



BUILDING TRUST

A WORLDWIDE GROUP

The LNE Group is constantly growing by consolidating its worldwide presence in close proximity to its customers and their ecosystems. Supported by its specialised subsidiaries, it plays a key role in winning foreign markets and in managing out-sourcing.



► IN FRANCE



PARIS

Groupe LNE - Head office, research, metrology, certification, training, LNE Development
GMED - Head office, certification, training (medical-healthcare)

TRAPPES

LNE - Research, expertise, metrology, tests

SAINT-DENIS

LNE - Research, metrology

NÎMES

LNE - Expertise, metrology, tests, certification, training

POITIERS

LNE - Metrology

SAINT-ÉTIENNE

GMED - Certification, training (medical-healthcare)

LE BOURGET DU LAC

Certisolis - Tests, certification (photovoltaic panels)



► WORLDWIDE

WASHINGTON GMED NORTH AMERICA

GMED North America - Certification (medical-healthcare)

HONG-KONG LNE ASIA

Joint-Venture LNE-LP Asia Ltd - Tests (consumer goods)

GMED Asia - Certification (medical-healthcare)



More than **1,000**
LNE Group employees



60,000
m² of laboratories in Paris, Trappes, Nîmes, Poitiers...



5,000
customers from all business sectors



20%
of the budget dedicated to scientific and industrial metrology research



83
experts involved in over 100 national and international standards committees



40
Cofrac accreditations
(List of sites and scopes available on cofrac.fr)

A BENCHMARK FOR TOMORROW'S TECHNOLOGIES

LNE is committed to supporting the ecological and digital transition, as well as the health and safety of our citizens, and is working to ensure technological independence **at the intersection of our industry's competitiveness and the challenges facing society**. A key player in measurement for over a century, we support private and public sector players in accordance with our values.



VISION

TRANSITION & INDEPENDENCE

Faced with the major challenges ahead, LNE's strategy is to support technological innovation and industrial competitiveness. It is perfectly in line with the objectives laid out in the France 2030 plan. Research activities and services to industry focus on four priorities:

- **Industrial competitiveness:** process control, quantum technologies, digital twins, nanotechnologies, innovative materials, etc.
- **Ecological transition:** renewable energies, decarbonisation, ocean acidification, recycled plastics, building renovation, etc.
- **Digital transition:** the performance of Artificial Intelligence, cyber security etc.
- **Public health and safety:** biomarkers, public risk prevention, road safety, biotechnologies, etc.



AMBITION

To achieve its ambition of becoming the benchmark laboratory for tomorrow's technologies, LNE has carried out a strategic exercise: Excellence 2030. The aim of this corporate project is to put people at the heart of our business and organisation, and to raise the standard of customer service even higher. Built in collaboration with our employees, it is based on two key principles:

- **Innovating for industry and society:** LNE deploys its expertise to support innovation and progress in a dynamic, prosperous, transparent and responsible industry.
- **Succeeding together:** strengthening a shared culture and commitment to LNE's economic and environmental challenges, and supporting each business function in its drive for greater efficiency.

« Promoting reindustrialisation also means meeting energy and digital transition challenges. Cutting-edge metrology is a real catalyst for innovation and sustainability. »

Thomas GRENON,
Chief Executive Officer at LNE.



2 STRATEGIC DOCUMENTS

- Target and performance contract 2025-2029.
- Medium-term R&D program 2021-2025.

BUSINESS ACTIVITIES OF EXCELLENCE

LNE's expertise is focused on two key objectives: technological independence and public safety. Its research activities are the foundation on which 5 businesses are built: metrology, testing, expertise, certification and training. LNE partners industry and supports public authorities to encourage the emergence of new technologies.

