



Okanagan Technology Industry Study 2005



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Acknowledgements

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**The Economic Development Commission
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Executive Summary

The technology industry in the Okanagan Valley has continued to grow in this, the third bi-annual high technology industry study, but the rate of new business formation has slowed from the pace exhibited in the latter half of the 1990's and the first few years of the new century. As in other high tech centers, the industry is maturing somewhat as established companies grow their markets, their revenue, and their employment base, but new start-up businesses are not as common as in the tech boom from 1997 to 2002. The annual growth in the number of technology companies in our sample is currently about 5% per year vs. 7-10% per year on previous surveys. Most of the new businesses are migrating into the Okanagan from other parts of Canada.

The technology sector growth as measured by employment and revenue growth is more robust – employment is growing at a rate of 10.8%, and revenue is growing at a rate of 10 to 25% per year.

The industry in the Okanagan continues to be dominated by the Information Technology sector, with more than half of the survey companies in that sector. The manufacturing component remains at about 25% of the technology industry, with some diversification into communication products and medical equipment adding to the existing aerospace and electrical equipment base.

The industry is hiring roughly equal numbers of new graduates and experienced workers, with technical skills accounting for 50 to 65% of those hires. Companies in our survey have provided us with detailed hiring history for 2004, and listed requirements for 160 new employees in 2005, which will help in long term planning for post secondary institutions in the region. Turnover in the Okanagan remains low at 2.6% of employees leaving, primarily due to dismissals and layoffs.

Okanagan companies continue to describe recruiting for technical and scientific skills as very or somewhat difficult, and sales and marketing skills are becoming more difficult to hire because of the technical content in the sales process and need to address customer solutions. Qualified trades people are also becoming more difficult to find. In addition to the difficulty in matching skills to company needs, the industry is also handicapped in hiring by a long history of “sunshine tax” in the Okanagan.

The technology industry in the Okanagan is well diversified in the end markets for its products and services, with no one sector accounting for more than 17% of the industry. More than 60% of companies in the industry were exporting to the US, and more than 50% had international clients.

50% of the technology companies in the region have used private capital to fund their business, primarily personal funds. 50% have accessed external financing, half through loans. Of those companies that attempted to secure financing in the last two years, about

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80-90% of those applying for private investment or loans were successful, but only half of those applying for venture capital succeeded.

More than 80% of the companies in the survey are conducting R&D, with the majority being performed in-house. 21% of the survey companies have applied for or obtained patents. 60-70% of the companies surveyed were aware of the government programs and tax credits available to assist in R&D, but only 25 to 40% of companies are using these programs today.

The technology industry in the Okanagan generally enjoys ready access to broadband services at a competitive price, with over 90% of companies satisfied with their services. About 75% of the industry is connected via cable modem or DSL services at bandwidths of 5 mbps or less. As traffic and bandwidth requirements grow, the availability of fibre infrastructure in the region will become more important.

When asked to indicate the relative importance of initiatives and programs to assist the industry locally, the survey companies ranked networking opportunities and industry events first and second, followed by mentoring and improved R&D linkages to institutions. OSTEC and the Okanagan Partnership are actively developing plans for initiatives in these last two areas.

The industry indicated similar priorities in ranking the business development assistance they felt they would need. Developing business networks and contacts ranked first on that list, followed by the need for technical development and training in marketing and finance, as these firms evolve from product development companies to sales and operating companies.

As in all previous studies, the industry still ranks staffing and finding the required skills as the biggest issue. As the industry matures, there is additional concern registered about managing growth and executing the business plan, and about marketing and sales in a competitive environment. These concerns suggest that the programs currently in place to assist companies with start-up issues may need to evolve to address marketing plans, operations, and other challenges of growing technology companies.

Previous studies of the technology industry in the Okanagan have highlighted the need for a university in the region to address the skill availability issues. With the planning for UBC-Okanagan and New Okanagan College well underway, that action item appears to be addressed. The planning for these institutions will also address previous recommendations for a structure to encourage more institutional research in the region and for a process to link the R&D in the institutions to the Okanagan technology industry to promote greater commercialization opportunities and cross-fertilization of ideas.

The recommendations for this iteration of the study are to supplement the opportunities created by the UBC-O and NOC structure by expanding the support programs to the industry beyond the start-up phase. There are existing programs and seminars for hiring and staffing, and for financing and business plans. As companies mature, the need for

assistance in market research and planning, competitive analysis, export market development, strategic planning, and operations suggests that OSTEC and other organizations may need to expand the scope of their support programs. The first step towards this is already being taken with the development of a mentoring program, but there may be other opportunities for training, seminars, referrals, web site development, and partnerships with service providers to address these needs.

The future for the technology industry in the Okanagan looks bright. The industry has successfully navigated through a difficult time following the “tech crash” of 2002 / 2003 and has emerged more mature and smarter. The region will see many benefits from UBC-O over the next few years, both in skill development and in R&D capacity, and the area’s population growth continues to provide additional local markets and a wider range of skilled workers and service providers to encourage in-migration and start-up activity.

Survey Analysis

Industry Categories

As in previous surveys, the Information Technology sector represents the largest industry group in the Okanagan, with half of the survey companies falling in this category. As a result, the “Services” sector of the industry represents about 53% of the survey companies and 75% of the companies defined as High Technology companies. This compares to the provincial average of 84% of high tech companies classified as “Services” companies.

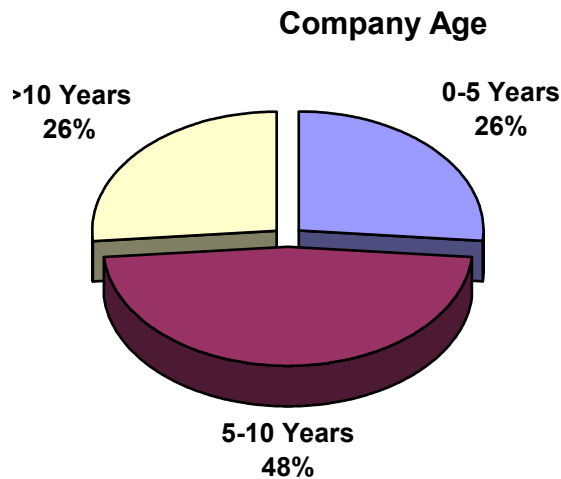
The High Tech manufacturing sector has seen additional diversification in the past few years with the addition of new companies in the medical equipment and communications equipment fields.

