

# Statistics on R&D Activities 2010



Institution identificatio	n		
Amendments to the identi	fication particulars (Con	nplete only those se	ctions subject to variation)
Institution name		_	NIF
Registered address (street, square, avenue, etc.)			
Postal code Municipality			
Province	Provincial code Telephone	Fax	E-mail
Details of the person to be contac	ted if necessary for		SIGNATURE OR SEAL
queries, clarifications or modificat		aire.	SIGNATORE ON SEAL
Mr./Ms.:			
Post held:			
Telephone	Fax:		
E-mail:			
Website:			

### Nature, characteristics and purpose

These statistics are within the framework of the General plan for statistics on science and technology promoted by the Statistics Office of the European Union (Eurostat). They have the main objective of ascertaining the resources that Private Non-Profit Institutions spend on R&D, for the purpose of estimating the national effort in research.

They are conducted following recommendations of the OECD (Frascati Manual).

### Statistical Legislation of compulsory compliance

### Statistical Secrecy

The personal information obtained by the statistical services, both directly from the informants and from administrative sources, shall be subject to protection, and covered by **statistical secrecy** (article 13.1 of the Law on Public Statistical Services, of 9 May 1989, (LFEP)). All statistical staff will be obliged to maintain statistical secrecy (article 17.1 of the LFEP).

### Obligation to provide data

Laws 4/1990 and 13/1996 establish the obligation to provide the data that is requested for the compilation of these Statistics.

The statistical services may request data from all individuals and companies, regardless of whether they are Spanish or foreign, resident in Spain (Article 10.1 of the LFEP).

All individuals and legal entities that provide data, regardless of whether their collaboration is compulsory or voluntary, must respond in a true, exact and comprehensive manner within the stipulated deadline to the questions outlined in due form by the statistical services (art. 10.2 of the LFEP).

In order to monitor compliance with these regulation, the LFEP (art. 48) grants the INE sanctioning capacity.

Failure to comply with the obligations envisaged in this Law, as related to statistics for state purposes, shall be sanctioned in accordance with the terms established in the regulations contained in this Heading (art. 48.1 of the LFEP).

Very serious infringements shall be sanctioned with fines ranging from 3,005.07 to 30,050.61 euros. Serious infringements shall be sanctioned with fines ranging from 300.52 to 3,005.06 euros. Minor infringements shall be sanctioned with fines ranging from 60.10 to 300.51 euros (art. 51.1, 51.2 and 51.3 of the LFEP).

General considerations
For the purposes of these statistics, <b>the following are regarded as R&amp;D activities</b> : the group of creative activities undertaken systematically, in to increase the flow of scientific and technical knowledge and use them to introduce new applications. This activity comprises basic research, applied research and experimental development. The latter leads to new devices, products, materials, processes, services or systems.
The following are not included as R&D activities: education, scientific and technical information, collection of data of a general nature, routine trials, everyday standardisation work or other technological activities relating to production or use of known products or processes. Mineral exploration is not included either, when it is aimed at discovering exploitable reserves and not essentially an increase in basic geological knowledge.
The criterion distinguishing R&D from other activities is the presence or lack of a notable degree of creativity or innovation.
General instructions
Information unit: The information that is requested in this questionnaire refers to the unit, organisation or centre whose identification data appoint the front cover. The data requested refers to all of the institution research centres in Spain.
Reference period: Data must refer to the target year of the statistics.
Form of recording the data: Write down the data clearly. Please do not write in the shaded areas. The financial data is requested in euros with decimals.
Consignment term: This questionnaire, duly completed with the required information, must be returned within a term not exceeding 15 days f time of receipt.
Please carefully read the annex before completing this questionnaire.
1. General data for the institution
4.4 Dan an dan are of the inestitution
1.1 Dependency of the institution  For each question, please mark with an 'x' where appropriate
1. Does it impart higher education?
1. Does it impart nighter education:
YES NO
2. Does it sell the production at a significant economic price?
YES NO
3. Who is the main financer of the institution?
Companies Public Administration Higher Education PNPI* serving households
4. Who is the main controller of the institution?
Companies Public Administration Higher Education PNPI* serving households
(*) PNPI: Private Non-Profit Institutions.
1.2 Institution activity
Briefly describe the purposes and activities of the institution
1.3 Trust or governing body of the institution
Without identifying any individual or company, please briefly describe the trust or managing body of the institution (f
example, write public officers, individuals, members of companies, religious persons, non-governmental organisatior persons in academia, legal figures, etc. )

