Statistisk sentralbyrå
Statistics Norway

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Mandatory

Research and development (R&D) in business enterprises, 2024

N.B.! This form shows the questions in the survey.

Layout and design differ somewhat from the electronic form in the web-portal Altinn.

Log on to https://www.altinn.no/ to answer the survey.

If you need help completing the form, please contact by:

- **e-mail: datafangst@ssb.no**
- **telephone: 62 88 51 90**

Open on weekdays between 09–15.

For more information on the survey, see the guidelines at the end of this document

You shall report for the period 2024.

If the enterprise belongs to a conglomerate (enterprise group), do not report for other enterprises within the enterprise group/conglomerate.

Important change in this year's questionnaire

In previous years, we have asked for amounts in NOK 1000.

Starting with the reporting year 2024, you must report all amounts in whole NOK. This means that one million is written as 1,000,000.

The reason for the change is the authorities' requirements for universal design.

PAGE 2

Research and development (R&D) are creative work undertaken on a systematic basis to increase the stock of knowledge, and to devise new applications of available knowledge. For an activity to be considered R&D, it must satisfy five core criteria. The activity must have an appreciable element of novelty, it must be creative, there must be some uncertainty about the outcome, it must be systematic and lead to results that could possibly be reproduced.

- Research is systematic work in order to increase the stock of knowledge.
- Development is systematic or experimental work drawing on existing knowledge to develop new or improved products or processes.

For more information, we refer to the guidelines given on the last page.

Did your enterprise engage in intramural research and development (R&D) in Norway during 2024?

Do include R&D activity performed by own personnel or contracted personnel, both in own R&D department/center and in other departments in the enterprise. Also include R&D performed on behalf of others and R&D that is a part of deliveries to customers.

Do not include:

- Routine testing and quality control.
- Technical service, problem solving in production and engineering projects using existing technology.
- Pre-planning and other routine work at the start of production.
- Adoption of known, established technology.
- Ordinary upgrade or use of software and system software in a new area of use or for a new purpose.

☐ Yes

☐ No → Go to page 12

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PAGE 3: About employees involved in the enterprise's R&D activity in 2024

The questions on this page are about persons employed in the enterprise that took part in the enterprise's own R&D activity in 2024.

Include:
- both full time and part time employees that worked with R&D.
- employees in a R&D department/-center; in case your company has such a department/center.
- employees that worked with R&D in other departments.
- employees in administration, and persons in supporting functions that have been involved in R&D.
- R&D-persons should spend at least 0,1 full-time equivalent (i.e. 10 % of their work time) on R&D activities.

Do not include:

- contracted personnel.

How many persons employed in your enterprise were involved in intramural R&D activities in 2024?

If the number of persons that worked with R&D varied much over the year, please give an average.

R&D personnel's educational level	Number of R&D persons	Of which women
With PhD		
With higher degree education (Master's degree or similar)		
With lower degree or no education (Intermediate subject, bachelor's degree, vocational school or lower)		
Number of employed R&D persons in total		

How many R&D full-time equivalents were performed in 2024?

A full-time employee working 50 % on R&D has performed 0,5 R&D full-time equivalent (FTE).

R&D full-time equivalents' educational level	R&D full-time equivalents
With PhD	,
With higher degree education (Master's degree or similar)	,
With lower degree or no education. (Intermediate subject, bachelor's degree, vocational school or lower)	,
R&D full-time equivalents performed in total	,

Were any of the R&D persons with PhD or higher degree education foreign nationals?

☐ Yes
☐ No → Go to the next page

How many R&D persons with PhD or higher degree education were foreign nationals?

R&D persons

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Page 4: Tasks performed within R&D by the enterprise's employees in 2024

The questions on this page are about the tasks within R&D performed by personnel employed in the enterprise in 2024. It is the persons and full-time equivalents specified on the previous page that shall be distributed.

What type of tasks did the R&D persons employed in the enterprise perform in 2024?

