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**Federal Government expenditure on science, research and development, by funding areas and funding priorities<sup>12</sup>**

		Millions of €			
Funding area Funding priority		ACTUAL			
		2018		2019	
		Total	Of which, R&D	Total	Of which, R&D
<b>A</b>	<b>Health research and health industry</b>	2,804.7	2,519.5	3,031.7	2,725.3
AA	Health research and health industry	2,734.0	2,505.5	2,958.0	2,709.9
AB	Radiation protection	70.7	14.0	73.7	15.4
<b>B</b>	<b>Bioeconomy</b>	296.5	295.5	305.1	304.4
<b>C</b>	<b>Civil security research</b>	141.3	139.0	139.6	137.2
<b>D</b>	<b>Nutrition, agriculture and consumer protection</b>	880.4	709.0	962.9	784.7
DA	Nutrition	52.4	30.7	53.5	31.0
DB	Sustainable agricultural economy and rural areas	548.7	467.5	609.3	523.0
DC	Health and economic consumer protection	279.4	210.8	300.0	230.7
<b>E</b>	<b>Energy research and energy technologies</b>	1,667.1	1,327.7	1,807.2	1,444.6
EA	Efficient energy conversion	763.9	762.0	827.8	826.8
EB	Renewable energy	278.0	276.7	336.3	333.0
EC	Nuclear safety and waste management	199.9	143.4	209.9	141.3
ED	Decommissioning of nuclear facilities	288.5	9.4	298.6	9.2
EF	Fusion research	136.7	136.1	134.6	134.2
<b>F</b>	<b>Climate, environment, sustainability</b>	1,595.9	1,358.7	1,616.5	1,373.7
FA	Climate, climate protection; global change	289.8	273.2	299.3	284.4
FB	Coast, marine and polar research, geosciences	537.7	490.5	521.5	474.5
FC	Environmental and sustainability research	468.3	363.1	476.1	365.9
FD	Ecology, nature conservation, sustainable use	300.0	231.8	319.6	248.9
<b>G</b>	<b>Information and communication technologies</b>	1,088.0	851.7	1,496.5	1,332.0
GA	Software systems; knowledge technologies	282.2	277.2	343.9	340.4
GB	Communication technologies and services	175.8	174.0	189.5	186.8
GC	Electronic, electronic systems	460.4	269.6	409.2	293.8
GD	Microsystems technology	41.6	40.7	402.6	402.2
GE	Multimedia - development of convergent information and communication technology	127.9	90.2	151.3	108.7
<b>H</b>	<b>Vehicle and traffic technologies including maritime technologies</b>	469.0	367.7	496.0	369.4
HA	Vehicle and traffic technologies	399.6	310.9	421.4	306.4
HB	Maritime technologies	69.4	56.8	74.5	63.1
<b>I</b>	<b>Aerospace</b>	1,819.4	1,816.6	1,871.5	1,868.4
IA	Aviation	296.7	296.3	335.6	335.1
IB	National space research and space technology	664.9	664.1	673.6	672.6
IC	European Space Agency (ESA)	857.8	856.2	862.3	860.8
<b>J</b>	<b>Research and development to improve working conditions and in the service sector</b>	175.5	115.1	190.1	126.8
JA	Research to improve working conditions	127.0	71.5	137.2	81.5
JB	Research in the service sector	48.5	43.7	53.0	45.2
<b>K</b>	<b>Nanotechnologies and materials technologies</b>	737.0	719.9	777.8	760.7
KA	Nanotechnologies	259.3	254.7	280.8	274.8
KB	Materials technologies	477.7	465.2	497.0	485.8
<b>L</b>	<b>Optical technologies</b>	238.6	230.2	254.4	243.5
<b>M</b>	<b>Production technologies</b>	255.6	253.1	274.7	272.6
<b>N</b>	<b>Regional planning and urban development; construction research</b>	123.9	118.1	120.5	113.9
NA	Regional planning, urban development, housing	28.3	28.3	28.1	28.0
NB	Construction research	95.6	89.9	92.3	85.9

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**Federal Government expenditure on science, research and development, by funding areas and funding priorities<sup>12</sup>**

