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| **3.4.5. Number of publications of R&D units (1990–) [pieces]** |
| Year | Published books and chapters | Articles | Published books and chapters | Articles |
| in Hungarian | in foreign language |
| 1990 | 1 266 | 13 217 | 396 | 9 186 |
| 1991 | 1 185 | 12 841 | 377 | 9 666 |
| 1992 | 1 226 | 13 637 | 504 | 9 792 |
| 1993 | 1 396 | 13 321 | 513 | 10 300 |
| 1994 | 1 655 | 13 764 | 603 | 10 402 |
| 1995 | 1 651 | 12 808 | 516 | 10 102 |
| 1996 | 1 735 | 13 979 | 475 | 11 464 |
| 1997 | 2 411 | 15 429 | 579 | 11 569 |
| 1998 | 2 780 | 17 437 | 775 | 12 332 |
| 1999 | 2 828 | 16 810 | 799 | 12 891 |
| 2000 | 3 428 | 19 263 | 850 | 13 722 |
| 2001 | 3 457 | 20 590 | 936 | 13 607 |
| 2002 | 3 888 | 21 472 | 1 018 | 13 950 |
| 2003 | 3 835 | 20 441 | 1 024 | 14 154 |
| 2004 | 4 002 | 19 814 | 970 | 13 221 |
| 2005 | 3 796 | 19 510 | 949 | 13 902 |
| 2006 | 4 337 | 18 856 | 1 091 | 13 703 |
| 2007 | 6 026 | 17 402 | 1 720 | 13 799 |
| 2008 | 5 975 | 16 054 | 2 234 | 13 628 |
| 2009 | 6 484 | 16 466 | 2 326 | 13 079 |
| 2010 | 7 052 | 14 918 | 2 584 | 14 225 |
| 2011 | 7 476 | 15 040 | 3 082 | 14 282 |
| 2012 | 7 724 | 13 008 | 3 389 | 14 806 |
| 2013 | 7 356 | 12 035 | 3 241 | 15 215 |
| 2014 | 7 716 | 11 718 | 3 406 | 15 803 |
| 2015 | 7 363 | 11 106 | 3 135 | 14 703 |
| 2016 | 6 824 | 9 707 | 3 047 | 14 872 |
| 2017 | 7 415 | 10 674 | 3 311 | 16 463 |

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| **3.4.5. Number of publications of R&D units (1990–) [pieces]** |  |  |
| Year | Published books and chapters | Articles | Published books and chapters | Articles |  |  |
| in Hungarian | in foreign language | fact | Estimations |
| 1990 | 26 | 20 | 27 | 28 | 1000 | 959 |
| 1991 | 28 | 22 | 28 | 27 | 1000 | 956 |
| 1992 | 27 | 18 | 25 | 26 | 1000 | 966 |
| 1993 | 25 | 19 | 24 | 24 | 1000 | 970 |
| 1994 | 23 | 17 | 21 | 23 | 1000 | 978 |
| 1995 | 24 | 23 | 23 | 25 | 1000 | 961 |
| 1996 | 22 | 16 | 26 | 22 | 1000 | 976 |
| 1997 | 21 | 13 | 22 | 21 | 1000 | 989 |
| 1998 | 20 | 8 | 20 | 20 | 1000 | 998 |
| 1999 | 19 | 10 | 19 | 19 | 1000 | 999 |
| 2000 | 18 | 6 | 18 | 13 | 1000 | 1011 |
| 2001 | 17 | 2 | 17 | 16 | 1000 | 1014 |
| 2002 | 14 | 1 | 14 | 10 | 1000 | 1027 |
| 2003 | 15 | 3 | 13 | 9 | 1000 | 1026 |
| 2004 | 13 | 4 | 15 | 17 | 1000 | 1017 |
| 2005 | 16 | 5 | 16 | 11 | 1000 | 1018 |
| 2006 | 12 | 7 | 12 | 14 | 1000 | 1021 |
| 2007 | 10 | 9 | 11 | 12 | 1000 | 1024 |
| 2008 | 11 | 12 | 10 | 15 | 1000 | 1018 |
| 2009 | 9 | 11 | 9 | 18 | 1000 | 1019 |
| 2010 | 7 | 15 | 8 | 8 | 1000 | 1023 |