R&D personnel's tasks	Number of R&D persons	Of which women
Product- or process developers, researchers and project managers…… Have developed new knowledge, products, processes, methods or systems, and/or planned and managed R&D projects.		
Other R&D personnel (including technicians)…… Support personnel for R&D, including technicians that execute R&D tasks defined by researchers/developers. For example, machinists, laboratory personnel, administration directly engaged in an R&D project.		
Employed R&D persons in total ……..		
On the previous page you reported following number of R&D persons, and of which women……		

2.4 How many R&D full-time equivalents were performed in these tasks?

R&D full-time equivalents' tasks	R&D full-time equivalents performed
Product- or process developers, researchers and project managers…… Have developed new knowledge, products, processes, methods or systems, and/or planned and managed R&D projects.	,
Other R&D personnel (including technicians) …….. Support personnel for R&D, including technicians that execute R&D tasks defined by researchers/developers. For example, machinists, laboratory personnel, administration directly engaged in an R&D project.	,
R&D full-time equivalents in total……	,
On the previous page you reported following number of R&D full-time equivalents ……	,

The next two questions are regarding 2025:

How many employed persons do you estimate that the enterprise will use for intramural R&D activity in 2025?
Include only own employees, do not include contracted personnel.

R&D-persons

How many full-time equivalents do you estimate that the enterprise will use for intramural R&D activity in 2025?
Include only R&D full-time equivalents performed by own employees, do not include contracted personnel.

, R&D full-time equivalents

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Page 5: Contracted R&D persons in 2024

This page regards contracted R&D persons who are an integrated part of the enterprise's intramural R&D activity. They must have worked together with the enterprise's own R&D personnel and been subject to the enterprise's direct management, e.g. consultants.

Do not include Acquired R&D services:
Acquired R&D services are when others perform R&D on behalf of the enterprise without being integrated into the enterprise's own R&D activity. External persons performing such R&D should therefore not be counted as contracted R&D personnel. R&D services acquired from others could for example be to outsource R&D activity to others.

3. Did contracted persons (beyond own employees) participate in the enterprise's R&D activity in 2024?

- ☐ Yes
- ☐ No → Go to the next page

How many contracted persons did participate in the enterprise's R&D activity in 2024?

☐ Contracted R&D persons

How many R&D full-time equivalents did the contracted persons perform?

☐ , ☐ R&D full-time equivalents

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Page 6: Expenditures for R&D performed in the enterprise in 2024

On this page you shall specify expenditures for R&D performed in the enterprise in 2024, distributed by type of costs. Specify the amounts in whole NOK without VAT.

For more information, we refer to the guidelines given on the last page.

Intramural current costs for R&D

Compensation of employees' R&D fulltime equivalents reported earlier in the questionnaire……		NOK
Costs of R&D fulltime equivalents performed by contracted personnel reported on the previous page…… (Acquisition of R&D services shall not be specified here, but later in the questionnaire)		NOK
Other current expenditure to R&D…… (Acquisition of R&D services shall not be specified here, but later in the questionnaire)		NOK

Investment costs for R&D (purchase value), without depreciation

Buildings, property, etc. for R&D……		NOK
Machinery, equipment, instruments, etc. for R&D……..		NOK
Total intramural R&D expenditure ……		NOK

The next question is regarding 2025

How much do you estimate that the enterprise will use for intramural R&D in 2025?

NOK

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Page 7: R&D expenditures on technological fields

Definition of different technological fields:

- **Biotechnology:** Use of natural sciences and technology on living organisms and parts, as well as products and models of these, so that living- and non-living material is altered to achieve knowledge, products and services. The definition of biotechnology does not include separate subjects, including ethical, juridical and societal aspects.

- **Nanotechnology:** New techniques developed for synthesis and processing for the design of functional and structural materials, components and systems, where dimensions and tolerance in the spectrum 0,1 to 100 nanometers are of crucial importance. Ethical, juridical, societal or health/environment/safety aspects with nanotechnology.

- **New materials, except nanotechnology:** Functional materials (materials with certain chemical, physical or biological traits). Materials where the traits purposefully change when using nanotechnology should be listed under nanotechnology.

- **Information- and communication (ICT):** ICT-technology such as artificial intelligence, robotics and automation, smart components, hardware, communication technology, the internet of things, software and user interface. Digital security, such as e.g. encryption, biometry and privacy. Digital transformation/implementation of ICT in the transfer between technology and humans, organizations and/or society; use of digital processes to simplify, streamline and optimize business models, organizations, products, services and processes.

How was the R&D expenditures in 2024 distributed on the following technological fields?

