

GLOBAL **AMBITIONS**

Content in the Age of AI

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A REAL-LIFE APPLICATION OF AI
A Case Study

THE FUTURE IS HUMAN
How to Successfully Deploy AI in Localization

...and much more.

argos
multilingual

Intro.

Dear Reader,

Welcome to the second edition of our outsert with *MultiLingual* magazine, where we delve into the fascinating intersection of artificial intelligence (AI) and global content.

In an increasingly interconnected world, the role of AI in enhancing localization strategies is becoming more apparent. But how exactly does it work? And what are the implications for data science and quality management in localization? These are questions we tackle head-on in this edition.

We are particularly excited to share with you a case study on our collaboration with Accuray. Here, we demonstrate the capabilities of Argos Multilingual's proprietary AI TM cleanup tool. This case is not only about technological development, but it also underscores our commitment to delivering efficient, accurate, and reliable localization solutions. The question isn't whether AI can improve your localization strategy, but rather, how can you afford not to leverage it?


We examine the profound impact of AI on data science. As AI continues to redefine the landscape

of data interpretation, we explore how it is changing the game for businesses worldwide. Are we ready for this paradigm shift? What opportunities does it present?

Finally, we present an insightful piece by Chillistore on the indispensable role humans play in the successful deployment of AI solutions in localization. This article emphasizes the importance of quality management from a human perspective, even, or rather especially, in an era dominated by AI. How will humans and machine coexist and collaborate for better results?

This edition promises to be an enlightening journey through the world of AI and localization. Each article has been carefully curated to provide you with a comprehensive understanding of these complex topics. Are you ready to delve deeper and discover the future of global content?

Stay curious, stay informed, enjoy the read. And as always: onwards, and upwards!



Véronique Özkaya
CEO, Argos Multilingual

Content.

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Generative AI and Localization:

Practical Thoughts and Two Predictions



TIM ARATA Locale Solutions

Tim Arata is a Founding Partner at Locale Solutions. Locale Solutions is a localization consulting company where each Partner leverages 20+ years of hands-on localization experience to optimize both client-side and vendor-side global business processes.

In one regard, the localization industry is quite used to this. Over the past 30 years, we've seen numerous technologies arrive on the scene that were guaranteed to completely upend the industry, take everyone's job, and annihilate vendors once and for all. Rules-based machine translation (MT), translation management systems, statistical MT, automated LQA and I18N testing, neural MT, and massively multilingual MT engines were all expected to coldly pummel the human element out of localization. The news of our demise was greatly exaggerated. Welcome to the party, generative AI!

It's August, 2023. The generative AI (GenAI) fanfare is mercifully ebbing. A recent webinar alluded to the "tide of hype receding" — a great and useful visual. It means we can all begin to search for what this most recent wave left on the beach: to piece together how we'll effectively use GenAI as the tool that it is.

In addition to some practical thinking around GenAI and localization, this article contains two predictions. The predictions don't have to be correct; they're made in the hope that you'll be better prepared for the GenAI possibilities that eventually land at your company. As every company has a unique set of requirements that fulfill its global content needs, be playful as you read this. Think about how the discussion points can apply to you and your company's current and future work.

"To efficiently create
the most useful content possible,
GenAI needs to know what you have
said and how you like to say it."

GenAI captures the imagination more than MT ever did

While both included their own type of hype, the difference between the advent of MT versus GenAI is striking. Apart from translating song lyrics from English into Bulgarian and back into English, or using Google Translate to cheat on high-school language essays, the general public didn't spend a lot of energy on MT. In the business world, a new and still problematic security challenge — employees using free MT engines to better understand company-internal communications — was born. The most substantive (and never-ending) conversations about what MT means for the future, however, have always taken place within the hallowed halls of the localization industry.

That's not GenAI.

GenAI has captured way more public mindshare than MT ever did. *Everyone* is talking about it. Prompt engineering was suddenly a thing. Hundreds of millions of dollars have been added to the valuations of companies allegedly poised to cash in. For goodness sake, my wife used GenAI to write limericks to differentiate her demand gen emails. The widespread talk, first usage, and speculation are mind-numbing and ubiquitous.

Your manager and C-suite are caught up in this hype, suffer FOMO, and want answers. How might a localization professional who has lived through other stages of hype talk to them about GenAI? Below are some practical statements that lower the temperature of this overly hot topic and help you speak to the inevitable questions from management.

"Though the velocity of GenAI improvement is pretty staggering, it will still take time to get the use case right."

Talking points for GenAI

GenAI is a tool. GenAI is NOT a panacea.

We will all learn how to best use this latest technology tool in the next few years. While GenAI means great things for content authoring and localization, no one knows its precise impact today.

I can say one thing for sure about GenAI: Humans will always be in the loop. GenAI will always have limitations, and its output will always need to be reviewed. Please don't fire your legal, marketing, product, and localization personnel who are currently responsible for creating and reviewing content. Humans will have the hard job of figuring out the relevancy of generated content and where/how it can be best applied.

I look forward to learning how we can continue to become even more efficient by using GenAI. Similar to MT — something we have a lot of experience with — our

success with GenAI will be iterative. Remember that it took years to learn how to properly leverage the promise of MT. Though the velocity of GenAI improvement is pretty staggering, it will still take time to get the use cases right.

For localization, it's likely we'll find that MT and current workflows still work best for certain use cases. Other use cases will be best served by GenAI, and they'll require new and different workflows.

Prediction: The tool everyone will use

This prediction is less than outrageous because multiple companies are developing similar systems as I type.

- In a year or three, most companies will have a single-platform GenAI tool. Naturally, the tool can generate copy in any language.
- In the process of generating the content, the tool will scan previously approved content to better inform the generated output. The tool will also reference the company's linguistic assets – translation memories, style guides, and terminology databases.
- Within the platform, reviewers will review/edit the generated content.
- Integrated with publishing systems, the platform will push the post-edited content (in any language) for publication.