Millions of €					
Funding area Funding priority		ACTUAL			
		2018		2019	
		Total	Of which, R&D	Total	Of which, R&D
<b>O</b>	<b>Innovations in education</b>	1,066.1	570.7	1,065.2	558.2
OA	Educational reporting, international assessments	502.3	188.6	510.0	200.3
OB	Educational research	510.8	329.0	524.4	327.1
OC	New media in education	53.1	53.1	30.8	30.8
<b>P</b>	<b>Humanities; economics and social sciences</b>	1,504.5	1,160.6	1,665.9	1,295.6
PA	Humanities research	950.6	631.9	1,031.7	689.3
PB	Social scientific research	302.7	280.0	338.6	313.5
PC	Economic and finance scientific research	99.9	99.9	109.3	109.3
PD	Infrastructures	151.3	148.7	186.3	183.6
<b>Q</b>	<b>Innovation funding for SMEs</b>	1,046.7	1,037.1	1,106.3	1,096.2
QA	Start-up support	104.3	104.3	133.2	133.2
QB	Technology support for SMEs	529.8	525.6	554.4	549.4
QC	Technology transfer and innovation consulting	166.5	161.7	174.7	169.9
QD	Research infrastructure SMEs	246.1	245.6	244.1	243.7
<b>R</b>	<b>Innovation-relevant underlying conditions and other cross-cutting activities</b>	741.4	584.0	743.7	562.1
RA	Technology Assessment	2.3	2.3	2.3	2.3
RB	Structural cross-cutting activities	130.6	71.1	193.1	107.7
RC	Demographical change	88.2	88.2	86.6	86.6
RD	Sports promotion and sports research	29.0	29.0	27.2	27.2
RE	Others	491.3	393.5	434.5	338.3
<b>T</b>	<b>Funding organisations, restructuring of the research field in acceding areas; construction of universities and primarily university-specific special programmes<sup>5</sup></b>	3,642.5	760.3	3,632.4	762.7
TA	Basic funding of research institutions	0.0	0.0	0.0	0.0
TB	Others	3,642.5	760.3	3,632.4	762.7
<b>U</b>	<b>Large-scale equipment for basic research</b>	1,312.1	1,311.8	1,341.9	1,341.3
<b>Z</b>	<b>Global reduced expenditure; budget reserve<sup>6</sup></b>	-	-	-	-
<b>Total of civil funding areas</b>		<b>21,606.1</b>	<b>16,246.2</b>	<b>22,899.7</b>	<b>17,473.3</b>
<b>S</b>	<b>Military scientific research</b>	1,065.6	1,003.8	1,340.7	1,274.8
SA	Military medical and military psychological research	56.6	18.3	64.6	23.6
SB	Defense technological research	991.0	971.6	1,257.8	1,236.7
SC	Social scientific research	2.6	2.6	2.8	2.8
SD	Military historical research	10.8	10.8	11.4	11.4
SE	Geoscientific research	4.6	0.4	4.0	0.4
<b>Total expenditure</b>		<b>22,671.7</b>	<b>17,250.0</b>	<b>24,240.4</b>	<b>18,748.1</b>

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**Federal Government expenditure on science, research and development, by funding areas and funding priorities<sup>12</sup>**

Millions of €					
Funding area Funding priority		ACTUAL		TARGET <sup>3</sup>	
		2020		2021 <sup>4</sup>	
		Total	Of which, R&D	Total	Of which, R&D
<b>A</b>	<b>Health research and health industry</b>	3,950.3	3,620.5	4,047.7	3,743.5
AA	Health research and health industry	3,857.0	3,600.2	3,982.2	3,734.4
AB	Radiation protection	93.2	20.3	65.5	9.0
<b>B</b>	<b>Bioeconomy</b>	308.2	307.9	275.0	274.4
<b>C</b>	<b>Civil security research</b>	153.1	151.0	171.3	168.8
<b>D</b>	<b>Nutrition, agriculture and consumer protection</b>	995.3	821.9	1,309.2	1,076.1
DA	Nutrition	55.5	32.6	61.1	37.2
DB	Sustainable agricultural economy and rural areas	610.8	532.0	893.2	765.7
DC	Health and economic consumer protection	329.0	257.3	355.0	273.2
<b>E</b>	<b>Energy research and energy technologies</b>	1,871.4	1,442.4	2,479.0	2,022.0
EA	Efficient energy conversion	877.3	875.1	1,356.2	1,355.3
EB	Renewable energy	393.7	364.6	475.8	472.8
EC	Nuclear safety and waste management	225.5	147.9	233.4	143.8
ED	Decommissioning of nuclear facilities	334.7	15.5	379.6	16.4
EF	Fusion research	40.1	39.2	34.1	33.7
<b>F</b>	<b>Climate, environment, sustainability</b>	1,682.6	1,422.9	2,089.4	1,816.2
FA	Climate, climate protection; global change	307.1	293.8	327.8	310.3
FB	Coast, marine and polar research, geosciences	533.9	489.4	642.6	594.9
FC	Environmental and sustainability research	487.0	364.8	655.0	527.2
FD	Ecology, nature conservation, sustainable use	354.6	274.8	463.9	383.7
<b>G</b>	<b>Information and communication technologies</b>	1,575.6	1,409.5	1,642.0	1,521.9
GA	Software systems; knowledge technologies	401.8	399.8	491.8	488.1
GB	Communication technologies and services	199.3	197.2	272.6	270.1
GC	Electronic, electronic systems	454.7	343.6	418.8	368.4
GD	Microsystems technology	340.0	338.9	207.9	207.5
GE	Multimedia - development of convergent information and communication technology	179.9	130.0	250.9	187.9
<b>H</b>	<b>Vehicle and traffic technologies including maritime technologies</b>	551.6	439.0	739.0	645.3
HA	Vehicle and traffic technologies	466.2	366.5	639.0	561.7
HB	Maritime technologies	85.4	72.5	99.9	83.6
<b>I</b>	<b>Aerospace</b>	1,972.8	1,969.6	2,134.3	2,131.5
IA	Aviation	379.6	379.1	426.4	425.9
IB	National space research and space technology	732.5	731.5	781.9	780.9
IC	European Space Agency (ESA)	860.6	858.9	926.1	924.7
<b>J</b>	<b>Research and development to improve working conditions and in the service sector</b>	193.4	128.0	271.7	204.1
JA	Research to improve working conditions	149.2	89.6	247.0	186.7
JB	Research in the service sector	44.2	38.4	24.7	17.5
<b>K</b>	<b>Nanotechnologies and materials technologies</b>	838.5	824.9	966.7	944.7
KA	Nanotechnologies	314.9	308.9	426.5	420.9
KB	Materials technologies	523.6	516.1	540.2	523.9
<b>L</b>	<b>Optical technologies</b>	237.2	231.2	276.0	265.7
<b>M</b>	<b>Production technologies</b>	295.4	292.4	237.3	235.2
<b>N</b>	<b>Regional planning and urban development; construction research</b>	132.3	123.5	209.0	198.6
NA	Regional planning, urban development, housing	28.4	28.4	59.7	59.7
NB	Construction research	103.9	95.1	149.3	138.9