Biotechnology		%
Nanotechnology		%
New materials, except nanotechnology		%
Information- and communication technology (ICT)		%
Other fields of technology		%
Please specify other fields of technology		
Not distributed	100	%

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Page 8: Thematic fields for R&D

Mark the thematic fields in which the enterprise performed R&D within in 2024

Energy

- ☐ *Renewable energy:* Water, wind, bio energy, sun, geothermic, waves, etc.
- ☐ *Energy efficiency and change:* Energy saving in general, such as within construction, manufacturing, transport, petroleum production, power production and energy supply, as well as within the energy system. Includes also energy carriers such as battery and hydrogen.
- ☐ *Petroleum:* Offshore exploration and extraction of petroleum resources, field development, production and transportation, as well as HMS in the oil- and gas industry. Maritime operations linked to petroleum should be reported under Maritime. Energy efficiency improvement/Environment is to be reported under, in turn, Energy efficiency improvement- and restructuring and Environment.
- ☐ *Other energy:* Nuclear power and energy production from coal.

Climate

- ☐ *CO_2 handling*: Catching, transport and storing of CO_2.
- ☐ *Climate technology and other emission restrictions:* Technology for reduction of climate gas emissions and other climate drivers. Social framework conditions and instruments for emission reductions.
- ☐ *Climate and climate change adaption:* The climate system, climate changes and consequences of, and adaption, of these (do not include climate technology/emission reductions).

Environment

- ☐ *Environmental technology:* Technologies that directly and indirectly improve the environment, except fields mentioned above. Includes technologies for minimizing pollution with help from cleansing, more environmental friendly products and production processes, more efficient resource management, noise reduction and technological systems for reducing environmental impact.
- ☐ *Onshore environment and society:* Biological diversity, ecosystems and ecosystem services, pollution (except climate related), waste and recycling economy, onshore use, cultural monuments and – environments.

Other fields

- ☐ *Agriculture:* Production, processing and market for agricultural products (agriculture, including livestock farming and forestry).
- ☐ *Fishery:* Fishing and harvest, processing and market for marine organisms. (Research on management shall be reported under Marine.
- ☐ *Aquaculture:* Production, processing and market for aquaculture products.
- ☐ *Marine:* Marine ecosystems. Surveillance management and influence on the sea and coastal area resources and environment. Includes possibilities for new bioresources.
- ☐ *Maritime:* Design, construction and operation of ships for sea transport and all types of maritime operations, as well as services related to this.
- ☐ *Health and care:* Health and health promotion conditions, prevention, causal mechanism of diseases, reduction and treatment of diseases and functional reductions. Organizing and efficiency improvement of services in the health and care sector. Clinical and pharmaceutical R&D.

☐ **The enterprise did not have any R&D on any of the fields above.** → Go to page 10

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Page 9: Percentage distribution of R&D expenditures

Please specify the percentage share of intramural R&D expenditures in 2024 that falls into the fields you marked on the previous page.

Renewable energy ……		%
Energy efficiency and change ……		%
Petroleum……		%
Other energy……		%
CO2-handling……		%
Climate technology and other emission restrictions		%
Climate and climate change adaption ……		%
Environmental technology ……		%
Onshore environment and society……		%
Agriculture……		%
Fishery ……		%
Aquaculture ……		%
Marine……		%
Maritime……		%
Health and care ……		%

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Page 10: Funding of intramural R&D

Earlier in the questionnaire you reported expenditures for intramural R&D in 2024 to NOK [X]. On this page you shall specify how these expenditures were funded.

Specify the amounts in whole NOK without VAT.

Own funding:

Own sources, sales, new equity, including venture capital……		NOK
Loan from financial institutions or Innovation Norway…….		NOK

External private funding:

Norwegian enterprises in your enterprise group……....		NOK
Foreign enterprises in your enterprise group……..		NOK
Other Norwegian enterprises/ institutions……		NOK
Other foreign enterprises/ institutions……		NOK

Public funding:

The Norwegian Research Council……		NOK
SkatteFUNN (tax reduction of intramural R&D, including disbursement) ……..		NOK
Support from Innovation Norway.....		
Ministries, directorates, counties, municipalities or others.		NOK
Please specify:……		

Other funding (from abroad):

Funding from EU institutions (not national authorities)…….		NOK
Other foreign funding**…….**……		NOK

Remains to be distributed:

Not distributed……..		NOK
Earlier in the questionnaire you reported expenditures in total to……		NOK

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Page 11: Sale/delivery of R&D services

Did your enterprise sell or deliver R&D services to others in 2024?

