

Revised DBEDT Technology Definition (NAICS-Based)

Based on American Electronics Assoc. (AeA) definition with some reorganization/rephrasing, additions (in red *italic*) and deletions (see end of list).

COMPREHENSIVE CLASSIFICATIONS

1. SCIENTIFIC & TECHNOLOGICAL RESEARCH & DEVELOPMENT

- a. *1111 Oil Seed & Grain Farming [Represents Primarily Agricultural BioTechnology]*
- b. 541710 Research & Development in the Physical, Engineering, & Life Sciences

2. MANUFACTURE OF TECHNOLOGY PRODUCTS

a. **Medical & Pharmaceutical Manufacturing**

- 325411 Medicinal and Botanical Manufacturing*
- 325412 Pharmaceutical Preparation Manufacturing*
- 325413 In-Vitro Diagnostic Substance Manufacturing*
- 325414 Other Biological Product Manufacturing*
- 334510 Electromedical & Electrotherapeutic Apparatus
- 334517 Irradiation Apparatus
- 339112 Surgical & Medical Instrument Manufacturing*
- 339113 Surgical Appliance & Supply Manufacturing*
- 339114 Dental Equipment & Supplies Manufacturing*
- 339115 Ophthalmic Goods Manufacturing*
- 339116 Dental Laboratories (Mfg)*

b. **Miscellaneous Technology Manufacturing**

- 333314 Optical Instrument & Lens Mfg
- 333315 Photographic & Photocopying Equipment
- 334111 Electronic Computers
- 334112 Computer Storage Devices
- 334113 Computer Terminals
- 334119 Other Computer Peripheral Equipment
- 334210 Telephone Apparatus
- 334220 Radio & TV Broadcasting & Wireless Communications Equipment
- 334290 Other Communications Equipment
- 335921 Fiber Optic Cables
- 334310 Audio & Video Equipment
- 334413 Semiconductor & Related Devices
- 334411 Electron Tubes
- 334412 Bare Printed Circuit Boards
- 334414 Electronic Capacitors
- 334415 Electronic Resistors
- 334416 Electronic Coils, Transformers, & other Inductors
- 334417 Electronic Connectors
- 334418 Printed Circuit Assembly
- 334419 Other Electronic Components
- 333295 Semiconductor Machinery

334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical Systems and Instruments
334512 Automatic Environmental Controls
334513 Industrial Process Control Instruments
334514 Totalizing Fluid Meter & Counting Devices
334515 Electricity Measuring & Testing Equipment
334516 Analytical Laboratory Instruments
334519 Other Measuring & Controlling Instruments

336411 Aircraft Manufacturing

336412 Aircraft Engine and Engine Parts Manufacturing

336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing

336414 Guided Missile and Space Vehicle Manufacturing

336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Mfg

336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing

3. TECHNOLOGY SERVICES

a. Communications Services

517110 Wired Telecommunications Carriers
517211 Paging Services
517212 Cellular & Other Wireless Telecommunications
517310 Telecommunications Resellers
517410 Satellite Telecommunications
517510 Cable & Other Program Distribution
517910 Other Telecommunications

b. Computer Software & Programming

511210 Software Publishers
541511 Custom Computer Programming

c. Computer Systems Design & Related Services

541512 Computer Systems Design
541513 Computer Facilities Management
541519 Other Computer Related Services
611420 Computer Training

e. Internet Infrastructure & Services

516110 Internet Publishing & Broadcasting
518111 Internet Service Providers
518112 Web Search Portals
518210 Data Processing, Hosting, & Related Services