### 2. Staff employed in internal R&D activities in 2010

### 2.1 Staff employed in internal R&D, according to occupation

The full-time equivalent (FTE) is the sum of the staff the on R&D activities. (See annex at the end of the question		I-time and th	e fractions of	time tha	it the part-time	e staff works			
Occupation		Total	Total Women		Total on TE	Women on FTE*			
				(	1 decimal)	(1 decimal)			
Researchers (including interns in research)									
2. Technicians									
3. Assistants									
TOTAL STAFF (1+2+3)									
Out of the researchers from point 1, please indicate the into					· .				
Qualification	Staff in	Staff in R&D			Researchers (including interns)				
	Total	Women	Total on FTE * (1 decimal)	Total	Women	Total on FTE * (1 decimal)			
1. University doctorate-holders									
2. University graduates, architects, engineers and the like									
3. Diploma students, technical architects and engineers and the like									
4. Advanced training cycles. (Specific Vocational Training)									
5. Intermediate training cycles, Post-Secondary qualification									
and the like									
6. Other studies			<u> </u>						
TOTAL (1+2+3+4+5+6)									

# 2.3 Distribution of staff in internal R&D, by Autonomous Community in which the institution carries out R&D activities

Autonomous Community	Staff in R&D				Researchers (including interns)				
· 	Total	Women	Total on FTE * (1 decimal)	Women on FTE* (1 decimal)	Total	Women	Total on FTE * (1 decimal)	Women on FTE* (1 decimal)	
1. Andalucía									
2. Aragón							<u> </u>		
3. Asturias (Principado de)									
4 D 1 (III )									
5. Canarias									
6. Cantabria									
7. Castilla y León									
8. Castilla-La Mancha									
9. Cataluña									
10. Comunitat Valenciana									
11. Extremadura									
12. Galicia									
13. Madrid (Comunidad de)									
15.Navarra (Comunidad Foral de)									
47 D:-:- /L-\									
18. Ceuta							<u> </u>		

19. Melilla								
TOTAL								
(*) FTE: Full-time equivalent.								
2.4 Researchers, by sex and age	group (inclu	uding interns	in research	1)				
	All ages	Under	25 to 34	35 to 44	45 to 54	55 to 64		5 years
		25 years of age	years old	years old	years old	years ol	a o	ld or ove
Total researchers								
Of them, women								
2.5 Researchers, by nationality a				-h)				
	and out (mo	rading intom	o in roodard	Total res	earchers	Of th	em, wo	men
							<u> </u>	
Spain								
Rest of the EU <sup>1</sup>								
Other European countries								
North America						<u> </u>		
Central America								
South America								
Asia								
Africa								
Oceania								
TOTAL								
Rest of the European Union: Germany, Al Hungary, Ireland, Italy, Latvia, Lithuania, Romania and Sweden.  2.6 Staff dedicated to internal R	Luxembourg, I	Malta, Norway	, Netherland	s, Poland, Po	rtugal, Unite			
			aff in R&D			rchers (in	cluding ir	iterns)
		То	tal	Women	Total		Wom	nen
1. Exact and natural sciences								
0.5								
							-	
				-				
6. Humanities								
TOTAL								
3. Expenditure on R&D act	ivities in 2	0010						
•								
3.1 Expenditure on internal R&E  Expenditure on remunerations shall technicians and assistants on FTE spec	be those corr	esponding to						
percentage of the part that corresponds			·	ŕ	·			
						nount simals)	(euros	withou
- Remunerations of researchers on FTE	(including the	remuneration	of interns)		11			
- Remunerations of technicians and ass	istants on FTE							
- Other current expenses (without VAT	or amortizatio	ns)						
					A			

