



SURVEY OF THE CANADIAN TRANSLATION INDUSTRY

***HUMAN RESOURCES AND EXPORT
DEVELOPMENT STRATEGY***

Final report of the Canadian Translation Industry Sectoral Committee

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FOREWORD

We are proud to present the Final Report of the Canadian Translation Industry Sectoral Committee. For two years, representatives of not only translators, terminologists and interpreters, but also educators, managers of linguistic services, and designers and distributors of aids for translation and machine translation, as well as observers from various levels of government, worked together to produce this report. This was the first time that such a wide range of stakeholders had sat down at the same table to discuss issues affecting the future of the translation sector in Canada.

Another innovation was the fact that the Committee looked at translation more specifically as a sector of economic activity. Having fought hard for professional recognition, translators, terminologists and interpreters must now see themselves—and promote themselves—as an industry. Other professions have taken the same route, spurred on largely by globalization. In the translation industry a number of distinctive factors are at play. First, in Canada translation has always been focussed on the two official languages, whereas the world trend is toward multilingualism. Second, translation is increasingly becoming a critical link in the chain of document management. Finally, the problem of succession planning is especially serious in the translation sector, because of the aging workforce, a sharp increase in demand and the fact that translation is neither well known nor highly valued as a sector of economic activity in Canada.

Starting from as clear a picture of the current situation as possible, the Committee has tried to mark out the way that the translation industry in Canada could take in the future.

Canada is well placed to take full advantage of the opportunities offered by the new trends. It can build on long experience, a tradition of quality and solid professional organizations to develop the considerable potential of the translation sector and related activities as they respond to the exponential growth of communications brought about by globalization and the Internet.

This report is not the end of a process. Rather, it is intended as a starting point for future development. That will have been the Committee's contribution. If they want Canada to remain at the forefront of translation and not be relegated to the ranks of a regional market, it is now up to all the stakeholders in the Canadian translation industry to take this report, make it their own and move forward.

September 30, 1999

Gilles Gamas
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All the members of the Committee, whose names are listed on the following pages, took part on a voluntary basis. We would like to acknowledge the contributions of a number of people and organizations, who, although not directly involved in the work of the Committee, helped with the translation and production of the various reports:

- Participants in the focus groups and public meetings (Moncton, Montreal, Ottawa, Toronto, Vancouver)
- Secretariats of the provincial professional associations and the Canadian Translators and Interpreters Council
- Translation Bureau (Public Works and Government Services Canada)
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INTRODUCTION

Although translation has been practised officially in Canada since 1867, the industry's organization as such began in 1934, when the federal government's Translation Bureau was established.¹ The industry really took off in 1969 in Canada with the passage of the *Official Languages Act* and, in 1977, Quebec's *Charter of the French Language*.

The *Official Languages Act* made Canada one of the few countries in the world to have enshrined in its Constitution equal rights for two official languages: French and English. In practice it means in particular that interpretation services are to be provided during parliamentary debates, that the transcription of the debates in one language has to be translated into the other, that all legislation, archives, decrees and regulations have to be prepared and published in both official languages, that English and French are the languages of the courts, that all federal institutions have to be prepared to communicate with the public in both official languages, and that all services delivered by federal agencies have to be available in both official languages. The task of developing and coordinating the federal directives and programs to enforce the Act in all federal institutions—excepting the Senate, House of Commons, and Library of Parliament—falls to the Treasury Board.

As for the *Charter of the French Language*, it sets apart French as the official language in the province of Quebec and recognizes French as the normal, usual language of work, education, communications, trade and commerce. Within the government of Quebec itself, French is the language of legislation and justice (bills are, however, published in both French and English, and anyone may use English or French in cases being heard by Quebec courts), administration, and public agencies. In the workplace, all communication from employers to employees, collective agreements and arbitration awards must be in French. In business, all product, container and packaging labels must be in French, as must all trade catalogues, brochures and directories. Contracts and documents used for employee training must be in French.

¹ The Translation Bureau, which is part of Public Works and Government Services Canada, serves mainly the federal government. Its clients include the Parliament of Canada, over 130 organizations of the government of Canada, as well as various provincial, territorial and municipal administrations across Canada and some international agencies.

Lastly, every business with one hundred or more employees must obtain a francization certificate from the *Office de la langue française du Québec*, without which it must undertake a systematic francization process.

These two pieces of legislation were enough to spark a flourishing translation and interpretation industry, not only in Quebec, but all across Canada. It was also in the early 1970s that the first graduates with degrees in translation from Canadian universities entered the work force. However, it was not until the early 1980s that the first large translation firms really expanded. In the ensuing years, Canadian professionals acquired and perfected an unequalled expertise in translation between Canada's two official languages. Today, Canada enjoys an international reputation of excellence in the translation, terminology and interpretation fields, not only for the quality of its expertise, but also for its terminology products, aids for translation, and university research. In addition, Canadian translators, terminologists and interpreters have equipped themselves with a well-rounded infrastructure that governs professional certification, professional ethics and professional development.

The overall translation industry can be divided into five sectors: translation proper, terminology, interpretation, aids for translation and machine translation.

The translation industry is also a sub-sector of communications, which is experiencing strong growth. It is estimated that the world translation market is growing by 15 to 25% annually and will reach \$7 billion by the year 2000. Yet the industry is undergoing a total change. Global markets and the new tools developed with the latest technology are pushing the industry to change how it is structured and, gradually, how it gets the work done. Although the industry is still comprised of hundreds of small businesses and thousands of independent workers, we have been witnessing in recent years the emergence of powerful international groups positioning themselves to exploit new market opportunities opening up pretty much everywhere on various continents. Even so, the translation industry is relatively unknown, as much in Canada as around the world. This shift from being an unrecognized professional activity to being a structured, organized, self-governed industry is the focal point of discussions.

Translation is becoming an economic activity with growing importance as a factor contributing to increased sales, revenue and employment for Canadian business. Concurrently, the quality of translation is becoming a measure of competitiveness.

It is against this ever-changing backdrop that a systematic study of the translation industry in Canada was undertaken, thanks to an initiative of Industry Canada and funding from Human Resources Development Canada. A Canadian Translation Industry Sectoral Committee was incorporated as a non-profit organization with the mission to analyse the current status of translation in Canada and develop a strategy to promote the growth of this economic sector. The Committee's members come from professional associations, translation firms, large companies, universities, and suppliers of aids for translation and machine translation software, with federal and provincial government observers also present.

The study has a threefold objective:

- For each sector of the translation industry, draw up a profile of Canadian suppliers, their clients and the development of demand for services.
- Outline strategies and steps for strengthening the Canadian industry and developing export markets.
- Outline strategies and steps for human resource development.

The methodology adopted for the study included, in particular:

- A cross-sectional descriptive snapshot of the industry (semi-structured questionnaires sent to all industry stakeholders or to representative samplings of each of the industry sectors); in all, 283 firms and independent workers, 225 client businesses, and 13 developers of aids for translation and machine translation systems responded to the questionnaires.
- Extensive interviews with 14 of the main translation, terminology and interpretation firms in Canada.
- Personal interviews with representatives from eleven university-level translation schools.

- Five focus groups with selected industry representatives, held in Moncton, Montreal, Ottawa and Vancouver.
- Private consultation with Rose Lockwood, leading expert on the translation industry.
- Five public hearings (held in Moncton, Montreal, Ottawa, Toronto, and Vancouver) attended by 166 industry representatives.
- Consideration of two studies on the international prospects of the translation industry: *The Global Translation Market*, by Equipe Consortium, Great Britain; and *Language Translation: World Market Overview, Current Developments and Competitive Assessment*, by Allied Business Intelligence, United States.
- Various telephone surveys in Canada, United States and Europe.
- Statistical data, and information gathered from the Internet.

An enormous amount of information was gathered as part of this study, much of which has been presented in separate reports. A summary report of the various sectoral studies has been completed and is currently available at the Web site of the Canadian Translation Industry Sectoral Committee, at <http://www.industrietraduction.ca>. For this report we have retained only the information with a direct bearing on strategies for market and human resource development.

Where applicable in this document, the term “translator” designates inclusively the professions of translator, terminologist and interpreter.

1 PROFILE OF THE CANADIAN TRANSLATION INDUSTRY

1.1 The professions

The main players in the translation industry referred to throughout this document exercise professions defined as follows² by the provincial professional associations in Canada.³

Translators are specialists in written communication who render texts written in one language into another, conveying the message as faithfully as possible.

Terminologists are communications specialists who establish a specific vocabulary for a particular sphere of activity. From documents or a data bank, they make lists of terms belonging to a particular field, define them and find their equivalents in another language. They also define the terms used in a specific work situation and standardize them.

Conference Interpreters are specialists in oral communication who offer simultaneous interpretation services (transmission of a message while it is being delivered, by electronic means) or consecutive interpretation (oral translation after each speaker) at conferences, meetings, lectures, etc.

Court Interpreters are specialists in oral communication who offer interpretation services in courts of law or administrative tribunals. They provide consecutive

² According to the OTIAQ directory of members.

³ ATIA (Association of Translators and Interpreters of Alberta), ATIM (Association of Translators and Interpreters of Manitoba), ATINS (Association of Translators and Interpreters of Nova Scotia), ATIO (Association of Translators and Interpreters of Ontario), ATIS (Association of Translators and Interpreters of Saskatchewan), CTINB (Corporation of Translators, Terminologists and Interpreters of New Brunswick), ITSNWT (Interpreters/Translators Society of Northwest Territories), NKT (*Nunattinni Katujjiqatigiit Tusaajinut* – Nunavut Translators and Interpreters Association), OTIAQ (*Ordre des traducteurs et interprètes agréés du Québec*), SITY (Society of Interpreters and Translators of Yukon), STIBC (Society of Translators and Interpreters of British Columbia) and their umbrella organization, CTIC (Canadian Translators and Interpreters Council).

interpretation of witnesses' statements or simultaneous interpretation of the entire proceedings by electronic means for one of the people in attendance.

A third category of interpreter for which there is a growing demand, but which is not yet regulated by the associations, is the "community interpreter." Community interpretation is done by professionals or paraprofessionals who interpret between the official languages and a foreign or Aboriginal language.

Also, as will be observed in this document, other professional categories are emerging in an industry traditionally peopled by translators, terminologists and interpreters, namely software programmers, software engineers, graphic designers, and project managers, as the role they now play in the industry cannot be overlooked.

1.2 Employment trends

According to Statistics Canada, the number of individuals who declared revenue from translation rose from 7,450 in 1985 to 9,780 in 1990, and to 11,790 in 1995. This represents average annual growth nearing 5%. Few professions in Canada have had such sharp growth. Quebec is the leading region, with 5,325 translators, followed by Ontario with 4,155. The two provinces combined account for 80% of all translators and interpreters in Canada. At a regional level, Montreal reported the most translators in Canada, with 3,400 in 1995, followed by Ottawa-Hull, with 2,180, then Toronto, with 2,025, and Vancouver, with 600. These four urban areas alone account for 70% of all translators in Canada.

The number of full-time translators grew noticeably between 1985 and 1990 (in absolute numbers, from 3,575 to 4,655), but less rapidly from 1990 to 1995 (4,655 to 5,020). Moreover, their relative standing among all translators has dropped substantially, from 48% to 42.6%. Meanwhile, part-time translators saw their numbers increase even more quickly, going from 3,875 in 1985 to 5,125 in 1990, and to 6,770 in 1995. Part-time translators thus represent 67% of the total growth in the number of translators from 1985 to 1995.

**Table 1 — Evolution of number of translators in Canada
1985-1995**

Translators	1985		1995		Share of total growth
	Number	%	Number	%	
Full-time	3,575	48.0	5,020	42.6	33.3
Part-time	3,875	52.0	6,770	57.4	66.7
Total	7,450	100.0	11,790	100.0	100.0

Source: Statistics Canada, Publ. No. 93-332 and 1996 census products on CD-ROM.

This situation may have various explanations: the recession of 1990-1991 and the ensuing downsizing forced many businesses and agencies to cut full-time translator positions. Many of them became independent workers, yet were unable to earn sufficient income from their profession. During the same period, several firms also embraced a more flexible arrangement by using independent workers in order to reduce direct costs, and this had the same consequences. In addition to this, a large number of translators and community interpreters joined the professional ranks, although a growing proportion of them were part-time workers.

In 1995, the average income of a full-time translator (employed or independent) in Canada was \$40,570, a drop of 3.6% from 1990 levels. In the case of independent workers, this amount represents net earnings, after operating expenses have been deducted. Full-time translators therefore saw their standard of living drop appreciably in the last five years. As for part-time translators, the average income in 1995 was \$17,000. Moreover, we can observe some regional and local disparities, as can be seen in the following table.

**Table 2 — Average incomes of full-time translators in Canada
1990-1995
(in 1995 dollars)**

Region	1990	1995
Quebec	41,691	42,193
Montreal	38,989	39,726
Ontario	44,548	41,514
Ottawa-Hull	49,780	48,970
Toronto	43,195	35,903
British Columbia	38,302	26,035
Vancouver	38,984	26,086
Canada	42,100	40,570

Source: Statistics Canada, 1996 census products on CD-ROM.

The figures shown for translation incomes in British Columbia and Vancouver must be received with caution, for there is a $\pm 15\%$ margin of error due to the low number of respondents. Also, the situation in Toronto may be explained in various ways: seasoned translators retired and were replaced by younger, lower-salaried translators, or seasoned translators were laid off by one employer only to be hired by another, but at a lower salary.

There are more female workers than male workers in this profession. In 1995, female translators numbered 7,775 in Canada, i.e., 65.9% of all translators. Although they are in the majority in the profession, female full-time translators earn less than male full-time translators. The average income of male full-time translators was \$43,601 in 1995, compared with \$38,813 for female full-time translators. However, the gap between them is closing, having gone from 18.7% in 1985 to 11.0% in 1995.

**Table 3 — Average incomes of male and female full-time translators in Canada
1990-1995
(in 1995 dollars)**

Region	1990		1995	
	Male	Female	Male	Female
Quebec	45,942	39,025	44,852	40,675
Montreal	40,802	38,079	39,242	39,932
Ontario	49,047	42,042	45,103	39,317
Ottawa-Hull	53,329	47,185	52,706	45,685
Toronto	49,588	39,560	35,520	36,136
Canada	46,214	39,712	43,601	38,813

Note: Data for the other provinces are incomplete.

Source: Statistics Canada, 1996 census products on CD-ROM.

In conclusion, the translation, terminology and interpretation professions experienced strong growth from 1985 to 1995, but mainly during the first part of that decade. During the latter part, the number of part-time translators rose sharply. The average income dropped after 1990, and women earned less than men, although the gap has narrowed noticeably.

1.3 Firms and independent workers

1.3.1 The Canadian market

We estimate the value of the translation market in Canada to be about \$450 million, excluding the value of translations provided by the in-house translation services of Canadian businesses and organizations. This market is served by over 800 firms and some 4,500 independent workers. Firms are concentrated in Quebec and Ontario, where 85% of the firms are based, as can be seen from the following table.

Table 4 — Number of firms by province or territory

	Number of firms	%
Quebec	382	48
Ontario	296	37
British Columbia	52	6
New Brunswick	19	2
Manitoba	18	2
Nova Scotia	14	2
Alberta	10	1
Newfoundland	6	< 1
Saskatchewan	4	< 1
Prince Edward Island	2	< 1
Northwest Territories	1	< 1
Total	804	100

Source: Canadian Translation Industry Sectoral Committee, *Supplier Survey*, 1998.

Annual sales for these firms were evaluated to be almost \$230 million, of which subcontractors handle 31% (see Table 5). The firms employ about 7,200 individuals (4,635 professionals and 2,575 others in related functions). The annual sales of independent workers are estimated to be about \$219 million. For its part, the Translation Bureau has sales of \$72 million, of which 42% is outsourced. In the spring of 1998, it employed 600 professionals and 220 employees in related functions. If we take into account the sector working for Parliament and the terminology sector, the total employment roster, in the spring of 1998, was 1,200.

In-house translation services are considered here as being a captive market of the demand and are therefore not considered in assessing the supply side of the translation services industry. However, we estimate that there are about 2,000 translators employed by in-house translation services in Canada.

Table 5 — The translation services market in Canada in 1997

	Firms	Employees	Sales (million \$)
Independent, part-time workers		1,350	27.0
Independent, full-time workers		3,150	192.0
Small firms with sales up to \$150,000	385	1,540	39.0
Mid-size firms with sales between \$150,000 and \$500,000	385	4,620	135.0
Large firms with sales over \$500,000	34	1,050	55.0
Total estimated supply	804	11,710	448.0
Translation Bureau (revolving fund) ⁽¹⁾		820	72.0
Less subcontracted work (double counting)			(77.0) ⁽²⁾
Total		12,530⁽³⁾	443.0

(1) Revolving fund: "A continuing or non-lapsing authorization by Parliament to make payments out of the Consolidated Revenue Fund for working capital, capital acquisitions, and temporary financing of accumulated operating deficits." Source: TERMIUM®, Government of Canada Linguistic Data Bank, 1999.

(2) Firms and the Translation Bureau derive respectively 31 and 42% of their revenue from subcontracted work, which is already taken into account by the independent workers. We are including, however, for the firms and the Translation Bureau, their outsourcing margin, evaluated to be 22.5 and 25% respectively. $(\$229M \times 0.31 \times 0.775) + (\$72M \times 0.42 \times 0.75) = \$77M$.

(3) The firms and the Translation Bureau together employ 5,230 professional translators and 2,800 support staff.

Source: Canadian Translation Industry Sectoral Committee, *Summary of Sectoral Reports*, 1999.

