

# Globalization Strategy Playbook

## *A Guide for Localization and Globalization Professionals*

## Document Revision History

| Version | Revision Date   | Description                 |
|---------|-----------------|-----------------------------|
| v1.0    | 15 October 2021 | Published Markdown document |

### Authors: Strategic Thinking Group

Melissa Biggs (Locale Solutions)  
 Wayne Bourland (Dell Technologies)  
 Karen Combe (Combe Consulting)  
 Francesca Di Marco (Pinterest)  
 Loïc Dufresne de Virel (Intel)  
 Mimi Hills (Hillstra Associates)  
 Natalia Levitina (PTC)  
 Christian Redmann (Siemens Digital Industries Software)  
 Lyena Solomon (ServiceNow)  
 Jean-François Vanreusel (Adobe)  
 Erji Wang (VMware)  
 Lorna Whelan (Tripadvisor)

## Book Reviews

Special thanks to Localization Industry professionals below who reviewed Globalization Strategy Playbook.

This is what they said.

*“Globalization Strategy Playbook is a comprehensive, informative and helpful guide for every globalization professional building, managing or leading globalization.”*

**EDITH BENDERMACHER,**

Head of Globalization Strategy, Localization Operations at NetApp

*“The Globalization Strategy Playbook offers straightforward, practical advice for globalization leaders in a format that invites readers to consider the core purposes of their own organizations as they navigate the challenges of creating critical vision. In this way, it takes the position of a thoughtful coach—encouraging introspection over adherence to absolutes. This is precisely what leaders need in the complexly multifaceted field of globalization.”*

**ADAM YOUNGFIELD,**

Global Manager, Translation Operations at The Church of Jesus Christ of Latter-day Saints

*“This playbook, written by G11N leaders with 200 combined years of industry expertise, covers all aspects of L10N strategy from languages to technology, stakeholders, quality, and more. A must-read for anyone, whether you’re entering or leading Globalization.”*

**JENNY KANG,**

Director, Globalization at Veritas

## License Information and Restrictions



As per the [Creative Commons Attribution-NonCommercial-ShareAlike License](#) you **may not** use the material for [commercial purposes](#) (i.e. to publish and/or monetize the content of the document).

You **are allowed** to use the content of this material provided that you follow the [license](#) usage terms for the following purposes:

1. To improve your company’s ROI by setting up or improving your localization and globalization processes
2. For education and training.

As per the license terms, you must always give appropriate credit, provide a link to the [license](#), and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.

## Table of Contents

- [Chapter 1: Purpose and Vision](#)
  - [Strategic Thinking and Planning Steps](#)

- Step 1. Your Organization Vision
- Step 2. Your Organization Strategy
- Step 3. Execution of Your Plan
- Acknowledgements
- Chapter 2: Strategy Overview
  - Assessing Your Company Against the Ideal Company
    - Language Strategy
    - Internationalization
    - Mergers and Acquisitions
    - R&D—CICD, UX
    - Product Development Process
    - Finance Information
    - Procurement
    - IT
  - Your Company Strategy
  - Building a Department Strategy
- Chapter 3: Stakeholders—Strategic Engagement and Communication
  - Defining Your Stakeholders
  - Understanding Types of Stakeholders
    - Primary Stakeholders #1
    - Primary Stakeholders #2
    - Primary Stakeholders #3
    - Secondary Stakeholders
    - Primary But Too Often “Forgotten” Stakeholders
    - Other Indirect Stakeholders
  - Engaging with Your Stakeholders
  - Stakeholders as Strategic Partners
  - Best Practices at Hand
- Chapter 4: Language Strategy
  - Defining the Language Strategy
  - The Relevance of Language Strategy
  - Partners and Audience for Language Strategy
    - Key Stakeholders
    - Drivers of Language Strategy
  - Building the Strategy
  - Components and Alignment
  - Governance: Best Practices for Language Strategy Oversight
  - Deeper Understanding of Language Strategy
    - Spoken or Written

- Linguistic and Cultural Considerations Impacting Localization
- A Successful Language Strategy
- Chapter 5: Technology Strategy
  - What is a Globalization Technology Strategy?
  - Create and Implement Your Technology Strategy
    - Demonstrate Value
    - Map Business Objectives to Tools
    - Technology Maturity Model
    - Understand Where You Sit in the Technology Maturity Model
    - Identify What Technology to Go After
    - Build a Business Case and Get Buy-In
    - Implement the Solution
    - Build Reporting and Monitor Results
  - Technology Evolution
  - How to Incorporate Different Technologies into Your Strategy
  - Main takeaways
- Chapter 6: Data Analytics for Globalization Strategy
  - Globalization Data Strategy
  - Key Considerations
  - Strategy Reports and Dashboard
  - Understanding the Data
    - Incomplete Data
    - Data Gaps
  - Globalization Data Engineering and Analyst roles
  - Partnership
  - Analytics Tools
  - How to Build a Business Case
    - Using data to build a business case
  - Measuring MT Quality and Effectiveness
  - Main takeaways
- Epilogue: Our Final Words
- Appendix A: Technology Decision Drivers and Strategic Objectives
- Appendix B: Data Inventory

## Chapter 1: Purpose and Vision

Developing and implementing a strategy is the central responsibility of any leader. Whether the head of a small or a large department in an enterprise on the client side, whether your team is called Localization, Internationalization or something else, Globalization leaders envision the ideal future for their team and their company. They determine how and when to achieve the most desirable goals. This set of actions is called strategy.

In this playbook, we will introduce common strategic thinking concepts, such as vision, pillars, objectives and goals, roadmap and metrics, and guide you through how they apply to the process of Globalization.

There are two kinds of strategies that a leader needs to consider.

One is the business unit strategy—how your organization will fit into your company structure and success in the future, and what you need to do to secure the optimal position to contribute the most. Imagine if your company is pivoting its monetization strategy to a new set of markets, and as a Globalization lead you need to reconfigure your team's positioning with your stakeholders. How do you handle the language strategy, the market strategy, internationalization processes, etc.? How do you make sure you set up your company and your team for success?

The second kind of strategy is your team strategy—what kind of team (skills, seniority, expertise) you need have to support the future demand, and what career paths you need to envision for the people you plan to hire.

Perhaps, in addition, there should be a third type of strategy—outsourcing strategy to support fluctuating demand. This includes how and when your vendor strategy needs to be reconsidered, made more agile, or simply re-evaluated based on ever-changing business needs.

A good strategy works by helping to get to a destination without feeling lost, and by providing support where it will have the greatest effect in overcoming obstacles and making progress.

By offering a wide variety of tools and an expansive globalization framework, this document aims to be a compass in this journey: How do Globalization leaders know when they are solving the right problem? How do they define the problems?

This playbook promises to empower Globalization leaders to build a coherent strategic response by offering an overview of the following:

- **Vision:** What does the future you are trying to create look like? How do you define your goals for whatever you aim at working towards in the future? For example, what is your vision for international customer experience if your goal is to provide out-of-the-box globalization capabilities in each product? How do you ensure that non-English speaking audiences will have similar or better user experience as English-speaking users?

- **Strategic direction:** By strategic direction, we are referring to strategic pillars, annual objectives, goals, and roadmap. The strategic pillars are the most essential battlefields that a Globalization leader needs to govern for the company's long-term success.  
The strategic pillars for the Globalization team are: people (internal and external), processes (localization-specific and corporate lifecycle), infrastructures (TMS, that is Translation Management Systems, globalization libraries, MT, that is machine translation, etc.), and reporting tools (dashboards, newsletters, etc.). The rest of the elements are annual objectives and goals, which represent the desired outcome.  
And lastly the roadmap, which is the tactical and operational plan that spells out the details on how to achieve the goals, and the metrics to measure success of those tactical actions.
- **Guide for conversations:** What are the topics, the metrics, and the rationales that a Globalization leader should address with stakeholders and the C-suite to align the globalization function with business goals; socialize localization data showing impact on revenue and customer loyalty as well as localization success metrics among company leaders; and define who will affect the work directly or indirectly.
- **Tips and best practices:** What are the procedures and processes that better represent the most effective course of action in localization (spanning from vendor recruiting to tooling evaluation, etc.). This process usually starts with defining your present status, your projects and how they help achieve the future state following your vision. It then continues with collecting data, building a business case, and realigning your resources and projects to follow the strategy. Finally, it concludes with evaluating the gap between now and the future state and what actions will help you get there and when.

The content of this playbook spans from tactical tips to more creative insights. However, the recurring theme of this work is to guide Globalization leaders through a strategic thinking process, where the strategy is the approach one takes to achieve a goal, and a goal is the primary, measurable outcome of a strategy.

Whereas objectives might be different across the readership (because they are tied to specific businesses), strategy and the strategic thinking exercise encouraged in this playbook should resonate with each reader. Whether you are a Globalization leader of a small company or of a seasoned corporation, the strategic framework to navigate to pursue a specific objective is the same.

## Strategic Thinking and Planning Steps

This playbook will guide you through several practical steps, from painting a picture of where you and your team want to be in a couple of years to defining the main milestones for the team and metrics to guide you along the way. In this section, we offer you a version of how it might look.

### Step 1. Your Organization Vision

Your organization vision is an image of how your organization will fit and contribute to your company several years from now. It needs to align with your company vision and contribute to the overall company success.

For example, if your company's vision is to become a global company in three years, your vision could be to create a Go to Market (GTM) strategy for international markets. If your company is rapidly growing or you are in a developing industry, your vision should not span beyond a couple of years. If you are in an established industry and the focus of the company is to capitalize on existing market share, your vision could stretch out to three to five years, or it could be even less specific because you do not want to keep changing it. However, your vision must always align with your company's vision.

The Globalization team strategy in this context uses the company's plan for international markets and expands on it. As a champion for international customers and local teams, your organization will take various roles across the company—consultant, stakeholder, fulfiller, researcher, program manager, subject matter expert (SME), etc. Your globalization strategy, though focused on non-English speakers, will have to start with a company strategy for English speakers. In many ways, Globalization strategy will influence that strategy for a company to become truly global.

Your team needs to be the best collaborators and influencers in the company. They need to be the best listeners and even better advocates for the non-English speakers so that your company can realize goals in target international markets.

## **Step 2. Your Organization Strategy**

Once you know where you need to end up, according to your vision, get a compass—your strategy. Think through how you are going to achieve your goal and create a general statement that reflects your plan. It should be clear and specific enough so there is no ambiguity, but also generic enough so you can change tactics, but not the strategy to accomplish your goal.

In other words, you need a statement that defines how you select milestones or outcomes to make your vision a reality.

For example, if you are driving from San Francisco to Los Angeles, there are not many roads you can pick. However, you can determine where you stop for lunch and when, how you would react if you hit traffic and where it is more likely to happen, what are the times of the day you should not be around populated areas so the traffic would not slow you down. Your strategy can be “Reach Los Angeles by 8 pm on Friday” or “Get to Los Angeles in six hours.” See the difference in strategy? Your tactics will be different based on the goal—time of journey or time of arrival.

This thought process can be applied to decisions related to Globalization vision. For example, if you want to develop a Machine Translation (MT) infrastructure in your company, you could hire natural

language processing engineers who would create your own MT engines and infrastructure, decide to purchase machine translation as a service from a third-party provider, or a mix of both.

Your planning process should consist of three thinking steps:

1. What is your forecast for the future demand of your organization's work product? Think in terms of the environment—your company, your industry, and the world.
2. What is your present status? What are you producing now? What will you produce as your projects are completed? If you do nothing different, how would your contribution look in the future?
3. Compare A and B to determine if there is a gap between today and future demands. Do you need to produce more or less of something? Do you need to produce something completely different?

### Step 3. Execution of Your Plan

Now that you know where you need to end up and know how you are going to do that, it is time to plan a journey. It is time for milestones or specific outcomes you have to reach to realize your vision. Those are very specific, time-bound, measurable outcomes that you will have to monitor and track on a regular basis. This is your vision's "health monitor."

Using our Machine Translation infrastructure analogy above, you can decide to rely on a third-party provider. This means that you need to identify providers which support your language set. You also need to put in place selection criteria to pick the most suitable providers for your needs. Those criteria can include language availability, costs, hosting strategy, translation quality, speed delivery, ability to customize/train the engines, etc.

And that is why the strategy statement has to be both specific and generic. It sets your organization's priority without specifying the exact way of execution. Your execution plan and measurement would be your guide on where you are on the road and how likely it is for you to hit your goal.

## Acknowledgements

This playbook is the outcome of the initiative, participation and contribution of a group of Globalization leaders with different backgrounds and experiences. Bringing together our diverse everyday life in the Globalization department, our years of experience, our different working styles and skills, we hope we have made this playbook more impactful. Here is the list of contributors:

- [Melissa Biggs](#) is a founding Partner at Locale Solutions consultants. She has held management positions in localization for over 25 years at technology firms. Melissa contributed to this unique playbook to help make it a powerful channel for communicating the many key facets of global strategy both within localization groups and across *all* company and partner organizations.



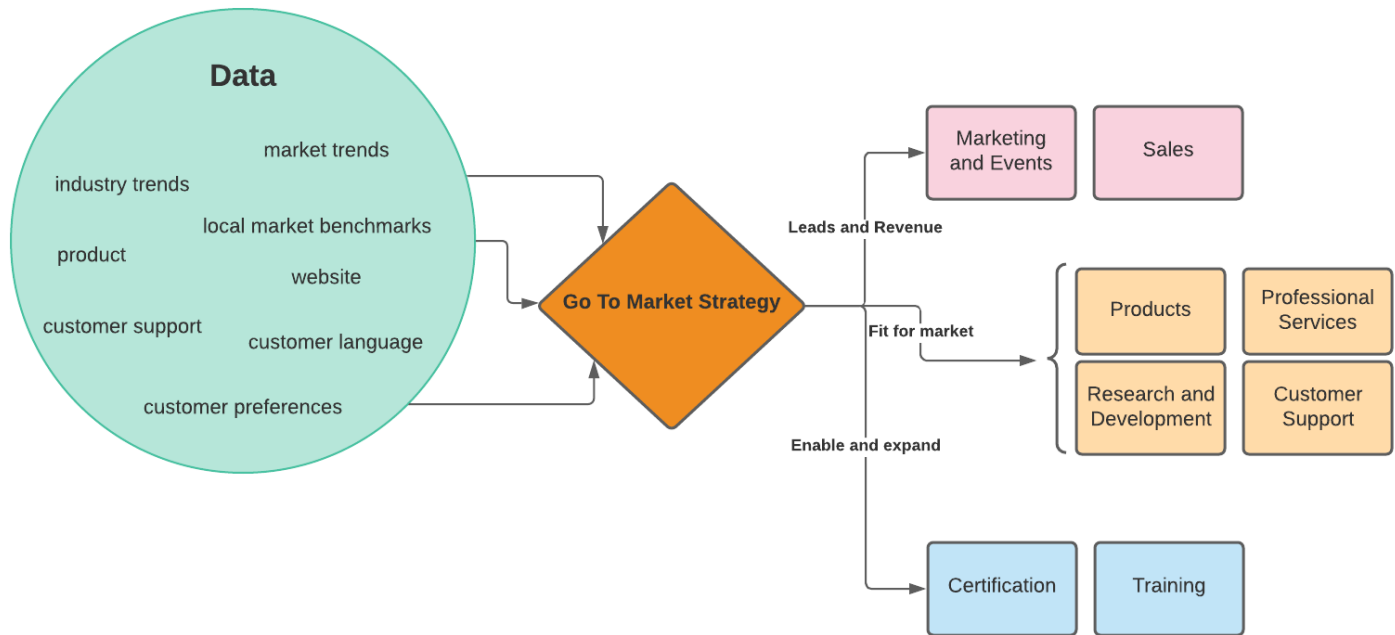
- [Wayne Bourland](#) has led multiple facets of translations for the past 14+ years and is currently the Director of Translations (L10N, I18N and Interpretation) for Dell Technologies. Wayne contributed to this playbook out of a passion for sharing best practices and a need to do something other than having yet another conversation about word rates, turn around time, and quality metrics (although those are all important)!
- [Karen Combe](#) retired recently from her role as VP of Localization at PTC, having worked for 20 years to build and develop the Localization Department. She wants to share the results of her challenges and successes with others so that they can spend their own efforts more productively.
- [Francesca Di Marco](#) is the Internationalization Lead at Pinterest where she had the privilege to build a Localization program and then an Internationalization program. She has been in the localization industry on and off for 20 years. Francesca contributed to this playbook with the wish to pass it on to the next generation of Globalization leaders, like a recipe to improve and customize, rather than to preserve.
- [Loïc Dufresne de Virel](#) currently leads Intel's in-house localization team. Loïc has deep experience in all aspects of localization, translation, internationalization, translation memory tools, QA (Quality Assurance), process optimization, innovation, and more. More recently, he worked on advanced localization projects involving natural language understanding and multilingual speech recognition engines. Loïc joined this initiative to help other localizers move forward faster through collaboration, teamwork, and experience sharing.
- [Mimi Hills](#) has served as director of Globalization teams at major Silicon Valley companies. She is passionate about ensuring that the non-English speaking customer is treated well—and also that the Localization Department is seen as a strategic contributor to the company's goals.
- [Natalia Levitina](#) is a Localization Director at PTC where she is responsible for implementation of localization technology in the department as well as overseeing the in-house translation team and vendor management. Natalia has contributed to the playbook because one learns not only by doing but also by putting down their thoughts on paper (or Google Doc)!
- [Christian Redmann](#) is a Localization Director at Siemens Digital Industries Software. Christian has been in a leadership role in Localization for more than 20 years and had the privilege to build a Localization program and organization early in his leadership career. Christian has been a Globalization and Localization champion throughout his career and is passionate about his chosen field. He contributed to this playbook out of the belief that a guide like this did not exist but would be an invaluable resource for anyone looking to build and run a successful Globalization program and organization supporting the culture and drive the strategic objectives of the company.
- [Lyena Solomon](#) is a Globalization Director at ServiceNow. She is responsible for product globalization and business Go To Market strategy. Lyena contributed so she can help globalization leaders develop strategic mindset and learn from localization industry experts. Think big, start small, measure, change, succeed—that is the ticket to global domination.

- [Jean-François Vanreusel](#) is Director of Globalization at Adobe where he's been leading globalization teams and activities for 20+ years. He joined this initiative to share his *savoir-faire* so all people around the globe can enjoy software products and content to their full extent.
- [Erji Wang](#) is a Senior Globalization Program Manager at VMware Inc. Erji has been working in product globalization for eight years. In recent years he has used business data to build the roadmap of product globalization at VMware. He contributed to this playbook to share what he has learned in this journey.
- [Lorna Whelan](#) is Senior Director of Localization at Tripadvisor and has been in the localization industry for 20 years. Lorna contributed to this playbook to share her learnings and to help create a very valuable resource to guide new Globalization leaders in raising the strategic importance of localization.

## Chapter 2: Strategy Overview

Imagine you are the Globalization leader in The Ideal Company. The Ideal Company develops a strategy that works for its global market. It does not first develop for one country, then see how it can make adjustments to fit into other markets. This global strategy informs all the work for Corporate and Regional Marketing, Professional Services, Products, Research and Development, Sales, Customer Support, Training, Certification, etc.

It is not an entirely top-down approach: all those groups focus on gathering feedback from their customers, and they feed it back into the global strategy. As a Globalization leader, you collaborate with various groups on strategic approaches to meet expectations of multilingual users in their geographical markets.

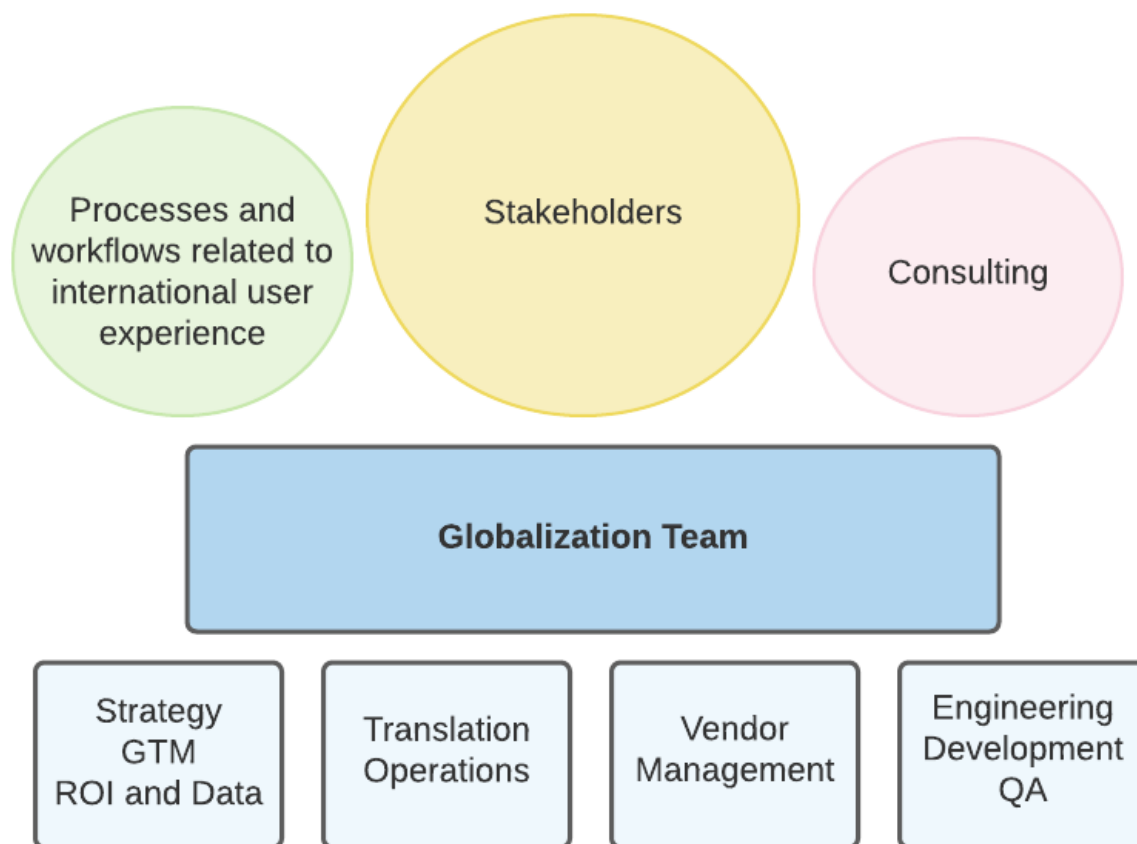


Global Go to Market Motion is carried out for new products or services targeting both geographical market and language preference of the potential customers. The markets where the product will be introduced first are chosen early, along with the languages needed to support those markets. Budget is allocated for localization, and marketing materials, service materials, and product localization are all ready to go when the product is first shipped.