Industry Group	Respondents %
Service Industries	53
Software Publishing	25
Computer System Design	17
Data Processing	8
Engineering	13
Manufacturing Industries	20
Communications Equipment	6
Medical Equipment	6
Aerospace Products and Parts	4
Other Electrical Equip. & Components	4
Other	18
Service Provider to High Tech	9
Other High Tech related	9

Company Age

Companies responding to the survey had been in business for an average of 10 years. 26% of the companies had been formed in the last five years, but growth in the number of new companies formed in the last 2 years (2003 and 2004) appears to have slowed somewhat from previous years, at about 5% annual growth vs. 7-10% annual growth in the previous two studies. This slower growth is consistent with industry patterns elsewhere following the high tech market peaks in 2002.

Companies that were more than 5 years old in the current survey appear to have a relatively good survival rate, and therefore the overall Okanagan High Tech sector has matured somewhat.



In Migration

Approximately 40% of the companies in the survey relocated to the Okanagan from other locations. This is a higher proportion than in previous studies which had indicated 25-30% had relocated. This suggests that the majority of new companies in the region are relocations from other areas.

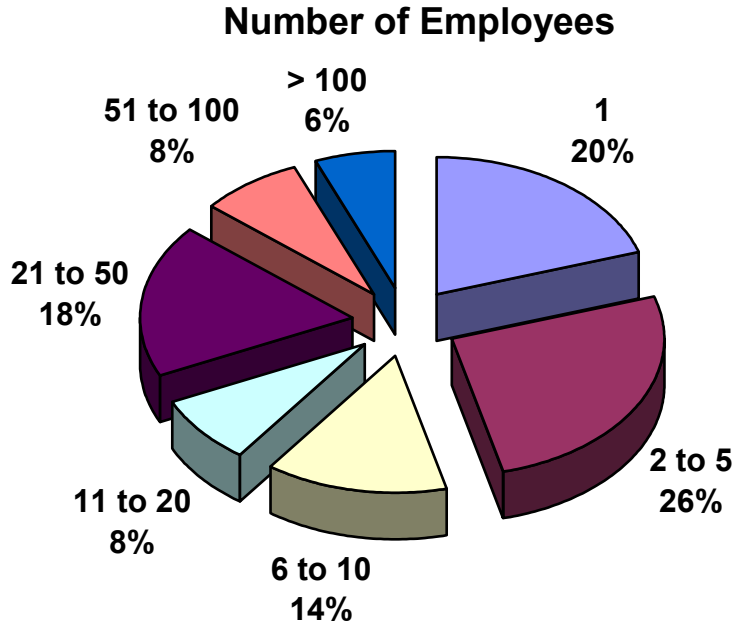
Of those companies that made a move, 29% came from Ontario, 28% from the Prairie Provinces, 19% from other areas of BC, 14% from European countries, and 5% from the US.

85% of those that moved indicated that the Okanagan lifestyle and atmosphere was a factor in the decision, 29% had friends or family in the area, and 24% indicated that lower operating or living costs influenced the decision to relocate.

79% of the companies responding are established in Kelowna, 10% north of Kelowna, and 12% south of Kelowna.

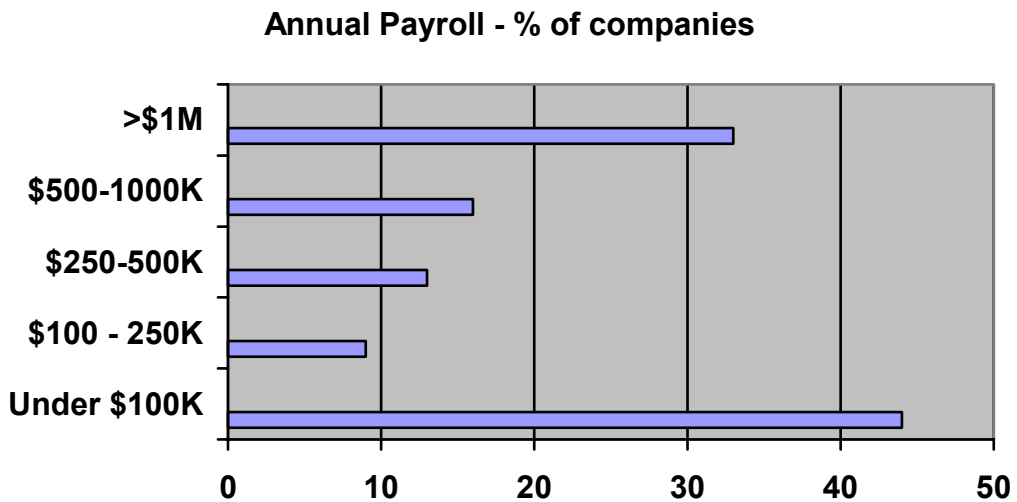
Employment

The companies responding to the survey employed an average of 30.2 employees, 87% of which were full time. About 60% of the companies employed 10 or less people, which is consistent with results from previous studies.



Companies surveyed expected to grow the number of employees by 10.8% in 2005.

44% of companies surveyed had an annual payroll of less than \$100,000, and 33% had a payroll in excess of \$1 million. This is a significant increase in the number of \$1M+ payrolls from previous surveys, where that proportion was 10-15%.

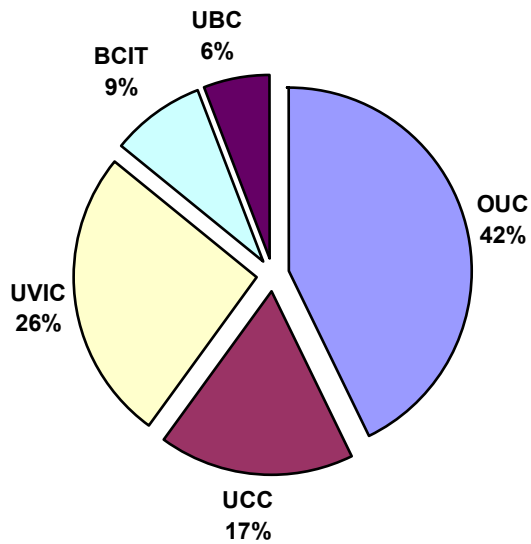


Hiring

Companies surveyed hired 95 new grads in 2004 and 97 experienced hires, for average new hiring of about 4 employees per company (from a base of about 30 employees).

