

scannix **SYSCADE** 
TECHNOLOGIES

**YOUR PARTNERS FOR
EFFICIENT D&D
PROJECTS**



**YOUR PARTNER FOR ALL NUCLEAR
MEASUREMENT DEVICES AND
ACCESSORIES**



**YOUR PARTNER FOR RADIOACTIVE
WASTE INSPECTION AND
CHARACTERIZATION**



INNOVATIVE & COST EFFECTIVE SOLUTIONS FOR NUCLEAR MEASUREMENTS

Scannix & Syscade combine their expertise to offer advanced solutions in radiation measurement and inspection systems.

Together, we support research, development, and industrial projects in sectors where safety, precision, and reliability are essential.

Through this collaboration, we offer our customers advanced tools and customized support to meet the demands of their most challenging decontamination and decommissioning projects.

Let's drive innovation together, ensuring safety, performance, and excellence.

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Every Decontamination and Decommissioning (D&D) project is unique – with its own set of requirements, constraints, and technical challenges.

Since 2020, SCANNIX and SYSCADE have combined their expertise to become trusted providers of advanced radiation measurement solutions tailored to the needs of the nuclear industry.

Our mission: to support complex D&D projects at every stage of the lifecycle.

We offer a wide range of equipment and services, from standard off-the-shelf equipment to fully customized solutions, as well as on-site technical support and scientific consulting. With over 5 years of experience, we are also capable of deploying our solutions internationally to meet the needs of our global customers.

Whatever your challenge, SCANNIX and SYSCADE are ready to help you move forward – efficiently, safely, and successfully.



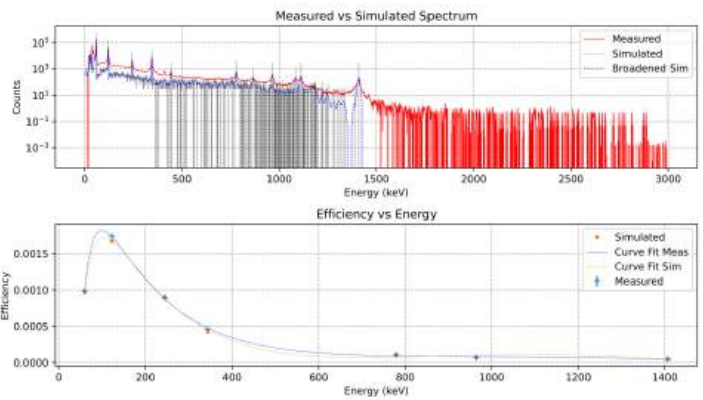
R&D, SIMULATIONS, ENGINEERING AND TESTING

SYSCADE and SCANNIX teams have a strong expertise in the development of radiation detection systems, from simple alpha, beta & gamma counting systems to complex equipment for inspection and characterization of nuclear wastes.

Our services cover:

- **Simulation & Modelling with MCNP Transport Code**
 - Performance comparison of gamma-ray detectors (HPGe, CZT, LaBr3)
 - Efficiency Calculations
 - Geometry Optimization
 - Radiation Shielding Design
 - Dose Rate Calculations
 - Activity Uncertainty Analysis
 - Automation & Data Post Processing with Python

- **Experimental Capabilities**
 - An electronic laboratory where radiation detection equipment is developed and tested.
 - An instrumentation laboratory where each new equipment is installed and tested before delivery to the customers.
 - Nuclear Spectrometry tools with calibration sources.
 - A fully automated Angular - SGS (Segmented Gamma Scanning) Station capable of high-throughput and reproducible measurements.
 - This station is accessible to test and benchmark new detector technologies and validate simulation codes.
 - A high energy X-ray cabin for non-destructive inspection of equipment and for testing the resistance of electronic components under radiation (high dose rates).



YOUR PARTNERS FOR SMART & EFFICIENT NUCLEAR MEASUREMENT SOLUTIONS

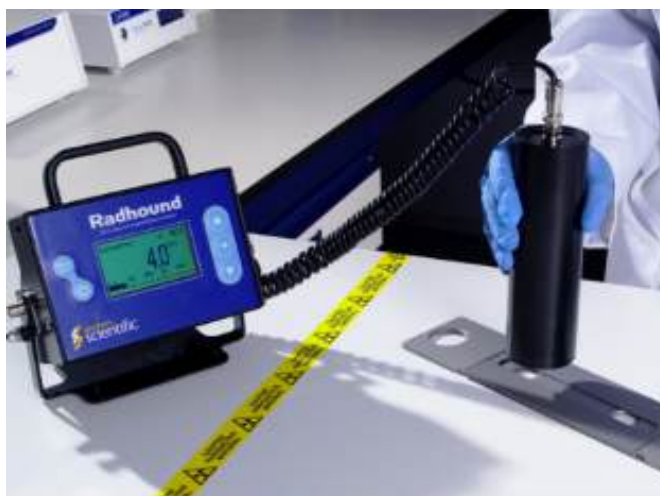
Technical Guidance for Evolving Systems

We provide feasibility studies and technical support at all steps of your D&D project. This includes assistance for the selection of alpha, beta and gamma radiation detection equipment and radiation monitoring solutions to supervise the D&D process, personal safety and radioprotection devices, and waste assay equipment.