- Equipment and instruments (without VAT)		_4		
- Land and buildings (without VAT)		_5		
- Acquisition of specific software for R&D (including licences) (without VAT)		6		
B. Total capital expenses on R&D (4+5+6)		В		
C. Total internal expenditure on R&D (A+B)		C		
3.2 Financing of internal R&D expenditure in 2010				
Breakdown of the total internal expenditure on R&D from question 3.1, according to the or for R&D. Public financing should differentiate between the origin of the funds acc Administration. The refundable loans for carrying out R&D obtained from both the Administration at their own funds. Those quotas, laws, donations and other items of an in institutions are financed (and which are not specific R&D orders), must be included as their or	ordin stration stitut	ng to the ty on and other ional nature, unds.	pe of fina sources, sl with whice	ancing nall be ch the
Source of the funds		Amount decimals)	(euros	without
A. Financed by the actual institution				
- Own funds (including refundable loans, donations and quotas of an institutional nature)	1			
B. Public financing				
- From the State Administration and its Autonomous Institutions (AI)	1			
- From the State Administration to which it belongs (where appropriate) and its Al				
- From other Autonomous administrations and their Al				
- From local administrations		-		
		-		
C. Other domestic sources to carry out R&D - From public companies	1			
	'			
- From private companies and research associations	2	•		
- From public universities	3			
- From private universities	4			
- From other Private Non-Profit Institutions	5	_		
D. Funds from abroad for carrying out R&D				
- From foreign companies	1			
- From European Union programmes	2			
- From foreign public administrations	3			
- From foreign universities	4			_
- From foreign Private Non-Profit Institutions	5	-		
- From other international organisations	6			
Total internal expenditure on R&D (this must coincide				
with 3.1.C)				
3.3 Regionalisation of internal R&D expenditure in 2010  Please distribute the total internal expenditure on R&D indicated in question 3.1, according	to th	a Autonomo	ıa Cammu	nity in
which the R&D activities have been carried out.	נט נוו	e Autonomo	us Commu	ility iii
Autonomous Community		Amount decimals)	(euros	without
1. Andalucía	1			
2. Aragón	2			
3. Asturias (Principado de)	3			
4. Balears (Illes)	4			
5. Canarias	5			
6. Cantabria	6			
7. Castilla y León	7			
8. Castilla-La Mancha  9. Cataluña	8			
Cataluña     Comunitat Valenciana	9 10			
11. Extremadura				
12. Galicia				
13. Madrid (Comunidad de)	13			

