

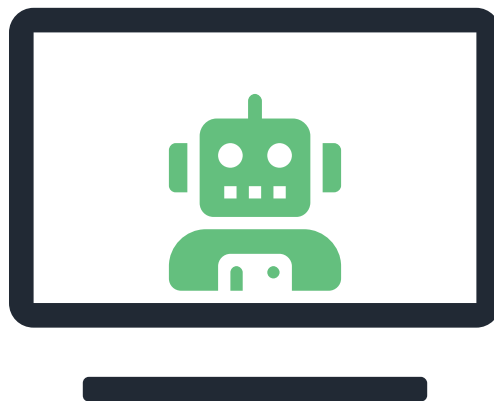
Integrating Translation Solutions into Your IT Workflow



Introduction

While localization is not traditionally seen as a true part of IT, the two fields share many characteristics and are complementary. You can use this to your advantage, but, in order to do so, communication is vital. Of course, you can send out translation requests and have single files translated, but this way you miss out on a variety of benefits offered by a more durable relation with a linguistic service provider. In this whitepaper, we will discuss a number of ways in which you can benefit from specialist services in your IT localization project.

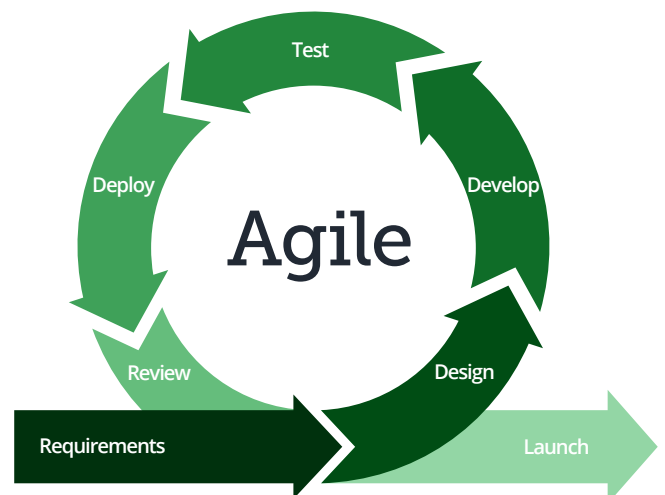
We will first highlight the importance of discussing your workflow and methodologies when approaching a linguistic service provider: they might be able to match your workflow or release cadence or even set up a custom workflow tailored to your needs. Then, we will elaborate some more on the cross-pollination of IT and localization and how you can profit from some of the shared characteristics of translators and developers. Finally, we will get a little more in-depth, with a discussion of how certain technical solutions can save you time and money, and potentially even add value to your existing workflows.



Contents

Introduction	2
Workflows, methodologies and planning	4
Code and language	7
Don't wait, integrate!	10
Conclusions	12

As such, wouldn't it be great if your localization partner could just adopt your schedule? Well, they probably can and will if you ask them in advance. The localization industry has always been a deadline-centric business, wedged in between the delivery of the source product and the planned release window of the localized end product. As such, project managers in this line of work are used to wrangling scheduling challenges, tight deadlines and working in lockstep with their client release planning. Whether you prefer to work with big, monolithic hand-offs or smaller batches with tight turnaround times, it is likely your localization partner can facilitate your workflow.