| 2011 | 3 | 14 | 6 | 7 | 1000 | 1031 |
| 2012 | 1 | 21 | 2 | 5 | 1000 | 1032 |
| 2013 | 6 | 24 | 4 | 3 | 1000 | 996 |
| 2014 | 2 | 25 | 1 | 2 | 1000 | 1002 |
| 2015 | 5 | 26 | 5 | 6 | 1000 | 988 |
| 2016 | 8 | 28 | 7 | 4 | 1000 | 986 |
| 2017 | 4 | 27 | 3 | 1 | 1000 | 1000 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Total number of researchers, headcount | Total number of researchers, female, headcount | Total R&D staff number of technicians, headcount | Total R&D staff number of other supporting staff, headcount | Calculated R&D staff number, FTE | Calculated R&D staff number of researchers, FTE | Calculated R&D staff number of technicians, FTE | Calculated R&D staff number of other supporting staff, FTE | Number of researchers staying abroad (as empoyees, as students), person |
|
| 1990 | 30 256 | 8 489 | 17 849 | 11 618 | 36 384 | 17 550 | 11 711 | 7 123 | 1 300 |
| 1991 | 26 763 | 7 711 | 14 238 | 10 217 | 29 397 | 14 471 | 8 903 | 6 023 | 1 249 |
| 1992 | 24 110 | 7 361 | 11 449 | 8 320 | 24 192 | 12 311 | 7 152 | 4 729 | 1 079 |
| 1993 | 23 012 | 7 338 | 9 761 | 8 226 | 22 609 | 11 818 | 6 003 | 4 788 | 894 |
| 1994 | 22 401 | 7 328 | 9 691 | 7 718 | 22 008 | 11 752 | 5 922 | 4 334 | 720 |
| 1995 | 20 859 | 7 092 | 9 612 | 7 617 | 19 585 | 10 499 | 5 207 | 3 879 | 589 |
| 1996 | 20 485 | 6 649 | 9 244 | 7 557 | 19 776 | 10 408 | 5 114 | 4 254 | 766 |
| 1997 | 21 999 | 7 367 | 9 375 | 8 252 | 20 758 | 11 154 | 5 205 | 4 399 | 654 |
| 1998 | 23 547 | 8 129 | 9 209 | 8 561 | 20 315 | 11 731 | 4 907 | 3 677 | 556 |
| 1999 | 24 609 | 7 554 | 9 036 | 8 443 | 21 329 | 12 579 | 5 037 | 3 713 | 511 |
| 2000 | 27 876 | 9 537 | 8 313 | 9 136 | 23 534 | 14 406 | 5 166 | 3 962 | 557 |
| 2001 | 28 351 | 9 363 | 8 098 | 9 227 | 22 942 | 14 666 | 4 752 | 3 524 | 570 |
| 2002 | 29 764 | 10 039 | 8 965 | 9 998 | 23 703 | 14 965 | 4 936 | 3 802 | 569 |
| 2003 | 30 292 | 10 647 | 8 659 | 9 730 | 23 311 | 15 180 | 4 641 | 3 490 | 531 |
| 2004 | 30 420 | 10 484 | 8 873 | 10 322 | 22 826 | 14 904 | 4 713 | 3 209 | 412 |
| 2005 | 31 407 | 10 731 | 8 663 | 9 653 | 23 239 | 15 878 | 4 591 | 2 770 | 413 |
| 2006 | 32 786 | 10 973 | 8 441 | 9 184 | 25 971 | 17 547 | 4 943 | 3 481 | 388 |
| 2007 | 33 059 | 11 077 | 8 474 | 7 952 | 25 954 | 17 391 | 5 141 | 3 422 | 437 |
| 2008 | 33 739 | 11 139 | 8 456 | 8 084 | 27 403 | 18 504 | 5 237 | 3 662 | 386 |
| 2009 | 35 267 | 11 323 | 8 739 | 8 516 | 29 795 | 20 064 | 5 527 | 4 204 | 454 |
| 2010 | 35 700 | 11 418 | 9 329 | 8 962 | 31 480 | 21 342 | 5 967 | 4 171 | 398 |
| 2011 | 36 945 | 11 729 | 9 797 | 8 644 | 33 960 | 23 019 | 6 506 | 4 435 | 435 |
