IPCTN23

Inquérito ao Potencial Científico e Tecnológico Nacional

EMPRESAS

"National Statistical System Survey (under Law n. º 22/2008, of 13 May 2008) of compulsory response, registered at INE under n. º 10526, valid until December 31 of 2024."

Business Enterprise Sector

The Directorate-General for Education and Science Statistics (DGEEC) is the Statistical Authority responsible for collecting and processing data from the National Scientific and Technological Potential Survey (IPCTN), through a delegation of competences from the National Statistics Institute (INE).

IPCTN is the official instrument for collecting information on the human and financial resources allocated to Research and Development (R&D) activities in Portugal.

This survey is addressed to all potential R&D performing enterprises, with 2023 as the reference year for this statistical operation.

The results of this statistical operation enable the construction of indicators to characterise and develop the national scientific and technological system and integrate the national (MCTES and INE) and international (Eurostat, OECD, among others) official statistical series.

Please fill the survey at https://ipctn.dgeec.mec.pt/ipctn23e, using the access codes you have been given. It is suggested the reading of the frequently asked questions [FAQ], as well as the instructions for filling in the information available on the survey platform. You can obtain a copy of the information you provide by selecting the "Report" option, which is available in the bottom right-hand corner of the platform.

For any question, please contact us by telephone: 213949296/345/361 or by e-mail: ipctne@dgeec.medu.pt

LEGISLATION

The DGEEC is the delegated agency from INE for the statistics in Science and Technology, integrating the National Statistical System (SEN). As such, is subject to legislation stipulating the operation of SEN (Law n. º 22/2008, of 13 May).

MANDATORY RESPONSE

It is mandatory to provide the information requested by the DGEEC, as the SEN entity responsible for the direct collection of statistical information.

STATISTICAL CONFIDENTIALITY

The DGEEC is obliged to safeguard the individual statistical information of natural and legal persons collected by it. The collection, treatment and dissemination of statistical data is carried out in accordance with the provisions of the SEN Law, namely article 6, which establishes the application of the principle of statistical secrecy to all information that allows the individualization of statistical units, as well as the manuals for the application of this principle by statistical authorities.

All data is kept in a secure technological environment, on a DGEEC server located in Portugal, with access restricted to DGEEC employees responsible for its management and maintenance. The results of the processing of personal data are always disclosed in aggregate form, never revealing the identity of the holders of the same. The breach of statistical confidentiality is punishable not only disciplinarily, but also criminally, in accordance with article 32.º SEN Law.

PRIVACY

For questions exclusively related to the privacy of your personal data, contact the data protection officer in writing via email: dpo@dgeec.medu.pt

In a situation of doubt or conflict, regarding the use of your personal data, which is not resolved by the respective Controller or by the Data Protection Officer, you may submit a complaint or request clarification to the competent authority: National Data Protection Commission (CNPD), Av. Dom Carlos I, 134 – 1st, 1200-651 Lisbon. Telephone: 21 392 84 00.

In case of doubt, use the form available at: https://www.cnpd.pt/cidadaos/pedidos-de-informacao/ and in case of conflict, you must use the form accessible at: https://www.cnpd.pt/cidadaos/participacoes/

Section IA – Enterprise identification

1. Contact person responsible for the answer:

1.1. Name

1.2. Function

1.3. Phone number

1.4. E-mail address

2. Name of the enterprise:

3. Fiscal identification number:

4. Main activity (NACE 2):

5. Location:

5.1. Address

5.2. Postcode

-

5.3. City

5.4. District - County

5.5. Phone number

5.6. E-mail address

5.7. Website (www)

Section IB - General information in 2023

1. Distribution of the enterprise capital according to its origin:

%	National public capital
%	National private capital
%	Foreign capital
100%	**Total**

2. The enterprise is part of a group of enterprises?

☐ No

☐ Yes 2.1. Name of the group:

2.2. Country of nationality of the group:

3. Enterprise turnover in 2023

[Data obtained by administrative data (Decree-Law 8/2007, of January 17).]

4. Number of persons employed by the enterprise in 2023

[Data obtained by administrative data (Decree-Law 8/2007, of January 17).]

Section II – Research and Development (R&D) activities in 2023

[It is suggested to read the concepts and examples presented in Annex I (pp. 17-23).]

1. R&D activities of the enterprise in 2023:

[This question can be multiple responses, in the case of the three first options.]

☐ Developed intramural R&D activities

[Required to answer Sections III, IV and VI, must complete the Individual form and Additional information to finish the questionnaire please.]

☐ Hired R&D services to other institutions or enterprises

[Required to answer Section V, must complete the Additional information to finish the questionnaire please.]

☐ Financed R&D activities of other institutions, enterprises and/or individuals

[Required to answer Section V, must complete the Additional information to finish the questionnaire please.]

☐ Did not develop, hire or finance R&D activities

[Required to answer the Additional information and finish the questionnaire please.]

Section III – Human resources in R&D activities in 2023

[To complete this section, you should consider the following procedures:

• Include all persons dedicated to R&D in the enterprise (internal personnel, regardless of the type of employment contract, and external personnel, such as grant holders and individuals paid by other enterprises or institutions).

• Distinguish between men and women and consider the percentage of time devoted to R&D with reference to person/year. If the R&D activities in the enterprise were developed only part of the year, this should be reflected in the percentages presented here. If the R & D activities took place simultaneously with the enterprise's other activities, it should estimate the proportion of R&D time spent (see examples in Annex II (page 24)).

• Breakdown by level of education, considering the highest completed level obtained by the end of 2023.]

IMPORTANT: Each individual can only be considered in one of the groups (tables 1.1.1. to 1.3.2.), to avoid repetitions, so it should be indicated the representative situation of the largest number of months of the year for each individual.

1.1. Number of personnel engaged in R&D activities in the enterprise in 2023, by qualification, percentage of time and gender, with the following tasks:

- Professionals engaged in the conception or creation of new knowledge
- Conduct research and improve or develop concepts, theories, models, techniques instrumentation, software or operational methods
- Collection, processing, evaluating, analyzing, and interpreting research data
- Evaluating the results of investigations and experiments and positing conclusions using different techniques and models
- Applying principles, techniques and processes to develop or improve practical applications
- Planning, directing and coordinating the R&D activities
- Preparing scientific papers and reports

Percentage of time in R&D activities during the year 2023	Doctorate degree		Master degree		*University degree*		Bachelor degree		Higher Education Professional Courses (TESP) [See Note 3]		Primary education, or Upper secondary education, complete or incomplete, or post-secondary education		**Total**
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
1.1.1. Internal personnel (Employees, including working proprietors and unpaid family households workers): [See concept in Annex II (pp. 24).]													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
1.1.2. External personnel (non-employees, ex.: self-employed professionals, consultants, grant holders and others paid by other enterprises or institutions): [See concept in Annex II (pp. 24).]													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
Total													

1.2. Number of personnel engaged in technical tasks supporting R&D activities in the enterprise in 2023, by qualification, percentage of time and gender, with the following responsibilities:

- Carrying out bibliographic searches and selecting relevant material from archives and libraries
- Providing technical assistance and support in R&D, or testing prototypes and maintaining and repairing research equipment
- Assisting in analysing data, keeping records and preparing reports
- Carrying out statistical surveys and interviews
- Other technical assistance tasks and support to R&D activities

Percentage of time in R&D activities during the year 2023	Doctorate degree		Master degree		*University degree*		Bachelor degree		Higher Education Professional Courses (TESP) [See note 3]		Primary education, or Upper secondary education, complete or incomplete, or post-secondary education		**Total**
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
1.2.1. Internal personnel (Employees, including working proprietors and unpaid family households workers): [See concept in Annex II (pp. 24).]													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
1.2.2. External personnel (non-employees, ex.: self-employed professionals, consultants, grant holders and others paid by other enterprises or institutions): [See concept in Annex II (pp. 24).]													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
Total													

1.3. Number of personnel engaged in other supporting R&D activities in the enterprise in 2023, by qualification, percentage of time and gender, with the following tasks:

- Administrative and secretarial tasks
- Provision of legal services and other intermediate related services
- Inspection for law enforcement and similar
- Technical assistance in galleries, libraries, archives and museums
- Performing skilled tasks in agriculture, forestry and fisheries
- Execution of plant and machine operation tasks and assembly work
- Management of financial and human resources aspects and administration of general matters

Percentage of time in R&D activities during the year 2023	Doctorate degree		Master degree		*University degree*		Bachelor degree		Higher Education Professional Courses (TESP) [See note 3]		Primary Education, or Upper secondary education, complete or incomplete, or post-secondary education		**Total**
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
1.3.1. Internal personnel (Employees, including working proprietors and unpaid family households workers): [See concept in Annex II (pp. 24).]													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
1.3.2. External personnel (non-employees, ex.: self-employed professionals, consultants, grant holders and others paid by other enterprises or institutions): [See concept in Annex II (pp. 24).]													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
Total													

1.4. Number of total personnel engaged in R&D activities in the enterprise in 2023, by qualification, percentage of time and gender, with the following tasks:

[Sum of the values in tables 1.1 to 1.3.]