f. Testing & Diagnostic Facilities

541380 Testing Laboratories
621511 Medical Laboratories
621512 Diagnostic Imaging Centers

DELETIONS FROM AeA DEFINITION

Engineering Services

541330 Engineering Services

Source: DBEDT, Oct 2006

Hawaii Technology Sector, 2001 to 2005

		YEAR					Growth %						
MAJOR SECTOR	SUB-SECTOR	MEASURE	2001	2002	2003	2004	2005est	2002	2003	2004	2005	2001-2005	
SCIENTIFIC AND TECHNOLOGY R&D	Agricultural Biotechnology R&D	Jobs	697	759	785	841	950	9.0%	3.3%	7.2%	13.0%	36.3%	
		Wages (\$)	20,021,029	21,086,206	23,090,948	26,976,814	32,551,330	5.3%	9.5%	16.8%	20.7%	62.6%	
		Ave. Wage	28,731	27,769	29,425	32,077	34,265	-3.3%	6.0%	9.0%	6.8%	19.3%	
		Establishments	14	15	15	14	12	7.1%	0.0%	-6.7%	-14.3%	-14.3%	
	R&D in Phys., Engr, & Life Sci	Jobs	1,214	1,286	1,458	1,538	1,650	6.0%	13.4%	5.5%	7.3%	35.9%	
		Wages (\$)	66,882,354	74,730,972	92,326,960	102,959,975	115,499,097	11.7%	23.5%	11.5%	12.2%	72.7%	
		Ave. Wage	55,104	58,111	63,321	66,940	69,999	5.5%	9.0%	5.7%	4.6%	27.0%	
		Establishments	113	116	125	124	137	2.7%	7.8%	-0.8%	10.5%	21.2%	
	TOTAL R&D	Jobs	1,911	2,045	2,243	2,379	2,600	7.1%	9.7%	6.1%	9.3%	36.1%	
	Wages (\$)	86,903,383	95,817,178	115,417,908	129,936,789	148,050,427	10.3%	20.5%	12.6%	13.9%	70.4%		
	Ave. Wage	45,485	46,847	51,461	54,616	56,942	3.0%	9.8%	6.1%	4.3%	25.2%		
	Establishments	127	131	140	138	149	3.1%	6.9%	-1.4%	8.0%	17.3%		
	MANUFACTURE OF TECHNOLOGY PRODUCTS	Medicinal & Pharmaceutical Mfg	Jobs	326	324	298	296	329	-0.6%	-7.9%	-0.8%	11.4%	1.2%
			Wages (\$)	9,817,766	10,837,633	10,245,011	10,312,519	13,065,409	10.4%	-5.5%	0.7%	26.7%	33.1%
Ave. Wage			30,147	33,493	34,360	34,869	39,657	11.1%	2.6%	1.5%	13.7%	31.5%	
Establishments			51	57	55	50	54	11.8%	-3.5%	-9.1%	7.0%	4.9%	
Misc Technology Mfg		Jobs	327	145	44	38	62	-55.8%	-69.4%	-13.9%	61.6%	-81.2%	
		Wages (\$)	26,048,513	9,152,440	1,765,243	1,642,447	3,573,559	-64.9%	-80.7%	-7.0%	117.6%	-86.3%	
		Ave. Wage	79,700	63,339	39,892	43,128	58,049	-20.5%	-37.0%	8.1%	34.6%	-27.2%	
		Establishments	5	6	7	10	19	20.0%	16.7%	42.9%	87.5%	275.0%	
TOTAL MFG		Jobs	653	468	342	334	391	-28.3%	-26.8%	-2.5%	17.1%	-40.1%	
Wages (\$)		35,866,279	19,990,073	12,010,254	11,954,966	16,638,967	-44.3%	-39.9%	-0.5%	39.2%	-53.6%		
Ave. Wage		54,967	42,706	35,075	35,811	42,552	-22.3%	-17.9%	2.1%	18.8%	-22.6%		
Establishments		56	63	62	60	72	12.5%	-1.6%	-3.2%	20.5%	29.1%		
TECHNOLOGY SERVICES		Communications Services	Jobs	4,936	4,524	4,002	3,772	3,847	-8.3%	-11.5%	-5.7%	2.0%	-22.1%
			Wages (\$)	263,635,680	245,387,346	232,954,901	245,599,275	242,675,493	-6.9%	-5.1%	5.4%	-1.2%	-8.0%
	Ave. Wage		53,412	54,236	58,204	65,105	63,087	1.5%	7.3%	11.9%	-3.1%	18.1%	
	Establishments		141	189	178	170	164	34.0%	-5.8%	-4.5%	-3.5%	16.4%	
	Computer Software & Programming	Jobs	1,334	1,171	1,194	1,221	1,343	-12.2%	2.0%	2.3%	10.0%	0.7%	
		Wages (\$)	80,444,766	73,686,464	72,562,336	75,475,121	94,388,085	-8.4%	-1.5%	4.0%	25.1%	17.3%	
		Ave. Wage	60,300	62,935	60,764	61,793	70,282	4.4%	-3.4%	1.7%	13.7%	16.6%	
		Establishments	241	261	286	276	293	8.3%	9.6%	-3.5%	6.2%	21.6%	
	Computer Systems Design & Related Serv.	Jobs	2,551	2,856	3,074	3,084	3,313	12.0%	7.6%	0.3%	7.4%	29.9%	
		Wages (\$)	118,577,556	144,778,078	161,341,906	163,064,458	188,983,613	22.1%	11.4%	1.1%	15.9%	59.4%	
		Ave. Wage	46,484	50,690	52,487	52,874	57,038	9.0%	3.5%	0.7%	7.9%	22.7%	
		Establishments	245	274	279	263	282	11.8%	1.8%	-5.7%	7.3%	15.2%	
	Internet Infrastructure & Services	Jobs	801	914	721	746	694	14.2%	-21.2%	3.5%	-6.9%	-13.3%	
		Wages (\$)	37,602,853	45,611,688	39,066,237	37,493,515	35,512,973	21.3%	-14.4%	-4.0%	-5.3%	-5.6%	
		Ave. Wage	46,960	49,894	54,202	50,282	51,171	6.2%	8.6%	-7.2%	1.8%	9.0%	
		Establishments	121	114	118	117	107	-5.8%	3.5%	-0.8%	-8.5%	-11.6%	