| 2012 | 37 019 | 11 453 | 10 216 | 9 251 | 35 732 | 23 837 | 6 993 | 4 902 | 422 |
| 2013 | 37 803 | 11 462 | 11 247 | 9 187 | 38 163 | 25 038 | 7 748 | 5 377 | 373 |
| 2014 | 39 190 | 11 897 | 10 069 | 7 926 | 37 329 | 26 213 | 6 833 | 4 283 | 355 |
| 2015 | 38 418 | 11 848 | 10 303 | 7 514 | 36 847 | 25 316 | 7 112 | 4 419 | 363 |
| 2016 | 38 915 | 11 969 | 9 097 | 6 624 | 35 757 | 25 804 | 6 252 | 3 701 | 287 |
| 2017 | 42 729 | 13 024 | 10 729 | 7 474 | 40 432 | 28 426 | 7 495 | 4 511 | 245 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Total number of researchers, headcount | Total number of researchers, female, headcount | Total R&D staff number of technicians, headcount | Total R&D staff number of other supporting staff, headcount | Calculated R&D staff number, FTE | Calculated R&D staff number of researchers, FTE | Calculated R&D staff number of technicians, FTE | Calculated R&D staff number of other supporting staff, FTE | Number of researchers staying abroad (as empoyees, as students), person |  |  |  |
|  |  | Estimations |
| 1990 | 16 | 19 | 1 | 1 | 5 | 11 | 1 | 1 | 1 | 1000 | 1990 | 1082 |
| 1991 | 20 | 21 | 2 | 3 | 11 | 19 | 2 | 2 | 2 | 1000 | 1991 | 1055 |
| 1992 | 22 | 24 | 3 | 17 | 15 | 22 | 5 | 6 | 3 | 1000 | 1992 | 1017 |
| 1993 | 24 | 25 | 10 | 19 | 22 | 23 | 11 | 5 | 4 | 1000 | 1993 | 991 |
| 1994 | 25 | 26 | 11 | 23 | 23 | 24 | 13 | 11 | 6 | 1000 | 1994 | 970 |
| 1995 | 27 | 27 | 12 | 24 | 28 | 27 | 16 | 17 | 8 | 1000 | 1995 | 946 |
| 1996 | 28 | 28 | 15 | 25 | 27 | 28 | 20 | 13 | 5 | 1000 | 1996 | 944 |
| 1997 | 26 | 23 | 13 | 18 | 25 | 26 | 17 | 10 | 7 | 1000 | 1997 | 967 |
| 1998 | 23 | 20 | 16 | 14 | 26 | 25 | 24 | 21 | 12 | 1000 | 1998 | 948 |
| 1999 | 21 | 22 | 18 | 16 | 24 | 21 | 21 | 19 | 14 | 1000 | 1999 | 951 |
| 2000 | 19 | 17 | 27 | 11 | 17 | 20 | 18 | 16 | 11 | 1000 | 2000 | 1003 |
| 2001 | 18 | 18 | 28 | 8 | 20 | 18 | 25 | 23 | 9 | 1000 | 2001 | 997 |
| 2002 | 17 | 16 | 19 | 4 | 16 | 16 | 23 | 18 | 10 | 1000 | 2002 | 1036 |
| 2003 | 15 | 14 | 23 | 5 | 18 | 15 | 27 | 24 | 13 | 1000 | 2003 | 1025 |
| 2004 | 14 | 15 | 20 | 2 | 21 | 17 | 26 | 27 | 20 | 1000 | 2004 | 964 |
| 2005 | 13 | 13 | 22 | 6 | 19 | 14 | 28 | 28 | 19 | 1000 | 2005 | 964 |
| 2006 | 12 | 12 | 26 | 10 | 13 | 12 | 22 | 25 | 22 | 1000 | 2006 | 968 |
| 2007 | 11 | 11 | 24 | 21 | 14 | 13 | 19 | 26 | 16 | 1000 | 2007 | 992 |
| 2008 | 10 | 10 | 25 | 20 | 12 | 10 | 15 | 22 | 23 | 1000 | 2008 | 972 |
| 2009 | 9 | 9 | 21 | 15 | 10 | 9 | 14 | 14 | 15 | 1000 | 2009 | 1032 |
| 2010 | 8 | 8 | 14 | 12 | 9 | 8 | 12 | 15 | 21 | 1000 | 2010 | 1013 |