Percentage of time in R&D activities during the year 2023	Doctorate degree		Master degree		*University degree*		Bachelor degree		Higher Education Professional Courses (TESP) [See note 3]		Primary Education, or Upper secondary education, complete or incomplete, or post-secondary education		**Total**
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
1.4.1. Internal personnel													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
1.4.2. External personnel													
up to 5%													
6% to 10%													
11% to 20%													
21% to 30%													
31% to 40%													
41% to 50%													
51% to 60%													
61% to 70%													
71% to 80%													
81% to 90%													
91% to 100%													
Subtotal													
Total													

Note 3 - The legal regime of the Higher Education Professional Course is provided for in Decree-Law no. 74/2006, of March 24, amended and republished by Decree-Law no. 63/2016, of September 13. This course does not confer an academic degree and the successful completion of the respective course of study grants the diploma of professional higher technician. This cycle of studies is taught in polytechnic teaching, has 120 credits and its duration is four curricular semesters of student work, consisting of a set of curricular units organized into components of general and scientific training, technical training and training in the context of work, which takes place through an internship.

Section IV - Intramural R&D activities expenditures in 2023

1.Intramural expenditure on R&D activities carried out by the enterprise in 2023, regardless of funding source.

1.1. Current R&D expenditures in 2023:

€	1.1.1. Labour costs with internal R&D personnel [Includes costs with the enterprise's employees, family members and working proprietors. See concept in Annex II (page 24).]
€	1.1.2. Labour costs with external R&D personnel [Includes costs with non-employees (eg. self-employed professionals, individual contractors, grant holders and others paid by other enterprises or institutions). See concept in Annex II (page 24).]
€	1.1.3. Other current R&D costs
€	Total (a)

1.2. Capital R&D expenditures in 2023:

€	1.2.1. Land and buildings
€	1.2.2. Machinery and equipment
€	Total (b)
€	**Total (a+b)**

Intramural expenditures: all expenditures for R&D performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds.

Current costs:
Labour costs: comprise annual wages and salaries and all associated costs or fringe benefits, such as bonus payments, holiday pay, contributions to pension funds and other social security payments, payroll taxes, etc. The labour costs of persons providing indirect services which are not included in the personnel data (such as security and maintenance personnel or the staff of central libraries, computer departments or head offices) should be excluded and included in other current costs.

Other current costs: comprise non-capital purchases of materials, supplies, equipment and services to support R&D performed by the statistical unit in the reference year. Examples are water and fuel (including gas and electricity); books, journals, reference materials, and subscriptions to libraries and scientific societies, etc.; imputed or actual costs of small prototypes or models made outside the statistical unit; and materials for laboratories (e.g. chemicals, animals, etc.). Other current costs include royalties or licenses for the use of patents and other intellectual property rights, the lease of capital goods (machinery and equipment, etc.) and the rental of buildings to support R&D performed by the statistical unit in the reference year.

Capital expenditures:
Are the annual gross amount paid for the acquisition of fixed assets that are used repeatedly or continuously in the performance of R&D for more than one year. They should be reported in full for the period when they took place, whether developed in-house or acquired, and should not be registered as an element of depreciation.

Land and buildings: land acquired for R&D use (e.g. testing grounds, sites for laboratories and pilot plants) and buildings constructed or purchased for R&D use, including major improvements, modifications and repairs.

Machinery and equipment: costs with the acquisition of machinery and equipment for use in the performance of R&D, costs of computer software that is used in the performance of R&D for more than one year. It includes long-term licenses or the acquisition of separately identifiable computer software, including program descriptions and supporting materials for both systems and applications software. The production costs (e.g. labour and materials) of internally produced software should be reported. Software from external vendors may be obtained through the outright purchase of rights or licenses to use. Software used or licensed for one year or less should be reported under current expenditures (see earlier text on “Other current R&D costs”).

2. Funding of intramural expenditure on R&D activities carried out by the enterprise in 2023, by source of funds:

[Funds that are transferred to other entities by subcontracting R&D should be indicated in R&D extramural expenditure (Section V). In this question 2 only the funds that were spent by the enterprise during 2023 should be considered, with reference to the costs stated in the previous question.]

€	Own enterprise [Includes funds from revenues arising from the sale of products, interest or rent, and from transfers or provision of non-R&D related services.]
	Funds from R&D contracts or R&D subsidies, from national institutions
€	National enterprises in the same group
€	Other national enterprises
€	Government: exchange R&D **Exchange R&D** funds are related to the provision of R&D services performed by the enterprise to other public or private entities.
€	Government: transfer R&D **Transfer R&D funds are** related to transfers to R&D from other public or private entities (eg. projects funded by the Portuguese 2020 or 2030 structural funds, managed in particular by Compete, Regional Operational Programs and the National Innovation Agency, among others; other Government funds for R&D, scholarship funding, EU funded projects, etc.)
€	National higher education institutions
€	National private non-profit institutions
€	Scientific patronage [under Decree-Law nº 74/99, of March 16.]
	Funds from R&D contracts or R&D subsidies, from foreign institutions
€	European Union
€	Foreign enterprises in the same group
€	Other foreign enterprises
€	Foreign government institutions
€	Foreign higher education institutions
€	Foreign private non-profit institutions
€	Other international organizations
€	**Other funds.** Specify:
€	**Total** [Equal to the total (a+b) declared in question 1.]

3. The enterprise develop(ed) or intend to internally develop R&D activities in 2024?

☐ No

☐ Yes 3.1. Estimated expenditure on R&D in 2024:

3.1.1. Percentage change compared to 2023:

☐ Higher than 2023 %

☐ Less than 2023

☐ Equal to 2023

4. Local where the enterprise developed the largest share of expenditure on R&D in 2023:

5. Distribution of R&D activities of the enterprise in 2023, by type of R&D:

%	Basic research [Consists of experimental or theoretical work, developed with the main purpose of obtaining new knowledge about the fundamentals of phenomena and observable facts, without any specific objective of practical application.]
%	Applied research [Consists of original research work, developed with the aim of creating new knowledge, directed towards a predetermined application or objective.]
%	Experimental development [The systematic use of existing knowledge obtained through research and/or practical experience in order to manufacture new materials, products or devices; to install new processes, systems or services; or to improve existing ones substantially.]
100%	**Total**

6. Distribution of R&D activities of the enterprise in 2023, by field of science:

[For a breakdown of each science and technology see Annex III (pp. 25-26).]

	1. Natural Sciences
%	1.1. Mathematics
%	1.2. Computer and information sciences
%	1.3. Physical sciences
%	1.4. Chemical sciences
%	1.5. Earth and related environmental sciences
%	1.6. Biologic sciences
%	1.7. Other natural sciences. Specify:
	2. Engineering and technology
%	2.1. Civil engineering
%	2.2. Electrical, electronic and information engineering
%	2.3. Mechanical engineering
%	2.4. Chemical engineering
%	2.5. Materials engineering
%	2.6. Medical engineering
%	2.7. Environmental engineering
%	2.8. Environmental biotechnology
%	2.9. Industrial biotechnology
%	2.10. Nanotechnology
%	2.11. Other engineering and technologies. Specify:
	3. Medical and health sciences
%	3.1. Basic medicine
%	3.2. Clinical medicine
%	3.3. Health sciences
%	3.4. Medical biotechnology
%	3.5. Other medical science. Specify:

[The list continues on the next page.]

	4. Agricultural and veterinary sciences
%	3.1. Agriculture, forestry, and fisheries
%	3.2. Animal and dairy science
%	3.3. Veterinary science
%	3.4. Agricultural biotechnology
%	3.5. Other agricultural sciences. Specify:
	5. Social sciences
%	5.1. Psychology and cognitive sciences
%	5.2. Economics and business
%	5.3. Educational sciences
%	5.4. Sociology – includes anthropology, demography and ethnology
%	5.5. Law
%	5.6. Political science
%	5.7. Social and economic geography
%	5.8. Media and communications
%	5.9. Other social sciences. Specify:
	6. Humanities and arts
%	6.1. History and archaeology
%	6.2. Languages and literature
%	6.3. Philosophy, ethics and religion
%	6.4. Arts (History of arts, performing arts, music) – includes architectural design
%	6.5. Other humanities. Specify:
100%	**Total**

7. Distribution of R&D activities of the enterprise in 2023, by socio-economic objective:

[According to the **nomenclature for the analysis and comparison of scientific programs and programs - NABS2007**, Eurostat. For a breakdown of each socio-economic objective see **Annex IV** (pp. 27).]

%	1. Exploration and exploitation of the earth
%	2. Environment
%	3. Exploration and exploitation of space
%	4. Transport, telecommunication and other infrastructures
%	5.1. Energy efficiency
%	5.2. Fossil fuels: oil, gas and coal
%	5.3. Renewable energy sources
%	5.4. Nuclear fission and fusion
%	5.5. Hydrogen and fuel cells
%	5.6. Other power and storage technologies
%	5.7. Other cross-cutting technologies or research
%	5.8. Other energy domains
%	6. Industrial production and technology
%	7. Health
%	8. Agriculture
%	9. Education

[The list continues on the next page.]

%	10. Culture, recreation, religion and mass media
%	11. Political and social systems, structures and processes
%	12. General advancement of knowledge
%	13. Defense
100%	**Total**

8. Distribution of R&D activities of the enterprise in 2023, by national strategic priority:

[As defined in the National Strategy for Smart Specialization ENEI 2030. For a breakdown see Annex V (pp. 28-29).]

%	1. Digital transition
%	2. Materials, systems and production technologies
%	3. Great natural assets: forest, sea and space
%	4. Green transition
%	5. Health, biotechnology and food
%	6. Society, creativity and heritage
%	7. Other priorities. Which are?
100%	**Total**

9. Distribution of R&D activities of the enterprise in 2023, by product field:

[Refers to the final product that is served by the R&D activities undertaken by the enterprise. See the list of products set out in Annex VI (pp. 30-33).]