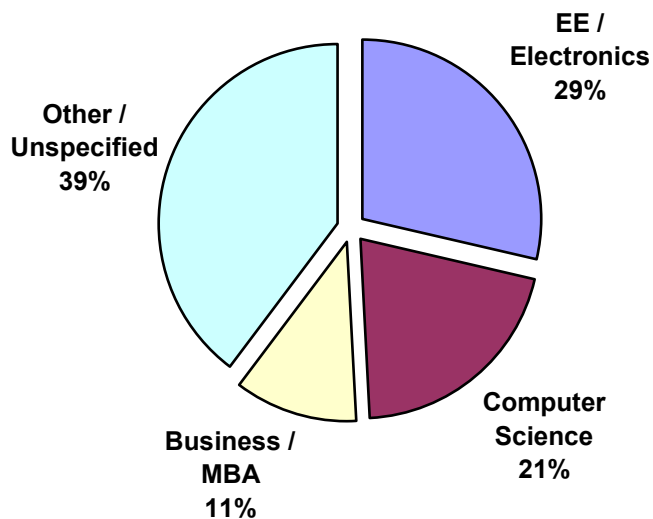
The educational institutions used to recruit new grads include:

Graduates Hired From:

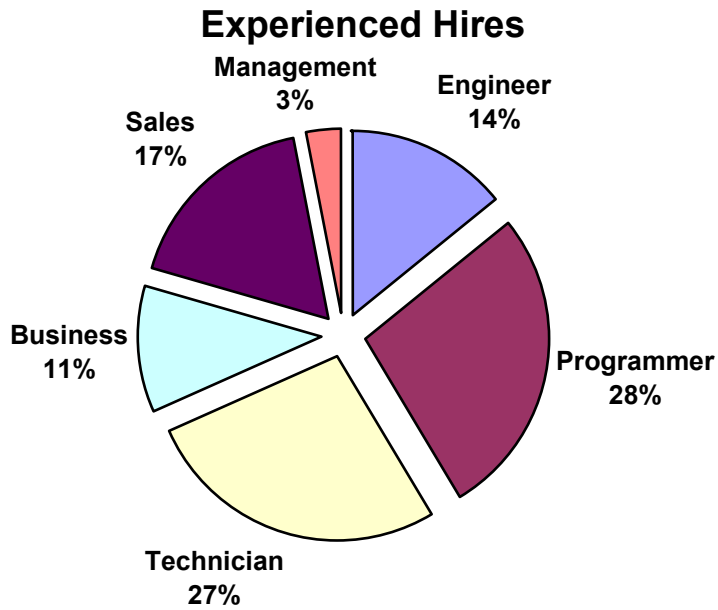


The skills that were recruited for new grads include:

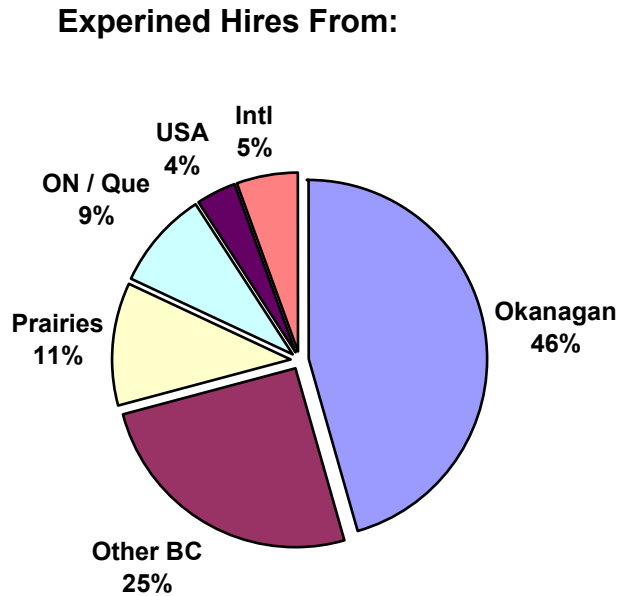
Graduate Skill Areas



The skills that were recruited as experienced employees include:



Experienced employees were recruited from:



Companies participating in the survey identified the following 2005 Professional Hiring needs:



In addition, the industry identified a need for 114 production workers, the majority of which are required at Pacific Safety Products.

Turnover

The industry reported that about 2.6% of their employees left during 2004. About half of the responding companies indicated one or more employees had left. The most common reasons for employees leaving were:

Reason for Leaving	Percentage of total turnover
Other Opportunities	26
Dismissal	24
Geographic Move	17
Restructure – Layoff	17
Lifestyle change	7
Back to School	5
Family	5

Recruiting

Survey companies were asked to indicate how difficult it was to recruit specific skills. The table below indicated the percentage of companies that categorized the difficulty as very difficult, somewhat difficult, or not difficult:

Skill	Very Difficult (%)	Somewhat Difficult (%)	Not Difficult (%)
Technical	26	21	6
Marketing	25	25	0
Comp. Sci.	19	26	9
Scientific	19	6	0
Trades	13	11	2
Engineers	11	9	6
Financial	9	9	9
Production	9	11	4
Admin	6	19	23
HR	8	4	6

The primary causes for difficulty in recruiting were identified as:

Difficulty in recruiting	Percentage of Companies
Finding fit to needed skill / experience	49
Okanagan Salaries / Sunshine Tax	23
Organization Fit / Corporate Culture	9
Work Ethic / Soft Skills	8
Spousal Employment	6
Small Technology Base in Okanagan	6

Companies were asked what they did to aid in recruiting and to attract employees:

Recruiting Tactic	Percentage of Companies
Selling the candidate on the job / company	28
Networking / Word of mouth	26
Advertising	21
Internet / WWW recruiting	19
Work with Universities / Colleges	9
Sell Okanagan Lifestyle	8

Companies identified the following alliances to assist with recruiting:

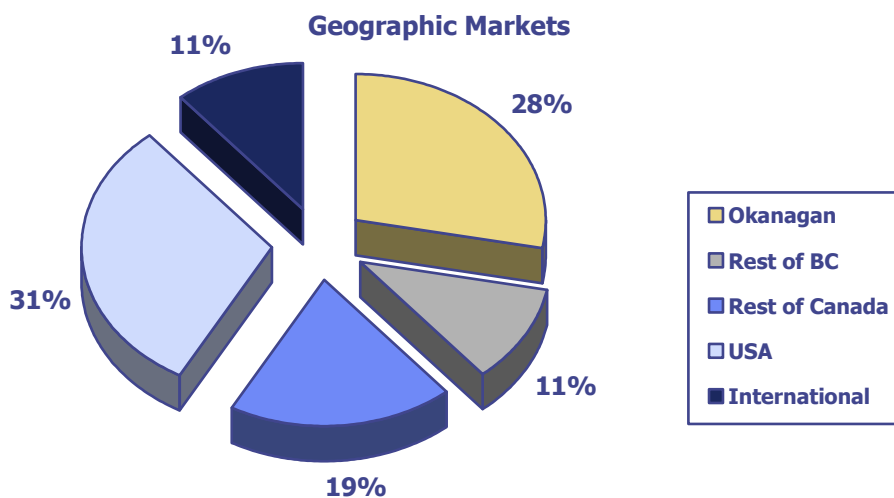
Partner Agency	Percentage of Companies
Local School Districts	28
OUC	21
OSTEC	13
HRDC	8
Other University / College	6
Other	23

Markets and Revenue

It is difficult to collect reliable revenue numbers for the high technology sector using sample survey tools. A number of companies in the sample declined to provide revenue data, and others are part of larger corporate entities that do not break out revenue associated with facilities in the Okanagan. Our survey sample is also biased towards the larger, established technology development firms in the region

With that caveat, the survey sample showed an average annual revenue of \$2.19M In 2004 for those companies that supplied data. For those same companies, expected revenue for 2005 would increase to an average of \$2.77M, an increase of 26%. The average expected revenue change for 2005 for all companies in the survey was in the range of 10 to 25%. The average revenue per employee for those companies that reported their revenue was \$102, 198.

