

Employment Data for San Diego Region's Technology Clusters

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Employment By Technology Cluster										
Biomedical Products	7,645	7,184	7,351	7,125	6,559	6,431	6,135	5,765	6,444	6,256
Biotechnology & Pharmaceuticals	12,311	14,881	16,266	16,338	17,235	18,629	20,371	23,008	21,385	23,056
Communications	12,340	13,443	14,144	14,721	14,789	16,422	18,174	20,646	25,771	24,878
Computer & Electronics Manufacturing	23,427	20,979	21,124	20,022	20,303	21,679	22,990	25,058	23,734	24,169
Defense Manufacturing	40,844	35,143	28,435	22,997	20,466	18,953	19,578	19,113	19,559	18,149
Environmental Technology	3,238	3,368	3,157	3,150	3,356	4,154	4,280	4,469	4,627	4,580
Horticulture	6,097	5,995	5,620	5,889	5,900	6,243	6,175	6,325	6,483	6,644
Recreational Goods	2,216	2,410	2,930	3,770	5,081	5,270	5,631	6,195	4,598	4,939
Software & Computer Services	8,935	9,510	10,315	11,422	12,367	13,645	15,453	17,660	18,363	21,290
Technology Cluster Employment:	117,053	112,913	109,342	105,434	106,056	111,426	118,788	128,239	130,964	133,961
Total Regional Employment:	976,975	957,505	949,040	960,927	982,357	1,016,423	1,060,167	1,115,048	1,157,670	1,198,357
Technology Share of Region:	12.0%	11.8%	11.5%	11.0%	10.8%	11.0%	11.2%	11.5%	11.3%	11.2%
Non-Technology Employment:	859,922	844,592	839,698	855,493	876,301	904,997	941,379	986,809	1,026,706	1,064,396
Employment Shares By Technology Cluster										
Biomedical Products	6.5%	6.4%	6.7%	6.8%	6.2%	5.8%	5.2%	4.5%	4.9%	4.7%
Biotechnology & Pharmaceuticals	10.5%	13.2%	14.9%	15.5%	16.3%	16.7%	17.1%	17.9%	16.3%	17.2%
Communications	10.5%	11.9%	12.9%	14.0%	13.9%	14.7%	15.3%	16.1%	19.7%	18.6%
Computer & Electronics Manufacturing	20.0%	18.6%	19.3%	19.0%	19.1%	19.5%	19.4%	19.5%	18.1%	18.0%
Defense Manufacturing	34.9%	31.1%	26.0%	21.8%	19.3%	17.0%	16.5%	14.9%	14.9%	13.5%
Environmental Technology	2.8%	3.0%	2.9%	3.0%	3.2%	3.7%	3.6%	3.5%	3.5%	3.4%
Horticulture	5.2%	5.3%	5.1%	5.6%	5.6%	5.6%	5.2%	4.9%	5.0%	5.0%
Recreational Goods	1.9%	2.1%	2.7%	3.6%	4.8%	4.7%	4.7%	4.8%	3.5%	3.7%
Software & Computer Services	7.6%	8.4%	9.4%	10.8%	11.7%	12.2%	13.0%	13.8%	14.0%	15.9%
Technology Cluster Employment:	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Source:	California Employment Development Department									