| 2011 | 7 | 5 | 9 | 13 | 8 | 7 | 9 | 8 | 17 | 1000 | 2011 | 1048 |
| 2012 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 4 | 18 | 1000 | 2012 | 1058 |
| 2013 | 5 | 6 | 4 | 9 | 2 | 5 | 3 | 3 | 24 | 1000 | 2013 | 1011 |
| 2014 | 2 | 3 | 8 | 22 | 3 | 2 | 8 | 12 | 26 | 1000 | 2014 | 1011 |
| 2015 | 4 | 4 | 6 | 26 | 4 | 4 | 6 | 9 | 25 | 1000 | 2015 | 1011 |
| 2016 | 3 | 2 | 17 | 28 | 6 | 3 | 10 | 20 | 27 | 1000 | 2016 | 1011 |
| 2017 | 1 | 1 | 5 | 27 | 1 | 1 | 4 | 7 | 28 | 1000 | 2017 | 1011 |
| 3.4.6. Patent activity (2000–) |   |   |   |   |   |
| Year | Number of national patent applications | Of wich: | Number of granted patents | Number of valid patents |
|   | domestic patent applications | foreign patent applications |   |   |
| 2000 | 4 883 | 810 | 4 073 | 1 627 | 11 084 |
| 2001 | 5 451 | 919 | 4 532 | 1 306 | 10 927 |
| 2002 | 5 906 | 842 | 5 064 | 1 555 | 10 784 |
| 2003 | 4 810 | 756 | 4 054 | 1 379 | 10 385 |
| 2004 | 2 657 | 738 | 1 919 | 977 | 9 525 |
| 2005 | 1 275 | 699 | 576 | 1 243 | 9 224 |
| 2006 | 924 | 715 | 209 | 1 916 | 9 338 |
| 2007 | 791 | 686 | 105 | 2 216 | 10 306 |
| 2008 | 772 | 682 | 90 | 2 212 | 11 462 |
| 2009 | 821 | 756 | 65 | 2 688 | 12 749 |
| 2010 | 696 | 646 | 50 | 3 031 | 13 853 |
| 2011 | 698 | 660 | 38 | 3 195 | 15 390 |
| 2012 | 748 | 689 | 59 | 3 278 | 16 988 |
| 2013 | 708 | 641 | 67 | 4 965 | 19 130 |
| 2014 | 619 | 546 | 73 | 3 718 | 20 426 |
| 2015 | 633 | 569 | 64 | 3 947 | 21 851 |
| 2016 | 665 | 616 | 49 | 4 366 | 23 782 |
| 2017 | 532 | 490 | 42 | 5 366 | 26 225 |

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| 3.4.6. Patent activity (2000–) |   |   |   |   |   |  |  |  |
| Year | Number of national patent applications | Of wich: | Number of granted patents | Number of valid patents |  |  |  |
|   | domestic patent applications | foreign patent applications |   |   |  |  | Estimations |
| 2000 | 3 | 3 | 3 | 13 | 11 | 1000 | 2000  | 1011  |
| 2001 | 2 | 1 | 2 | 16 | 12 | 1000 | 2001  | 1011  |
| 2002 | 1 | 2 | 1 | 14 | 13 | 1000 | 2002  | 1012  |
| 2003 | 4 | 4 | 4 | 15 | 14 | 1000 | 2003  | 1002  |
| 2004 | 5 | 6 | 5 | 18 | 16 | 1000 | 2004  | 990  |
| 2005 | 6 | 8 | 6 | 17 | 18 | 1000 | 2005  | 988  |
| 2006 | 7 | 7 | 7 | 12 | 17 | 1000 | 2006  | 1000  |
| 2007 | 9 | 10 | 8 | 10 | 15 | 1000 | 2007  | 1000  |
| 2008 | 10 | 11 | 9 | 11 | 10 | 1000 | 2008  | 1000  |
| 2009 | 8 | 4 | 12 | 9 | 9 | 1000 | 2009  | 1000  |
| 2010 | 14 | 13 | 15 | 8 | 8 | 1000 | 2010  | 994  |
| 2011 | 13 | 12 | 18 | 7 | 7 | 1000 | 2011  | 994  |
| 2012 | 11 | 9 | 14 | 6 | 6 | 1000 | 2012  | 1006  |
