10 THINGS YOU PROBABLY DIDN'T KNOW ABOUT MACHINE TRANSLATION

What the Global 2000 Know About Machine Translation that You Can Leverage

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// INTRODUCTION

LexWorks provides **industrial-strength machine translation** for companies who need a high volume of content localized. We use machine translation, optimized by our experts, to provide our customers with a speed and cost advantage without compromising on quality.

With our parent company based in Paris and offices on 3 continents, LexWorks counts many of the largest and best run companies in the **Global 2000** among our top customers.

Through our work with the Global 2000, we have helped some of the most successful companies in the world to leverage advances in technology – particularly **machine translation** – to leapfrog their competition into international markets.

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// WHAT THE GLOBAL 2000 KNOW

The **Global 2000** are under constant pressure to bring their products to **new markets** with all due speed.

The average **multinational** company routinely translates content into 8-16 languages, depending on the markets they serve. The amount of content is increasing as well, thanks to user-generated content.

To build **sustainable translation processes**, the **Global 2000** made an **early investment** in machine translation and are farther down the **experience curve** with this technology compared with other companies. Over time, the Global 2000 have been able to **reduce spending** on translation and **speed up** the release of content across international markets.

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// WHAT YOU NEED TO KNOW

01 This Isn't Your Father's **Machine Translation**

02 **Don't** Even Think About **Doing It Yourself**

03 There Isn't **One Kind** Of Machine

04 Your **Data Security** Matters

05 Look For **"T-shaped"** Companies

06 Start With A **Pilot Program**

07 Bring In **The Experts**

08 Invest In **Training**

09 Reap Savings With **Translation Memory**

**10** Keeps The Humans For **Quality Control**

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01 This Isn't Your Father's Machine Translation.

"MT is often associated with a compromise of quality in favor of cost and turnaround improvements. Contrary to all expectations, using machine translation has improved our quality. In blind tests with each major language, reviewers consistently evaluated the content as equal or superior to our traditional translation process."

In 1954, in the New York head office of **IBM**, the **first demonstration** of a machine translation system took place – based on a vocabulary of just **250 words**. But despite the early fanfare that accompanied this, **automatic translation** came to be identified with translations such as this one, which in 2007 nearly provoked an international incident when sent by a journalist to a visiting Middle Eastern diplomat: *"Helloh bud, enclosed five of the questions in honor of the foreign minister: The mother your visit in Israel is a sleep to the favor or to the bed your mind on the conflict."*

Today's machine translation has moved on from this inauspicious beginning.

Now, a few advances in **artificial intelligence** and machine learning later, machine translation is better – and we're smarter about the processes to **optimize** it. While it may once have been an overhyped technology, today **Global 2000** companies are using machine translation to reach new customers and communicate with their international staff. Like Apple's progress from the **Newton** to the **iPad**, machine translation is at a point where it can deliver on its original promise.
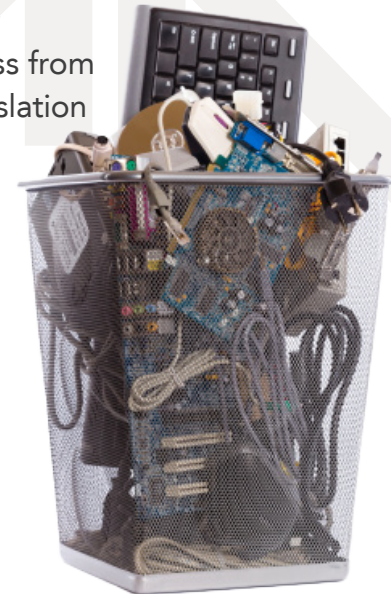
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02 Don't Even Think About Doing It Yourself.

"For security reasons, we use an internal engine which we trained ourselves. In order to reduce the time spent reworking translations we turned to LexWorks to train for our 6 languages and 5 business units."

It's tempting to go to a **machine translation** vendor, purchase an engine, set it up, and train it on a set of documents. Tempting like that extra slice of **chocolate cake** is tempting

The reality is that these kinds of experiments almost always end up costing you a lot in **time**, **money**, and most importantly, **missed opportunity**.

Instead focus on what you do best. Setting up and customizing a machine translation engine is not for the faint of heart and takes expertise and skills that most enterprises don't have readily available.

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03 There Isn't **One Kind** Of Machine.

"We use a rules-based engine for our documentation, but for real-time translation for our online customer support, we decided on a statistical tool with 24/7 availability."

Rules based. Statistical. Hybrid. These are the three types of engines available from the vendors who sell machine translation technology.

They are all good choices depending on the type of content you need to **translate**, the **source language**, the **target language(s)**, and also the **level of quality** desired.

Best practice companies know that the single most effective way to cut through the complexity and get to the ROI they need is to call on outside firms – firms who understand the technology inside and out and who know how to select the approach that will perform the best.

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04 Your **Data Security** Matters.

"...a series of security problems because emails not intended to go out behind our firewall were being uploaded onto an open translation server."

One **localization manager** we interviewed at a multinational said it this way.

"We tried working with a new company that offered translation based on a **software-as-a-service** model at a **low price per word**. This seemed like it would work. Until it didn't. We had a myriad of problems not the least of which was a series of **security problems** because emails not intended to go out behind our firewall were being uploaded onto an open translation server."

Protect your IP by looking for **service providers** with **experience** placing machine translation engines both on premises and off with enterprise-class security.

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05 Look For "**T-shaped**" Companies.

McKinsey – the eminent management consulting firm – defines two types of consultants. I-shaped and T-shaped.