Optimized Strategies

We help to define the most effective measurement strategy and methodology to meet the goals of your projects, using best practices adapted to your operational cost.



Comprehensive Field Services, Equipment & Reporting

Our on-site services range from dose rate surveys and gamma imaging devices to advanced gamma spectroscopy systems to identify radionuclides and determine the levels of radioactivity. A wide range of instruments and systems are available for sales and rental, with or without technical assistance and training.



Standardized Procedures and Operator Training

We deliver clear, QA-compliant operating procedures, documentation, and training to support reliable and standardized measurements to your teams.



Performance Optimization for Assay Systems

Our experts continuously improve the performance of our Non-Destructive Assay (NDA) solutions. Leveraging their on-site experience, Syscade and Scannix deliver the most suitable solutions, from simple dose-rate meters to sophisticated X-ray and gamma scanning systems to inspect and characterize radioactive waste. Our services include technical assistance during measurement campaigns, and system adjustments.

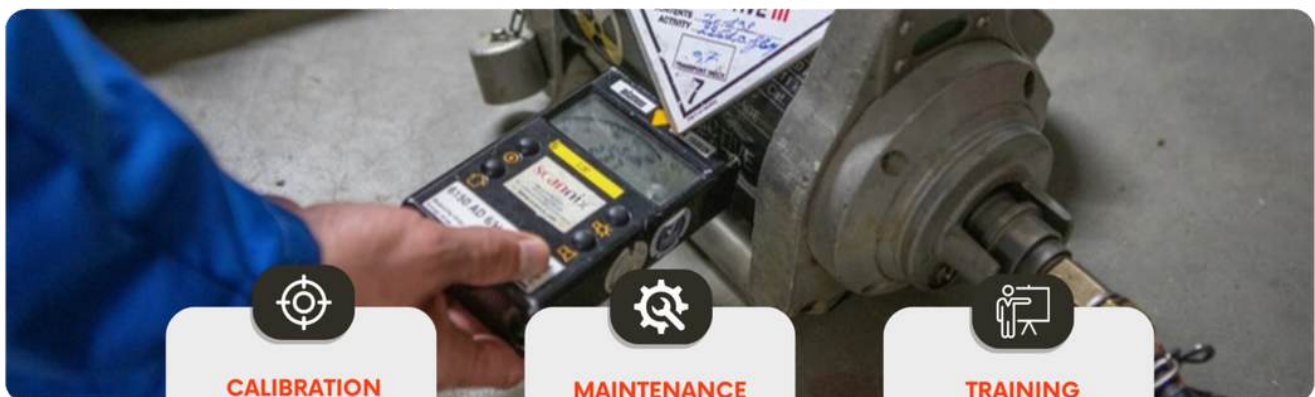


Segmented Gamma Scanning station by Syscade, JRC Ispra, Italy

Quality Assurance, Calibration and Certification Services

We offer in-depth reviews of measurement results, including QA checks, Monte Carlo simulations and analysis to validate and interpret data.

This includes initial and periodic calibrations, system qualifications, and certifications to maintain the accuracy and compliance of your equipment. Calibration service is another key strength of Scannix. It covers all brands of equipment, and a wide range of equipment from pocket dosimeters to high resolution spectrometry systems.



CALIBRATION

Our certified calibration services guarantee accurate and reliable measurements, in compliance with the Federal Agency for Nuclear Control standards, to ensure the reliability of your operations.



MAINTENANCE

We maintain and repair your equipment to ensure continuous, optimal operation, reducing downtime and preserving your company's productivity.



TRAINING

Our customized training programs are designed to maximize your teams' efficiency in using our equipment, and guarantee optimal, safe use of your investments.

OUR TAILORED SOLUTIONS FOR THE GLOBAL D&D CHALLENGES

Decontamination and Decommissioning (D&D) projects are underway worldwide – from early R&D labs to first-generation nuclear power plants, weapons production sites, fuel fabrication facilities, and research reactors. Each site presents unique technical and radiological challenges that require accurate data, reliable systems, and expert support at every phase.