14. Murcia (Región de)					
19. Melilla19					
Total internal expenditure on R&D (this must coincide with 3.1.C)					
3.4 Socio-economic objective					
Please break down, as a percentage, the expenditure on R&D that the institution has incurred in 2010			e pu	rpos	se of
socio-economic objective of the research (do not write decimals), and check that the sum of the percentage of the research (do not write decimals).	entages is 10		,		
			<u>6</u>	1	
Exploration and exploitation of the land media and of the atmosphere		1			%
2. Control and care of the environment		2	i l		% 
3. Exploration and exploitation of space 4.1 Transport and telecommunications systems		ە 4.1		_	— <sup>%</sup>
4.2 Other infrastructures		4.1	<u> </u>		<b></b> /%
5. Production, distribution and rational use of energy		5	<u> </u>	+	— %
6. Industrial production and technology		6	1		— / <sub>%</sub>
7. Protection and improvement of human health		7	Ì	1	— / <sub>%</sub>
Development of agriculture, livestock breeding, forestry and fishing		8	<u>_</u>		— %
9. Education		9			%
10. Culture, leisure, religion and communication		10		i	%
11. Political and social systems, structures and processes		11			%
12. Unguided research		12	ĺ	Ī	%
13. Defence		13			%
TOTAL			1	0	0 %
If in the previous question (3.4 Socio-economic objective) there is a percentage of expenditure on R improvement of human health, please indicate the expenditure, according to the Autonomous Co research is carried out.  (The percentage from point 7. Protection and improvement of human health, multiplied by the total centre, must be equal to the expenditure on research in the protection and improvement of human health.	mmunity in	whic	h th	e he	alth
		1			:414
Autonomous Community	Amount decimals)	(et	iros		without
1. Andaluaía	-				
Andalucía     Aragón					
3. Asturias (Principado de)	_				
4. Balears (Illes) 5. Canarias					
6 Contabrio					
6. Cantabria					
7. Castilla v Laón					
7. Castilla y León					
8. Castilla-La Mancha					
8. Castilla-La Mancha 9. Cataluña					
8. Castilla-La Mancha  9. Cataluña  10. Comunitat Valenciana					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura 12. Galicia					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura 12. Galicia 13. Madrid (Comunidad de)					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura 12. Galicia 13. Madrid (Comunidad de) 14. Murcia (Región de)					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura 12. Galicia 13. Madrid (Comunidad de) 14. Murcia (Región de) 15. Navarra (Comunidad Foral de)					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura 12. Galicia 13. Madrid (Comunidad de) 14. Murcia (Región de) 15. Navarra (Comunidad Foral de) 16. País Vasco					
8. Castilla-La Mancha 9. Cataluña 10. Comunitat Valenciana 11. Extremadura 12. Galicia 13. Madrid (Comunidad de) 14. Murcia (Región de) 15. Navarra (Comunidad Foral de)					

19. Melilla

Total expenditure on research in the protection and improvement of human health

3.6 Researc	h grants
-------------	----------

	and the organ			0 by the research in em. This figure mu				
researchers from q	destion 5.1.					Amount decimals)	(euros	without
1. Research grants					1			
3.7 Type of rese	arch							
Please break down	n, as a percenta	_	•	ture on R&D that the the sum of the colur			1 2010, acc	ording
1. Fundamental or	basic research						1	%
2. Applied research	h						2	%
3. Experimental res	search						3	%
TOTAL							1 0	0 %
3.8 Evolution of	the annual re	esources in scie	entific research	and technologic	al develon	ment activ	/ities	
O.O EVOIDATION OF	the united re	230410C3 III 30IC	To	rtal staff on FTE* decimal)	ur uc verop	Total inte	ernal expen	
Resources anticipa	ted for the year	2011						
(*) FTE: Full-time equiv	alent.							
000 :			••					
3.9 Purchase of								
				nstitution, via contr s, not implying a d			does not ii	nclude
						Amount decimals)	(euros	without
A. Purchase of R&D	Services in Spa	ain (without VAT	)					
<ul> <li>From companies</li> <li>From Public Admi</li> </ul>	injetration hadis				1 2			
- From Public Admi	inistration bodie				2			
- From Private Non	-Profit Institutio	ns			4			
B. Purchase of R&D	) services abroa	d (without taxes)						
- From foreign					1			
- From foreign pub		ons			2			
<ul><li>From foreign univ</li><li>From foreign Priva</li></ul>		natitutiona			3			
- From other intern					4 5			
C. Total purchase of	•					-		
-					- 2010			
Biotechnology is th	ne application o	of science and ted	chnology to living	echnologies in gorganisms, as wel owledge, goods and	I as to their		ucts and m	nodels, in
Does the centre ca organisms or compo products of value (in	ounds obtained f	rom them, for the	ourpose of obtaining		YES ↓	NO _	Go to sec	etion <b>5</b>
If the answer is YES	, please complet	e the Biotechnolog	gy Use Module					
The full-time equiv	alent (FTE) is th	ne sum of the sta	ff that works full-	sciences and techno time and the fractio	-	hat the part-	time staff	works on
activities based on	prological scien	ices and technolo	yies.		Total	expenditu	re (euros	without
	Staff		Staff on FTE	(1 decimal)	decin	-		
	Total	Women	Total	Women				
Resources used:				<u> </u>	<u> </u>			
5. Activities	for Large S	Scientific and	d Technolog	ical Installation	ons			
partially open to	use by the enti ors, synchotron	re scientific-techr n light sources, s	nological and ind	s dedicated to cuttinustrial community, centres, astronom	whether do	mestic or int	ternational	(such as
			n Large Scientific a	nd Technological Inst	tallations?	YES	NO	

