



motionpoint

A Guide to **Neural Machine Translation**

Learn about this cutting-edge approach to machine translation, and how it helps companies engage global markets.

Introduction

Neural Machine Translation is the most advanced form of automated translation software available today. With recent advances in self-learning AI, deep learning and big data, Neural Machine Translation (NMT) systems essentially “learn” new languages, and apply linguistic knowledge to repeatedly produce translated content that’s more accurate than previous machine translation approaches.

Other systems of machine translation, such as Statistic Machine Translation, can’t learn the way NMT does.

These older technologies recognize text at the *word, phrase or syntax* level. Since this approach examines a sentence’s content on a granular level, it doesn’t account for the full contents—or *context*—of the entire sentence. Translations suffer as a result.

In contrast, NMT models process information similarly to the human brain: nonlinearly, using different layers of a neural network. This allows NMT to read and translate content at the more holistic sentence level, resulting in far more accurate and nuanced translations.



By now, every major provider of machine translation uses Neural Machine Translation.

NMT is fast becoming a viable way to localize a company’s customer experience for international markets. Here is some helpful information about NMT, and about the translation vendors that use this powerful technology.

The Benefits of NMT

Thanks to recent technological breakthroughs, companies can benefit from NMT in several key ways, including:

- ▶ **Budget-Friendly:** The cost to localize high volumes of online or offline content are significantly lower than translations crafted by professional linguists

- ▶ **Speed:** Large amounts of content can be localized quickly, in real-time
- ▶ **Quality:** Translates content into widely-spoken languages with far fewer errors than traditional machine translation
- ▶ **Teachable:** Translation quality can improve over time by “training” the database’s language patterns with additional content



Serving Global Markets with NMT

NMT empowers brands to reach their global customers in the languages they prefer, quickly and cost-effectively. Here are several common use cases in which NMT can be used to drive international business:

High Volume, Low Cost

NMT can localize large volumes of content such as product pages and descriptions, offline documents or user-generated content almost instantly, for a fraction of the cost of human translation.

Low-Risk International Expansion

With NMT, companies can minimize their translation spend while testing the waters

in new online markets. Successful localized websites can be enhanced with human translation as needed.

Flexible Application

Businesses with small budgets can affordably create localized customer experiences, with the flexibility to apply human translation to strategically critical content within spending limits.

Comprehensive CX Localization

Depending on your translation vendor, your company may also be able to apply NMT to other features, such as:

- ✓ Localization of images, multimedia, web applications and third-party content

- ✓ Localizing social media content, and real-time sentiment analysis of multilingual customers' social posts
- ✓ Instant translation for chat or email applications



Smartly Using NMT: The Hybrid Approach

Despite its ability to deliver far superior translations compared to Statistical Machine Translation, NMT isn't without its flaws.

Here are a few:

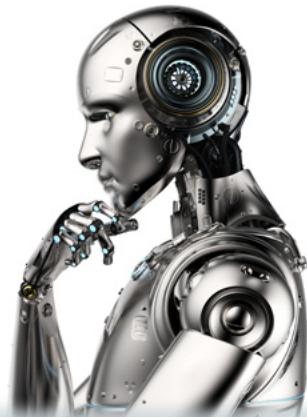
- ✗ Lengthy "learning" processes (see sidebar on page 5)
- ✗ Inconsistent word usage, which can confuse readers or undermine a brand's credibility
- ✗ Inability to translate words outside the NMT database's vocabulary
- ✗ Unsophisticated handling of nuanced creative copy, such as wordplay

For businesses that want to leverage the cost-effective, time-saving benefits of NMT without risking their brand's reputation, the best translation vendors **offer a hybrid approach, combining NMT with expert human translation**. This delivers unmatched efficiency, accuracy and flexibility.

Companies can apply a NMT-human approach to use cases such as:

- ✓ Using NMT for high-volume, low-traffic areas and human translation for brand-sensitive or high-traffic areas such as homepages and landing pages
- ✓ Translating all content with NMT, and applying post-editing with a human linguist on select sections or pages
- ✓ Launching a digital localization project with NMT, and upgrading to human translation later, as business needs and budget allow





The Challenges of ‘Teaching’ a NMT System

Neural Machine Translation systems are most effective when they have been “trained” with bilingual content, and learn the linguistic rules needed to understand and interpret language patterns.

Companies can also refine their NMT databases over time by editing their output with a human translator, and re-teaching it to the system. This is the best way to get the most accurate results that reflect your brand’s voice and messaging.

However, training a NMT system can take a lot of energy and time. Some translation providers that offer NMT put this training burden on their customers. **However, superior vendors handle those tasks with no customer effort required.**

Consider how much effort you and your teams can commit to training an NMT system when choosing a translation vendor.

Conclusion

Translation technology experts predict that NMT is the future of digital localization. However, in its current state, more innovation is required before NMT overtakes human translation as the best and most accurate way to localize content.

The best way global businesses can use NMT is to **leverage a hybrid approach** that combines its cost-effective, time-saving benefits with the unparalleled linguistic, cultural and industry fluency of professional translators.

As you consider different solutions to localize your website and other assets for international customers, make sure to look for vendors that offer both cutting-edge technology and human expertise.

About MotionPoint

MotionPoint solves the operational complexity and cost of website localization. Unlike all other approaches, our technology and turn-key solution are built specifically for this purpose.

We translate, deploy, and operate multilingual websites, optimizing the customer experience across all channels.



MotionPoint Corporation

info@motionpoint.com

www.motionpoint.com