Of course you—a Globalization Leader—play a critical role in all of this. You have access to all of the data about sales, product usage, website usage, customer language usage and preferences, and so on. You are not just a recipient of the information, you play a role in the decision-making about the strategy.

When the company is looking at a new marketing campaign or a new product, you pull up the data for how similar campaigns or products have worked for the company in the past. No one would even think about pulling together a plan without asking you for your data, experience, and wisdom.

You head up a single team at The Ideal Company, and your team handles the localization work for all departments. Your team is well-tuned and optimized for the company strategy. You have the budget you need for the services you outsource, as well as for the team members who do the work. Your team includes project and program managers, perhaps a vendor manager, data analysts, technology experts to help with your tools, machine translation experts, language experts: whatever you need to execute and contribute to the strategy. You even have a seasoned program manager who is focused on strategy.



Whether you report into Global Marketing, the head of Research and Development (R&D), or another team, you and your team are respected contributors. People understand how your team informs the strategy, boosts customer satisfaction, and contributes to revenue.

In fact, you have a problem that you are proud of: your stakeholders are calling, emailing, and messaging you to seek your wisdom. They consider you a valued member of their teams and they invite you to attend their meetings—but you can't accept all invitations. Fortunately, you have prepared your team for these conditions, and you have specialists in every discipline and product area who can speak for the department and contribute to solving the stakeholders' challenges.

It is clear that your role is highly valued at The Ideal Company. As if to prove that, you just got a call this morning from the CEO. She wants to give you a new title: Chief Globalization Officer (CGO). And she is asking you to sit in on her staff meetings.

What's that you say? It doesn't work that way at your company? Actually, it does not work that way at any of the companies we work at, either. We made that confession to each other long ago, and started sharing our ideas with each other. Given our company cultures, strategy, and products and services, how can we make the most of our roles? We've tried some ideas, rejected others, and have developed localization strategies that work for the circumstances in which we find ourselves. Over time we have grown our reputations and our teams' reputations within our companies.

We share our ideas with you in this playbook so you can learn what we have found that works for us. On many topics, there's no right answer; it is about asking yourself the right questions and choosing

what is right for your company. You know your company culture and strategy, and you can pick and choose what works for you.

## Assessing Your Company Against the Ideal Company

Whether you are taking over Globalization for an existing department, developing a new Localization function in a start-up or other company, or re-thinking your current department, as a strategic Globalization leader, you need to have a goal and an actionable plan to achieve it within a specific timeframe.

You need a vision of a better future for your international customers and your company, and you have to determine your Key Performance Indicators and targets to monitor your progress and make adjustments if you need them. That is what we defined as strategy and vision in the previous chapter.

However, the first step in strategy development is assessment of your company against The Ideal Company in terms of overall globalization strategy and readiness, including visibility to and interaction with company executives.

### Language Strategy

1. Does your company have a specific Strategy Group, either stand-alone or as part of an executive function? This group would consider which markets the company should attack, based on industry and overall economic data, and establish priorities for commitment of company resources. If the answer is “yes,” then your team should be integrated into that group to some degree, depending on the level of maturity in the organization. Perhaps Globalization has made the Strategy group aware of the need to assess markets in alignment with languages rather than geographies (e.g. Germany rather than Central Europe, or Spanish-speaking countries rather than Europe). Or Globalization might contribute past performance data by language, since it is likely that only your department is collecting that data.



Kate met with the leader of the Strategy team in her company to try to get more industry data related to language rather than the more inclusive “geography.” The SVP leader assigned someone on her team to perform research and work with the Localization team, since that data was not available at the time.

Kate was able to establish an on-going relationship with Strategy by presenting ROI data by language and by product to them on a regular basis, which evolved into a mutually beneficial partnership that facilitated more in-depth analysis on existing and potential target markets.

2. If your company is not blessed with a Strategy Group, then who decides what markets to penetrate? Is it Sales? (It often is.) Some Localization departments report into what is euphemistically termed “Revenue,” which may provide an opportunity to contribute directly to the formulation of a global market strategy if one does not exist.

In the absence of any localization, you can initiate the process for Return on Investment (ROI) development of potential markets by working actively with regional Sales executives on forecasts and projections in the countries where the company is actively selling. How much better would the results be if the product were localized? Are there competing products that have been developed in the native language? Do other competitors localize into the relevant languages? See the chapter [“Language Strategy”](#) for more details to supplement these examples.

3. It is often Product Management (sometimes considered Product Marketing) that initiates a foray into one or more international markets, based on their own analysis of the competitive landscape. In this case, you would work with the relevant stakeholders to establish a process as outlined in the [“Language Strategy”](#) chapter.

The important point is to determine how your company’s decisions for language support are made and figure out how to best support that process, or optimize it. You will likely need to invoke your influencing and stakeholder management skills to be effective. See also the chapter [“Stakeholders—Strategic Engagement and Communication.”](#)

## Internationalization

No matter what kind of company you work in, to enter international markets the products need to be “world ready,” meaning that they function properly in any of the company’s target markets and can be productively localized.

Internationalization applies not only to software and hardware, but also to other content including technical documentation, marketing material, website, tech support articles, and any other customer-facing documents such as sales presentations. Your products may be consumed in the source language (usually English) by non-native speakers of the language where localized artifacts are not available.

This means that certain guidelines should be followed when creating content, resulting in output that is clear, concise, and readily understandable. Content created in this way is also efficiently translatable by humans and machines. If any of your company organizations have Content strategies, your team can advise them on how to create content that is localization-ready. Most likely, your local market teams will be a great partner in this effort.

Do the appropriate internationalization guidelines for development and content creation exist in your company? If not, then part of your department strategy should include initiatives to instigate their creation, implementation, and validation. It is not uncommon for such guidelines to include trademark

and other legal requirements for translation, internal regulations for writing code, and rules around taxonomy and nomenclature.

## Mergers and Acquisitions

Most of us have experienced the need to integrate an acquired company. Ideally, Globalization is involved in the due diligence conducted by the Mergers and Acquisitions (M&A) team before any deal is concluded. Are the target company's products internationalized, localized, distributed to non-English markets?

You will be doing your company a service if you manage to integrate your expertise into the process, because if the products are not world-ready there will be costs to internationalize, which executives will not have taken into account in setting the price of acquisition. There may be delays in making the products available to global markets, which means that revenues projected as part of the acquisition would be delayed. In addition, of course, the cost of eventual localization can be severely impacted.



Kate's company acquired a company that used extensive documentation to explain their product. Each page of the documentation was formatted by hand, with multiple graphics that had to be placed with exact accuracy. And there was an immediate demand for the product in multiple international products. The cost to localize was very high, not to say astronomical, and it took several releases to transition to a more rational approach for a global product. Lesson learned.

## R&D—CICD, UX

Many Globalization departments report to the R&D (also known as Engineering) department and integrate themselves effectively into the development processes. But even the Globalization teams that report to some other function need to develop those same close ties, assuming they are responsible for localizing the products.

In assessing your company against the ideal, look particularly at these four areas, some of which apply only to software companies (although even hardware companies now include extensive software in their products).

## Product Development Process

What type of **development process** does your company follow? Waterfall, Agile, combination? What level of localization integration exists? We'll assume that you're already dealing with Internationalization, per the earlier paragraph. So depending on what kind of localization technologies you have (see the chapter "[Technology Strategy](#)" for detailed information), you may find existing direct integrations with repositories and the integration pipeline.

If you are in a software company and your company is doing CICD (Continuous Integration Continuous Deployment), you definitely want to incorporate planning for those integrations into your department strategy. If they are already in place, that is ideal. But even if your company is not using a CICD approach, the best relationship with Development requires the maximum automation possible, providing you with a clear objective.

What about **Quality Assurance**? QA covers multiple areas in Localization, but primarily functional testing in this context and includes Internationalization testing. Does the QA function in your Development team use automated tests? And do those tests work for all languages? If not, add this topic to your Internationalization ToDo list.

In the Ideal Company, the QA team is responsible for running automated tests on all languages, whether that is on separate servers or in a centralized pipeline. However, debugging test failures necessarily falls to engineers with language competence, so your team needs to provide that function either with your own staff or through your vendors. Internationalization compliance should be included in Definition of Done for software releases and your team may be managing the processes around it.

Often the **UX** (User Experience) team is part of Development. Your assessment includes that team and their awareness of their international customers. Ideally their best practices, or their design system, includes guidelines appropriate for global customers. Your department may be best placed to provide consulting and input. If that awareness is lacking, there's another item on your strategy ToDo list.

User experience is often tied to accessibility. There are legal requirements for some markets as well as customer requirements. Align with the teams who manage accessibility and include checks and balances in the QA workflow.

The team that Globalization often works with most closely is **Publications** (Technical Writing). Is there a collaborative spirit between the two groups in your company, with mutual understanding of the requirements of each one? Depending on the Development strategy—simultaneous shipment of all languages, CICD, staggered releases—you may need to engage with Publications to find creative ways to shorten timelines without impacting quality. Treating Publications as your ally in achieving strategy goals generally offers the best results.

Sometimes priorities for documentation differ for various markets. Information you gather from local teams about such priorities would be invaluable in prioritizing what to translate or not to translate, in what languages, and when.

## Finance Information

To fully participate in the global market objectives of your company, you need information from Finance, particularly revenue and budget information. You cannot establish ROI for products and



languages without the revenue (Return) side. And you cannot assess the cost (Investment) side unless you have the company view of your budget and costs. Headcount is also a part of financial management of your organization.

For example, in a product ROI analysis, the localization costs include both the percentage of headcount in your department allocated to the product as well as any external costs. But for your headcount, should you include only salary and benefits, or add in bonus, plus stock awards, plus facilities overhead? The answer is to know what your company does when it calculates the cost of a headcount.

This revenue and cost data constitutes part of the data you need to effectively manage your department and to manage up to the executive level. See also the chapter [“Data Analytics for Global Strategy”](#) for more information. If you do not have access to this type of information, either directly or through your manager, consider the approaches outlined in the chapter ["Stakeholders—Strategic Engagement and Communication"](#) to establish a productive relationship with Finance.

## Procurement

A procurement department or function can be of great help to Globalization in the selection of and negotiations with suppliers. But this relationship only works well if Procurement sufficiently understands the particular requirements for localization pricing. Do you seriously mean that you count words, and that there are different kinds of words?

It is unlikely that any Procurement department achieves a deep understanding of the localization industry and its nuances, so it is your responsibility as the leader to demonstrate your own deep knowledge of pricing and requirements. It is important that you take the lead on pricing and review cadence of contracts with your vendors. Procurement can then contribute its expertise when needed in negotiations and standard supplier agreements for an optimal outcome. If you do not find this balanced relationship in your assessment, you have another item on your strategy ToDo list.



Kate’s company added a Procurement department whose mission was, first, to reduce the number of suppliers from several thousand to a reasonable number and second, to find ways to save money through the procurement function. When the new VP visited the Localization Department, Kate was pleased to be able to demonstrate her team’s mastery of vendor strategy:

- A short list of long-time vendors, with reasoning behind each one
- Proposal to consolidate and expand select vendors’ scope of work based on their expertise (QA services, for example)
- CMMI-certified (Capability Maturity Model Integration for software development from Carnegie Mellon), documented practices for new vendor acquisition, including testing for

quality, business viability, and verified recommendations from other customers

- Service Level Agreements (SLAs) with addenda for pricing and penalties for non-performance
- A quoting, possibly bidding, system to compare offers from multiple localization agencies

In fact, it soon became clear that the Localization department vendor management practices were unparalleled anywhere else in the company! Then Kate and her vendor manager demonstrated in their cost-management software how pricing works in the localization industry: different word rates depending on language, vendor, leverage, machine translation usage and hourly rates for non-translation tasks. Machine translation usage provided proof of ongoing and increasing savings. The Procurement VP left happy after that hour long meeting and never came back!

## IT

If your department or one that you work with closely uses localization technology, such as a TMS, you will interact with Information Technology (IT). The first order of business in technology is security, so any technology that connects to entities outside your company firewall must meet the standards that IT defines.

Now suppose your department uses a TMS that does not meet the standards. IT will likely insist that the technology be upgraded or changed within a certain timeframe. You need a productive interaction with IT to ensure that the timeline can be met, or you need to offer an acceptable alternative.

In a slightly different scenario, some IT departments prefer to manage your technology themselves, which presents an additional challenge in relationship management.

Finally, make sure you have a solid SLA with IT because your localization infrastructure needs to be available 24/7.

If your company operates in the Cloud technology space, there will be data privacy requirements associated with TMS technology, i.e. where the data is going for translation and how it is returned. IT, the Intellectual Property board, Cloud technology team, etc. will have input into your technology decisions. Consider consulting with those teams when making decisions about TMS.

As you can see, whatever your assessment of your company and department reveals, you need a strategy to move towards the ideal, which will certainly involve building or improving relationships with stakeholders.

## Your Company Strategy

Let's review the story of a Globalization leader's efforts to assess and evaluate against The Ideal Company. This practical exercise will get you started on benchmarking your strategy and will unveil

some insightful learnings.



One of Diana's responsibilities was to run a program to translate her corporate website into German as a small part of her company's expansion in the German market. Weeks after the program went live, five more languages were requested to be added to the program. It was clear that the program would need to have its own Lead and plan. That is how Diana dropped everything else and was put in charge of the website localization group.

It was an overstatement to call her team a group because she was the only one there, working with multiple operational teams, pushing her lower priority localization. It was up to Diana now to define what resources she needed to hire, what budget she needed to translate, and what vendors to engage for specific needs. As her experience in running a Localization function was measured in weeks, she turned to research and her various networks.

It was soon pretty clear that there is no straightforward guidance on any of those questions. All answers started with "it depends..."

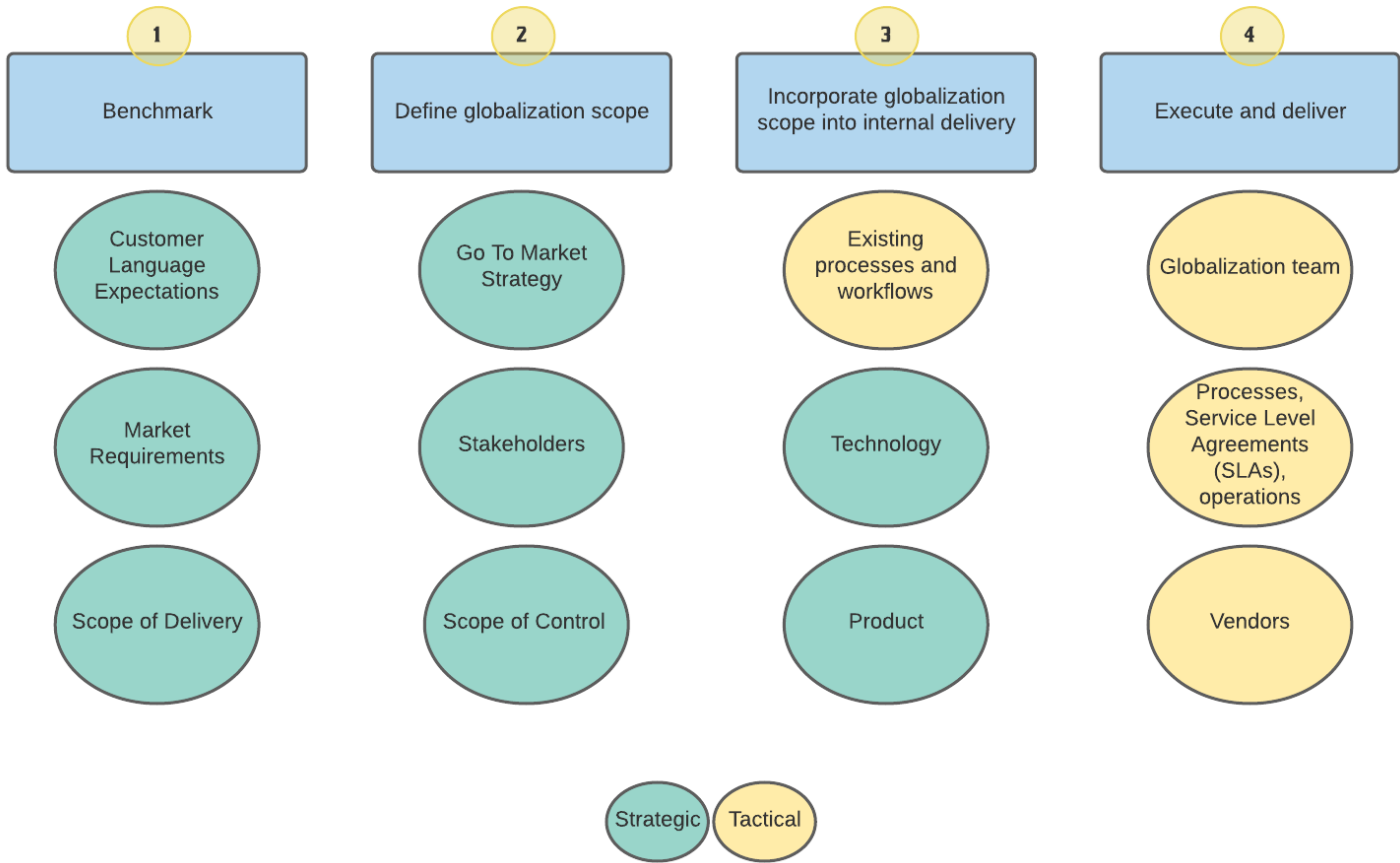
As Diana navigated the operational maze of production and workflows, set up frameworks to ensure on-time delivery and measure success, interfaced with stakeholders, hired team members, and on-boarded vendors, she learned several lessons.

- A Globalization team succeeds by helping other teams achieve their goals in international markets. The added value is very specific to consulting on the needs of those markets, and tying the actions to the company's global strategy to accelerate success. See the chapter ["Stakeholders—Strategic Engagement and Communication."](#)
- What you measure should roll up into the company's global strategy measurements. Your contribution is value-add and it multiplies corporate success in local markets. See the chapter ["Data Analytics for Global Strategy"](#)
- The Globalization team is the liaison between your company and customers, corporate and local teams, and functional teams within the company. It is essential for the team to collaborate and work well with others.

How would you do it if you were in Diana's place?

Here is the framework.

### Go to Market Strategy Process



1. Start with benchmarking and understanding how your competition does globalization in your target markets. That would determine your scope just to compete on equal footing. One thing to consider is that your competition in English could be different than in a local market; it could even be outside your industry. Focus on the language experience expectations of your customers.
2. Understand how your company produces the product you sell and where your globalization scope intersects with their processes and deliveries. Talk to the leader of each process and look for possible adjustments in their workflows so you can include the globalization track. These leaders are your most valuable partners and collaboration with them is critical to your success.
3. Figure out what you can do *now* and what will need to be done later. Work with the leaders not only on managing changes, but revising your own strategic vision and plan. As you learn about their process and they learn about yours, it is imperative to know enough to work together well without interfering into each other's process flows.
4. Validate your plans and assumptions with your local markets. Listen to their priorities and make sure they are aligned with the business/technical/financial priorities of your company and of your product stakeholders. Know what data you need to make your business case.
5. Execute your plan with your stakeholders as collaborators. Program managers will handle the progress of various projects that involve translation, internationalization, or localization. Your job is to make sure that all groups are moving in the direction outlined in your strategic vision.

You have now completed an assessment of where your company stands as compared to The Ideal Company, and you have seen how Diana, a Globalization leader, was able to plan a global strategy that fit in with the company strategy and successfully build bridges with other parts of the company.

Sometimes localization is an afterthought in the global market strategy. If you are considering how you are not included in the process, you are not alone. Many of us found our departments in similar positions. Typical situations include:

- The global market is divided by regions in a company, and each region figures out their own strategy. There is no coordination across language markets.
- The global market strategy is considered a sales strategy. When a market is prioritized, it may include some marketing budget, but the localization budget is not coordinated.
- The global market strategy is outlined for all, but each product prioritizes its own strategy. The Localization budget may not be coordinated. There can be regional marketing and product teams who use their own budget to fill localization gaps—in English or in native languages.
- There is no global market strategy. In this scenario, a sales team may give the Localization department a budget to localize certain campaigns or products.
- In companies where there are several different localization groups, management may pursue different strategies that are not coordinated between the groups.