Percentage	Product code	Product description
%		
%		
%		
%		
%		
%		
100%	**Total**	

Section V – Extramural R&D activities expenditures in 2023

[Complete only if you have indicated in Section II, hired and /or financed R&D activities.]

1. Extramural expenditure on contracting and/or financing R&D activities, in 2023, from other institutions or enterprises.

1.1. R&D contracting	1.2. R&D funding	
€	€	National enterprises in the same group
		Specify:
€	€	Other national enterprises
		Specify:
€	€	Foreign enterprises in the same group
€	€	Other foreign enterprises
€	€	Private non-profit institutions in Portugal
		Specify:
€	€	Technological centers or Interface institutions with enterprises in Portugal
		Specify:
€	€	Private non-profit institutions, Technological centers or Interface institutions with enterprises, abroad
€	€	Higher education institutions in Portugal
€	€	Higher education institutions abroad
€	€	Government institutions in Portugal
		Specify:
€	€	Government institutions abroad
€	€	Other institutions in Portugal
		Specify:
€	€	Other institutions abroad
		Specify:
€	€	**Total**

Extramural expenditure: the amount spent by the research unit (institution or enterprise) by contracting R & D activities and funding/ transfer of funds for R&D activities carried out by other units.

Funds received by the enterprise (from foreign or national entities) that are transferred to other entities for external R&D execution (subcontracting) should be considered as extramural expenditure.

The **contracting** presupposes the provision of an R&D service by an entity external to the enterprise, whose results of the R&D service revert to the enterprise.

The **funding** refers to the transfer of funds for R&D to be developed by others institutions, such as other enterprises, public or private entities or individuals (for example: granting R&D grants, R&D project awards, etc.) without that there are counterparts or sharing of R&D results with the enterprise it finances.

Section VI - Biotechnology R&D activities in 2023

[This section aims to compile basic information and additional activities on the development of R&D in biotechnology and the application of biotechnology techniques to produce goods or services.]

Biotechnology is the application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services. (OCDE, 2005).

1. Has the enterprise developed biotechnology R&D activities in 2023?

☐ Yes

☐ No

[If you answered "No", end here the filling of this section.]

2. Techniques used in biotechnology R&D activities in 2023:

☐ **DNA/RNA**	Genomics, pharmacogenomics, gene probes, genetic engineering, DNA/RNA sequencing/synthesis/amplification, gene expression profiling, and use of antisense technology.
☐ **Proteins and other molecules**	Sequencing/synthesis/engineering of proteins and peptides (including large molecule hormones); improved delivery methods for large molecule drugs; proteomics, protein isolation and purification, signaling, identification of cell receptors.
☐ **Cell and tissue culture and engineering**	Cell/tissue culture, tissue engineering (including tissue scaffolds and biomedical engineering), cellular fusion, vaccine/immune stimulants, embryo manipulation.
☐ **Process biotechnology techniques**	Fermentation using bioreactors, bioprocessing, bioleaching, biopulping, iobleaching, biodesulphurisation, bioremediation, biofiltration and phytoremediation.
☐ **Gene and RNA vectors**	Gene therapy, viral vectors.
☐ **Bioinformatics**	Construction of databases on genomes, protein sequences; modeling complex biological processes, including systems biology.
☐ **Nanobiotechnology**	Applies the tools and processes of nano/microfabrication to build devices for studying biosystems and applications in drug delivery, diagnostics etc.
☐ **Other techniques**	Specify:

3. Field of application of enterprise biotechnology R&D in 2023:

☐	**Human health**	Molecule therapeutics and monoclonal antibodies produced using rDNA technology. Other therapeutics, artificial substrates, diagnostics and drug delivery technology etc.
☐	**Veterinary**	Molecule therapeutics and monoclonal antibodies produced using rDNA technology.
☐	**Agricultural**	New varieties of genetically modified (GM) plants (including fruit trees, flowers, horticultural crops, grains, etc.), animals and micro-organisms for use in agriculture, aquaculture and silviculture, genetically modified (GM). New varieties of non-GM plants (fruit trees, flowers, horticultural crops, grains, etc.), animals and microorganisms for use in agriculture, silviculture, biopest control and diagnostics developed using biotechnology techniques (DNA markers, tissue culture, etc.), non-genetically modified (non-GM).
☐	**Food and beverages processing**	Use of bio-processing or improved crop varieties to improve food quality and characteristics.
☐	**Natural resources**	Applications for mining, petroleum/energy extraction, etc.
☐	**Natural resources**	Diagnostics, soil bioremediation, treatment of water, air and industrial effluents using micro-organisms, clean production processes.
☐	**Industrial processing**	Bioreactors to produce new products (chemicals, food, ethanol, plastics, etc.), biotechnologies to transform inputs (bioleaching, biopulping, etc.)
☐	**Bioinformatics**	DNA/RNA/protein synthesis and databases for humans, plants, animals and microorganisms. Gene identification, gene constructs, etc.
☐	**Non-specific applications**	Research tools, etc.
☐	**Other applications**	Specify:

4. Percentage assumed by the biotechnology in the total R&D activities of the enterprise in 2023:

	%

Additional information

1. Authorization for the disclosure of enterprise data in list(s) of enterprises/groups with more expenditure on R&D and in the directory of enterprises with R&D, in 2023.

[Pursuant to Law n. º 22/2008 of May 13, no. 6, art. 6.]

[This disclosure does not involve any costs (immediate or future) for the enterprises and does not apply to enterprises that did not develop R&D activities in 2023 (see answer to question 1.'s Section II).]

List(s) of enterprises /groups with more expenditure on R&D:

[To be made available on the DGEEC website.]

Authorize	Not authorize	
☐	☐	The disclosure of the name of the enterprise
☐	☐	The disclosure of the total intramural R&D expenditure
☐	☐	The disclosure of the number of R&D personnel
☐	☐	The disclosure of the number of R&D personnel with higher education degree
☐	☐	The disclosure of the number of R&D personnel with doctoral degree

Directory of enterprises with R&D:

[In the directory of enterprises with R&D, only information relating to the name of the enterprise, NACE, postal and electronic address and other enterprise contacts will be disclosed.]

Authorize	Not authorize
☐	☐

2. Time spent on completing the questionnaire:

[It should include the time spent collecting the information to answer the questionnaire.]

/ Hours/Minutes

3. Comments / Suggestions:

Annex I – Concepts and examples of R&D activities

R&D Concepts:

Research and Development (R&D)

Research and Development (R&D) activities are understood as all creative work carried out in a systematic way, with the aim of increasing knowledge - including knowledge of mankind, culture and society, and devising new applications resulting from that knowledge (Frascati Manual, 2015).

There are five cumulative basic criteria for identifying R&D activities:

- **Novelty/originality:**
  - R&D projects/activities always imply new discoveries for the unit and for the sector;
  - The potential novelty/originality of R&D projects results from comparison with the stock of knowledge existing in the sector;
- **Creativity:**
  - R&D projects/activities must aim at new concepts or ideas that increase existing knowledge;
  - Excludes routine process or product changes;
- **Uncertainty (multiple dimensions):**
  - Regarding the results/outputs;
  - Regarding the costs;
  - Regarding the time to allocate from the human resources involved;
- **Systematics:**
  - Activities have to be planned;
  - They have to be accounted for in terms of human and financial resources (costs and funding);
  - Procedures have to be defined and recorded;
  - The results have to be recorded (reports);
- **The knowledge is/must be transferable and/or reproducible**
  - The results of R&D projects/activities must be able to be reproduced by others;
  - Since the purpose is to increase the stock of knowledge, the results cannot remain "tacit knowledge" (i.e., remain only in the minds of researchers or other human resources involved);
  - Even if protected by means of Intellectual Property Protection, it is expected that processes and results will be registered for use.

Generally speaking, it is considered R&D if the resolution of a problem is not evident to any individual who is aware of the set of knowledge and basic techniques commonly used in the area in question. Activities of a routine nature must be included in R&D, if they are developed, exclusively or mainly, within the scope of R&D projects.

The R&D activities are classified in three categories:

- **Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.
- **Applied research** is original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective.
- **Experimental development** is systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes.

Examples of R&D activities:

1. Scientific and technical activities

Data collection	Investigation of new methods of measuring (e.g. temperature).
	Study and development of new systems and techniques for interpreting the data.
	The collection of data that is part of the R&D process, exclusively or mainly, should be considered as R&D activity (for example, topographical mapping, geological, hydrological, oceanographic or meteorological surveying and astronomical observations). Likewise, in the social sciences, the collection of data by surveys or other, carried out for the purpose of serving R&D projects, should also be considered as R&D activity. Routine collection of data for purposes other than scientific research should not be considered as R&D activity. Market studies are also to exclude from R&D.
Methodology and statistics	Conceptual and methodological work in relation to the development of completely new or substantially modified surveys and statistical systems.
	Work on sampling methodologies, small area statistical estimates.