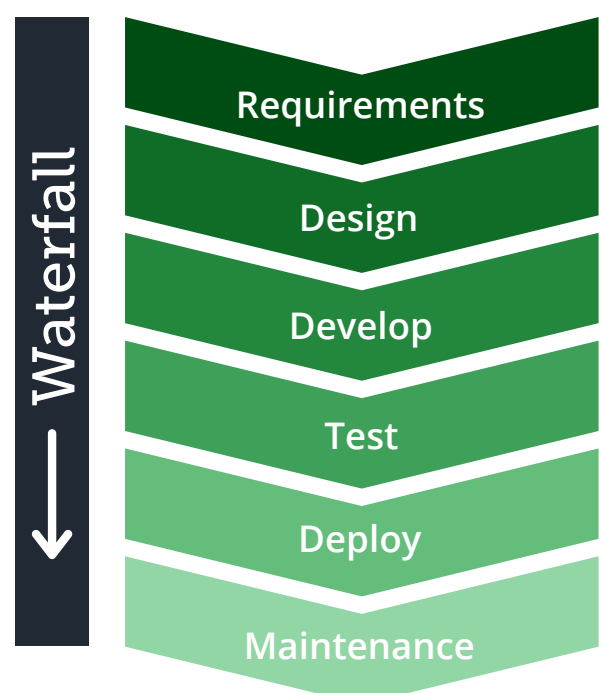
Let's say you are developing an app, working in three-week sprints. This means that you essentially know you will have a new iteration of your app every three weeks, probably with at least some text added to the previous version. Ideally, you would send the results of your sprint off for localization while you go through the steps reviewing your sprint. This way, your deliverable can be implemented to the live environment for all your target markets simultaneously, preferably by the time you start your next sprint, so you can start collecting user feedback straight away, in preparation for either a dedicated later sprint or adding urgent issues to the sprint backlog for immediate remediation.

In terms of localization, this is actually a feasible scenario: such localization sprints are typical workflows for situations where an IT company has a set localization partner with a well-defined and well-tooled workflow. By clearly stating your requirements and cadence, including estimates of your average sprint workload, your localization partner can set up an efficient workflow and line up translation assets matching your specific needs. Depending on your workloads and cadence, this could mean a monthly recurring task for one or two people, but it could also mean setting up a translator pool of 20-30 people, ready to take on 8-10 hours of work every week – each.

Waterfall model releases

Of course, an agile workflow might not work for every situation. Sometimes, it makes sense to just work on that one big update until it is ready to move to the next process step. Or maybe you can't break up your project into smaller release segments, because you are working on that big first launch that needs to be just right before anybody outside of your clean room gets anywhere near it. That's fine too, obviously, sprints aren't for everybody – some of us actually prefer a marathon.

Still, such a workflow requires an entirely different localization approach. It offers different challenges as well as different opportunities, while the planning will obviously also be different. In this scenario, odds are you will have one large batch of translatable words, potentially with some additions or updates later, like patch notes, marketing blurbs or testimonials by happy new customers. You will also see your localization hand-off coming well in advance, while you might also have a target launch date set.



Again, communication is key: get your localization partner involved early and start preparing well in advance. Many of the most successful product launches have one thing in common, which is extensive and detailed preparation with eye for detail. In this case, this will likely mean sending a heads-up weeks or even months in advance and getting people involved in creating some basic assets your translation team will need later. Think, for example, of style guides, linguistic instructions and detailed multilingual glossaries. In a recurring sprint model, translators can build on previous work, in terms of tone, terminology and lingo, but when going from 0 to 100 in a very short time span, they might appreciate some help. This is also your chance to prevent any problems or confusions and craft a universal company style that is shared across all markets. Once such prep work is in place, your localization partner is ready to assemble a team that can draw from these assets to produce a unified, coherent final product you can be proud to launch – and on schedule too.



Custom planning

Then again, you might be working on your own terms, combining methodologies or simply staggering your launches in various locales. Or you have very specific localization schedules that do not match the two main scenarios sketched above. In that case, it can be worth enquiring about custom solutions or workflows, to set up a workflow tailored entirely to your needs. It never hurts to ask, and you could be surprised: often there are more options than you might expect. Any localization business worth their salt knows that going the extra mile, meeting those highly specific demands, leads to happy clients and durable business relations.

In all these scenarios, the central take-away is that communication is key. Whether you are looking for a partner to handle a continuous flow of work, somebody to take on a sizable volume challenge or a translation workflow that can be customized to your specific needs, the first thing to do is ask. Never assume people understand your workflow, and be explicit about your expectations, wishes and requirements. Communicate your ideal outcome, discuss the possibilities and discover what's possible. The more information you provide in advance, the better the outcome: give people the background information they need to excel and they might surprise you.