RESEARCH

A PARTNER TO INNOVATION

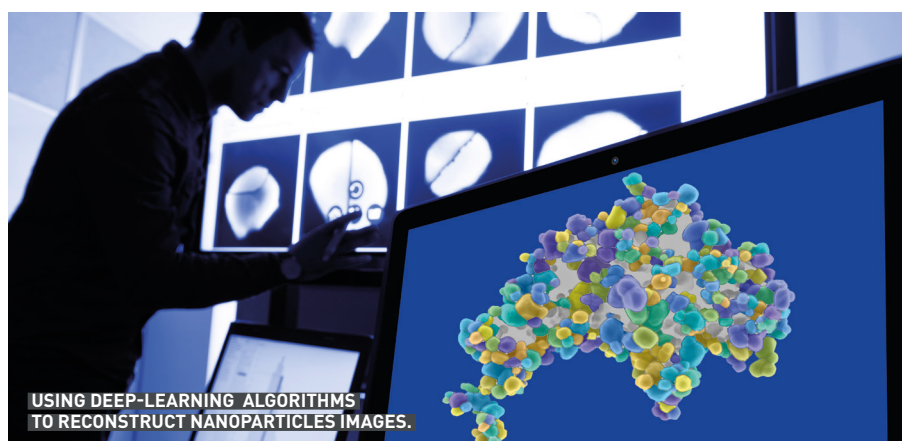
By devoting 25% of its budget to research, LNE aims to remove the metrological obstacles to progress. It develops standards and measurement methods adapted to emerging technologies, alongside institutional, academic and industrial partners.

At the heart of its program:

- **Challenges for Society:** healthcare (biomedical analyses: certified reference materials and reference methods for biomarker determination), energy (nuclear, renewable energy, etc.) and environment (water and air quality), etc.
- **Artificial Intelligence and machine learning:** assessment (reliability, safety, ethics and legality) of artificial intelligence systems, setting up artificial intelligence assessment laboratories, assessing measurement uncertainties, etc.

- **Materials and Nanomaterials:** evaluation of physico-chemical properties and characterisation methods, pre- standards work, user safety, etc.
- **Quantum technologies:** development of instrumentation, methods, measurement and evaluation reference systems, reference standards for digital twins, etc.

LNE is also a major player in steering the RNMF (Réseau National de la Métrologie Française), the French organisation - "National Network of French Metrology". In this steering capacity, it coordinates and conducts research to establish reference and transfer standards, and to maintain the units of the International System (SI) at the highest possible level of precision.



RNMF: A METROLOGY NETWORK OF EXCELLENCE

French Metrology is organised into a network of 10 laboratories, headed by LNE: the Réseau National de la Métrologie Française (RNMF).

These laboratories are officially designated by European and international bodies in one or more specific fields.

From the creation of International System units (SI) to the development of transfer standards, these laboratories are responsible for:

- Improving and creating standards
- Maintaining the performance of standards and participating in international comparisons
- Disseminating these standards to users

Manager	National laboratories	Designated laboratories	
LNE Chemistry and biology, mechanical, electricity, optical radiation, thermal engineering, mathematics and statistics	LNE-LNHB/CEA Ionising radiation	LNE-Cetiat Hygrometry, liquid flow measurement, anemometry	LNE-LADG Gas flow Metering Department
	LNE-OP Time-Frequency	LNE-Ensam Dynamic pressure	LNE-LTFB Time-Frequency
	LNE-CNAM (LCM) Length-interferometry, mechanics, optical radiation, thermometry	LNE-ASNR Neutron dosimetry	LNE-Trapil Hydrocarbon flow measurement

METROLOGY

THE BEST IN MEASUREMENT

LNE, the French national metrology institute, helps companies and public authorities to control and optimise their metrological resources, with a view to improving quality and competitiveness. Their long-term support is based on a comprehensive analysis of their specific needs. It ensures both quality and performance:

- **instrumentations:** calibration and characterisation, drift analysis and predictive maintenance, on-site or in-lab connection;
- **materials:** physical, chemical and biological characterisation, creation of certified reference materials, connection.

