

<p>PNT-05</p> <p>Questionnaire on nanotechnology research and experimental development</p> <hr style="width: 50%; margin: auto;"/> <p>for 2022</p>	<p>Statistics Poland Report Portal raport.stat.gov.pl</p> <p>Statistical Office in Szczecin 70-530 Szczecin ul. Matejki 22</p> <p>Deadline for submission: 14.04.2023</p>
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The obligation to submit data arises from Article 30, Paragraph 1, Subparagraph 1 of the Act of 29 June 1995 on Official Statistics (Journal of Laws of 2022, item 459, as amended).

Data collected with the use of the following questionnaire are granted absolute protection in accordance with the statistical confidentiality principle (Article 10 of the Official Statistics Act).

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(e-mail of secretary's office of the unit filling in the questionnaire – FILL IN WITH CAPITAL LETTERS)

Data on the unit

Full name ^{a)}	01	
	02	
	03	
	04	
REGON		

^{a)} Full name of the unit, taking into account every component, should be provided.

In case of hierarchical names, e.g. for the unit of a higher education institution, every level of the name should be provided in different row, starting with the highest one.

For a department of a higher education institution full name should be provided as follows:

row 01: name of higher education institution,

row 02: name of organisational unit

row 03: name of institute (if superior to department),

row 04: name of department.

What is nanotechnology?

Understanding and control of matter and processes at the nanometre-scale, typically but not exclusively below 100 nanometers, in one or more dimensions, where the onset of size-dependent phenomena usually enables novel applications. These applications utilise the properties of nanoscale materials that differ from the properties of individual atoms molecules to create improved materials devices and systems that exploit these new properties.

0. General information

A. Does your unit have subsidiaries or branches in which nanotechnology research and experimental development is conducted?

YES	
NO	

If 'yes' to question A, then:

A1. The questionnaire is:

a. for a subsidiary, branch	b. a collective questionnaire
<input type="checkbox"/>	<input type="checkbox"/>

1. Did your unit conduct nanotechnology R&D in 2022?

YES	
NO	

If 'YES', go to question 1.1 and mark 'X' in columns 1, 2 or 3 for appropriate rows.

If 'NO', go to question 1.1 and mark 'X' in column 4 for appropriate rows or go to questions 3 and 11.

1.1. Nanotechnology R&D

Nanotechnology/areas of nanotechnology application		Were nanotechnology methods used in the unit in 2022 to conduct			Is the unit going to use nanotechnology methods in the next 3 years?
		basic research	applied research ^{a)}	experimental development	
0		1	2	3	4
Nanomaterials	01				
Nanoelectronics	02				
Nanooptics	03				
Nanophotonics	04				
Nanobiotechnology	05				
Nanomedicine	06				
Nanomagnetics	07				
Nanomechanics	08				
Filtration and membranes	09				
Nanotools	10				
Nanoinstruments and nanodevices	11				
Catalysis	12				
Modelling and simulation software	13				
Other: please specify:	14				
.....					
Which area of nanotechnology activity prevails in your unit? (please provide number of a row 1-14)	15				

^{a)} Term defined in Article 4 on the Act of 20 July 2018 the Law on Higher Education and Science (Journal of Laws of 2018 item 1668).

2. Financing nanotechnology R&D conducted in the reporting unit in 2022 (intramural expenditures)

Specification		in thousand PLN (to one decimal place)	
Intramural expenditures actually incurred (without depreciation of fixed assets) (rows 1.1+1.2) – total expenditures		1	
of which expenditures	capital	1.1	
	current	1.2	
	of which labour costs	1.2.1	

2. Financing nanotechnology R&D conducted in the reporting unit in 2022 (intramural expenditures) (continued)

Specification		in thousand PLN (to one decimal place)		
Out of intramural expenditures (row 1) on (rows 2 + 3 = row 1)				
Internal funds ^{a)}		2		
External funds (rows 4 + 5 = row 3) ^{b)}		3		
Of which from:	Domestic entities (rows 4.1 + 4.2 + 4.3 + 4.4 = row 4)		4	
	of which from:	government sector	4.1	
		business enterprise sector	4.2	
		higher education sector	4.3	
		private non-profit sector	4.4	
	of which (out of row 4)	scientific institutes on the Polish Academy of Sciences	4.5	
		research institutes	4.6	
	Foreign entities (rows 5.1 + 5.2 + 5.3 + 5.4 + 5.5 + 5.6 = row 5)		5	
	of which from:	the European Commission	5.1	
		international organisations and foreign institutions	5.2	
		government sector (e.g. within the European Economic Area Financial Mechanism)	5.3	
		business enterprise sector	5.4	
		higher education sector	5.5	
		private non-profit sector	5.6	
out of current expenditures (row 1.2) on	scientific research	basic	6	
		applied ^{c)}	7	
	experimental development		8	
out of total expenditures (row 1) on areas of nanotechnology applications	nanomaterials		9	
	nanoelectronics		10	
	nanooptics		11	
	nanophotonics		12	
	nanobiotechnology		13	
	nanomedicine		14	
	nanomagnetism		15	
	nanomechanics		16	
	filtration and membranes		17	
	nanotools		18	
	nanoinstruments and nanodevices		19	
	catalysis		20	
modelling and simulation software		21		
other		22		

^{a)} E.g. own funds, funds from credits and received from tax reliefs ^{b)} Funds received from domestic and foreign entities. ^{c)} Term defined in Article 4 on the Act of 20 July 2018 the Law on Higher Education and Science (Journal of Laws of 2018 item 1668).

