

<p>PNT-06</p> <p>Questionnaire on nanotechnology in firms</p> <hr style="width: 50%; margin: 10px 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 firm

REGON	
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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

1. Did your firm conduct nanotechnology activities or used nanotechnology in 2022?

YES	
NO	

If **YES** to question 1, please go to question 3. If **NO**, please go to question 2.

2. If your firm did not conduct nanotechnology activities in 2022, is your firm going to use nanotechnology in the next 3 years?

YES	
NO	

If **NO**, please go to questions 11 and 18.

3. When did your firm start nanotechnology activities?

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4. Nanotechnology activities in 2022 (please mark all correct answers with X)

Area of nanotechnology application		Nanotechnology application			
		in research and experimental development	user or integrator of nanotechnology	production of intermediate goods	production of final goods
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 firm? (please provide the number of a row)	15				

5. Activities of the firm related to nanotechnology in 2022

Specification		<i>Please mark all correct answers with X</i>
R&D products or services	01	
Production/processing <i>If X in row 02, please answer question 6.</i>	02	
Quality control	03	
Marketing	04	
Legal issues or related to intellectual property	05	
Activities related to environment, health or safety	06	
Import/export	07	
Standardisation/normalisation	08	
Other, e.g. regeneration (please specify)	09	
.....		

6. Which of the following types of products is produced by your firm? (concerns only firms which in question 5 marked answer Production/processing row 02)

Specification		Please mark all correct answers with X	
Nanotools (atomic force microscope, nanolithography, molecular controllers)	01		
Nanomaterials (nanoparticles, nanotubes, quantum dots, fullerenes, etc.)	02		
Nano-intermediate products (coating, fabrics, memory chips, optical elements, composites, etc.)	03		
Final goods incorporating nanotechnology products (cars, clothes, computers, pharmaceuticals, mobile phones, building materials, etc.)	04		

7. How did the firm obtain or create technologies used in nanotechnology activity in 2022?

Organisation		Please mark all correct answers with X	
Intramural R&D	01		
R&D outsourced to a firm, specialist laboratory, etc.	02		
Obtained from or as a result of co-operation with: (Note: obtaining technology includes mergers and acquisitions)	03		
		domestic	foreign
<i>higher education institutions</i>	04		
<i>scientific units of the Polish Academy of Sciences</i>	05		
<i>research institutes</i>	06		
<i>business enterprises</i>	07		
<i>private non-profit institutions</i>	08		

8. Source of infrastructure or equipment of the firm used in nanotechnology in 2022

Source of infrastructure or equipment		Developed	Produced
		Please mark all correct answers with X	
0		1	2
Intramural	01		
In co-operation with other organisation	02		
With what kind of organisation ?			
Obtained (including vis mergers and acquisitions)	03		
From what kind of organisation ?			
Other	04		
.....			

9. Financing activities in the firm, including in nanotechnology by source of funds and areas of nanotechnology application in 2022 (intramural expenditures)

Specification		Total	of which intramural R&D expenditures		
			<i>(in thousand PLN to one decimal place)</i>		
0		1	2		
Intramural expenditures actually incurred (without depreciation of fixed assets) – total expenditures in the firm ^{a)}		1			
Expenditures on nanotechnology ^{b)}		2			
of which expenditures	capital	2.1			
	current	2.2			
	of which labour costs	2.2.1			
Out of intramural expenditures (row 2) on (rows 3+4 = row 2)					
Internal funds ^{c)}		3			
of which	credits, loans and other financial liabilities	3.1			
External funds ^{d)} (rows 5 + 6 = row 4)		4			
Of which from:	Domestic entities (rows 5.1 + 5.2 + 5.3 + 5.4 = row 5)	5			
	of which from:	government sector	5.1		
		higher education sector	5.2		
		business enterprise sector	5.3		
		private non-profit sector	5.4		
	of which (out of row 5)	scientific institutes on the Polish Academy of Sciences	5.5		
		research institutes	5.6		
	Foreign entities (rows 6.1 + 6.2 + 6.3 = row 6)		6		
	of which from:	business enterprise sector	6.1		
		higher education sector	6.2		
structural and other European funds		6.3			
out of total expenditures on nanotechnology (row 2) on areas of nanotechnology applications	nanomaterials	7			
	nanoelectronics	8			
	nanooptics	9			
	nanophotonics	10			
	nanobiotechnology	11			
	nanomedicine	12			
	nanomagnetics	13			
	nanomechanics	14			
	filtration and membranes	15			
	nanotools	16			
	nanoinstruments and nanodevices	17			
	catalysis	18			
	modelling and simulation software	19			
other	20				