Responsible for implementing SI units with the best possible level of uncertainty, LNE offers a multitude of traceable references and one of the most extensive calibration and connection panels:

- Radiometry - Photometry
- Masses and related dimensions
- Length - Dimensions
- Time - Frequency
- Electricity - Magnetism
- Temperature and thermal values
- Table of contents

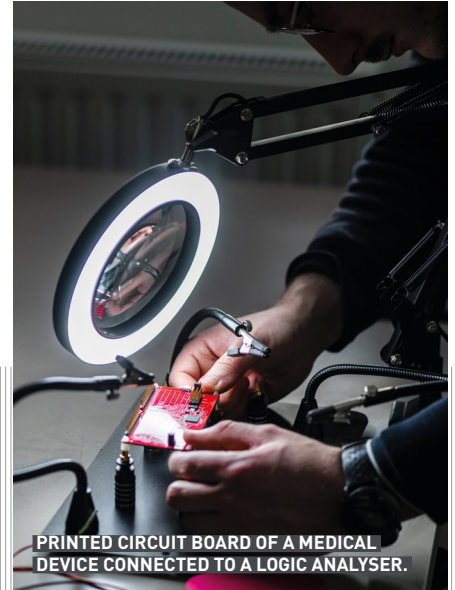


LEGAL METROLOGY

As a designated legal metrology organisation, LNE helps companies to demonstrate that their measuring instruments used in commercial transactions and operations involving health, the environment or the safety of goods and people are compliant.



RADIO FREQUENCY LABORATORY
IN PARTNERSHIP WITH NEXIO.



PRINTED CIRCUIT BOARD OF A MEDICAL
DEVICE CONNECTED TO A LOGIC ANALYSER.

TESTS

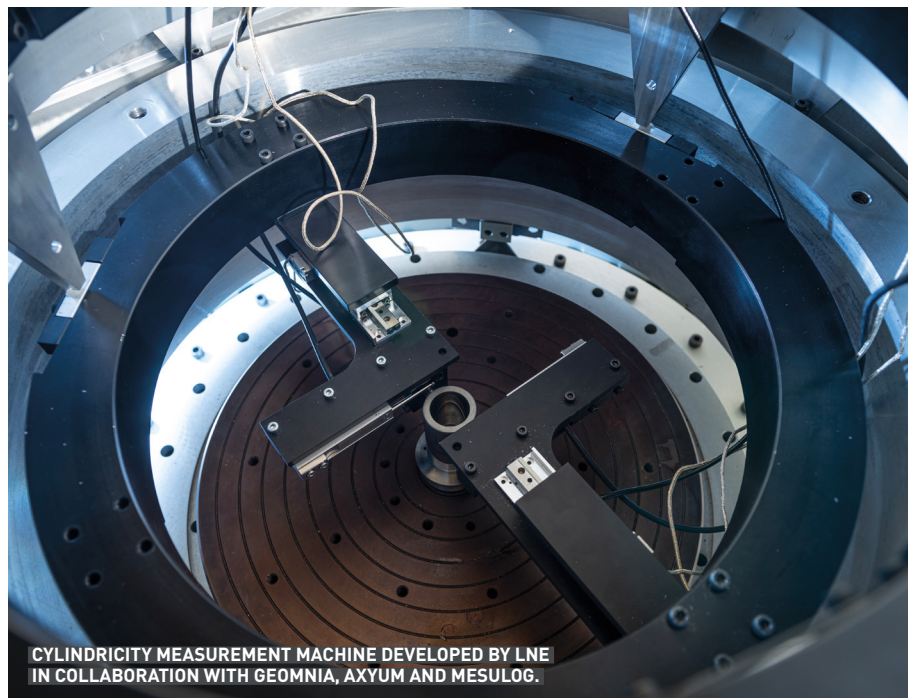
PERFORMANCE AND COMPLIANCE

To ensure confidence in materials, products and systems, LNE offers a wide range of testing and analysis services. Our solutions are constantly evolving, in line with the state of the art and changes in standards and regulations:

- **Assessment for safety, quality and compliance.**
- **Unit testing/series production control:** upstream expertise, qualification testing, investigative testing.