A breakdown of revenue by geographic markets served by Okanagan companies shows that more than 40% of technology firm revenue is from products and services exported outside of Canada. 62% of companies exported to the US and 53% exported internationally.

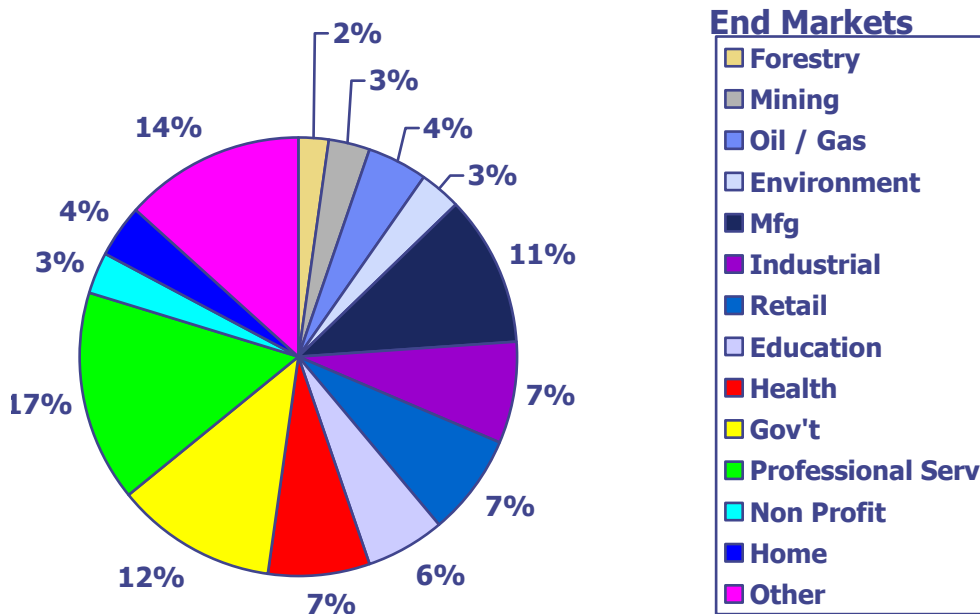


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New York, California, and Washington State were the most common US markets served today, and New York, California, and Texas were most frequently cited as opportunities for market growth.

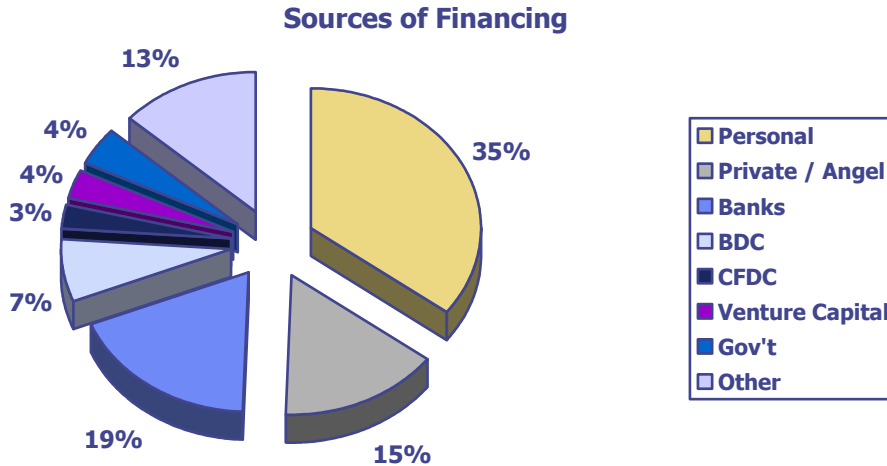
When asked to identify geographic markets that they would require assistance to address, the US was mentioned most often, Europe second, and emerging markets such as China, Russia, and India third.

The end user market segments for the industry are well diversified, with Manufacturing, Government, and Professional Services representing the largest sectors.



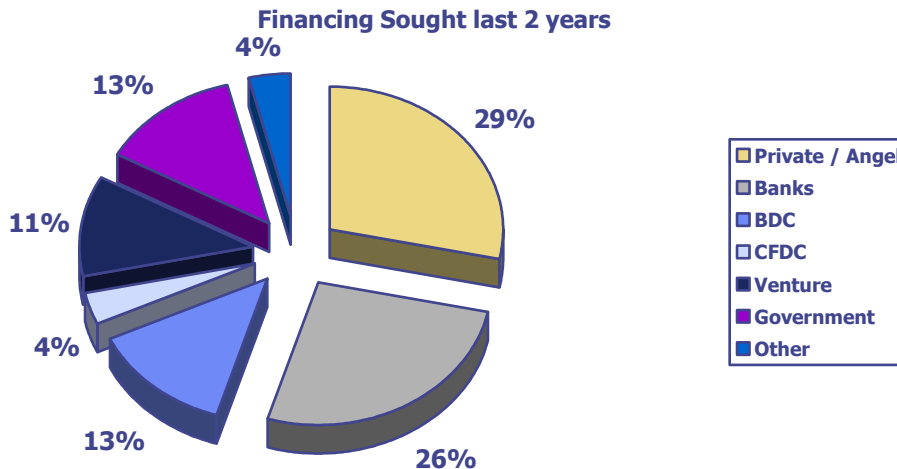
Access to Capital

Companies were asked to identify all sources of capital used to fund their company. The proportion of funding sources is shown below:



Half of the responding companies had private financing, either their own capital (35%) or capital contributed by other private investors – family, friends, or angel investors (15%). Those companies that used outside financing most commonly used bank and credit union funding (19%) or accessed business development financing at BDC or CFDC (10%). Venture capital was used in 4% of financing, and 4% used government funding assistance such as IRAP. The 13% that responded “other” used funding from public markets or from corporate parents.

Companies were also asked what sourced of financing they had sought in the last 2 years:



The success rate for these funding applications was quite high, other than for venture capital.