Hawaii Technoloy Sector, 2001 to 2005

MAJOR SECTOR	SUB-SECTOR	MEASURE	YEAR					Growth %				
			2001	2002	2003	2004	2005est	2002	2003	2004	2005	2001-2005
	Testing & Diagnostics Facilities	Jobs	1,279	1,397	1,527	1,569	1,625	9.3%	9.3%	2.8%	3.6%	27.1%
		Wages (\$)	48,633,928	55,337,880	63,209,601	65,220,274	67,414,314	13.8%	14.2%	3.2%	3.4%	38.6%
		Ave. Wage	38,040	39,612	41,395	41,564	41,486	4.1%	4.5%	0.4%	-0.2%	9.1%
		Establishments	49	48	46	47	47	-2.0%	-4.2%	2.2%	0.0%	-4.1%
TOTAL SERV		Jobs	10,900	10,863	10,518	10,393	10,822	-0.3%	-3.2%	-1.2%	4.1%	-0.7%
		Wages (\$)	548,894,783	564,801,456	569,134,981	586,852,643	628,974,478	2.9%	0.8%	3.1%	7.2%	14.6%
		Ave. Wage	50,357	51,995	54,109	56,468	58,120	3.3%	4.1%	4.4%	2.9%	15.4%
		Establishments	797	886	907	873	893	11.2%	2.4%	-3.7%	2.3%	12.1%
ALL PRIVATE TECHNOLOGY		Jobs	13,463	13,376	13,104	13,106	13,813	-0.6%	-2.0%	0.0%	5.4%	2.6%
		Wages (\$)	671,664,445	680,608,707	696,563,143	728,744,398	793,663,873	1.3%	2.3%	4.6%	8.9%	18.2%
		Ave. Wage	49,889	50,883	53,159	55,606	57,458	2.0%	4.5%	4.6%	3.3%	15.2%
		Establishments	980	1,080	1,109	1,071	1,115	10.2%	2.7%	-3.4%	4.1%	13.7%
ALL PRIVATE SECTOR		Jobs	446,130	444,519	454,089	468,748	487,098	-0.4%	2.2%	3.2%	3.9%	9.2%
		Wages (\$)	13,301,622,000	13,756,399,000	14,519,181,000	15,742,130,000	16,837,174,000	3.4%	5.5%	8.4%	7.0%	26.6%
		Ave. Wage	29,816	30,947	31,974	33,583	34,566	3.8%	3.3%	5.0%	2.9%	15.9%
		Establishments	34,047	34,278	35,394	33,593	34,596	0.7%	3.3%	-5.1%	3.0%	1.6%
		Ave. Wage	29,816	30,947	31,974	33,583	34,566	3.8%	3.3%	5.0%	2.9%	15.9%

NOTE: Includes Wage & Salary Jobs Only.

SOURCE: Department of Business, Economic Development & Tourism, October 2006