Our multi-disciplinary portfolio responds to industrial sectors' requirements and aims to simulate real usage or transport conditions for equipment and products:

- **Initial property characterisation**
- **Usage and environmental impact assessment:** reaction to fire, electrical safety-EMC, acoustics-mechanical-climatic, vibration-shock-constant acceleration, packaging safety.



CYLINDRICITY MEASUREMENT MACHINE DEVELOPED BY LNE
IN COLLABORATION WITH GEOMNIA, AXYUM AND MESULOG.

CERTIFICATION

HIGH STANDARDS CERTIFICATION

The **LNE Certification mark** is a real asset for differentiating products, services and company management systems. It encompasses four main areas of expertise:

- **DIGITAL:** cybersecurity, AI performance
- **ENVIRONMENT:** environmental and energy transition.
- **SAFETY:** consumer and worker safety.
- **PERFORMANCE:** suitability for use, compliance assessment.

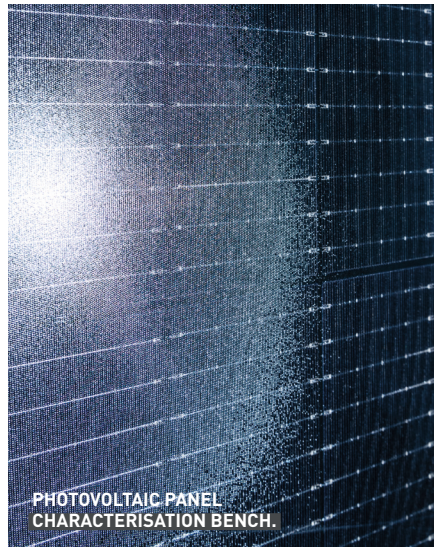
GMED certification supports players in the medical-healthcare sector in responding to regulatory changes to:

- CE-marking for medical devices,
- certifying quality management systems.

This certification includes all types of medical devices (implantable, custom-made, electro-medical, in vitro diagnostic, etc.), whatever the level of risk and the technology used.

At the heart of the challenge of energy transition, **Certisolis certification** guarantees the performance, safety and environmental impact of photovoltaic modules, in line with international standards.

The **Association pour la Certification des Matériaux Isolants (ACERMI)** is also involved in energy transition issues, providing independent support for insulation innovation by offering manufacturers certification to demonstrate the quality and performance of their products.



EXPERTISE AND INNOVATION

A COMPREHENSIVE, CUSTOMISED SOLUTION

By its **technical expertise**, the LNE supports the most complex or innovative projects.

Objective: to master product and system characterisation processes throughout the life cycle. This solution may involve project management assistance or complete project management:

- Measurement data processing: calculation of uncertainties in accordance with current standards.
- Modelling and numerical simulation: nanoparticles, substance migration, fire behaviour, thermal efficiency, product transport, etc.

WITHIN INESIA, LNE, A PLAYER IN ASSESSING AND ENSURING THE SAFETY OF AI

Involved in AI metrology for over 15 years, LNE is supporting our country in the development of secure AI solutions. It is currently involved in the Institut National pour l'Evaluation et la Sécurité de l'IAI (INESIA), the French organisation for assessing AI safety, alongside leading national players ANSSI, INRIA and PEReN. With INESIA, France is amplifying its strategy to be among the champions of AI and to develop the safeguards of trust advocated by the AI Act.

- Customised studies and services: regulatory and standards studies, audit/diagnosis of processes and products, development of instrumentation and methods, creation/management of metrology laboratories, etc.
- Creating standards and labels.