If any of these situations sound familiar to you, don't despair. As Globalization leaders, we have had to navigate such situations ourselves. Some of the questions we have looked at when thinking about our company's strategy include:

- What are the disconnects: Is the budget not allocated according to the global market strategy? Are regional customer expectations being met? Are market limitations (for example, English language proficiency) taken into consideration?
- Where are the disconnects? Are they on a company level, product level, or department level?
- What data is being used to decide on the strategy? Who is collecting the metrics? Who is doing the analysis and what are the channels of distribution?
- Are you included in the process of developing the strategy, either because you are considered a stakeholder or you are contributing directly to the strategy? If you are, what is your role and what are the expectations on deliverables from your team? Are they realistic and will they contribute to the expected business outcome?
- How do your department's deliverables fit into the global strategy? This is an important question that you'll want to answer as you look at the next step: figuring out where your department is and where to go next.

## Building a Department Strategy

You may have come into a company as a Globalization leader, and found the global market strategy was good overall but lacking in one major area—and no funding available to fix that—Globalization department to oversee globalization strategy.

If you have been hired at a startup to put together a brand new Globalization team, congratulations! You have an opportunity to create a department that perfectly fits the company's global market strategy. You can develop strategies for languages, outsourcing, technologies, and a department structure according to current priorities, keeping in mind where the company is moving.

Most of us don't have that luxury. Our departments have a budget, some people in various roles, and deliverables and expectations that we need to accomplish with that budget and those employees. Even while we figure out what our department strategy should be for the next three to five years, it is critical that we successfully deliver according to expectations. We need to build trust with our management and stakeholders that we know what we are doing, so that when we tell them what else we need to do, they will believe us.



Minato was hired as Localization Director for a software company that had been localizing their products for over ten years. Experienced project managers worked with vendors to localize products. A separate group was responsible for internationalization and localization quality assurance, and the two groups interacted well. Software was sold as individual products and suites, so all products were localized into the same set of languages for an optimal customer experience.

The company appeared to have mature processes and a mature strategy, with an exception: none of the products were localized into Spanish. Minato's first step was to seek contacts with Sales in Latin America and Spain. Those in Latin America were adamant that they can increase sales if the products were localized. He asked for the percentage increase, and though they were reluctant to make promises that might be held against them if they didn't achieve them, they agreed on a conservative 20% sales increase.

Minato then researched the sales data, broken down per product, per country. He got estimates for first-time localization based on word counts that were readily available in his department, on a per product basis. He then was able to show that a 20% sales increase on the products would break even in the first year and within five years would yield over 15 times annual return on investment. He presented to product executives, and was given the budget to add Spanish to the Product Localization budget.

In the end, translating into Spanish yielded 348% ROI over three years on Minato's translation effort.

In any company there is a limit to what a Globalization leader can realistically do, considering the resources, business strategic direction, technology, and underlying business need for globalization. One way to make a difference is to define a different approach for each of the following three areas.

- **What you control.** This can include the tools you use, people you hire, vendors you select, processes you introduce, results you drive, etc.
- **What you influence.** These are the outcomes bigger than your team's deliverables and can include the product roadmap, other teams' project scope (for example, training), and other company outcomes. You would work through stakeholders to add the globalization angle to the requirements, features, and ROI metrics for languages.
- **What you need to adapt to** since you have no influence or control. This area is the most difficult because we are talking about things that just are the way they are. For example, your company is not ready to go into the market you think it should be in. Or you did not get a headcount for a role that you need. Or the company did not meet the numbers and now they are downsizing your organization. Things happen. And as you work across the whole organization, they might happen to you more frequently than to others. Create your description of the hard requirements and fit your scope of control within those boundaries. You will need to continue to innovate and push the limits.

It is important to focus yourself and your team on what you can control and outcomes that you can deliver, develop and expand the sphere of influence, and quickly adjust to changing priorities so you can keep the outcomes you can control in line with the company goals.

One of the roles of a Globalization leader is to build an organization that follows operational and organizational excellence principles. A successful leader hires the right people for the roles needed to add value to the business, invests in the right technology, and creates scalable processes to amplify company returns in international markets. The strategic Globalization team collaborates and innovates, expands integrations and strengthens interoperability to extend one language functionality into multilingual markets. We will outline the basic principles of forming such a team.

To be successful, any Globalization team needs to be operationally sound and deliver excellent results in addition to innovation. Performance management, continuous improvement, and process excellence are critical when striving to achieve scalable delivery with complex dependencies on various business units and groups across the business. Therefore, the Globalization team should have both internal and external focus.

The internal focus is mainly operational and fulfills the needs of your company. Translation delivery at high quality is usually the main purpose of the internal focus. That also encompasses technology, processes, vendor management, QA, and linguistic support. Collaboration with brand, legal, marketing, and other groups will create linguistic guidelines for translation in supported languages.

The external focus is on your customer and their customers. Understanding your international customers and influencing the product roadmap to make your company offering more attractive in international markets is the strategic part of the job. The recommendations your team makes for customer requirements and market expectations should be a part of any Go To Market Motion in your company. Your team should define and run an internal framework of standards and processes that meet customer requirements so you can deliver your product or service within business expectations.

As a Globalization leader, you need to hire talent who can help you define business expectations, customer requirements, and address the gap. If collaboration with other teams on their roadmaps is necessary for your success, your team's job is even more complex. The only way to make this work is to create a collaborative culture and trust within the team, and empower team members to work independently. Transparency is a necessity, and so is communication. As the Globalization leader you are providing strategic direction, so be clear on success metrics and goals of the team.

Nowadays, all companies track an increased amount of data to monitor their business and even predict customers' behavior. In recent years, more Globalization teams have created dedicated Globalization Data Engineering and Globalization Data Analysts positions. Those roles are responsible for building and running a globalization data infrastructure and identifying key globalization insights, which are critical for setting up the Globalization strategy. Even simple metrics that show the percentage of projects delivered on time and budget can show your team and your management that you are delivering to plan.

The chapter "[Data Analytics for Global Strategy](#)" will dive into a deeper discussion of how to collect metrics and use them to show how you are reaching your strategy.

At this point we have looked at how The Ideal Company might create a global strategy—and we've talked about what we mean by strategy. We have looked at how to assess where the company you work for creates their strategy. We have talked about figuring out how you can ensure your department's strategic function works with the company's strategy, and how you can build a strategy for your department. Let's look at several critical areas for your success in your department strategy to ensure that it serves your company strategy.

## **Chapter 3: Stakeholders—Strategic Engagement and Communication**

By the very nature of their activities, in-house localization teams often find themselves at a crossroads between product engineering and marketing, between headquarters and in-country offices, and between internal-facing documents and external-facing collateral materials. As a consequence, they



interact with a variety of stakeholders. Some stakeholders are more critical than others, but all worthy of attention at some point.

## Defining Your Stakeholders

Taking a holistic approach, we consider a Stakeholder to be any party that interacts or should interact with the Globalization team, either routinely or on an ad-hoc basis.

There are different ways to approach your stakeholders, for example based on the sphere of influence in relation to the Globalization team, or based on the working relationship they have with the members of your team, from within or outside of the company.

From the perspective of the Globalization leader, stakeholders can be categorized into three main groups:

1. Individuals or teams who have **specific needs and expectations** from the localization team. Also referred to as internal customers, these are the business units who are relying on the Globalization team for the production of a specific deliverable. They often represent a larger audience of global end users, industry partners, or resellers, who are the final consumers of the localized products or contents. End users are also stakeholders of the localization team, but in our experience, interaction with such end users is often indirect, through customer support representatives or in-country sales and marketing teams.
2. Individuals or teams who have **direct or indirect influence** on a project or program, such as veto power or decision-making ability. They might have only sporadic relations with the localization team, but those touch points can be critical to your success. They often represent:
  - Executives, mostly interested in strategy and the big picture; for example, they may ask how an internationalized product contributes to the success of the company and helps them achieve specific revenue goals or growth objectives.
  - Engineering teams, development teams, product teams, and even creative agencies. The need to support multiple languages will impact their work and at a minimum will require proper internationalization.
  - UX designers, as the user journey might change from one country to another, or one language to the next.
  - Analytics and insight teams, as they will validate your assumptions and provide the data necessary to build robust business cases.
  - Finance, IT, Procurement, Legal, including Information Security and Privacy teams.
  - Field Sales, Customer Success, Customer Support, on a global scale.
  - Ecosystem and training partners, particularly in the case of certification programs.
3. Individuals or teams who are **involved in the production of localized materials**. These resources are typically a mix of employees, contingent workers, and freelancers. They are either

fully allocated to the localization team or engaged on a time-and-materials basis. Among the employees involved in localization, some might not be part of the localization team. They might belong to an in-country sales or marketing team being asked to review a translated white paper or a new localized marketing campaign.

A stakeholder can belong to more than one category. For example, Procurement might assist the Localization team during contract negotiations with a major Localization Service Provider (LSP), but also engage the services of the same Localization team to translate purchasing contracts or supplier training.

As a Globalization leader, your priorities, concerns, and responsibilities change as you engage with different stakeholders, over which you may or may not have authority or influence. When supervising your own resources, you might have to think about career paths and performance management. In your interactions with other teams, you might have to manage budget priorities and strategic initiatives.

## Understanding Types of Stakeholders

Let's examine in more depth the categories of stakeholders. Based on their function and depending on company structure, size, and environment, stakeholders can be classified as "primary" or "secondary," as well as "forgotten" or "indirect." The labels can apply to the same stakeholders at different times. Stakeholders that are considered primary at one company can be considered secondary in another.

Primary stakeholders are business units for which the localization team provides translation services, including organizations like product teams, Sales, Customer Success, Marketing, and Customer Support. There are different types of primary stakeholders.

### Primary Stakeholders #1

These are the players with whom the Localization team routinely deals and to whom they deliver. They can be Sales and Customer Success teams, who will get you in the room with customers so you can hear feedback from them (see the "End Users" section). Or they can be a Customer Support team that helps you understand customer feedback. These stakeholders engage with both development and marketing teams, and can have conflicting priorities.

Marketing organizations can be your primary or secondary stakeholders, depending on your team's engagement model. In some companies, the Globalization team is the stakeholder for Marketing. In others, Marketing is the primary stakeholder when your team is responsible for localizing the web and marketing artifacts. In this case, Marketing is critical in building Return on Investment for new localization efforts as it has to support new languages in products.

### Primary Stakeholders #2

These stakeholders are the end users of localized products. Whenever possible, connect with end users, as they provide invaluable input on how our localized products perform in real life. They also share how they use those products and contribute the needed international user perspective to forming UX design patterns inclusive of multilingual audiences.

Monitor social channels as well, as translation issues can quickly go viral on social media. At the end of the day, we localize our products and services to reach non-English speakers everywhere, so we should always keep the needs of the end users in mind and see their response as the ultimate measure of success.

In the case of business-to-business (B2B) companies, customers' customers are important because they define customer success. It is the end user who determines everyone's success.

### **Primary Stakeholders #3**

These stakeholders are your management chain. Localization is often a niche business, but it is part of a larger organization and it is important to connect your work and results to the goals of parent organizations. A good relationship with your management chain is helpful during budget negotiations, or when some friendly pressure is needed on external teams that do not follow proper internationalization and localization guidelines.

### **Secondary Stakeholders**

Secondary stakeholders include IT, Finance, HR, M&A, Procurement, Legal, Privacy and Compliance, etc. Although not directly involved in the provision of language services or actual production work, these stakeholders need to understand what you do, how you do it, and support your efforts and strategy. Having regular conversations with them to seek alignment and build trust is a must.

Procurement, for example, can help by routing requests for non-preferred providers to the central Localization team. The Localization team can then ensure that preferred suppliers are used, enterprise systems (such as TMS) are used across multiple projects to maximize the return of investments (ROI), and negotiated rates are applied.

The secret to a long-term partnership with Procurement is twofold: finding solutions that drive down costs while increasing revenue and building a relationship based on trust. Procurement values ethical behaviors in partners, hence a transparent approach is key. In this partnership, it is important for the Globalization leader to be the decision-maker when it comes to vendor pricing and vendor engagement. Procurement should play an execution and logistics role.

Finance is another crucial secondary stakeholder. Finance can provide the data needed to build a proposal for Globalization with a solid ROI analysis, such as country-specific sales data. It is possible

that in some companies information on country sales and priorities can be obtained from Sales organization.

Sometimes language requirements for doing business in a country stem from contractual or legal obligations. Properly handling privacy and compliance issues on a global scale, for example, to meet General Data Protection Regulation (GDPR) in Europe or the Russian Federal Law on Personal Data, requires a solid understanding of rules in multiple jurisdictions, and requires close collaboration with legal and compliance teams.

IT is an indispensable partner to deploy a solid localization technology stack in the enterprise, and to integrate it with content management systems (CMS). See [“Assessing Your Company Against The Ideal Company”](#) in the chapter [“Strategy Overview”](#) on how to do an assessment of the relationship with the IT organization.

## **Primary But Too Often “Forgotten” Stakeholders**

Managing a team of multiple suppliers who need to collaborate on a regular basis is like coaching a national team. You expect everybody to wear the same jersey with pride and give their best, but as soon as the game is over, each player goes back to their own team and competes against the other. Influencing them so they really function as a high-performing team is an ongoing challenge. However, as soon as the players understand that the game is not one in which one side must win and the other side loses, you are on the right track.

Employees working within the Globalization team are another kind of forgotten stakeholder. When someone has been doing localization for 10 or 15 years, where do they go next? If you have translators on your staff, what kind of career path do you offer them within a large corporation?

You might have some success with former teammates moving into product teams or marketing teams, becoming strong business partners and your best “salespeople,” while also growing their own career. Watching employees move to another team within the company is better from a corporate standpoint than losing talent to another company or a competitor.

You should regularly invest time and effort in career management and succession planning. Losing talent is always painful, especially in an industry like localization where the expertise and technical depth of a few individuals often make the difference between a success and failure. Ensure that other resources are always ready to provide coverage in case of an unexpected departure of a key individual.

## **Other Indirect Stakeholders**

These stakeholders are represented by local governments (source of rules and regulations you need to comply with), and even competitors. You might not ever engage directly with these groups, but you

need to monitor what they are doing, as changes in your broader environment might impact your strategy and how you run your business.

For example, China will not tolerate any reference to Taiwan as a “Country.” Obviously, if suddenly one of your key competitors expands their offerings to ten new languages, you might feel some pressure to close the gap, or increase your own set of supported languages to maintain your competitive advantage.

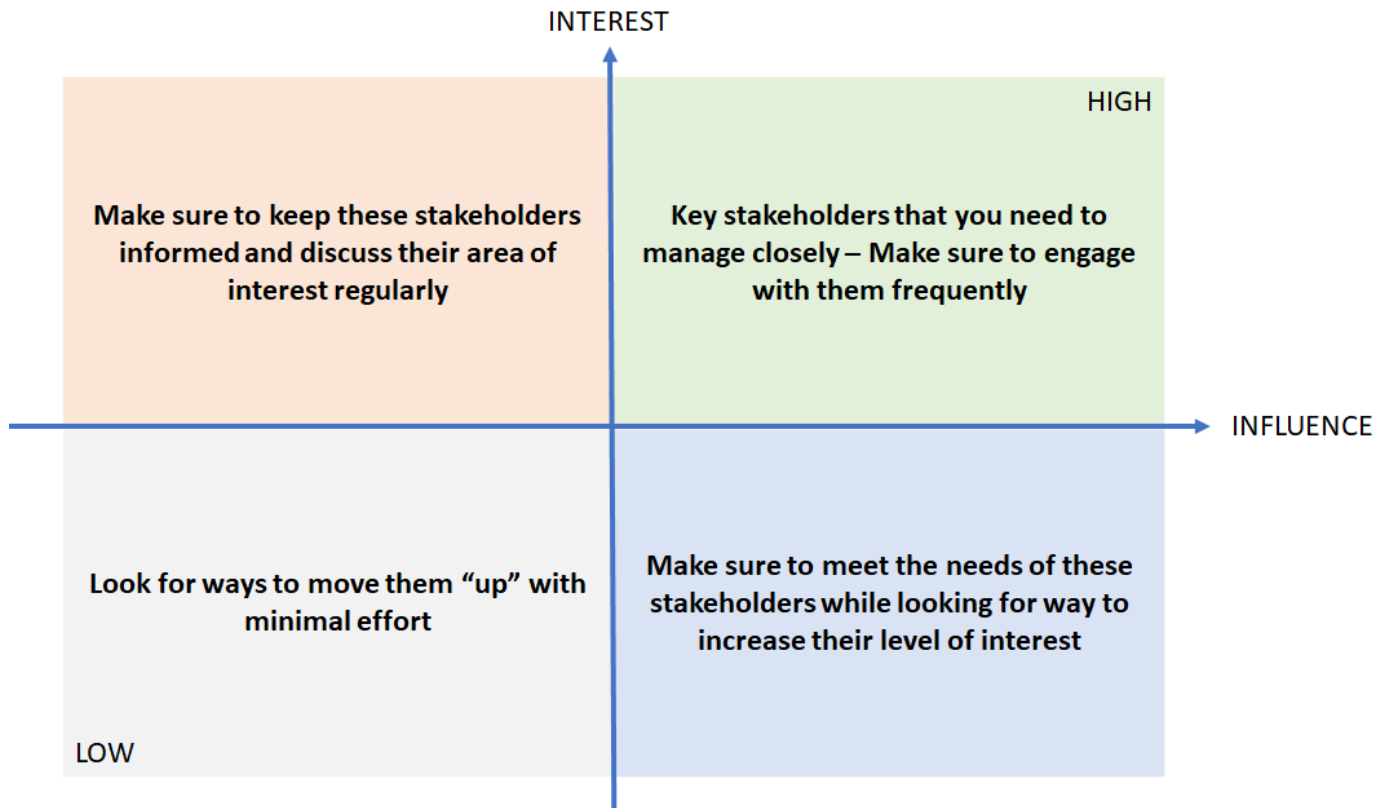
## Engaging with Your Stakeholders

Once you have identified your stakeholders, invest some effort into building relationships with them. Identify and nurture advocates, allies, or sponsors in all the different types of stakeholders. Cultivate relationships with the co-workers who will recognize the need for consultation from your team in meetings and bring you into conversations early on.

Some stakeholders need to be managed closely, others only need to be informed, and still others are simply to be monitored. The final goal is to keep your stakeholders engaged and supportive. After all, stakeholder management is the process of maintaining good relationships with the people who have the most impact on your work.

Actively developing and sustaining relationships with stakeholders has an incredible number of benefits. Improving risk management and minimizing uncertainty indirectly decreases costs. It speeds up problem solving and decision-making, and increases stakeholder support. In the end it leads to better outcomes for the company.

One useful tool for stakeholder management is a prioritization matrix where you place your stakeholders on two perpendicular axes, typically representing influence and level of interest. Over time, as you gather information about your stakeholders, you can add useful stakeholder-specific metadata to this map, such as frequency of communication, preferred communication style, personality, key dates, and relationships.



The stakeholders in the top-right quadrant are your priority: with them, you will discuss and agree on roadmaps, budgets, joint initiatives, strategic outcomes, etc. Your goal is to increase the level of interest of your stakeholders, so you deal mostly with people in the top two quadrants. That said, as companies are far from static, new stakeholders might appear in any of the four quadrants. In the case of an acquisition or reorganization, you need to carefully monitor the environment.

You can use different stakeholder management strategies to effectively engage stakeholders. These are the core strategies that we recommend to manage expectations and gain trust.

1. **Understand their vision.** The key to a successful stakeholder engagement is to have a good understanding of stakeholders' vision. By gathering your stakeholders' requirements, you will better understand their concerns and constraints, and you will find solutions more easily. What are your stakeholders' goals and agendas? What problems are they trying to solve? What additional information will help you understand their needs and priorities?

Examine the urgency and the legitimacy of your stakeholders' expectations, who influences their opinions, and who they influence in turn. In dealing with a variety of stakeholders (from product teams to executive teams, to Procurement, etc.), you will have to deal with conflicting priorities. When you have to go through some delicate prioritization, as a guiding principle, do what is best for the company.

### **Providing support in the local language**



In her market research for a local market, Diana discovered that there were serious comprehension issues in one of the target markets for which localized products were not provided. She validated her findings with the local teams. Then she created a strategic proposal to improve revenue from the region and address the comprehension issues by translating the products into the customers' preferred language.

One of the suggestions was to add more customer support representatives who speak Japanese to the call center. The Head of Customer Support told Diana that they never get calls with any problems in Japanese. Diana shared that customers do not call because nobody in the call center speaks their language.

To get out of that impasse, Diana used relevant data. Local teams shared their time-tracking analysis, showing that the sales team spent 40% of their time troubleshooting and resolving issues for customers. The sales team felt they were not as good at issue resolution as trained customer support teams, and those teams also felt better equipped to resolve issues faster.

By bringing everyone back to a shared vision and a common goal, Diana was able to justify the hiring of customer support agents who spoke Japanese. The local sales teams were very appreciative, and the customers saw their issues resolved 70% faster. The resolution time for this local market was in-line with results achieved for English-speaking markets. As a result, Net Promoter Score (NPS) in the region improved significantly.