Code and language

However, the potential for synergy goes beyond planning benefits. As mentioned above, the localization and IT industries are natural allies who share certain roots and tendencies. Some of the ways this manifests is through mutual dependence, a shared mentality and aptitude, and an intense collaboration on enabling each other's success. Below, we'll first discuss some recent localization history, highlighting how software innovation has been central to the development of the translation business. Then, we will see why this co-dependency and constant cross-pollination should not surprise us. Finally, we'll explore some of the ways in which these two businesses keep driving each other forwards, creating major added value for both fields.

Early adopters and growth enablers

The localization industry has been at the vanguard of IT developments for decades. Translation agencies were quick to recognize the benefits of the computer revolution, for a wide variety of reasons. For one, they stand at the apex of a proud technological lineage, tracing back millennia and always benefitting from technological innovation to further the spread of knowledge, drive business and bring information to the masses. To name one example: the Gutenberg printing press, which finally allowed quick and cheap production of translated works to reach new markets, no longer requiring these volumes to be handwritten for every copy. This resulted

in a huge boost to innovation in various other markets and created the conditions for the modern (knowledge) economy. Since then, technological development has made economies ever more global, especially since the digital turn in the 1980s and 1990s, and localization has been a key part of this development every step of the way.

Once personal computing took off in earnest, translators were both very early adopters and contributors to its success. Of course, translators are, in a very literal sense, word processors: the move away from handwritten text and typewriters to computer applications was a liberation from many physical aspects of their workflow. Once paper, ink and package post were replaced by pixels, digital storage and eventually email, their work has become more and more efficient over time.

In turn, they were instrumental to the worldwide adoption and success of these technologies. Their efforts made software, documentation and business representation available to markets worldwide. Even though English has become the lingua franca of business communication in many parts of the world, the majority of the global population still prefers working with computers in their native language. Software developers are acutely aware of this: this is why localization has been such a close partner of the IT industry since its inception. Translators expand the reach of software products, stimulating growth and adding value wherever they go.

Language fans united

The bond between IT and localization exists on an individual level too, as there is one thing most developers and localization experts share: a love for languages. While the types of languages vary, working with human language and working with computer code require a similar skill- and mindset. Both are highly concerned with correct syntax, signification and proper use of punctuation marks. But the similarities go further than that, which explains why major tech companies are often found recruiting in university humanities faculties, and specifically in linguistics departments. These shared characteristics explain why many translators have a feeling for computer code and do not panic when faced with stray bits of code in their translation.

In software and app translations, it is not unusual to see computer code mixed in with the regular text. This can occur in the form of formatting tags in HTML, such as tags for italic text or line breaks. However, software developers are also used to working with variables and dependencies. This makes code more efficient and eliminates the need to copy and repeat entire blocks of code to account for minute differences. As such, it is not a surprise this usage has also entered the content side of software and web design. From very early on in the development of translation tools, they have supported the use of variables and tags. Using these, it is possible to provide a translation for a sentence using all possible variations for a given variable, without having to repeat that entire sentence for every option.

The screenshot shows a translation tool interface with two tabs: "Pluralizations" and "Raw ICU". The "en-US (en-US)" tab is active, displaying the following ICU message format:

```
{count, plural,  
  one { Are you sure you want to restore "{nameOne}"? }  
  =2 { Are you sure you want to restore "{nameOne}" and "{nameTwo}"? }  
  =3 { Are you sure you want to restore "{nameOne}", "{nameTwo}" and "{nameThree}"? }  
  other { Are you sure you want to restore "{nameOne}", "{nameTwo}" and {countOthers, plural,  
    one { one other }  
    other { # others }  
  }? }  
}
```

Below the code, a list of placeholders is shown: "count count count count count count count count count count count count count count count count count count count".

The "nl-NL (nl-NL)" tab is also visible, showing the Dutch translation of the same rule:

```
{  
  count, plural,  
  one { Weet u zeker dat u "{nameOne}" wilt herstellen? }  
  =2 { Weet u zeker dat u "{nameOne}" en "{nameTwo}" wilt herstellen? }  
  =3 { Weet u zeker dat u "{nameOne}", "{nameTwo}" en "{nameThree}" wilt herstellen? }  
  other { Weet u zeker dat u "{nameOne}", "{nameTwo}" en {countOthers, plural, one { een andere } other { # anderen } } wilt herstellen? }  
}
```

At the bottom, there are buttons for "Minor change", "Unverify", and "Save".

