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Federal Government expenditure on science, research and development, by funding areas and funding priorities¹²

		Millions of €			
Funding area Funding priority		ACTUAL			
		2021		2022	
		Total	Of which, R&D	Total	Of which, R&D
A	Health research and health industry	3,522.9	3,184.2	3,650.6	3,283.2
AA	Health research and health industry	3,422.8	3,153.3	3,555.6	3,253.4
AB	Radiation protection	100.1	30.9	95.0	29.8
B	Bioeconomy	286.0	285.8	300.8	300.4
C	Civil security research	127.3	125.1	125.1	122.9
D	Nutrition, agriculture and consumer protection	1,046.7	873.0	1,099.8	921.6
DA	Nutrition	56.5	32.0	64.7	39.7
DB	Sustainable agricultural economy and rural areas	637.3	564.4	661.3	590.1
DC	Health and economic consumer protection	353.0	276.6	373.7	291.8
E	Energy research and energy technologies	2,060.7	1,642.9	2,206.1	1,771.9
EA	Efficient energy conversion	703.5	701.2	792.2	789.9
EB	Renewable energy	740.9	739.2	777.3	775.5
EC	Nuclear safety and waste management	242.4	152.8	244.3	160.3
ED	Decommissioning of nuclear facilities	338.0	14.8	356.5	11.3
EF	Fusion research	35.9	34.9	35.9	34.9
F	Climate, environment, sustainability	1,733.6	1,518.0	1,766.9	1,545.0
FA	Climate, climate protection; global change	314.1	298.1	332.4	319.5
FB	Coast, marine and polar research, geosciences	607.5	560.0	583.9	537.3
FC	Environmental and sustainability research	465.0	365.4	516.1	406.1
FD	Ecology, nature conservation, sustainable use	346.9	294.5	334.4	282.1
G	Information and communication technologies	1,549.9	1,439.2	1,840.1	1,669.2
GA	Software systems; knowledge technologies	475.3	473.5	557.0	554.8
GB	Communication technologies and services	321.3	319.2	438.8	436.6
GC	Electronic, electronic systems	401.9	349.8	477.7	365.2
GD	Microsystems technology	131.5	130.4	91.7	90.6
GE	Multimedia - development of convergent information and communication technology	219.9	166.4	274.8	221.9
H	Vehicle and traffic technologies including maritime technologies	534.3	430.0	727.9	618.2
HA	Vehicle and traffic technologies	443.5	350.4	633.2	537.4
HB	Maritime technologies	90.7	79.6	94.7	80.8
I	Aerospace	2,270.2	2,266.9	2,174.3	2,170.9
IA	Aviation	513.0	512.5	449.0	448.4
IB	National space research and space technology	829.3	828.2	803.1	802.1
IC	European Space Agency (ESA)	927.9	926.2	922.2	920.4
J	Research and development to improve working conditions and in the service sector	226.9	158.6	211.9	140.9
JA	Research to improve working conditions	184.1	121.9	173.0	108.2
JB	Research in the service sector	42.8	36.7	38.9	32.7
K	Nanotechnologies and materials technologies	878.6	861.6	1,001.2	980.0
KA	Nanotechnologies	315.0	308.3	317.5	310.7
KB	Materials technologies	563.6	553.3	683.6	669.2
L	Optical technologies	361.7	355.3	407.0	400.5
M	Production technologies	307.8	304.7	355.6	352.4
N	Regional planning and urban development; construction research	157.3	148.3	162.0	148.2
NA	Regional planning, urban development, housing	37.3	37.3	45.0	39.3
NB	Construction research	120.0	111.0	117.1	108.9

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Federal Government expenditure on science, research and development, by funding areas and funding priorities¹²