- ☐ Yes, to enterprises within your enterprise group
- ☐ Yes, to other enterprises, institutes, public authorities, etc. (contracts/commercial sale)
- ☐ No → Go to the next page

What was the value of R&D services delivered to enterprises within your enterprise group?
Specify the amounts in whole NOK without VAT.

Units in Norway		NOK
Units abroad		NOK

What was the value of R&D services delivered to other enterprises, institutes, public authorities, or others?
Specify the amounts in whole NOK without VAT.

Units in Norway		NOK
Units abroad		NOK

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Page 12: Acquired or received R&D services from others

Acquired R&D is performed by others on behalf of the enterprise. It could be part of an R&D project, or an entire R&D project.

Include R&D services acquired or received from:

- Other enterprises, both within and outside own enterprise group
- Research institutes and universities
- Support for R&D performed by others, even if the enterprise itself does not directly benefit from it.

Do not include:

- Contracted personnel integrated in the enterprise's own R&D activity. This is to be reported earlier in the questionnaire.

Did your enterprise acquire or receive R&D services from others in 2024?

☐ Yes
☐ No → Go to the next page

What was the expenditure for acquired R&D services from others in 2024?

Specify the amounts in whole NOK without VAT.
Do not include the expenditure for contracted personnel or other costs for intramural R&D specified earlier in the questionnaire.

Norwegian enterprises in your enterprise group……..		NOK
Foreign enterprises in your enterprise group……..		NOK
Other Norwegian enterprises……		NOK
Other foreign enterprises…..……		NOK
Research institutes and universities in Norway……		NOK
Research institutes and universities abroad…….……..		NOK
Professional institutes etc. (e.g. contingents, fees, licenses, grants, etc.)……		NOK
Total extramural R&D expenditures ……..……..		NOK

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Page 13: Distribution of R&D on the enterprise's sub-entities in 2024

What is a sub-entity?
An enterprise can have several sub-entities (establishments, type of activity), and these are registered with their own organization number.

A sub-entity is locally bounded functional unit which mainly engages in activity within a specific industry group.

Earlier in the questionnaire you reported that **[X]** employees participated in the enterprise's intramural R&D activity and that the enterprise had expenditures for intramural R&D totaling to NOK **[X]** in 2024. On this page you shall specify how these are distributed by the enterprise's sub-entities

Distribute R&D persons and intramural R&D expenditure on the enterprise's sub-entities

Organisation number	Name/Department	Number of R&D persons	Intramural R&D expenditures	
				NOK
				NOK
				NOK
				NOK
				NOK
				NOK
				NOK
				NOK
				NOK
				NOK
Other establishments……				NOK
Not distributed……				NOK
Earlier in the questionnaire you reported following number of R&D persons and R&D expenditure in total……..				NOK

If the enterprise has sub-entites not present in the list above, please specify organisation number or address and name of the sub-entity.

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If you have any comments to the information you have given, you can write them here:

The information below is the information SSB has about your enterprise's contact person.

If the information is incorrect or insufficient, please update in the relevant fields below:

Name	
Phone	
E-mail	

Guidelines

This is an abridged version of the Norwegian guidelines that can be found on the reporting page https://www.ssb.no/innrapportering/forskning-og-utvikling

What do we mean by research and development (R&D)?

R&D comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge or to devise new applications of available knowledge.

Research is systematic work aimed at collecting new knowledge. **Development** is systematic or experimental work that uses existing knowledge to develop new or improved materials, products or processes. R&D does not need to be located in specific R&D departments, it could also be organized in a different manner, or be a part of the enterprise's other activities.

It can be difficult to distinguish R&D activity from more ordinary activities. In order for an activity to be defined as an R&D activity, it must fulfil five basic criteria:

1. **Novelty:** The objective of R&D activity is to obtain new knowledge or find new applications of knowledge in the enterprise's industry.
2. **Uncertainty:** The solution, use of resources and results of the R&D activity are not obvious in advance, even for a person with basic knowledge in the field
3. **Creative:** The R&D activities use or develop original ideas, hypotheses, and concepts.
4. **Systematic:** R&D activity is planned and budgeted, often organized as a project, but can also be targeted activity carried out by a person or a group.
5. **Transmissibility/reproducibility:** R&D activity should increase the knowledge base in its field, and therefore it should potentially be able to be transferrable and reproducible by others.

What is R&D activity?