| 2013 | 12 | 14 | 11 | 2 | 5 | 1000 | 2013  | 1000  |
| 2014 | 17 | 17 | 10 | 5 | 4 | 1000 | 2014  | 1000  |
| 2015 | 16 | 16 | 13 | 4 | 3 | 1000 | 2015  | 1000  |
| 2016 | 15 | 15 | 16 | 3 | 2 | 1000 | 2016  | 1000  |
| 2017 | 18 | 18 | 17 | 1 | 1 | 1000 | 2017  | 1000  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Total number of researchers, headcount | Total number of researchers, female, headcount | Total R&D staff number of technicians, headcount | Total R&D staff number of other supporting staff, headcount | Calculated R&D staff number, FTE | Calculated R&D staff number of researchers, FTE | Calculated R&D staff number of technicians, FTE | Calculated R&D staff number of other supporting staff, FTE | Number of researchers staying abroad (as empoyees, as students), person |
|
| 1990 | 30 256 | 8 489 | 17 849 | 11 618 | 36 384 | 17 550 | 11 711 | 7 123 | 1 300 |
| 1991 | 26 763 | 7 711 | 14 238 | 10 217 | 29 397 | 14 471 | 8 903 | 6 023 | 1 249 |
| 1992 | 24 110 | 7 361 | 11 449 | 8 320 | 24 192 | 12 311 | 7 152 | 4 729 | 1 079 |
| 1993 | 23 012 | 7 338 | 9 761 | 8 226 | 22 609 | 11 818 | 6 003 | 4 788 | 894 |
| 1994 | 22 401 | 7 328 | 9 691 | 7 718 | 22 008 | 11 752 | 5 922 | 4 334 | 720 |
| 1995 | 20 859 | 7 092 | 9 612 | 7 617 | 19 585 | 10 499 | 5 207 | 3 879 | 589 |
| 1996 | 20 485 | 6 649 | 9 244 | 7 557 | 19 776 | 10 408 | 5 114 | 4 254 | 766 |
| 1997 | 21 999 | 7 367 | 9 375 | 8 252 | 20 758 | 11 154 | 5 205 | 4 399 | 654 |
| 1998 | 23 547 | 8 129 | 9 209 | 8 561 | 20 315 | 11 731 | 4 907 | 3 677 | 556 |
| 1999 | 24 609 | 7 554 | 9 036 | 8 443 | 21 329 | 12 579 | 5 037 | 3 713 | 511 |
| 2000 | 27 876 | 9 537 | 8 313 | 9 136 | 23 534 | 14 406 | 5 166 | 3 962 | 557 |
| 2001 | 28 351 | 9 363 | 8 098 | 9 227 | 22 942 | 14 666 | 4 752 | 3 524 | 570 |
| 2002 | 29 764 | 10 039 | 8 965 | 9 998 | 23 703 | 14 965 | 4 936 | 3 802 | 569 |
| 2003 | 30 292 | 10 647 | 8 659 | 9 730 | 23 311 | 15 180 | 4 641 | 3 490 | 531 |
| 2004 | 30 420 | 10 484 | 8 873 | 10 322 | 22 826 | 14 904 | 4 713 | 3 209 | 412 |
| 2005 | 31 407 | 10 731 | 8 663 | 9 653 | 23 239 | 15 878 | 4 591 | 2 770 | 413 |
| 2006 | 32 786 | 10 973 | 8 441 | 9 184 | 25 971 | 17 547 | 4 943 | 3 481 | 388 |
| 2007 | 33 059 | 11 077 | 8 474 | 7 952 | 25 954 | 17 391 | 5 141 | 3 422 | 437 |
| 2008 | 33 739 | 11 139 | 8 456 | 8 084 | 27 403 | 18 504 | 5 237 | 3 662 | 386 |
| 2009 | 35 267 | 11 323 | 8 739 | 8 516 | 29 795 | 20 064 | 5 527 | 4 204 | 454 |
| 2010 | 35 700 | 11 418 | 9 329 | 8 962 | 31 480 | 21 342 | 5 967 | 4 171 | 398 |
| 2011 | 36 945 | 11 729 | 9 797 | 8 644 | 33 960 | 23 019 | 6 506 | 4 435 | 435 |