In the review/edit phase, the tool highlights non-conformances of the GenAI output with previously approved content or linguistic assets. Reviewers will correct any non-conformance. The corrected content will then become part of the reference data for future generations (that's "future generations," as in what will be generated as content in the future, not your children's children). This process probably looks extremely familiar to you — MT post-editors working with adaptive engines have done this type of work for several years.

An interesting aspect of this new process is that the concept of the global content workflow — source creation in a content management system (CMS) -> translation management systems -> CMS -> publication of all languages — will be eliminated or drastically changed. The punchline is that both localization technology and CMS providers must ensure seamless management and publication of "sourceless" content in multiple languages.

A more speculative prediction about translators' work and GenAI

For the translators reading this, the answer to the question you think I will discuss is this: No, GenAI will not take

your job. I know some of you still can't believe that neural MT didn't replace you, but here we are. Here you are.

This speculative prediction pertains to how translators might expand their roles in the GenAI world. Take as given the continued need for translator expertise in translation, reviewing, editing, transcreation, data annotation, neural algorithm scoring, etc. This prediction is a potential "plus one." Translators have my permission to love it, hate it, or ignore it.

With linguistic expertise still at the core, I can envision a GenAI world where translators specialize in a language and choose to develop a deeper understanding of a product-specific legal, business, or commercial aspects of their locale. A simple example:

It's 2026, and a US-based company selling baby formula worldwide has the GenAI tool described above. The Brazilian Portuguese translator/reviewer/editor has developed some expertise in Brazilian commercial law pertaining to information that must be included when marketing baby formula. In their queue, they see the tool's latest generated marketing blurb (marked "urgent") for resellers in Brazil. The translator judges the content to be linguistically sound.

The translator recognizes, however, that some of the wording is not in compliance with a recently passed Brazilian law. The translator contacts legal, marketing, and the department responsible for ensuring the AI engine is trained with recent, important legal data. The translator's relative expertise means the matter was resolved more quickly than it would have been had they waited for everyone to complete their individual reviews.

With linguistic expertise still at the core,
I can envision a GenAI world where translators specialize in a language and choose to develop a deeper understanding of a product-specific legal, business, or commercial aspects of their locale.

Even though the translator in the example does not have a legal degree, their deeper understanding of Brazilian law clearly helps the entire process. While a translator's "domain expertise" can be seen as a linguistic parallel, the concept I'm suggesting falls outside the scope of pure language work. It's best thought of as highly specific "locale expertise," which combines linguistic expertise with some semblance of legal, marketing, or other commercial knowledge. Translators possessing such knowledge ensure that generated content is — from both a linguistic and a commercial/legal business standpoint — correct.

Before you object, remember that this content is being *generated*. Unlike the old days, August 2023 for example, the content is not being authored by marketing, reviewed, edited, reviewed, sent to product for review, returned with comments, sent to legal for review, approved, sent to localization, returned, and published simultaneously in 20 languages. In the GenAI world, translators who develop practical expertise in one of the many locale-specific business areas will create more value. They will make the entire review process of generated content more efficient.

One extremely smart and practical sentence

I recently attended a webinar — one of hundreds, it feels like — about the future of localization and GenAI. The webinar started with a large panel discussion where a panelist dropped the comment that "Everyone should start working to make their style guides (in all languages) as good as possible." It was almost treated as a throw-away comment, missed as others rushed to speak about topics more speculative.

The brilliance of this simple comment is that it informs everyone — the localization industry in particular — how to best prepare for a GenAI future. To efficiently create the most useful content possible, GenAI needs to know what you have said and how you like to say it. It must reference your company's tone, style, preferred usage, and terminology. Clean, reliable linguistic assets are now more important than ever. Why not start by making your style guides better for all languages?

Six Talking Points for Localization Professionals around Multilingual AI



LIBOR SAFAR

VP of Growth at Argos Multilingual

Libor Safar is currently vice president of growth at Argos Multilingual. With a background in electrical engineering and business administration, his passion for languages and technologies led him to the translation industry in the mid-1990s. Since then, he's worked various roles in translation, localization, quality management, operations, sales, and marketing before joining Argos in 2021.

What the heck are we doing with AI?" or, "Can you share your AI slide deck with me?" Who hasn't been on the receiving end of questions like this over the past few months? Everyone has been asked to have an "AI strategy." For anyone working in the language industry, the time to adopt multilingual AI is now.

This is exciting because it represents a significant opportunity for language professionals. How many times have we heard complaints that localization is not seen as strategic? It is often perceived as just a cost center, receiving little love, attention, and dwindling resources. The amount of content written about this persistent grievance and what to do about it could feed one mighty language model.

The opportunity at hand is huge because language is at the heart of much of generative AI (GenAI), either as its output or as training data. And who is better positioned to understand the nature of multilingual AI than language professionals? These are large language models (LLMs), and we have decades of experience using machine translation and machine learning across languages. In a sense, we're ahead of the game.

It's easy to feel excited about GenAI, but also powerless in the face of the enormous extent and pace of change. There is a knowledge gap that needs to be filled, but there is also an expectation that current early adopters

will be the winners. However, being at the forefront now doesn't necessarily mean being the long-term winner. This applies to horizontal AI developers of flagship LLMs that power many current implementations, as well as companies that have already implemented GenAI in some form or another. It is still early days.

Here are some talking points and suggestions for capturing this opportunity. It's better to proactively tackle GenAI rather than wait for it to hit us, since it's going to change every business.

Own multilingual AI in your organization

GenAI can be implemented in various ways: top-down, grassroots, centrally, by IT departments, by individual groups, and more. However, no one can cater to the multilingual aspects better than existing language groups.

After all, they know better than anyone else what it takes to produce local language content that meets the many criteria for quality. Content that is on-brand and inclusive. They understand the power and limitations of language, how to transfer ideas to international audiences so they can understand and accept them. They're also aware of the current flaws of LLMs, which are trained mostly on data in English, and the existing gap between high- and low-resource languages.