Source of Capital Sought	Success %
Private / Angel	87
Banks and Credit Unions	86
Business Development Bank (BDC)	86
Community Futures Development Corp (CFDC)	100
Venture Capital	50
Government Financial Assistance	100
Other	100

Research and Development

81% of survey companies are currently developing a new product / service, about the same percentage as in previous studies. About one third of those projects are in the early concept and research phase, about one third in active development, and one third in market testing or early customer delivery stage.

The average R&D budget for the sample companies was about \$75,000 in 2004, an increase of about \$25,000 from previous studies. R&D budgets are expected to grow to about \$90,000 per company in 2005

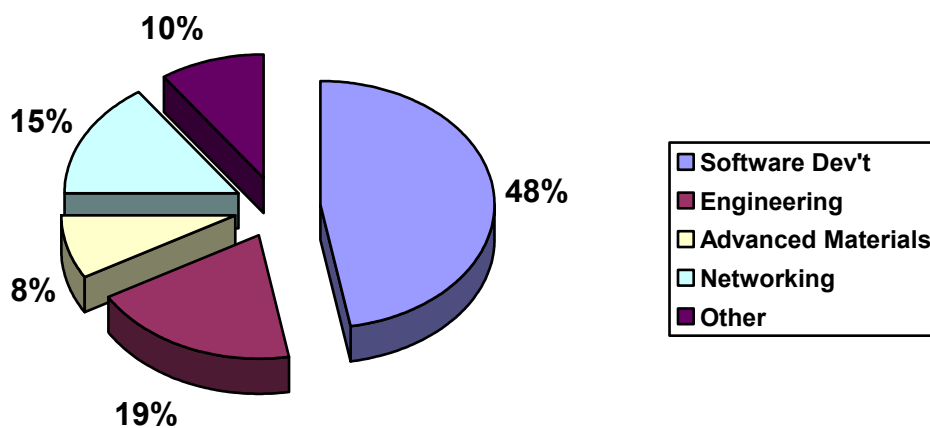
72% of Research and Development is conducted in-house, 12% through or with Universities, and 16% through other private or contract research and development companies. This represents an increase in outside R&D from previous studies, primarily in the form of partnerships with Universities.

21% of the companies in the survey have obtained or applied for patents on their intellectual property.

Companies were asked if they were aware of the R&D assistance programs available through the federal and provincial governments, and whether they had used the programs.

R&D Assistance Programs	Aware	Have Used
Industrial Research Assistance Program (IRAP)	62%	25%
Scientific, Research and Experimental Dev (SR&ED)	71%	42%
Technology Partnerships Canada	23%	2%
Agriculture and Agri-Food Canada	8%	0
Other	6%	0

The focus areas for R&D in the Okanagan include:



Given the high concentration of IT companies in the high tech sector, the focus on software development and networking is not surprising. The industry has indicated a high degree of interest in R&D alliances with local institutions and universities, and the benefit of this emerging opportunity will depend in part on how well these focus areas can be matched to institutional research.

Broadband Access

Companies were asked if they were able to obtain the broadband connectivity they needed at their location in the Okanagan, and if they were able to obtain those services at a competitive rate.

91% of companies indicated they have obtained access at competitive rates; 6% have obtained the needed access, but feel the prices are not competitive; 2% have been unable to obtain the service needed because the rates were not competitive; and 2% have been unable to access the desired service.

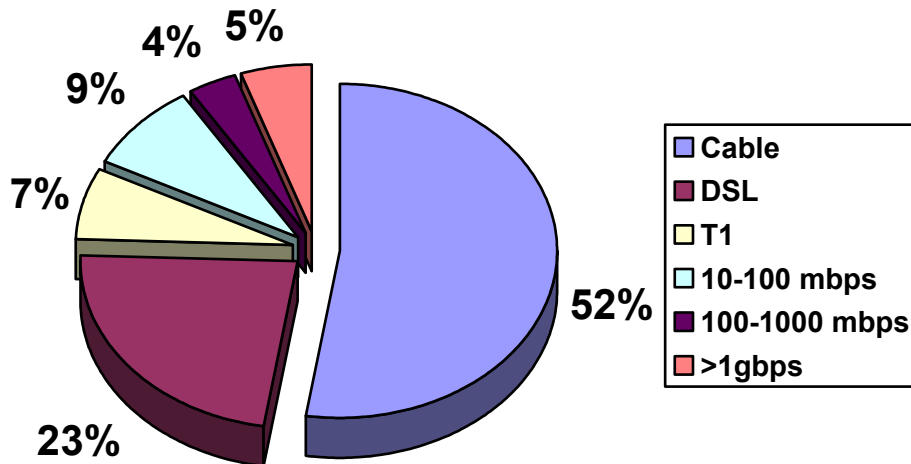
This suggests that in general, the data communications facilities in the Okanagan are healthy and that competition for services has resulted in pricing that is competitive with that found in the lower mainland for the most common services.

However, some 10% of the Okanagan consider themselves underserved today (notably the very high bandwidth users, and those in rural areas), and the high proportion of Cable and DSL users may find that the future demand for bandwidth will dictate a move to fibre

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optic facilities in time, which would be a challenge if last mile fibre is not included in planning for the valley's infrastructure.

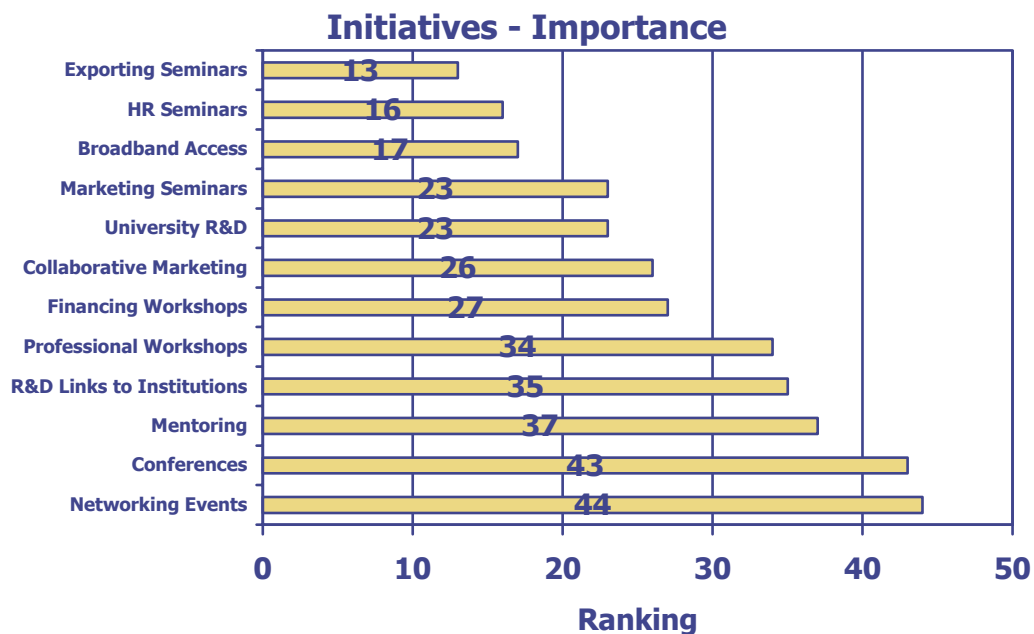
The Broadband technologies most commonly used in the Okanagan today include:



28% of companies responding indicated that they were also using wireless broadband technology to provide connectivity within the company, either as an in-building LAN or to interconnect facilities. Most users reported an 11 mbps wireless bandwidth.