Translation represents 80% of demand in Canada, while interpretation accounts for 10%, and related linguistic services (terminology, writing, revision, etc.) account for the remainder. Based on our survey, 75% of Canadian firms provide only translation services, 23% offer both translation and interpretation services, and 2% specialize solely in interpretation.

Prospects for growth of the Canadian translation market are excellent, if we are to believe firms and independent workers. The expected rate of annual growth ranges between 5% and 10%, depending on whom one asks.

Not well known, not highly valued

Clients know little of the Canadian translation industry, translation technology and industry difficulties. Moreover, the professional status of certified translators is not widely valued. Translation is often viewed as a cost that must be kept at a minimum. It is one of the last activities to be done in a production process, and delivery deadlines are often very tight. If no professional translators are available at that point, clients look for someone else, and non-official suppliers begin to look attractive: surely any bilingual person can translate! It also happens that not all translators have a knack for marketing, and there are no business associations promoting their services. In the end, companies need to gain a fuller appreciation of the importance of translation in the success of their products and services.

Revolves around the public sector

Direct demand from the public sector, which we evaluate to be about \$165 million, represents a significant proportion—more than 35%—of the total Canadian market. The federal government alone accounts for between \$100 and \$120 million of this market, and this does not take into account in-house translation work done by the departments themselves or the work included in the acquisition of goods and services (e.g., translations done as part of the frigate construction project). What is more, demand from the private sector is spurred on by the legal requirements in Canada (*Official Languages Act* and *Charter of the French Language*). This situation, coupled with Canada's low industrial density, explains the importance of public sector demand in the total demand for translation across the country.

Until 1995, the Translation Bureau in Canada assumed full responsibility for meeting the translation needs of the various federal departments, calling on subcontractors—firms and independent translators—to help it handle the workload. Since then it has become a Special Operating Agency (SOA), and the departments are free to choose between it and the private sector for translation services.

Although it is still part of the public service, the Translation Bureau must now reach certain cost-effectiveness objectives. With annual sales of \$72 million and over 800 employees (excluding the sectors working for parliament and terminology), the Bureau is now meeting 60% of the federal government demand; of this it does 58% in-house and subcontracts 42%.

A fragmented industry

The Canadian translation industry is characterized by its large number of independent workers and small firms, with very few firms operating internationally. Based on our survey, more than 80% of Canadian translation firms have annual sales below \$500,000. Scarcely thirty of them exceed this threshold in Canada. Average annual sales for all firms are below \$300,000. This situation is not unlike what is observed elsewhere around the world. In the United States, for example, about 2,700 of a total 3,000 firms have annual sales below \$500,000, and the number of independent workers is estimated to be over 40,000. However, the ratio of firms with annual sales greater than \$500,000 is twice as high as it is in Canada, and there are many firms operating at an international level, some of which have annual sales in excess of \$100 million.

Lacklustre profitability and inadequate capital

Independent translators and translation firms have differing views on profitability. For the former, profitability amounts to being able to have consistent annual earnings (net of expenses) greater than or equal to what could be earned as employees in the same profession, with an equivalent number of hours worked. Their earnings must also compensate for the risk and provide a reserve for future investments. For private firms, as is the case for any company, profitability is measured as a production/investment ratio (net profit/shareholder assets). Since human resources (wages and benefits) are the largest cost recorded on income and expenses statements, the gross margin (total revenue less the cost of human resources) is the most reliable indicator.

On this basis, independent workers and firms alike have been feeling the squeeze of lacklustre profitability for a few years. In fact, the industry has still not rebounded from the blow incurred by the recession of 1990-1991.

Whereas it was profitable before the recession, the industry has since then been going through some difficult adjustments: gross margins hover between 20 and 25%, and net income is scarcely more than 5% of gross sales. Having known prosperity during the 1980s, the industry had to undergo far-reaching changes in the 1990s. Budget cuts among the governments, reduced private sector spending, employee downsizing (which served to increase the number of independent workers in the market) and lower rates exacted a serious toll on the profitability of firms, especially among the large firms (those with annual sales in excess of \$500,000). Some firms report gross margins that collapsed by 25%.

In professional service industries, the targeted gross margin is 50%, meaning that revenue per professional must be twice the salary paid to the professional.

It may be recalled that the growth in the number of translators in the market between 1985 and 1995 (according to Statistics Canada) derives, in two out of three cases, from independent translators. Our survey findings indicate, in fact, that 56% of all independent translators in Canada began working as such only after 1990.

This increase in the number of translators in a market with zero or negative growth has put enormous pressure on rates. Generally speaking, independent workers do not compete with firms, for they meet different market needs. The former meet specific, small-volume, sporadic demands for translation, whereas the latter handle large volumes and often produce within very tight deadlines. Also, the primary concern of independent workers is to provide themselves with ample income, and they set their rates accordingly. In comparison, firms have less flexibility when it comes to setting rates because of overhead costs and, especially, the investments they have to make to develop and ensure their long-term survival. Even so, firms and independent workers compete occasionally in meeting public sector demand and, given the rules governing outsourcing by the State, independent translators have an artificial advantage over firms in bidding on small contracts.

Average rates invoiced by firms vary between \$0.19 and \$0.26 per word for the official-languages pair, compared with \$0.17 and \$0.23 per word invoiced by independent workers.

To maintain some profit margin, firms pay their subcontractors between \$0.14 and \$0.21 per word. This makes it difficult for them to find experienced independent translators, who are often accustomed to higher rates from the public sector.

A company's profitability must also be backed up with adequate capital, without which it cannot be considered healthy. In general, Canadian translation firms are short on capital, mainly because of the nature of their activity and small size. This means they often have difficulty in attempts to expand or to persuade private investors to inject share capital.

Focused on official languages

The Canadian translation industry is focussed primarily on translations involving the official languages. Notably, 80% of industry revenues are derived from the English-French and French-English combinations. The ratio is somewhat higher among the large firms who find some sizeable mass markets in these combinations, and among independent workers, who find the public sector easier to access. Small firms are more open to working with other languages: 30% of their revenues derive from combinations involving one of the official languages and a foreign language. The Spanish-official language combinations alone account for almost 10% of revenues for small firms.

Table 6 — Breakdown of industry revenues by language combination*

	Firms		Independent workers		Total	
	N	%	N	%	N	%
French to English	65	27	108	31	173	30
English to French	70	48	132	51	202	50
Spanish to French	10	3	4	< 1	14	1
French to Spanish	8	< 1	4	< 1	12	< 1
English to Spanish	23	3	8	2	31	2
Spanish to English	13	1	13	1	26	1
Other	28	17	37	14	65	15

* The findings reported in this table are based on the observed averages, ranging between 0 and 100% for each respondent.

Source: Canadian Translation Industry Sectoral Committee, *Supplier Survey*, 1998.

An industry built on quality

Strongly influenced by the legislative framework imposed by the governments, the Canadian industry has acquired high standards of quality. The requirements of the *Official Languages Act* and the *Charter of the French Language* have literally created sophisticated markets for “institutional” translations. However, any concern for quality among service providers, visible mainly in their thorough terminological research and rigorous revision procedures, is all for nothing unless the client can appreciate its full value—and clients are not always able to distinguish a good translation from a not-so-good translation. The industry will therefore have to take action to apprise clients of what constitutes a quality product.

The same concern for quality is also evident in the field of pure research and the design of aids for translation. These two activity sectors are now recognized worldwide for the quality of their research and products.

Strongly concentrated in the Canadian market

As busy as it is providing adequate service to the Canadian market, the Canadian translation industry is scarcely beginning to enter foreign markets. In fact, 90% of industry revenues are from Canadian clients, and this holds true for independent workers and small and large firms. Moreover, few firms (3%) are affiliated with an international group. Those who export their services do so almost entirely to the United States. Although size is not a highly important criterion in a human-resource-intensive industry, it remains nonetheless that the development of export markets calls for an effort and an investment that many industry stakeholders are still not prepared to make.

Table 7 — Breakdown of industry revenues by market *

	Firms		Independent workers		Total	
	N	%	N	%	N	%
Canada	87	90	188	93	277	92
United States	46	8	48	5	95	6
Mexico	0	0	0	0	0	0.0
Western Europe	6	< 1	16	1	22	1
Eastern Europe	1	< 1	1	< 1	2	< 1
Oceania	0	0	0	0	0	0.0
Central America	0	0	0	0	0	0.0
South America	0	0	0	0	0	0.0
Asia (Middle East and Far East)	3	1	2	< 1	5	< 1

* The findings reported in this table are based on the observed averages, ranging between 0 and 100% for each respondent.

Source: Canadian Translation Industry Sectoral Committee, *Supplier Survey*, 1998.

1.3.2 Human resources

Human resources are the *sine qua non* of a service industry such as translation. Although electronic aids for translation are becoming increasingly available within the industry, the industry depends on the quality and readiness of its human resources.

Educated professionals

The level of education attained by translation professionals in Canada is high. In all, 81% of the professionals hold at least a B.A. degree, and 26% of these have a Master's degree. This holds true especially for certified conference interpreters, many of whom hold a post-graduate degree, the only level offered in Canada. In comparison, in the community interpreter sector, which is currently experiencing significant growth but which is still not regulated by the professional associations, there are more experienced practitioners than degree-holding professionals. However, this sector is currently being structured.

Leading areas of specialization

In addition to specializing in official-language translations, Canadian translation professionals working for firms or as independent workers have acquired particular skills in various activity sectors. The leading areas of specialization are industry and technology, communications, economy and finance, and policy, management and administration. However, we do not observe any regrouping or systematic organization of resources for developing these specialized markets.

A shortage of seasoned professionals

Firms are encountering increasing difficulty in locating seasoned translators, and for many firms this difficulty hinders their development. Following the 1990-1991 recession, governments and large companies cut their budgets and downsized their staff. Translation firms in turn had to adjust and rely more on independent workers. Large translation firms now make 38% of their revenues with their help. In recent years, the demand for translation has begun to recover, and experienced independent workers still in the market are now being solicited by both businesses and translation firms.

Few relief workers in sight

Firms are witnessing the gradual aging of their workers, which indicates that there are few new recruits in their ranks. The typical professional working for a firm is 41 years old and has 14 years professional experience. Scarcely 1% of the professionals employed by firms are under 25 years of age, and only 20% are under 35 years of age. The typical independent worker is older (45 years of age) and has slightly more experience (16 years); many independent workers entered the work force as such later in life because of the downsizing measures taken by their former employers. The aging work force is even more noticeable within the Translation Bureau, where the average age of professionals is 46 years.

On-the-job training is viewed as one option for preparing the succession more adequately. Yet small firms are prevented by their size from investing in the training of young translators, which can take at least two years.

Moreover, while the industry has historically benefited from the Translation Bureau providing a training ground, the Bureau gave up this role in the early 1990s. It has, however, recently assumed it again by offering a co-op (work/study) program for students studying translation in Canadian universities.

We note, lastly, that the 1990-1991 recession and the ensuing downsizing gave the impression that the translation profession was irreparably in decline. Many guidance counsellors, lacking up-to-date information, even discouraged students from becoming translators. Because this impression still persists, despite a new demand for professionals, there are fewer student registrations and, accordingly, fewer graduates entering the industry.

A growing demand for graduates in translation

Our various surveys have shown that firms, independent workers wishing to expand, in-house translation services of large companies and public agencies, and the Translation Bureau collectively will need between 900 and 1000 new professionals per year for the next three years. The same surveys also showed that 40% of the professionals needed by the firms and 70% of the professionals needed by the in-house services will have to have an Honours B.A. or a Master's degree in translation. Total demand for such graduates is expected to hover between 360 and 400 per year.

For more details on the industry's prospects in the area of human resources, see Chapter 6.

A gap between employers' expectations and the training acquired by university graduates

Our surveys have also shown that employers have definite expectations of new graduates in translation, and they are finding that the universities fall short of meeting their expectations regarding required skills and preparation for being on the work force. The main obstacles encountered when hiring graduates are their narrow exposure to culture, lack of practical training and difficulty in working independently. Translation firms claim that university training is too theoretical.

It may also be noted that the findings of our survey show only a moderate degree of satisfaction among respondents with regard to the university training of recent translation, terminology and interpretation graduates.

Chapter 6, which addresses human resources issues, offers a fuller description of the skills required by employers.

Relatively low salaries

Given the level of education and the average number of years of experience of translators, an average annual income of \$40,570 is relatively low for a full-time translator. This is a reflection of the industry being misunderstood and undervalued. For example, in 1995 professionals in the social sciences, education and public administration sectors enjoyed an annual average income of \$48,044. What is more, professionals in the translation industry were dealt a severe blow by the recent recession: average incomes dropped from 1990 levels (while the average income for all professions across Canada held steady at 1990 levels) and job security was undermined (growing number of part-time translators).

1.3.3 Technology

Aids for translation are software packages designed to facilitate the work of a translator. These include:

- Word-processing packages
- Personal terminology management systems
- Terminology banks on CD-ROM
- Documentary data bases
- Word counters
- Spelling and grammar checkers
- Search utilities
- Version comparison utilities
- Translation memories

Most of the respondents in our survey have the basic computer tools: a personal computer equipped with a CD-ROM drive and a modem.

The Internet has become a core computer resource for industry firms, as 93% of firms now have Internet access. Moreover, some independent workers (14%) are on an Intranet network, most likely with their main client. Also, the computer equipment is new. More than 90% of firms and independent workers are set up with microcomputers running on Pentium processors.

The Canadian translation industry makes full use of basic computer tools, but the penetration rate of more sophisticated electronic tools or aids for translation is relatively low. Firms make a slightly greater use of computer equipment and tools than do independent workers.

1.3.4 Regional characteristics

Although 85% of the firms and 80% of the professionals providing translation, terminology and interpretation services are concentrated in Quebec and Ontario, the translation industry presents regional and intra-regional differences in several regards. For example, the translation industry in British Columbia, which ranks third for number of firms and translators, differs very much from what is found in the rest of the country. There the number of translators jumped from 275 in 1985 to 765 in 1995—the most significant growth in Canada. There one encounters multilingualism much more frequently because of the strong Asian presence. There the export of translation services is greater for the same reason. Moreover, industry services other than translation proper are more common than elsewhere in the country. For example, a significant Canadian model for localization services is emerging, which could give rise to a regional specialization, especially since the western states in the US have already gained worldwide renown in this sector. The Society of Translators and Interpreters of British Columbia (STIBC) was the first to recognize court interpreters some fifteen years ago. The STIBC has a widely diverse membership of professionals specializing in several languages, including a large pool of Chinese translators and interpreters. However, it is also in British Columbia that the income levels of full-time translators and

interpreters are the lowest (35% lower than the Canadian average), and the ratio of part-time translators is the highest (76.5% versus 57.4%), according to Statistics Canada.

New Brunswick ranks as the fourth largest province in terms of number of firms and translators and interpreters. The strong Francophone presence in the province has been a key factor in the creation of the region's translation industry. The *Université de Moncton* has its own school of translation, which offers students certificate and Honours B.A. programs. The school reports a 100% placement rate for its graduates. Official-language translations account for a large proportion of local needs.

Intra-regionally there are some notable differences, for example between Montreal and the rest of Quebec, and between Ottawa and Toronto. In Montreal, the average income of full-time translators is lower than elsewhere in Quebec, and the ratio of part-time translators is higher. This situation is likely due to the fact that Montreal has a higher proportion of foreign-language translators and community interpreters, whose rates are often lower than those of their official-language colleagues. The Ottawa-Hull situation is a special case in that the presence of federal government offices creates a local demand for translation and interpretation which has a huge influence on the labour market. Ottawa-Hull ranks second for number of translators and interpreters, after Montreal but ahead of Toronto. The average income in Ottawa-Hull is 23% and 36% higher than the respective incomes in Montreal and Toronto. Employment is also more stable, as 62% of translators hold full-time positions, compared with 43% and 39% in Montreal and Toronto.

Lastly, our survey of the industry shows that firms in Quebec are more translation oriented than elsewhere in the country, where services seem to be more diversified. In Ontario, firms derive more revenue from the public sector than do Quebec firms, which are more oriented toward large companies. The large number of firms based in Ottawa that serve mainly the federal government explain this situation. In Quebec, translation firms focus more on the official languages, while in the rest of the country the firms derive more revenue from translations involving other languages. Firms outside Ontario and Quebec export more, but the salaries they pay to their professionals are lower.

1.4 Aspects of the demand for translation

The total demand for translation, terminology and interpretation services is the sum of the needs presented by companies and agencies and met by in-house translation services and external suppliers, commonly referred to as the "translation industry." While it is relatively easy to estimate the extent of translation demand met by external suppliers, it is not so easy for in-house translation services. Although national groups such as the Association of Linguistic Service Managers (ALSM), the network of translation departments of member companies of the Pharmaceutical Manufacturers Association of Canada (PMAC), and the linguistic services section of The Life Insurance Institute of Canada represent the interests of commercial business (sources of work), there are no national directories that would allow for making a systematic listing of in-house translation departments. In many cases they are a sub-element of other departments, such as communications or public relations. Being unable to measure the entire population, we opted instead to survey a sampling of companies and agencies on their translation needs and services and how they address them. Over 2,350 large companies and agencies in different sectors of activity received our questionnaire. A total of 225 companies responded, of which 116 had their own translation department.

1.4.1 Consumers of translation services: primarily large agencies or companies

The average annual sales of the respondents to our questionnaire are \$74.4 million, and their average number of employees is 660. These are therefore relatively large companies. This does not mean, however, that small and medium enterprises (SMEs) do not have needs for translation services, but large agencies and companies lead the way in terms of consistently large volumes. Moreover, they are the leading source of revenue for firms and the second-largest source of revenue for independent workers, whereas SMEs rank third.

These large companies annually spend \$16.2 million for external translation, terminology and interpretation services.

The average company pays \$40,000 annually for translation. Based on our survey of service suppliers, the large companies represent about \$120 million of a total market of \$450 million. Our sampling would therefore represent 13% of the total market.