3. Financing nanotechnology R&D conducted outside the reporting unit in 2022

Specification		in thousand PLN (to one decimal place)
0		1
Total funds transferred (rows 02+03+04+05+06+07+08)		01
of which transferred funds to	scientific units of the Polish Academy of Sciences	02
	research institutes	03
	higher education institutions	04
	business enterprises	05
	private non-profit institutions	06
	other domestic entities	07
	foreign entities	08

4. Sales of nanotechnology R&D results (knowledge, products and services) in 2022

Specification		in thousand PLN (to one decimal place)
Revenue from sales of nanotechnology R&D results		1
Expenditures on creating sold results of biotechnology R&D (rows 2.1+2.2+2.3+2.4+2.5+2.6+2.7+2.8+2.9)		2
out of total expenditures incurred on creating sold results of nanotechnology R&D on funds	internal	2.1
	budgetary	2.2
	the European Union, including structural funds and EU framework programmes	2.3
	international organisations and foreign institutions	2.4
	business enterprises	2.5
	scientific institutes on the Polish Academy of Sciences	2.6
	research institutes	2.7
	higher education institutions	2.8
	private non-profit institutions	2.9

5. Internal personnel engaged in nanotechnology R&D by R&D function ^{a)} in 2022

Specification			Total	Of which		
				researchers ^{b)}	technicians and equivalent staff ^{c)}	other supporting staff ^{d)}
0			1	2	3	4
Number of persons	total	1				
	of which women	1.1				
Number of full-time equivalents (FTE) (To one decimal place) ^{e)}	total	2				
	of which women	2.1				

a) According to classification of R&D personnel by R&D function developed by the OECD. ^{b)} Professionals conducting research and improving or developing concepts, theories, models, techniques, instrumentation, software or operational methods. ^{c)} Persons participating in R&D performing scientific and technical tasks related to the application of concepts and operational methods and using research equipment, normally under the supervision of researchers. ^{d)} Skilled

and unskilled craftsmen, and administrative, secretarial and clerical staff participating in R&D projects or directly associated with such works. ^{e)} FTE – time dedicated by an employee to R&D during a reporting year, FTE for one person cannot exceed 1.

6. Internal personnel engaged in nanotechnology R&D by level of education in 2022

Specification		Number of persons	
		total	of which women
0		1	2
Total		01	
With title of professor		02	
With academic degree of	doctor	03	
	habilitated doctor	04	
With level of education	other tertiary (with other university degrees below PhD level)	05	
	other	06	

7. Did the unit have intellectual property instruments related to nanotechnology in 2022?

YES	
NO	

If YES, please fill in questions 7.1, 7.2, 7.3 and 7.4.

If NO, go to question 8.

7.1. Nanotechnology intellectual property owned by the unit in 2022

Specification		Number
0		1
Patents	0	
	1	
Licences (excluding licences for standard software)	0	
	2	
Technology transfer agreements	0	
	3	
Other, please specify:	0	
	4	

7.2 Submitted patent applications and granted patents in nanotechnology in 2022

Specification	Number
0	1
Number of patent applications submitted to the Patent Office of the Republic of Poland in 2022	01
How many patent applications, out of patent applications provided in row 01, is the unit going to submit to foreign patent institutions?	02
Number of patent applications submitted to foreign patent institutions in 2022	03
Number of patents granted by the Patent Office of the Republic of Poland in 2022	04
Number of patents granted by foreign institutions in 2022	05

7.3. Sales of nanotechnology patents and licences in 2022

Specification			Number
0			1
Total patents and licences			01
of which	domestic recipients		02
	foreign recipients		03

7.4. Purchases of nanotechnology patents and licences in 2022

Specification			Number
Total patents and licences			01
of which from	domestic suppliers		02
	foreign suppliers		03

8. Academic degree obtained by persons employed in nanotechnology R&D in 2022

Academic degree	Age (years)	Number of academic degrees in nanotechnology by fields of science:											
		total	of which					of which women	of which				
			biological	chemical	agricultura I	physical	technology		biological	chemical	agricultura I	physical	technology
0		1	2	3	4	5	6	7	8	9	10	11	12
doctor	total	01											
	of which	below 35	02										
		35–45	03										
		over 45	04										
habilitated doctor	total	05											
	of which	below 40	06										
		40–50	07										
		over 50	08										

9. The number of publications in journals included in ISI Master Journal List in biotechnology in 2022

The number of publications in nanotechnology in journals included in ISI Master Journal List	
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10. Did the unit have research (partner) co-operation agreement in nanotechnology R&D in 2022?

YES	
NO	

If Yes, answer question 10.1.

If No, go to question 11.

10.1. Research (partner) co-operation in nanotechnology R&D by research areas in 2022 (please provide the number of partner institutions in appropriate rows and columns)

Specification		Partner institutions from sectors:				
		business enterprise	government	higher education	private non-profit	abroad
0		1	2	3	4	5
Nanomaterials	01					
Nanoelectronics	02					
Nanooptics	03					
Nanophotonics	04					
Nanobiotechnology	05					
Nanomedicine	06					
Nanomagnetics	07					
Nanomechanics	08					
Filtration and membranes	09					
Nanotools	10					
Nanoinstruments and nanodevices	11					
Catalysis	12					
Modelling and simulation software	13					
Other, please specify:	14					

11. Comment

Thank you for filling in the questionnaire. You can provide us with feedback related to filled in questionnaire or suggestions for its modification below.

12. Data of a person responsible for filling in the questionnaire

E-mail	
Telephone	

Please provide estimated time (in minutes) dedicated to collecting data needed for filling in the questionnaire	01	
Please provide estimated time (in minutes) dedicated to filling in the questionnaire	02	