Something similar applies to the use of HTML code in translation: many tools recognize the tags during initial opening of translation files and mark the code tags as such, often ensuring they do not get corrupted. But even when such code snippets are not locked or filtered out, this typically does not pose a challenge for experienced translators. When encountering machine code in their text, such

translators will typically recognize what that code does and ensure it does the same thing in their translation (e.g. italicize the same word or retain the position of a line break). Sometimes, they might even decide that a certain bit of HTML code is not needed in their translation, like when a plural apostrophe is coded into the source that does not occur in the target language.



Additional business benefits from linguistic experts

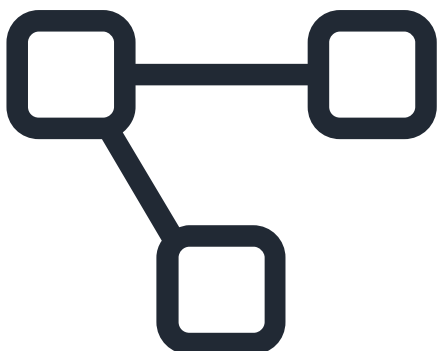
This code-savviness on the part of translators is also why they are sometimes involved in app testing. Once they have translated an app, they are typically somewhat familiar with what an app should do and how it should look. So, after translation, it can be very valuable to add a testing step to the workflow, checking for both linguistic issues, such as translations that turn out incorrect when seen in their proper context, and any technical ones that a user might encounter during a regular use-flow. Because of their insights into the inner workings of the app or software, a translator can sometimes give more accurate indications of what causes a technical issue than an external beta tester could.

Of course, these are just some examples of how translators' feeling for language offers benefits for software and website developers. There are many ways in which these two disciplines can benefit from each other's insights and skills, such as in the area of SEO work, accessibility features, audience targeting and even AI development. That clever Q&A bot feature enabling easy access to a knowledge base? That's another example of a close collaboration between linguists and developers. In the next section, we'll go into some more ways in which the IT and localization industries can work together efficiently to realize value multiplier effects.

Don't wait, **integrate!**

As we mentioned above, the localization industry tends towards early adoption of new technologies. This is reflected in the great potential for synergy with the workflows of the IT industry. In the following section, we will discuss some examples of that synergy, each offering their own benefits and added value. We will first look at integrations between development and translation tools, which can shorten turnaround times and ease file and project management. Next, we will build on that, discussing the possibilities for setting up (semi-)automated workflows.

A recent development in the field of software localization is the integration of development and localization tools. This is a logical next step after the proliferation of web-based tools combining translation work and file management in the past decade, which offered major efficiency benefits in its own right. Since then, various steps have been made to make life even easier for IT companies, such as plugins for CMSes such as WordPress to manage translatable file formats and direct links between localization tools and development environments. Especially that last point will be a game-changer going forward, but both of these examples represent potential for huge time savings.



CMS integrations for localization

Looking at these two examples, the first is a relatively simple type of integration: a user-friendly WordPress plugin that will mark selected content for translation, exporting files that a localization partner can then use to provide translations to all languages required. Once that work is completed, these files can be imported back into the plugin, which will generate a set of new content variants for each new language. Obviously, this saves the user a lot of work:

- ✓ Copying content for each language variant
- ✓ Extracting the text for translation
- ✓ Manually copying the translated text to the newly created language pages

The savings might be limited if one needs a single translation, but imagine the benefits for a webstore requiring localization of dozens or even hundreds of pages into ten or twenty languages! Additionally, because the translations are performed within the original file format, there is much less chance of code corruption or other issues.