"R&D activity" is the sum of actions that an R&D actor deliberately performs to generate new knowledge or new products/processes. The R&D concept encompasses three types of activities:

- **Basic research is** experimental or theoretical activity that is primarily carried out to obtain new knowledge without a view to special application or use.
- **Applied research** is also activity of an original nature that is carried out to obtain new knowledge. Applied research is primarily aimed at specific practical goals or applications.
- **Experimental development work is** a systematic or experimental activity that uses available knowledge from research or practical experience, and which is aimed at:
    - manufacturing new or improved materials, products or devices.
    - developing new or improved processes, systems or services.

In most cases, R&D activities can be grouped into "R&D projects". Each R&D project consists of different R&D activities that are organized and managed for a specific purpose and have their own objectives and performance expectations associated with them. It can also be targeted activity carried out by a person or a group.

The R&D activities may be:

- **product-oriented,** i.e., to develop new or improved goods and services with regard to quality and mode of use (not cosmetic changes or product differentiation).
- **process-oriented,** i.e., creating new or improved production techniques in the form of improved inputs (materials, equipment, energy and labour) and systems for managing production and administrative routines.

R&D integrated in development work for others

R&D can be carried out for the enterprise's own use, or it can be included as an integral part of a development contract for customers. In such projects, there is often a need for new knowledge and new solutions, and technological development and problem solving often require R&D. Although it may be difficult to demarcate the R&D part of this type of contract, you must also report such R&D work.

How to distinguish R&D activity from other activities?

Examples of non-R&D activities:

- Normal construction and planning work.
- Adoption of known, established technology in business.
- Ordinary upgrading (e.g., of equipment, materials).
- Ordinary upgrade or use of software and system software in a new area of use or for a new purpose.
- Routine testing and quality control.
- Technical service, problem solving in production and engineering projects using existing technology.
- Pre-planning and other routine work at the start of production.
- After Sales Service and Troubleshooting/Error Correction.
- Courses and competence enhancement outside R&D projects.

Border cases between R&D activity and other activities:

- Construction of prototypes and test facilities, industrial design, equipment installation and full-scale test production with subsequent development is counted as R&D. If testing is complete, the first units in a test production are not considered R&D.
- When software and system software are part of an R&D project, they are classified as R&D. The same applies to software and system hardware research and development. It is not classified as R&D if it is an ordinary upgrade or custom of software and system hardware in new use or for new purpose.
- Industrial design is considered R&D if the design is necessary to run the R&D project.
- Industrial technology and equipment installation associated with the development of new products and new processes is counted as R&D. If it is part of the ordinary production process, it is not considered R&D.
- Sample production is R&D if the production involves full-scale testing with additional design and technology development. All other related activities are not considered R&D.
- Patent and licensing work is not considered R&D, unless this work is directly linked to R&D. Do not include administrative and legal work in connection with patents or licenses.
- Data collection is not to be regarded as R&D, except when it is an integral part of an R&D project.

What do we mean by costs for intramural and purchased R&D?

- **Intramural R&D:** R&D activities performed by own or contracted personnel. Include the R&D activity regardless of if the work is performed in their own R&D department or not. Do not include work carried out in your own R&D department that is not of an R&D nature. Include R&D that is performed on assignment for others, or as part of a delivery to customers.
    - *Compensation of employees* includes earned salary, employer's National Insurance contributions and other benefits. Do not use approved hourly rates in the SkatteFUNN scheme. Compensation of employees shall correspond to the man-years of the R&D personnel.
    - *Costs of contracted personnel* includes costs for persons directly engaged in the enterprise's R&D project(s) but who are not employed by the enterprise. Purchase of R&D, which is exclusively performed by others, must be reported under purchased R&D services.
    - *Other current expenditure* includes direct costs to materials, equipment, travel, meetings, and course costs for own R&D personnel. Also includes share of shared rent, light, fuel and office services. Do not include depreciation.
    - *Investments* are acquisitions minus annual sales of fixed assets (excluding depreciation) utilized in R&D activities, both capitalized and directly expensed. Tangible assets are plants, buildings, transport equipment, machinery, inventory, instruments, and equipment with a useful life of more than one year. Also includes proportionate share of tangible property, plant, and equipment. Do not include depreciation.

Purchased R&D services: Purchased R&D services are when others perform R&D on behalf of the enterprise without being integrated into the enterprise's own R&D activity. External persons performing such R&D shall therefore *not* are considered contracted persons. Purchased R&D can, for example, be outsourced. Include support for R&D performed by others, even if the enterprise itself does not benefit directly from it. Do not include deductible VAT.