MACHINE TRANSLATION AT THE GOVERNMENT OF CANADA: REACHING FOR THE FUTURE

By Lucie Séguin, Chief Executive Officer of the Government of Canada’s Translation Bureau
BACKGROUND

THE CANADIAN LANGUAGE INDUSTRY

- An estimated value of CAD $1.5B (USD $1.2B);
- Estimated to employ 27 500 Canadians on a part-time, contract or as-needed basis;
- About 75% of the businesses have fewer than 10 employees; 1% have 100 employees or more.

THE TRANSLATION BUREAU

- Is an optional service provider on a cost-recovery basis for ~70% of the government’s translation and interpretation expenses;
- Generated USD $140M in revenues in 2020 and ranked 14th in CSA Research’s worldwide “Top 100 Language Service Providers”;
- Outsources ~45% of its business volume, which accounts for ~14% of the Canadian language industry’s total volume of work.

1 280 EMPLOYEES NATIONWIDE
30 000 HOURS OF INTERPRETATION IN 2020-2021
350 M WORDS TRANSLATED IN 2020-2021

THE CANADIAN GOVERNMENT’S CENTRE OF EXCELLENCE IN LINGUISTIC SERVICES
LINES OF SERVICE & CLIENTS

Translation
- Translation
- Post-editing
- Revision

Interpretation
- Conference interpretation
- Sign language interpretation
- Closed captioning
- Speech reading

Terminology
- Search for equivalents
- Terminological recommendations
- Customized glossaries

Language Portal
- TERMIUM Plus® databank
- Glossaries and vocabularies
- Language resources

Canadian Parliament, judiciary, and federal departments and agencies

All Canadians
CANADIAN LEGISLATIVE CONTEXT

Equal content and quality in French and English is a right

“English and French are the official languages of Canada and have equality of status …”

Canadian Charter of Rights and Freedoms

Indigenous and disabled Canadians have their own language rights

“[The Government of Canada must] support and promote the use of Indigenous languages …”

Indigenous Languages Act

“… it is essential to ensure the economic, social and civic participation of all persons in Canada, regardless of their disabilities …”

Accessible Canada Act

The Translation Bureau helps the Government and Parliament of Canada in their legislated duty to provide Canadians with quality communications that respect their language rights.
COVID-19 PANDEMIC: THE BUREAU IN THE HEAT OF THE ACTION

Interpretation in official languages for hundreds of meetings on COVID-19

Translation of public health documents into 49 Indigenous and foreign languages

Sign language interpretation for COVID-19 press briefings that are broadcast on national channels

Glossary on the COVID-19 Pandemic

Vocabulary on Distance Teaching and Telework
I recommend that the Translation Bureau and federal institutions develop and implement an action plan to ensure that appropriate tools and structures are in place to facilitate the drafting and simultaneous delivery of emergency communications of equal quality in both official languages.

October 2020—A Matter of Respect and Safety: The Impact of Emergency Situations on Official Languages, report from the Commissioner of Official Languages of Canada
HOW MACHINE TRANSLATION CAN HELP:
A PRIME EXAMPLE

HUMANS AND MACHINES WATCHING OUT FOR CANADIANS
1977
The Bureau starts using a statistical machine translation (MT) system to translate weather statements and reports.

2009
PORTAGE MT is launched by the NRC* at the MT Summit XII in Ottawa, Canada, and piloted at the Bureau.

2016
Using PORTAGE, the Bureau and the NRC launch the Language Comprehension Tool for federal public servants.

2018
The Bureau conducts structured trials of various neural MT tools in order to assess their efficiency and quality.

2019
The Bureau provides its translators with neural MT demonstration accounts and launches neural MT pilot projects.

*National Research Council of Canada
A COMPREHENSIVE AND FORWARD-LOOKING STRATEGY

**Automated language and subject field identification**
To make workload distribution easier and, eventually, use different neural MT engines for texts in different subject fields.

**Elimination of gender bias**
For translations that support inclusion policies.

**Neural MT benchmarking**
To select a best-in-class toolkit.

**Data management**
To secure a solid foundation of objective, quality and easily accessible information.

**Automated quality estimation**
To give translators an indication of usability and flag the need for engine retraining.

**Automated quality evaluation**
For a risk management approach to pre-delivery quality assurance.

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Public Services and Procurement Canada
Services publics et Approvisionnement Canada
Governments must keep abreast of machine translation breakthroughs to

- SEIZE OPPORTUNITIES
- MITIGATE RISKS
- PROTECT LANGUAGE RIGHTS

A CASE IN POINT: Free access to Microsoft Office 365 tools for clients

**Breakthrough**

Microsoft Office 365 includes several translation, captioning, subtitling and transcription features in both of Canada’s official languages.

**Opportunity**

Make it easier for public servants to use and access official languages when communicating, in keeping with the Official Languages Act.

**Risks**

Are servers located in another country? Could sensitive information be divulged? Is there any possibility of misuse?

**Language rights**

Is the output of equal quality in both official languages? Are users aware of the need for quality control?
We are fortunate to have so many qualified and innovative language professionals in Canada and believe that it is essential that they be well equipped to meet the growing demand in Canada. In order to do so, it is therefore essential to consult them.

August 2019—Statement by the Parliamentary Secretary to the Minister of Public Services and Procurement
HOW TO KEEP PACE WITH TECHNOLOGY: THE CHALLENGE FOR DEMOCRATIC INSTITUTIONS

Specific concerns that seldom rhyme with nimbleness

**Fairness**—All potential bidders must be given a fair chance to compete.

**Limited expertise in AI procurement**—Hard to create clear statements of work to obtain the desired results.

**Transparency**—The public expects to have access to their government’s information.

**Security**—Information of national interest must not be divulged.

**Accountability**—All expenses must be pre-approved, reported and justified.

**Strict fiscal framework**—The lowest bid is an important procurement criteria.
WHERE DO WE GO FROM HERE?

Sharing best practices and expertise within Canada …

- Other federal departments and agencies
- Other levels of government
- Private sector
- Professional associations
- Academia

... and around the world

- Intergovernmental cooperation
- Industry associations
- International forums and conferences
- Think tanks
Questions?
Translation services in Canada’s official languages, transcription and desktop publishing services

- Twice a year, the Translation Bureau launches a Request for Supply Arrangements process under which suppliers can qualify to fulfill requirements in two categories: official languages translation, and transcription and desktop publishing. Visit buyandsell.gc.ca for additional information.

Terminology services, translation services in Indigenous and foreign languages, and interpretation services in Canada’s official languages, Indigenous languages, foreign languages and sign languages