Large companies purchase mainly official-language translations

Over 80% of industry-related purchases by large companies involve translation services, and very little involve interpretation. Translation spending is mainly in relation to the two official languages, which account for 90% of expenditures. As for other languages, either large companies do not call on Canadian service providers or their foreign-language needs are very small.

The French-to-English combination accounts for 31% of their needs, and English-to-French for 59%. Proportionally, companies spend more for the French-to-English combination in Quebec and for the English-to-French combination elsewhere in Canada. Also, the other provinces have a greater proportion of combinations other than those proposed for the framework of the study (for example, English to Japanese).

Independent workers benefit from the large-company market

When large companies call on external translation suppliers, they turn to independent workers 55% of the time and to firms 45% of the time. The reasons given for using independent workers are: small volumes of work, infrequent work, more direct relationship with translator, and good knowledge of company culture and activity sector. Firms usually handle high-volume contracts and jobs with very tight deadlines, and respond to needs for guaranteed supply or diversified services. However, it seems that firms have not yet succeeded in defining more fully and promoting their distinctive advantages. Yet, large companies spend very little on integrated linguistic services⁴ (scarcely 2% of spending), likely because this service is not offered much. In comparison, when it comes to conference interpretation, the private sector companies prefer to deal with interpretation firms or equipment suppliers if they turn to one-stop suppliers.

A high level of satisfaction with external suppliers

Companies that use external suppliers to meet their translation, terminology and interpretation needs are generally satisfied with the services obtained. 90% of them say they are “very satisfied” or “satisfied” with their suppliers. Quality is the most important criterion, ranking at 98%, followed by quick turnaround times at 92%. Price is the fourth most important criterion, ranking at 79%. Companies that do not have an in-house translation department would seem to rank the price criterion higher, however. As well, price is more important in selecting interpretation services, as more intermediaries come into play.

1.4.2 In-house translation services: primarily among very large companies

More than 60% of the companies that have their own translation department report annual sales greater than \$100 million. Based on our survey, there is a direct relation between the number of employees of a company and whether or not it has a translation department. For example, among those with a translation department, there are twice as many companies that employ 1,000 people or more. The 116 respondents which have a translation department are multinationals or very large companies. Altogether they allocate approximately \$38 million annually for in-house translation (average budget of \$140,000) and over \$12 million for outsourcing.

Human resources with higher education and better wages

The average number of professionals working full time for an in-house translation department was 4.8 in 1995 and 4.5 in 1998. In all, 522 professionals work for the companies we surveyed. In the next three years, fewer than 50 positions will be created (job vacancies or new jobs). The level of education of the professionals is higher among those working for such translation departments than for those in translation firms: 88% have a B.A. or a Master’s degree, compared with 81% for firms.

⁴Range of services including more than translation per se: writing, translation, publishing, documentation,

Less sophisticated computerization

Businesses with an in-house translation department do not seem to be fully exploiting the potential offered by technology. They make little use of modern aids for translation. The computer tools used most often are word-processing software packages and documentation research, which are the most commonly used tools of business.

1.5 Aids for translation and machine translation

1.5.1 Profile

Developers of aids for translation (AT) or machine translation (MT) systems are key players in the Canadian translation industry in that they provide companies, translation service suppliers, training institutes and the general public with tools to increase productivity and improve the quality of their product. Computerized translation products fall into two categories: aids for translation and machine translation systems. An aid for translation is a software package designed to facilitate the work of a translator. Machine translation systems translate texts without human intervention. Translation memories are better categorized as aids for translation, as they do not translate texts, strictly speaking, but are a special kind of database in which are stored translations that can be used again later.

We identified fifteen businesses and para-university organizations in Canada that are active in the computerized translation products sector. Thirteen of them answered our questionnaire. Eight of them specialize strictly in AT, two in MT, and three in both areas. Nine of the thirteen businesses design and distribute their own products.

Table 8 — Leading Canadian businesses that research or develop aids for translation or machine translation systems

Company Name	Sector	Field	Product line
JOHN CHANDIOUX	AT-MT	Custom tool design	METEO [®] , METEO [®] 96, Général TAO, Lexium
MACHINA SAPIENS	AT-MT	Writing tools and machine translation	Correcteur 101, CorText, El Corrector, ConText
UNIVERSITY OF TORONTO	AT-MT	R&D	Computational linguistics
ALIS TECHNOLOGIES	MT	Integrated language solutions	ATS ^{MC} , ATLD [®]
SOCATRA	MT	Machine translation	XLT [®]
TRANSLATION BUREAU	AT	Terminology bank	TERMIUM [®] (3 million terms)
DOCUMENSA	AT	Customizable systems for in-house terminology management	Edibase IW5.0, Edibase.net
DRUIDE	AT	Writing tools	Antidote
OLF	AT	Terminology bank	Grand dictionnaire terminologique (3 million terms)
LABORATOIRE RALI	AT	R&D	Reacc, ¿Que?
TERMINOTIX	AT	Pre-translation and terminology tools	LogiTerm ^{MC} , LogiTrans ^{MC} , LogiLex
UNIVERSITÉ DE MONCTON	AT	Legal terminology bank	JuriTerm
ARDILOG	AT	Document tools	Naturel Pro, Naturel Net, NQL, Naturel Edition

Source: Canadian Translation Industry Sectoral Committee, *Summary of Sectoral Reports*, 1999.

A very diverse sector

Whether considered by type of tools, targeted clients and sectors, languages used, markets exploited, or size of business, the gathered data do not readily lend themselves to a valid analysis for the sector as a whole, or to discern major trends. Each respondent presented a unique profile. The aids for translation and machine translation industry is integrated very little and comprised of small businesses.

Strong concentration in Quebec

Canadian businesses developing computerized aids for translation are concentrated in Quebec, where 86% of them are based, of which 67% are in the Montreal area. According to some of the respondents to our survey, the main reasons for this situation are:

- Canadian bilingualism has its roots in Quebec
- Montreal's multilingual setting
- Tax credits for scientific research and experimental development
- Calibre of computer programmers
- Quality/price ratio of human resources
- Existence of many venture capital corporations

Strong market growth

Total sales for the industry barely reached \$25 million in 1997, which depicts a small, fairly fragmented industry in which 80% of the businesses make less than \$1.5 million. However, these businesses are active in a market where there is strong demand: the median growth rate for the next three years, all tool types combined, is estimated to be 17.5%. Worldwide, growth is expected to range between 20 and 30% annually.

Exports are still limited

Most respondents still report limited exports, with the exception of a few businesses, including Alis Technologies. In fact, more than 50% of the respondents earn 80% or more of their sales in Canada. The others export their products, mainly to the United States, Asia and the Far East and Western and Eastern Europe.

Undercapitalized and constantly looking for funding

Because of the size of these businesses, which in many cases are comprised of only a few individuals, inadequate capital is for some a major obstacle to rapid expansion. For others, the major hindrance is inadequate funding for their research program, without which their program cannot succeed. However, they are getting access to an increasing number of venture capital corporations.

Computational linguistics in demand

This sector of the translation industry employs almost 300 individuals and is expected to recruit about 150 more over the next three years. However, very few recruits have translation training. The businesses hire mainly computer programmers, engineers, project managers, etc. The most coveted training is computational linguistics.

1.5.2 Scientific research and experimental development

Growth in the aids for translation and machine translation sector depends mainly on the research and development effort made by each designer, as well as on support from university research. In Canada, several universities, specialized public and private institutes, and language companies carry out research. Some do so in order to meet their own needs, as is the case in Western Canada where various agencies have developed language learning software. Others count on being able to market their finished products. Partnerships are a common practice of most of the respondents, as the majority have ties with academic institutions, either to share the research findings or to have access to human resources doing post-graduate work. In other cases the partnerships involve associations for marketing or developing products.

Our survey reveals, however, that the percentage of annual sales that the respondents have devoted to R&D in the last three years and will allocate in coming years will generally decline. In the last three years, R&D budgets have dropped between 20 and 30%, and this trend will continue in the medium term. Several businesses find that this is only an indication of a more mature market, and they are instead devoting more effort to marketing their products.

Institutional research conducted in this activity sector in Canada is not as extensive as what is being done in other countries or regions of the world. Yet this support is all the more important as the fields of application rapidly evolve. In fact, the global

intensification of communications (multilingualism) and the development of linguistic technologies are creating a considerable challenge for Canada.

Currently focussed on the official languages and especially on translation and terminology, research in Canada must broaden its scope to include linguistics and multilingualism. Should the industry actors not gain a genuine awareness of the required changes, Canada may well lose what little comparative advantages it has acquired in some niches over the years. What is more, investment in Canadian R&D is inadequate and fragmented. It is therefore vital that researchers and developers be able to work together in creating critical masses capable of taking advantage of new market trends.

1.6 Infrastructures for training and professional development

1.6.1 University training

Training institutions are an important link, and they play a key role in the evolution of the Canadian translation industry. Canadian universities are the leading institutions in providing training in translation, terminology and interpretation. There are also a few post-secondary institutions such as Vancouver Community College and Algonquin College, which offer training in community interpretation, but their number is limited.

We consulted the eleven university-level training institutions offering translation training in Canada. All are members of the Canadian Association of Schools of Translation (CAST). They are the universities of: Montreal, Ottawa, Concordia, McGill, Laval, York, Laurentian, St. Boniface, Moncton and Quebec (at Trois-Rivières and Hull).

These universities offer various levels of degrees: certificate, B.A. with a minor or a major in translation, B.A. Honours, graduate diploma, Master's, and Ph.D. Conference interpretation training is offered only at the University of Ottawa, and this is a one-year program at the postgraduate level. The small number of candidates admitted to the program and the high cost of the program forced the University to suspend it in 1995. However, it was once again offered in September 1998.

The Quebec City-Montreal-Ottawa corridor

Translation training institutions in Canada are highly concentrated in Quebec and Ontario, which have 75% of such institutions, primarily in the Quebec City-Montreal-Ottawa corridor. These institutions are the largest in the country, with the largest budgets. They also are the only institutions (along with York University in Toronto) to offer graduate and post-graduate degree programs in translation, and they are the universities equipped with the latest technological equipment. Moreover, approximately 87% of students registered in translation study at these universities.

A growing demand for graduates in translation

Our various surveys have shown that the demand for professionals among translation firms, independent workers seeking to expand, in-house translation departments of large companies, public agencies and the Translation Bureau, will hover between 900 and 1000 per year for the next three years. According to the same surveys, 40% (between 360 and 400 per year) of these professionals will have to have an Honours B.A. or a Master's degree in translation. However, the universities are only producing about 320 graduates per year at the present.

Seeking to answer employer expectations, the universities offer general and basic linguistic training (including introduction to various specializations and computer tools), to which is added a mixed-bag of training in what it is to work as a professional. According to the universities, acquiring a more specialized background cannot encroach upon general training.

Number of graduates with an Honours or Master's degree on the decline

For each of the last three years, the number of new students registered in translation courses and programs in Canada has held steady, along with the number of graduates. Yet this stability hides a disturbing trend: the number of students graduating with a certificate (or B.A. with a minor in translation) is on the rise, while the number of students

graduating with an Honours B.A. (or B.A. with a major in translation) or a Master's degree is dropping.

The increasing number of graduates with a certificate may be explained by the fact that certificate programs suit, in many cases, individuals who already have a job (and whose employer may be paying the tuition). The programs are more flexible (evening courses), and are designed to round out, improve and strengthen the skills already in use on the job. The drop in the number of graduates with Honours B.A. or Master's degrees may be due to the financial difficulties of the universities and to the lack of promotion of translation as a profession.

Limited financial resources

The training institutions are struggling with limited funding. Budget cuts are definitely nothing new in the education sector, but the majority of the institutions we contacted noted that the funding problem hits translation harder than it does other disciplines. For example, translation schools are considerably limited in developing new courses, acquiring advanced technology, promoting co-op programs, or even adequately promoting their translation programs.

Aging instructors

Our survey of university translation schools showed that a majority of them will have problems finding available instructors in the coming years. Budget cuts in recent years have considerably hindered the hiring of younger blood for tenured positions while promoting the use of instructors. Current teaching staff are aging, and their retirement could create some serious shortages. This situation does not help to ensure that programs develop continually. To that can be added the difficulties universities have in offering adequate wages to instructors, which becomes all the more acute in universities at greater distances from the major urban areas that already have difficulty attracting experienced instructors.

Inadequate computerization

The training institutions seem unable to exploit fully the potential of new technology. In addition, some translation departments in Canadian universities are better equipped

than others with aids for translation. Some have language laboratories with a workstation for each student,

while others offer little more than an introduction to the theory of computer use in translation. Some software installations (on stand-alone computers where students can gain familiarity with the tool) are demo versions only, rather than network versions (where a group of students receive guided training on a networked tool).

Multilingualism and computational linguistics

Our surveys in other segments of the industry showed a growing demand for professionals capable of working in a third language (especially Spanish) and for graduates with degrees in computational linguistics. For the former category, universities are aware of the need, and some offer certificate and degree programs in a third language. However, computational linguistics is not offered in translation departments. The universities recognize the importance of offering new programs, but here too budget restraints delay their introduction.

1.6.2 Professional associations and professional development

Canada is probably one of the countries with the best structured organization of translation, terminology and interpretation professionals. The Canadian Translators and Interpreters Council (CTIC) is the umbrella organization for eleven provincial associations bringing together more than 3,800 members, of which 2,500 are certified in their profession. The largest associations are: the *Ordre des traducteurs et interprètes agréés du Québec* (2,000 members), the Association of Translators and Interpreters of Ontario (1,000 members), the Society of Translators and Interpreters of British Columbia (430 members) and the Corporation of Translators, Terminologists and Interpreters of New Brunswick (175 members). The associations in Quebec, Ontario and New Brunswick are recognized by provincial legislation.

At the international level, the main organizations with which the Canadian associations have ties are: the International Federation of Translators (FIT), whose members are the national associations (including CTIC) in 50 countries, representing over 100,000

translators and interpreters; the International Association of Conference Interpreters (AIIC⁵), present in 80 countries and representing over 2,500 conference interpreters; and the American Translators Association (ATA), which represents over 7,000 translators and interpreters in the United States, of which 2,000 are certified.

Only those holding a B.A. or higher degree are eligible to apply for the reserved titles of Certified Translator (C.Tran. / C.Tr.), Certified Terminologist (C.Term.) and Certified Interpreter (C.Int.), which are granted by the provincial associations. Of course, applicants with equivalent training and experience may be eligible if certain conditions are met.

Where the size of their membership permits, the Canadian associations have created various committees: training committees to recommend changes to university programs; professional development committees to organize and offer courses and seminars to members; peer review and disciplinary committees; and various committees formed to serve the specific interests of sub-groups of professionals: conference interpreters, court interpreters and terminologists.

Professional development is handled mainly by the provincial associations, the Translation Bureau and professionals themselves. The committees in Quebec (OTIAQ) and Ontario (ATIO) are the most active in this area by virtue of their respective sizes. They both offer ongoing professional development programs. Through its Training and Evaluation Service (TES), the Translation Bureau offers its employees and outside clients a series of translation, writing and revision courses. For example, for the fall of 1998, OTIAQ signed an agreement with the TES to offer workshops at the best possible cost. Universities are also solicited occasionally by the associations to give professional development courses. Through OTIAQ, some 600 to 800 translation professionals annually complete some forty courses given in Montreal, Quebec City and in the Outaouais area.

⁵ The AIIC negotiates the professional fees and working conditions of independent interpreters with international organizations and holds advisory status with UNESCO.

2 THE GLOBAL TRANSLATION INDUSTRY

The worldwide industry of translation goods and services can be divided into three sectors: human translation, localization, and aids for translation and machine translation software. Two recent studies offer global perspectives on the components of this market: the first⁶ described the market in terms of total demand or, as is sometimes preferred, in terms of total consumption of translation products and services. The second⁷ studies the market in terms of the supply of private translation services, localization (outsourcing⁸ of services) and sales of translation products. Since total demand is much greater than the outsourcing industry (three or four times greater in some regions of the world), the figures below must be interpreted accordingly.

2.1 Worldwide consumption and outsourcing of human translation services

Allied Business Intelligence (ABI) evaluated the total translation need in the world (or total consumption) on the basis of the number of translators. Accordingly, the 140,000 full-time translators and the 252,000 part-time translators reflect a total need evaluated to be over US\$7.3 billion (CAN\$11.2 billion) in 1998. By 2003, consumption should reach between US\$8.8 and US\$9.6 billion (between CAN\$13.5 and CAN\$14.8 billion). This market includes both the in-house translation services of corporations and organizations around the world and external services, also referred to as the private industry of language services.

⁶ Allied Business Intelligence Inc., *Language Translation: World Market Overview, Current Developments and Competitive Assessment*, United States: 1998.

⁷ Equipe Consortium Ltd, *The Global Translation Market*, Great Britain: September 1998.

⁸ Outsourcing consists of awarding to an external company the management and carrying out of a non-strategic business activity. In-house staff responsible for that activity may be transferred to the external company.

Table 9 — Breakdown of translators worldwide – 1998

Country / region	Salaried translators	Independent translators
United States	22,360	41,509
Canada	6,800*	4,114
Latin America and the West Indies	10,192	18,921
Europe	40,212	74,650
Countries of the former USSR	8,551	15,875
Africa	15,265	28,338
Oceania	2,922	5,554
Other	34,038	63,055
Total	140,340	252,016

* The numbers for Canada are based on the results of our survey.

Source: Allied Business Intelligence Inc., *Language Translation: World Market Overview, Current Developments and Competitive Assessment*, 1998, p. 34.