Annex I – Concepts and examples of R&D activities [continuation]	
Feasibility studies and scientific articles	Study of the viability of R&D projects.
	Scientific articles.
Patent and license work	Administrative and legal work carried out to register patents and licenses should be excluded from R&D. Work connected directly with R&D projects is R&D.
Mining and prospecting	Development of new geological survey methods and techniques.
	Geological surveys undertaken as an essential part of a research project on geological phenomena.
	Research on geological phenomena per se undertaken as a subsidiary part of geological surveying and surveying programs.
Specialized health care	Research on the side effects of certain treatments (e.g. autopsy; research a particular mortality to establish the side effects of certain cancer treatments).
	Research on the effects of new drugs (e.g. special programme of blood tests).
Clinical trials	Systematic testing on human volunteers to ensure the efficacy and safety of new drugs, vaccines or treatments before their placing on the market (Phases 1, 2 and 3).
	Activities related to the testing of medicinal products or treatments, after their production and placing on the market, if they bring scientific and technological advances (Phase 4).
Space exploration	All activities, except the routine placing of orbiting satellites or the establishment of tracking and communication stations.
Software development	**<u>Include as R&D activites:</u>**
	Development of new operating systems or languages;
	Design and implementation of new search engines based on original technologies;
	Effort to resolve conflicts within hardware or software based on the process of re-engineering a system or a network;
	Creation of new or more efficient algorithms based on new techniques;
	Creation of new and original encryption or security techniques.
	<u>Routine activities not considered R&D</u> (exclude from IPCTN)
	Improvements to existing systems or specific programs;
	Technical problems already resolved in previous projects on the same operating systems and computer architecture;
	Routine maintenance of computers and software;
	Other software-related activities that <u>are not R&D activities</u>:
	Development of business application software and information systems using known methods and existing software tools;
	Adding user functionality to existing application programs (including basic data entry functionalities) ;
	Creation of websites or software using existing tools;
	Use of standard methods of encryption, security verification and data integrity testing;
	Customization of a product for a particular use, unless during this process knowledge is added that significantly improves the base program;
	Routine debugging of existing systems and programs, unless this is done prior to the end of the experimental development process.

Annex I – Concepts and examples of R&D activities [continuation]

2. R&D administration and indirect supporting activities	
Direct management of R&D projects	R&D manager who plans and supervises the scientific and technical aspects of the project or the person who produces the interim and final reports containing the results of the project.
Indirect supporting activities	Management, administration and secretarial activities that contribute directly to the R&D projects. Writing of progress reports and final reports of the R&D projects.
Studies and projects	Studies of prototypes, models, pilot plants, special equipment, structures or tools needed to design and implement a new product, process or service.
Prototypes	Design, construction and testing of original models that feature all the technical qualities and performances of the new product (includes all activities up to the latest modifications to the prototype and after the tests are successful completed).
Pilot plants	Construction and operation of a pilot plant is a part of R&D as long as the principal purposes are to obtain experience and to compile engineering and other data to be used in: evaluating hypotheses; writing new product formula; establishing new finished product specifications; designing special equipment and structures required by a new process; preparing operating instructions or manuals on the process.
Trial production	Activities associated with new design work and engineering in the start-up phase.
"Feedback" R&D	Activities related to the resolution of technical problems that require more R&D, after a new product or process move to the production units.
Industrial design	Plans and drawings aimed at defining procedures, technical specifications and operational features necessary to the conception, development and manufacturing of new products and processes.
Tooling up and industrial engineering	Activities that in the tooling-up and industrial engineering lead to new R&D works, such as developments in the production machinery and tools, changes to the production and quality control procedures or the development of new methods and standards.
Tests and trials	Activities related to testing and final testing of new materials, components, products and processes and others that are framed in R&D projects (even though most of the activities of these projects are developed by other institutions or enterprises) should be considered as R&D activities.

Annex I – Concepts and examples of R&D activities [continuation]

3. R&D activities in services	
Banking and insurance	Mathematical research relating to financial risk analysis.
	Development of risk models for credit policy.
	Experimental development of new software for home banking.
	Development of techniques for investigating consumer behavior for the purpose of creating new types of accounts and banking services.
	Research to identify new risks or new characteristics of risk that need to be taken into consideration in insurance contracts.
	Research on social phenomena with an impact on new types of insurance (health, retirement, etc.), such as on insurance cover for non-smokers.
	R&D related to electronic banking and insurance, Internet-related services and e-commerce applications.
	R&D related to new or significantly improved financial services (new concepts for accounts, loans, insurance and saving instruments).
	Analysis of the effects of economic and social changes on consumption and leisure activities.
Other service activities	Development of new methods for measuring consumer expectations and preferences.
	Development of new methods of delivering and measuring social service outcomes that can be adapted to a variety of socioeconomic or cultural settings.
	Development of new inquiry methods and instruments.
	Development of tracking and tracing procedures (logistics).
	Research into new travel and holiday concepts.
4. R&D activities in arts	
New tools and technologies	The experimental development to produce new electronic musical instruments.
	The exploration of new technologies for the performance art, for example, to improve of audio/video quality.
Studies of the arts and artistic expression	Basic or applied research that contributes to most of the studies of the arts (musicology, art history, theatre studies, media studies, literature, etc.).
	Artistic performance is normally excluded from R&D. However, higher education institutions that award doctoral degrees to artists as a result of their artistic performance can recognize artistic practice as an R&D activity.
Preservation and restoration	Preservation and restoration activities are considered as R&D if involve specialized technical personnel related to scientific research as grant holders or the publishing of scientific works.

Annex I – Concepts and examples of R&D activities [continuation]

How types of R&D can be differentiated?

A key criterion that guides the classification of R&D activities by type is the expected use of the results: in basic research, the results don't have any specific objective of practical application; in applied research, the results are aimed to a predetermined application or objective; in experimental development, the results are aimed at manufacturing new materials, products or devices, installing new processes, systems or services or substantially improving the existing ones.

In addition, two questions can help identify the type of R&D: how far ahead in time are the activities likely to lead to results that can be applied, and how broad is the range of potential fields of application for the results of the R&D (the more fundamental the research, the broader the potential field of application).

The relationship between basic research, applied research and experimental development must be seen within a dynamic perspective. It is possible that applied research and experimental development could adapt fundamental knowledge arising from basic research directly for general application. However, the linearity of such a process is affected by the feedback that takes place when knowledge is used to solve a problem. This dynamic interaction between knowledge generation and the solution of problems links basic and applied research and experimental development.

With reference to the enterprise where R&D is performed, a clear-cut separation of the three types of R&D rarely exists. All three types may sometimes be carried out in the same unit by essentially the same staff, but some research activities may cover one or two types of R&D. For instance, the search for a new medical treatment for people affected by an epidemic disease may involve both basic and applied research. It is recommended to undertake an evaluation of the type of R&D at the level of the activity performed, by classifying its expected results according to the two indicators described above

>>Examples of how to differentiate types of R&D in the Natural sciences and engineering:

• The study of a given class of polymerisation reactions under various conditions is basic research. The attempt to optimise one of these reactions with respect to the production of polymers with given physical or mechanical properties (making it of particular utility) is applied research. Experimental development then consists of “scaling up” the process that has been optimised at the laboratory level and investigating and evaluating possible methods of producing the polymer as well as products to be made from it.

• The modelling of a crystal’s absorption of electromagnetic radiation is basic research. The study of the absorption of electromagnetic radiation by this material under varying conditions (for instance, temperature, impurities, concentration, etc.) to obtain given properties of radiation detection (sensitivity, rapidity, etc.) is applied research. Testing a new device using this material in order to obtain a better detector of radiation than those already existing (in the spectral range considered) is experimental development.

• The development of a new method for the classification of immunoglobulin sequences is basic research. Investigations undertaken in an effort to distinguish between antibodies for various diseases is applied research. Experimental development then consists of devising a method for synthesising the antibody for a particular disease on the basis of knowledge of its structure and clinical tests of the effectiveness of the synthesised antibody on patients who have agreed to accept an experimental advanced treatment.

• A study about how the properties of carbon fibers could change according to their relative position and orientation within a structure is basic research. The conceptualisation of a method to allow for processing carbon fibers at industrial level with a degree of precision at the nano-scale could be the outcome of some applied research. Testing the use of new composite materials for different purposes is experimental development.

• Controlling material processes in the domain where quantum effects occur is an objective to be pursued through basic research. Developing materials and components for inorganic and organic light-emitting diodes for improved efficiency and cost reduction is applied research. Experimental development could be aimed at identifying applications for advanced diodes and incorporating them in consumer devices.

• Searching for alternative methods of computation, such as quantum computation and quantum information theory, is basic research. Investigation into the application of information processing in new fields or in new ways (e.g. developing a new programming language, new operating systems, program generators, etc.) and investigation into the application of information processing to develop tools such as geographical information and expert systems are applied research. Development of new applications software and substantial improvements to operating systems and application programmes are experimental development.

• The study of sources of all kinds (manuscripts, documents, monuments, works of art, buildings, etc.) in order to better comprehend historical phenomena (the political, social, cultural development of a country, the biography of an individual, etc.) is basic research. Comparative analysis of archaeological sites and/or monuments displaying similarities and other common characteristics (e.g. geographic, architectural, etc.) to understand interconnections of potential relevance to teaching material and museum displays is applied research. The development of new instruments and methods for studying artefacts and natural objects recovered through archaeological endeavors (e.g. for the age-dating of bones or botanic remains) is experimental development.

Annex I – Concepts and examples of R&D activities [continuation]

Agricultural sciences

Basic research: Researchers investigate genome changes and mutagenic factors in plants to understand their effects on the phenome. Researchers investigate the genetics of the species of plants in a forest in an attempt to understand natural controls for disease or pest resistance.

Applied research: Researchers investigate wild potato genomes to locate the genes responsible for resistance to potato blight in an effort to improve the disease resistance in domestic/crop potatoes. Researchers plant experimental forests where they alter the spacing and alignment of the trees to reduce the spread of disease while ensuring the optimum arrangement for maximum yield.