This is an opportunity to deploy the many multilingual assets you have been building and protecting over the years: structured source and localized content with metadata, translation memories, glossaries, style guides, etc. These data are now a goldmine and a great way to build custom models that perform better than generic, even if gigantic, LLMs. This is also where the benefits of having centralized language operations show very clearly.

Language groups also possess a major asset in their access to in-country language specialists who can assist with training, testing, evaluating, and fine-tuning custom models. These specialists can intelligently verify output generated for any use case.

This will become even more valuable as we face the challenge of a limited amount of accessible, high-quality data that is needed to train and retrain LLMs, especially with multilingual data where the amount diminishes for lower-resource languages.

The use of synthetic data generated by AI models to further train LLMs is increasing. However, there are potential dangers of recycling existing language issues and biases stemming from existing training data. Therefore, local expertise is needed to clean this data before it can be used for retraining.

Multilingual AI has many internal use cases in just

"GenAI can be implemented in various ways...**However, no one can cater to the multilingual aspects better than existing language groups.**"

about any global company, and existing language teams have a significant role to play in this area.

Implement and then show and tell the results

It is easy to assume that AI translation will soon replace traditional human and TM-based solutions. However, we are nowhere near that point yet. Instead, there are a myriad of small things that AI can do to reduce unnecessary administrative work, steps, and costs. Upgrade your existing workflows to embrace AI, and study how your current translation toolbox, including translation management systems, can increasingly provide for that.

Aim for small early wins and celebrate them.

For instance, AI can be used to automate large chunks of a typical LQA process, identify issues upfront, analyze and clean up existing multilingual data (e.g., translation memories or glossaries), enrich data, transform content between formats, etc. Importantly, it allows us to do things that weren't possible previously, or at least weren't economically feasible.

The new opportunity is to break free from a siloed approach and plug multilingual AI features into wider

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corporate applications. That is, connecting it with internal workflows and systems so that it can reach a much wider internal user base.

Skill up and educate others

We all need to learn about AI, how it works, and how it can be best used. There's no avoiding that. Educate yourself, build expertise in your team, and share your knowledge internally. There is a huge demand for valuable information and guidance, and here's a chance to meet that need, building on your existing knowledge around multilingual content.

For instance, why not create an internal hub on multilingual AI, build a resource library, and proactively promote this? Document, measure, and communicate your GenAI developments. Connect and network with others. If they didn't think of you in the time of "traditional" localization or translation, they are even less likely to now. But if you talk about actual practical applications of multilingual AI (and we have a head start with all the things NMT and ML used already), they might listen now.

Understand the specific context of using AI in your industry. There's emerging regulation for Life Sciences, in specific regions such as the EU, and there's plenty of fluidity in terms of rules for treating AI-generated content, IP, privacy, etc.

Build new expertise internally

Until recently, nothing has been certain except death and taxes. But now, the impact of AI is another certainty that will affect most of us in one way or another. It makes sense to take a longer-term perspective and evaluate what capabilities and functions will be needed in our teams in the AI world, and what expertise we will need to have.

It is reasonable to expect that roles will become either more technical or more strategic. There may be less administrative work thanks to AI (that's the hope, at least).

AI is being introduced into organizations via the many varied systems used today in enterprises, such as ServiceNow, VMware, Salesforce, and more. All of these add AI or generative AI features, and their capabilities will only grow over time.

While it takes specific skills to build or customize LLMs, and for that data scientists are needed, the effective use of AI is a question of experience and best practices. We don't need to be experts in machine learning.

In this context, the role of "AI operations" will become important. It's a matter of connecting the individual components, the AI plumbing, which will make or break

GenAI implementations. And even more so in the multilingual world. In a way, these "AI ops" will help connect the "existing" translation tech stack with new AI applications. Definitely an area where we should all work to build solid internal expertise.

In general, we can assume that with GenAI, the skills that will be most valuable will be domain and product expertise, as well as specific language and market knowledge. These are the skills that are not easily commoditized, especially when combined together.

Plug into product development

The horizontal AI space requires massive investments and computing power, but it's the vertical AI models where most organizations compete. These industry-specific applications may incorporate subject matter expertise that organizations can leverage. Working closely with product development to build solutions that use truly multilingual LLMs presents another opportunity to stay relevant.

Own in-language content creation

One of the biggest promises of GenAI is the ability to create original content in any language. Locally-specific content usually performs better than translated content, which is why many marketing organizations prefer transcreation, despite its higher cost, for its "local" feel. However, original multilingual copywriting is now more accessible thanks to GenAI, whether done by experts alone or with AI assistance that is still human-controlled.

This means that localization teams can become a sort of an internal global marketing agency that helps create optimized content across languages. They know how to produce local copy that works and understand the potential pitfalls that come with it, especially given the current limitations of LLMs that are not multilingual by default. GenAI will also soon be able to personalize content for individuals or audiences, something that was previously impossible at scale.

...and finally

Labeling all of this as an opportunity of a lifetime might be stretching it a bit, but just a bit. This is a chance for anyone involved in localization or translation, in any capacity, to further develop their careers on the back of the coming wave of AI-based innovations. Sure, it's still early days, and a few years from now we may look back at our current conversations about AI and smile. But the actions we take now will help us smile happily in the future.

Significant Improvement in MT Engine Output Achieved with Argos AI TM Cleanup Tool

A Case Study

The client

Accuray Incorporated is a pioneering radiation oncology company that specializes in the development, manufacture, and sale of innovative radiation therapy treatment solutions. The company is renowned for its commitment to expanding the curative power of radiation therapy, helping clinicians treat patients more efficiently and effectively.

The Accuray portfolio includes innovative technology like the CyberKnife and TomoTherapy Systems, which have set new standards in the field of cancer and neurological disease treatment.

Accuray has an expansive global reach, continually striving to make treatment shorter and more personalized. Their ground-breaking approach to radiation therapy ultimately aims to enable patients to live longer, better lives.