Equipe Consortium Ltd. evaluated the external human translation suppliers sector (outsourcing of services) at about US\$2.3 billion (CAN\$3.5 billion) in 1998 and predicts it will reach US\$3.9 billion (CAN\$6 billion) by 2000. The demand for external translation services will continue to be concentrated in Western Europe (on the basis of target languages) with CAN\$2.9 billion by 2000 (49% of the world market), followed by Far East countries with \$2.3 billion (39%). In Western Europe, the largest markets are in Germany, Italy, France and the Netherlands. Japan dominates by far the market in the rest of the world. Translation in Japan will be a CAN\$925-million market by 2000, which is greater than the German market, which dominates the Western Europe market.

Despite the enormity of these markets and their strong growth, the industry is still highly fragmented and characterized by a large number of independent workers. Worldwide, few translation firms report annual sales in excess of \$5 million. However, in recent years we have witnessed some groupings, mergers and acquisitions which will result in global players capable of meeting the multiple needs of businesses "going global." For example, Lernout and Hauspie (L&H), based in Belgium, acquired Trantex in Finland, Kermit s.r.l. in Italy, Wordwork in Sweden and GMS in Germany. Two British firms, Polyglot and RMS, recently merged their operations to become RWS Polyglot, the largest translation company in the United Kingdom. Bowne Global Solutions of New York acquired I&G COM in France, GECAP in Germany,

ME&TA in Spain and Pacifitech in Japan. The American corporation, ALPNET, purchased Computype Ltd., of Great Britain, which specializes in desktop publishing. The British firm, SDL, acquired Polylang, another firm in Great Britain specialized in the localization of Web sites.

In this human translation market, the public sector (federal governments) demand that is outsourced is expected to grow at a rate much slower than the rate for the industry as a whole: from US\$264 in 1994 (CAN\$406 million) to US\$354 million by 2000 (CAN\$544 million), i.e., 5% per year, compared with 25% per year for the entire industry.

In comparison, the technical translation market niche will grow strongly. It is estimated, for example, that scarcely 8% of technical documents are currently translated. This field should see growth reaching 25 to 30% per year.

The main fields in which the need for human translators will grow sharply are:

- Aerospace industry
- Transportation
- Business services
- Pharmaceutical industry
- Telecommunications equipment
- Financial services
- Information technology
- International organizations

2.2 Localization

Localization may be broadly defined as the adaptation of software and related technical documentation into a foreign language and culture. Localization is more than a simple, literal transcription of a software product's features into a target language. It also strives to integrate coherently all the features into the language and cultural context of the target country.

Localization is considered a success if the French or German user of a foreign software product has the impression that the software was designed and developed in the user's own country, never once thinking that it may have been created in a foreign country, converted and then imported.

Not so long ago, converting software for a non-Anglophone market simply involved translating, from English to the main foreign languages, the user guides, advertising copy, and messages appearing on the screen. Most of these products, easily handled and managed, were well received by the non-Anglophone world. That meant that almost any translator would be considered qualified to translate this type of document. Managing this type of work as well was relatively simple: it could be handled by small translation firms or even by independent translators. The market has since changed, especially with regard to management and entertainment software, which are the main localization markets. Clients have become more demanding, and the procedures are more complex.

The businesses that specialize in this new market niche must, however, rely on highly diversified resources, including:

- Skilled project managers
- Regional experts and language specialists (a broad, worldwide network)
- Experts in the marketing jargon of the target country
- Experts in the product's technical specifications
- Audiovisual production teams
- World-class recording studios
- Seasoned programmers and beta testers

The localization market is mainly from English to other languages, mostly Japanese, German, French and Spanish. There is therefore a huge market in this sector.

The total worldwide consumption of localization services (in-house and external services) was evaluated in 1998 at US\$2.8 billion (CAN\$4.3 billion), and is expected to reach US\$4.8 billion (CAN\$7.4 billion) by 2003. In 1998, 80% of localization was for software products developed in the United States, with the remainder from other regions.

The Asia-Pacific region is expected to capture 42% of the American supply by 2003, while Europe should keep its demand at 1998 levels. Growth in the European market will be absorbed by a better-structured local supply.

The outsourcing of localization services (localization industry) represented total sales of US\$1.4 billion (CAN\$2.2 billion) in 1998, and sales are expected to reach US\$3.4 billion (CAN\$5.2 billion) by 2003. Despite this strong growth, entrance barriers for new businesses are relatively high, as can be ascertained from the essential resources listed above, as well as from the amount of investment required. Moreover, there are a limited number of businesses specializing in localization worldwide. No translation firm based in Canada offers a full-fledged localization service, and for this reason most of the software companies in Canada turn to foreign firms to have their products localized. For marketing, however, they might rely on in-house localization services. Companies such as Corel, JetForm, Newbridge and Fulcrum, which are based in the Ottawa area, all have contracts with foreign localization service providers.

2.3 Aids for translation and machine translation

This is the sector of the translation industry that will experience the strongest growth, nearing 50% per year. Private industry will see sales grow from US\$200 million (CAN\$308 million) in 1995 to US\$1.5 billion (CAN\$2.3 billion) by 2000. This sector includes all aids for translation, translation memories, machine translation and the related costs of implementation and training.

Machine translation

Machine translation accounts for almost 50% of the aids for translation and machine translation sector. Prior to the 1960s, researchers from the United States, the Soviet Union and Western Europe were confident that research coupled with advances in computer technology would greatly improve the reliability of machine translation. However, the Automatic Language Processing Advisory Committee (ALPAC) report, published in 1966, suggested it would be better to redirect resources away from machine translation development and toward resolving the underlying linguistic problems that

were preventing the development of reliable machine-translation systems in the short-term.

In the next decade the number of laboratories active around the world in machine translation research dropped sharply. However, this did not prevent some countries, such as Canada and France (Montreal and Grenoble) to further research through grants to university groups.

The globalization of markets and the phenomenal growth of the processing capacity of computers at increasingly lower cost created a new surge of interest in the 1980s for machine translation systems. Machine translation systems can be divided into two categories: general and targeted. General machine translation systems are used to get a quick understanding of a text in a foreign language. They are not, strictly speaking, aids for translation. They translate texts without human intervention, but the texts are not intended for publication. Targeted systems translate only in specific fields using fixed vocabulary. This is the type of application where machine translation is the most effective, and the METEO[®] system (which translates weather bulletins from English to French and French to English for Environment Canada), developed in Canada in 1977, has set the standard for targeted systems.

Although there is a growing use of general machine translation systems, they will never replace human translators, for they do not meet the same needs. They have, however, become indispensable modern tools in an increasingly globalized society, where rapid understanding of exchanges between diverse foreign languages is necessary. Rather than being in competition with human translation, general machine translation systems are complementary tools that the translation industry should take greater advantage of and include in its range of services. Increased use of general machine translation systems will likely increase the demand for human translation insofar as it encourages ever-greater exchanges around the world. An increasing volume of texts translated by machines for internal purposes will create a need for document revision by translators prior publication. The automatic translation of texts displayed on the Internet could also lead readers to request human translations of texts of special interest.

In 1993, it was estimated that 380 million words were being translated annually by machines, at least among the very large users. These included the European Union,

which alone translated 30 million words in thirteen language combinations with the help of its system called Systran. We now know that this number more than doubled in 1988 and exceeded 70 million words.

According to ABI, the total consumption for machine translation was evaluated at US\$246 million (CAN\$378 million) in 1998. ABI also predicted sales in excess of US\$1.3 billion (CAN\$2 billion) by 2003, which represents an annual growth rate of over 40% per year. The three main markets where this growth will be evident are Europe, North America, and Japan. Most of the consumption of machine translation will derive from government and para-government organizations.

2.4 American suppliers

Sales in the translation industry in the United States were evaluated at over US\$1.3 billion (CAN\$2 billion) in 1997. The following table shows how more than 3,000 translation firms share this market.

**Table 10 — Breakdown of translation industry sales
in the United States by size of firm
1997**

Number of firms	Size	Total sales (US\$ millions)
2700	< US\$500,000	925
220	US\$500,000 - 1 M	165
105	US\$1 M -2.5 M	155
35	> US\$2.5 M	105
Total: 3 060		1 350

Source: Allied Business Intelligence Inc., *Language Translation: World Market Overview, Current Developments and Competitive Assessment*, 1998.

Although this fragmentation greatly resembles what has been observed in Canada, the large US firms are, in comparison, much larger, and the trend toward mergers in response to globalization is much more advanced than it is in Canada.

However, contrary to the situation in Canada where various Acts have helped to shape the profession, translation in the United States is tilted to meeting private sector demand (domestic and foreign) and, to a lesser degree, to public sector demand (foreign trade and international bodies).

Table 11 lists the leading suppliers in the United States in 1998.

Table 11 — Leading suppliers in the United States

Company Name	Total sales⁽¹⁾ (\$US million)	Fields of specialization
Alpnet	41/41	Localization, translation, documentation, interpretation, desktop publishing, glossaries
Berlitz	90/500	Language instruction, localization, translation, documentation, desktop publishing, interpretation
Bowne Global Services	60/500	Localization, translation, information management, preparation and distribution of documents
International Language Engineering	20/20	Localization, multimedia
LioNBridge Technologies	38/38	Localization

(1) Sales from translation and related services/total sales

Sources: Allied Business Intelligence Inc., *Language Translation: World Market Overview, Current developments and Competitive Assessment*, 1998, section six.
Equipe Consortium Ltd, *The Global Translation Market*, September 1998, pp. 44-69.

In coming years, the main characteristics of the US market will be:

- The industry will continue to consolidate.
- Diversification will continue to be the preferred development strategy, and large businesses will turn increasingly to one-stop suppliers.
- Large translation firms could take over between 10 and 20% of the market.
- Small firms will have to specialize and envisage various types of partnerships.

Rates

The rates charged by the translation firms in the United States are difficult to obtain by going through the traditional channels, because the Federal Trade Commission determined a few years ago that the publication by associations and firms of their standard rates contravened the principle of free competition. We called some firms and found that their rates vary considerably, depending on the client type.

For example, the rates charged by some firms for high-end translations, such as diplomatic documents, can reach from US\$0.23 to US\$0.26 per word (CAN\$0.35 to CAN\$0.40 per word). However, according to other sources, rates charged by firms could go as low as US\$0.13 to US\$0.15 (CAN\$0.20 to CAN\$0.23) per word, whether for public- or private-sector clients.

The rates we noted during our documentary research were mainly those charged by independent workers. For example, ABI found that independent workers in the United States charged an average US\$40 (CAN\$62) per page for common languages. Assuming 300 words per page and a Canadian dollar at US\$0.65, we can estimate the rate at about CAN\$0.20 per word.

A survey conducted by an American researcher over the Internet between January and April 1997 among 337 respondents gave the following findings: the rates charged to translation firms by independent workers ranged from CAN\$0.17 per word (into Italian) to CAN\$0.25 per word (into Dutch). Rates for translation into French or English were, respectively, CAN\$0.19 and CAN\$0.18 per word. Where independent workers transacted directly with clients, their rates went up 35%. Our survey found that the average rates charged by independent workers varied from CAN\$0.19 to CAN\$0.23 per word. We can conclude that the rates charged in the United States and in Canada are quite similar.

The profit margins seen by translation firms for revision, the client's terminological corrections, formatting, and administration of independent workers, vary from 30% to 70% of the rate charged by the independent worker. This situation is somewhat different from what is found in Canada, where profit margins are considerably lower.

We can conclude that the American translation market is immense and full of contrasts. There are large firms offering their services around the world, and at the same time there are many independent workers. Rates vary noticeably, depending on the region, language and field of speciality. The rates may be attractive to Canadian translators, but competition is lively. There are, in particular, independent workers charging rates as low as US\$0.07 or \$0.08 per word (CAN\$0.10 to \$0.12). One thing is certain, Canadian translators are well positioned to take advantage of this market. Their expertise and thoroughness, coupled with a value of the Canadian dollar that promotes exports make this market an attractive place to expand or diversify. Many American firms are looking for translators with experience in certain fields. Canadian firms and independent workers need to embrace this reality more openly.

2.5 European suppliers

The translation market in Europe is the largest in the world, and the governments and international agencies employ large numbers of translators.

The diversity of languages and the advent of the European Union largely explain the enormous need for translation. The European Commission alone employs 1300 translators; the European Parliament, 400; the European Council, 500; the Economic and Social Committee and the Audience Court, 100 each; and the Court of Justice, 200.

The translation service of the European Commission translates about 1.4 million pages per year. The portion entrusted to independent workers amounts to 170,000 pages per year. Not all documents are translated into the eleven languages of the member countries. It is estimated that each document is translated into 5.5 languages.

Table 12 lists the leading European suppliers.

Table 12 — Leading suppliers in Europe

Company name	Annual sales ⁽¹⁾ (\$US M)	Fields of specialization
Interverbum (Sweden)	13/13	Localization, translation, technical documentation, technologies management
LOGOS (Italy)	13/13	Machine translation, localization, translation, technical documentation, glossaries
L&H/Mendez (Belgium)	32/99	Localization, machine translation, human translation, etc.
Star (Germany)	30/30	Translation, technical documentation, automobile, information management

(1) Sales from translation and related services/total annual sales

Sources: Allied Business Intelligence Inc., *Language Translation: World Market Overview, Current developments and Competitive Assessment*, 1998, section six.
Equipe Consortium Ltd, *The Global Translation Market*, September 1998, pp. 44-69.

No European supplier has annual sales in excess of US\$50 million (CAN\$77 million) for translation services.

The main characteristics of the European market are:

- Firms have experienced lower growth rates than their American competitors: from 10 to 20% compared with 20 to 30%. European firms have given less impetus to the software localization market, which is the area showing strongest growth in the world.
- Consolidation will also continue in Europe, but will be led by the American firms.
- There are fewer acquisitions by European firms, as this approach is foreign to their culture. They prefer the internal approach for growth. It is observed that access to public funding for acquisitions investment is more limited in Europe than in America.
- European firms have not been as successful as the American firms in trying to reduce the pressure on prices, opting instead for more enduring relations with their clients.

Rates

Translation rates are “advertised” more in Europe than in the United States. The average rate paid to a translator hired by the external translation service of the European Commission is US\$47 (CAN\$72) per page (one page being 1500 non-white characters) for a finished text. For translations requiring “post-editing”, the average rate is US\$26 (CAN\$40) per page.

Rates vary from US\$15 (CAN\$23) to over US\$95 (CAN\$146) per page, depending on the language combination and field of specialty. These rates are based on an analysis of the contracts granted in 1997.

The external translation service of the European Commission has a roster of over 700 translation firms and independent workers on whom they call, depending on the need.

The rates of international organizations (ILO, WTO) are about 200 to 220 Swiss francs (CAN\$208 to CAN\$229) per 1000 words, including formatting and publishing. OECD rates vary between 0.70 and 0.85 French francs (CAN\$0.18 and CAN\$0.21) per word.

In Great Britain, average rates vary between CAN\$0.17 and CAN\$0.20 per word. A freelancer can expect about 50% of this rate if subcontracted by a translation firm.

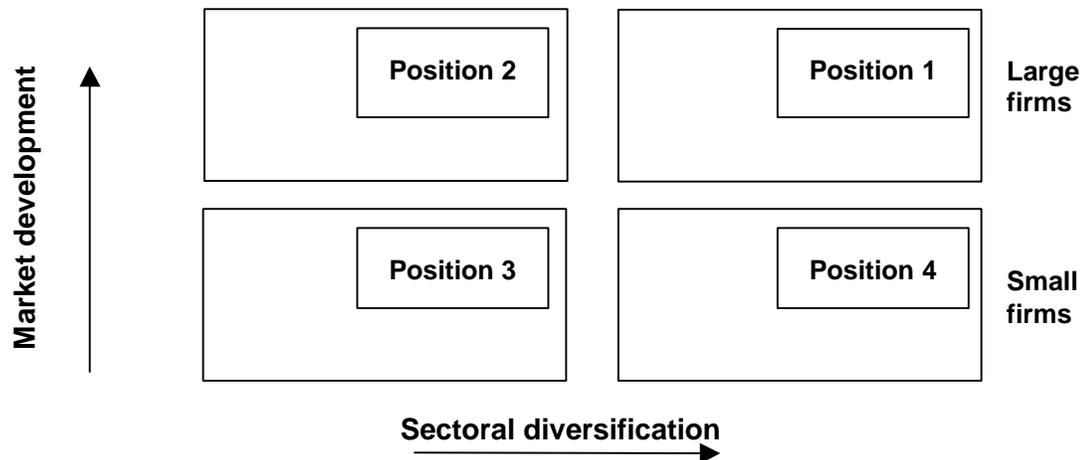
2.6 Strategies used by large translation firms

Translation firms, large and small, American and European, have adopted a strategy geared to one of the following factors:

- Specialization
- Diversification
- International development

These strategies are illustrated in the following diagram.

DEVELOPMENT STRATEGY



Source: Equipe Consortium Ltd, *The Global Translation Market*, September 1998.

The vertical axis represents the strategy of conquering international markets (from domestic markets to international markets). The horizontal axis represents the strategy of progressive diversification (from one specialized sector or field to general diversification). Large firms are positioned in the international markets (positions 1 and 2) while the small firms work mainly in the domestic markets (positions 3 and 4). Firms in position 1 (Berlitz and Alpnet) are more generalist, traditional, large and increasingly dependent on market expansion, mainly through acquisitions. Firms in position 2 have concentrated their efforts in a few sectors and fields of specialization that they exploit internationally (e.g., Bowne and LionBridge). They invest considerably in technology. They have been among the most profitable firms in the past and have seen strong growth. But without territorial expansion they risk levelling off. They try, little by little, to diversify and gain ground in additional markets, thereby becoming a threat to the firms in position 1 who, themselves, do not always have the most recent expertise needed to break into some specialized markets. The firms in position 3 are also specialized, but they work mainly in domestic markets. They are unable to compete with the large firms on the international markets, but often work for them as subcontractors. The firms in position 4 are generalists and concentrated on their domestic market. They are excellent targets for take-overs by the large, expansionist firms.