Experimental development: Researchers create a tool for gene editing by using knowledge of how enzymes edit DNA. Researchers use existing research on a specific plant species to create a plan for improving how a enterprise plants its forests to achieve a specific goal.

Nanotechnology

Basic research: Researchers study the electrical properties of graphene by using a scanning tunnelling microscope to investigate how electrons move in the material in response to voltage changes.
Applied research: Researchers study microwaves and thermal coupling with nanoparticles to properly align and sort carbon nanotubes.
Experimental development: Researchers use research in micromanufacturing to develop a portable and modular micro-factory system with components that are each a key part of an assembly line.

Computer and information sciences

Basic research: Research on the properties of general algorithms for handling large amounts of real-time data.
Applied research: Research to find ways to reduce the amount of spam by understanding the whole structure or business model of spam, what spammers do, and their motivations in spamming.
Experimental development: A start-up enterprise y takes code developed by researchers and develops the business case for the resulting software product for improved on-line marketing

>> Examples to differentiate types of R&D in the Social sciences, humanities and the arts

With reference to the social sciences, humanities and the arts, the distinction between basic and applied research may not be as clear-cut as it is in other fields. Below are some examples of R&D in these fields of research.

Economics and business

Basic research: A review of theories on the factors determining regional disparities in economic growth. Economists conducting abstract research in economic theory that focuses on whether a natural equilibrium exists in a market economy. The development of new risk theories.
Applied research: The analysis of a specific regional case for the purpose of developing government policies. Economists investigating the properties of an auction mechanism that could be relevant to auctioning the telecommunications spectrum. The investigation of new types of insurance contracts to cover new market risks or new types of savings instruments.
Experimental development: The development of operational models, based upon statistical evidence, to design economic policy tools to allow a region to catch up in terms of growth. The development by a national telecommunications authority of a method for auctioning the telecommunications spectrum. The development of a new method to manage an investment fund is experimental development as long as there is sufficient evidence of novelty.

Education

Basic research: Analysis of the environmental determinants of learning ability. The investigation by researchers of the effect of different types of manipulatives on the way first graders learn mathematical strategy by changing manipulatives and then measuring what students have learned through standardised instruments.
Applied research: The comparative evaluation of national education programmes aimed at reducing the learning gap experienced by disadvantaged communities. The study by researchers of the implementation of a specific math curriculum to determine what teachers needed to know to implement the curriculum successfully.
Experimental development: The development of tests for selecting which educational programme should be used for children with specific needs. The development and testing (in a classroom) of software and support tools, based on fieldwork, to improve mathematics cognition for student special education.

Social and economic geography:

Basic research: Researchers seek to understand the fundamental dynamics of spatial interactions.
Applied research: A research study analyses the spatial-temporal patterns in the transmission and diffusion of an infectious disease outbreak.

Annex I – Concepts and examples of R&D activities [continuation]

History:

Basic research: Historians study the history and human impact of glacial outburst floods in a country.
Applied research: Historians examine past societies' responses to catastrophic natural events (e.g. floods, droughts, epidemics) in order to understand how contemporary society might better respond to global climate change.
Experimental development: Using previous research findings, historians design a new museum exhibit on the adaptations of past human societies to environmental changes; this serves as a prototype for other museums and educational installations.

Language/linguistics

Basic research: Linguists study how different languages interact as they come into contact with one another.
Applied research: Speech therapists examine the governing neurology of languages and how humans acquire language skills.
Experimental development: Linguists develop a tool for diagnosing autism in children based on their language acquisition, retention and use of signs

Music

Basic research: Researchers develop a transformational theory that provides a framework for understanding musical events not as a collection of objects that have particular relationships to each other but as a series of transformational operations applied to the basic material of the work.
Applied research: Researchers use historical records and the techniques of experimental archaeology to recreate an ancient and longdisappeared musical instrument and to determine how it would have been constructed, how it was played and the types of sounds it would have produced.
Experimental development: Music educators and theorists work to produce new pedagogical materials based on new discoveries in neuroscience that changes our understanding of how humans process new sounds and information.

Annex II – Human resources and percentage of time dedicated to the R&D activities

Internal personnel (Employees of the enterprise)

Individuals who, during the reference period, participated in the enterprise's R&D activities, regardless of the duration of such participation, under the following conditions: a) personnel linked to the enterprise by a work contract, receiving in return a remuneration; (b) staff connected to the enterprise, who don't have an employment contract with the enterprise, do not receive regular remuneration for the time worked or work provided (eg. Working proprietors, unpaid family members, active members of cooperatives); c) staff from other institutions that worked in the enterprise and are directly paid by it; d) persons under the conditions of the preceding paragraphs, temporarily absent for a period equal to or less than one month for vacation, work conflict, professional training, as well as for illness and accident at work.

The following are not considered as internal personnel: a) employees who have been transferred to other enterprises /institutions and are paid for them; b) individuals working in the enterprise whose remuneration is borne by other enterprises / institutions (eg. temporary workers); (c) self-employed professionals (eg. service providers, also known as "*recibos verdes*"). All these individuals, if they participated in the enterprise's R&D activities, should be considered as external personnel.

External personnel (non-employees of the enterprise)

Individuals who have worked in the enterprise 's R&D activities, regardless of the duration of such participation, under the following conditions: a) self-employed professionals (service providers, also known as " *recibos verdes* " or *Atos Únicos*), such as contracted consultants individually; b) PhD students, masters, and/or other students; c) grant holders; d) retired; e) employees of the enterprise displaced to other enterprises /institutions, being directly remunerated in these enterprises; f) individuals working in the enterprise whose remuneration is on the payroll of other enterprises/institutions (eg. temporary workers).
The costs of external personnel may be supported by the enterprise or by other enterprises or institutions.

Percentage of time dedicated to the R&D activities

Personnel 100% dedicated to R&D

All personnel exclusively performing R&D activities throughout the year (12 months), during normal working hours.

Personnel part-time dedicated to R&D

All personnel that have not only R D activities throughout the year (12 months) or during normal working hours.

It will be considered part-time all personnel in the period under review (year) that:

(ii) Do not perform exclusively R&D activities during the normal working hours on a single enterprise/institution;
(iii) perform exclusively R & D activities in more than one enterprise/institution (and is considered part-time in each of them);
(iv) While performing only R&D activities during the normal working hours on a single enterprise/institution, didn't work for all year (12 months).

Examples of calculating the percentage of time dedicated to R&D activities

- An individual A is 100% dedicated to R&D activities throughout the year (12 months) in enterprise;
- An individual B is 100% dedicated to R&D activities for 6 months (1/2 year) the enterprise;
- An individual C is 25% dedicated to R&D activities throughout the year in enterprise;
- An individual D is 30% dedicated to R&D activities for 4 months (1/3 year) the enterprise;

Individual	Percentage of time in R&D	Percentage of time in R&D in the year
A	100%	100% x 1 year = 100%
B	100%	100% x 1/2 year = 50%
C	25%	25% x 1 year = 25%
D	30%	30% x 1/3 year = 10%

Annex III - Classification of Fields of Research and Development (FORD, 2015)

1. Natural sciences	**1.1. - Mathematics:** Pure mathematics, Applied mathematics; Statistics and probability.
	1.2. - Computer and information sciences: Computer sciences, information science and bioinformatics (hardware development to be 2.2, social aspect to be 5.8).
	1.3. – Physical sciences: Atomic, molecular and chemical physics (physics of atoms and molecules including collision, interaction with radiation; magnetic resonances; Moessbauer effect); Condensed matter physics (including formerly solid state physics, superconductivity); Particles and fields physics; Nuclear physics; Fluids and plasma physics (including surface physics); Optics (including laser optics and quantum optics), Acoustics; Astronomy (including astrophysics, space science).
	1.4. – Chemical sciences: Organic chemistry; Inorganic and nuclear chemistry; Physical chemistry, Polymer science, Electrochemistry (dry cells, batteries, fuel cells, corrosion metals, electrolysis); Colloid chemistry; Analytical chemistry.
	1.5. - Earth and related Environmental sciences: Geosciences, multidisciplinary; Mineralogy; Palaeontology; Geochemistry and geophysics; Physical geography; Geology; Volcanology; Environmental sciences (social aspects to be 5.7); Meteorology and atmospheric sciences; climatic research; Oceanography, Hydrology, Water resources.
	1.6. - Biological sciences: Cell biology, Microbiology; Virology; Biochemistry and molecular biology; Biochemical research methods; Mycology; Biophysics; Genetics and heredity (medical genetics to be 3); reproductive biology (medical aspects to be 3); developmental biology; Plant sciences, botany; Zoology, Ornithology, Entomology, Behavioural sciences biology; Marine biology, freshwater biology, limnology; Ecology; Biodiversity conservation; Biology (theoretical, mathematical, thermal, cryobiology, biological rhythm), Evolutionary biology; other biological topics.
	1.7. - Other natural sciences
2. Engineering and technology	**2.1. - Civil engineering:** Civil engineering; Architecture engineering; Construction engineering, Municipal and structural engineering; Transport engineering.
	2.2. - Electrical engineering, Electronic engineering, Information engineering: Electrical and electronic engineering; Robotics and automatic control; Automation and control systems; Communication engineering and systems; telecommunications; Computer hardware and architecture.
	2.3. - Mechanical engineering: Mechanical engineering; Applied mechanics; Thermodynamics; Aerospace engineering; Nuclear related engineering; (nuclear physics to be 1.3); Audio engineering, reliability analysis.
	2.4. - Chemical engineering: Chemical engineering (plants, products); Chemical process engineering.
	2.5. - Materials engineering: Materials engineering; Ceramics; Coating and films; Composites (including laminates, reinforced plastics, cermets, combined natural and synthetic fibre fabrics; filled composites); Paper and wood; textiles; including synthetic dyes, colors, fibers; (nanoscale materials to be 2.10; biomaterials to be 2.9).
	2.6. - Medical engineering: Medical engineering; Medical laboratory technology (including laboratory samples analysis; diagnostic technologies); (Biomaterials to be 2.9 [physical characteristics of living material as related to medical implants, devices, sensors]).
	2.7. - Environmental engineering: Environmental and geological engineering, geotechnics; Petroleum engineering, (fuel, oils), Energy and fuels; Remote sensing; Mining and mineral processing; Marine engineering, sea vessels; Ocean engineering.
	2.8. - Environmental biotechnology: Environmental biotechnology; Bioremediation, diagnostic biotechnologies (DNA chips and biosensing devices) in environmental management; environmental biotechnology related ethics.
	2.9. - Industrial biotechnology: Industrial biotechnology; Bioprocessing technologies (industrial processes relying on biological agents to drive the process) biocatalysis, fermentation; bioproducts (products that are manufactured using biological material as feedstock) biomaterials, bioplastics, biofuels, bio-derived bilk and fine chemicals, bio-derived novel materials.
	2.10. - Nano-technology: Nano-materials [production and properties]; Nano-processes [applications on nano-scale]; (biomaterials to be 2.9).
	2.11. - Other engineering and technologies: Food and beverages; Other engineering and technologies.