People who are I-shaped have deep expertise in one or more subjects. **T-shaped people** – on the other hand – demonstrate both deep expertise in a single subject plus a broader based strategic understanding of business issues. To truly get the most from today's machine translation, look for an **outside firm** that is not all technology ("I"), not all linguistics ("I"), but demonstrates depth of knowledge in both these areas along with the ability to collaborate with your business decision makers.

*LexWorks is one-such **T-shaped** company with a background in both linguistics and technology. LexWorks has been providing traditional translation services for more than a quarter-century and has a decade of experience in cutting-edge machine translation.*

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06 Start With A Pilot Program.

"After a successful pilot with the French and German, the process has been tested and is now expanding to the remaining European languages."

Is your content suitable for machine translation? What will your Return on Investment be? To find out, ask a potential service provider to **set up the pilot for a single department** with a high volume of translation needs, say 1000 pages of content across two or more languages.

This enables the **service provider** to **customize** the machine translation engine to a specific set of content and to meet a specific quality goal. **Processes can be fine-tuned** to meet your turnaround needs.

A busy litigation department that is under the gun with discovery may need less quality and a faster turnaround while a manufacturing department responding to international RFPs will need higher quality. The purpose of your pilot is to determine whether machine translation is a methodology that will work in the real world and deliver real world results.

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07 Bring In The Experts.

"Our partnership with LexWorks has resulted in an average of 20% cost savings and 30% improvement in time to market."

While there have been many advances in machine translation, it remains true that to deliver quality at the same level of **POTBH (plain-old-translation-by-humans)**, machine translation needs to rely on a repeatable process that uses people in small doses on both the front end and the back end.

On the **front end**, people are needed to customize and train the engine on your company's content. On the **back end**, linguists and subject-matter experts may be required to post-edit the results, so as to enhance the quality of the raw output. We say "may" because it really depends on the quality level you need. (See point #10 below.)

To have a **sustainable process** in place, round up a village of experts to set up and run your project for success. These should include an experienced project manager, linguists and experts in the subject matter(s) specific to your company or industry sector. Or, better still, hire a company that already has those experts in place.

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08 Invest In Training.

"Working with LexWorks to automatically translate our international RFPs with an engine that is trained for our industry (transport) means that we gain an average of 5 days..."

Some early investments in machine translation did not work out. The problem? Almost always it's not spending enough time training and customizing the machine on enterprise-specific content. This results in raw output from the machine translation process that is low quality. Post-editing content from poorly trained MT is very time consuming and will burn out your team.

Great post-editors are hard to find. They're real experts in linguistics and your exact subject matter. Work with professionals who know how to train your machine translation engines properly so as to avoid this kind of burn-out.

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09 Reap Savings With Translation Memory.

"In addition to the 42-49% savings from using Translation Memory, we benefit from an additional 10-30% from using MT with TM, for a total average savings of 48-64% from translation technology alone."

If you are unfamiliar with **translation memory**, here's how it works. Most content includes phrases you will repeat multiple times. With translation memory you save those translated phrases in a **database**. This gives you a set of phrases in pairs that you can use as building blocks when translating additional content.

Translation memory cuts your translation costs because you end up translating 1x phrases that come up again and again.

It turns out that **translation memory** is a great strategy to reduce translation costs. However, unless you have only just started working with translation memory, most likely you have already realized most of the savings it can offer; for additional savings, your company needs to look at using machine translation.

Translation memory works best when the content domain is well established, say with an existing product. But companies get the majority of their revenue and profits from new products. Also, the way you wrote about your products and services five years ago is probably not the way you write about them today: things change, and your translation memories may well be out of date.

And this is where machine translation really shines. With your company's translation memories as training data, LexWorks builds highly customized machine translation engines. And, you can count on these engines to improve over time.

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10 Keep The Humans For **Quality Control.**

"We were surprised to see an improvement in our quality. For the French files, the reviewer reported that the translation rated 8.25/10 for MT, while the traditional TM translation was at 8/10. For German the MT translation scored 9/10 and our reviewer said: "It was the best translation of courseware I ever read.""

The raw output of machine translation typically delivers quality that is at the 60-70% level. Lots of errors, some of which get in the way of understanding. Apply subject-matter expertise to the **post-editing process** and you can turn the crank on quality and get it up to the same level as plain-old-translation-by-humans.

This turns out to matter a lot because not all content needs to be translated to the same quality level. Some of it will need to be close to perfect. And some can pass muster at a lower level of quality.

Machine translation enables you to take content you normally could not afford to translate – for example user-generated content – and make it available to your customers. You can do this in a wholesale fashion or take more of a self-service approach, by making a widget available on your support site so customers can translate on demand.

Either way, what you are doing is using machine translation to cut the cost of translation while upping the amount of content you make available in your customers' languages. Which can also dramatically cut your customer support costs.

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// NEXT **STEPS**

Global 2000 companies capitalize on advances in machine translation to translate more of their content into more languages.

Their goal?

A sustainable process that costs less and delivers more. We've talked about ten ways you can leverage what they've learned.

To get started on the journey to a more sustainable translation process, email us at *info@lexworks.com*.

We'll help you develop an ROI pilot for machine translation with a full feasibility report. We'll work with you to help you:

- grow international revenues
- decrease time to global markets
- increase customer satisfaction
- reduce costs and
- improve profitability.

// **ABOUT** US

LexWorks provides industrial-strength machine translation for companies who need a high volume of content localized. We use SMART™ machine translation to provide our customers with a speed and cost advantage without compromising on quality. LexWorks has the people, processes, and technology to turn today's most advanced translation tools to your competitive advantage.

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