Canadian translation firms are located mostly in positions 3 and 4, and only a few are in position 2. No Canadian translation firm is in position 1.

The main strategies of the large firms, whether American or European, are:

- **Diversification.** None of the large firms does nothing but translation. They are all diversified in various communications-related fields: language courses, multimedia, information management, computer aids for translation, speech-to-text processing, training, etc.
- **Turnkey services.** In the translation sector, large firms often offer integrated services, including graphic arts, desktop publishing, translation of Web sites, writing and publishing glossaries, and, in some cases, printing. The main strength of large firms is their ability to offer a complete range of translation and communication services to large international businesses. In the translation-only and standing-offer market, they will be less and less able to compete with small firms and independent workers.
- **Multilingualism.** All the large firms offer multilingual services and have an international network of translators.
- **Development of international markets.** Large firms emphasize growth through acquisition (in order to diversify or to break into emerging markets) or organic growth (by hiring and training human resources and massive investments in technology).
- **Investments in technology.** All large firms invest in technology and, in a good number of cases, in the creation of proprietary tools (machine translation, translation memories, speech-to-text, desktop publishing, etc.).

3 POSITIONING THE CANADIAN TRANSLATION INDUSTRY

An analysis of the strengths, weaknesses, opportunities and threats of the Canadian translation industry must take into account the various trends observed in the evolution of the translation industry worldwide. These trends are likely to influence the orientation of the Canadian industry and its future positioning. We have grouped these trends into three categories: goods and services, technology and capacity.

3.1 Trends in goods and services

Management of multilingual documents. Managing the number of languages companies must grapple with as part of their expansion into international markets is becoming increasingly complex and commensurately challenging. To address the challenge large companies will centralize management of this process at their head office but will turn increasingly to outsourcing for having specialized tasks completed.

The continuance and development of outsourcing. The outsourcing of linguistic and documentary services by large businesses will continue. Traditionally, large businesses handled most of their translation needs internally. However, the globalization of markets and the growing needs for "cultural" translations are leading large businesses to favour outsourcing over other options. They will prefer partnerships with firms offering a production capacity and a quality that meet their needs.

Greater control over the communication process. At a global level, translation ties in with an increasingly complex communication process. In fact, writing, documenting, establishing terminology, translating, publishing, developing help tools, and multimedia creations now require that businesses have access to cutting-edge knowledge. Linguists (for research), systems analysts (for designing aids for translation) and translators are now inextricable partners of the industry. Rather than continuing to compartmentalize these fields of specialization, as has too often been the case until now, translation firms will have to act as catalysts and technological and organizational advisors for their clients.

One-stop service outlets. The industry has grown annually by 20 to 40% in some sectors. The markets capable of supporting this type of growth are noticeably the multi-service markets. There is an increasingly marked trend in the industry to offer a range of linguistic services at a single location, starting with the initial drafts and ending with the final publication. In Canada, scarcely 2% of large companies are taking advantage of these services, most likely because of insufficient supply.

Strong growth in technical translation. Barely 8% of all technical documentation in the world is translated. There is therefore an enormous demand in this field. With the United States being a world-leading designer and manufacturer of technical goods and services, a huge market is at our doorstep.

Increase in localization. The localization industry represented total sales of \$1.4 billion in 1998, and sales are expected to reach \$3.4 billion by 2003. The United States and Europe (especially Ireland) have several firms offering localization services. This is, however, a highly specialized field of activity which requires specific resources, a worldwide network of translators and sizeable investments in technology. There are different forms of localization: software, documentation (product information, brochures, maintenance guides, training materials), videos (publicity, training), and packaging (containers, labels). In the years to come we will witness the broadening of the localization concept to include additional forms of communication.

Continued focus on high-quality translation. Despite the progress achieved with the help of technology and the demands for increasingly tighter delivery deadlines, the demand for quality human translation will remain high. The globalization of markets has created large markets, but the specificity of the targeted cultures demands a quality that only seasoned translators can deliver. Moreover, the ever-widening use of the Internet and machine translation should increase the need for top-notch translations.

Strong growth in consecutive interpretation. The simultaneous interpretation market is well known and well established. Users of conference interpreters are mainly governments and international organizations. According to Allied Business Intelligence, there is a significant market potential for consecutive interpretation, especially among multinational businesses and the world of business in general.

3.2 Trends in technology

Increasingly sophisticated integrated, multilingual aids for translation. The automation of the environment in which translations are produced is expected to continue its rapid growth. The demand for aids for translation is expected to grow at a high rate in coming years. More specifically, translation memories will be used to greater extents as aids for translation. Tools will be more user-friendly and integrated into the computer systems. We will witness an international standardization of content and formats. Multilingual aids for translation will emerge. Prices will continue to drop.

Machine translation will continue to make inroads. Machine translation will continue its strong growth. Developments will be seen in both general and targeted systems. Also, translation memories will be paired more and more with general systems. However, this trend is not expected to have an impact on professional translation, as the tools are primarily helps. On the contrary, we can expect an increased demand for professional translation because of the increased use of general systems. Post-editing translation is also expected to increase.

Greater use of the Internet. The Internet is both a market to exploit and an indispensable tool for firms and independent workers. According to International Data Corporation, the United States accounted for 76% of all world trade on the Internet in 1998, but will account for no more than 55% in 2003. It is expected that Internet-related spending by business will reach US\$203 billion (CAN\$312 billion) by 2003, compared with US\$85 billion (CAN\$130 billion) in 1998. The manufacturing and financial services sectors will account for almost 50% of this volume. Moreover, the strong growth in Internet usage by non-Anglophones is creating an enormous demand for translation in a very technical niche, and often in a specific language. Moreover, the Internet is a good tool for accessing specialized dictionaries, lexicographical works, etc. It also allows users to gain familiarity with foreign cultures through local papers and specialized journals.

Emergence of language standards. We will witness the creation of international language standards, particularly in the areas of terminology and translation memories.

3.3 Trends in capacities

Shortage of key skills. The large businesses "going global" will run into a shortage of experienced professionals wherever linguistic services are required. Private firms and independent workers capable of rising to the challenge will succeed.

Increased specialization. In parallel with growth in technical documentation translation, translators will become increasingly specialized. Shortages of experienced translators are often observed in specialization sectors. The main specialization sectors in the world are: aerospace industry, transportation, business services, pharmaceutical industry, telecommunications equipment, financial services, information technology and international organizations.

Language learning. Knowing a third language well is considered increasingly to be a necessity around the world. Mastery of three languages is an entrance requirement in translation and interpretation schools in Europe.

Knowledge of technology. The industry expects its professionals to be at ease in using translation-related technologies. This means having more than a theoretical knowledge, as they must have familiarity with various aids for translation. Increased levels of productivity achieved with the efficient use of computerized tools will increasingly be a matter of survival for translation firms.

3.4 Analysis of the strengths, weaknesses, opportunities and threats of the Canadian translation industry

The analysis of the intrinsic characteristics of the Canadian translation industry provided in Chapter 2 and their comparison with the trends and prospects of the industry worldwide, as provided in Chapters 3 and 4, help to describe more accurately the current position of the Canadian translation industry and strategize for the future.

The industry's main strengths and weaknesses are:

Markets

Strengths

- The existence in Canada of language legislation which has created and sustained a large demand for official-languages translation.
- A continually growing market nearing \$450 million.
- A large translation capacity in the public administration sector.
- High standards for quality.
- A good base of suppliers of aids for translation and machine translation.

Weaknesses

- The industry and the profession of translator are not well known.
- A highly fragmented industry which has few international translation firms.
- An introverted industry overly focussed on public sector markets.
- Inadequate profit margins.
- Undercapitalization of businesses.
- Lack of diversification into translation of languages other than French and English.
- A weak presence in export markets.

Skills and human resources

Strengths

- Large critical mass of educated, experienced translators, terminologists and interpreters.
- Solid expertise in fields of specialization, including communications, economy and finance, industry and technology, management and administration, and law.
- Professionals are well organized.
- Good professional development programs.

- An established history of university-level training in translation.

Weaknesses

- Shortage of experienced translators to handle increased demand.
- Insufficient training in technology, specialization and translation processes.
- Universities have difficulty turning out more graduates and investing in technology.
- Students lack awareness of the emerging potential of the translation and multilingualism industry.

Technologies and R&D

Strengths

- World renown for R&D in translation and terminology.
- Good infrastructure for applied research into aids for translation.
- High quality of terminology publications and translation products.
- Generous R&D tax credits.

Weaknesses

- Lack of coordination among R&D stakeholders.
- Lack of institutional investment in R&D.
- Research, and research findings, tilted too strongly toward pure translation and terminology.

The main opportunities and threats confronting the Canadian translation industry are:

Markets

Opportunities

- Strong growth of world markets in professional translation, localization and translation of technical documentation.
- Strong growth of world markets for aids for translation and machine translation.

- Nearness of the American market.
- Growing market for the control and management of translation processes.
- Growth of outsourcing market and concept of one-stop service.
- Strong growth in multilingual services.
- Growth of the Internet as a vehicle for expanding business and an aid for translation.

Threats

- Likely entrance of American and European firms into the Canadian market.
- Increased competition and pressure on prices.
- A growing market share of large firms among international companies.
- Decisions on the multilingual translation of documents increasingly concentrated at head offices.
- Perceptible movement toward international mergers and acquisitions.

Skills and human resources

Opportunities

- Growing need for multilingual services.
- Emerging potential in areas of specialty such as computational linguistics, graphical design, project management and document management.

Threats

- The scepticism of translation professionals toward computer tools.
- The perception (among young people) that the industry is losing steam.
- A possible shortage of university graduates in translation.
- A gap between industry expectations and what university graduates offer.
- University funding problems and the aging of instructors.

Technology and R&D

Opportunities

- Aids for translation will become increasingly multilingual.

- Closer ties between translation firms and developers of aids for translation.

Threats

- Little synergy among researchers, designers of aids for translation, and translation service providers.
- The United States, Europe and Japan invest proportionally more than Canada in the various linguistics-related processes.

In conclusion, the Canadian translation industry will have to adjust and make some choices in its domestic market where its strengths are insufficiently exploited and where significant structural weaknesses call for corrective action. Although growing, the domestic market is not enough to ensure the translation industry is internationally competitive. This means it can become vulnerable to foreign competitors making inroads in its own territory. For this reason it must also adapt in order to become profitable in export markets where profit can be found, but also in the markets where the threats are most prominent. The following chapter therefore sets out the main challenges that the sum total of these strengths, weaknesses, opportunities and threats represents for the industry, and also puts forward a set of recommendations to address them.

4 MARKET STRATEGIES

4.1 Chief criteria for a strong Canadian industry

The elaboration of strategies for supporting and developing the Canadian translation industry must be based on proven criteria that lead to a strong and healthy industry. We have determined five general criteria:

- Sustained retention of a large share of the domestic market
- Profitability
- Creation and maintenance in Canada of high-quality, well-paying jobs
- Innovation and constant investment in research and development
- Assertive presence in export markets

These criteria have guided the development of the strategies and action plan presented in this chapter.

Our comparison, in the previous chapter, of the chief characteristics of the Canadian translation industry with the main trends of the global industry enabled us to identify some of the challenges the industry will be facing in the coming years. We have grouped these challenges in line with the two basic objectives of this inquiry: to strengthen the positioning of the Canadian industry in the domestic market and to develop export markets. The challenges take into account the great diversity of the industry's stakeholders and address one or another of the following parameters: market, skills and technologies. Knowledge of the markets and the ability to respond to changing needs, a sufficient quantity and quality of human resources and mastery of leading-edge technologies are central to the development of a strong industry.

With regard to markets, the Canadian translation industry faces nine major challenges, five to strengthen the domestic market, and four to develop export markets. These challenges and the related recommendations were presented to industry representatives during public hearing held in five Canadian cities.

The impact of these challenges on human resources supply and demand will be discussed in greater detail in Chapter 6.

4.2 Strengthening the positioning of the Canadian industry in the domestic market

To improve its positioning and become a strong industry in the Canadian market, the Canadian translation industry needs to consider five building blocks for development: greater recognition of its activities; a more solid and better balanced supply structure; greater financial capacity; greater public support for the emerging aids for translation industry and increased investment in research and development; and more openness to technology. Thus, if the industry is to survive and prosper, it has to meet five major challenges:

Challenge 1: Raise awareness among all industry members and the Canadian customer base of the existence of a Canadian translation industry.

Challenge 2: Organize more effectively in order to make the most of market opportunities in Canada and better withstand foreign competition.

Challenge 3: Improve the profitability and financial capacity of Canadian translation companies.

Challenge 4: Make governments aware of the strategic importance to Canada of supporting the growth of developers of aids for translation and increasing linguistic research.

Challenge 5: Demystify aids for translation and machine translation and promote their use as a way of increasing profits.

Challenge 1: Raise awareness among all industry members and the Canadian customer base of the existence of a Canadian translation industry.

The Canadian translation industry is not well known and not highly valued. It even lacks awareness of its own existence as an economic sector. To date, little information has been available about its size, components or specialities. The various components of the industry, that is, translators (including terminologists and interpreters), designers of aids for translation, teaching institutions and research institutions, are aware of each other but have little contact. The Canadian customer base has even less knowledge of the industry. The public tends to regard translation as a cost rather than an added value. Moreover, translation as a profession is poorly understood. Rarely is translation made an integral part of product or service development; instead, translators are brought in at the end of the process and expected to perform under tight deadlines. Translation professionals have noted a steady reduction in time allotted for translation and see a need for customer education. The fact that bilingual individuals are frequently called upon to translate texts makes the need to raise awareness of the expertise offered by professional translators all the greater. Indeed, the Canadian translation industry has developed high levels of expertise in translation of the official languages for both the public and private sectors. The Canadian translation market is expected to grow between 5% and 10% annually, with excellent business opportunities waiting to be discovered. Thus, the industry must protect the gains it has made while developing new market niches. The first major challenge it faces is awareness of its own vigour among its own members first and then among its customer base.

Recommendation 1: Form an association/network of translation industry stakeholders.

To strengthen the industry in the Canadian market, it is highly desirable that a national association be formed to bring together all industry stakeholders. Some organizations already exist within the translation industry, for example, professional associations, the Canadian Association of Schools of Translators, the Association of Linguistic Service Managers, an association of translation firms,⁹ etc. Rather than duplicate the work being done by others, the new national association would play a unifying role, overseeing all

⁹ In the process of formation.

existing organizations and serving as a discussion forum and promoter of the industry's interests. Its purpose would be to:

- Implement the recommendations of the Canadian Translation Industry Sectoral Committee and see to their follow-up.
- Ensure development of the forum itself by associating with all stakeholders.
- Help bring together certain stakeholders, in particular, designers of aids for translation and researchers.

The main objectives of the new association would be to:

- Defend and promote the interests of the translation industry.
- Support development of member industries and ensure that they fully play their role.
- Ensure that members have quality standards appropriate to their group.

Later, the association could bring in other stakeholders, such as large companies buying translations, conference organizers, interpretation equipment suppliers and government departments.

In collaboration with its members, the new association would develop a specific action strategy, set objectives for the network and adopt an annual action plan. It would require an office staff directed by an executive board. Projects undertaken by the network would be carried out by subcommittees composed of stakeholders interested in the given issue. The new association would work alongside the professional associations, themselves responsible for protecting the public, regulating the profession, setting standards, providing for the professional development of members, etc. The new association would promote the industry by encouraging synergies among members and doing the lobbying required to maintain and develop its members' markets. In particular, it could:

- Help develop and sustain demand in different Canadian market segments (institutional, derivative and private translation).
- Develop profitable synergies among stakeholders.

- Establish a venue for formal discussions among stakeholders by organizing conventions, seminars and forums.
- Promote the Canadian industry by making maximum use of available Internet sites of various economic players.
- Create a translation watch office (reporting centre) that would make information available to all members, in particular on the industry's "best practices."
- Represent the industry at international fairs.
- Promote among the customer base the industry's varied expertise and professions and the quality and reliability of products and services.
- Collect pertinent information on aids for translation/machine translation from time to time and disseminate it on the association site.
- Identify the industry sectors experiencing a shortage of translators.
- Link up Web sites of various organizations involved in translation across Canada.
- Promote career opportunities in translation, especially among ethnic groups living in Canada.
- Promote the universal character of Canadian French-language translations.

Recommendation 2: Make government authorities and private companies aware of the need to use qualified suppliers; make buyers of translation services aware of Canadian quality standards and incorporate the standards into calls for tender.

The Canadian industry must continue to promote what distinguishes it worldwide: top-quality work performed by experienced and well-supported professionals. It must emphasize the positive role of translation in generating sales, revenue and jobs for Canadian companies providing goods and services. Translation quality is a factor in competitiveness and the industry must make both government and private sector purchasers of translation services aware of the high quality standards developed in this country. This initiative should also counter the use, in the private sector, of unqualified people as translators.

Challenge 2: Organize more effectively in order to make the most of market opportunities in Canada and better withstand foreign competition.

The Canadian translation industry is highly fragmented, encompassing a large number of independent translators and small firms (according to the classification used in our

survey, those with annual sales below \$150,000). This situation is not very different from that in other parts of the world. However, in Canada, the proportion of medium and large firms (annual sales of \$150,000 to \$500,000 and \$500,000 or more) is much smaller than in the United States or Europe. In the United States, more than 15% of translation firms have annual sales over \$500,000, compared with fewer than 5% in Canada. To keep and increase its share of the Canadian market and better withstand foreign competition, the Canadian industry must include larger companies. At present, very few Canadian firms operate internationally. Over the last few years, we have seen many firms around the world form alliances to meet the needs of globalized businesses. This process has not yet begun in Canada. We need to encourage as many firms as possible to become larger if we are to compete more effectively with the potential presence of foreign firms in Canada.

