

2. Software Design

The packaged software industry serves a wide range of markets, including business enterprise software, office software, educational software, and entertainment software. In the United States alone, software publishers employed over 350,000 staff in 2007.

a) Representative Operation – Advanced Software Development

Software business operations typically range in size from hundreds of programmers providing sophisticated new products, to very small groups serving niche customer markets.

The representative operation performs original technology development and ongoing application development for packaged software applications. As illustrated in Exhibit 3.50, this operation is characterized by:

- Leased office space
- A workforce consisting mostly of very highly skilled product development staff, with heavy sales and administration support.

The business is assumed to operate as a stand-alone profit center.

EXHIBIT 3.50 – SOFTWARE DESIGN

Software Development – Summary of Operating Parameters

Facilities Requirements

Class A office space leased	22,500 ft ²	(2,090 m ²)
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Other Initial Investment Requirements

Machinery and equipment – US \$'000	–
Office equipment – US \$'000	\$3,000
R&D equipment – US \$'000	\$150
Inventory – US \$'000	–
Equity financing – % of project costs	67%

Workforce

Management	17
Sales and administration	33
Dedicated product development	50
Customer support	10
Total employees	110

Energy Requirements

Electricity monthly consumption/peak demand	120,000 kWh and 360 kW
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Other Annual Operating Characteristics

Sales at full production – US \$'000	\$22,000
Operating costs – % of sales	10%
Investment in tax-eligible R&D – % of sales	–

b) International Results

International results are illustrated in Exhibit 3.51. These results reflect the combined impact of 26 location-sensitive cost components applied to the modeled operation. Detailed results, by key cost component, are presented in Exhibit 3.52.

c) Selected Cities

Exhibit 3.53 profiles results for selected cities, by country, from among the 95 cities featured in this report. Results for all other featured cities can be found in Chapter 4, Exhibit 4.7.

EXHIBIT 3.51 – SOFTWARE DESIGN

Software Development – International Results (US = 100.0)

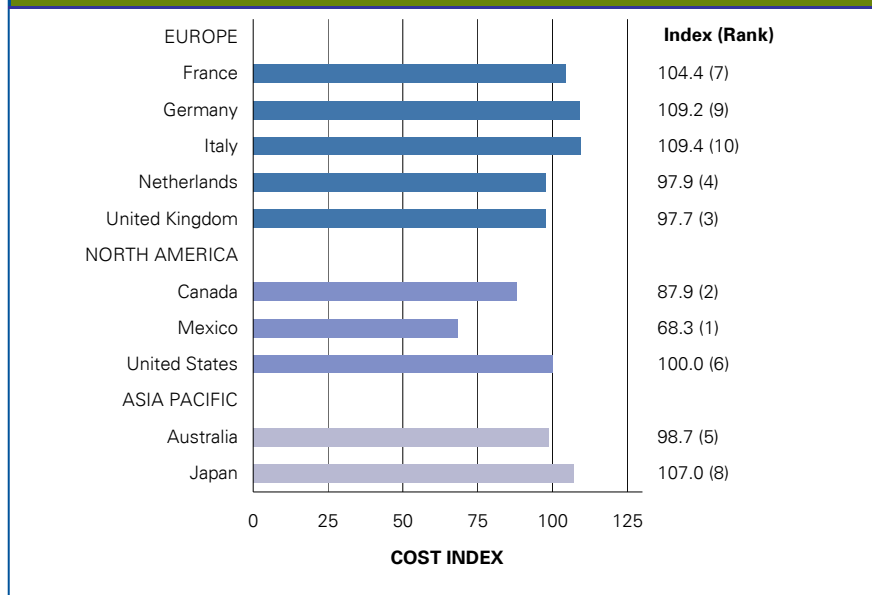


EXHIBIT 3.52 – SOFTWARE DESIGN

Software Development – Costs, by Major Component, US \$'000

	Europe					North America			Asia Pacific	
	France	Germany	Italy	Netherlands	UK	Canada	Mexico	US	Australia	Japan
Revenues	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800
Costs										
- Salaries & Wages	8,742	12,068	10,127	9,814	9,157	8,886	5,455	9,762	9,994	10,984
- Statutory Plans	3,770	1,543	2,249	1,000	908	610	333	764	1,296	1,068
- Other Benefits	1,841	2,726	3,064	3,183	3,036	2,055	1,479	2,926	2,481	2,629
- Total Labor & Benefits	14,353	16,338	15,440	13,997	13,101	11,550	7,267	13,453	13,771	14,681
- Facility Lease	1,092	635	615	454	1,169	717	424	582	741	1,312
- Transportation	-	-	-	-	-	-	-	-	-	-
- Utilities	107	162	271	158	167	122	200	134	174	159
- Interest & Depreciation	460	541	539	347	350	335	(795)	433	215	523
- Non-Income Taxes	325	-	56	7	-	17	107	260	-	77
- Location-Insensitive Costs	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080
Profit Before Income Tax	2,383	1,045	1,801	3,759	3,934	5,981	11,517	3,859	3,821	1,970
- Income Taxes ¹	786	324	1,113	954	1,108	1,347	3,270	1,447	1,170	843
Effective Rate	33.0%	31.0%	61.9%	25.4%	28.2%	22.5%	28.4%	37.5%	30.6%	42.8%
After-Tax Profit	1,596	722	687	2,805	2,826	4,634	8,247	2,413	2,651	1,127
Total Annual Costs	19,204	20,079	20,114	17,996	17,974	16,167	12,554	18,388	18,150	19,673
Index (US=100.0)	104.4	109.2	109.4	97.9	97.7	87.9	68.3	100.0	98.7	107.0
Rank	7	9	10	4	3	2	1	6	5	8

1 Income taxes may be either positive or negative, irrespective of whether profit before income tax is positive or negative, due to the impact of specific expense deduction rules, minimum taxes, and refundable income tax credits. Effective tax rates are not shown where results are not meaningful because of low profitability.

EXHIBIT 3.53 – SOFTWARE DESIGN

Software Development – Results for Selected Cities, by Country

Country and City	Index	Rank ¹	Country and City	Index	Rank ¹	Country and City	Index	Rank ¹
International Locations – All Cities						North America – Selected Cluster Cities		
AU Adelaide	94.5	42	JP Osaka	105.6	88	CA Edmonton, AB	87.7	16
Brisbane	96.2	56	Tokyo	108.4	92	Montreal, QC	86.0	13
Melbourne	96.8	59				Toronto, ON	89.8	20
Sydney	100.6	82	MX Mexico City	68.5	2	Vancouver, BC	87.4	15
			Monterrey	68.0	1			
FR Lyon	98.8	76				US Boston, MA	102.0	84
Paris	110.1	93	NL Amsterdam	98.6	73	Denver, CO	97.7	70
			Brabant Stad	97.6	69	Los Angeles, CA	102.4	85
GE Berlin	107.5	91	The Hague	97.2	64	New York City, NY	103.3	86
Frankfurt	110.8	94	Utrecht	97.4	68	North Virginia (Metro DC)	98.3	72
						Portland, OR	96.9	61
IT Milan	107.0	90	UK London	103.9	87	San Francisco, CA	105.9	89
Rome	111.7	95	Manchester	91.6	27	Seattle, WA	100.0	78

1 Rank among 95 cities.