| 2012 | 37 019 | 11 453 | 10 216 | 9 251 | 35 732 | 23 837 | 6 993 | 4 902 | 422 |
| 2013 | 37 803 | 11 462 | 11 247 | 9 187 | 38 163 | 25 038 | 7 748 | 5 377 | 373 |
| 2014 | 39 190 | 11 897 | 10 069 | 7 926 | 37 329 | 26 213 | 6 833 | 4 283 | 355 |
| 2015 | 38 418 | 11 848 | 10 303 | 7 514 | 36 847 | 25 316 | 7 112 | 4 419 | 363 |
| 2016 | 38 915 | 11 969 | 9 097 | 6 624 | 35 757 | 25 804 | 6 252 | 3 701 | 287 |
| 2017 | 42 729 | 13 024 | 10 729 | 7 474 | 40 432 | 28 426 | 7 495 | 4 511 | 245 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Total number of researchers, headcount | Total number of researchers, female, headcount | Total R&D staff number of technicians, headcount | Total R&D staff number of other supporting staff, headcount | Calculated R&D staff number, FTE | Calculated R&D staff number of researchers, FTE | Calculated R&D staff number of technicians, FTE | Calculated R&D staff number of other supporting staff, FTE | Number of researchers staying abroad (as empoyees, as students), person |  |  |  |
|  |  | Estimations |
| 1990 | 16 | 19 | 1 | 1 | 5 | 11 | 1 | 1 | 1 | 1000 | 1990 | 1082 |
| 1991 | 20 | 21 | 2 | 3 | 11 | 19 | 2 | 2 | 2 | 1000 | 1991 | 1055 |
| 1992 | 22 | 24 | 3 | 17 | 15 | 22 | 5 | 6 | 3 | 1000 | 1992 | 1017 |
| 1993 | 24 | 25 | 10 | 19 | 22 | 23 | 11 | 5 | 4 | 1000 | 1993 | 991 |
| 1994 | 25 | 26 | 11 | 23 | 23 | 24 | 13 | 11 | 6 | 1000 | 1994 | 970 |
| 1995 | 27 | 27 | 12 | 24 | 28 | 27 | 16 | 17 | 8 | 1000 | 1995 | 946 |
| 1996 | 28 | 28 | 15 | 25 | 27 | 28 | 20 | 13 | 5 | 1000 | 1996 | 944 |
| 1997 | 26 | 23 | 13 | 18 | 25 | 26 | 17 | 10 | 7 | 1000 | 1997 | 967 |
| 1998 | 23 | 20 | 16 | 14 | 26 | 25 | 24 | 21 | 12 | 1000 | 1998 | 948 |
| 1999 | 21 | 22 | 18 | 16 | 24 | 21 | 21 | 19 | 14 | 1000 | 1999 | 951 |
| 2000 | 19 | 17 | 27 | 11 | 17 | 20 | 18 | 16 | 11 | 1000 | 2000 | 1003 |
| 2001 | 18 | 18 | 28 | 8 | 20 | 18 | 25 | 23 | 9 | 1000 | 2001 | 997 |
| 2002 | 17 | 16 | 19 | 4 | 16 | 16 | 23 | 18 | 10 | 1000 | 2002 | 1036 |
| 2003 | 15 | 14 | 23 | 5 | 18 | 15 | 27 | 24 | 13 | 1000 | 2003 | 1025 |
| 2004 | 14 | 15 | 20 | 2 | 21 | 17 | 26 | 27 | 20 | 1000 | 2004 | 964 |
| 2005 | 13 | 13 | 22 | 6 | 19 | 14 | 28 | 28 | 19 | 1000 | 2005 | 964 |
| 2006 | 12 | 12 | 26 | 10 | 13 | 12 | 22 | 25 | 22 | 1000 | 2006 | 968 |
| 2007 | 11 | 11 | 24 | 21 | 14 | 13 | 19 | 26 | 16 | 1000 | 2007 | 992 |
| 2008 | 10 | 10 | 25 | 20 | 12 | 10 | 15 | 22 | 23 | 1000 | 2008 | 972 |
| 2009 | 9 | 9 | 21 | 15 | 10 | 9 | 14 | 14 | 15 | 1000 | 2009 | 1032 |
| 2010 | 8 | 8 | 14 | 12 | 9 | 8 | 12 | 15 | 21 | 1000 | 2010 | 1013 |