GitHub and API integration

The other example listed above might seem somewhat more arcane, but actually offers even more possibilities. Linking translation and development environments removes even the need to send and manage files and allows support for any type of development project, from website to cloud implementation and from app to complete software suite. To illustrate this type of integration, consider GitHub, the popular platform for shared development projects, used by anybody from one-person app projects to major software corporations (including GitHub's owner, Microsoft).

GitHub, like many such services, offers extensive support for API interactions. Thinking back to the analysis of localization specialists as IT-interested people above, it should not come as a surprise that this was noted as an opportunity. For many recent translation platforms, API compatibility has been a priority item, mainly for this reason. Now, those investments are paying off: using the power of API's, it is possible to connect translation tools directly to GitHub.

This allows developers to push content directly to their localization partner, so they can pick up translation tasks the very moment they come in, without any file wrangling, additional tool set-up or repetitious emailing back and forth for every new task.

Note that such an API interaction is appealing regardless of development style or workflow model. When working with a series of small consecutive updates, being able to push every update immediately after finishing it, without any overhead, is a huge time-saver. However, when processing larger blocks of work for a release, such a direct link offers useful ways of keeping track of progress and oversight, which can aid in planning and managing the release schedule. Either way, using such a direct API link offers a variety of additional benefits, including easy correction workflows, source language review options and extensive automation possibilities.

Conclusions

All in all, then, it should be clear that choosing the right localization partner offers great benefits to an IT-oriented company. Not just because localization opens up new markets and audiences, but because your linguistic service partner can be much more than a provider of translations. Working side by side for a long time, the translation business and the IT industry have benefited each other greatly and supported each other's growth to today's levels. As such, it should not be surprising that with proper communication, you can achieve great and lasting partnerships generating tremendous value for all stakeholders.

The first area where this is clear, for instance, is in planning. Translation agencies have evolved along with the IT industry and consequently are well aware of the possible workflows involved. If you prefer an agile workflow, your translation workflows can reflect this, with short turnaround times and recurring translation cycles that fit your schedule. But those working with waterfall approaches can also reap clear benefits of collaboration: a localization agency can reserve capacity to match your large hand-offs and prepare translator documentation in advance to ensure deadline and quality requirements are met.

The fact that the localization industry is an early and eager adopter of IT technology also matters on the level of contents. Most translators not only recognize computer code when they see it, but can read the more common elements and ensure variables, tags and the like are handled correctly in translations. Additionally,

many translation tools offer options to protect or filter code snippets, ensuring no code is broken in the localization phase. Because of this tech-savvyness among translators, localization agencies are often also happy to provide other IT-related services, such as SEO and app testing.

Finally, we discussed the great potential of integrations to make your localization experience even better. More and more options are becoming available to make the translation process easier, faster and more efficient. One example we looked at was the use of WordPress plugins to generate translatable files, in order to generate localized versions of websites.

The other example is even more of a game-changer: the rise of dev tool integrations and API interactions. This type of integration paves the way for a full integration of localization into your existing development workflows, with additional possibilities for extensive automation, vastly reducing the overhead costs.

However, the examples listed in this whitepaper clearly only scratch the surface. It is obvious that the IT industry and the localization business share an especially productive past and current interactions are only adding further value.

As such, a close partnership between an IT company and their localization partner can clearly offer great possibilities, often beyond what is immediately obvious. As such, the key advice to unlock this potential value can probably be summed up by saying: get in touch with a translation agency, start exploring the options together, and be surprised by the range of possibilities.

About Scriptware

Scriptware is an international translation agency that specializes in professional translation solutions and the technical integration of translation workflows. Scriptware has a team of more than 1,000 qualified translators, all native speakers, who work with more than 30 different languages and countless language combinations. Scriptware has been offering business customers customized solutions for over 25 years. With its flexible and scalable approach, Scriptware is able to deliver high quality translations and translation workflows. Other businesses that have already enjoyed the benefits of Scriptware's knowledge and expertise include Microsoft, Amazon, FleetGo, Schüco, HP Valves, CATO-SMS, and Google. The European head office of Scriptware is in Haarlem in the Netherlands.

🌐 Read more at scriptwaretranslations.com