FOR R&D BASED IN FRANCE

LNE's research partnerships also enable companies to accelerate their innovation process, by benefiting from LNE's expertise and technology platforms. This will enable investments in areas of shared interest to be pooled and the benefits shared.

TAX CREDIT FOR RESEARCH (CRÉDIT D'IMPÔT RECHERCHE)

A recognised organisation by the French Ministry of Higher Education, Research and Innovation, LNE has Tax Credit for Research (CIR) accreditation.



TRAINING

DEVELOPING SKILLS

Through its **two training organisations, LNE and GMED**, the Group provides a range of courses with a high level of technical expertise. Conceived, designed and implemented by our experts (auditors, test engineers, metrologists, technicians, etc.), our training courses provide training in the latest regulatory and technical developments in our fields of activity:

- Metrology: measurement, test and analysis results performance.
- Mechanical, thermal, optical, electrical and legal metrology.
- Product and personal safety (cybersecurity, AI, food packaging, BRCGS (Brand Reputation through Compliance of Global Standards), fire safety, radio frequencies, etc.).
- Medical- healthcare: regulation of medical devices and in vitro diagnostic medical devices, risk management, quality management systems, special processes.



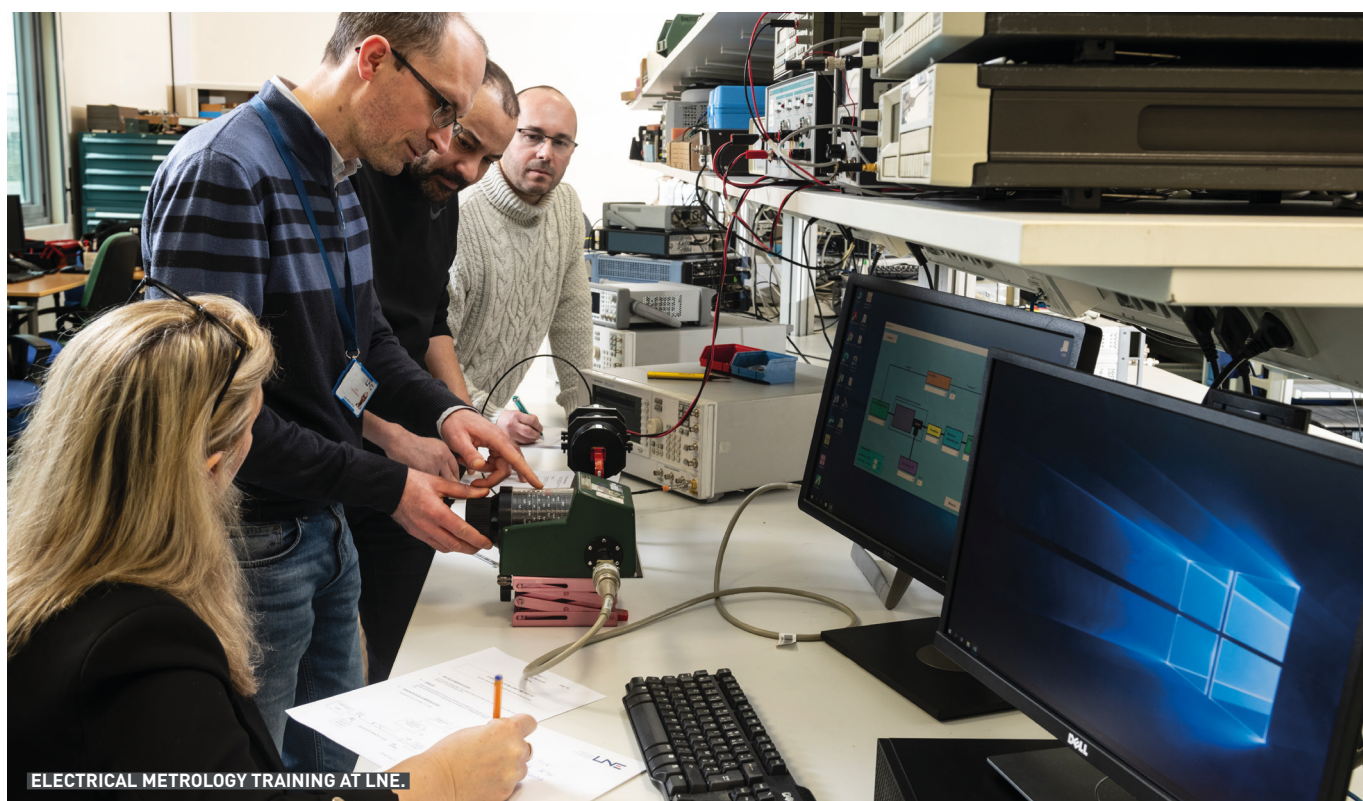
- Environmental/Quality Management.