Since 2018, Accuray has been building a professional collaboration with Argos. Argos's key services include precisely translating technical documentation and software strings, catering to over 25 languages globally.

The challenge

Accuray faced a significant challenge in maintaining the quality of their translation memories (TMs), which they heavily rely upon. Over the past two years, they achieved an impressive average of **80%** reuse from these TMs.

However, in collaboration with Argos, potential quality issues were identified within these legacy translation memories. Accuray's commitment to high standards led them to confront this issue head-on.

Accuray needed a comprehensive clean-up of its TMs in five of its most frequently used target languages: **French, German, Italian, Spanish** (Spain), and **Portuguese** (Brazil).

The intended outcome

Accuray's primary objective was to enhance the overall quality and efficiency of their TMs in the target languages through a comprehensive cleanup project. This involved removing outdated content to streamline the TMs, thereby improving their functionality.

Additionally, Accuray aimed to use the refined TMs as a foundation for training custom machine translation (MT) engines.

This strategic move was intended to generate further cost savings over time by leveraging high-quality MT.

What we did

Argos developed a custom solution based on AI technology that evaluates each segment using a trained large language model (LLM) and multilingual vector distance. Using a self-hosted machine learning instance, we can process the data within a secure environment. The application provides an interface that displays at a glance a "TM Health" view for each translation memory. Using this approach, we align with Accuray's goals. Initially, a metadata-based method was used to identify and eliminate outdated and unused portions of the translation memories, removing **50%** of the total TM volume with acceptable leverage loss. This step allowed us to focus on non-legacy segments, avoiding unnecessary costs.

Accuray also reviewed their existing glossary terms and added over **700** new ones. To expedite the process, the AI TM cleanup was divided into two phases. The first phase addressed issues detected by AI, consistency checks, and targeted regular expressions. The second phase began when the new glossary was ready and tackled false positives in glossary checks.

Upon completion of both phases, the cleaned TM was merged with the delta from parallel translation projects. The cleaned TMs were then used to fine-tune MT engines for improved output quality, which was confirmed through blind human evaluation tests.

The MT engine is currently updated monthly with new TM content, with performance tracked in real time to

77%
reduction in
terminology issues

prevent any deterioration in the TMs. The project highlights the importance of a custom approach, clean terminology for MT fine-tuning, and real-time performance tracking.

How it's going

The implementation of the custom solution yielded remarkable results, particularly in the improvement of MT.

A blind human evaluation was conducted to assess the quality of the untrained and trained engines. The untrained engine scored 3.8 out of 5, translating to a 76% quality rating. However, after training, the engine's score soared to 4.6 out of 5, indicating a substantial increase to 92% quality. This represented a 16% quality increase in MT content output, a testament to the efficacy of the solution implemented.

Furthermore, there was a significant reduction in terminology issues by 77%, demonstrating the solution's effectiveness in enhancing the precision of translations. These statistics reveal the profound impact of the implemented solution on improving the quality and accuracy of MT at Accuray.

What Tool Providers in the Industry Say about AI in Localization



KONSTANTIN SAVENKOV
CEO and co-founder at Intento



MARIA CASTAÑEDA
Sr. Product Marketing Manager at Lokalise



SIMONE BOHNENBERGER-RICH
Chief Product Officer at Phrase



RAFAŁ JAWORSKI
Linguistic AI Expert at XTM International

Discover insights from our partners on how they are incorporating the latest developments of artificial intelligence (AI) and machine learning (ML) into their technology — and what benefits these advancements bring to you.

We asked four of our technology partners two questions regarding AI.

1. How are they incorporating the latest developments of AI and ML into their technology?
2. What do they see as the biggest benefits in the near term?

Here is what they said:



Intento

Intento Enterprise MT Hub is built like rails to connect the new technology to existing language workflows. We've been experimenting with GPT-3 since the first beta version appeared in early 2021. As soon as the technology became good enough, in late 2022, we added an option to use it in translation workflows for source quality improvement and automatic post-editing.

We see it achieves up to another 60% of the editing effort reduction on top of the best-of-breed custom NMT in the post-editing workflows. Combining machine translation with generative AI models (like GPT) enhances traditional translation workflows and achieves accurate, in-context translation.

Through Intento MT Hub, GenAI-enabled workflows are available in all TMS and other enterprise software platforms, such as Salesforce or ServiceNow, to share MT/AI models across the enterprise and improve them based on feedback. Currently, we're rolling out the last pillar of GenAI for localization, translation quality estimation, which is used to automatically process translation feedback and enhance MT.

In localization, AI and ML offer efficiency, speed, and cost reduction in creating and adapting a variety of multilingual content.

Our forward-thinking enterprise clients use AI for quality control, brand voice consistency, and content adaptation for various markets. Continuous experimentation, testing, and optimization are essential to maintain a leading position in this continuously evolving field.

We foresee a future where information and experiences are universally accessible in one's native language. One of the main benefits in the near term may be making content accessible for underrepresented communities, as generative AI and advanced machine translation make this affordable for almost any business.



Lokalise

With Lokalise, the future of localization looks bright as we continue to push boundaries and leverage the latest developments in AI and machine learning to deliver exceptional localization experiences. Not only are we revolutionizing the localization industry but also empowering language professionals and localization stakeholders alike.

Lokalise has introduced three AI features that work in harmony to enhance efficiency, accuracy, and speed in the localization process.

The first, AI Suggestions, speeds up the translation process by giving translators suggestions, variants, the option to rephrase, shorten, and even optimize for SEO. This enables translators to deliver accurate and engaging content at record speed.

The second product, AI Translations, takes translation efficiency to the next level. With Lokalise's AI-powered bulk translation feature, users can translate content at scale with context. This is particularly beneficial for businesses who handle large volumes of content across multiple languages. Some businesses are already using Lokalise AI to pre-translate, helping them deliver more accurate translations at scale, in less time, which means human reviewers can focus on more complex content.