**2. Communication strategy.** Understanding your stakeholders' vision and aligning and communicating with each one is the most effective way to build and maintain relationships. Consider how often each stakeholder will want to receive updates, the nature of the updates, and their preferred format (project briefs, face-to-face meetings, or visual updates such as slides or charts?).

Focus on the most important stakeholders first, and the less crucial ones later. Make sure that you time-box your interactions so that your time is used effectively. Communication in stakeholders' management is not a business plan, however it helps you achieve some of your organization's business goals.

### **Localization Steering Committee**



After his organization became centrally funded, Larry worked with his manager to form a Localization Steering Committee. He included his VP, senior representatives from the business units to which at least \$1M was allocated for localization, and Procurement. The primary goals of this steering committee were to secure alignment on the priorities and maximize the impact of localization. Their approach included:

- Spending available budget on highly visible programs aligned with the company's overall strategy.
- Improving coordination and planning by sharing a consistent message about partnership and alignment at the management level.
- Driving joint activities to improve efficiency.
- Building awareness of eventual challenges and long-term initiatives for which some support or buy-in was necessary.

Meeting on a quarterly basis, the committee also helped define the annual funding needed to support the agreed-upon localization programs aligned with key corporate initiatives.

3. **Educate.** “Evangelization” is the process of positioning the Globalization team’s activities to drive better deliveries and increase trust. Ensure that your stakeholders know your team exists, understand what you do, and realize how the team’s efficiency depends on design or architecture choices made upstream of localization.

Select the educational pieces you share with a given stakeholder to facilitate collaboration and customer satisfaction, and to improve visibility and trust. If an extra hour of work by a Product team can eliminate 20 hours of effort by the Globalization team, then Globalization should be able to influence Product to put in this extra hour.

Trust is key, and stakeholders respond better when there is transparent communication. Sharing your knowledge and challenges openly and clearly opens up room for collaboration and alignment, and builds understanding. Sharing your knowledge organically leads to increased trust and respect.

4. **Set boundaries.** Manage your company's resources effectively and maintain the well-being of your team by setting boundaries. Without boundaries, you are likely to focus on other teams' priorities or react to their needs instead of your own, and your team may become less effective. Setting boundaries also means indirectly communicating to stakeholders how to work with you. In general, setting boundaries for every aspect of your work is not necessary. However, there are areas where a Globalization leader needs to pay attention: budget and team resources. Allocating a budget to a workflow that is not cost-effective is one of the boundaries you are expected to set, as well as dedicating one headcount from your team to a program because it is suboptimal. Keep in mind that you manage company resources, and this means that sometimes you have to say no to your stakeholders. Ask for business justifications of translation requests or funding and, in some cases, headcount from the teams who require work that will expand Globalization delivery scope.

You can simplify this delicate balance between being a service provider and a strategist by identifying boundaries proactively, communicating them clearly, and formalizing the boundaries. You may need to create a system or process in which you reinforce a boundary, for example by creating templates for requests that flag what cannot be accommodated.



## Stakeholders as Strategic Partners

In the relationship with each stakeholder, the goal is to progress from what is called “ad-hoc or transactional” to “trusted advisor” up to “strategic partner.” Similarly to moving your stakeholders towards the area of “high interest” in the stakeholder map, you want your stakeholders to move Localization to the top-right quadrant in their respective map and acknowledge the value that your team brings.

Ultimately, as a Globalization leader, you want to derive tangible results from the time invested in knowing, understanding, and managing your stakeholders. Moving from being treated as a service provider whose costs must be minimized, to being recognized as a strategic partner contributing to your company revenue and the value of your global brand takes time and effort, but is highly rewarding.

The following table shows a few examples of such behavioral changes and results.

| <b>Service Provider</b>  | <b>Strategic Partner</b>   |
|--|--|
| Potential internal clients contact your team when their English product is ready, after they realize the product should be translated.   | Along with other internal business units, you contribute to planning sessions for the English product.   |
| Client A and client B work with two different project managers on your team, with conflicting glossaries and different language sets.  | Your team engages proactively with multiple business units to seek alignment of glossaries and language sets.  |
| Your project managers spend a significant amount of time negotiating funding with potential customers on an ad-hoc basis.  | Your funding is debated during long-range planning sessions to support the expected international growth of your company.  |
| Quality feedback from in-country teams reaches you weeks after a product launch, or when well-intended in-country reviewers implement changes that result in inconsistencies or typos. | You embed a qualified senior linguist with in-country teams, prompting local sales and marketing teams to delegate eventual reviews to this expert (who happens to be well integrated with the localization team). |

You can also use elements of the strategic planning process framework to drive engagement with some of your stakeholders:

1. What business problem are you solving? Articulate the business outcome you are trying to achieve. Ideally, it will be rooted in feedback from local markets, corporate strategic direction, and capabilities and responsibilities of the globalization team.
2. How will you solve the problem? Make your recommendations and emphasize the business impact and customer value of your solution. Define the stakeholders you will need to coordinate with.
3. What needs to be done? Collaborate with stakeholders on parts of the solution relevant to their business functions. Define a commonly acceptable recommendation for action. Include information on budget and headcount necessary to succeed. Tie the success metrics to a business problem relevant to the stakeholder and you will have earned a strong ambassador and evangelist.
4. Seek approval. Select one of the stakeholders to present the plan to the right group of executives, with your scope as a part of the solution.
5. Execution. Once approvals are received, a cross-functional team will be created to execute on the strategic plan. You can hand off your plan to the capable care of project managers.
6. Measure success. As the project progresses, keep an eye on the success metrics you defined. Sometimes you will need to change them as scopes, integrations, and implementations change in the process. After the roll-out, measure success, get feedback, and adjust.

Finally, you are managing the budget on behalf of many stakeholders. You want those stakeholders to be your strategic partners. Budget management can vary widely from one company to the next, depending on the way the Globalization team is funded and even the way localization is perceived (from being considered *Cost of Goods Sold* to being treated as an *Investment*).

A few very basic principles help make those budget discussions less stressful with your stakeholders:

- Unquestioned integrity. Any decision should always be made to maximize the benefit to your company as a whole.
- Established reputation as reliable, competitive, and efficient. Your stakeholders should have no doubt that you will manage their localization budgets efficiently (if applicable) and that your team is top-notch.
- Ultimately, it doesn't matter if you control the localization budget, or receive funding from some stakeholders on a project-by-project basis, funding for localization in support of key corporate initiatives will be secured one way or another.

Managing a **centralized localization** budget can be a blessing and a curse. It will give you some flexibility as you'll be able to reinvest eventual savings and productivity gains to fund R&D initiatives focused on localization, or take on a new project. But it will also force you to have delicate conversations with stakeholders to prioritize some initiatives over others, or optimize end-to-end processes, looking at what happens pre- and post-localization.

If you want to go this route, we suggest partnering with Procurement to assess the overall spend across your company on localization, as well as with Finance to consolidate multiple separate budgets under one umbrella, while securing buy-in from the different teams that may be impacted by this change.

Operating under a **charge-back or distributed funding** model also comes with its own layer of complexities, as you have to balance fixed costs and long-term commitments against a variable demand and short-term funding. Regular conversations with stakeholders about their long-term plans, three-year roadmaps, and key priorities will help you close eventual gaps.

We have also seen **hybrid** models with the on-going demand for Localization centrally funded and the unexpected or new demand funded through bill-back mechanisms in the first year.

Ultimately the way to deal with budget issues is to change the lens through which your company management looks at localization. You might need to build a solid business case to secure funding for a project or initiative, but you should now have the partners and the data needed to complete that step successfully. See the chapter [“Data Analytics for Globalization Strategy”](#) if you feel your data is not as robust as you’d like it to be.

## Best Practices at Hand

The Globalization function in any company is built on trust and partnership. Building trust and partnership takes time and can only be achieved through intentional actions and proactive communication. You do not want to be the Globalization manager that only engages with stakeholders during an escalation, or who first meets a Product Manager to give them the bad news that their new application cannot be localized because it first needs to be properly internationalized.

Regular, coordinated, and purposeful engagement with all stakeholders will help you increase the visibility of your organization inside your company, maximize the impact the Globalization team has on your brand and your company revenue on a global scale, with data to support your success story, and drive sustained process improvements and efficiencies.

Engaging with a multiplicity of stakeholders is a delicate and challenging exercise. However, remembering the few best practices below will help you simplify your strategy:

- Build a solid and detailed stakeholder map, and maintain it proactively.
- Identify advocates and allies within your company and keep them regularly informed of your strategies, challenges, plans, and successes.
- Engage the help of your Procurement colleagues to route through your team translation requests going to non-preferred suppliers.

- Leverage your most experienced in-country resources as local “ambassadors” to build trust and close partnerships with stakeholders from your field offices.
- Understand the limits and constraints some of your stakeholders operate under, and help them understand yours.

## Chapter 4: Language Strategy

“If you talk to a man in a language he understands, that goes to his head. If you talk to him **in his language**, *that goes to his heart.*”

—*Nelson Mandela*

### Defining the Language Strategy

A language strategy is unique to each company or business, based on multiple factors across business objectives, customer, markets, brand, product, and content. Language strategy is a long-term, living framework.

Language strategy encompasses a recommended set of *languages*, for a specific business purpose or group, based on an analysis of desired reach and outcome. It is often tied to KPIs (Key Performance Indicators) such as sales, revenue, visits, or support incidents, as well as other factors such as geopolitical realities. It is confined by budget, resources, tool capabilities, and other practicalities.

Language Strategy *is not*:

- A business plan, although it often complements one.
- Strictly defined by countries or even regions—one needs to understand the specific language needs of the given target country. For example, there may be legal requirements, such as in Canada, where both English and Canadian French are supported. Or in some cases, such as in India depending on the target audience, English may be acceptable or even preferred.
- An inflexible mandate—rarely do companies get top-down support for a mandated language strategy, which means the onus is on the business owner to secure budget, and on the Globalization team to consult on the right set of languages to capitalize on the desired business outcomes.

Exceptions do and should exist for a language policy and framework.

### The Relevance of Language Strategy

Language strategy is not so much about language; it is about reaching your audience. Defining the languages you support is how you achieve that reach. A good language strategy focuses attention on

the set of markets that matter most to the business based on KPI, branding, and/or other country or customer-specific requirements. It also helps ensure (but does not guarantee) cross-functional alignment on language support for those markets, ultimately improving the end-to-end international customer experience.

It is common for people to equate language and country. It is important for a Globalization leader to communicate the distinction in a way that separate consideration for languages, like Canadian French and French French are given by the strategic leadership of the company. Similarly, initiate decisions about which version of LATAM Spanish will be appropriate for the company's unique purpose and market objectives.

Finally, articulate that international audiences exist within countries and regions. For example, the Spanish-speaking population in the US needs to be considered if your company is involved in health-related distribution of services or information to the communities.

## Partners and Audience for Language Strategy



Eva faces a challenge that she has experienced many times in companies large and small: an inconsistent customer journey in interactions with the company from research and consideration, to purchase, then to support.

In Tier 1 markets like Germany and France, the experience is relatively seamless with consistent language support throughout the customer's transactions. However, for lower tiered markets, such as Vietnam, the customer journey is disjointed at best.

While a customer can search on Google and find the company's products, when they get to the website, the experience is in English. When they call to purchase, they are greeted in their native language. However, if they seek support after buying, they find that while support is available in local language, the process to retrieve documentation or drivers from the site is again in English.

Enabling local language support across a number of different sites, platforms and business units is no simple task, and gaining agreement across them on the need for consistency is a journey all its own.

Successfully defining, accommodating and managing the needs of your language partners and your company's audience are key to your business and strategy success. Participants and those who benefit from a language strategy are the two cornerstones of your strategy.

### Key Stakeholders

As addressed in the previous chapter, within a company, you may have a variety of stakeholders who will be either primary or secondary partners in the management and success of the language strategy. Key stakeholders may have an active role in both the language strategy and/or its implementation. Examples of these stakeholders are Sales, Field Support, IT organizations; Marketing or Growth functions; Product teams; Localization functions.

Or they may have key supporting roles around language strategy, as for example Social Media, User Experience, content providers, legal/regulatory, Human Resources, Procurement or Finance.

Beyond internal stakeholders, companies may have a wide range of stakeholders for their language strategy, across external “functions”. There may be partners, investors, legal, regulatory, government, and special vertical customer sectors as stakeholders, depending on business focus.

Any or all of these functions may represent those key stakeholders, Customers and Prospects. Take all of these areas into consideration when building out your language strategy.

## Drivers of Language Strategy

As mentioned in Chapter 2, “[Strategy Overview](#),” depending on the company structure and operations, a number of the key stakeholders may also function as drivers of the language strategy.

These drivers can include the following:

|                       |                      |                         |        |
|-----------------------|----------------------|-------------------------|--------|
| CEO                   | Marketing/<br>Growth | Engineering/<br>Product | Sales  |
| Field<br>Organization | Localization         | Other                   | No One |

Drivers of language strategy may vary, depending on many factors, including type of company (B2B, B2C, Consumer, Non-Profit, etc.), the company’s business vertical. Drivers of language strategy may participate, or be included in governance initiatives. (See section 5.6) Regardless of title or department, language strategy is typically driven by one of three forces:

- Desire to bring customers in (to buy, participate, donate, etc.).
- Desire to “shift left”—moving customers from more costly or frictioned contact modes, like phone, to less costly modes like self-help on the web.
- Desire to improve overall customer satisfaction.

These driving forces are what you need to hitch your cart to, or ride their wave. By riding alongside these initiatives, and partnering with those individuals or initiatives that are driving them, you have a

far greater chance of success in educating on, and selling the value of, a unified (or at least well thought out), language strategy.

## Building the Strategy

When defining a language strategy, first and foremost one has to focus and prioritize the company's business objectives. Consider the following:

- **Business type**

Be aware of the type of business your company is in. The strategy can look totally different depending on whether you are in a B2B or a B2C type of business. Language requirements differ based on a wide range of international and local business and cultural factors.

- **Customer experience**

- Analyze customer experience and identify gaps in their journey, from pre-sales to support. What are the pain points? At what stage in the customer journey are you losing customers, failing to convert a contact into a lead into a sale? Does the customer experience shift and change over time, with general business shifts (e.g., digital transformation)?
- Tie language support with Go To Market initiatives; understand what it will take to really engage with and support customers who speak the languages you localize your product or application into.

- **Budget constraints**

- The costs are different depending on the approach. You can support the language strategy through a mix of Human Translation, MTPE (Machine Translation and Post Editing), and unedited Machine Translation (Raw MT). These methods can be combined in various ways, depending on the market's tolerance for machine translated content and the level of visibility for different content types. Be flexible.
- Negotiate with stakeholders to achieve the end state over time, based on available budget/resources. Be sure to have as much data as possible for your negotiations. Secure their commitment to achieving the end state together as partners.
- If the language strategy has been endorsed by the executive stakeholders (or any company senior executive), the Globalization team has a great tool to leverage in their discussion with Business Units and stakeholders that need to localize their products.

- **Language tiers**

- Adopt a flexible tiering strategy for your language choices to accommodate market growth, internal business constraints (such as budgets), external business and regulatory requirements, customer preferences. This tiering can become more complex with company expansion and maturity.

Sometimes, translation scope differs for individual languages. For example, product information might not be necessary to translate in regions where the product is not sold. Best

practice, however, is to reduce the customization per language in favor of scalability of operations.

- Consider niche or long-tail languages. What should be the approach to long-tail languages? For high-volume languages, the business case is often strong, but as we move into tier 2, tier 3, and smaller markets, the justification becomes harder. However, for specific products or domains, the need is real (see for example, Translators Without Borders or other NGOs involved in rescue operations on a global scale, who might have a completely different way of prioritizing languages or building a language strategy).
- We should consider the digital divide between languages. One facet of this is the terminologies. In many long tail languages, it is not easy to translate cutting edge technologies. Even though we created new terminologies in those long-tail languages, they might not be easy for customers to understand.
- Language tiering can help with your vendor engagement and delivery model. For top tier languages you might consider hiring dedicated linguists and language leads, or have a different, more stringent vendor selection and requirements process. You might need one vendor per language or subset of languages to achieve desired outcomes in the target market.

- **And the exceptions**

Although there might be an official language strategy, it should probably be more an ideal than a mandate. In large complex business organizations some business units or subsidiaries might have specific business needs, or limited target audiences. As a consequence, they might decide to support a language set that differs from the official POR (plan of record). Typically, they will do fewer languages, as more might be problematic (as it increases the risks of gaps in the customer journey). On the other hand, when products are closely related, and many customers have multiple products installed, it makes sense to align the language strategy for the products.

## Components and Alignment

Thinking and designing broadly when producing a language strategy will yield a more robust and lasting strategy. Coverage of a wide range of criteria, aligning the language components, and defining best governance practices provide a flexible overall approach.

Examples of components of your language strategy include:

- Compliance with regional (e.g., EU) or country legal requirements (see this [Slator article](#) or application of the force majeure regulation for language coverage in France).
- Specific country requirements might dictate elements of the language strategy (such as, if you do business in Canada, you might need to support both French and English).
- The type of company and product mixes that may drive portions of the language strategy.



- Specific customer requirements which might dictate elements of the language strategy. For example, drivers pre-installed on HP or Dell systems have to be localized by their suppliers into 20 languages. And another example: business with government entities, university and school systems, might require full localization.
- A system of “justification” for adding or removing a language. It might be quite simple, or more complex:
  - Reach 98% of internet users in their native language
  - Add support for language X when revenue from countries where language X is spoken reaches \$xxx
  - Add support for language X if language X is also supported by the main competitor(s), etc.
- A data model and data collection for measuring and aligning your language strategy (see language strategy model in the chapter ["Data Analytics for Global Strategy"](#)).  
This type of model mixes various data points used to build a robust language strategy: country data, user data, competitive data, cost data, sales data, regulatory data, etc.

At the end, the language strategy should support a solid ROI story, minimize legal and geo-political risks, and improve the overall customer experience on a global scale.

In some cases, a language might be supported for a totally different reason (social aspect, good PR, as in the case of Apple, Google, and Microsoft offering support for Cherokee in their OS)—as obviously the ROI case is poor (unless you factor in a significant amount of goodwill).

Finally, for governance, it should be understood that the language strategy is not set for life, it is not static. Business needs evolve, the environment and external conditions evolve, so the strategy needs to adapt and evolve over time. This calls for a process to update the strategy, understanding clearly the impact of adding or removing support for one or many languages.

Governance around language strategy is simpler, and potentially more effective, when there is a basic form of cross-functional organization agreement on the business and management (e.g., maintenance) guidelines for languages.

Once the components of the language strategy are in place, refinements may be necessary to customize around use cases and maintain them appropriately.

- Build in flexibility for a variety of content delivery features—for example, video, chat, text-to-speech, graphical imagery, etc.
- Practice “managed rollouts” for your language coverage.
- Understand that your language strategy might need to adapt, even at a country level, to your target population. For example, if your audience is mostly urban professionals in India, using English only might be acceptable. However, if your audience is more rural, then you might need

not only Hindi, but another five, ten or more local languages to reach your audience in a language they understand.

## **Governance: Best Practices for Language Strategy Oversight**

One solution for a company to solidify language strategy is to put in place an oversight or governance committee. This committee, with eyes on the overall company's business, reviews overall product strategy, portfolio, and partner relationships, including language strategy, as part of that effort. In a broader oversight context, it can take the form of a Governance council.

The mission of such a committee or council is not to come up with a language strategy, as that function is usually performed by either a Strategy team, or a Globalization or Localization team or perhaps some other organization. The aim of the council across the corporation is to ensure compliance with ratified strategies, and oversee governance for the corporate business initiatives.

Going beyond a sole product focus, a governance council, *reviews* and *audits* compliance, overall strategy (such as language strategy or U/X conditions), market strategy, financial, regulatory, and legal for the corporate offerings. For most effectiveness, executive staff representing product, marketing, sales/field, IT, support, legal and finance, and globalization would sit on the council.

As part of the business product process, a somewhat parallel group function may exist, often called New Product Introduction. On a more limited scale, a New Product Introduction committee aims to ensure that there is a business plan in place for every new product and potentially for every new product release, and that appropriate funds have been allocated to each part of the plan.

The goal of the committee is to provide an oversight in coordinating release-related efforts across all the relevant groups, such as Research & Development (Product owners, UX Design), Strategy, Sales, Marketing, Customer Success, TechSupport, representatives from the CTO, and Legal teams. Therefore, representatives from these groups are typically included in this committee. From the international perspective this group would monitor internationalization compliance in product(s), regulatory issues, and international market conditions, among others.

For both of these group functions, it is extremely important for a Globalization leader to get a seat at that table to be able to voice any language strategy-related concerns. For example, when a new language is being added to the next product release, and funds have been allocated for this effort, the committee has to check that all the other activities related to rolling out the product to a new market are not only being planned but also have been funded.

Such activities may include hiring sales force and marketing resources in the new market, as well allocating budget for marketing activities, plus localization of the website and any collateral materials

into the new language. Additionally, there may be legal concerns related to not localizing certain materials or access to the product in specific markets.

A mature organization may have a template that helps to holistically approach product rollout to a new market. More often than not, however, it falls on a Globalization leader to ensure that such questions are raised and addressed.