Millions of €				
Funding area Funding priority	ACTUAL			
	2021		2022	
	Total	Of which, R&D	Total	Of which, R&D
O Innovations in education	1,072.3	461.9	1,085.3	476.8
OA Educational reporting, international assessments	515.3	138.5	630.4	161.6
OB Educational research	524.9	291.3	434.8	295.1
OC New media in education	32.1	32.1	20.1	20.1
P Humanities; economics and social sciences	1,830.1	1,415.3	1,887.0	1,397.9
PA Humanities research	1,063.2	687.3	1,201.7	747.9
PB Social scientific research	381.9	346.2	404.5	372.5
PC Economic and finance scientific research	121.6	121.6	118.1	118.1
PD Infrastructures	263.4	260.2	162.7	159.4
Q Innovation funding for SMEs	1,277.7	1,267.6	1,447.0	1,436.3
QA Start-up support	196.4	196.4	201.9	201.9
QB Technology support for SMEs	625.9	620.3	662.5	656.4
QC Technology transfer and innovation consulting	180.4	176.6	324.6	320.7
QD Research infrastructure SMEs	275.0	274.4	258.0	257.4
R Innovation-relevant underlying conditions and other cross-cutting activities	1,128.5	922.7	1,128.2	911.3
RA Technology Assessment	5.0	5.0	4.9	4.9
RB Structural cross-cutting activities	409.4	310.8	478.0	372.8
RC Demographical change	82.8	82.8	85.2	85.2
RD Sports promotion and sports research	27.2	27.2	31.1	31.1
RE Others	604.2	496.8	529.0	417.3
T Funding organisations, restructuring of the research field in acceding areas; construction of universities and primarily university-specific special programmes⁵	3,070.7	862.4	3,139.4	1,016.3
TA Basic funding of research institutions	0.7	0.4	0.7	0.5
TB Others	3,069.9	862.0	3,138.6	1,015.8
U Large-scale equipment for basic research	1,489.1	1,488.6	1,624.5	1,624.0
Z Global reduced expenditure; budget reserve⁶	-	-	-	-
Total of civil funding areas	24,932.3	20,012.3	26,340.3	21,287.8
S Military scientific research	1,786.5	1,716.6	2,171.2	2,097.6
SA Military medical and military psychological research	109.4	66.2	65.4	20.9
SB Defense technological research	1,658.2	1,634.1	2,079.8	2,057.4
SC Social scientific research	4.7	4.7	6.2	6.2
SD Military historical research	11.4	11.4	12.5	12.5
SE Geoscientific research	2.8	0.3	7.3	0.7
Total expenditure	26,718.8	21,728.9	28,511.5	23,385.4

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Federal Government expenditure on science, research and development, by funding areas and funding priorities¹²

Millions of €					
Funding area Funding priority		ACTUAL		TARGET ³	
		2023		2024 ⁴	
		Total	Of which, R&D	Total	Of which, R&D
A	Health research and health industry	3,555.8	3,175.2	3,567.1	3,211.5
AA	Health research and health industry	3,453.1	3,143.0	3,469.7	3,188.1
AB	Radiation protection	102.7	32.1	97.4	23.4
B	Bioeconomy	278.0	277.7	252.5	252.3
C	Civil security research	134.6	132.0	130.2	128.0
D	Nutrition, agriculture and consumer protection	1,184.0	1,010.9	1,253.5	1,054.6
DA	Nutrition	60.7	35.9	64.1	37.2
DB	Sustainable agricultural economy and rural areas	720.4	658.3	755.7	688.0
DC	Health and economic consumer protection	402.8	316.7	433.7	329.4
E	Energy research and energy technologies	2,443.8	1,986.3	2,670.0	2,191.4
EA	Efficient energy conversion	1,043.2	1,040.6	1,406.7	1,404.6
EB	Renewable energy	722.0	719.5	560.5	558.4
EC	Nuclear safety and waste management	267.5	178.8	275.7	180.3
ED	Decommissioning of nuclear facilities	374.0	11.4	389.9	11.8
EF	Fusion research	37.0	35.9	37.1	36.3
F	Climate, environment, sustainability	1,917.1	1,677.9	2,083.1	1,849.6
FA	Climate, climate protection; global change	374.5	356.4	332.3	278.8
FB	Coast, marine and polar research, geosciences	660.1	611.7	845.0	802.2
FC	Environmental and sustainability research	536.7	418.9	539.7	442.8
FD	Ecology, nature conservation, sustainable use	345.8	291.0	366.0	325.8
G	Information and communication technologies	2,091.4	1,926.8	2,359.6	2,096.6
GA	Software systems; knowledge technologies	688.4	685.3	615.2	612.0
GB	Communication technologies and services	551.1	548.6	582.0	580.0
GC	Electronic, electronic systems	503.5	398.5	597.4	399.7
GD	Microsystems technology	54.9	53.6	123.4	122.4
GE	Multimedia - development of convergent information and communication technology	293.5	240.7	441.6	382.5
H	Vehicle and traffic technologies including maritime technologies	666.0	551.2	906.1	759.8
HA	Vehicle and traffic technologies	568.4	469.2	776.4	646.3
HB	Maritime technologies	97.7	82.0	129.7	113.5
I	Aerospace	2,466.7	2,462.9	2,451.9	2,448.8
IA	Aviation	664.9	664.3	544.8	544.3
IB	National space research and space technology	891.0	889.8	803.2	802.2
IC	European Space Agency (ESA)	910.8	908.8	1,103.9	1,102.3
J	Research and development to improve working conditions and in the service sector	223.2	149.7	291.7	217.4
JA	Research to improve working conditions	184.8	118.2	268.5	199.8
JB	Research in the service sector	38.4	31.5	23.2	17.6
K	Nanotechnologies and materials technologies	1,023.7	1,001.8	1,014.2	994.1
KA	Nanotechnologies	328.7	321.2	442.6	436.4
KB	Materials technologies	695.0	680.7	571.5	557.7
L	Optical technologies	407.4	399.9	387.0	380.8
M	Production technologies	426.6	423.1	356.4	353.5
N	Regional planning and urban development; construction research	172.7	156.6	268.0	206.3
NA	Regional planning, urban development, housing	50.8	44.0	132.7	82.5
NB	Construction research	121.9	112.6	135.3	123.8