In some regions, like New Brunswick, translators and firms must become better organized if only to meet local demand more adequately. A representative of the New Brunswick government translation service pointed out that 55% of translation work contracted out by the service goes to independent translators outside the province.

Although not yet noticeable on a national scale, foreign competitors have made their presence felt here and there in Canada, especially among medium and large customers. In Toronto, large international companies use foreign firms for multilingual translation. Many high-tech companies in the Ottawa region use foreign firms for their software localization. In western Canada, Canadian firms such as DNA Media Services and Mosaic compete with Alpnet, Berlitz, LionBridge and L&H Mendez. Alpnet's Canadian sales increased by 24% in 1997. AT&T (USA) has covered the Canadian 911 market with its own interpreters. These foreign companies are a threat not only to private firms, but also to independent translators. We must remember that large companies outsource 55% of their demand to these independent translators.

Recommendation 3: Make the industry aware of the importance of size in light of the global development of business. Encourage alliances and partnerships (formal or virtual) among Canadian firms or independent workers in order to create critical masses, in terms of finances or sectoral specialties.

The size of a company is not always indicative of the quality of its product or its profitability. Small companies can offer excellent services and amply reward their professionals. However, a national industry structure needs to include a nucleus of firms able to take on large-scale mandates, invest more in technology and export services; in short, ensure the industry's long-term survival. The present Canadian industry consists of a handful of firms with annual sales of \$500,000 or more, a few hundred firms with annual sales of \$150,000 to \$500,000 and several thousand independent translators. This structural weakness could be dangerous given the increased trend towards mergers and partnerships among foreign firms. Industry stakeholders must be made aware of the potential offered by real or virtual partnerships among Canadian firms. The establishment of strategic alliances among firms or independent translators can serve as a means for achieving various goals: market diversification, rapid access to specialized resources, access to new technologies and ability to take on larger or more lucrative mandates while also reducing market development and operating costs.

Recommendation 4: Invite interpreters to increase awareness of their areas of expertise (conference, legal or community interpreters) and to consider ways that will help them adjust better to the requirements of a market-based economy, in particular by investing in information, visibility and promotional strategies for their profession.

The various services provided by interpreters are not generally known. With help from the professional associations, interpreters should produce a detailed profile of their profession and make the areas of expertise and practice of the different categories of interpreters known so as to increase the profession's visibility.

This initiative should be accompanied by effective promotion of the services offered by interpreters. Moreover, interpretation firms could broaden the range of services they offer as project managers.

Recommendation 5: Given the new global realities that make a stronger Canadian translation industry desirable, put in place co-operative bridges between the Translation Bureau and the industry.

The value of Canada's translation market (not counting in-house translation services) is close to \$450 million. The private sector, which accounts for 65% of demand, consists of a multitude of relatively small customers with highly diverse needs. The public sector, comprising 35% of the market, represents a relatively more homogeneous demand and less fragmented volume. Federal government needs account for about 27% of the total market, not counting translation needs included in goods and services acquisition projects.

Because of its highly fragmented structure, the Canadian translation industry, perhaps more than others, needs public support in order to develop. While the private sector has enabled many translation firms in other parts of the world to attain the requisite means to take on foreign markets, this has not been the case in Canada. Here, the public sector, in particular the federal government market, could be used more to provide economic leverage for the emergence of a nucleus of strong companies which would have the means to invest in human resources and technologies, be less vulnerable to foreign competition and be capable of taking on export markets.

Until 1995, the Translation Bureau met all the translation needs of government departments. Since then, the departments have been at liberty to use the private sector, and the Translation Bureau provides optional services on a cost-recovery basis. The Bureau presently meets 60% of federal government demand, performing 58% of the work itself and sub-contracting 42%. This dominance of the Translation Bureau in the federal government sector raises questions among certain industry members.

Some members, including large firms active in the government market, argue that because the Bureau's prices do not reflect the real costs involved, they are barred from competing fairly for a market segment important for their development. They advocate the creation of a leveller playing field.

On the other hand, the Translation Bureau is subject to public service legislation and regulations which impose constraints and obligations. In addition, it plays a “public service” role that is useful to the entire profession and industry, in particular with regard to training, professional development and preparation of replacement workers, all of which entails costs.

While recognizing the diversity of viewpoints on this issue, the Committee would rather focus on the potential for agreement. To achieve the goal of stimulating the emergence in the Canadian translation industry of a sector able to face up to foreign competition in the domestic and export markets, much could be gained by establishing a mechanism for joint action that would bring together large Canadian translation firms and the Bureau to consider ways of tapping national and international markets so as to strengthen the Canadian industry. To the extent compatible with its mandate, the Translation Bureau could examine with private firms the possibility of profiting from international contracts. It could also consider methods for awarding contracts able to serve as levers for expanding the Canadian translation industry.

Challenge 3: Improve the profitability and financial capacity of Canadian translation firms.

The profitability of the translation industry has been a problem for a number of years. The 1990-1991 recession and the sudden increase between 1990 and 1995 of the supply of independent translators because of streamlining programs among large companies and governments, created enormous pressures on the profitability of firms. Yet beyond this economic phenomenon is emerging an underlying trend toward a total review of the practices, processes and costs of translation. The Canadian industry has not yet sufficiently emphasized process improvement, partly because of the strong demand from the public sector, the private sector having already re-engineered its costs. Gross margins of 20% to 25% and net income in the order of 5% are insufficient to ensure the long-term survival and development of firms.

Profitability is insufficient if it is not based on adequate financial capacity. Generally speaking, translation firms are undercapitalized. To contemplate growth, they must

increase their capital base through private investments or listings on the stock exchange. There is a need for lending agencies to become open to such investments.

Recommendation 6: Draw up and disseminate a list of the "best practices" of large American and European translation companies.

Knowledge and dissemination of the strategies and practices of translation companies around the world can only benefit Canadian firms. Through the new association's Web site, or by other means, translation firms and independent translators should be able to access information on strategies, markets, rates, human resources and technological tools used by a wide variety of international firms.

Recommendation 7: Make lending agencies, banks and venture capital corporations aware of the industry's potential in order to make it easier for translation companies to access private capital.

Translation is not necessarily perceived as a high-growth sector. However, market globalization has opened unimagined prospects for the translation industry. A number of American venture capital corporations now invest in company expansion or merger projects. To improve their financial health, translation companies must have access to private capital for their expansion. For this reason, banks and other lending agencies must be made aware of this industry's growth outlook.

Recommendation 8: Promote the importance to the industry of moving from conventional translation toward other services with greater added value or toward high-growth sectors.

To increase their profitability, many medium and large firms have diversified their services. Firms which offer only translation will become increasingly vulnerable. Among the large companies, diversification of services has been the key to greater profitability, while for other firms specialization has yielded equally positive results. In both cases, pure translation accounts for only a portion of total revenues. For example, for ALPNET, translation accounts for only 20% of revenues, with another 35% coming from localization and 45% from documentation services. A small American company, Hartmann International (US\$1.1 M), has chosen to specialize in the automotive, information technology and electronics sectors. Whatever the strategy used, mastery of

the translation process and of leading edge technological tools lies at the basis of success.

Increasingly, Canadian government departments and private firms will demand turnkey translation services, from initial draft to final publication. Localization, for which the market is growing worldwide, represents another diversification opportunity. Many Canadian software companies must look abroad for translation of their software because of a lack of Canadian suppliers. Specializing in high-growth sectors is another possible alternative. The sectors most in need of translation services include aerospace, telecommunication equipment, pharmaceuticals and information technology equipment. However, all these services have a strong technological component. Translators need to be informed about services with added value and how to go about offering such services.

Challenge 4: Make governments aware of the strategic importance to Canada of supporting the growth of developers of aids for translation and increasing linguistic research.

The translation industry also includes dynamic young developers of aids for translation. The keys to their success lie in their originality and the fact they operate in highly specific areas. The international market for aids for translation and machine translation is experiencing very strong growth. Canada has a good reputation throughout the world for research on translation and terminology, in particular regarding our official languages. We can count on world-class research capabilities. Indeed, a number of our researchers are internationally known for their work and writings, and Canada is recognized as a source of high quality, technologically advanced terminology products. Finally, Canada has a public R&D support policy, in particular through tax credits that are among the most generous in the world.

In general, our firms suffer from undercapitalization and a lack of financing for expansion. A great deal of capital is required for research and development, which is the key to success in this type of enterprise. There is also a lack of co-ordination between the various parties doing R&D. Small research groups are scattered across Canada, working more or less in isolation. This is also true of other components of the industry: researchers, tool designers and translators have no established structures for exchange.

According to developers of aids for translation, institutional research in linguistics in Canada is minimal in comparison with what is done in Europe, Japan and the United States, all proportions considered. Moreover, our research is focussed essentially on our official languages and on one aspect of the process of linguistic communication: translation and terminology. Yet research worldwide increasingly tends toward multilingualism and computational linguistics. There is remarkable potential in these fields. However, those who finance research programs in Canada must become aware of these opportunities and realize the strategic importance of taking advantage of them.

Recommendation 9: Promote the adoption of a Canadian policy of support for R&D in linguistics based on the policies of other countries. Promote AT/MT companies as a research sector.

Canada does not really have a specific language research policy that the industry could rely on to support its development. Language is simply one field of research among others, yet Canada is one of the rare countries that have official languages legislation and the advantage of a structured industry. The development of technologies and the emergence of multilingualism require stronger support. Research in Canada must extend to the wider field of linguistics and multilingualism. Unless stakeholders become fully aware of the changes underway, Canada could lose the few comparative advantages it has acquired over the years.

Recommendation 10: Promote government-sponsored technical assistance and business development support programs among industry stakeholders.

Although financial assistance programs for business have been considerably cut back in Canada, enough programs remain for it to be worthwhile for the translation industry to be informed about them more systematically. Through its Web site, the new association could provide information on the financial and technical assistance programs most likely to benefit the industry.

Recommendation 11: Support the initiative to bring together active players in the field of computational linguistics, including research in natural language processing and aids for translation.

In Canada, some universities, research centres, specialized institutes and private enterprises conduct linguistic research.

However, this research can be portrayed as follows : small teams, tight budgets and very specific, highly diverse areas of research. In the milieu, there is much criticism of the isolation of the various Canadian research teams. Thus it is of primordial importance that these groups collaborate to create critical masses in the Canadian language industry, as has been proposed for natural language processing (NLP).

Challenge 5: Demystify aids for translation and machine translation and promote their use as a way of increasing profits.

Knowledge and profitable use of aids for translation are not uniform throughout Canada. In both translation firms and contractor practices, the penetration of aids for translation is very uneven. Low industry profits can also be a cause of major technological delays. Some people are not aware of such tools and prefer traditional methods; others are familiar with a few and use the most widespread ones. While these tools are not useful for all forms of translation, very few people can claim to be up to date on them and use them appropriately. There are many different tools that promise different advantages and translators do not always have the time they need to evaluate them properly. Therefore this technology is viewed with a degree of scepticism.

Recommendation 12: Investigate the possibility of establishing an information medium on aids for translation and machine translation.

In order to increase productivity, overcome resistance to change and support industry professionals in choosing the aids for translation best suited to their needs, the new association could study the feasibility of creating a Web site to establish an information medium for aids for translation on the market. Like the ATA (American Translations Association), the association could use this site to institute a discussion group on the Internet where translators could share their experiences as users of electronic tools. Another advantage of this project is that it would inform Canadian clients about the possibilities and limitations of these tools. The information should also include the various tools used, or to be used, by interpreters: videoconferencing, satellite interpretation, interpretation over the Internet, etc.

Recommendation 13: Increase the presentation of aids for translation and machine translation at association conferences.

Professional associations already discuss aids for translation and machine translation at their colloquiums and conferences. However, given the rapid technological changes in this field and client needs, the tools available to translators should be made more visible.

4.3 Export market development

The Canadian industry registers low on the export market. It lacks diversification both in number of languages and communication chain processes, and it is ill-structured to cope with a different playing field. However, it can bank on long experience in high-quality translation, solid expertise in technical translation, qualified human resources and competitive prices. We have identified four major challenges:

Challenge 6: Increase the market share of translation firms and independent translators in the global marketplace.

Challenge 7: Lead an industry focussed on the official languages into being more open to multilingualism.

Challenge 8: Take advantage of Canadian expertise in public administration when entering foreign markets.

Challenge 9: Develop Canadian models for localization, technical translation and one-stop services.

Challenge 6: Increase the market share of translation firms and independent translators in the global marketplace.

The proximity of the American market is a major advantage for Canadian translation firms. Armed with a history of over 30 years in high-quality translation and familiarity with North American technology, Canadian firms should be able to profit from the neighbouring CAN\$1.8 billion market. Yet the Canadian industry derives less than 10% of its revenue from exports to the United States.

Of course, conquering export markets is not within everyone's reach. Effort and money must be expended in unfamiliar environments. Some do not have the means to take such risks, but the Canadian industry must be more outward looking. The industry is divided, however, and firms are often too small to successfully launch themselves in international markets. In parallel with efforts to conquer the American market, the industry could also adopt a strategy that is the inverse of Ireland's: it could translate from foreign languages into English and French.

Recommendation 14: Raise stakeholders' awareness of potential partnerships with American firms.

Foreign markets can be conquered in two ways: by one's own means or in partnership with foreign firms. The latter solution is increasingly employed by firms wishing to penetrate foreign markets rapidly while minimizing risks and respecting local habits and customs. However, with partnerships comes inevitable exposure to constraints and risks. Colloquiums and seminars on this subject are a good way to make the Canadian translation industry aware of these realities.

Recommendation 15: Promote the Canadian translation industry in Team Canada missions.

The Canadian translation industry, through its new association or otherwise, should take advantage of Team Canada missions to establish contacts with various foreign companies exporting to Canada or the United States and with local translation firms with a view to possibly establishing partnerships.

Recommendation 16: Encourage the creation of electronic directories of services offered by translation firms and contractors in Canada.

In order to market our translators' and interpreters' expertise worldwide to translation firms searching for specialized resources, the industry should plan to establish and publish regularly updated electronic directories.

Recommendation 17: Help independent translators sell their services to foreign firms looking for contractors.

Independent translators trying to expand their client list have a difficult time identifying the international firms looking for the skills they offer. There are many directories of foreign translation firms and the Internet is full of firms looking for translators with experience in specific sectors. In order to save time and ensure the right companies are selected, it would be appropriate to consider setting up courses on tools and techniques independent workers can use to approach foreign translation firms.

Recommendation 18: Promote Canadian translation capabilities to foreign subsidiaries in Canada.

Foreign companies established in Canada or even the United States are prime targets. They do not necessarily entrust their translation needs to Canadian firms for various reasons, which range from the policies of the parent company to lack of knowledge about the capabilities of the Canadian industry. Since these companies are often large, the potential benefits are worth the effort required to make them more open to greater use of Canadian services.

Challenge 7: Lead an industry focussed on the official languages into being more open to multilingualism.

The Canadian industry lacks diversification in the translation of languages other than French and English. The *Official Languages Act* has, of course, contributed to the development of a translation industry, but it has also determined its choice of markets. Given the major development of multilingual markets worldwide, translation firms and independent translators and interpreters must capitalize on the growing need for multilingual translation and offer such services by networking with independent translators abroad.

Canadian universities are aware of this trend and are offering a growing number of courses in third languages. However, the demand for such courses does not seem to reflect the potential emerging in this field.

Finally, in the West and especially in British Columbia, there is a large pool of foreign-language translators who could support the industry's efforts to position itself in multilingual translation.

Recommendation 19: Develop the ability to manage the demand for multilingual translation and interpretation in Canada.

The Canadian industry must position itself strongly as a manager of multilingual translation and interpretation projects. If it does not, it will run the risk of becoming a secondary player working for foreign firms. Translation firms must control the process itself even if the translators contracted are outside the country. Work should be done where there are resources to do it. What is important is to be able to manage the work domestically.

Recommendation 20: In co-operation with the managers of Canadian terminology banks (TERMIUM® and the Grand dictionnaire terminologique) study the possibility of adding other languages.

For firms and independent workers taking the step toward multilingualism, the addition of other languages to existing terminology banks would greatly enhance productivity. When specific needs become apparent, the industry should make the managers of these banks aware of the advantages of such a project.

Recommendation 21: Encourage designers of aids for translation to develop their products in other languages, either alone or in partnership with foreign firms.

In most cases, aids for translation are marketed by Canadian firms essentially in the official languages. Barely one firm out of three offers its services in a language other than English or French. The translation industry should encourage designers to develop multilingual tools for foreign markets.

Recommendation 22: Create a working group aimed at developing standards for metadata intended for multilingual documentation.

Metadata are data that describe other data and are used to manage bodies of information more efficiently. They specify, for example, the file size, date of creation or

revision, typestyle, etc. to make it easier to manage and reconfigure documents. Within 15 years, most of the information contained in networks will be coded with metadata. Metadata management is becoming increasingly important in the information technology industry. Presently, much effort is devoted to establishing metadata standards to facilitate the manipulation of multilingual documents. The Canadian industry could become an actor in this field and give Canada a role to play.

Recommendation 23: Create a mechanism for East-West discussion in Canada about the development of a multilingual industry.

The features of the translation industry in the west of the country are somewhat different from those in the east. For example, the Society of Translators and Interpreters of British Columbia, which has far fewer members than OTIAQ and ATIO, has the greatest linguistic diversity of the three associations. In the region there are also the beginnings of the country's only localization and translation-multimedia firms. A mechanism for exchanges between translation firms in the east and the west could only benefit the industry as a whole.