| 2011 | 7 | 5 | 9 | 13 | 8 | 7 | 9 | 8 | 17 | 1000 | 2011 | 1048 |
| 2012 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 4 | 18 | 1000 | 2012 | 1058 |
| 2013 | 5 | 6 | 4 | 9 | 2 | 5 | 3 | 3 | 24 | 1000 | 2013 | 1011 |
| 2014 | 2 | 3 | 8 | 22 | 3 | 2 | 8 | 12 | 26 | 1000 | 2014 | 1011 |
| 2015 | 4 | 4 | 6 | 26 | 4 | 4 | 6 | 9 | 25 | 1000 | 2015 | 1011 |
| 2016 | 3 | 2 | 17 | 28 | 6 | 3 | 10 | 20 | 27 | 1000 | 2016 | 1011 |
| 2017 | 1 | 1 | 5 | 27 | 1 | 1 | 4 | 7 | 28 | 1000 | 2017 | 1011 |
|  | Publications | R&D units | Patents | Staff Numbers | Aggregation |
| 1990 | 959 | 958 | 1000 | 1082 | 1003 |
| 1991 | 956 | 957 | 1000 | 1055 | 977 |
| 1992 | 966 | 951 | 1000 | 1017 | 974 |
| 1993 | 970 | 960 | 1000 | 991 | 979 |
| 1994 | 978 | 955 | 1000 | 970 | 970 |
| 1995 | 961 | 956 | 1000 | 946 | 965 |
| 1996 | 976 | 967 | 1000 | 944 | 968 |
| 1997 | 989 | 979 | 1000 | 967 | 982 |
| 1998 | 998 | 985 | 1000 | 948 | 981 |
| 1999 | 999 | 986 | 1000 | 951 | 984 |
| 2000 | 1011 | 989 | 1011 | 1003 | 1007 |
| 2001 | 1014 | 1010 | 1011 | 997 | 1010 |
| 2002 | 1027 | 1018 | 1012 | 1036 | 1033 |
| 2003 | 1026 | 1022 | 1002 | 1025 | 1024 |
| 2004 | 1017 | 1024 | 990 | 964 | 977 |
| 2005 | 1018 | 1026 | 988 | 964 | 985 |
| 2006 | 1021 | 1028 | 1000 | 968 | 1019 |
| 2007 | 1024 | 1030 | 1000 | 992 | 1030 |
| 2008 | 1018 | 1025 | 1000 | 972 | 1010 |
| 2009 | 1019 | 1027 | 1000 | 1032 | 1032 |
| 2010 | 1023 | 1028 | 994 | 1013 | 1009 |
| 2011 | 1031 | 1029 | 994 | 1048 | 1020 |
| 2012 | 1032 | 1025 | 1006 | 1058 | 1037 |
| 2013 | 996 | 1024 | 1000 | 1011 | 1008 |
| 2014 | 1002 | 1020 | 1000 | 1011 | 1009 |
| 2015 | 988 | 1007 | 1000 | 1011 | 999 |
| 2016 | 986 | 997 | 1000 | 1011 | 997 |
| 2017 | 1000 | 1018 | 1000 | 1011 | 1007 |

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| --- | --- | --- | --- | --- | --- |
|  | Publications | R&D units | Patents | Staff Numbers |  |
| 1990 | 27 | 24 | 7 | 1 | 1000 |
| 1991 | 28 | 25 | 7 | 3 | 1000 |
| 1992 | 25 | 28 | 7 | 8 | 1000 |
| 1993 | 24 | 23 | 7 | 18 | 1000 |
| 1994 | 22 | 27 | 7 | 20 | 1000 |
| 1995 | 26 | 26 | 7 | 27 | 1000 |
| 1996 | 23 | 22 | 7 | 28 | 1000 |
| 1997 | 19 | 21 | 7 | 22 | 1000 |
| 1998 | 17 | 20 | 7 | 26 | 1000 |
| 1999 | 16 | 19 | 7 | 25 | 1000 |
| 2000 | 13 | 18 | 2 | 15 | 1000 |
| 2001 | 12 | 15 | 2 | 16 | 1000 |
| 2002 | 3 | 13 | 1 | 5 | 1000 |
| 2003 | 4 | 11 | 5 | 7 | 1000 |
| 2004 | 11 | 9 | 27 | 23 | 1000 |
| 2005 | 9 | 6 | 28 | 23 | 1000 |
| 2006 | 7 | 4 | 16 | 21 | 1000 |
| 2007 | 5 | 1 | 16 | 17 | 1000 |
| 2008 | 9 | 7 | 16 | 19 | 1000 |