Site Characterization

Before dismantling begins, comprehensive site characterization is often required to assess potential risks and project costs. This phase may also include scenario modeling to support planning and strategy development. Our tools cover a wide spectrum of applications, including large-area outdoor surveys, and radiological analysis of concrete walls, floors, structural components, and reactor equipment.



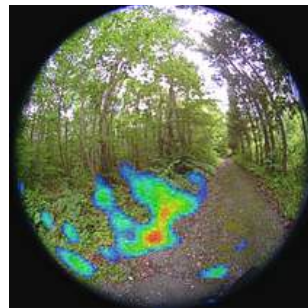
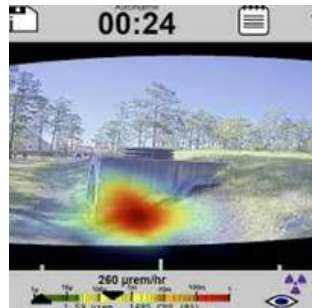
Dismantling Support

Continuous environmental monitoring is vital throughout all D&D phases. Real-time and sample-based monitoring programs provide baseline data and help detect anomalies that may indicate radiological releases. In the event of an incident, rapid and reliable detection is critical to protect personnel and the public. Our systems enable proactive environmental risk management and emergency response preparedness.



Environmental Monitoring

As dismantling progresses, accurate radiological quantification of materials becomes essential. Radiological mapping may also be needed to guide safe and efficient demolition activities. We provide practical measurement solutions and methodologies that ensure compliant waste sorting, classification, and shipment readiness.



Worker Safety

A robust health and safety program is key for minimizing exposure, compliance to ALARA principle, and preventing incidents throughout dismantling activities. We offer a wide range of proven solutions designed to monitor and protect personnel working in high-risk or dynamic radiological environments. This includes personal dosimeters and a wide variety of handheld equipment to measure dose rates, surface contamination and radio-isotope identifiers.



PRODUCTS & SYSTEMS

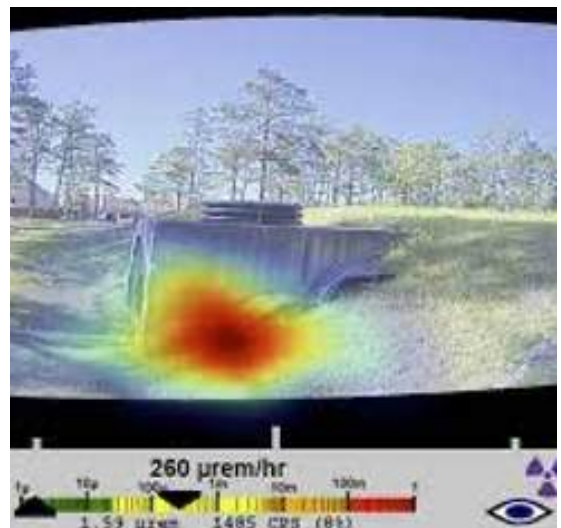
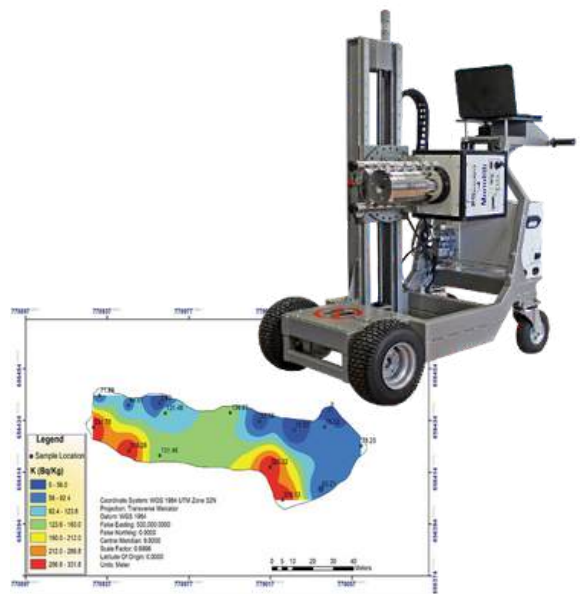
OUTDOOR RADIOLOGICAL SURVEY SOLUTIONS

We provide high-performance instruments combined with real-time GPS geolocation for precise radiological mapping over large areas.