Annex III - Classification of Fields of Research and Development (FORD, 2015) [continuation]

3. Medical and Health sciences	**3.1. - Basic medicine:** Anatomy and morphology (plant science to be 1.6); Human genetics; Immunology; Neurosciences (including psychophysiology); Pharmacology and pharmacy; Medicinal chemistry; Toxicology; Physiology (including cytology); Pathology.
	3.2. - Clinical medicine: Andrology; Obstetrics and gynecology; Pediatrics; Cardiac and Cardiovascular systems; Peripheral vascular disease; Hematology; Respiratory systems; Critical care medicine and Emergency medicine; Anesthesiology; Orthopedics; Surgery; Radiology, nuclear medicine and medical imaging; Transplantation; Dentistry, oral surgery and medicine; Dermatology and venereal diseases; Allergy; Rheumatology; Endocrinology and metabolism (including diabetes, hormones); Gastroenterology and hepatology; Urology and nephrology; Oncology; Ophthalmology; Otorhinolaryngology; Psychiatry; Clinical neurology; Geriatrics and gerontology; General and internal medicine; other clinical medicine subjects; Integrative and complementary medicine (alternative practice systems).
	3.3. - Health sciences: Health care sciences and services (including hospital administration, health care financing); Health policy and services; Nursing; Nutrition, Dietetics; Public and environmental health; Tropical medicine; Parasitology; Infectious diseases; epidemiology; Occupational health; Sport and fitness sciences; Social biomedical sciences (includes family planning, sexual health, psycho-oncology, political and social effects of biomedical research); Medical ethics; Substance abuse.
	3.4. - Medical biotechnology: Health-related biotechnology; Technologies involving the manipulation of cells, tissues, organs or the whole organism (assisted reproduction); Technologies involving identifying the functioning of DNA, proteins and enzymes and how they influence the onset of disease and maintenance of well-being (gene-based diagnostics and therapeutic interventions (pharmacogenomics, gene-based therapeutics); Biomaterials (as related to medical implants, devices, sensors); Medical biotechnology related ethics.
	3.5. - Other medical sciences: Forensic science; Other medical sciences.
4. Agricultural and veterinary sciences	**4.1. - Agriculture, Forestry, and Fisheries:** Agriculture; Forestry; Fishery; Soil science; Horticulture, viticulture; Agronomy, plant breeding and plant protection; (Agricultural biotechnology to be 4.4).
	4.2. - Animal and Dairy science: Animal and dairy science; (Animal biotechnology to be 4.4); Husbandry; Pets.
	4.3. - Veterinary science
	4.4. - Agricultural biotechnology: Agricultural biotechnology and food biotechnology; GM technology (crops and livestock), livestock cloning, marker assisted selection, diagnostics (DNA chips and biosensing devices for the early/accurate detection of diseases) biomass feedstock production technologies, biopharming; agricultural biotechnology related ethics.
	4.5. - Other agricultural sciences
5. Social sciences	**5.1. – Psychology and cognitive sciences:** Psychology (including human - machine relations); Psychology, special (including therapy for learning, speech, hearing, visual and other physical and mental disabilities).
	5.2. - Economics and Business: Economics, Econometrics; Industrial relations; Business and Management.
	5.3. - Educational sciences: Education, general; including training, pedagogy, didactics; Education, special (to gifted persons, those with learning disabilities).
	5.4. - Sociology: Sociology; Demography; Anthropology, ethnology, Social topics (women's and gender studies; Social issues; Family studies, Social work).
	5.5. - Law: Law, criminology, penology.
	5.6. - Political science: Political science; public administration; organization theory.
	5.7. - Social and economic geography: Environmental sciences (social aspects); Cultural and economic geography; Urban studies (Planning and development); Transport planning and social aspects of transport (transport engineering to be 2.1).
	5.8. - Media and communications: Journalism; Information science (social aspects); Library science; Media and socio-cultural communication.
	5.9 - Other social sciences: Social sciences, interdisciplinary; Other social sciences.
6. Humanities and arts	**6.1. - History and Archaeology:** History (history of science and technology to be 6.3, history of specific sciences to be under the respective headings); Archaeology.
	6.2. - Languages and Literature: General language studies; Specific languages; General literature studies; Literary theory; Specific literatures; Linguistics.
	6.3. - Philosophy, Ethics and Religion: Philosophy, History and philosophy of science and technology; Ethics (except ethics related to specific subfields); Theology; Religious studies.
	6.4. - Arts (history of arts, performing arts, music): Arts, Art history; Architectural design; Performing arts studies (musicology, theater science, dramaturgy); Folklore studies; Studies on Film, Radio and Television.
	6.5. – Other humanities

Annex IV – Socio-economic objectives, according to the EUROSTAT nomenclature for the analysis and comparison of scientific programmes and budgets (NABS 2007)

1. Exploration and exploitation of the Earth: Includes R&D related to the exploration of the earth's crust and mantle, seas, oceans and atmosphere, and their exploitation; climatic and meteorological research, polar exploration (under various headings, as appropriate) and hydrology; mineral, oil and natural gas prospecting; exploration and exploitation of the sea-bed; earth's crust and mantle excluding sea-bed; other research on the exploration and exploitation of Earth. Does not include R&D related to pollution (included in 2.); soil improvement (included in 4.); land-use and fishing (included in 8.).

2. Environment: The control of pollution, aimed at the identification and analysis of the sources of pollution and their causes, and all pollutants, including their dispersal in the environment and the effects on man, species (fauna, flora, microorganisms) and biosphere; development of monitoring facilities for the measurement of all kinds of pollution; the elimination and prevention of all forms of pollution in all types of environment; protection of atmosphere and climate; protection of ambient air; solid waste; protection of ambient water; protection of soil and groundwater; noise and vibration; protection of species and habitats; protection against natural hazards; radioactive pollution; other research on the environment.

3. Exploration and exploitation of space: includes R&D related to civil space – with the specific goal, such as the increase of general knowledge (e.g. astronomy), or relates to particular applications (e.g. telecommunications satellites); scientific exploration of space; applied research programmes; launch systems; space Laboratories and space travel; other research on the Exploration and exploitation of space.

4. Transport, telecommunication and other infrastructures: Includes R&D related to infrastructure and land development, including the construction of buildings; the general planning of land-use; protection against harmful effects in town and country planning; transport systems; telecommunication systems; general planning of Land-use; construction and planning of building; civil engineering; water supply; other research on the infrastructure and general planning of land-use. Does not include R&D related to other types of pollution than harmful effects in town (included in 2.).

5. Energy: includes R&D related to the production, storage, transportation, distribution and rational use of all forms of energy; processes designed to increase the efficiency of energy production and distribution; the study of energy conservation; energy efficiency; CO2 capture and storage; renewable energy sources; nuclear fission and fusion; hydrogen and fuel cells; other power and storage technologies. Does not include R&D related to prospecting (included in 1.); vehicle and engine propulsion (included in 6.).

6. Industrial production and technology: Includes R&D related to the improvement of industrial production and technology; industrial products and their manufacturing processes; increasing economic efficiency and competitiveness; all manufactures as defined in the NACE Rev. 2 (codes 10 to 33); recycling waste (metal and non-metal). Does not include R&D related to industrial products and their manufacturing processes where they form an integral part of other objectives (e.g. defense, space, energy, agriculture).

7. Health: includes R&D related to protecting, promoting and restoring human health - broadly interpreted to include health aspects of nutrition and food hygiene. It ranges from preventative medicine, including all aspects of medical and surgical treatment, both for individuals and groups, and the provision of hospital and home care, to social medicine and pediatric and geriatric research; prevention, surveillance and control of communicable and non-communicable diseases; monitoring the health situation; health promotion; occupational health; public health legislation and regulations; public health management; specific public health services; personal health care for vulnerable and high risk populations; other research on the health.