## Deeper Understanding of Language Strategy

As you define and refine your language strategy, it is useful to have a basic understanding of the differences between various languages or language families, locales, scripts, and other cultural aspects that might impact the way you implement your strategy.

### Spoken or Written

A first difference to consider is how spoken languages differ from written languages. We could of course ‘oppose’ the languages that exist mostly in a spoken-only form, with some of them classified as endangered, to those that exist in both spoken and written forms.

According to Ethnologue data (<https://www.ethnologue.com>), out of the around 7,150 languages spoken in the world today, some 4,000, or about half, have developed a writing system. Of those, maybe 100 can be considered ‘vehicular languages,’ and just a dozen of them will enable you to reach 90% of the world population in a language they speak, often natively or officially: Chinese and English, plus Hindi, Arabic, Spanish, Bengali, Portuguese, Russian, Urdu, French, Japanese, and German. Still, many international companies ignore some of these languages, while supporting other languages that reach a comparatively smaller population (although probably richer, in GDP per capita).

We’re mentioning spoken and written languages here for a few reasons:

- Historically, in the area of software or content localization, we have worked mostly with written text. However, we expect Globalization to deal more and more with voice-enabled applications and conversational interfaces in the near future, which will require our industry to get much better at handling spoken text.

Today, voice assistants like Alexa, Cortana, or Siri only support a few languages, including some variants (accents), but as AI, ML and NLP capabilities continue to advance, more languages will be supported. Multilingual conversational interfaces are critical for chatbots used in customer support or for voice assistants connecting humans to an increasingly digital world, including autonomous vehicles.

- Written text means script, and written data conservation means proper encoding. Historically, this has been a delicate issue for localization, but today, thanks to the Unicode Standard, it has become much easier to handle and preserve text strings.

- Each form, spoken or written, has its specificities: permanency for written language, versus immediacy for spoken language; complexity and intricacy for written language, versus simplicity and tonality for spoken language. Of course, scripted or recorded speech can more closely resemble written language, from the perspective of complexity, or grammatical usage.

Written languages can be classified in two main groups based on their writing systems, with one group for the languages and scripts that represent consonants and vowels (aka alphabets) and one for those that represent syllables (aka syllabaries).

Among the alphabetic scripts, we can include:

- Arabic, Farsi (Persian), Hebrew, and Urdu, all being written right-to-left, all being also considered consonants-based (aka Abjads).
- All languages based on the Latin script/alphabet, in its extended form, with diacritics, which today include most Western and Central European languages (some might also use the Cyrillic or Arabic script), as well as languages like Vietnamese or African languages for which written scripts were developed by European missionaries, like Zulu.
- All languages based on the Cyrillic alphabet.
- Greek.
- The Hiragana and Katakana scripts used in Japanese, often for borrowed words.
- Korean (Hangul).
- Armenian, Gaelic, Georgian, Mongolian, N'Ko, Tifinagh, etc.

Among the syllabic languages, we can include:

- The logo-syllabic languages like Chinese and Japanese (Kanji)—for these languages, characters represent both sound (syllable) and meaning, with words made up of one or more characters. Typically, there are multiple characters for each possible syllable, each with a different meaning.
- Most languages from the Indian subcontinent, such as Bengali, Hindi (Devanagari), Malayalam, Punjabi, Tamil, Telugu, etc.;
  - Burmese, Khmer, Lao.
  - Thai—another particularity. In its written form, Thai does not use separators between words (like we do in English, with a space used as a word separator). Spaces in Thai are the equivalent of the period in English and mark the end of a sentence.
  - Cree, Ethiopic, Inuktitut, Tibetan.

We will also mention here Bamum, a language spoken in parts of Cameroon, as an interesting case of a language that historically started using a syllabic script upon its creation in 1896, but later switched to an alphabetic script during the French colonial era. Today, efforts are made to revive the Bamum Syllabary despite the fact that many books, as well as the corresponding printing equipment, were destroyed a century ago.

## Linguistic and Cultural Considerations Impacting Localization

With so many languages, scripts, and locales, each with specific cultural norms, there are many differences that you need to take into account, as they might have a significant impact on the success of a localization project, or simply the overall user experience. However, you cannot typically address everything, and you should not let a flurry of details confuse you or lead you to some unwanted state of paralysis. We will list here a few that are quite generic, trusting that you will have no difficulties to expand on that list with topics that are relevant for your company or products.

- **Text Expansion**—If you have ever compared different versions of the same content written in English, Spanish, Russian, or Chinese, you know that the amount of space needed for each version varies by language. Spanish and Russian, as well as most Western European or Eastern European languages typically “run” longer than English. Thus it is wise to account for a text expansion of 30% or more, which can impact the layout in a PDF or PowerPoint presentation. However, for short sentences or segments, like the text on a UI button (one or two words), that text expansion can reach 300% or more. Of course, your desktop publishing (DTP) experts might figure out ways to adjust the font size or play with the kerning and tracking settings in your document. But the best approach is to ask your content creators to leave some white space. Basically, avoid cramming too much content on one page or one slide. Chinese typically runs shorter, on the horizontal axis, than English, but it might require a bit more space vertically. You might also be more limited with font size adjustments, as most English characters might still be legible with a 7-point size, but some Chinese ones will be harder to decipher. Again, give yourself some space; this will make your content more pleasing to the reader anyway.
- **Bi-Directionality**—Although we often talk of Left-to-Right, or Right-to-Left, languages, it is practically more accurate to talk of bi-directional languages, as Arabic or Hebrew have borrowed English words. Difficulties appear when some English text, typically with a strong left-to-right directionality, is embedded inside, for example, an Arabic paragraph, which gives to the content a strong right-to-left directionality. To complicate things, some characters have what we call a ‘weak’ directionality, meaning their position to the right or left of another word will depend on the language of the text around them. Here, your best option is to rely on the expertise of your Arabic or Hebrew linguists, and whenever needed, use invisible Unicode control marks to assign a strong directionality to a weak character.
- **Forms used to collect personal information**—Here, the main problem is with cultural norms. Ideally, most forms would be dynamic, particularly registration forms where a user is asked to provide their contact information. This may include a street address, a phone number, and a ZIP code, or select a State from a drop-down menu. Some of these concepts do not translate well from one country to the next. But please, do not force people to provide a ZIP code, or do not force them to enter a 10-digit phone number with a 3-digit area code. This will mark you as ‘American-centric.’

Avoid running checks that might reject as invalid a letter c with cedilla (ç), a letter n with tilde (ñ), or a letter u with umlaut (ü), as all these letters are perfectly valid in other languages and found in first names and last names, or city names. And if you accept them for input, make sure your internal systems do not corrupt them at some point, turning a perfectly valid name or address into a meaningless string of characters.

- **Collation:** Usually used to mean ‘sorting.’ Actually, many languages have their own norms to sort lists, which can be useful when you need to select one item in a long drop-down menu, or in a long list of terms. From a UX perspective, you need to sort the content, which might be bilingual (say, a digital library including hundreds of titles in both English and Korean), in a way that makes sense for the user. Otherwise, you might as well display all the items in that list randomly, but should you do that with your English content, you might not retain your users very long or achieve a high degree of user satisfaction with your product.
- **Gender and possessive forms:** Although people do have a gender, English is basically a gender-neutral language. That is, the English language does not need to worry about any kind of agreement in gender (nor in number) between adjective and noun. But translating the segment “Dear <firstname>” is problematic with language for which the adjective must agree in gender with the gender of the person you are greeting, so “Dear Georges, Dear Elizabeth” would become, in French, “Cher Georges, Chère Elizabeth” or in Spanish, “Querido Georges, Querida Elizabeth”. In a similar way, the strings “His car | Her car | His boat | Her boat”, where the possessive pronoun refers to the owner of the thing, would translate in French as “Sa voiture | Sa voiture | Son bateau | Son bateau”, where the possessive pronoun agrees in gender with the thing being owned, regardless of the gender of its owner.
- **Plural forms:** English is also quite simple when it comes to plural forms, with only two options: you have one unit of something, or zero, two, or more units of something. Other languages can have a much more complicated way of handling all this, with up to five or even six different plural forms. Here as well, the Unicode Consortium is your friend, as they have documented everything there is to know in one of their technical reports.
- **Concatenation and variables (placeholders):** Let’s consider a sentence like “Results 11~20 of 136”, placed at the top of a page where your application displays the results to a query, 10 results at a time. In Japanese, this sentence would become “結果136の11~20”, and you immediately notice that 136 comes before 11~20, contrary to the English structure. Now, imagine if the sentence you send to translation is actually made of two segments, “Results” and “of”, concatenated at runtime as “Results + <displayed\_range> + of <total\_number\_of\_results>”. Not only would you be at risk of getting a translation for the word “of” that might not be correct in context, but your Japanese sentence would mimic the order of the English construct, which would be incorrect. Ideally, you would send for translation a sentence like “Results {0} of {1}”, which makes it possible for the translators to properly place {0} and {1} in the translated version. However, for this to work,

you are dependent on your developers using variables (placeholders) instead of ‘clever hacks’ that work for only a few languages.

Although many languages use grammatical constructs based on the Subject-Verb-Object (SVO) order used in English, Japanese uses Subject-Object-Verb (SOV), which is actually the most common type among natural languages with a word order preference.

## A Successful Language Strategy

Clearly, as we barely scratched the surface, the devil is in the details when it comes to understanding how differences between languages can impact a localization project. These are considerations to be assessed in building out your language infrastructure and strategy.

The truth is, you are not alone. All your colleagues in the industry have experienced these issues before, and you have a fantastic pool of resources that can provide expert guidance—your translators, linguists, and localization experts. Experience helps as well, but nobody expects you to remember specific aspects that could mean trouble for any of the multiple languages that you support.

You need to identify the issues, assess the impact, and discuss possible resolutions with your extended team, meaning you need to make the content “authors” part of this discussion, especially if you need them to adopt new writing or coding practices.

Over time, you might notice that the most glaring issues, the ones that impact your largest foreign markets, or maybe the less complex to solve, stop appearing in your English products. This would be a good indication that you are doing something right and have managed to influence your stakeholders to adopt a more localization-friendly approach. Take a breather, you earned it, and celebrate!

### *Do you want to read more?*

- [Global Language Hotspots](#)
- [Differences between writing and speech](#)
- David Bellos (2012), *Is That a Fish in Your Ear?*, Faber and Faber Inc.
- [Bamum Script](#)
- [The Unicode Standard, Bamum](#)
- [The Unicode Standard, Bamum supplements](#)
- [Plural Rules](#)
- [Subject–verb–object](#)

## Chapter 5: Technology Strategy



Working as a Localization Technology leader in a large software company, Diana managed a mission-critical localization tool, a Translation Management System (TMS) that automatically sent content from product repositories through a translation cycle. The TMS connected vendors and reviewers and provided Project Managers with an up-to-date status of every type of job such as software, help center, marketing, and sales materials.

Diana was very proud of her team's successful work on the integrations and the ability to support many types of content. The centralized system significantly reduced localization costs by increasing content leverage and allowed for a faster turnaround.

One day, she bumped into a Marketing executive in a hallway who casually mentioned that the Marketing team was signing a contract to buy a different TMS to support the website translation. She managed to convince the executive that it would be beneficial to have a meeting to discuss the pros and cons before signing the contract.

In that meeting, Diana learned that the main advantage of the new TMS was that it allowed reviewers to make changes in a user-friendly environment. On the other hand, the new environment made all the rest of the workflow steps more cumbersome for the other participants, including the vendors.

Since the executive's main stakeholders were the reviewers, Diana's reasoning fell on deaf ears and at the end of the meeting the executive proceeded with her plan to get a separate TMS. What happened? —Is having two Translation Management Systems actually wrong?

Find out later in this chapter what Diana ends up doing.

Welcome to the world of a Globalization Technology leader, whose job is to answer such questions and develop a technology strategy that fits the company's business objectives, reflects the current needs, and supports the future growth of the enterprise.

The globalization technology strategy must be viewed as part of an overall Go to Market strategy, able to meet business demands of time to market, user experience, cost savings, and global growth across all parts of the business including Product, Marketing, Legal, Customer Support, etc. At the heart of it, the globalization tools, when combined and tightly integrated with the technology stack used by the stakeholder teams, allows you to make cost per word a commodity and turn your focus to strategy, versus execution.

## **What is a Globalization Technology Strategy?**

A globalization technology strategy is a plan based on principles, objectives, and tactics for using technology to achieve strategic business objectives. Developing your technology strategy involves



identifying specific technologies and resources responsible for managing them, as well as detailing future scalability and ensuring chosen technologies align to business objectives.

A technology suite that meets all or some of these objectives can require a significant investment of both time and money, and it can be very costly to implement, since you must consider vendor, in-house team, and infrastructure costs. Particularly, because of a lack of a standard in TMS parsing technology and company-specific CMS integration requirements, switching from one TMS to another can be a very expensive endeavor.

Therefore, acquiring a TMS technology should be viewed as a long-term investment (at least five to ten years). Your company's overall business objectives are the biggest influence on the technology strategy and those will change over time, meaning that your strategy will need to adapt as business objectives evolve. But you also want to be able to take advantage of new technologies that can advance your globalization program and function as they become available.

The process of strategy development detailed here can be viewed as an ideal step-by-step process—however, we know that the real world is a lot more messy. For example, company objectives change, acquisitions happen, there are different brands to consider, and funding does not get approved. Take from this process what works best for you and your organization.

In addition to developing the strategy, consider other factors that impact its success. Those factors include having:

- Executive-level support for the overall strategy. See [“Stakeholders—Strategic Engagement and Communication.”](#)
- Strong relationships with teams including Procurement, Finance, IT, suppliers. See [“Stakeholders—Strategic Engagement and Communication.”](#)
- Talent to identify, implement, and manage the technology (particularly engineering talent who will solve problems in an appropriate way).
- A solid business case for any technology investment.

Whereas strategies may be similar across companies, no two strategies are the same, due to differences in strategic business objectives, maturity levels of the Globalization organization, availability of funding and resources, globalization principles, as well as other issues specific to your organization and company. Approaches that impact your strategy include:

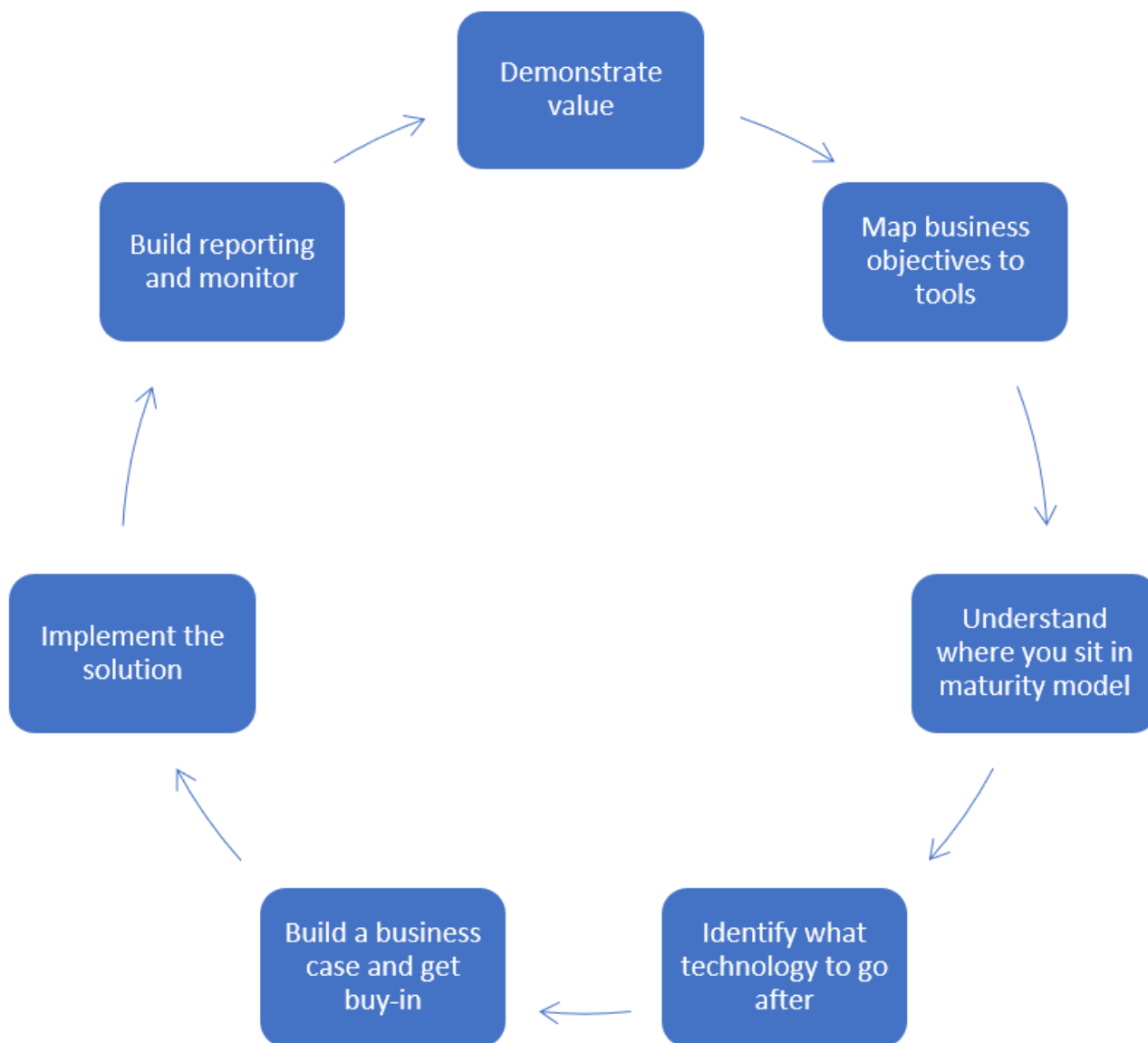
- Build versus buy
- In-house resourcing versus outsourcing
- Centralized versus decentralized localization

Four business objectives usually drive a globalization technology strategy:

- Global growth
- Faster time to market
- Cost savings and efficiency
- Great user experience

## Create and Implement Your Technology Strategy

Creating and implementing your technology strategy involves several steps that are cyclical, as shown in the diagram below, starting with “Demonstrate value” and proceeding through the seven steps of a cycle that builds and strengthens your technology strategy.



### Demonstrate Value

The first thing to focus on when defining your globalization technology strategy is your company’s business objectives. You need to be able to demonstrate how your technology strategy contributes to

the objectives. You'll need to map to the objectives to demonstrate ROI and get the buy-in you need.

In addition, you need to demonstrate the value of the investments you have already made. You have to define how the technology impacts the business and how your technology brings value to the business.

Examples include:

- Cost savings, or better yet, cost scaling: how your technology enables you to do more with the same resources (more languages, more source content translated, etc.).
- Translation memory ("TM") leverage: how you gain from not just the cost savings, but the consistency TM brings across content types.
- Customer satisfaction: how applying raw machine translation ("MT") when no translation would otherwise be available satisfies customer needs.
- Global revenue: how making a language available enables revenue growth in new markets.

You will also need a champion at the Executive level, as mentioned in the chapter [“Stakeholders—Strategic Engagement and Communication.”](#)

## Map Business Objectives to Tools

Once you have clarity on your company's business objectives and how your technology strategy contributes, think about the vision and objectives for your Globalization team. Technology is a significant investment, so plan for the long-term.

Factors to consider include:

- Where do you want your localization technology to be in three to five years?
- Content and source formats (mobile platforms, rich media content) continue to evolve, and your technology must be flexible enough to support these changes.
- Does your technology allow you to integrate with other technologies and input/output formats?
- Is Localization centralized or decentralized at your company? It is easier to develop a strategy for a centralized localization function. While it is more challenging for a decentralized function, it is still worth considering centralized localization technology.
- What technology management resources, if any, are in-house and what is outsourced? Who will manage and maintain the technologies?
- Will you work with more than one translation vendor? Is there a possibility for change in the future?
- Think about the long-term. How can you work towards building localization technology as a deeply integrated platform, rather than a set of disparate tools? How can you leverage new technology trends such as artificial intelligence (AI) and machine learning (ML)?