Using the Group's career paths; trainees can easily identify the learning required for their project. Depending on their needs, they can also choose between face-to-face and distance learning. Inter-company training courses offered by the LNE training organisation can be adapted for intra-company or customised training. They are also modular, for greater flexibility and efficiency.

Qualiopi
processus certifié

 **RÉPUBLIQUE FRANÇAISE**

Quality certification has been awarded for the following category of activity:
TRAINING ACTIVITIES.



ELECTRICAL METROLOGY TRAINING AT LNE.

TECHNOLOGY PLATFORMS

LNE has a number of leading multi-technical platforms at both national and international level. Bringing together cutting-edge human and technical resources, these systems are the fruit of extensive R&D in measurement and testing.

➤ THREE PLATFORMS FOCUSED ON THE INFINITELY SMALL

- **CARMEN**: characterising the physico-chemical properties of nanomaterials.
- **MONA**: characterisation of nano-objects in aerosol form and generation of standard aerosols.
- **NAEL**: studying the electrical properties of nanomaterials and nanodevices.



➤ AI ASSESSMENT LABORATORIES

Assessing intelligent physical or digital systems with the LE.IA Simulation, LE.IA Immersion and LE.IA Action platforms.



➤ RADIO FREQUENCY TEST LABORATORIES

Assessment of the conformity of radio equipment according to the requirements of the RED directive (Radio Equipment Directive).



➤ MATIS PLATFORM

Characterisation of thermal, radiative and optical properties of various materials.



➤ MELODI PLATFORM

Wavelength and dimensional metrology.



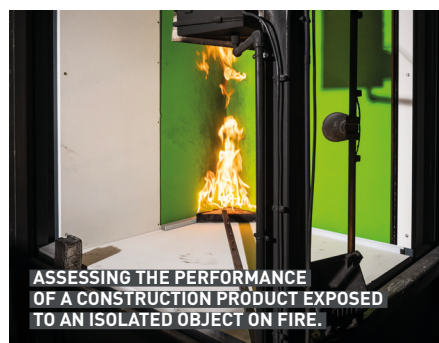
➤ HIGH-VOLTAGE ELECTRICAL METROLOGY PLATFORM

Measures AC voltages up to 300 kV and 250 kV DC voltages. Pulse-wave measurement up to 420 kV



➤ FIRE TEST PLATFORM

- **Reaction to fire tests**, for transport and construction.
- **Fire safety engineering**: tests, modelling and simulation.



PARTNERS

At the heart of the scientific, industrial and standards ecosystem, LNE works with numerous partners to:

- **Develop an international dimension**: BIPM, Euramet, Welmec, Eurolab.
- **Contribute to the national strategy**: Plan National Quantique, Challenge IA, Association NanoMesureFrance, INRIA...

- **Anticipate changes in regulations and standards**: OIML, Welmec, Comités AFNOR, CEN/CENELEC, ISO, IEC, CIE.
- **Support the transfer to industry**: competitiveness clusters, French-Tech, Scientific Interest Groups, Collège Français de Métrologie, Réseau Mixte de Technologie, etc.

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