- a) Provide all expenditures, regardless of the source of funds, capital and current, incurred during a reporting year on all types of activity also apart from nanotechnology. ^{b)} Rows 2 - 20 concern expenditures on nanotechnology. ^{c)} Own funds, funds from credits and received from tax reliefs. ^{d)} Funds received from domestic and foreign entities.

10. Value of sales of products (goods and services) manufactured in a firm including nanotechnology products in 2022

Specification		Value of sales in transaction prices (in thousand PLN, to one decimal place)		
		total	of which sales to	
			domestic market	foreign market
0		1	2	3
Total ^{a)}	1			
of which nanotechnology products	2			
of which R&D products	2.1			

^{a)} Concerns value of sales of all products manufactured in the firm, including nanotechnology products.

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

Specification			Amount (in thousand PLN, to one decimal place)
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	

12. Total personnel in the firm, including in nanotechnology in 2022

Specification		Total
0		1
Number of persons employed ^{a)}	01	
Number of persons employed in nanotechnology	02	

- a)** Include all persons employed in the unit.

13. Personnel in the firm engaged in nanotechnology by level of education and type of activity in 2022

Specification		Total		R&D		of which researchers ^{a)}		in production	
		total	of which women	total	of which women	total	of which women	total	of which women
0		1	2	3	4	5	6	7	8
Total (number of persons)		01							
of which	with title of professor	02							
	with academic degree of	doctor	03						
		habilitated doctor	04						
	with other tertiary education	05							
	with other level of education	06							
Number of full-time equivalents (FTE) (to one decimal place) ^{b)}		07							

^{a)} Professionals conducting research and improving or developing concepts, theories, models, techniques, instrumentation, software or operational methods. ^{b)} Provide the number of persons employed in nanotechnology together with persons working on the basis of a mandate contract or a contract for specific work in conversion units called full-time equivalents.

14. Did the firm have difficulties in recruiting skilled personnel in nanotechnology in 2022?

YES	1
NO	2

15. Did the firm have research (partner) co-operation agreement in nanotechnology R&D?

YES	1
NO	2

If YES, go to question 15.1, if NO, go to question 16.

15.1. With what type of organisation did the firm have research (partner) co-operation agreement in nanotechnology R&D? (Please mark all correct answers with X)

Partner institutions	
Business enterprise sector	1
Government sector	2
Higher education sector	3
Private non-profit sector	4
Abroad sector	5

16. Did the firm try to raise capital for nanotechnology projects in 2022?

YES	1
NO	2

16.a If Yes, was the firm successful in raising capital for research projects?

YES	1
NO	2

16.b If Yes, how much capital did you raise?

	(in thousand PLN, to one decimal place)
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16.c If Yes, was the amount specified in 16.b smaller, equal or larger than you tried to raise?

less	1
the same	2

17. Did your firm have own intellectual property instruments related to nanotechnology in 2022?

YES	1
NO	2

If YES, please fill in questions 17.1, 17.2, 17.3.
If NO, go to question 18.

17.1. Nanotechnology intellectual property owned by the firm 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	

17.2. 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

17.3. 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

17.4. Purchases of nanotechnology patents and licences in 2022

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

18. 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.

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

E-mail	01	
Telephone	02	

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