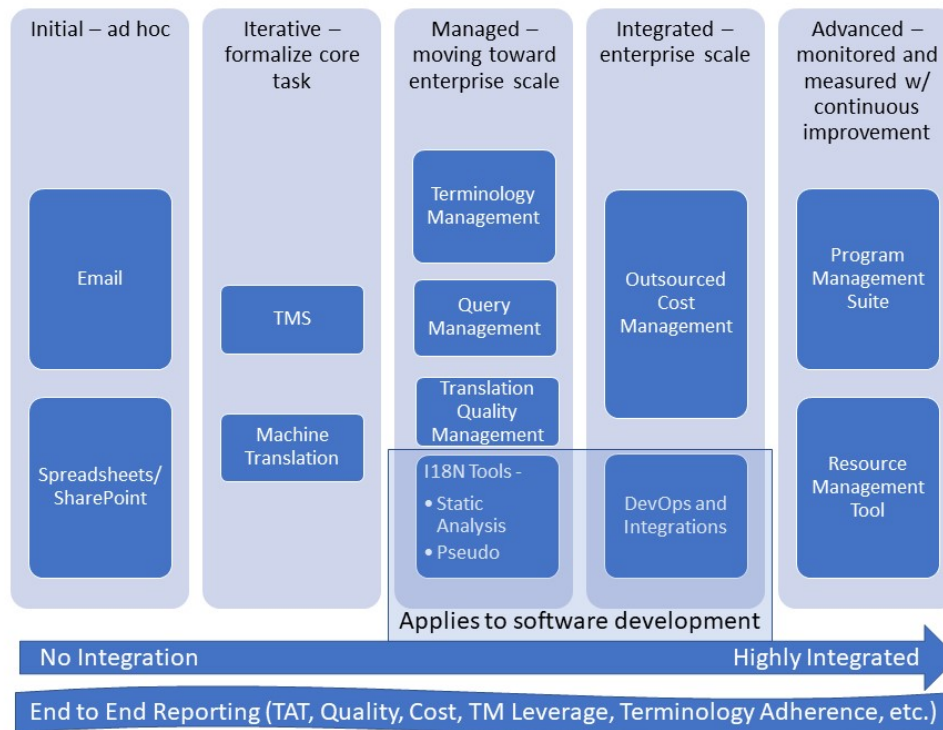
You will want to evaluate which tools will contribute to or drive specific business objectives. The following matrix will help you make this determination.

| Technology/<br>Business Objectives | Enable Cost<br>Savings/<br>Efficiency | Great User<br>Experience | Faster Time<br>to Market | Enable<br>Global<br>Growth | Total<br>Objectives<br>Met |
|------------------------------------|---------------------------------------|--------------------------|--------------------------|----------------------------|----------------------------|
| TMS                                |                                       |                          |                          |                            | 4                          |
| Machine Translation                |                                       |                          |                          |                            | 4                          |
| DevOps/Integrations                |                                       |                          |                          |                            | 3                          |
| I18N Suite                         |                                       |                          |                          |                            | 3                          |
| Localization Testing               |                                       |                          |                          |                            | 2                          |
| Query Management                   |                                       |                          |                          |                            | 2                          |
| Quality Management                 |                                       |                          |                          |                            | 2                          |
| Terminology                        |                                       |                          |                          |                            | 2                          |
| Cost Management                    |                                       |                          |                          |                            | 1                          |
| Program Management                 |                                       |                          |                          |                            | 1                          |
| Resource Management                |                                       |                          |                          |                            | 1                          |

See Appendix A: [“Technology Decision Drivers and Strategic Objectives”](#) for a detailed description of these technologies.

The mapping of business objectives to technology with increasing complexity and integration can be described in what you might call a Technology Maturity Model. The diagram below shows the pillars or stages of technology maturity.

## Technology Maturity Model



## Understand Where You Sit in the Technology Maturity Model

Be realistic about where you are and where you can get to; it is not realistic to go from Initial to Advanced in one year. At the same time, your progression through the model may not be entirely linear, and that is fine.

Understanding where you are on the technology maturity model requires you to step back and catalog your tools, then separately catalog your key objectives and technology needs. Next you compare the two to understand where you have gaps. The ideal final state will depend on your specific needs and requirements. Will you need internationalization tools? Does consistency of terminology matter in your use case?

Using the provided model, build your own view of the ideal end state, no matter how unachievable it may seem at first. Based on the scope and scale of your organization, consider analytics technology that will allow you to help make decisions that are driven or supported by customer and business data. Once you have all of these components, you can understand where you sit from a technology maturity standpoint, and use it as a talking point as you negotiate for the next piece.

Company culture also plays an important role. If your company places a high value on innovation, you may be able to invest in technology more aggressively.

Having the tools alone does not indicate full maturity; the level of interoperability and/or integration between the tools is a key factor. Likely you will need to find the right balance between perfect

automation and things working 80% of the time.

Aspects to consider are:

- Tighter integration enables better data capture, tracking, and efficiency, by keeping a consistent environment. For example, logging into a termbase tool to update terms is less efficient than handling it within the TMS.
- Many TMSs enable APIs (Application Programming Interfaces) for integrating tools, and some have partnerships with other tool providers that offer complementary capabilities such as term management, quality estimation, and MT.
- Integration can require employing a middleware provider who can help integrate multiple source technologies with your TMS and other tangential technologies.

## Identify What Technology to Go After

Not every company or team needs every technology listed, nor will every company be able to implement every needed technology at once. Deciding which technology you need requires doing an inventory of your business imperatives and your charter.

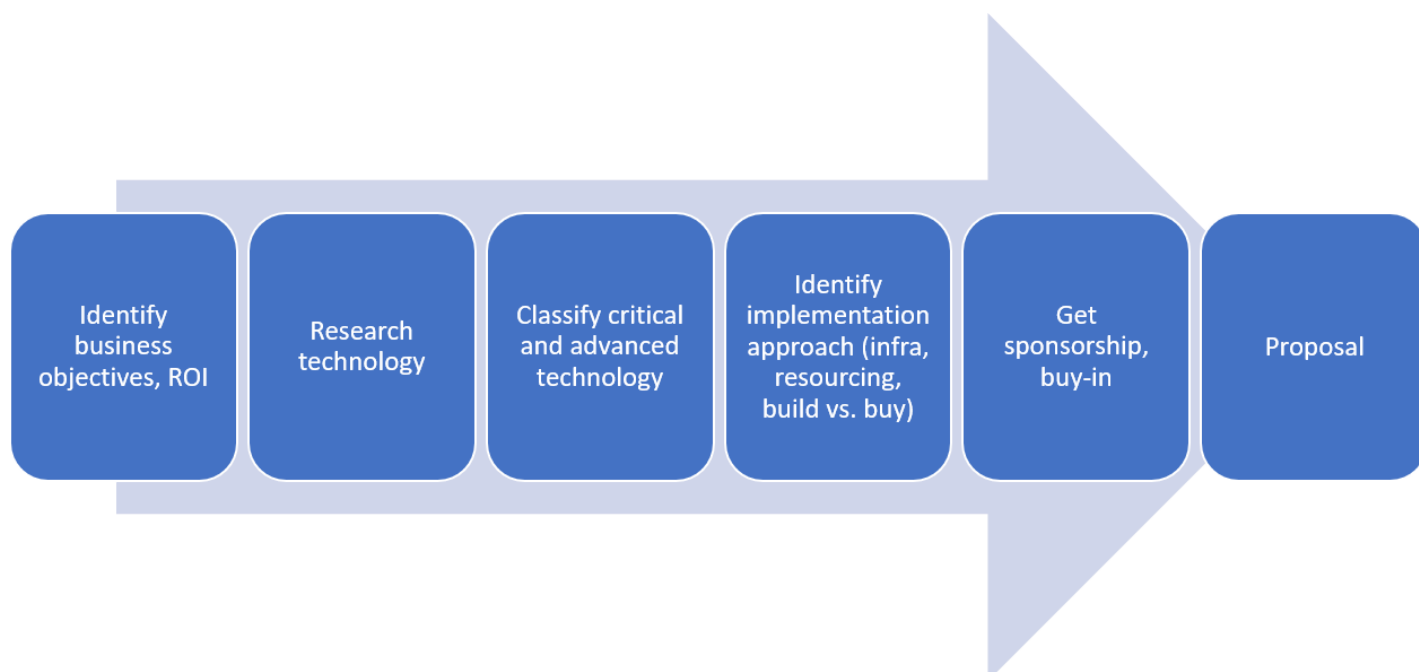
Then, ask yourself: What are your pain points that technology can solve? What is stopping you from achieving your charter? What technology do you need to be successful faster? Which of those is the highest priority? What do you have a budget for? How can you share the investment or budget burden with other stakeholders? What can you leverage from an LSP (localization service provider) as opposed to owning and managing internally? Leveraging LSP technology may provide a short-term solution, but you must make sure that the solution fits into your overall technology ecosystem and that you have an exit strategy.

Build a technology roadmap. Begin with the technology that is most critical, and think about how to integrate that technology within your current ecosystem and processes. Address the most critical needs first, within the budget and resource constraints. Monitor technology trends and be ready to revise your strategy in the future if major innovations appear, especially related to AI and ML.

## Build a Business Case and Get Buy-In

Once you have established the technology that supports your business objective, you must justify the expenditure to secure the budget. How do you define the return on investment (ROI)? Do you expect to offset the investment by cost savings or cost avoidance? What other non-financial considerations apply, for example eliminating error-prone tasks, optimizing resource utilization, or reducing potential defects?

Enlist a technology vendor to help you build your ROI. Many vendors have ROI calculators. The following chart shows the typical steps involved in building a business case.



Start by broadening your view. Will the Globalization team be the only user of the technology? If not, how will the technology impact other teams?

When building a business case for a terminology solution, don't forget developers and writers whose help is required to define new terms. Will the technology help the User Experience team be more consistent with terminology across multiple products? Refer to the chapter "[Stakeholders—Strategic Engagement and Communication](#)" to make sure you are not missing anyone.

Identifying such departments or individuals is crucial to your success. Even if the localization function is centralized in your company, work cross-functionally with other teams to collectively build the technology strategy, pool funds, and work out a joint approach. For example, while the product localization function is often centralized, the marketing teams are often independent and are given a freedom to set up their own processes and tools (see Diana's story above). Such a system may create duplication of effort and wasted resources for an enterprise.

Think of who would benefit from the technology stack the most, who would be your most likely ally in building the business case and what department will fund the investment: would it come from a corporate budget through IT, Localization department, Marketing or any combination of these? Engage with these departments and individuals early on and try to secure a champion or, better yet, a sponsor.

As with any business case, start with assessing the current situation and putting together a list of all the gaps you have encountered, both tangible and intangible. What is the impact of not having some or all of the most important tools listed in the Technology Maturity Model?

The impact varies based on the company setup, but foundational tools like a TMS are essential. In the case of lack of automation, would there be a need to hire more resources? Would your LSP fees for managing the additional work go up? Explain how technology will help close the gaps you have

identified. For example, a Translation Management System would help to reduce spend by enabling reuse, machine translation would cut translation costs, and a Program Management Suite would reduce project manager overhead through efficiency gains.

Put a price tag on all of these gains. Some, such as the ones listed above, are easy to calculate. Others, such as lost revenue or damage to the brand, are much more difficult to assess. Once you know how much you would save, dive into the costs of your solution. There are a few aspects to consider:

- Should you build your own solution or buy an off the shelf tool?
- Consider the market offerings. Some of the most complex and most important localization technologies, such as TMS and machine translation, have been in use for a decade or longer, and there are well-developed offerings in those fields. Buyers have a variety of tools to pick from for many different use cases and requirements. Other products, such as cost management or internationalization tools, have a limited offering and may or may not meet buyer's particular needs.
- What is the company's culture in that regard? Do you work at a company that has engineering resources and likes to build their own solution or does it typically buy off-the-shelf solutions? Often companies choose to buy solutions that are already available on the market and focus the internal resources on integration tasks. However, if the existing solutions are not up to your specs functionality-wise or not innovative enough, you may decide to develop your own technology regardless of the market offerings.
- Calculate the maintenance costs for both scenarios. Remember that developing a tool in-house represents an engineering investment: the product will need a manager, it will have to be upgraded on a regular basis, new functionality may need to be added and tested by engineers to support the needs of a growing business, and so on.
- Consider potential customization costs and resources needed. Do you buy a bare-bones system and build components that integrate? Is the system open with API support and an SDK (software development kit)? What programming expertise is needed? Even with a mature TMS, you may be looking at extensions that are not out of the box, requiring you to consider customization.
- Consult with IT regarding the security requirements for your solutions, and make sure to include that point in the RFP (request for proposal) for the technology vendors.
- Should you own the technology or have your LSP manage it? Many LSPs have developed their own localization tools, including Translation Management Systems, and allow clients to upload files manually and connect to client's CMS, as well as track the translation progress.

It is important to consider your overall LSP strategy when making this determination. Such a solution may work well when using a single LSP for all the translation needs. However, that strategy might become quite cumbersome when using multiple LSPs for translation of different products or for translation and review tasks.



Additionally, using one LSP for both translation and technology needs takes control out of your hands, and weakens your risk management proposition: what if you lose confidence in the LSP or they introduce a steep price increase?

- If you are buying a product, should you get an on-premise or a hosted solution? Should you choose a traditional license model or a subscription?

For some, this might not even be a consideration, as the company culture and an IT security team would make that determination. However, it is important to keep a few things in mind when answering the question:

- Will the hosted solution allow for an integration with the other systems, such as CMS, MT, procurement or a middleware system connecting all of these systems together? Consider data protection and security, especially if you are asking your technology vendor to host an environment that you want to connect to source code repositories.

Your vendor hosted environment may not be straightforward to connect with source code repositories that have highly restricted access permissions. Get your IT and Data Security stakeholders involved early in the decision-making process.

- Do you have customization needs for this technology? If so, will the hosted solution allow for that?
- If going for an on-prem solution, consider the costs of hardware, in-house IT and application support, maintenance and upgrades, which are typically included in your subscription and hosting cost in a vendor hosted environment.
- Consider your future needs. It might be hard to predict what your long-term needs will be, but keep scalability in mind. Review your language strategy again (see the chapter [“Language Strategy”](#)). Is the company planning to expand to other markets and you will therefore need to add support for more languages and more users? Is your company active in the acquisition field and will you therefore need to potentially support additional CMS integrations? Make sure the technology is able to support your potential growth for at least several years.

Keep in mind that some tools, such as a Translation Management System, are hard to migrate to, as mentioned above, and may also have cost implications. For example, shifting costs can be significant when a new TMS segments source content in a different way, resulting in lower In-Context-Exact (ICE) and 100% matches. Therefore, when buying a TMS you are making an investment for years to come.

- Consider how you will resource your technology strategy. Whether you have decided to implement a technology as an on-prem solution, use a cloud setup of a technology vendor, or rely on your LSP, think of the in-house resources that need to support your strategy going forward, both technical and operational.

The technology resources may come in different variations, from a purely strategic role, staying up to date on the industry trends and making sure the latest technology is being used by a vendor, to a Chief Architect role, who puts together an integration and customization plan, to the actual

engineering resources, who build the solutions, develop the integrations and customizations, work on the implementation and maintenance tasks as described above.

In addition to the actual technical resources, make sure that the operational resources are in place. For example, even before you implement a Terminology solution, you may have to hire a terminologist, who centralizes all the terminology work for both source and target terms, and once a technology is acquired, looks after implementing it and making sure the system is used as designed. For more information on resourcing your technology strategy, refer to the "[Technology Evolution](#)" section below.

## Implement the Solution

When it comes down to choosing and implementing the right technology, detailed requirements are key. Just like when making a car purchase, you do not walk into a dealership off the street, tell them you want a car, and drive off in whatever they show you first. You come in having done some research, you know which features are important to you, which are must-haves, and which you can live without. You have an idea of what you want to pay, and how much above that you can go before you walk away.

Selecting the technology you will implement is much the same, except the requirements list will be longer, there will be disagreement as to which features are must have versus nice to have, and it is not your wallet or credit report that determines if you make the purchase, but a more convoluted path involving Procurement.

So, you might be wondering, do I just start jotting down a list? Maybe, but resources are available. You can reach out to colleagues that have already gone through the process and may be willing to share theirs. You can also reach out to globalization analysts and consulting firms for reports and research on the topic, or to run the technology selection on your behalf.

Those are all good starting points, but you will still need to do a lot of the leg work with the team. Different parts of your own team will have different perspectives. If we use a TMS example, PMs will be focused on features that reduce manual work getting content in and out of the tools and understanding status. However, your quality team will be more concerned about query management, quality scoring, etc. An internationalization team will be focused on integrations with code repositories and how it handles resource files. You will need to make sure all voices are heard and considered.

Additionally, you will want to understand your stakeholder needs, particularly if you have stakeholders in a self-service model who interact with the TMS.

Often overlooked, but essential to the decision, are requirements from your supply base. Suppliers use the technology more than anyone else in the ecosystem, so they will be significantly impacted by the decisions you make. Your suppliers also have a lot of experience working with different technology,

some may even supply technology, so they are well placed to act as consultants around requirements and best practices.

Now that you have made a technology decision, you are done, right? No, you are just getting started, now you have to focus on implementation, that is training resources to use tools, change management, integrating with other technology, and likely, reporting.

## Build Reporting and Monitor Results



Eva was quite frustrated with turn around time from one of her suppliers. After several months of talk, she saw no real improvement. She and her analyst took a fresh look at the data, specifically data by process stage—how long was the supplier taking to translate the jobs, to do DTP, to authorise the work, etc.

They discovered that the supplier was performing well in all steps but one, DTP. Armed with this data, Eva went back to the supplier, who had not looked at that portion of the process, because they had not looked at the data either. Within a few weeks, after process changes, turnaround time was back on target.

While it seems elementary, we often do not step back and look at the data from the right perspective; instead we make assumptions about what the problem may be without validating those assumptions with data. Technology, specifically reporting capability and the data it captured, gave Eva visibility into the process and insight into unexpected performance to be able to address it.

While you may have lots of metrics on the outcomes of the work you do, we regularly forget about measuring the effectiveness of the tools and processes we leverage to achieve those outcomes. You need to institute metrics and instrumentation to capture how well your technology is performing for you:

- Uptime
- Responsiveness
- Error rates (such as jobs failing in your TMS system)

You need someone assigned to track these metrics, and also to analyze trends. This may be the tool provider, but not all providers have this in place, or they do not have customer facing data in place. You will need to push them to make it available and demand transparency. See the chapter [“Data Analytics for Globalization Strategy.”](#)

## Technology Evolution

You just got everything up and running and integrated the way you envisioned, but it is not time to rest yet. Your technology is probably already outdated, or no longer fits into how your organization and/or company has evolved. A constant in technology is the need to update it, or perhaps even make a wholesale change.

It is critical to stay abreast of how tools and technology are changing in the marketplace. This requires you to be plugged in:

- Subscribe to research and analyst firms' newsletters and blogs
- Read industry news websites
- Join a forum in your area of interest
- Attend industry conferences
- Follow key industry technology providers
- Ensure this is a frequent topic with suppliers

Ideally, you will assign someone in your team to act as your technologist. Larger organizations may have someone dedicated to this role, or it might be part of someone's role on a smaller team, or maybe it is your role, if you are at a smaller company.

Your technologies should document your changing requirements. TMS changes may come every 5–15 years, depending on your requirements, growth, changing strategy, etc. However, other technology in your stack may change more frequently. Never thinking you are done, but rather reach a plateau, take a breath, and set your sights on the next peak.



You first learned about Diana's predicament [earlier in this chapter](#). She was not able to convince a Marketing executive to utilize her technology and the company ended up with two TMS solutions.

After getting her frustrations out of the way, what did our friend Diana do? Her company now had two different TMS systems: one for managing marketing content and another for everything else.

She decided to utilize multiple tactics. First, she devised her strategy to include multiple stakeholders (Product, Marketing and Sales Teams in her case). Then she thought through all the technology requirements and went back to the market to research and find TMS systems that would fit all of the stakeholder needs, including the reviewers. She also kept in touch with the Marketing executive and learned about their TMS implementation problems as well as translation quality issues. Essentially, the Marketing team was not enjoying managing the localization vendor relationship.

Once Diana found a few good TMS candidates that fit those requirements, she worked very closely with the stakeholders from the Product, Sales, Marketing, and Localization teams to choose a system that would meet most of the requirements.

The best part was that it was fairly easy to build the business case, because the company would save money by downsizing from two TMS systems to one. The ROI was obvious even with all the time required for the system change and the implementation. The reviewers were happy with the new system and the Marketing team was actually relieved to hand the process back to the Globalization team.

## How to Incorporate Different Technologies into Your Strategy

Many current and emerging technologies will carry the industry into the next era, including AI/ML, adaptive MT, and RSI (Remote Simultaneous Interpretation) to name just a few. These technologies are too complex and evolving too quickly to cover fully here, but a quick overview will boost awareness. You or your technologist should watch these evolving technologies and think about how they can help support your company's strategy.

- **MT.** While MT is fairly ubiquitous, advanced forms of MT such as adaptive and multimodal are less off-the-shelf and more custom solutions. They can require that you shift your entire technology stack and sometimes even your LSPs, to take advantage of it. Making such a move may seem unthinkable, but some large companies have made the leap, and others are sure to follow.
- **AI.** We have heard the promise of AI for some time, and more applications pop up every day in the localization industry. The key to a proper AI solution is data, lots of it, clean and accessible. Data requirements hold back adoption more than the technology itself. Today AI is focused on source analysis, and basic process optimization, akin to RPA (robotic process automation). However, tomorrow you will find that AI is being extended to making decisions about the quality of source, and what type of workflow to utilize, for example whether to apply MT. It will then look at the output and determine if it is good enough, or if it needs post editing or quality review. Finally, it will feed all of the data back into the model to make better decisions next time.
- **Chats.** Multilingual AI is a big part of globalization. Natural language understanding (NLU) and AI-driven automation are within reach. Companies may have multilingual virtual agents that automate processes and route requests to satisfactory conclusions or human assistance processes. The goal is to provide self-service and reduce dependency on humans to provide customer service. NLU is all about understanding the requestor's intent and taking next steps based on a defined script. NLU engineers populate the system with natural language examples—utterances—so that

the system is able to understand word meanings (intents) and contexts (entities). Based on that understanding, it would infer user or system actions.

Multilingual virtual agents go through the same process as English for each language. If your team is in charge of the NLU aspect of globalization, the team roles, skills, and processes are very different from traditional translation charter.