Quality assurance is a vital aspect of localization, so Lokalise developed AI language quality assurance (LQA). Our customers can effortlessly generate comprehensive quality reports using AI, empowering them with invaluable insights into the alignment of their translations with their brand identity. By following the industry-standard DQF-MQM structure, Lokalise ensures that customers can regularly evaluate and improve their translations, ultimately creating a seamless customer experience.

We have integrated contextual translations into all of our products, ensuring that both AI and humans

"Maintaining brand consistency is a top priority for businesses undergoing localization."

understand how their translations are being used. By considering important factors such as industry, audience, and tone of voice, Lokalise's AI technology delivers translations that are precise and culturally relevant. This ensures that businesses can communicate effectively with their global audiences.

Maintaining brand consistency is a top priority for businesses undergoing localization. Lokalise's AI products offer the option to include style guides and glossaries, guaranteeing that AI translations align seamlessly with the brand's identity and voice. This helps businesses maintain a consistent brand image across different languages and preserves their unique positioning across international markets.

Furthermore, Lokalise's AI-powered LQA reports will provide customers with a clear understanding of the quality of their translations. This allows businesses to quickly identify and address any issues that may arise, ensuring a high level of quality control and overall customer satisfaction.

Lokalise believes that new technologies, like generative AI, and the experience and human touch of language professionals will work in tandem and lead the localization and translation industry to a new peak in productivity, speed and quality that will result in great experiences for more people around the world.

By leveraging AI, Lokalise enables businesses to scale their localization efforts and shorten time to market, giving them a significant advantage in the global arena.



Phrase

Phrase, a global leader in cloud-based localization software, announced the appointment of localization industry leading authority Dr. Alon Lavie as its new vice president of AI research. Dr. Lavie was joined by an expert team of machine learning engineers with whom he has worked with for decades across different organizations. He and the team joined Phrase at a significant juncture, as the company further extends its leadership in localization software, and continues to set a new standard for next-generation language technology.

The Phrase Localization Suite supports over 30 machine translation engines, including Phrase's own engine, PhraseNextMT, the first TMS-ready engine. The integration of MT into enterprise localization processes has reached unprecedented depths, with adoption rates proving to be phenomenal. However, it is vital to recognize that the human in the loop remains crucial in maintaining the highest quality standards.

LLMs bring immense excitement as their applications extend far beyond mere content translation. They hold the potential to empower teams with increased efficiency through higher automation levels. Nevertheless, this abundance of potential use cases necessitates a better understanding of the true value drivers.

Building off of their AI-powered machine translation aggregation capabilities, Phrase has recently expanded its machine translation capabilities and will continue to double down on AI and MT enhancements for the Phrase Localization Suite.

"The integration of MT into enterprise localization processes has reached unprecedented depths, with adoption rates proving to be phenomenal."



XTM

AI is a cornerstone of XTM's development strategy, and customers are already benefiting from a series of AI-powered tools included in XTM Cloud, as well as new ones being launched. These include the AI-enhanced TM that transforms mid to high fuzzy matches to full matches, the automatic placement of inline tags with a 98% success rate, and the translation memory aligner tool, which can build translation memories based on previously localized content in a matter of minutes.

The latest version of XTM Cloud includes a new AI feature that is not only pioneering in the localization industry but also highly relevant to modern-day content standards. AI-powered quality checks are being introduced for non-inclusive and offensive language, checking for anything that might alienate readers. Once the inappropriate language is flagged, XTM then suggests appropriate alternatives for the linguists directly in Workbench (XTM Cloud's CAT tool).

By using it, companies can produce global content that not only resonates with their audiences but that is also positive for their brand's image. Plus, there is another QA check that flags any segments that fall below a certain quality threshold.

With these new features combined, linguists are able to complete tasks more efficiently by being able to focus on key terms and segments, without needing to consult reference materials. This feature is currently available in closed beta only, but XTM plans to release it to all customers shortly.

The benefits of AI are usually related to time and cost savings, as is also the case at XTM. However, with AI-powered quality checks, artificial intelligence is being leveraged to take content quality to the next level and adapt it to the modern-day world. Organizations that are able to produce inclusive global content that's free of offensive or inappropriate language, and do so with minimal human input and in a cost-efficient way, will have a considerable advantage in terms of brand image over those that don't.

From a strictly metrics-based point of view, XTM's AI-powered QA checks will enable the magic formula of producing better-localized content in less time. It will

"A shorter time to market can make a big difference when it comes to entering new, latent markets and gaining a competitive advantage."

make linguists more productive, as they will only need to do minor post-editing tasks instead of spending time checking style guides and reference materials, and this means that content can be published with shorter turn-around times.

A shorter time to market can make a big difference when it comes to entering new, latent markets and gaining a competitive advantage. A big part of a company's global success depends on the quality of its content and communications, and this new QA feature will certainly put them in the best position to do exactly that.

CREATIVE CONTENT IS
Intelligence Having Fun



Multilingual content is everywhere. We've been witnessing the content explosion for years. And now, with LLMs and generative AI, creating content in almost any language is easier than ever. But standing out is even more crucial – yet trickier to achieve. We need to make sure that our brand's voice can be heard, loud and clear.

Here's the deal: each piece of multilingual content has a purpose, and its impact should be measured. Merely translating content and crossing our fingers that it performs well won't cut it. Effective global content demands selecting the right approach: from translation to transcreation or, increasingly, native content creation. And there will be times when we need to decide whether human or AI-assisted

methods are best. In each case, measuring our content's performance is crucial to making informed decisions.

We all love great content. It possesses the remarkable ability to evoke genuine emotions, such as unity, love, and pride. But only when the language is just right. So, let's not settle for generic, one-size-fits-all content. The real magic happens when everything falls into place: in-country research, content creation, international SEO, custom local distribution, and local branding.

