studiecentrum voor Kernenergie Centre d'Etude de l'Energie Nucléaire

> Foundation of Public Utility Stichting van Openbaar Nut Fondation d'Utilité Publique

#### **Registered Office:**

Avenue Herrmann-Debrouxlaan 40 - 1160 BRUSSELS - Belgium

#### **Research Centres:**

Boeretang 200 - 2400 MOL - Belgium Chemin du Cyclotron 6 - 1348 Ottignies-Louvain-la-Neuve - Belgium