- **RSI.** Brought on by the COVID-19 pandemic, there has been an explosion in automation around remote interpretation, automated transcription, text to speech, speech to text, etc. All of these technologies were available pre-pandemic, but adoption was slow. Fast forward to today, there are innumerable companies and offerings to cover every aspect of remote needs.

Many larger companies appoint a Globalization Architect to drive the vision and implementation of the globalization technology stack. This helps to ensure alignment across all stakeholders.

## Main takeaways

If you are just starting your localization technology journey, or you have been thinking of making changes to an existing setup, be sure to contemplate the following approaches described in this chapter:

- Involve your stakeholders early on. Sync up with stakeholders that interact with the technology and engage with them on a regular basis.
- Demonstrate technology value by building a robust business case. Include data on savings in regular reports to illustrate not only the pay off, but operational efficiencies as well. Include maintenance costs.
- Build a technology roadmap based on your company's vision and strategy.
- Think about how the technology integrates into the stack, avoid standalone applications that create manual work.
- Buy what you can and focus internal resources on integration.
- Wherever possible, integrate technology that aligns to industry standards. Integrating and porting technology will be smoother.
- Prioritize the tools. Do not try to do everything at once.
- Data first. Data will empower automation and AI in the future. Make sure to include your business analytics strategy in your technology roadmap.
- Rely on industry research and talk to your peers.
- Keep it simple, keep customization to a minimum.
- Make sure components from different suppliers and integrations can be replaced without a significant dependency on any one supplier.
- Be aware of the risk when you use an LSP for translation services and technology.

### Notes:

We acknowledge that some of the mentioned tasks can be managed with lower-level technology such as spreadsheets and email. However, for the purposes of this document such low tech solutions are not considered to be a “technology” as defined in this chapter. For the purpose of this book technology is defined as a designated technical solution that has built in functionality to address the specific need.

Some of the tools described may be part of or linked to a TMS, depending on the technology.

## Chapter 6: Data Analytics for Globalization Strategy

“If you can’t measure it, you can’t improve it.”

—*Peter Drucker*

Everybody knows they need data to make decisions. It is like saying, I need food to survive. Which data though? As we go over our preferred ways to select data that matters to our businesses, you will find some relevant suggestions and some not relevant at all. When you think about your own strategic data, the only universal rule is to know why the data you selected is meaningful, how it affects your actions and recommendations, and what makes you certain you can trust it.

As a Globalization leader, your role is to create an inspiring vision and story, with the purpose of aligning all stakeholders around a common set of objectives and goals. Data plays a critical role in defining this globalization strategy. It will highlight the current gaps and opportunities. It will help your globalization program to stay on track and achieve your organization’s objectives and goals.

Needless to say that data is a foundational aspect of running any business. In recent years, data scientists and analysts are in more demand than ever. Of course, the same need applies to Globalization, as evidenced by the creation of dedicated globalization data engineering and analyst positions in global companies. Those roles are responsible for developing a globalization data infrastructure from which insights can be extracted.

In this chapter, we will tackle how to think about globalization data strategically:

- Why the KPIs you selected matter to your decisions and why you can trust the data
- How your work fits into the company business and how to use data to prove your contributions
- How to track everything you need to be aware of and prepared for.

### Globalization Data Strategy

As a Globalization leader, you rely on essential data to define and track your globalization strategy. You need to understand the nature of your data as well as its lifecycle. You also need to be selective and critical about this data. When analyzing data, ask yourself the following questions: What does the

data really represent? Does the data make sense? What is the expected value? Is it in line with industry benchmarks?

Do not limit yourself to quantitative data. Both qualitative and quantitative data are critical and they need to align to develop a sound globalization strategy. If quantitative data shows unexpected user behavior, connect with real users (possibly via a survey) or your international offices to confirm the right data interpretation.

Localization data is vast and touches customers, markets, finance, quality, operational efficiency, support, and other business critical metrics. As such, data needs to be prioritized based on the criticality and efforts to collect it. Data has to be meaningful, not just available.

The recommendation is to start with a small dataset and build from there. Note that data points that are critical to some companies may not be as relevant to others. For example, an e-commerce company may rely much more on web analytics than a company that mostly provides marketing, documentation and support materials on their corporate site.

There are also different levels of data granularity, including company performance, regional performance, product performance, etc. Evaluating these data points will result in different priorities and focus, but all roll up to your company revenue and market share. It is likely that country performance would be most relevant to globalization metrics.

When a company goes into a market, it has revenue expectations to justify the investment. If the expectations are not met, then the company leadership could conclude that the performance is poor. Collecting data around the performance will help understand the reason for any discrepancy between the forecast and the actual performance. Perhaps the metrics used in the projections do not correspond to reality—not enough customers in the country, not enough products sold, bad customer satisfaction (CSAT) scores, smaller than expected market share, low adoption rates, low renewal rates, not fit for purpose metrics, etc.

Localization metrics such as language usage should also be tracked and analyzed so you can influence performance. For example, if you concluded that the product adoption rate is low because translations are bad, your strategy would be to improve translations. Better translation quality will accelerate adoption rate, which, in turn, increases market share and product sales and is reflected in the company revenue in the country.

Find the data that tracks the status of every step and you can possibly calculate direct contribution to the revenue. The main challenge though is to prove that your translations actually improved—how do you know? The best way to figure that out is to work directly with the local teams and get buy-in from your strategic stakeholders. In many globalization attribution cases, it is impossible to calculate direct



contribution. If your stakeholders support your methods of measuring progress, they will give you credit in their data findings for multiplying their success.

As a Globalization leader, you will often, if not always, face the challenge of having to make critical decisions based on incomplete or inaccurate data. To address this gap, watch the trends, use your best judgement, make reasonable assumptions, track the outcome and pivot if necessary.

Finally, multiple data points need to come together to make informed decisions. Relying on a single data point does not tell the whole story. If the product adoption rate in a language is below expectations, do you stop providing your product in that language? If website visitors do not download translated marketing materials, is their English proficiency to blame or is it their inability to find the localized version? How do you know the real reason and make decisions?

Make an educated guess and confirm your conclusions. Employ multiple data points, recognize trends, talk to end users and local teams to corroborate your assumptions, make strategic decisions and validate them with the company strategic leaders (corporate and local). Remember, you are not alone. Strategy is a team sport.

## Key Considerations

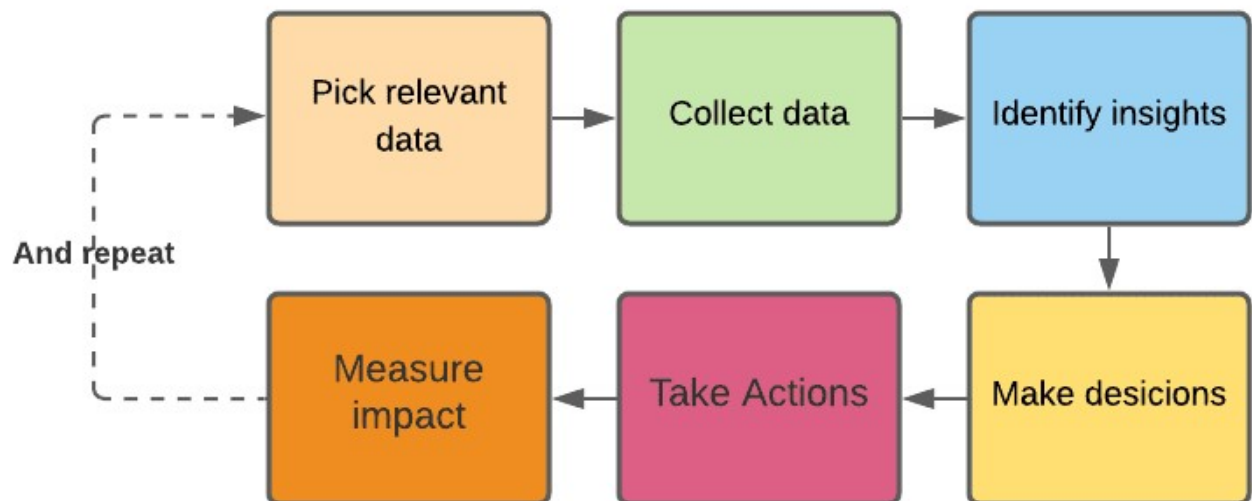
There are several aspects to consider when building up your globalization data strategy; some of which are detailed further in this document:

- **Data prioritization**—there are plenty of data points that could be tracked, but you ultimately need to prioritize which ones are the most critical for your organization. Ask yourself the following questions:
  - Why is data critical for globalization?
  - How to pick the right globalization data and associated granularity? How does it validate your strategy?
  - What story does the data tell and how does it inform your decisions, item by item?
- **Data collection**—once you identify key data, you need to collect this data at a regular cadence and at scale. For example:
  - What is the process to collect the data and build reports and dashboards?
  - What are the tools needed to collect, transform and process data?
  - Where is the data and whom can you partner with to collect data automatically?
- **Data presentation**—finally, you need to present your data to executives and other leaders. Consider the following points:
  - Which data is compelling to other Business Units when you make your points about business contributions of globalization efforts in your company?

- What is your globalization data strategy? Whom are you communicating it to and how? What is your elevator pitch about globalization value? How do you know you are successful in communicating it, especially at the C-level? What are the expected results?

Ultimately, as part of your Globalization Data Strategy, you will want to develop a virtuous circle with the following steps:

1. Pick relevant data
2. Collect data
3. Identify insights
4. Make decisions
5. Take actions
6. Measure impact
7. ...and repeat



## Strategy Reports and Dashboard

One way to win fans and build effective cross-functional strategic teams of advocates and supporters is through reports and dashboards. Their purpose is to be useful. Not pretty or congested, but simply useful.

Useful reports focus on one purpose and have metrics that track progress towards a target that is believed to impact the business for the better (see [Tactical Dashboard illustration](#) below).

Useful dashboards have to lead with real insights that prompt real actions so that the real impact on the business is achieved and realized. The primary focus of a dashboard is to present trends and actionable recommendations. Dashboards are brief, one-page displays of the most important

information needed to understand the business status at a glance (see [Strategic Dashboard illustration](#) below).

Ideally, a useful Strategic Globalization Dashboard shows key trends and insights, recommendations and business impact. It presents an end-to-end view of the success: acquisition of (international) customers, their behavior when using your product, and business value of that behavior (a.k.a. revenue).

For example, if you are trying to capture bigger revenue from French-speaking markets, your strategic approach could be to improve the user experience for French-speaking audiences. You would create a Strategic Dashboard that provides a comprehensive view of the French market performance and the business impact of your program. It could have the following metrics that indicate improvements in the user experience for your target audience:

- Month-over-month French-speaking user growth (acquisition)
- Adoption rate for French users compared to adoption rate for English users over a six-month period (behavior)
- Month-over-month increase/decrease of revenue from French-speaking markets (business impact)
- Feedback on French quality for your documentation pages

Recommendations and analysis cover actions that the company needs to take to get to the target outcome most quickly and efficiently, improving the whole business, not just one part of it. The insights could include suggestions for which programs to stop, continue, or focus on in the context of the overall business strategy. Observations could identify gaps and misalignments, and recommend new tactics for more favorable outcomes.

Sometimes, absence of something could indicate a broken process. As in Diana's story (see the chapter "[Strategy Overview](#)"), absence of customer tickets does not indicate that the product is perfect. The reason for the low number of opened tickets could be that the functionality to open tickets is only available in English—the language your customers do not speak. In this case, by fixing the problem by translating the user interface and thereby making it usable for French audiences, you would expect the number of tickets in French to increase. While an increase in the number of French tickets is a positive metric, the recommendation could be to staff up the French customer support team to handle the increased volume.

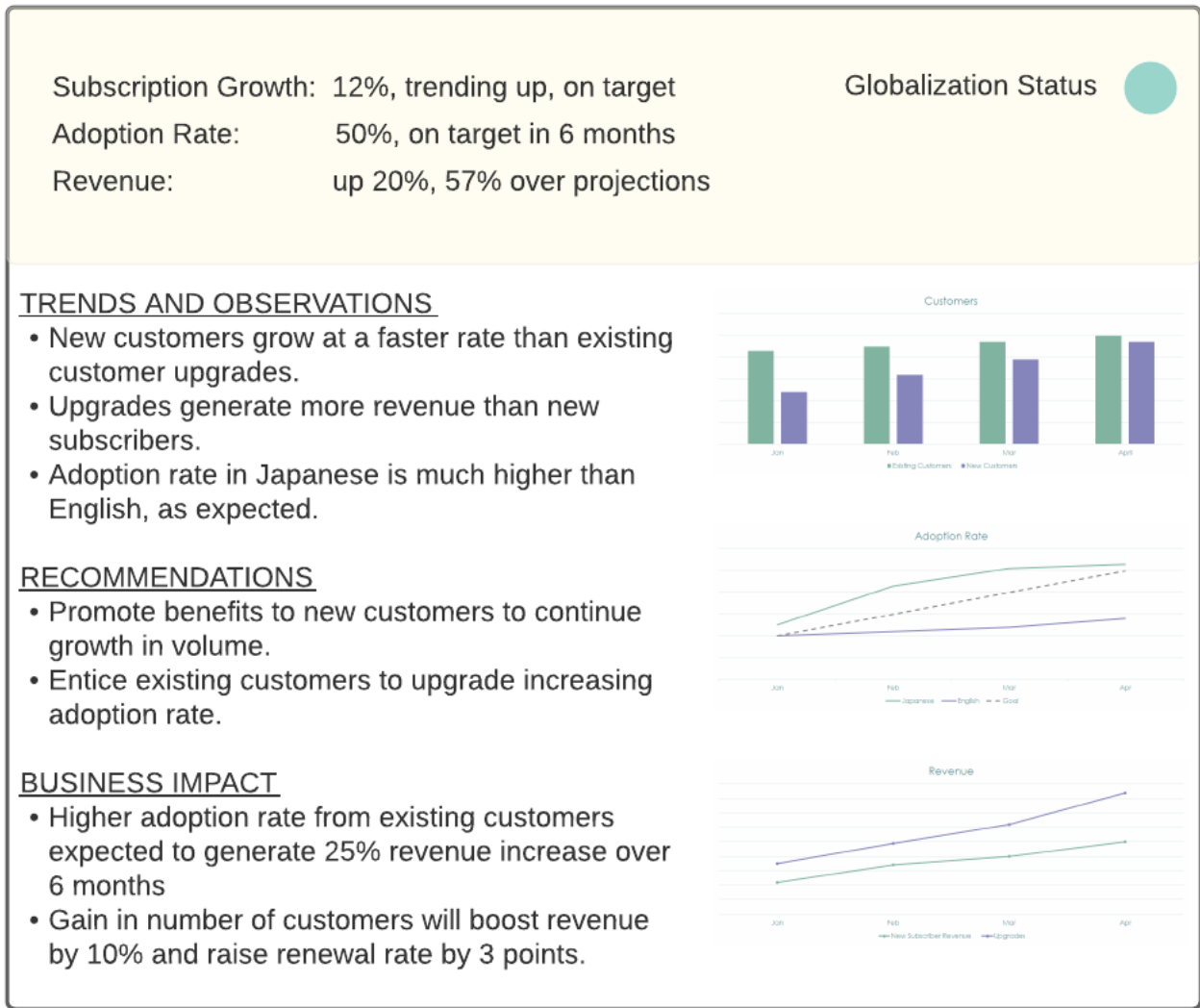
When we say "know your audience," we mean to know what they care about. Your observations and recommendations, supported by data, need to reflect the appropriate level of the audience.

CEO-level executives are interested in high-level business metrics and insights. They look for cross-functional teams to run a program that directly affects the company bottom line. Hence, strategic

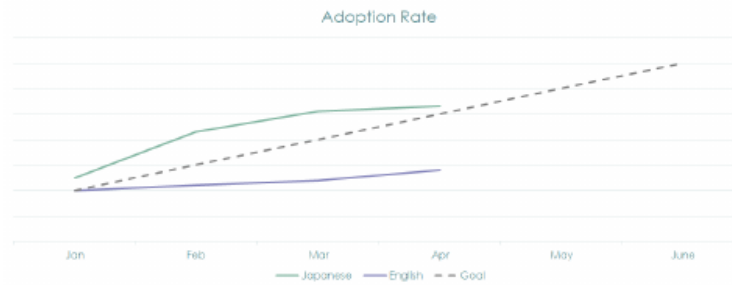
dashboards are most appropriate for them.

Business owners respond to recommendations and actions that help them deliver better outcomes. Tactical dashboards are more useful for them as they are focused on execution.

An example of a tactical dashboard that is aimed at one goal would be improvement of the adoption rate.



Goal: Business Impact  
 KPI: Adoption Rate  
 Target: 70% in 6 months  
 Scope: Japanese market



### ANALYSIS

- Japanese language adoption rate is following the target growth. The growth is slowing down in the last couple of months.
- English language adoption rate is lower, as expected.

### RECOMMENDATIONS

- Increase number of marketing campaigns in local market
- Increase awareness of the availability in Japanese Language
- Resolve translation quality issues faster.

### BUSINESS IMPACT

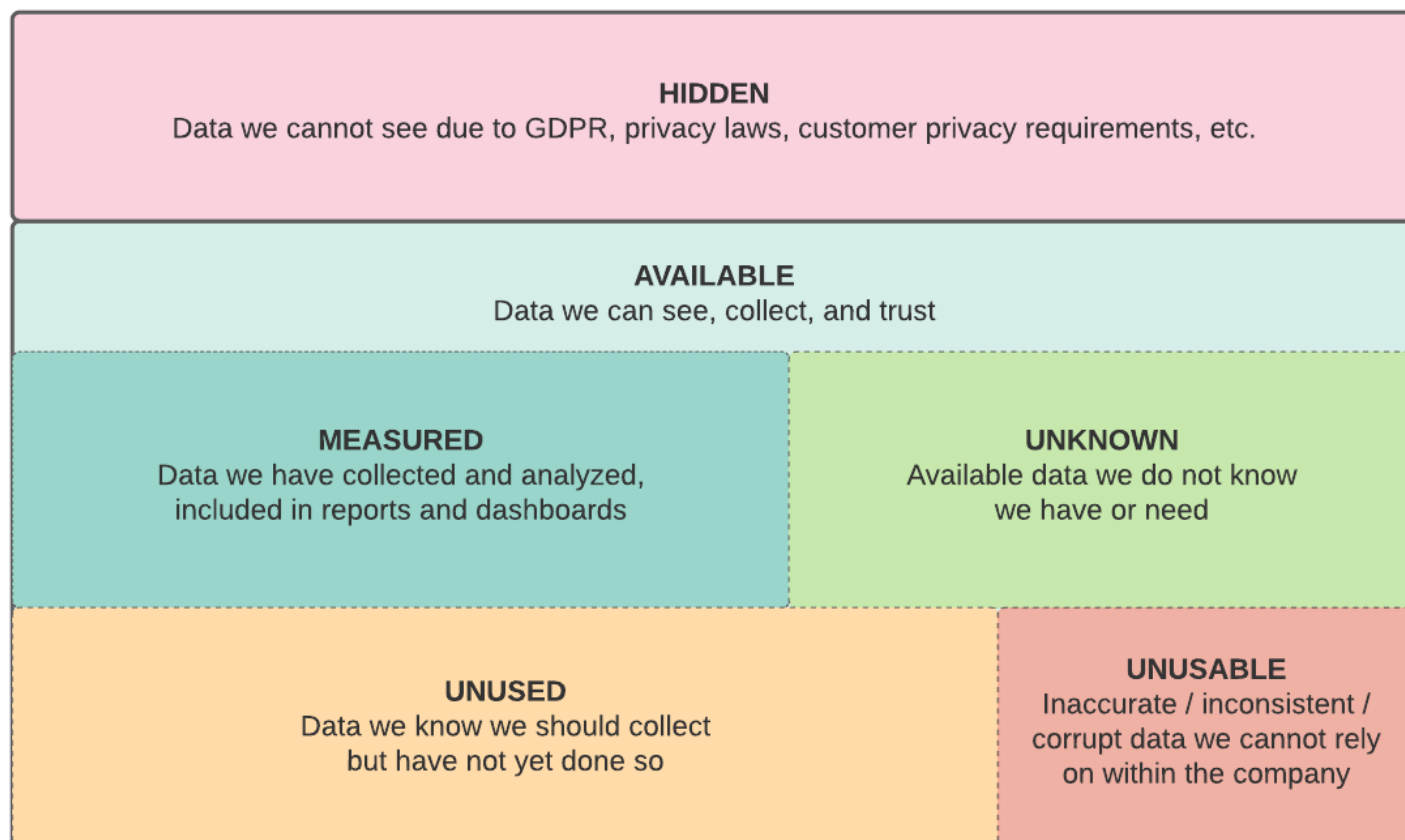
- Faster adoption rate increased revenue by 20%
- Brand recognition increased by 3 points

## Understanding the Data

Before we use the data, we need to understand and clarify our assumptions and call out data limitations. Here are some tips:

- Categorize the data with proper catalogs.
- Clean the data you collected. Exclude some of the outliers or irrelevant metrics, to ensure high data quality. Be sensitive to customer confidential data. Remove it from your reports to protect customer privacy.
- Understand the lifecycle of the data.
- Avoid only looking at a single source of data. It is always good to link different kinds of data together, to avoid bias.
- Build a historical baseline and look for trends while using the same process of data collection.