8. Agriculture: includes R&D related to the promotion of agriculture, forestry, fisheries and foodstuff production; chemical fertilizers, biocides, biological pest control and the mechanization of agriculture; the impact of agricultural forestry activities on the environment; the field of developing food productivity and technology; agriculture, forestry, and fishery; animal and dairy science; veterinary science and other agricultural sciences. Does not include R&D related to the reduction of pollution (included in 2.); the development of rural areas, the construction and planning of buildings, the improvement of rural rest and recreation amenities and agricultural water supply (included in 4.); energy measures (included in 5.); the food industry (included in 6.).

9. Education: Includes R&D related to education general including training, pedagogy, didactics; education, special (to gifted persons, those with learning disabilities); pre- and primary school; secondary school; post-secondary non-tertiary education; tertiary education; tertiary education; subsidiary services to education; other research on the educations.

10. Culture, recreation, religion and mass media: Includes R&D related to the social phenomena of cultural activities, religion and leisure activities so as to define their impact on life in society; racial and cultural integration and on socio-cultural changes in these areas; recreational and sporting services; cultural services; broadcasting and publishing services; religious and other community services.

11. Political and social systems, structures and processes: Includes R&D related to the political structure of society, public administration issues and economic policy; regional studies and multi-level governance; social change, social processes and social conflicts; the development of social security and social assistance systems; the social aspects of the organization of work; gender-related social studies including discrimination and familiar problems; the development of methods of combating poverty at local, national and international level; the protection of specific population categories on the social level (immigrants, delinquents, "drop outs" etc.), on the sociological level, i.e. with regard to their way of life (young people, adults, retired people, the handicapped etc.) and on the economic level (consumers, farmers, fishermen, miners, the unemployed etc.); methods of providing social assistance when sudden changes (natural, technological or social) occur in society.

12. General advancement of knowledge: Includes basic research without an defined socio-economic objective.

13. Defense: Includes R&D related to military purposes.

Annex V – National Strategic Priorities, as defined in the National Strategy for Intelligent Specialization ENEI 2030

For more information consult - https://www.ani.pt/media/8535/enei_2030.pdf

1. Digital transition	- Organization models and production technologies combined from i5.0, with the addition of the human factor to artificial intelligence and autonomous production systems, promoting a response to society's challenges and the re-skilling and up-skilling of people.
	- Promote the development of digital platforms and solutions for new models and processes of electronic commerce and business.
	- Development and adoption of integration and optimization systems for production chains, implementing logics of collective efficiency and circularity.
	- Valuing technical-scientific capacities and developments, promoting the creation, attraction and growth of enterprises producing digital, communication and software technologies.
	- Act on the demand side, stimulating the digitalization of the national economy through the adoption of digital platforms and solutions.
2. Materials, systems and production technologies	- Development and production of equipment goods with added functionality that are associated with higher added value solutions and that allow the development of integrated and customized equipment systems.
	- Leverage the industry for valuing endogenous resources (of biological and non-biological origin), and also the extraction of compounds with high added value and the development of materials through Industrial Biotechnology.
	- Development and production of advanced materials and components, with added functionality (intelligent surfaces, integration of functionalities, sustainability and recyclability, etc.).
	- Creation of more intelligent and sustainable solutions, associated with ecodesign and the optimization of value chains, contributing to the development of sustainable and functional products and systems, maximizing and reducing the cost of reusing materials.
	-Development and dissemination of technologies and materials for additive manufacturing, aiming at their application in multiple sectors, allowing the production of customized products with high added value.
3. Great natural assets: forest, sea and space	- Design, development and construction of satellites, rockets and micro-launchers and observation systems for space, oceans and Earth.
	- Development and commercialization of applications based on Earth observation technologies and their respective articulation with digital technologies and KET.
	- Reinforce advanced demand for Earth observation technologies by boosting the levels of related variety and promoting market demand dynamics for the development of models for monitoring, predicting and analyzing Forest, Soil, Defense and Maritime Surveillance, as well as the effects of climate change.
	- Valuing endogenous resources associated with plant and forest production through research and development of green biotechnology and the promotion of technologies and innovation in transformation.
	- Promotion of new technologies for exploring the oceans, including blue biotechnology, promoting the valorization of waste and effluents resulting from fishing activity, multiplying the research of substances and micro-organisms with health and cosmetic applications and treatment by bioremediation, of monitoring and security, the development of technologies for managing the coastline, minimizing the impact of rising sea levels, ocean mining and underwater communications.
	- Development of competitive positioning in the global market through digitization, standardization, Service Level Agreement opportunities and evolution of the Smart Port concept, including autonomous navigation and the reduction of environmental impacts.
4.Green transition	- Design and implementation of technological and social solutions that facilitate the operationalization of circular models and the promotion of a sustainable bioeconomy with applications in value chains such as construction, forestry, agri-food, waste management, plastics or the economy of the sea.
	- Adaptive transformations to climate change and development of sustainable models of agriculture and forest exploitation.
	- Development and implementation of technologies and production systems with a lower carbon footprint, including the optimization of industrial activities and infrastructure, the integration of thermal storage and capture solutions, storage and management of carbon use.
	- Integrated and systemic solutions for the decarbonisation of urban structures at different levels, integrating technological, digital, social, cultural, planning and territorial governance solutions in communities.

Annex V – National Strategic Priorities, as defined in the National Strategy for Intelligent Specialization ENEI 2030 [continuation]	
4.Green transition	- Valuing endogenous resources such as water and energy, promoting research and innovation in production, management of use and monitoring of networks, facilitating the interconnection, efficiency and complementarity of systems.
	- Development and application of new materials, technologies and systems for more efficient energy storage, enhancing the reliability and penetration of renewable energies and the energy transition.
5. Health, biotechnology and food	- Development of new therapeutic approaches, namely through the creation of innovative drugs, chemically and/or biologically/technologically based, and new solutions and interventions in the areas of antimicrobial resistance.
	- Development of medical diagnostic technologies, multifactorial integration and artificial intelligence, as well as new paradigms of response organization, remote assistance and use of health data.
	- Development of human-centric, integrated and multidimensional technology that contribute to new models and solutions for human health, animal health and environmental health, from an individual and societal perspective.
	- Creative and innovative digital health solutions to support chronically ill patients and/or active and healthy aging, in terms of, among others, inclusion and effective quality of life, remote monitoring, self-care, therapy and the adoption of regimens personalized foods.
	- Development of foods with specific medicinal purposes, functional and personalized diets in response to consumer awareness of food quality and safety.
6. Society, creativity and heritage	- Promotion of design activities in all areas of specialization (product design, fashion design, interior design, graphic and visual design, web design), as an activity that induces transformation.
	- Creation and management of corporate and territorial Brands and their articulation with the set of Marketing and Corporate and Institutional Communication activities, aiming at greater notoriety and differentiation of products and services and leveraging internationalization.
	- New forms of distribution, accessibility, diversity and media coverage of culture and creativity, including the production of multiplatform cultural and artistic content, intensifying the relationship between higher education institutions and research centers and the content ecosystem (audio-visuals, video, music , multimedia), in order to promote the development of new languages and new business models.
	- Exploring the potential of new segments of the tourist offer associated with the enhancement of creative, cultural and heritage assets, the territory, landscape and natural resources, including attraction and capitalization around major events, as well as responding to new consumer preferences and assets existing.
	-Actions to promote a more inclusive society, to promote cultural heritage and to respond to social, economic, technological and cultural transformations, mobilizing the interdisciplinarity of social sciences and humanities for a better understanding of contemporary transformations in society, including social innovation.

Annex VI – List of products

CODE	DESCRIPTION
	A. Products of agriculture, forestry and fishing
01000	Products of agriculture, hunting and related services
02000	Products of forestry, logging and related services
03000	Fish and other fishing products; aquaculture products; support services to fishing
	B. Mining and quarrying
05000	Coal and lignite
06000	Crude petroleum and natural gas
07000	Metal ores
08000	Other mining and quarrying products
09000	Mining support services
	C. Manufactured products
	Food products and tobacco
10000	Food products
11000	Beverages
12000	Tobacco products
	Textiles
13000	Textiles
14000	Wearing apparel
	Leather and related products
15100	Tanned and dressed leather; luggage, handbags, saddlery and harness; dressed and dyed fur
15200	Footwear
	Wood and of products of wood and cork, except furniture; articles of straw and plaiting materials
16000	Wood, sawn and planed
	Paper and paper products
17100	Pulp, paper and paperboard
17200	Articles of paper and paperboard
18000	Printing and recording services
	Coke and refined petroleum products
19000	Coke and refined petroleum products
	Chemicals and chemical products
20100	Basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms
20200	Pesticides and other agrochemical products
20300	Paints, varnishes and similar coatings, printing ink and mastics
20400	Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
20500	Other chemical products
20600	Man-made fibres
	Basic pharmaceutical products and pharmaceutical preparations
21100	Basic pharmaceutical products
21200	Pharmaceutical preparations
	Rubber and plastics products
22100	Rubber products
22200	Plastics products
	Other non-metallic mineral products
23100	Glass and glass products
23200	Refractory products
23300	Clay building materials

Annex VI – List of products [continuation]