We believe that there has never been a better time for creating engaging content than today.



content.argosmultilingual.com

AI Revolution: A New Era in Data Services

An inside look at how developments in AI have impacted a data services team



RAFFAELE PASCALE

**Data Services Product and Solutions
Manager at Argos Multilingual**

Raffaele is a tech-forward leader skilled in merging language and AI. He shines in managing products and solutions, especially in data services, seamlessly integrating technology to solve complex challenges.

In the dynamic world of data services, there is a constant evolution that demands our attention. One such revolution that has taken center stage is the recent advancements in artificial intelligence (AI). These developments come in many names, such as "GenAI" and "ChatGPT," but the technology goes beyond the jargon. They are not just technical jargon — they are reshaping the very core of how businesses operate, especially in terms of data collection, management, analysis, and utilization.

One significant breakthrough lies in the development of large language models (LLMs), AI constructs that have been trained on extensive datasets of both text and code. Their versatility is truly remarkable, from generating text to translating languages and even crafting creative content.

These AI models are not just delivering solutions; they are setting new standards for operational efficiency. Consider the ease of breaking language barriers in real-time or having a system that can generate expert-level content, all thanks to LLMs.

Moreover, these advancements are not confined to a single industry. Whether it's healthcare, finance, marketing, or customer service, the ripple effects of these AI advancements are being felt across the board.

The rise of large language models is creating a demand for comprehensive data services. Our team has worked hard to keep on top of these challenges and it is a very exciting time to be part of the data services business. We get to work on the entire LLM lifecycle from collecting and labeling vast datasets of text and code to training LLMs, all the way to creating human-like outputs from these models. In other words, we have the entire lifecycle of LLMs covered.

AI's impact on data services extends well beyond the bounds of just LLMs. It also encourages the increasing use of less common languages, which are typically spoken by a smaller demographic. Previously, services for these languages were overlooked due to a perceived limited market potential. However, today's AI advancements have opened up efficient pathways for collecting data from these languages. With this shift, our emphasis is on ensuring our resources are constantly evolving and scaling up to keep up with these emerging requirements.

As AI improves language models and expands the use of less common languages, it's also increasing the need to compare different models. With more machine learning models being developed thanks to AI, it's becoming more important for humans to step in and effectively compare these models. Seeing this escalating trend and realizing our client's growing appreciation for this service, we've created a bespoke solution specifically designed to compare models efficiently and accurately. This innovative approach ensures we're prepared to meet the increasing demand for these services in a rapidly changing AI environment.

Furthermore, AI has substantially enhanced the domain of virtual assistants like Siri, Alexa, and Cortana. These sophisticated tools, which interact with users via natural language, have seen a remarkable improvement in their accuracy and efficiency. They can execute tasks such as scheduling appointments, booking flights, and delivering customer support with remarkable precision. This advancement is largely attributable to the significant enhancements in voice recordings, answer enrichments, and response annotations — areas where our service provision has been extensive and influential.

AI doesn't just improve language models and expand the use of less common languages. It also extends to the integration of LLMs into tools and quality assurance (QA) automation. This has several substantial benefits. For one, it makes

"We've created a bespoke solution specifically designed to compare large language models efficiently and accurately."

processes more efficient by automating tasks that used to be done manually, like cleaning up data or analyzing text. These models can also detect and fix errors in data, which improves the quality of a business's products and services. Plus, by personalizing the customer experience, such as generating tailored recommendations and answering customer inquiries naturally, LLMs can help raise the bar for customer service standards.

AI's transformational influence on data services is substantial and far-reaching. It is paving the way for fresh opportunities while improving the precision and efficiency in data services. As this domain continues to evolve, it's evident that AI's role will further solidify and amplify, generating even more profound effects on the data services industry. The key for progressive companies is to remain scalable, strategically anticipating solutions that enhance productivity and task management while being cost-effective. Argos is positioned at the forefront of these developments, integrating these principles into its core mission to assist clients comprehensively with their evolving needs, thereby transforming altogether the future landscape of efficient, accurate, and expansive data services.

Argos Multilingual

With our customized solutions, proprietary tooling, and a dedicated team of multilingual experts, we are your go-to partner for addressing complex data challenges. Trust us to deliver exceptional results and drive success in machine learning and language model training applications alike.

The Future is Human:

How to successfully deploy AI in localization (so it works)



MATEUSZ BOBOWSKI

Lead Quality Manager at Chillistore

Mateusz Bobowski is the Lead Quality Manager at Chillistore, which specializes exclusively in language quality services. With experience as a linguist and localization manager, on both the buyer and LSP side, he tailors quality frameworks to clients' needs and supervises their successful implementation.



KATERINA GASOVA

Global Quality Director at Argos Multilingual

With almost 30 years in the language industry, Katerina Gasova drives the development of language quality programs for Argos' enterprise clients. She also owns the company's overall language quality management strategy and helps introduce new language-related solutions.

The GenAI revolution is here, and the exponential progress of large language models (LLMs) in recent months may have led many to believe that human linguists will soon become obsolete. However, the opposite is likely to be true: The future will be shaped by the complementary nature of AI capabilities and human expertise. And quality is the reason why humans should be the ones in the driver's seat.

Our landscape after the ChatGPT storm

AI is revolutionizing the localization industry. At the beginning of 2023, most practitioners were still skeptical, or at least cautious, about LLMs. But a few months later, after the release of GPT-4, it is hard to find anyone who has not yet joined the GenAI revolution. The innovation race is on, and new solutions are appearing on the market every week. Chillistore, a subsidiary of Argos Multilingual, is keeping up — the group stepped into the race in 2020 by forming its own Innovation Lab and commencing development work on new AI-powered solutions.

One of the widely discussed topics currently is how to manage quality in AI-assisted localization. It is becoming increasingly clear that standard quality management processes and tools will need to be thoroughly transformed, and a novel approach will need to be developed. This is particularly true when LLMs are not only used for content translation, but also for content generation.