Our solutions include:

- High efficiency and high resolution (<1%) Gamma cameras
- 2D - 3D map of radioactivity distribution in contaminated sites
- Mobile equipment for in-situ Gamma characterization and quantification
- Portable radiation identifiers and dose-rate meters
- Vehicle-mounted Beta and Gamma detectors to scan large areas

From dose rate measurement to full spectrometric mapping and imaging, our tools deliver accurate data to support your decommissioning and environmental monitoring needs.



SURFACE AND FLOOR MONITORING

Radiological assessment of floors and surfaces is typically carried out using Gamma dose rate meters and surface contamination detectors. Beta and Gamma contamination levels are measured with instruments capable of detecting down to 0.04 Bq/cm² for Beta and 0.4 Bq/cm² for Gamma radiation (equivalent to 240 and 2400 DPM/100 cm², respectively), in accordance with standard or site-specific thresholds.

We offer a comprehensive selection of tools – from smear test kits to handheld probes and large-area floor scanners for reliable detection of Alpha / Beta / Gamma radiation, with efficient channel separation, ensuring precise contamination characterization.



WALL AND BOREHOLE CHARACTERIZATION

When Beta / Gamma contamination is suspected, both surface and subsurface assessments of walls and floors are essential to define affected zones before initiating dismantling or remediation efforts. Once mapped, targeted strategies for decontamination and waste sorting can be developed.

We provide a wide range of solutions – from core sampling techniques to the deployment of HPGe or CZT detectors within drilled boreholes. Our advanced gamma imaging systems, combined with spectrometric analysis, enhance the spatial resolution and contamination profiling.



For non-destructive evaluations, calibrated In-Situ measurements using HPGe or CZT detectors are available. Data can be interpreted via In-Situ software or through expert support from our Advanced Gamma Spectrometry Services team.

CHARACTERIZATION OF SYSTEMS, STRUCTURES, AND COMPONENTS

With extensive experience in non-destructive radiological analysis, we offer proven solutions for assessing contamination in complex nuclear components. Equipment such as piping, ducts, scrap metal, ventilation elements, and irregularly shaped objects can be accurately characterized using our modeling-based approach.

Our solutions enable qualitative and quantitative activity assessments without the need for physical calibration sources, streamlining evaluations for waste storage, clearance, or disposal. The use of the most advanced gamma imaging equipment with 3D reconstruction software facilitates hotspot detection and spatial localization for enhanced decision-making during decommissioning and waste management processes.



RADIATION-HARDENED IMAGING SOLUTIONS FOR NUCLEAR ENVIRONMENTS

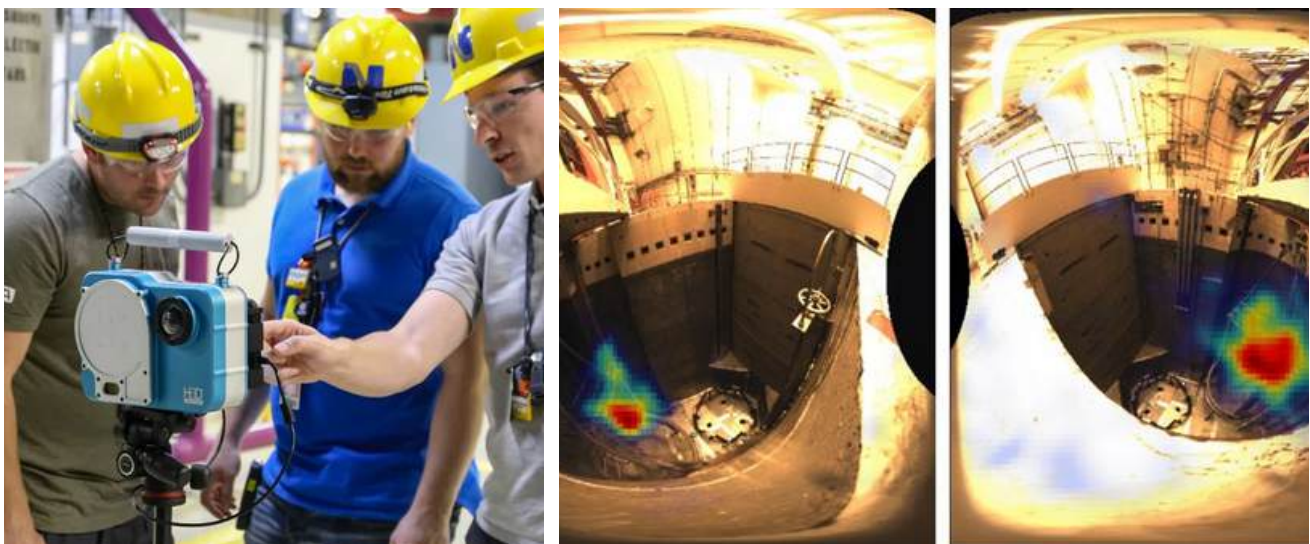
Robust visual monitoring is essential throughout the decommissioning and dismantling of nuclear facilities. Our radiation-tolerant imaging systems are engineered for durability in harsh environments – whether installed permanently or deployed temporarily in mobile configurations.