| 2009 | 8 | 5 | 16 | 6 | 1000 |
| 2010 | 6 | 3 | 26 | 9 | 1000 |
| 2011 | 2 | 2 | 25 | 4 | 1000 |
| 2012 | 1 | 7 | 4 | 2 | 1000 |
| 2013 | 18 | 9 | 16 | 10 | 1000 |
| 2014 | 14 | 12 | 16 | 10 | 1000 |
| 2015 | 20 | 16 | 16 | 10 | 1000 |
| 2016 | 21 | 17 | 16 | 10 | 1000 |
| 2017 | 15 | 13 | 16 | 10 | 1000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patents - Publications | Patents - Units | Patents - Staff |  |
| 1990 | 1,04 | 1,04 | 0,92 | 1000 |
| 1991 | 1,05 | 1,05 | 0,95 | 1000 |
| 1992 | 1,04 | 1,05 | 0,98 | 1000 |
| 1993 | 1,03 | 1,04 | 1,01 | 1000 |
| 1994 | 1,02 | 1,05 | 1,03 | 1000 |
| 1995 | 1,04 | 1,05 | 1,06 | 1000 |
| 1996 | 1,03 | 1,03 | 1,06 | 1000 |
| 1997 | 1,01 | 1,02 | 1,03 | 1000 |
| 1998 | 1,00 | 1,02 | 1,05 | 1000 |
| 1999 | 1,00 | 1,01 | 1,05 | 1000 |
| 2000 | 1,00 | 1,02 | 1,01 | 1000 |
| 2001 | 1,00 | 1,00 | 1,01 | 1000 |
| 2002 | 0,99 | 0,99 | 0,98 | 1000 |
| 2003 | 0,98 | 0,98 | 0,98 | 1000 |
| 2004 | 0,97 | 0,97 | 1,03 | 1000 |
| 2005 | 0,97 | 0,96 | 1,02 | 1000 |
| 2006 | 0,98 | 0,97 | 1,03 | 1000 |
| 2007 | 0,98 | 0,97 | 1,01 | 1000 |
| 2008 | 0,98 | 0,98 | 1,03 | 1000 |
| 2009 | 0,98 | 0,97 | 0,97 | 1000 |
| 2010 | 0,97 | 0,97 | 0,98 | 1000 |
| 2011 | 0,96 | 0,97 | 0,95 | 1000 |
| 2012 | 0,97 | 0,98 | 0,95 | 1000 |
| 2013 | 1,00 | 0,98 | 0,99 | 1000 |
| 2014 | 1,00 | 0,98 | 0,99 | 1000 |
| 2015 | 1,01 | 0,99 | 0,99 | 1000 |
| 2016 | 1,01 | 1,00 | 0,99 | 1000 |
| 2017 | 1,00 | 0,98 | 0,99 | 1000 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Patents - Publications | Patents - Units | Patents - Staff |  | Aggregation |
| 1990 | 2 | 5 | 28 | 1000 | 998 |
| 1991 | 1 | 4 | 27 | 1000 | 1001 |
| 1992 | 4 | 1 | 20 | 1000 | 1027 |
| 1993 | 5 | 6 | 12 | 1000 | 1021 |
| 1994 | 7 | 2 | 7 | 1000 | 1032 |
| 1995 | 3 | 3 | 2 | 1000 | 1036 |
| 1996 | 6 | 7 | 1 | 1000 | 1033 |
| 1997 | 10 | 9 | 5 | 1000 | 1020 |
| 1998 | 12 | 10 | 3 | 1000 | 1019 |
| 1999 | 13 | 11 | 4 | 1000 | 1016 |
| 2000 | 14 | 8 | 14 | 1000 | 1008 |
| 2001 | 17 | 13 | 11 | 1000 | 1003 |
| 2002 | 18 | 14 | 23 | 1000 | 989 |
| 2003 | 22 | 18 | 22 | 1000 | 982 |
| 2004 | 25 | 25 | 9 | 1000 | 985 |
| 2005 | 27 | 28 | 10 | 1000 | 971 |
| 2006 | 21 | 23 | 6 | 1000 | 994 |
| 2007 | 23 | 24 | 13 | 1000 | 984 |
| 2008 | 19 | 21 | 8 | 1000 | 996 |
| 2009 | 20 | 22 | 24 | 1000 | 978 |
| 2010 | 26 | 26 | 21 | 1000 | 971 |
| 2011 | 28 | 27 | 26 | 1000 | 963 |
| 2012 | 24 | 17 | 25 | 1000 | 978 |
| 2013 | 11 | 20 | 15 | 1000 | 998 |
| 2014 | 16 | 19 | 15 | 1000 | 994 |
| 2015 | 9 | 15 | 15 | 1000 | 1005 |
| 2016 | 8 | 12 | 15 | 1000 | 1009 |
| 2017 | 15 | 16 | 15 | 1000 | 998 |