Challenge 8: Take advantage of Canadian expertise in public administration when entering foreign markets.

The Canadian translation industry is well positioned and has extensive experience in all aspects of public administration in Canada. This capacity could be used abroad, even though it is the sector with the slowest growth in the industry. Predictions indicate a growth rate of 3% to 5% internationally, compared with rates of 15, 20 and even 30% for fields such as machine translation, localization and aids for translation. Yet, this sector remains valuable given its large volume and export potential.

Moreover, the Canadian public sector provides special access to this market, particularly among international agencies.

Recommendation 24: Explore the formation of public-private partnerships to target the markets of international organizations.

Private firms and the Translation Bureau could consider partnerships to tap the public contract markets of international organizations. The Bureau's means of access, size and expertise in major translation project management enable it to play a strong role in

obtaining large contracts from such international organizations. Such partnerships benefit both parties through access to larger markets, pooled capital for market development and access to specialized human resources.

Challenge 9: Develop Canadian models for localization, technical translation and one-stop services.

This challenge targets firms of a certain size that wish to enter, alone or with other firms, one of the three strong-growth fields: localization, technical translation and one-stop services. A number of international firms have developed expertise in these sectors. Canadian firms could benefit from these experiences and develop their own models.

Recommendation 25: Create a working group on localization.

Canada has little presence in the field of localization. Yet it has a number of firms that design and develop software, which are the main users of localization. Presently, many, if not all, of these firms fill their localization needs abroad. Around 80% of the localization services delivered in the world are for products developed in the United States, our neighbours to the south. Canada has human resources qualified in linguistics, computer engineering and translation, has access to a high-quality computer infrastructure, and offers generous R&D programs. Companies in British Columbia are developing in this field and could be used as a point of departure for gaining a better understanding of the situation and establishing a Canadian model for localization.

Recommendation 26: Create a working group on technical translation.

On one hand, the United States, which is a major designer and manufacturer of technical products and services in the world, is a large market at our doorstep. On the other hand, Canada has a great deal of experience in technical translation, particularly in the fields of communications and industry and technology. It also produces high quality terminology tools.

Canada could thus capitalize on this enormous potential in technical translation. The working group would have the tasks of taking stock of skills in technical translation, designing programs for professional development and raising awareness in the industry.

Recommendation 27: Create a working group on one-stop services.

The delivery of diversified services rather than translation alone is a path taken by many firms to set themselves apart. Different firms may offer very different services: graphic design, desktop publishing, Web site translation, glossary development and publishing, and, in some cases, document printing. The main advantage lies in offering a complete range of translation and communications services to major companies. In the translation-only market and for incidental demand, larger firms may come to compete less and less with small firms and independent workers. The proposed working group would have the objective of understanding needs, evaluating available skills, identifying best practices, developing a concept and suggesting a development plan (networking, partnerships, mergers, etc).

5 HUMAN RESOURCE STRATEGIES

Implementation of the marketing strategies described in the previous chapter will have a definite impact on the human resources required by the translation industry in the coming years. The major challenge to the industry can be defined as follows: *Provide an adequate supply of qualified human resources to meet the industry's changing needs.*

In this chapter, we will briefly summarize the current human resources situation in the industry, analyse foreseeable changes in needs in the near future, and define the skills employers require. We will then summarize the skills taught in Canadian translation universities, changes in training programs and program development constraints, and conclude with a description of the key strategies to be implemented in order to meet the industry's needs for both basic training and professional development more effectively.

5.1 Human resource needs

5.1.1 Status

The professionals working in the translation industry fall into four categories: translators, terminologists, conference interpreters and court interpreters. There is also increasing demand for community interpreters, although they are not governed by any association at this time. All these professionals work for private firms, in-house translation departments (private companies, government, non-profit organizations) or the Translation Bureau, or as independent workers.

The number of individuals declaring income as translators has increased significantly since the passage of the *Official Languages Act* and Quebec's *Charter of the French Language*. In 1985, almost 7,500 individuals declared income as translators and interpreters, both full-time and part-time. Despite the 1990-1991 recession and the resulting staff downsizing, 11,800 individuals earned income from translation in 1995.

However, translators and interpreters find themselves in an increasingly precarious position, particularly since the last recession: 58% of translators and interpreters worked part-time in 1995, compared with 52% in 1985. Two of every three professionals who entered the industry between 1985 and 1995 work part-time. In the translation industry, entry barriers are fairly low.

Generally, employers require a B.A. or Master's degree, but not necessarily in translation. According to our survey of various industry segments, approximately 40% of professionals working in private firms have a B.A. or Master's degree in translation, 40% have a B.A. or Master's degree in another discipline, and 20% have a variety of training. The findings for independent workers are similar. Professionals working in companies with an in-house translation department, have much more translation-centred training—72% have a B.A. or Master's degree in translation. This means that industry needs for professional translators are not being met solely by university translation departments.

Canadian language legislation, both federal and provincial, has had a determining impact on the profile and skills required of translators and interpreters. Translation in Canada is mainly English-French and French-English, and other combinations are much less common and valued less highly. Basic training programs in universities are thus mainly centred on official languages translation. Moreover, the largely institutional nature of translation in Canada contributed to the establishment of high quality standards, terminology research and stringent revision. The terminology data banks TERMIUM® and the *Grand dictionnaire terminologique* were created within this legal-linguistic context.

For the past two or three years, demand for translation services has been picking up. Private firms, who for several years were not hiring, relying more on the services of independent workers in order to reduce costs, are now looking for experienced translators. Large companies who previously cut translation budgets and staff are also turning to seasoned independent workers. Currently, there is an imbalance between the skills required by the industry and those offered: although there is a shortage of experienced translators, some independent workers cannot make a full-time living from translation.

The combined effects of a lengthy recession and renewed demand for translation

services point to two major problems: in the short term, a serious shortage of experienced translators, restricting the growth of some firms, and in the longer term, an insufficient number of new translators to replace those who will soon be retiring.

Alongside traditional industry professionals, i.e., translators, terminologists and interpreters, new professional categories are emerging. The translation industry is expanding to include various communication processes, specifically localization, documentation and publishing. A number of Canadian firms, particularly in western Canada, need computational linguistics specialists, graphic designers, computer programmers, project managers, etc.

Generally, firms hire few new university graduates and have little inclination to hire them as interns or offer other training opportunities. Firms prefer to hire translators with three or four years' experience, and find that it takes too long to train new graduates to meet their clients' pressing needs. Furthermore, a number of firms have neither the resources nor the staff to adequately train interns. Those who have tried training new graduates without a structured program have not, overall, had positive results. New graduates are thus left to their own devices and must acquire experience on the job. They often start their own firms without having received any on-the-job training in a translation department.

Workforce productivity in the translation industry is becoming increasingly important, as is the case in many other sectors. The translation process itself is becoming industrialized: it is being broken down into separate steps or procedures, and increasingly sophisticated tools are used to optimize productivity. Translators must work more and more quickly to remain profitable, as unit prices continue to fall or, at best, hold steady.

Regionally, the profile of the industry in western Canada, particularly British Columbia, is somewhat different from that in eastern Canada. The west has a few localization firms, and more translators working in a variety of foreign languages, directly impacting the type of skills required in the west compared with those required in eastern Canada.

5.1.2 *Employment prospects*

The translation industry worldwide will experience significant growth in coming years, as the ongoing globalization of businesses will force these businesses to set up multilingual communication services. In Europe, where the majority of the world's translation activity happens, the industry should grow by 7% per year over the next five years, and jobs by 3% annually. Canada's translation industry will also grow significantly. The translation firm representatives and independent workers who responded to our surveys expect the Canadian translation industry to grow between 5% and 10% annually over the next three years. In-house translation departments also report an upturn, but are not as optimistic as private firms.

With respect to human resources, our surveys showed that the various segments of the Canadian industry will require between 360 and 400 graduates with a B.A. Honours or Master's degree in translation each year for the next three years.

Some market niches are growing more than others: Web site translation, technical translation, localization (software, multimedia, marketing, etc.). Sectorally, the telecommunications, pharmaceuticals, information technology and financial services industries are among those that will require specialized translators the most. There will also be a need for "international" translation in a universal language free of regionalisms, as opposed to localization.

Thus, alongside traditional industry professionals, i.e., translators, terminologists and interpreters, new specialties will emerge. The translation industry is expanding to include communication processes, i.e., localization, documentation and publishing, and will increasingly need computational linguistics specialists, graphic designers, computer programmers, project managers, etc.

The need to increase workforce productivity will also require translators to broaden their knowledge and master aids for translation. Those who can combine translation and computer skills will have better job prospects. Using the number of words translated per day as a measurement, productivity varies significantly, depending on the nature of the translation and the sector.

Generally, an output of 2,000 words per day seems to be a fairly common industry standard. However, the introduction of increasingly sophisticated and user-friendly aids for translation is a way to increase productivity.

5.1.3 Required skills

According to survey respondents, the key skills professionals should have are:

- Professional skills: excellent understanding of the source language, and solid skills in writing and syntax in the target language.
- Personal abilities: well-rounded culture and intellectual curiosity, the ability to work within a team and the following qualities: adaptability, availability, motivation, good judgment, good communications skills and efficiency. Concern for the client and flexibility are also important.
- Mastery of a third language. In Europe, many translators and interpreters master three or four languages, and almost all European universities offer translation instruction in several languages. Languages useful in Canada include Spanish, German, Portuguese, Chinese, Japanese and Korean.
- Mastery in one field of specialization and the ability to work comfortably in some others.
- Mastery of computer tools.

Given the market strategies suggested in the previous chapter, translation professionals need to upgrade in some areas and acquire new skills. We can consider, for example, strategies that target:

- Structuring the industry by having more, larger firms, which will require training or upgrading in certain business-related areas: mergers and acquisitions, the creation of partnerships, marketing and strategy, business plans.
- Improving the profitability and financial capacities of companies: costs, better practices, choice of investments, finance.

- Demystifying aids for translation: learning and mastering aids for translation, desktop publishing.
- Multilingualism: learning to translate from a third language.
- Developing the following sectors: localization, technical translation, one-stop services, foreign language court interpretation, computational linguistics, project management, computer sciences, multimedia localization, sectoral specialization, court interpretation, etc.

According to the leading firms we surveyed, new translation graduates are not meeting the expectations of employers in some areas, i.e.,

- difficulty adapting to market requirements (problems making the transition from an academic setting to the realities of the workplace)
- lack of general culture
- specialization that is too rudimentary
- insufficient mastery of computer tools.

5.2 Human resources supply

This section deals with the supply of graduates from university translation programs in Canada and professional development courses offered by various industry stakeholders.

5.2.1 Status

Canadian universities (11 in all) are the main educational institutions offering translation, terminology and interpretation training. There are a few post-secondary institutions providing training in community interpretation, but their numbers are limited. Canadian universities offer essentially six types of training and degree programs at three levels: undergraduate level: certificate or B.A. with a minor, B.A. with a major, or B.A. Honours; graduate level: diploma or Master's degree; and postgraduate level: Ph.D. Two universities, Concordia University and the University of Ottawa offer a co-op (work-

study) program. Only the University of Ottawa provides conference interpretation training, a one-year program at the graduate level.

Over the last three years, the number of new registrations and the annual number of graduates has remained steady. However, there is a disturbing trend: the number of students graduating with a certificate is on the rise, and the number of students graduating with a B.A. is dropping. However, translation firms and large companies look mainly for individuals with a B.A. Honours or Master's degree.

In all, Canadian universities currently produce between 300 and 320 graduates each year with a B.A. Honours or Master's degree. According to our survey, demand for those graduates is approximately 360 to 400 per year, resulting in a shortage in the short and medium terms. This does not include demand for the so-called emerging professions described above. We have little information on the number of individuals required to meet this new demand in the coming years.

5.2.2 Program changes and development constraints

Universities tend to provide a balance of general and specialized training. They adapt their training programs based on the needs expressed by the various stakeholders: professional associations, employers, the Canadian Association of Schools of Translation, professors, etc. Training programs are modified to take into account employer expectations. Options are offered in various sectoral specializations (business, economic, legal, medical and pharmacological, computer, and other translation). Various introductory courses on aids for translation are also offered.

Some universities also offer elective translation courses in a third language. However, it appears that employers expect universities to provide students with more advanced training in a speciality, a third language and computer tools (rather than introductory courses). It would be a good idea to look into what steps can be taken to provide students with more in-depth instruction in areas deemed essential by employers. Some universities are already exploring a variety of approaches, including double-major

programs, where a degree is earned in translation plus another discipline. Students must also be made aware of which skills are more important to employers.

Universities are facing considerable financial constraints that restrict their ability to develop new programs, invest in technology, and attract and keep high-calibre professors. In the medium term, the number of new registrations and graduates should remain at least stable, according to university representatives. The institutions' registration caps, together with the students' negative perceptions of job prospects in translation can in large part explain this stagnation. Universities need to find ways to increase the number of graduates, and offer more advanced programs that meet the industry's changing needs more effectively.

Students also have to be encouraged to be more open to the global translation market. Although some Canadian universities already have student exchange program agreements in place with foreign universities (particularly France, Chile and Switzerland), few Canadian students take advantage of them. However, exchange programs are becoming increasingly important within a context of multilingual translation.

5.2.3 Skills taught

To summarize, the key skills students are taught at the university level are linguistic, translation and writing skills, the ability to analyse and synthesize and general culture.

Specifically, these skills are:

Translation and linguistic skills

- Translation
- Techniques for translating from one language to another

Writing skills

- Writing (identifying the type of communication, understanding social issues involved in communication)
- Document presentation (formatting)

- Good knowledge of international and Canadian French-language standards

Analysis and synthesis skills

- Comprehension skills
- Ability to do research, obtain information
- Organization and work methods

General culture

- General knowledge
- Introduction to some specialities
- Knowledge of computer tools
- Practical knowledge of Canadian realities
- Knowledge of international politics and economics

5.2.4 Professional development

Professional development is handled mainly by the provincial associations, the Translation Bureau and professionals themselves. Most Canadian associations have a training and professional development committee that offers professional development courses to their members on an ad hoc or structured basis. Through its Training and Evaluation Service (TES), the Translation Bureau offers its employees and external clients a series of translation, writing and revision courses. Universities are also occasionally solicited by the associations to give professional development courses. The courses offered cover the various aspects of professional practice and the translation business environment, for example:

- Translation and revision
- Writing
- Management (marketing, accounting, finance, etc.)
- Computer tools (Internet, Word 97, TERMIUM[®] on CD-ROM, etc.).

However, the strong presence of independent workers in the industry, whose jobs are becoming increasingly precarious, presents a problem with respect to knowledge

upgrading in an industry marked by rapidly evolving technology. Furthermore, barriers to entering the translation market, previously minimal, will increase gradually.

In addition to the fact that employers and translation consumers increasingly require a translation degree or certification, the growing number of source texts in electronic format and the use of text editing software will require independent workers to upgrade their skills and make greater financial investments. The same is true for tools for interpreting via teleconferencing or satellite, with which interpreters will have to become increasingly familiar. They need to be made aware of the importance of professional development, and inexpensive ways of making it more accessible must be found.

5.3 Human resource strategies

Given the status of available human resources, the Canadian translation industry will have to adopt six human resource strategies in order to implement its marketing strategies.

1. Continue maintaining high quality standards. The Canadian translation industry's reputation is built on the quality of its product and the professionalism of its translators. This trademark must be maintained by continuing to offer high-quality training programs and professional development courses. However, the growing shortage of experienced translators, the continuing entry into the Canadian market of translators with uneven qualifications and the financial burden imposed on universities may in the medium term hamper efforts to maintain that reputation. Stakeholders must be made aware of this threat to the industry.

Recommendation 28: Make Canadian universities with translation departments aware of the industry's potential and the importance of maintaining high-quality training programs.

Translation departments are neither the largest nor the most visible departments in Canadian universities. Moreover, the recent recession may have created the impression that translation programs were losing momentum. The industry must support the efforts

of translation instructors to maintain existing programs and develop new courses via a dynamic information campaign aimed at university management.

Recommendation 29: Raise awareness among government authorities responsible for administering official languages legislation in Canada of the importance of financial support for the development of skilled human resources.

As one of the few countries in the world with official languages legislation, Canada must preserve the gains made because of the legislation: a pool of translators, interpreters and terminologists that can quantitatively and qualitatively meet domestic market needs—specifically those of governments who are required to comply with official languages legislation—and a reputation for quality in translation, interpretation and terminology. If we allow the growing gap between supply and demand in these areas to widen, we risk a drop in translation quality in Canada, and a loss of “security of supply” from the Canadian government. The industry must thus make governments aware of the pressing need to implement a national human resources development program in translation.

Recommendation 30: Support the efforts of professional associations to maintain, develop and promote high-quality professional development programs.

The industry must support professional associations in their efforts to provide professional development courses that meet specific needs in Canada’s various regions. Translation firms and large companies must encourage their employees (financially and otherwise) to participate in ongoing professional development. The industry must also encourage exchanges among the Translation Bureau, universities and professional associations, and ensure optimum use of professional development resources.

There must also be an increase in the number of courses in areas that will help the industry implement the marketing strategies described previously.

2. Increase the number of experienced translators and interpreters. While the industry is currently facing a serious shortage of experienced translators, some

independent workers cannot earn a full-time living in translation. We must find short- and medium-term means for addressing this problem. In some areas of Canada, for example Toronto, there is a shortage of experienced foreign language court interpreters.

Recommendation 31: Implement effective ways (training practica, specialized training) to provide professional development opportunities for the existing workforce in order to make up for the shortage of experienced translators.