High Tech Initiatives

Survey companies were asked to rank the importance of initiatives offered by agencies and associations in the Okanagan in support of the high tech sector:



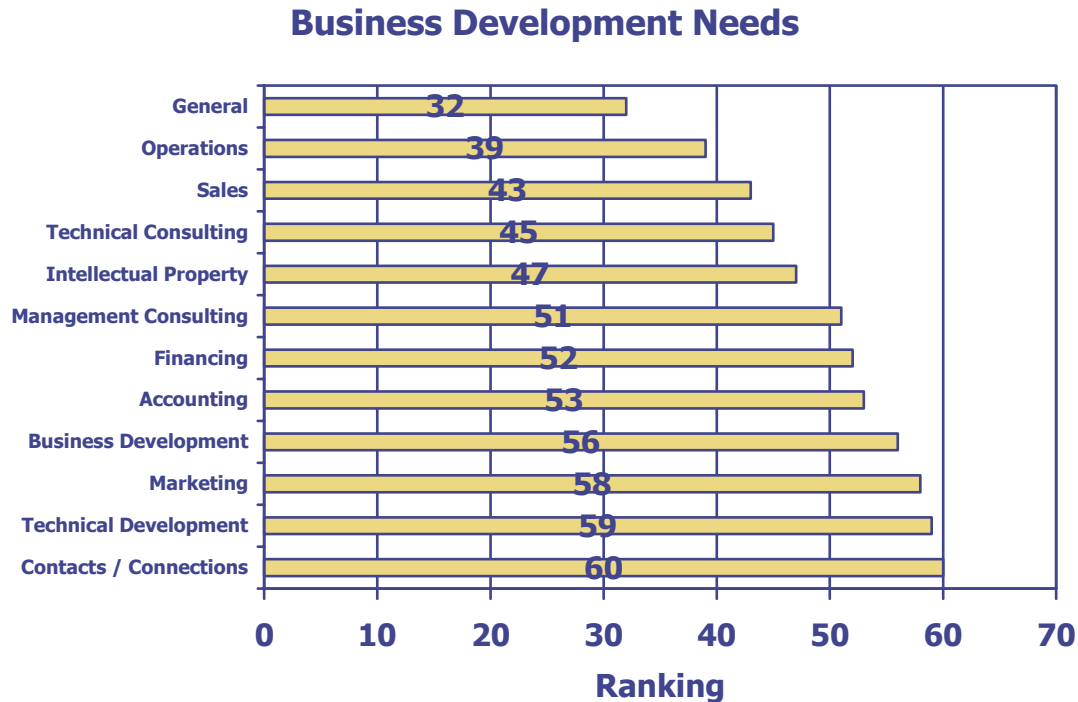
As in previous studies, networking opportunities and industry-wide conferences and events were rated as the most important programs. These opportunities for the industry to develop a sense of unity and to formally and informally share experiences remain popular because they allow companies to build relationships and because they increase the visibility of the technology sector in the community and outside.

OSTEC and the Okanagan Partnership are planning a mentor network for the Okanagan, and this initiative is also rated a high priority to support business development for emerging and growing young companies.

The planning for UBC-Okanagan and New Okanagan College has created new opportunities for linkages between industry and research activity in the valley. The post-secondary institutions along with the federal research facilities in the region have discussed ways of bring industry and institutions together as part of the Okanagan Partnership discussions, and this initiative, along with University R&D was mentioned frequently by the industry.

OSTEC and other agencies have historically offered human resources management seminars and various workshops on sources of capital. The industry is suggesting that additional topics such as sales and marketing and professional development for knowledge workers would also be valuable.

Companies were also asked to identify their business development needs:



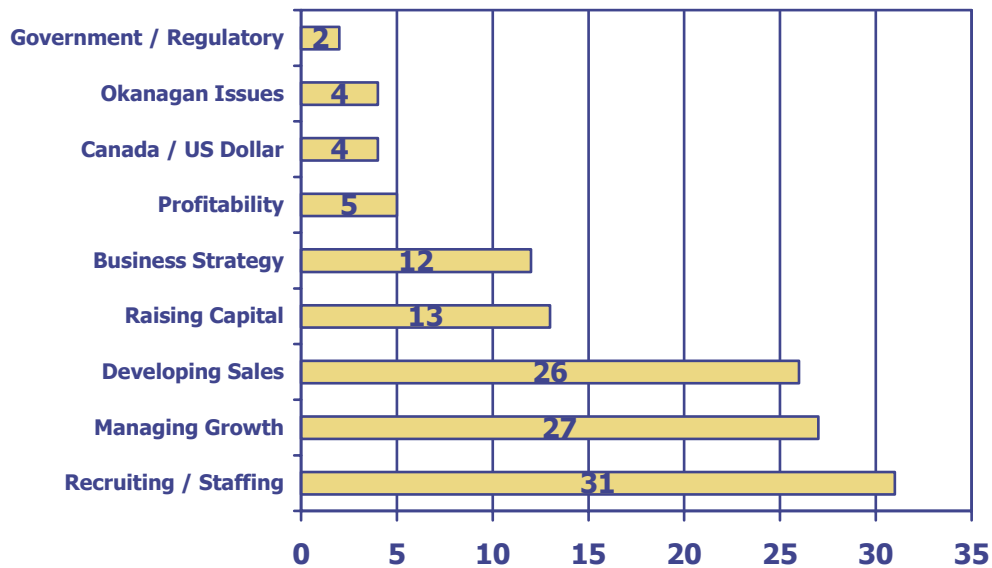
The ranking of business development needs mirrors the rankings assigned to the industry support initiatives. The need for contacts and connections is directly linked to the importance of networking opportunities and industry events.

Similarly, the need to offer further education in the areas of technical development, sale and marketing, business development, and financial management is consistent with the value assigned to those initiatives at an industry level.

The various professional needs identified also confirm the need for a highly skilled service provider segment in the Okanagan to assist with consulting, intellectual property issues, and business advising. These relationships are also strengthened through industry associations such as OSTEC, the EDC's, and the Chambers of Commerce.