CODE	DESCRIPTION
23400	Other porcelain and ceramic products
23500	Cement, lime and plaster
23600	Articles of concrete, cement and plaster
23700	Cut, shaped and finished stone
23900	Other non-metallic mineral products
	Basic metals
24100	Basic iron and steel and ferro-alloys
24200	Tubes, pipes, hollow profiles and related fittings, of steel
24300	Other products of the first processing of steel
24400	Basic precious and other non-ferrous metals
24510	Casting services of iron
24520	Casting services of steel
24530	Casting services of light metals
24540	Casting services of other non-ferrous metals
	Fabricated metal products, except machinery and equipment
25100	Structural metal products
25200	Tanks, reservoirs and containers of metal
25300	Steam generators, except central heating hot water boilers
25400	Weapons and ammunition
25500	Forging, pressing, stamping and roll-forming services of metal; powder metallurgy
25600	Treatment and coating services of metals; machining
25700	Cutlery, tools and general hardware
25900	Other fabricated metal products
	Computer, electronic and optical products
26100	Electronic components and boards
26200	Computers and peripheral equipment
26300	Communication equipment
26400	Consumer electronics
26500	Measuring, testing and navigating equipment; watches and clocks
26600	Irradiation, electromedical and electrotherapeutic equipment
26700	Optical instruments and photographic equipment
26800	Magnetic and optical media
	Electrical equipment
27100	Electric motors, generators, transformers and electricity distribution and control apparatus
27200	Batteries and accumulators
27300	Wiring and wiring devices
27400	Electric lighting equipment
27500	Domestic appliances
27900	Other electrical equipment
	Machinery and equipment n.e.c.
28100	General-purpose machinery
28200	Other general-purpose machinery
28300	Agricultural and forestry machinery
28400	Metal forming machinery and machine tools
28900	Other special-purpose machinery
	Motor vehicles, trailers and semi-trailers
29100	Motor vehicles
29200	Bodies (coachwork) for motor vehicles; trailers and semi-trailers
29300	Parts and accessories for motor vehicles

Annex VI – List of products [continuation]

CODE	DESCRIPTION
	Other transport equipment
30100	Ships and boats
30200	Railway locomotives and rolling stock
30300	Air and spacecraft and related machinery
30400	Military fighting vehicles
30900	Transport equipment n.e.c.
	Furniture
31000	Furniture
	Other manufactured goods
32100	Jewellery, bijouterie and related articles
32200	Musical instruments
32300	Sports goods
32400	Games and toys
32500	Medical and dental instruments and supplies
32900	Manufactured goods n.e.c.
	Repair and installation services of machinery and equipment
33000	Repair and installation services of machinery and equipment
	D. Electricity, gas, steam and air conditioning
35100	Electricity, transmission and distribution services
35200	Manufactured gas; distribution services of gaseous fuels through mains
35300	Steam and air conditioning supply services
	E. Water supply; sewerage, waste management and remediation services
36000	Natural water; water treatment and supply services
37000	Sewerage services; sewage sludge
38100	Waste; waste collection services
38200	Waste treatment and disposal services
38300	Materials recovery services; secondary raw materials
39000	Remediation services and other waste management services
	F. Constructions and construction works
41000	Buildings and building construction works
42100	Roads and railways; construction works for roads and railways
42200	Constructions and construction works for utility projects
42900	Constructions and construction works for other civil engineering projects
43000	Specialised construction works
	G. Wholesale and retail trade services; repair services of motor vehicles and motorcycles
45000	Wholesale and retail trade and repair services of motor vehicles and motorcycles
46000	Wholesale trade services, except of motor vehicles and motorcycles
47000	Retail trade services, except of motor vehicles and motorcycles
	H. Transportation and storage services
49000	Land transport services and transport services via pipelines
50000	Water transport services
51100	Sea and coastal passenger water transport services
51200	Sea and coastal freight water transport services
52000	Warehousing and support services for transportation
53000	Postal and courier services
	I. Accommodation and food services
55000	Accommodation services
56000	Food and beverage serving services
	J. Information and communication services
58100	Publishing services of books, periodicals and other publishing services

Annex VI – List of products [continuation]

CODE	DESCRIPTION
58200	Software publishing services
59000	Motion picture, video and television programme production services, sound recording and music publishing
60000	Programming and broadcasting services
61000	Telecommunications services
62000	Computer programming, consultancy and related services
63100	Data processing, hosting and related services; web portals
63900	Other information services
	K. Financial and insurance services
64000	Financial services, except insurance and pension funding
65000	Insurance, reinsurance and pension funding services, except compulsory social security
66000	Services auxiliary to financial services and insurance services
	L. Real estate services
68000	Real estate services
	M. Professional, scientific and technical services
69000	Legal and accounting services
70000	Services of head offices; management consulting services
71100	Architectural and engineering services and related technical consulting services
71200	Technical testing and analysis services
72110	Research and experimental development services in biotechnology
72190	Research and experimental development services in other natural sciences and engineering
72200	Research and experimental development services in social sciences and humanities
73000	Advertising and market research services
74000	Other professional, scientific and technical services
75000	Veterinary services
	N. Administrative and support services
77000	Rental and leasing services
78000	Employment services
79000	Travel agency, tour operator and other reservation services and related services
80000	Security and investigation services
81000	Services to buildings and landscape
82000	Office administrative, office support and other business support services
	O. Public administration and defence services; compulsory social security services
84000	Public administration and defence services; compulsory social security services
	P. Education services
85000	Education services
	Q. Human health and social work services
86000	Human health services
87000	Residential care services
88000	Social work services without accommodation
	R. Arts, entertainment and recreation services
90000	Creative, arts and entertainment services
91000	Library, archive, museum and other cultural services
92000	Gambling and betting services
93000	Sporting services and amusement and recreation services
	S. Other services
94000	Services furnished by membership organisations
95000	Repair services of computers and personal and household goods
96000	Other personal services

INE registration nº.: 10526

INQUÉRITO AO POTENCIAL CIENTÍFICO E TECNOLÓGICO NACIONAL 2023

Individual form

[Individual forms should be completed and/or updated for all individuals with a higher education who have been involved in R&D activities in the enterprise in 2023, all or part of the year, regardless of the link with the enterprise, including scholarship holders and other individuals whose main salary was paid by another institution. If R&D activities were developed in more than one institution, the respective individual form must also be completed in these other institutions.]

1. Name of the enterprise:

2. Full name of the individual:

3. Identification number:
[Indicate, preferably, the citizen's card number.]

4. Birth date: Y Y Y Y M M D D

5. Sex: Female Male

6. Country of nationality:

7. Level of education:
[Indicate the highest completed level of schooling achieved by the end of 2023.]

- Doctorate degree
- Master degree
- University degree
- Bachelor degree
- Higher Education Professional Courses (TESP)

[The legal regime of the Higher Education Professional Course is provided for in Decree-Law no. 74/2006, of March 24, amended and republished by Decree-Law no. 63/2016, of September 13. This course does not confer an academic degree and the successful completion of the respective course of study grants the diploma of professional higher technician. This cycle of studies is taught in polytechnic teaching, has 120 credits and its duration is four curricular semesters of student work, consisting of a set of curricular units organized into components of general and scientific training, technical training and training in the context of work, which takes place through an internship.]

8. Percentage of time spent in R&D activities or direct tasks supporting R&D in the enterprise in 2023:

[It should be made an estimate of the percentage of the time you spent on R&D activities in the enterprise, based on the person/year. If you have been dedicated to R&D activities in the enterprise only part of the year, this should reflect on the percentage presented here. If R&D activities were developed simultaneously with the enterprise's production activities, it should estimate the time spent on R&D (it is suggested to consult the examples presented in Annex II of IPCTN23 - Business Sector.)]

- Up to 5%
- 6% to 10%
- 11% to 20%
- 21% to 30%
- 31% to 40%
- 41% to 50%
- 51% to 60%
- 61% to 70%
- 71% to 80%
- 81% to 90%\
- 91% to 100%

9. Professional situation in the context of your R&D activities in the enterprise in 2023:

- [ ] Internal personnel
  [Includes working proprietors and unpaid family households workers.]

External personnel

- [ ] Integrated in another enterprise or institutions staff
- [ ] Integrated in a public administration career
- [ ] Self-employed professionals
- [ ] Grant holder paid by other institution
- [ ] Students (doctoral or master students)
- [ ] Other professional situation

10. Main function performed in enterprise R&D activities in 2023:

- [ ] . Professionals engaged in the conception or creation of new knowledge
  . Conduct research, improve or develop concepts, theories, models, techniques instrumentation, software or operational methods
  . Collect, process, evaluate, analyze, and interpret research data
  . Evaluate the results of investigations and experiments; draw conclusions using different techniques and models
  . Apply principles, techniques and processes to develop or improve practical applications
  . Plan, direct and coordinate the R&D activities
  . Prepare scientific papers and reports

- [ ] . Carrying out bibliographic searches and selecting relevant material from archives and libraries
  . Provide technical assistance and support in R&D, or test prototypes and maintaining and repairing research equipment
  . Prepare computer programs
  . Operate, maintain and repair research equipment
  . Assisting in analysing data, keeping records and preparing reports
  . Carrying out statistical surveys and interviews
  . Other technical assistance tasks and support to R&D activities

- [ ] . Administrative and secretarial tasks
  . Provision of legal services and other intermediate related services
  . Inspection for law enforcement and similar
  . Technical assistance in galleries, libraries, archives and museums
  . Perform skilled tasks in agriculture, forestry and fisheries
  . Execution of plant and machine operation tasks and assembly work
  . Management of financial and human resources aspects and administration of general matters

11. Time spent filling this form:

[ ] Minutes