Payroll Data for San Diego Region's Technology Clusters

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Payroll By Technology Cluster (in millions of Nominal Dollars)										
Biomedical Products	245.3	235.2	245.2	242.9	251.5	253.9	248.8	239.4	263.3	289.2
Biotechnology & Pharmaceuticals	466.5	604.9	679.4	712.6	795.8	936.2	1,125.0	1,287.3	1,287.4	1,619.9
Communications	496.1	570.8	641.4	648.6	701.9	795.6	895.5	1,060.3	2,739.3	2,893.4
Computer & Electronics Manufacturing	900.0	824.7	843.2	858.4	902.0	1,083.1	1,212.0	1,355.0	1,463.9	1,755.1
Defense Manufacturing	1,498.7	1,458.1	1,144.3	965.1	878.6	806.0	913.6	1,004.6	996.5	963.9
Environmental Technology	104.0	115.5	114.1	115.7	126.9	161.0	176.7	193.0	202.2	208.1
Horticulture	95.0	96.3	91.0	96.6	101.1	109.4	118.5	139.3	142.5	148.7
Recreational Goods	51.0	65.8	102.2	139.4	164.6	195.7	216.3	225.1	183.5	208.4
Software & Computer Services	403.3	423.4	475.0	547.4	638.3	721.1	881.0	1,126.6	1,285.5	1,689.5
Technology Cluster Payroll:	4,260.0	4,394.6	4,335.9	4,326.7	4,560.6	5,062.0	5,787.6	6,630.6	8,564.2	9,776.1
Total Regional Payroll:	24,423	25,106	25,151	26,195	27,368	29,266	32,304	35,872	40,187	45,024
Technology Share of Region:	17.4%	17.5%	17.2%	16.5%	16.7%	17.3%	17.9%	18.5%	21.3%	21.7%
Non-Technology Payroll:	20,163	20,712	20,815	21,868	22,808	24,204	26,516	29,242	31,622	35,248
Payroll Shares By Technology Cluster:										
Biomedical Products	5.8%	5.4%	5.7%	5.6%	5.5%	5.0%	4.3%	3.6%	3.1%	3.0%
Biotechnology & Pharmaceuticals	10.9%	13.8%	15.7%	16.5%	17.4%	18.5%	19.4%	19.4%	15.0%	16.6%
Communications	11.6%	13.0%	14.8%	15.0%	15.4%	15.7%	15.5%	16.0%	32.0%	29.6%
Computer & Electronics Manufacturing	21.1%	18.8%	19.4%	19.8%	19.8%	21.4%	20.9%	20.4%	17.1%	18.0%
Defense Manufacturing	35.2%	33.2%	26.4%	22.3%	19.3%	15.9%	15.8%	15.2%	11.6%	9.9%
Environmental Technology	2.4%	2.6%	2.6%	2.7%	2.8%	3.2%	3.1%	2.9%	2.4%	2.1%
Horticulture	2.2%	2.2%	2.1%	2.2%	2.2%	2.2%	2.0%	2.1%	1.7%	1.5%
Recreational Goods	1.2%	1.5%	2.4%	3.2%	3.6%	3.9%	3.7%	3.4%	2.1%	2.1%
Software & Computer Services	9.5%	9.6%	11.0%	12.7%	14.0%	14.2%	15.2%	17.0%	15.0%	17.3%
Technology Cluster Payroll:	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Source:	California Employment Development Department									

Number of Firms in San Diego Region's Technology Clusters

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Firms By Technology Cluster										
Biomedical Products	111	107	117	121	127	131	135	127	137	125
Biotechnology & Pharmaceuticals	310	314	321	323	365	397	408	449	507	540
Communications	280	318	338	363	405	442	469	522	551	525
Computer & Electronics Manufacturing	296	296	313	325	328	346	338	338	332	302
Defense Manufacturing	152	159	165	160	141	139	132	138	145	151
Environmental Technology	84	84	87	87	102	109	106	113	123	109
Horticulture	518	510	522	507	521	518	484	509	504	472
Recreational Goods	89	94	105	105	119	121	129	137	141	124
Software & Computer Services	572	599	657	714	887	990	1,024	1,251	1,397	1,440
Technology Cluster:	2,412	2,481	2,625	2,705	2,995	3,193	3,225	3,584	3,837	3,788
Total Number Regional Firms:	65,518	67,623	69,153	66,742	71,680	69,144	66,172	72,540	75,147	72,365
Technology Share of Region:	3.7%	3.7%	3.8%	4.1%	4.2%	4.6%	4.9%	4.9%	5.1%	5.2%
Non-Technology Firms:	63,106	65,142	66,528	64,037	68,685	65,951	62,947	68,956	71,310	68,577
Firms Shares By Technology Cluster										
Biomedical Products	4.6%	4.3%	4.5%	4.5%	4.2%	4.1%	4.2%	3.5%	3.6%	3.3%
Biotechnology & Pharmaceuticals	12.9%	12.7%	12.2%	11.9%	12.2%	12.4%	12.7%	12.5%	13.2%	14.3%
Communications	11.6%	12.8%	12.9%	13.4%	13.5%	13.8%	14.5%	14.6%	14.4%	13.9%
Computer & Electronics Manufacturing	12.3%	11.9%	11.9%	12.0%	11.0%	10.8%	10.5%	9.4%	8.7%	8.0%
Defense Manufacturing	6.3%	6.4%	6.3%	5.9%	4.7%	4.4%	4.1%	3.9%	3.8%	4.0%
Environmental Technology	3.5%	3.4%	3.3%	3.2%	3.4%	3.4%	3.3%	3.2%	3.2%	2.9%
Horticulture	21.5%	20.6%	19.9%	18.7%	17.4%	16.2%	15.0%	14.2%	13.1%	12.5%
Recreational Goods	3.7%	3.8%	4.0%	3.9%	4.0%	3.8%	4.0%	3.8%	3.7%	3.3%
Software & Computer Services	23.7%	24.1%	25.0%	26.4%	29.6%	31.0%	31.8%	34.9%	36.4%	38.0%
Technology Cluster Firms:	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Source:	California Employment Development Department									
Note:	Number firms in the Recreational Goods Manufacturing cluster in 1997 is an estimate									