Industry Concerns and Challenges

Industry Issues Ranking



As in all previous studies, the challenges of recruiting and retaining staff and in maintaining and building the required skills in the organization remains the largest issue for the industry. Many expressed the hope that the presence of UBC-O and the development of an engineering program and an MBA track would assist in solving some of these issues.

The second group of issues related to companies that have completed their initial product development and are moving into the market development and growth stage. Companies that were started by founders with strong technical skills need to make the transition to a sales orientation, and many struggle during that transition. The organization needs to change and different skills need to be hired and developed, and frequently the funding used to develop products has been exhausted and the cash flows needed to fund inventories, receivables, and marketing and promotion become a challenge for companies with long sales cycles.

Other aspects of corporate strategy such as competitive positioning, financial models, and operational planning to ensure profitability also become important issues for the industry.

Focus Group Input

A focus group session was held in early March of 2005 to provide an opportunity for the survey team and representatives from OSTEC, the EDC, and Industry Canada to listen to a small group of industry leaders as they provided more detailed input to some of the survey questions and discussed ideas for local initiatives to address some of the industry issues.

- The input from the industry suggested that some of the company start-ups in the Okanagan were smaller, family run businesses by design, because semi-retired professionals come to the Okanagan to live but want some ongoing opportunities to stay active in a business. The growth potential for many of these companies is limited by the amount of effort the founder is willing to put into the business.
- There is also a group of start-up businesses based on sound technology ideas, but with limited business development skills. Some of these “naïve” businesses may benefit from seminars, coaching, or incubator facilities to help develop a more realistic perspective about what commercial clients demand from a product and a company, and to provide broader education about business development. It was noted that DRAO at White Lake has an incubator facility at the observatory, but that the location and lack of visibility has led to that facility being underutilized – it’s not a “build it and they will come” proposition.
- Many smaller businesses in the Okanagan do not have adequate market knowledge. A company that wants to expand beyond local markets requires a “world view” of the opportunity for the product, the competitive landscape, and a structured marketing plan to expand into new areas. This may suggest an opportunity to provide more education about market research, competitive analysis, and marketing plans; and to help companies to take advantage of existing programs that may help with market studies.
- The input from the industry suggests that the supply of technical skills in the Okanagan has historically been a limiting factor in business development and growth. The industry is optimistic that the emergence of UBC-O and the evolution of NOC will address some of the limitations, and will provide ongoing technical development opportunities for those employed in the industry.
- Salaries in the High tech sector in the Okanagan continue to lag those in the major centers, in part because the smaller companies have limited capital to expand.

This compounds the skill availability issue as companies settle for what they can afford rather than what they need. There is relatively low turnover in the industry and little movement from one company to another. Better information about competitive salaries in neighbouring centers might help address this issue.

- Candidates for positions with Okanagan technology firms have also identified the difficulty of finding jobs for a spouse as a deterrent. Some companies are offering professional employment assistance programs to address this concern.
- The focus group members suggested that OSTECH could expand the scope of its website to provide more information about government programs, to link entrepreneurs with inventors, to list contract opportunities with companies that are outsourcing work, and to provide bulletin board / discussion forum facilities to allow members to ask questions and generate discussion about industry issues.
- Industry members identified the need to expand the current seminar / workshop menu to include market research, marketing plans, competitive analysis, communications, project management, accessing new markets, and accessing government programs.
- Companies that had not accessed government assistance programs such as IRAP or SR&ED credits indicated that they thought the process might be too complex and time consuming. Other companies that had successfully used these programs indicated that some service providers were available to assist companies to apply and administer the program. It was suggested that OSTECH may be able to provide referrals to assist companies not using the programs.

Recommendations

The technology industry in the Okanagan is well positioned going into 2005. Many of the recommendations from previous surveys will be implemented this year as a result of the introduction of UBC – Okanagan and the New Okanagan College, as well as the ongoing initiatives inspired by the Okanagan Partnership and the evolution of OSTEC and other agencies.

The following areas will be addressed by these initiatives:

- The industry has repeatedly listed the lack of skills in the Okanagan as the greatest deterrent to growth. The requirement to import advanced technical, scientific, and engineering skills to the valley have made it difficult to recruit and retain the needed skills. With the advent of UBC-O, many of the skills will be produced here in the Okanagan, which introduces a pool of talent that will ease the recruiting task for local companies and will attract new technology firms to the region. UBC-O has announced engineering and MBA programs that will directly benefit the industry in coming years, and will create opportunities for existing employees in the industry to upgrade their skills and enhance their professional development. NOC had demonstrated that it will provide a wide range of programs that are complementary to the UBC-O offerings, thus ensuring that the region has a full menu of post-secondary options.
- The introduction of UBC-O to the Okanagan will also stimulate the Research activity in the region, creating opportunities for industry to partner with academics on research projects and encouraging more commercialization of intellectual property developed in the research community. Work is underway to develop a three way partnership between the federal research facilities in the area (DRAO and PARC) and the university and the industry to stimulate the interchange of ideas and to capitalize on opportunities for joint projects.
- The Okanagan Partnership and OSTEC are developing a structure to provide mentoring to emerging companies. The Okanagan has a strong base of senior business people that have retired here or formed new businesses, and these experienced entrepreneurs and business leaders are invaluable resource for young and growing companies.
- The HR issues for technology firms are getting additional focus from OSTEC's initiative to make a "generic" HR manual available to companies in the region, and through a salary survey that will assist in benchmarking competitive salaries in the Okanagan.
- A number of regional technology companies have joined the EDC at an "Okanagan Booth" at various US and international trade shows. These joint

marketing opportunities are a cost effective way for companies to have a presence at major trade shows and also serve to promote the Silicon Vineyard.

- The Okanagan Partnership has also introduced the concept of a regional broadband fibre network that would leverage the introduction of the national high speed research network to UBC-O by implementing a valley wide optical fibre backbone that would ease the access to high bandwidth facilities for the other research facilities in the area, and provide a central access point in the major communities where industry and local institutions could attach to commercial carriers.