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Federal Government expenditure on science, research and development, by funding areas and funding priorities¹²

Millions of €					
Funding area Funding priority		ACTUAL		TARGET ³	
		2023		2024 ⁴	
		Total	Of which, R&D	Total	Of which, R&D
O	Innovations in education	1,082.5	475.6	1,103.9	496.5
OA	Educational reporting, international assessments	624.9	155.5	643.1	178.8
OB	Educational research	443.9	306.5	425.2	282.1
OC	New media in education	13.7	13.7	35.6	35.6
P	Humanities; economics and social sciences	1,951.7	1,449.9	1,961.6	1,490.7
PA	Humanities research	1,245.3	784.9	1,288.4	865.8
PB	Social scientific research	435.6	397.8	400.7	355.4
PC	Economic and finance scientific research	124.0	124.0	133.4	133.4
PD	Infrastructures	147.0	143.3	139.1	136.1
Q	Innovation funding for SMEs	1,394.2	1,382.8	1,679.1	1,669.7
QA	Start-up support	194.9	194.9	165.2	165.2
QB	Technology support for SMEs	562.2	556.0	739.8	734.7
QC	Technology transfer and innovation consulting	382.5	378.0	519.5	515.7
QD	Research infrastructure SMEs	254.7	254.0	254.6	254.0
R	Innovation-relevant underlying conditions and other cross-cutting activities	1,201.6	996.2	1,298.9	1,083.8
RA	Technology Assessment	5.1	5.1	5.1	5.1
RB	Structural cross-cutting activities	565.4	469.2	720.8	607.8
RC	Demographical change	79.6	79.6	8.6	8.6
RD	Sports promotion and sports research	32.4	32.4	34.5	34.5
RE	Others	519.0	409.9	529.9	427.9
T	Funding organisations, restructuring of the research field in acceding areas; construction of universities and primarily university-specific special programmes⁵	3,250.5	1,028.4	3,354.2	1,001.1
TA	Basic funding of research institutions	0.8	0.5	0.7	0.4
TB	Others	3,249.7	1,027.9	3,353.5	1,000.7
U	Large-scale equipment for basic research	1,661.2	1,660.7	1,697.2	1,696.8
Z	Global reduced expenditure; budget reserve⁶	-	-	-652.9	-652.9
Total of civil funding areas		27,532.5	22,325.5	28,433.3	22,930.6
S	Military scientific research	1,860.6	1,787.8	3,586.9	3,518.7
SA	Military medical and military psychological research	253.0	207.0	212.2	165.5
SB	Defense technological research	1,581.8	1,558.5	3,350.2	3,330.9
SC	Social scientific research	9.3	9.3	9.5	9.5
SD	Military historical research	12.7	12.7	12.5	12.5
SE	Geoscientific research	3.8	0.3	2.4	0.2
Total expenditure		29,393.1	24,113.3	32,020.2	26,449.3

Federal Government expenditure on science, research and development, by funding areas and funding priorities^{1,2}

- 1 According to the Federal Government's planning system 2009. Expenditure was implemented in accordance with the Federal Government's planning system 2009. Expenditure of non-university research organisations are distributed among funding areas and funding priorities. Discrepancies with regard to earlier publications are due to subsequent changes of assignments to funding areas and funding priorities or rather due to subsequent changes in the allocation to R&D. Possible rounding differences.
- 2 Until 2022, including "Energy and climate fund"; as of 2023, including "Climate and transformation fund".
- 3 Distribution among funding areas and funding priorities partly estimated or extrapolated.
- 4 Target expenditure 2024 including "Climate and transformation fund" but excluding other funds from section 60 "General financial management" - chapter 6002 "General appropriations". These are collected retrospectively.
- 5 Including universities of the federal armed forces and the Federal University of Applied Administrative Sciences.
- 6 ACTUAL figures are needed to break down the BMBF's total expenditure reduction by funding areas and funding priorities.

Last update: November 21, 2024

This table also appears in the Federal Report on Research and Innovation as Table 5.

Source: Special evaluation of the Federal Ministry of Education and Research

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<https://www.govdata.de/dl-de/by-2-0>