Moving to multilingual language models

However, because LLM's training data is primarily based on English text, there is a significant disparity in experience between English-speaking ChatGPT users and users of other languages. To address this issue, transitioning to truly multilingual language models has become a top priority. These models use training data that is distributed equally across language groups and leverage transfer learning techniques to establish connections between languages and apply what they have already learned from other languages.

Building multilingual language models means an increased demand for linguists who can evaluate the quality of language data produced by the model. They may also need to post-edit the data to improve its quality for further model retraining. Various studies have confirmed that linguists trained in evaluation should be involved to ensure that issues are correctly identified and resolved.

Quality management in the GenAI world

Although we are still on the cusp of the GenAI revolution, we can already see companies (both buyers and service providers) experimenting in various areas of quality management. Here are just a few examples of the topics we'd like to explore:

Quality screening

In addition to their use in content creation and translation, research suggests that LLMs might also aid in understanding target content quality. Nowadays, LLMs are being used to pioneer quality assessment. The accuracy of quality evaluation produced with the assistance of LLMs appears promising, as evidenced by a recent study conducted by one of the industry leaders on a few high-resource languages.

Pre-assessment of content quality

Although the gap between high- and medium-/low-resource languages still needs to be bridged to ensure comparable evaluation accuracy across languages, the conclusion that LLMs can be used for quality evaluation even when there is no human reference available opens up new possibilities for the use cases and implementation of language quality evaluations.

For example, with the use of LLMs, problematic parts of the content may be identified, and related quality management activities might be scoped to proactively mitigate risks. These activities may include additional revisions, enhanced or additional language quality evalu-

"The innovation race is on, and new solutions are appearing on the market every week."

ation (LQE), additional layers of automated quality checks, and cleanup of translation memories, among others.

Linguistic asset management

It is a well-known fact that translation memories (TMs) significantly reduce the cost and time required for translations. They are also essential for training and customizing machine translation (MT) engines. In the world of GenAI, high-quality linguistic assets, particularly TMs, will gain even more value due to their potential to help customize language models.

AI-powered translation memory (TM) clean-up

TMs are vulnerable databases. They are modified and processed by many users with little or no control. A typical TM would contain hundreds of thousands of segments translated into multiple languages. However, as it grows with time, its quality usually deteriorates. Bringing TM quality back to a healthy state is very costly and time-consuming. As a result, TM owners would rather adopt a compromise solution than invest in a genuinely thorough TM clean-up.

This is where large language models (LLMs) might become a real game-changer. Initial experiments with TM clean-ups using LLMs for semantic analysis and identification of potentially erroneous segments have shown significant time and cost savings. For instance, Argos' AI-powered TM clean-up is 90% faster than if the

same activity was performed in the traditional way. See the case study on page 12 for more details.

Content insights

In today's world, understanding the full range of content attributes is crucial for determining the most effective content delivery strategies. LLMs allow for a wide range of perspectives when analyzing vast amounts of content. The following are just a few examples of AI-assisted content analysis.

Content profiling

With the enormous amount of content produced, it is crucial to map the source content and cluster it based on various criteria, such as complexity, specific knowledge and expertise requirements, or the implementation of particular technologies, processes, and workflows. LLMs enable gathering all types of information.

In addition to various "counts" (character count, word count, sentence count, duplicates count, etc.), data on sentiment, spelling quality, grammar check, and text complexity can be obtained. Moreover, a quality manager can obtain information on critical elements like product names, part numbers or referential content, or extract terminology and validate it against the existing glossary.

AI-assisted content analysis can also help collect invaluable information for risk analysis and address reputational, legal, or general quality risks, or risks impacting user experience and accessibility, diversity, and inclusion. Content profiling is key to specifying quality requirements relevant to content use cases, right sourcing, defining the production workflow, scoping various quality controls, testing, and more.

Identification of style and tone of voice

Insights obtained from AI-powered content analysis can be helpful in understanding the tone of voice or language register. Specifics found in the given content type can be reflected in detailed style guide rules and tone of voice guidelines. This guidance is important not only for linguists, but it also helps fine-tune LLMs to better understand the particular nuances necessary for content creation.

Competitive analysis and sentiment detection AI-assisted content analysis may be extended to include the content of other brands and user-generated content published on social media and forums. This analysis could, for instance, focus on capturing language attributes that are typical for other brands' content and

their user personas. Alternatively, sentiment detection could help understand user's feelings about brands and their suite of products.

AI-assisted checks of language inclusivity

LLMs have the potential to detect anomalies and screen large volumes of data to identify offensive or inappropriate content, as well as content that does not comply with required diversity and inclusion standards. By leveraging AI's capabilities to identify more complex inclusivity issues beyond just "banned words and concepts," we can efficiently make content more inclusive. Any market- and language-specific challenges for delivering inclusive content should be considered when setting up the regular content creation process.

AI and language quality evaluation (LQE)

AI is rapidly transforming localization technology and tools in all aspects of the content creation life cycle. The potential for AI-powered language quality evaluation (LQE) is both fascinating and tempting from a quality management perspective, as it offers exciting opportunities for exploration and experimentation.

Both options are possible: high-level content-quality information as well as detailed error reporting

Even though it is still early days, information on text cohesion, compliance with terminology, grammar, or various specific rules can be collected to provide a high-level overview of content quality.

Currently, there are numerous experiments with AI-powered analytical language quality evaluation. The system is trained with precisely defined error typologies and severities, usually with multidimensional quality metrics (MQM), and with all mandatory references (glossaries, style guides, branded and do-not-translate terminology, etc.). The outcome of the AI-driven LQE is a quality report that lists segments with detected errors, including specifications of error types and severities, and suggestions for correct translations.

New opportunities for extending content quality evaluation coverage

By incorporating AI into content quality evaluation, it is now possible to evaluate all content types and use cases, a task which was previously seen as prohibitively time-consuming and costly. The AI-powered LQE ("LQE assistant") can work alongside humans to improve quality at scale. The LQE reports generated by AI can aid LQE experts or trained evaluators to

be more efficient. For less visible or less important content, raw quality data from the reports can be collected and analyzed, and only outliers or suspicious information would be revised by humans.