Average Annual Wages for San Diego Technology Clusters and Non-Technology Employees

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Average Annual Wage By Technology Cluster										
Biomedical Products	\$ 32,091	\$ 32,746	\$ 33,359	\$ 34,088	\$ 38,339	\$ 39,481	\$ 40,556	\$ 41,529	\$ 40,856	\$ 46,227
Biotechnology & Pharmaceuticals	\$ 37,888	\$ 40,645	\$ 41,771	\$ 43,617	\$ 46,173	\$ 50,256	\$ 55,228	\$ 55,949	\$ 60,200	\$ 70,259
Communications	\$ 40,199	\$ 42,460	\$ 45,345	\$ 44,059	\$ 47,462	\$ 48,447	\$ 49,273	\$ 51,356	\$ 106,296	\$ 116,301
Computer & Electronics Manufacturing	\$ 38,418	\$ 39,311	\$ 39,918	\$ 42,872	\$ 44,429	\$ 49,959	\$ 52,716	\$ 54,074	\$ 61,679	\$ 72,616
Defense Manufacturing	\$ 36,694	\$ 41,489	\$ 40,244	\$ 41,965	\$ 42,930	\$ 42,525	\$ 46,667	\$ 52,562	\$ 50,949	\$ 53,111
Environmental Technology	\$ 32,120	\$ 34,283	\$ 36,151	\$ 36,746	\$ 37,806	\$ 38,765	\$ 41,296	\$ 43,183	\$ 43,709	\$ 45,429
Horticulture	\$ 15,589	\$ 16,064	\$ 16,188	\$ 16,396	\$ 17,130	\$ 17,517	\$ 19,188	\$ 22,018	\$ 21,986	\$ 22,383
Recreational Goods	\$ 23,025	\$ 27,286	\$ 34,896	\$ 36,983	\$ 32,388	\$ 37,143	\$ 38,420	\$ 36,340	\$ 39,916	\$ 42,197
Software & Computer Services	\$ 45,141	\$ 44,526	\$ 46,045	\$ 47,924	\$ 51,612	\$ 52,846	\$ 57,012	\$ 63,792	\$ 70,007	\$ 79,360
Technology Average Wage:	\$ 36,394	\$ 38,920	\$ 39,655	\$ 41,037	\$ 43,002	\$ 45,429	\$ 48,722	\$ 51,705	\$ 65,394	\$ 72,978
Non Technology Average Wage:	\$ 23,447	\$ 24,523	\$ 24,789	\$ 25,562	\$ 26,027	\$ 26,745	\$ 28,167	\$ 29,632	\$ 30,800	\$ 33,115
Wage Ratio: Tech / Non-Tech:	155.2%	158.7%	160.0%	160.5%	165.2%	169.9%	173.0%	174.5%	212.3%	220.4%
Average Wage for Entire Region:	\$ 24,999	\$ 26,221	\$ 26,502	\$ 27,260	\$ 27,860	\$ 28,793	\$ 30,470	\$ 32,171	\$ 34,713	\$ 37,571

Average Annual Growth Rates

Technology Cluster:	Employment			Payroll	Nominal Average Wages			Firms
	91 to 94	94 to 2000	91 to 2000		91 to 2000	91 to 94	94 to 2000	91 to 2000
Biomedical Products	-2.3%	-2.0%	-2.0%	2.0%	2.1%	5.9%	4.9%	1.4%
Biotechnology & Pharmaceuticals	10.9%	6.9%	9.7%	27.5%	5.0%	10.2%	9.5%	8.2%
Communications	6.4%	11.5%	11.3%	53.7%	3.2%	27.3%	21.0%	9.7%
Computer & Electronics Manufacturing	-4.8%	3.5%	0.4%	10.6%	3.9%	11.6%	9.9%	0.2%
Defense Manufacturing	-14.6%	-3.5%	-6.2%	-4.0%	4.8%	4.4%	5.0%	-0.1%
Environmental Technology	-0.9%	7.6%	4.6%	11.1%	4.8%	3.9%	4.6%	3.3%
Horticulture	-1.1%	2.1%	1.0%	6.3%	1.7%	6.1%	4.8%	-1.0%
Recreational Goods	23.4%	5.2%	13.7%	34.3%	20.2%	2.3%	9.3%	4.4%
Software & Computer Services	9.3%	14.4%	15.4%	35.4%	2.1%	10.9%	8.4%	16.9%
Technology Total:	-3.3%	4.5%	1.6%	14.4%	4.3%	13.0%	11.2%	6.3%
Non Technology:	-0.2%	4.1%	2.6%	8.3%	3.0%	4.9%	4.6%	1.2%
Region Total:	-0.5%	4.1%	2.5%	9.4%	3.0%	6.3%	5.6%	1.0%