2. Does the institution carry out any activity for inte	rnational Large Scientific and Technological Installations? YES NO
6. In 2010, did the institution carresoftware?	ry out any internal R&D activity using or containing free
Free software refers to that software that respects freely used, copied, studied, exchanged and redistri	the freedom of users over the acquired product, and therefore, once obtained, it can butted.
YES	NO [
7. How long did it take to compl	ete this questionnaire?
Including the time required to collect the info	rmation necessary to do so
	Hours
Observations	
	The National Statistics Institute would like to thank you for your cooperation

### **Annex**

## 1 Scientific Research and Experimental Development Activities (R&D)

#### 1.1 Basic definitions

Scientific research and experimental development (R&D) is comprised of the creative work carried out systematically in order to increase the volume of knowledge, including the knowledge of man, culture and society, and the use of this knowledge to create new applications.

The criterion referring to creative work carried out systematically is met by projects with specific objectives and a budget.

The term R&D comprises three activities: basic research, applied research and experimental development:

- Basic research consists of experimental or theoretical work that is mainly undertaken to obtain new knowledge on the essentials of observable phenomena and facts, without considering giving them any particular application or use whatsoever.
- Applied research also consists of the original work carried out to acquire new knowledge; however, it is mainly directed towards a specific practical objective.
- •Experimental development consists of systematic work based on existing knowledge, obtained from the research and/or practical experience, aimed at the production of new materials, products or devices; at the establishment of new processes, systems and services, or at the substantial improvement of those already existing.

A **criterion** that allows R&D to be distinguished from other related activities is the existence, within the core of R&D, of an appreciable element of innovation and the resolution of a scientific and/or technological uncertainty; in other words, R&D appears when the solution to a problem is not evident to someone who is perfectly aware of the set of knowledge and basic techniques customarily used in the sector at hand.

**Not constituting R&D** are those activities that do not contain an appreciable element of innovation, as well as those routine activities that do not imply the resolution of a scientific or technological uncertainty.

### 1.2 Staff in R&D

All staff directly employed in R&D must be accounted for. as well as those persons who provide services directly related to R&D activities, such as directors, administrators and office staff.

Researchers are professionals who work on the conception or creation of new knowledge, products, processes, methods and systems, and on the management of their respective projects (it includes postgraduate students and interns who carry out R&D activities).

**Technicians** and/or similar personnel are persons whose main tasks require technical knowledge and experience in one or various fields of engineering, physical and life sciences, or social sciences and humanities. They participate in R&D, carrying out scientific and technical tasks that require the application of operational methods and principles, generally under the supervision of researchers.

Assistants (remaining staff) include workers, both qualified and unqualified, and secretaries and office staff, who participate in the execution of the R&D projects, or who are directly related to the execution of said projects.

### 1.3 Staff in R&D on FTE

The staff on full-time equivalent (FTE) is the sum of the staff that works full-time and the fractions of time that the part-time staff works on R&D activities. Therefore, a person dedicated full-time to R&D shall be counted as 1, and a person who dedicates 20% of their time to R&D shall be counted as 0.2. If someone works for three months full-time during the year, s/he will be counted as 0.25, as this is a quarter of the year. If a person works for part of the year full-time, and part of the year part-time, an estimation of the annual dedication to R&D will be calculated with a weighting (if s/he is, for example, 3 months full-time and 9 months 20% dedicated to R&D, then we calculate: 0.25\*1 + 0.75\*0.2 = 0.4).