LQE experts are more than quality evaluators

New horizons will also open up for LQE experts. They will have the opportunity to observe the "behavior" of the AI algorithm and learn how to provide actionable feedback to prompt engineers and data scientists, or to receive

training on creating and improving prompts themselves.

Content creation in the GenAI world

Challenges and potential solutions

Using generative AI for content creation is currently one of the most intensively explored topics. The limitations of LLMs for content creation have already been well described, so let's focus on the most frequently mentioned ones:

Limitation	Details and Solutions
Factual inaccuracies and hallucination issues.	Content may contain wrong statements or incorrect information. The ethical challenge of publishing AI-generated content that does not correctly reflect reality underlines the irreplaceable role of humans in detecting and fixing such issues.
Challenges in achieving consistent quality and performance across languages.	User experiences vary considerably across cultures. The disparity between the amount of English and non-English data is the key root cause. Solution: the creation of multilingual language models.
Current language models have not yet been developed to a state that would enable them to cater to the diverse needs and preferences of different user communities.	Content created by GenAI often conveys values that are encoded in English, rather than offering values that are relevant to the culture and language of the reader. As a result, the user may not be emotionally engaged, even if the text is technically correct from a linguistic standpoint.
Creating unique content for a specific brand is difficult.	It is often hard to distinguish content across multiple brands. This is why having detailed brand guidelines for each individual language has become more important than ever before.
Data anonymization is necessary for openly available language models.	To avoid extra cost and time, development of alternative solutions is key.
There is a somewhat negative sentiment and mistrust towards AI-generated content.	Content often feels unnatural and lacks engagement, even though it is technically correct. Humans tend to be much more critical of machine-generated content than they are of human-generated content, despite the fact that both may have similar issues. There are often exaggerated expectations regarding the capabilities of GenAI, while a lot of research and experimentation is still needed. Only human experts, such as scientists, linguists, and engineers can enhance the quality of AI-generated output and help improve overall sentiment towards it. Additionally, regulatory frameworks for the use of AI can help mitigate risks and increase trust.

"The potential for **AI-powered language quality evaluation (LQE)** is both fascinating and tempting from a quality management perspective..."

Linguists and their role

Looking around, we see that limitations often raise curiosity and motivate us to seek solutions. GenAI is a tool, and as such, humans are the driving force behind it. To improve the quality and performance of GenAI, we need to redefine the traditional roles of linguists.

In addition to the ever-growing importance of expert knowledge (such as domain, market, language processing, socio-economic, and cultural knowledge), there will be a high demand for "post-AI editors." These editors may work with a checklist like this to improve the output quality of GenAI:

01.

Carefully fact-check to eliminate any potential misinformation.

02.

Apply creative edits that add a human touch and make the text intellectually engaging.

03.

Correct linguistic issues, especially in content generated in rare languages.

04.

Adjust the style to align with the branded tone of voice.

05.

Handle **branded terminology**.

06.

Screen the **output for potential bias**.

07.

Suggest improvements to fixed parts of prompts to minimize recurring quality issues.

08.

Re-prompt and adjust non-fixed parts of prompts for their specific one-time use.

09.

Guide AI to deliver proper structure for SEO needs, including keywords and linking structure.

10.

Ensure the uniqueness of the output by embedding human-originated words and phrases in prompts.

11.

Perform enhanced editing on chunks of text to help (re)train, fine-tune, and create multilingual models.

Generative AI offers one powerful solution: prompts can be modified multiple times to tailor the output, bringing it as close as possible to the desired results. Linguists

"Instant collaboration **between linguists and engineers is the future of AI content generation.** "

play a key role in the content generation process in the world of AI. If trained, they can enhance the quality of the content immediately by fine-tuning the prompts themselves. Instant collaboration between linguists and engineers is the future of AI content generation.

So what's the future?

The rapid pace of this technological revolution presents unforeseen opportunities, and nobody wants to fall behind. As human beings, we naturally assume that content or products will resonate with our emotions and expectations. Today's reality, however, proves that significant and thoughtful investments are still needed if we want to offer comparable experiences across languages, cultures, and communities.

It's no wonder, then, that there's still a reserved sentiment about AI-generated content.

The internet is already flooded with low-quality content created solely for profit, which unfortunately drives away users. To combat this issue, Google has been penalizing auto-generated spammy content designed to manipulate search rankings for years. Additionally, the exponential growth of disinformation is a concerning issue.

To address this, the European Commission urges tech giants operating in the EU to label content generated by AI. Furthermore, AI content detectors are emerging on the internet and continuously improving in accuracy. Although it is currently not difficult to trick such detectors, they may become much more reliable very soon, especially after authorities introduce legal regulations for AI technology.

From the user's perspective, content generated by

human experts helps establish trust based on the belief that there are dedicated individuals with relevant expertise behind the material. In contrast, AI-generated content, even if it is fluent and easy to read, lacks "the human touch."

The language may be error-free but not emotionally engaging, and the style and/or word choice may not match the particular user community's preferences, especially if the extralinguistic context is not reflected. Except perhaps for English, users can recognize that content was not created by humans, which in certain cases may leave them feeling deceived or even threatened.

...the future is actually bright for us, language professionals

One thing is becoming increasingly clear: successful deployment of language models relies on humans at the core. It's not just about researchers, data scientists, or software engineers; it's also about linguists.

In the GenAI era, a linguist's value will grow with any type of expertise offered on top of "just being the translator." Domain expertise (financial, legal, medical, socio-cultural), in-depth product and/or market knowledge, and other types of expertise will be critical.

Linguists will be urgently needed to help enhance language models, fill gaps in language datasets for low-resource languages, and document all types of language-specific rules, brand guidelines, and terminologies used to improve the performance of language models.

In other words, humans won't just be in the loop; they will be in control when it comes to using AI for anything related to language.

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