These initiatives promise to address a number of key issues for the technology industry, but this survey has also reinforced the ongoing role of organizations such as OSTEC in capacity building for start-up and growing companies. In many cases, the questions that arise in establishing a new technology venture or in addressing new markets can be answered by a support organization like OSTEC through seminars, education, referrals, web site links and other facilitation tools to ease and encourage the evolution of these companies. OSTEC has been presenting education in fields such as HR recruiting and retention, options for accessing capital, business plan development, angel investor financing, and export market development for some time. Based on current survey input, the opportunity to expand that role for companies transitioning into sales and marketing companies exists, and we recommend that OSTEC and other regional organizations review these opportunities to assist maturing companies:

- Technology companies that are formed to develop a new product or technology often stumble when they attempt to start selling the product, or in developing new markets. Managers with strong technical skills to see a product through the development phase are not always best equipped to direct the commercialization of those products. There is an opportunity for OSTEC to assist companies by developing seminars, education programs, and resource links that will help companies to first understand their potential markets through market research, and then to develop concrete marketing plans matched to the characteristics of those markets. Similarly, expanding recruiting training to focus equally on sales and marketing people would help the shortages of good people in this area.
- A number of companies have described the difficulties in managing growth and in day to day execution. This gap in operations and project management skills also represents an opportunity for assistance to the industry by offering additional resources, mentoring, and linkages to address the day to day problems companies face. Basic questions such as “where do I go to get a package designed” or “how do I get CSA approval for my device” can be very time consuming for a small business, but the answers may be readily available in the high tech community if the links and referrals are developed, and if the service providers in the region are easily accessed.

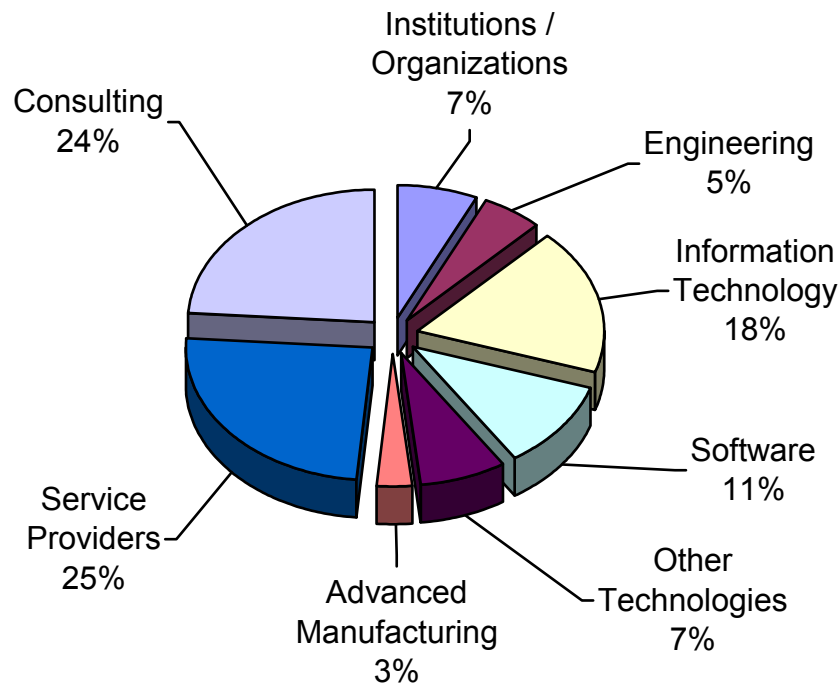
- The industry recognizes the value of informal networks and contacts. OSTEC and other can assist in this through additional networking opportunities and industry events, but some of these contacts can also be developed through a web site with bulletin board or discussion forum capabilities. Expansion of the OSTEC web site could also provide additional information about accessing government programs and links to resources that can assist with this.
- The technology industry in the region benefits from all programs that “market the Okanagan” and “develop the Okanagan brand”. The visibility of the region in other areas of the country and internationally helps with recruiting employees and with new business migration, and adds credibility for existing firms in the area. As regional EDC’s develop programs to promote the region they are encouraged to ensure that the technology sector is featured as one of the key drivers of the diversified local economy. An Okanagan presence at selected industry trade shows also provides an opportunity for companies that could not normally afford to exhibit at major shows to participate.

In summary, we believe that the technology sector in the Okanagan will see significant benefit from initiatives that have been in the planning stages for the past few years that are now being implemented, and we see a number of areas where the existing resource agencies could further assist the industry as it matures. The industry has demonstrated a strong desire to learn and to look for partnerships to achieve their goals. Taken together, this suggests that the “Silicon Vineyard” will be an increasingly dynamic environment for the technology industry, with a strong support network to assist in establishing and growing advanced technology businesses.

Appendix A: Survey Methodology

The 2005 Technology Study is the third iteration of the bi-annual industry survey commissioned by OSTECH (and its predecessor organizations, the Okanagan High Tech Council and the Science and Technology Council of the Okanagan) and the Economic Development Commission of the Regional District of the Central Okanagan and the regional office of Industry Canada.

To conduct the 2005 Survey, we started with the OSTECH company database consisting of 250 organizations. That list was made up of the following:



All companies on the list were invited to complete the survey, but we specifically targeted the technology development sector with follow-up mail and telephone contact to encourage participation. 45 of the 97 companies in that sector provided survey input, and 10 companies from the consulting and services sector responded for a total of 55 survey responses.

The survey process was supplemented with telephone interviews to clarify data and a focus group session with a cross section of 10 companies of varying sizes, age, and industry segments. The focus group session reviewed the survey data and asked the industry participants to expand on specific issues in the industry, and to suggest regional actions that would assist companies in dealing with those issues.

High Tech Definitions

In the course of the 5 year period since the initial Technology survey there has been ongoing discussion about the definition of High Technology companies, both within the region and within BC Stats, which also reports industry statistics.

BC Stats has changed from the older Standard Industry Classifications (SIC) coding to the more modern North American Industry Classification System (NAICS), and in the process companies that might have been included in a broad SIC category that was counted as “High Tech” may have moved to a NAICS category that was not classified as “High Tech” (a discussion on the process used by BC Stats to assess which classifications to include in the High Tech category can be found at http://www.bcstats.gov.bc.ca/data/bus_stat/busind/hi_tech/NAICSdef.pdf). This makes year to year and survey to survey trends more difficult, and also complicates comparisons to BC Stats data.

The major areas where BC Stats data will count a higher number of “High Tech” establishments than the data in the Okanagan study are in the “Engineering Category”, where our database has about a dozen companies, but BC Stats would count Structural, Mechanical, Civil, Geotechnical and similar engineering companies, representing more than 100 establishments in the region. Similarly, the area of IT services is represented by about 40 companies in our database, but the number of computer consultants, internet service companies, and IT support companies in the region is well over 100 establishments in the BC Stats definition.

The database used for the Okanagan Technology Study includes a category for Advanced Manufacturing companies that conduct R&D in advanced process development or in advanced materials such as composites. These companies would not be included in the BC Stats data as High Tech establishments.

Since the primary objective of the Okanagan Technology Study is to identify the needs of the local knowledge based industry in areas such as human resources, capital, and services; and to identify issues for this industry and develop initiatives to address these issues, the statistical differences between the BC Stats data and the local data are not a significant concern, but any direct data comparisons should recognize these differences.