### 1.4 Examples of R&D in exact and natural sciences and engineering

- The study of chemical reactions. The attempt to optimise one of these reactions. The experimental development for a "greater scale" repetition of the process optimised in the laboratory.
- Determining the sequences of amino acids of a molecule. The research undertaken in order to distinguish between the antibodies of different illnesses. The experimental development for seeking a method to synthesise the antibody of a given illness.
- The activities of the scientific and technical information services and of the libraries integrated in the research laboratories when they are mainly intended for the researchers of those laboratories.
- The development of Information technologies at the operative systems level, data processing programming languages, communications software and software development or Internet technology development tools

- The researching of methods for the design, development, effective use and maintenance of the software. The development of software that produces advances in general approximations of the collection, transmission, storage, recovery, manipulation or visualisation of information.

#### 1.5 Health research

This refers not only to biomedical research, but also to a broader field that includes R&D as regards health in the social sciences, above all, research in health services, intended to protect and promote human health

The medical sciences include the following scientific fields:

- **Basic medicine** (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immuno-haematology, clinical chemistry, clinical microbiology, pathology)
- Clinical medicine (anaesthesia, paediatrics, obstetrics and gynaecology, internal medicine, surgery, odontology, neurology, psychiatry, radiology, therapy, otorhinolaryngology, ophthalmology)
- Health sciences (public health, social medicine, hygiene, nursing, pathology)

### Examples of R&D in health

- Research carried out in the fields of **medical sciences** (basic medicine, clinical medicine and health sciences). For example, research in cardiology, respiratory diseases, mental illness, etc.
- There is health research into **biological sciences**, particularly into genetics, the objective of which is human health. For example, cancer research, research into degenerative illnesses, etc.
- -Research into **social and humanitarian sciences**, the objective of which is to protect and improve human health. For example, research into prevention of drug addition.
- Clinical trials:

Prior to releasing new medications, vaccinations or treatments on the market, they must be subjected to systematic trials on human volunteers, in order to ensure that they are safe and effective. These clinical trials are divided into four standardised phases, three of which are carried out before permission to manufacture is granted. In order to be able to draw international comparisons, it has been agreed that phases 1, 2 and 3 may be included in R&D. Phase 4 of the clinical trials, in which the medicine or treatment undergoes continued trials following approval and manufacture, must only be included as R&D if it gives rise to scientific or technological advances. Moreover, not all activities carried out before obtaining permission to manufacture are considered R&D, especially when a significant lag in time occurs after finishing phase 3 of the trials, during which marketing and development activities may begin.

### 1.6 Examples of R&D in agricultural sciences

The research in agrarian sciences encompasses the promotion of agriculture, forests, fishing and food production.

- The research on chemical fertilisers, the biological control of infestations and the mechanisation of agriculture.
- The research on the impact of agricultural and forestry activities on the environment.
- The research in the development of food productivity and technology

### 1.7 Examples of R&D in social sciences and humanities

- The study of the variables that influence the school results of children belonging to different social and ethnic groups. The study of the reading process in adults and children, in order to develop a new method for teaching adults and children to read
- The study of the structure and socio-occupational mobility of a society. Development of a model that uses the data obtained, for the purpose of preventing the future consequences of the recent trends in social mobility.
- The analysis of regional variations or other types existing in the use of a language, for the purpose of determining the influence of geographical or social variables in its development.
- The study of specific aspects of a particular language, such as syntax, semantics, phonetics, phonology, social or regional variations, etc.
- The study of sources of all types (manuscripts, monuments, art works, buildings, etc.) for the purpose of better understanding the historical phenomena.