Our inspection cameras are designed to support a wide range of D&D operations such as:

- Pre-shutdown condition assessments
- Fuel handling and removal
- Remote monitoring of inaccessible zones
- In situ observation of dismantling work
- Inspection of fuel storage basins
- Waste drum identification (machine vision)
- Support for robotic systems and remote tooling
- Monitoring of welding, cutting, and corrosion
- Oversight of waste retrieval, encapsulation, and vitrification
- Safeguards and regulatory documentation

Our systems allow inspections in environments with Gamma dose levels ranging from background up to 1 MGy.

With deep experience in large-scale D&D programs, our team of skilled system engineers and project managers provides end-to-end support – from initial design through to on-site deployment.



SOIL SORTING AND BULK MATERIAL ASSESSMENT

Decommissioning projects often generate large quantities of soil, sludge, and bulk waste that require rapid and accurate sorting. Efficient separation of contaminated materials from those eligible for free release is critical to reduce disposal costs and environmental impact.

We design and operate advanced soil sorting systems tailored to high-throughput applications. Our proven technologies have been successfully deployed at major D&D sites worldwide, ensuring reliable classification of materials and supporting optimized waste management strategies.

LABORATORY ANALYSIS SOLUTIONS

Radiological samples are routinely processed in radiochemistry labs for precise quantification of Alpha, Beta, and Gamma emitters. Our user-friendly, cost-efficient solutions support a wide range of analytical workflows, helping laboratories to achieve accurate, reliable results with minimal complexity.

WASTE CHARACTERIZATION

We offer extensive expertise in non-destructive waste assessment using gamma, neutron, and hybrid measurement systems. Our solutions cover a wide range of waste forms – from unpackaged materials to fully loaded containers and even vehicles.

Whether for routine monitoring or complex site-specific needs, our tailored measurement systems ensure compliance, traceability, and efficiency. Our specialized Measurement and Expertise Team is available for on-site deployment, delivering customized approaches to support your waste classification and disposal strategies.



REAL-TIME ENVIRONMENTAL MONITORING

Continuous monitoring is essential around decommissioning and dismantling sites to detect and assess potential radiological releases. Accurate, real-time data helps identify anomalies early and supports rapid response.

Our systems are designed for dynamic environments, where factors like wind speed and direction significantly influence contamination dispersion. Deployed with secure wireless connectivity, our solutions offer reliable performance even on complex or evolving D&D sites, ensuring full environmental oversight at all times.



Effluent Monitoring System for real-time detection of water contamination.

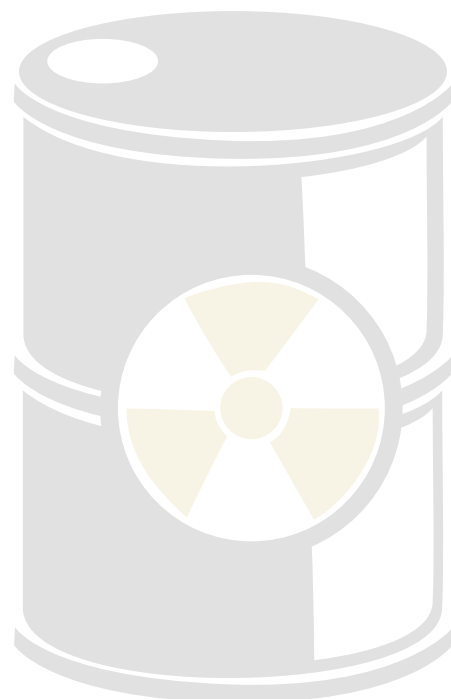
DOSIMETRY AND CONTAMINATION CONTROL

Protecting worker health is a cornerstone of any successful D&D operation. To uphold ALARA standards and ensure regulatory compliance, a proactive approach to radiation safety is essential.

We offer a wide range of monitoring solutions – from personal dosimeters to area contamination detectors – enabling real-time oversight of radiation exposure and workplace conditions. Our systems support a safe, compliant, and efficiently managed environment for your workforce.








scannix 

 info@scannix.com

 www.scannix.com

 +32 (0) 69 64 06 04

SYSCADE 

 info@mobile-radiography.com

 www.mobile-radiography.com

 Rue du Mont d'Orcq, 3 / 7503 - BELGIUM