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**Federal Government expenditure on science, research and development, by funding areas and funding priorities<sup>12</sup>**

Millions of €					
Funding area Funding priority		ACTUAL		TARGET <sup>3</sup>	
		2020		2021 <sup>4</sup>	
		Total	Of which, R&D	Total	Of which, R&D
<b>O</b>	<b>Innovations in education</b>	1,065.5	562.0	1,284.7	719.7
OA	Educational reporting, international assessments	518.9	208.1	581.7	238.6
OB	Educational research	507.8	315.2	565.0	343.1
OC	New media in education	38.8	38.8	138.0	138.0
<b>P</b>	<b>Humanities; economics and social sciences</b>	1,711.4	1,342.1	1,898.2	1,505.8
PA	Humanities research	1,054.8	714.7	1,157.3	795.8
PB	Social scientific research	354.6	328.5	369.3	340.8
PC	Economic and finance scientific research	126.0	126.0	137.3	137.3
PD	Infrastructures	176.0	172.9	234.3	231.8
<b>Q</b>	<b>Innovation funding for SMEs</b>	1,163.3	1,153.3	1,440.0	1,430.2
QA	Start-up support	159.9	159.9	150.4	150.4
QB	Technology support for SMEs	562.3	557.1	734.2	729.6
QC	Technology transfer and innovation consulting	169.6	165.3	251.5	246.6
QD	Research infrastructure SMEs	271.5	270.9	304.0	303.6
<b>R</b>	<b>Innovation-relevant underlying conditions and other cross-cutting activities</b>	1,040.9	848.5	1,486.6	1,279.3
RA	Technology Assessment	2.5	2.5	4.9	4.9
RB	Structural cross-cutting activities	427.1	334.3	788.5	689.1
RC	Demographical change	82.3	82.3	83.7	83.7
RD	Sports promotion and sports research	28.0	28.0	29.3	29.3
RE	Others	501.0	401.4	580.2	472.3
<b>T</b>	<b>Funding organisations, restructuring of the research field in acceding areas; construction of universities and primarily university-specific special programmes<sup>5</sup></b>	2,919.6	760.2	3,114.9	947.9
TA	Basic funding of research institutions	0.7	0.4	2.0	2.0
TB	Others	2,918.9	759.8	3,112.9	946.0
<b>U</b>	<b>Large-scale equipment for basic research</b>	1,409.0	1,408.6	1,515.0	1,514.4
<b>Z</b>	<b>Global reduced expenditure; budget reserve<sup>6</sup></b>	-	-	-412.3	-412.3
<b>Total of civil funding areas</b>		<b>24,067.3</b>	<b>19,259.3</b>	<b>27,174.9</b>	<b>22,233.1</b>
<b>S</b>	<b>Military scientific research</b>	1,491.9	1,422.6	1,800.6	1,745.5
SA	Military medical and military psychological research	68.6	22.9	157.8	122.4
SB	Defense technological research	1,405.6	1,384.8	1,628.0	1,609.8
SC	Social scientific research	2.9	2.9	2.6	2.6
SD	Military historical research	11.7	11.7	10.7	10.7
SE	Geoscientific research	3.1	0.3	1.5	0.1
<b>Total expenditure</b>		<b>25,559.2</b>	<b>20,681.9</b>	<b>28,975.5</b>	<b>23,978.6</b>

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**Federal Government expenditure on science, research and development, by funding areas and funding priorities<sup>1,2</sup>**

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- 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. Possible rounding differences.
- 2 Including "Energy and climate fund". Research funding in the area of electro mobility is financed by the "Energy and climate fund".
- 3 Distribution among funding areas and funding priorities partly estimated or extrapolated.
- 4 Without the supplementary budget of 9 June 2021.
- 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: September 9, 2021

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>