Professional associations, universities and the Translation Bureau should plan a joint offensive to address the shortage of experienced translators. By taking advantage of existing assistance programs, more translators could be encouraged to participate in professional development courses designed to meet immediate market needs. Special attention could be paid to part-time workers (upgrading to return to full-time work).

Recommendation 32: Post up-to-date lists of existing courses in relevant subject fields, as well as a directory of teaching resources, by specialty and by university, on the professional associations' Web sites.

By creating a directory of specialized courses available in universities and elsewhere, the industry could help interested individuals acquire the necessary specialized skills and thus better respond to market needs. Courses could eventually be offered via the Internet, similar to the Canadian Management Association.

3. Facilitate the entry of new translation graduates to the workforce. There is no doubt that bringing new graduates smoothly into the workforce is the industry's most significant human resource challenge. A number of translation firms are reluctant to hire new graduates because of the high training costs involved. Young graduates are thus left to their own devices, and structured on-the-job training opportunities are currently very limited.

For a long time, the Translation Bureau provided its employees with on-the-job training, benefiting the industry as a whole. Although this practice ended in the early 1990s, the Bureau has recently implemented a co-op program for translation students in Canadian universities. The *Ordre des traducteurs et interprètes agréés du Québec* provides coaching via mentoring. The use of retired translators as mentors should be explored. The industry must also do its part, and recommend a clearly-defined practicum formula

that employers could adopt. The federal government, which is responsible for application of the *Official Languages Act*, could share intern salary costs with employers according to a defined formula.

Recommendation 33: Set up a working group to propose avenues for promoting the entry of new graduates into the workforce.

This working group should be composed of representatives of the industry, professional associations, governments and universities, and would recommend practicum formulas for university graduates and promote the development of co-op programs within the universities. Furthermore, given the limited resources of many private firms, some form of government assistance could be implemented to finance the additional costs of hiring and training new graduates (see recommendation 29). The Translation Bureau is already working closely with universities to develop the next generation of translators and interpreters. In the spring of 1999, the Bureau offered a variety of programs for translation students in Canadian universities. About 70 students from five universities registered, thus helping the Bureau to meet its own needs and the industry to prepare new translation professionals.

4. Increase and strengthen translation and interpretation training in universities.

The demand for graduates with Bachelor's and Master's degrees is expected to exceed supply over the next three years. However, universities do not have the resources to accept more students at this time. Also, there is a persistent gap between employers' expectations and new graduates' skills, particularly in three areas: general culture, specialized training, and mastery of technological tools.

Recommendation 34: Create formal university-employer consultation mechanisms.

When reviewing their translation programs, universities consult informally with a number of industry stakeholders, including employers. However, given the rapid changes in the Canadian and international industry, more formal exchange agreements between universities and employers are required, i.e., the Canadian Association of Schools of Translation (CAST) could look into various types of training that would better match employer expectations. Some projects are already being studied: expanding co-op

programs, developing double-major programs, creating translation workshops, etc. All these efforts need to be channelled, strengthened and developed further.

Recommendation 35: Launch an awareness program on the translation and interpretation professions and the Canadian industry's needs, targeted at students, guidance counsellors and businesses in general.

After several years of budget cuts and staff downsizing, the industry is experiencing renewed demand, and new and qualified human resources are needed. However, among students, there is still a perception that the industry is losing momentum, or at the least, is stagnant. They need to be made aware of the transformations taking place within the industry and emerging needs. According to the results of our national survey, demand should outstrip supply for the next three years. The need is even more pressing now, as translators are leaving the profession for careers in communications, writing, etc. Generally, young people should be made aware of the importance of language studies well before they enter university. They are not familiar with the translation profession and employment opportunities.

Recommendation 36: Solicit sponsorship from large companies that are translation and interpretation consumers to fund translation and interpretation programs or the purchase of aids for translation at universities.

Budget cuts have slowed the growth and development of university translation and interpretation programs, and undercut their ability to meet the new and changing needs of the industry, particularly through the acquisition of the necessary technology and tools. In order for those programs to train a sufficient number of translators with the required translation and computer skills, financial and technological support is essential.

5. Respond to emerging needs for human resources in translation niches. The translation industry now includes activities much broader than ever before, mainly the result of technological innovation. In addition to translators, terminologists and interpreters, the industry is using greater numbers of specialists in computational linguistics, multimedia localization, graphic design, project management, etc. For example, some Canadian localization firms cannot find the specialized workers they need, and those they do have are often sought after by information technology

industries. New courses should be created, and professors trained to teach those courses.

Recommendation 37: Set up a working group composed of university representatives and concerned industry members to assess the nature and scope of new and emerging needs in computational linguistics and natural language processing.

Software and multimedia localization, turnkey services, and the development of aids for translation and machine translation cannot be provided without human resources with a combination of translation, linguistic and computer skills. The profile of those resources, and the extent of the potential in Canada are not well defined at this time. Universities and industry representatives must work together to define that profile and the training required. Particular attention to this situation is required in western Canada.

Recommendation 38: Upgrade training and professional development programs to include leading-edge fields such as localization, computerized aids for translation and translation project management. Create the programs and courses required to meet the industry's changing needs.

It is essential that those in charge of university programs and professional development programs are up-to-date on industry changes and needs. They must also quickly and concretely incorporate the new, required information within their programs by developing training and upgrading courses, seminars, workshops and conferences. British Columbia does not have an active university-level translation program, although there is a college-level community and court interpretation program. However, this province is experiencing the greatest growth in the number of translators, year after year. According to representatives of local companies, British Columbia needs a university program specializing in localization and technological aids for translation.

6. Be more open to the global market. Canadian translators and interpreters are too often confined to the Canadian market and official languages. University training too is highly focussed on official languages, although translation training in a third language is increasingly available. However, Canadian universities, unlike European universities, do not yet have a tradition of language exchanges abroad. There are not enough agreements in place with foreign universities, and those used are used more by foreign

students. Few Canadian translation students study abroad compared with the number of foreign students who come to study in Canada.

Recommendation 39: Increase and promote translation and interpretation courses in targeted foreign languages according to regional needs. Encourage the transfer of translation skills from official languages to other languages.

Universities providing translation training are increasingly offering courses in a third language. However, potential students are inadequately informed of the opportunities in these languages. A promotional campaign to inform students of the advantages of mastering a third language and the growing needs in this area would help move the industry toward multilingualism.

Recommendation 40: Encourage agreements between Canadian and foreign universities to increase student exchanges.

Achieving a multilingual Canadian industry depends on students being increasingly exposed to foreign cultures and languages. Implementing formal student exchange agreements with foreign universities and promoting the benefits of the exchanges is a step in the right direction.

Recommendation 41: Encourage working interpreters to actively master an additional language or work combination.

Interpreters are increasingly called upon to respond to multilingual needs created by market globalization. Spanish has been in high demand thanks to NAFTA and the imminent liberalization of the pan-American market. Mastery of four languages has become a common requirement in international markets and large institutions. However, Canadian interpreters, who focus more on bilingualism, work primarily for domestic clients.

Recommendation 42: Promote career opportunities in translation to members of ethnic groups living in Canada.

One way of accelerating the industry's move toward multilingualism would be to interest more immigrant university students in translation as a profession. Immigrants come to Canada from all corners of the world, and many of them possess language skills that could benefit the Canadian industry.

Implementation plan

A plan for implementing the marketing and human resource strategies is presented in Appendix 2. It lists the level of priority for each recommendation and who will be responsible for its implementation.

6 CONCLUSION

The Canadian translation industry really sprang up when the *Canada Official Languages Act* and the *Quebec Charter of the French Language* were passed in 1969 and 1977 respectively. An increasing number of firms and self-employed translators came on the scene to respond to the growing need for governments to implement bilingualism and for businesses and organizations to comply with the new legislative framework. As a result, the demand for a qualified workforce prompted a number of Canadian universities to develop translation programs. For the past thirty years, they have been providing various diplomas and degrees for students and, along with other stakeholders, have contributed to the creation in Canada of a tradition of professionalism and excellence in translating the country's official languages. Meanwhile, provincial professional associations were being set up, overseen by a national federation, which now regulates about 4,000 member translators, terminologists and interpreters. More recently, a small group of firms that design aids for translation and machine translation systems have cropped up in Canada in an appropriate linguistic and technological framework, and they require new disciplines, different from those of traditional translation occupations. Lastly, the translation industry is rounded out with small research groups scattered among various Canadian universities, whose work is often recognized internationally.

On the world scale, the translation industry is facing major changes. The globalization of markets and the rapid evolution of technology are slowly changing how translation stakeholders organize themselves and operate. For the first time in the history of translation, businesses are forming associations, production standards are being established and technology is progressively being incorporated into the translation process. In short, the translation industry is emerging as an economic activity area. The transition from an unknown professional activity to an organized and structured industry with its own operating rules is the focus of discussions. Translation is increasingly becoming an economic activity whose strong role of generating sales, revenue and employment in Canadian firms is of growing importance. The quality of translation is becoming a factor in competition.

The Canadian translation industry cannot avoid these changes and will have to adapt to major world trends, which, inevitably, will shape its future.

The Canadian translation industry must therefore meet a number of challenges to strengthen its positioning in the domestic market and develop export markets. In the Canadian market, it has to focus on its recognition as an industry or economic activity sector, organize itself more efficiently to deal with foreign competition, increase its profitability and financial capability, and invest in technology and R&D. On the international scene, the industry must increase its market share, open itself up to multilingualism and develop its own models in high-growth activity areas, such as localization, technical translation and one-stop services.

The Canadian translation industry will have to adopt human resources strategies that are consistent with the market strategies it chooses. The growth in global and Canadian demand for translation and interpretation services, the emergence of new occupations and the fast-paced evolution of technology will require universities and professional development organizations to make major changes. The industry must adopt the following strategies: maintain the trademark high level of quality with its clients and educational institutions, respond quickly to the pressing demand for experienced translators, help new graduates enter the labour market, adapt its training programs to respond better to the needs of the industry, provide the human resources needed for emerging industry niches, and open up translation training to the global context. The Internet and machine translation are only a couple of the factors that will shape the industry of the future.

The Canadian translation industry is ready to meet these challenges and has the resources it needs to adapt to the changes. The Canadian government, however, must lend its technical and financial support to bolster the industry's efforts. Responsible for enforcing the *Official Languages Act*, it must ensure that the industry has sufficient competent human resources on a permanent basis. The Canadian government must also capitalize, as other regions of the world have done, on the strategic importance of this activity area by investing more in linguistic research and development.

APPENDIX 1
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APPENDIX 2

IMPLEMENTATION PLAN

IMPLEMENTATION PLAN

STRENGTHEN THE CANADIAN TRANSLATION INDUSTRY

Challenge	Recommendations	Timeframe*	Action
Raise awareness among all industry members and the Canadian customer base of the existence of a Canadian translation industry.	1. Form an association/network of translation industry stakeholders.	ST	Sectoral Committee
	2. Make government authorities and private companies aware of the need to use qualified suppliers; make buyers of translation services aware of Canadian quality standards and incorporate the standards into calls for tender.	Co	Firms / professional associations
Organize more effectively in order to make the most of market opportunities in Canada and better withstand foreign competition.	3. Make the industry aware of the importance of size in light of the global development of business. Encourage alliances and partnerships (formal or virtual) among Canadian firms or independent workers in order to create critical masses, in terms of finances or sectoral specialties.	MT	Sectoral Committee / large firms
	4. Invite interpreters to increase awareness of their areas of expertise (conference, legal or community interpreters) and to consider ways that will help them adjust better to the requirements of a market-based economy, in particular by investing in information, visibility and promotional strategies for their profession.	ST	Interpreters / professional associations
	5. Given the new global realities that make a stronger Canadian translation industry desirable, put in place co-operative bridges between the Translation Bureau and the industry.	ST	Firms / Translation Bureau

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Challenge	Recommendations	Timeframe*	Action
<p>Improve the profitability and financial capacity of Canadian translation companies.</p>	<p>6. Draw up and disseminate a list of the “best practices” of large American and European translation companies.</p> <p>7. Make lending agencies, banks and venture capital corporations aware of the industry’s potential to make it easier for translation companies to access private capital.</p> <p>8. Promote the importance to the industry of moving from conventional translation toward other services with greater added value or toward high-growth sectors.</p>	<p>Co</p> <p>MT</p> <p>MT</p>	<p>New association</p> <p>Committee of large firms</p> <p>Committee of large firms</p>
<p>Make governments aware of the strategic importance to Canada of supporting the growth of developers of aids for translation and increasing linguistic research.</p>	<p>9. Promote the adoption of a Canadian policy of support for R&D in linguistics based on the policies of other countries. Promote AT/MT companies as a research sector.</p> <p>10. Promote government-sponsored technical assistance and business development support programs among industry stakeholders.</p> <p>11. Support the initiative to bring together active players in the field of computational linguistics, including research in natural language processing and aids for translation.</p>	<p>MT</p> <p>Co</p> <p>ST</p>	<p>New association</p> <p>New association</p> <p>New association</p>
<p>Demystify aids for translation and machine translation and promote their use as a way of increasing profits.</p>	<p>12. Investigate the possibility of establishing an information medium on aids for translation and machine translation.</p> <p>13. Increase the presentation of aids for translation and machine translation at association conferences.</p>	<p>ST</p> <p>Co</p>	<p>New association</p> <p>Professional associations</p>

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DEVELOP EXPORT MARKETS

Challenge	Recommendations	Timeframe*	Action
Increase the market share of translation firms and independent translators in the global marketplace.	14. Raise stakeholders' awareness of potential partnerships with American firms.	MT	Committee of large firms
	15. Promote the Canadian translation industry in Team Canada missions.	Co	New association
	16. Encourage the creation of electronic directories of services offered by firms and contractors in Canada.	MT	Professional associations
	17. Help independent translators sell their services to foreign firms.	ST	Professional associations
	18. Promote Canadian translation capabilities to foreign subsidiaries in Canada.	MT	Committee of large firms
Lead an industry focussed on the official languages into being more open to multilingualism.	19. Develop the ability to manage the demand for multilingual translation and interpretation in Canada.	MT	Committee of large firms
	20. In co-operation with the managers of Canadian terminology banks (TERMIUM® and the <i>Grand dictionnaire terminologique</i>), study the possibility of adding other languages.	MT	Translation Bureau
	21. Encourage designers of aids for translation to develop their products in other languages, either alone or in partnership with foreign firms.	MT	Designers Committee
	22. Create a working group aimed at developing standards for metadata intended for multilingual documentation.	MT	DNA Multimedia
	23. Create a mechanism for East-West discussion in Canada about the development of a multilingual industry.	ST	New association
Take advantage of Canadian expertise in public administration when entering foreign markets.	24. Explore the formation of public-private partnerships to target the markets of international organizations.	ST	Large firms / Translation Bureau

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Challenge	Recommendations	Timeframe [*]	Action
Develop Canadian models for localization, technical translation and one-stop services.	25. Create a working group on localization.	ST	East- West committee of firms
	26. Create a working group on technical translation.	ST	Committee of firms / independent workers
	27. Create a working group on one-stop services.	ST	Committee of large firms

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HUMAN RESOURCE STRATEGIES

Strategy	Recommendations	Timeframe*	Action
Continue maintaining high quality standards.	28. Make Canadian universities with translation departments aware of the industry's potential and the importance of maintaining high-quality training programs.	MT	New association / CAST
	29. Raise awareness among government authorities responsible for administering official languages legislation in Canada of the importance of financial support for the development of skilled human resources.	MT	New association
	30. Support the efforts of professional associations to maintain, develop and promote high-quality professional development programs.	ST	New association
Increase the number of experienced translators and interpreters.	31. Find effective ways (training practice, specialized training) to provide professional development opportunities for the existing workforce in order to make up for the shortage of experienced translators.	ST	Committee of Universities / professional associations, firms
	32. Post up-to-date lists of existing courses in relevant subject fields, as well as a directory of teaching resources, by specialty and by university, on the professional associations' Web sites.	Co	CTIC
Facilitate the entry of new translation graduates to the workforce.	33. Set up a working group to propose avenues for promoting the entry of new graduates into the workforce.	ST	Committee of Universities / firms / businesses / professional associations

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Strategy	Recommendations	Timeframe*	Action
Increase and strengthen translation and interpretation training in universities.	<p>34. Create formal university-employer consultation mechanisms.</p> <p>35. Launch an awareness program on the translation and interpretation professions and the Canadian industry's needs, targeted at students, guidance counsellors and businesses in general.</p> <p>36. Solicit sponsorship from large companies that are translation and interpretation consumers to fund translation and interpretation programs or the purchase of aids for translation at universities.</p>	<p>ST</p> <p>ST</p> <p>MT</p>	<p>Universities / CAST</p> <p>Professional associations</p> <p>Universities</p>
Respond to emerging needs for human resources in translation niches.	<p>37. Set up a working group composed of university representatives and concerned industry members in order to assess the nature and scope of new and emerging needs in computational linguistics and natural language processing.</p> <p>38. Upgrade training and professional development programs to include leading-edge fields such as localization, computerized aids for translation and translation project management. Create the programs and courses required to meet the industry's changing needs.</p>	<p>ST</p> <p>Co</p>	<p>CAST Committee / universities / business</p> <p>CAST / Universities</p>
Be more open to the global market.	<p>39. Increase and promote translation and interpretation courses in targeted foreign languages according to regional needs. Encourage the transfer of translation skills from official languages to other languages.</p> <p>40. Encourage agreements between Canadian and foreign universities to increase student exchanges.</p> <p>41. Encourage working interpreters to actively master an additional language or work combination.</p> <p>42. Promote career opportunities in translation to members of ethnic groups living in Canada.</p>	<p>MT</p> <p>MT</p> <p>MT</p> <p>MT</p>	<p>Universities / professional associations / business</p> <p>CAST / Universities</p> <p>Professional associations</p> <p>Professional associations</p>

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