This is an overview of the different types of data available:



## Incomplete Data

In many companies data sets are incomplete. There are many reasons why it happens. GDPR, DPA, PIPL, LGPD, PDPA and other data protection legislation across the world restricts companies' abilities to store and use data. Some companies allow customers to block data sharing. There might be internal regulations in place so that you can see only part of collected data. Data can get corrupted, lost, or not collected.

In the real world, you rarely, if ever, have perfect data. The good news is that you do not need to wait for your data to become perfect to get insights from it. When you receive a data set, understand its limitations or flaws and define what they mean to your ability to make decisions. Your analysis can still show the trends even with all the caveats you discovered.

Alternatively, you can predict what your data would have looked like had you had the full set and share projected data in your analysis, if it makes sense. Make assumptions. Be creative in using what you have. Know your data and you will improve your prediction accuracy. Do not wait for perfect data to come your way. Do not drown in data.

Here are a few recommendations on how to handle data imperfections and incompleteness:

- Build data analytics incrementally
- Apply some reasonable assumptions

- Collaborate and use a dot-connecting mindset
- Be transparent to stakeholders to share the logic of data analytics
- Strive to select the right data/KPI to tell you the truth

## Data Gaps

It is very important to start the business analytics journey by analysing data gaps. What data are you missing, how important is it that you have it? If you determine that this data is essential to factual analysis (for example, in what language your product is being served up to your users), you have to find a way to track it. Identify the business owner and convince them that this data has to be collected and analyzed going forward. This process may take months and could require planning and resources.

Additionally, you will not be able to make any conclusions from the data until you have collected it for at least a few months. If you are already collecting the data, but it is not cataloged or not normalized, your analysis might not be or viable or even possible. Cleaning up the data is not an easy undertaking either. Therefore, a Globalization leader should invest time in identifying the data collection gaps and then assigning resources to analyze and understand the data integrity.

Check this [data inventory](#) and decision matrix to quickly identify what dataset you need and how to build it:

| <b>What kind of business decision I do need to make/what kind of problem do I need to solve/what kind of question I might need to use data to answer</b> | <b>What kind of data analytics might help me</b>   |
|--|--|
| What is the International business opportunity?  | <ul style="list-style-type: none"> <li>• Benchmark with other localized products within company</li> <li>• Benchmark against companies in the industry</li> <li>• Total Addressable Market (TAM) data (3rd party research)</li> </ul>                |
| What is my reason for localizing? (what is the value of localization to my business)   | <ul style="list-style-type: none"> <li>• Increase revenue in a market</li> <li>• Improve customer satisfaction, measured through surveys, customer feedback</li> <li>• Get more content consumption, measured through page views, dropout</li> </ul> |

|  |  |
|--|--|
|  | <p>rates</p> <ul style="list-style-type: none"> <li>• Save cost for support function, measure through reduced support calls</li> </ul>   |
| <p>Which target languages should I localize into?</p>  | <ul style="list-style-type: none"> <li>• Visitors' language settings to software user interface, web and documentation pages</li> <li>• Legal requirements (e.g. Canada, France)</li> <li>• Region business opportunity, TAM, revenue, customer feedback</li> <li>• English tolerance</li> <li>• Competitor status</li> <li>• Strategic alignment with other products in the company</li> </ul>    |
| <p>We have multiple products, which product should be localized first? Or should they be localized all together?</p> | <ul style="list-style-type: none"> <li>• Available localization budget (possibly multi-year strategy)</li> <li>• Product internationalization readiness (how much effort it will require)</li> <li>• Internal globalization headcount to support effort</li> <li>• Product team commitment/priorities</li> <li>• Revenue drill down by countries</li> <li>• TAM drill down by countries</li> </ul> |
| <p>What is the cost of adding/maintaining a new language and the internationalization functionality?</p>             | <ul style="list-style-type: none"> <li>• Internationalization complexity + localization cost + release frequency</li> <li>• First time or subsequent localization?</li> </ul>  |
| <p>What is the cost of NOT adding a language?</p>  | <ul style="list-style-type: none"> <li>• Business opportunity loss (region revenue numbers usually provided by</li> </ul>  |



|  |   |
|--|---|
|  | <p>Sales organization)</p> <ul style="list-style-type: none"> <li>• Customer satisfaction and retention</li> </ul>  |
| <p>What kind of content has the biggest customer impact, and we should consider localizing it first? (KB, UI, Docs, Training materials, etc)</p>       | <ul style="list-style-type: none"> <li>• Content usage/traffic data</li> </ul>  |
| <p>How to measure the business impact /effectiveness of localization on each product and its content?</p>  | <ul style="list-style-type: none"> <li>• Historical data benchmark (before and after localization): region revenue, customer traffic and retention, support costs</li> </ul>  |
| <p>Which resourcing model should I use (internal vs. vendor, distribution of the team)</p>   | <ul style="list-style-type: none"> <li>• Cost (internal vs vendor costs)</li> <li>• Turnaround time</li> <li>• Operation cost (vendor management, training, switching)</li> <li>• Volume &amp; scalability</li> </ul>                               |
| <p>What is the KPI to measure the localization team efficiency?<br/>Internal team &amp; vendor team<br/><br/>Toolchain/pipeline automation/faction</p> | <ul style="list-style-type: none"> <li>• Number of product releases or content projects per person;</li> <li>• Average turnaround time</li> <li>• Percentage of task automation</li> <li>• Metric around early i18n compliance detection</li> </ul> |
| <p>How to measure localization quality</p>   | <ul style="list-style-type: none"> <li>• Internal operational QA (Bugs number, standard globalization keywords)</li> <li>• Customer feedback/rating (internal &amp; external), potential escalations</li> </ul>                                     |
| <p>What is the globalization/localization readiness level of the product /company</p>  | <ul style="list-style-type: none"> <li>• Internationalization score card</li> <li>• Language matrix</li> <li>• End-to-end international customer experience heatmap</li> </ul>  |
| <p>What is the business value of localization over time</p>  | <p>Track this data of target region before</p>  |

|   |  |
|---|--|
| (before and after localization)                   | and after localization completion <ul style="list-style-type: none"> <li>• Revenue</li> <li>• Customer satisfaction</li> <li>• Content consumption</li> </ul>                                |
| How we measure the usage of the localized content | <ul style="list-style-type: none"> <li>• Localized content page view counts,</li> <li>• Percentage of localized content page view</li> <li>• Customer feedback on localized pages</li> </ul> |

## Globalization Data Engineering and Analyst roles

In recent years, more global companies have added globalization data engineering and data analysis roles to their globalization teams. Those roles work in tandem to identify the key globalization data that needs to be tracked. They also collaborate on instrumenting the content (software user interface, documentation, web-pages, etc.) to understand the international customers' behavior.

Automation is another key aspect of the globalization data pipeline and a key requirement to report results automatically and frequently. Finally, globalization analysts are responsible for interpreting the data, identifying and presenting insights and actions.

Here is a job description for Senior Analytics Engineer, Globalization Data Science and Engineering, posted by a global streaming company:

We are looking for a highly motivated **Senior Analytics Engineer** to partner closely with the business teams to define, measure, and visualize metrics that empower effective and efficient localization. In this high impact role, you will have direct influence on globalization decisions through technical and business thought partnership.

### What you will do:

- Lead the research for developing novel metrics to quantify local member experience`
- Build and maintain robust data aggregates and pipelines
- Creatively analyze data to generate insights that support business decisions and identify new opportunities
- Design and analyze A/B tests to bolster product innovations
- Rapidly construct, and iterate on dashboards and other visualization tools

- Communicate your contributions (in written, verbal and presentation form) to all levels of the company with varying levels of technical background

### Your background and characteristics:

- Proven track to transform large amounts of complex data into insights by leading the end-to-end creation of intuitive data products
- Expert in querying and manipulating data sets using SQL and Python and visualization tools like Tableau (or similar tools)
- Familiar with statistical methods and A/B testing
- Excited to form strong stakeholder relationships
- Self-starter who thrives under a high level of autonomy
- Comfort with ambiguity and translating abstract business questions into actionable insights and high impact data products
- Enthusiastic about company culture

## Partnership

To better prepare the data and maximize the impact of data analytics, we work with different stakeholders and build strong partnerships, especially in these areas:

- **Data Collection.** Local teams provide data from the region (e.g., sales numbers) that the global team can use in the analysis. We share our analysis and insights with them because it adds a global perspective to their part of the business and gives them access to the data they might not have otherwise obtained. This is a win-win relation, which makes data exchange and partnership much easier within the company.
- **Collaborate in data analytics and discussions to arrive at impactful conclusions.** When we share the dashboard or report, we include metadata—the info about the data source, how it was collected, its limitations. We include assumptions and conditions of data use, how we performed calculations and reached conclusions. By doing so, our data analytics consumers understand the context and background of data collection and analysis, which allows them to offer suggestions to improve our analysis. Such collaboration makes the analytics work more meaningful and insights and recommendations more trustworthy.
- **Data-driven decision making.** The only efficient way to present your analysis is by knowing how your audience makes decisions based on data; what they are looking for in your presentation.
  - To upper management (or executives), we will present formal slides, open with analysis, business impact and recommendations. Have detailed data as a backup. And don't forget the conclusion and call-to-action in the end.
  - To the internal operation team, we put all data and analysis into a dashboard, which gives details and allows them to slice-and-dice metrics that are relevant to their day-to-day

performance.

- It is important to understand the data collection specifics and data limitations so you can make better decisions and take more effective actions.

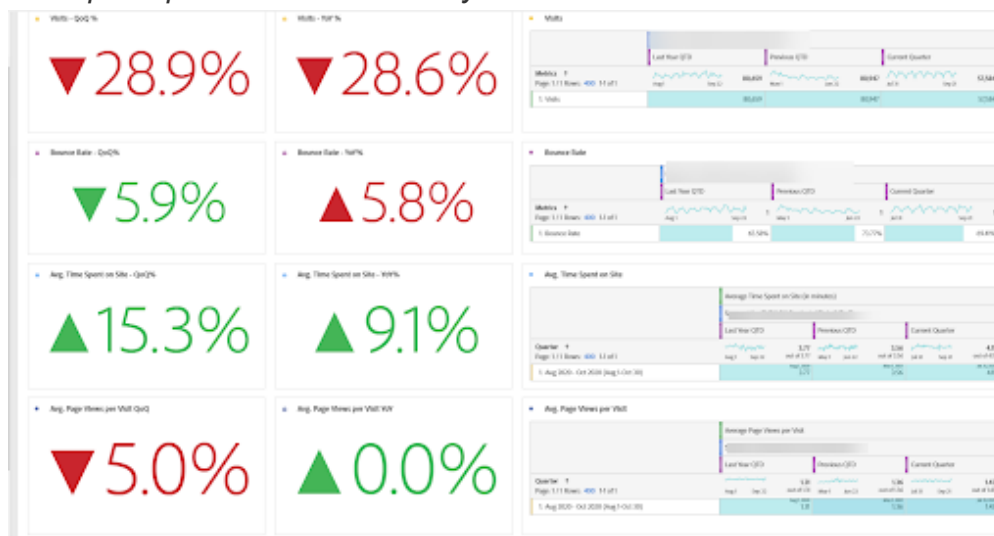
## Analytics Tools

- **Excel sheet.** Excel is the foundation of all analysis and the most versatile of all tools. The computational capabilities of the program coupled with charting functionality make it the favorite and indispensable tool for any analyst. There is almost anything you can do with Excel. Except perhaps, analyzing really large sets of data. For that, you will need more powerful tools.
- **Adobe Analytics and Google Analytics.** Web Analytic tools are used to track the usage of the content/web pages in different locales. With these tools, you can better understand the customer journey and their behavior/preference. Cumulative knowledge of your customers will allow you to design more effective websites with better customer engagement, produce content that resonates with the website visitors, create interactions that improve customer satisfaction, and measure the value of localized content.

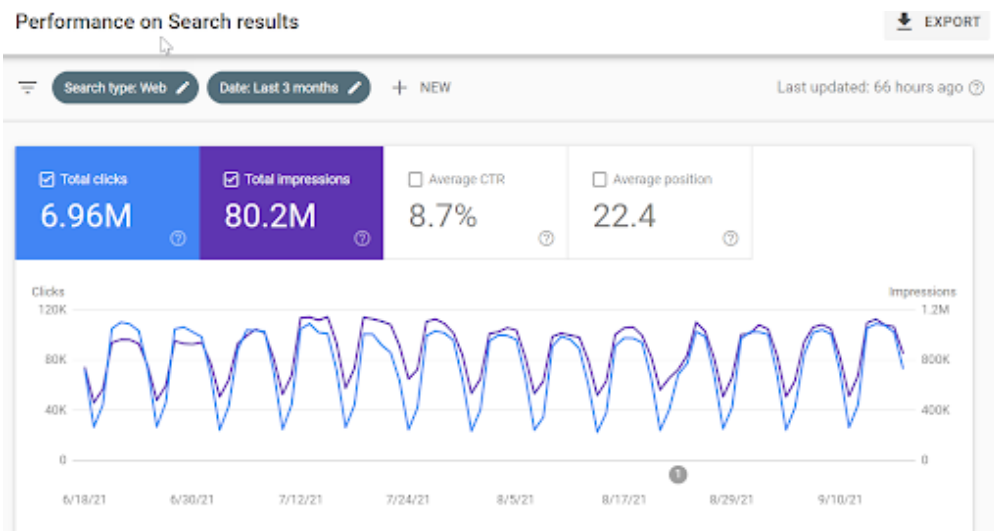
Both Adobe Analytics and Google Analytics are widely used for tracking users across digital properties, analyzing on-site behavior, and measuring business outcomes. For instance:

- Customer traffic/downloads by region/locale
- Referred analytics (from where customers find the content e.g. search engines, another corporate website, etc.
- Click flow of the customers' journey on the pages
- Content popularity by different granularities
- Goal/outcome tracking with a variety of attribution models
- A/B and multivariate testing

*Example report from Adobe Analytics*



*Example report from Google Search Console*



- **Translation Management System (TMS) reporting/analytics.** Much of the day-to-day translation transaction data managed via the TMS, as well as the associated business data, is typically stored in the backend database of your TMS. This includes projects, languages, pricing, timelines and due dates, vendor information, and much more. This data is important to define metrics on production data, for example:
  - volume translated monthly
  - volume translated by vendor
  - volume by content type
  - internal client, language
  - cost and pricing information
  - Translation Memory leverage, etc.

These metrics will help you evaluate the health of the localization pipeline and business model implemented. This information is invaluable if you are able to benchmark against similar organizations in other companies.

Dashboards help stakeholders keep track of processes that are in flight. As a project manager, you might have a project dashboard that allows you to drill down to specific details. As a product manager or product owner, a dashboard might display your product status at any given time. As a Globalization or QA engineer you might see what is in the queue for you.

A TMS might have robust and scalable reporting and dashboarding capabilities built in, or provide integration or connectivity with a third party reporting tool that can be used to report on and analyze data. Since most TMS's store production data in a common database format (e.g. SQL, MySQL, Oracle), third party reporting tools provide flexibility. A company's needs may be different based on infrastructure, query languages and automation layers (e.g. Jenkins). A visualization tool (e.g. Power BI, Tableau) is recommended to better analyze and visualize the raw data that a reporting tool might provide.

- **Sentiment analysis analytics.** Sentiment analysis analytics are fundamental to turn feedback into meaningful customer insights.

Sentiment analysis is the interpretation and classification of emotions (positive, negative and neutral), feelings (angry, happy, sad, etc), and even of intentions (e.g. interested vs. not interested) within text data using text analysis techniques. The human language is complex and teaching a machine to analyze the various grammatical nuances, cultural variations, slang and misspellings that occur in online mentions is a difficult process.

Insights can be gained from large datasets (for example, millions of Tweets or Facebook comments). Many emotion detection systems use lexicons (i.e. lists of words and the emotions they convey) or complex machine learning algorithms. That is a set of human-crafted rules to help identify polarity through various techniques developed in computational linguistics, such as stemming, tokenization, part-of-speech tagging and parsing. Hybrid systems that combine both rule-based and automatic approaches are the most accurate ones.

There are different tools available that provide sentiment analysis analytics. In choosing one or the other, you should ask the following questions:

- Does the tool have language detection, machine translation, and automated data breakdown (dashboards' creation) features available?
- The languages and markets you want to address, and are all locales covered by the tool?
- Can the tool discern market and language (i.e. text is in Spanish and the geographical provenance can also be detected and tracked)?
- Will you use the tool essentially for product sentiment or for marketing sentiment?

Once Globalization teams have collected data analytics, this data can be presented on various dashboards. Each dashboard may target a specific persona or business area. Dashboards are more dynamic than presentation slides and enable globalization data analysts to extract trends and insights more easily.

Simple charts and dashboards can be created in Microsoft Excel. Excel is also a good sandbox tool to verify the integrity of the data and identify initial insights. Other than Microsoft Excel, mid- to large-size companies usually have access to more robust data management and dashboard solutions such as Microsoft Power BI (through Microsoft Office 365 license) or Tableau. A key benefit of such dashboard tools is their ability to connect to multiple data sources.

Finally, globalization data can initially seem overwhelming. We recommend starting with small datasets and dashboards, and growing them over time.

## **How to Build a Business Case**

Strategic direction based on data analysis is only the beginning. You need your executive team to believe your plan will improve customer experience and benefit your company. To make your recommendations come true, you need executive sponsorship and funding. You will need to build a business case.

“What customer problem am I solving?” is the question you should be answering when putting your proposal together. The customer problem usually emerges out of customer interviews. Data helps validate the problem and adds a business impact facet to the story. Improvement projections or future revenue would be your success metric once you figure out a solution to resolve the problem.

## Using data to build a business case



David had just been hired as the Localization Manager for a startup that was ready to go outside of its home market. As he analyzed the data for the European market, it became clear that German should be one of the languages his company supports.

Unfortunately, German translation was not included in the budget. Product managers told him everyone in Germany spoke English anyway.

David went to work on his business proposal. He found data on the Total Addressable German market (TAM) in one of the sales presentations, got information about local business deals in progress, and calculated approximately the potential value of those deals. David discovered that all direct competitors in the region supported German. Local country teams shared that they lost a couple of deals because of the lack of native language support, and that a localized product would enable another \$100K in Sales within the next 12 months.

David presented his proposal to the senior executives of his startup and stated the problem: customer expectations in their industry require software to be available in German; their company needs to translate their product into German to be competitive.

David stated that for a *70K initial investment in translation, the company stood to make around 300K in revenue from pending deals in the country in year one.*

In addition, they would not only grow their market share in the region, but would have a good start establishing their brand recognition. If they delayed for another year or two, it would be significantly more difficult to expand in the market because of the established reputation of an English-only company.

Focusing on the business problem made David’s argument compelling and relevant to the company growth. He got his funding.

It is not enough to recommend the direction and articulate how the international user experience should look. Making a business case for those recommendations will define why it is important to the company and the customers. Business impact analysis makes prioritization easier and puts business context around your solution.

The following best Practices and use case stories illustrate:

- how you can use metrics
- how they can impact decisions
- what the limitations of data and metrics are
- what the best practices are for managing the insights from data you are collecting
- how other factors, such as geo-political and geo-cultural aspects, impact data and insights
- how you can shape the outcome.



In recent years, Bill's company added several new product lines as a result of M&A. Most of the acquired new products were not localized yet.

Bill wanted to work with the product team to evaluate the business opportunity for globalizing/localizing the products if there were any plans to sell them in countries where English is not the primary language. Bill planned to collect and study this data using one of the newly acquired products to spearhead globalization and localization.

Question: Is there a good business opportunity for this product outside of the US? 40% of the revenue at Company X comes from overseas markets.

Bill collected product A's revenue numbers from the prior fiscal year, broken down by country. He discovered that almost 90% of this product's revenue came from the US market, and the percentage of overseas market bookings was fairly small. This discovery gave Bill an indication that there would be a good opportunity for this product to expand business in global markets outside the US.

Besides the revenue data, Bill looked at industry research reports (Gartner or IDC) to check Total Addressable Market (TAM) and Market Opportunity (MO) in each country. This could shed some light on which region/locale he should pursue, and which may not represent a significant opportunity after all.

Product A is a software security product, and Japan and Germany have a higher TAM rating than other regions. And due to regulatory policies in China, the TAM for security products from foreign companies there is small.

Another key factor was the impact to Bill's customers, since he knew that customers in each country have different English tolerance index (ETI), which may also depend on the industry. For example, the tolerance of English in Japan and proficiency in specific industries is lower than in other countries. Lack of product localization could be a blocking issue to customers there. In European countries on the other hand, although customers might prefer using products in their own language, they can live with using English.



There are several institutes and companies that provide research results about English tolerance and proficiency, for example the EPI (English proficiency index), which could help us to rank countries by customer impact.

Bill also studied Product A's competitive landscape (CSR), before his team launched the product in non-English speaking regions. Bill hoped that their localization offerings could bring an advantage to Product A when it was launched in non-English speaking markets. He fed all of this data into a formula to calculate each locale's Effectiveness Score (ES) to get a priority ranking for the various locales.

$$ES = \frac{MO * (1 + CSR)}{CC * ETI}$$

CC: cost coefficient of Globalization (Internationalization and localization cost indicator)

## Measuring MT Quality and Effectiveness

There are several different metrics to measure quality and effectiveness of machine translation. One of them is to get immediate customer feedback as to the usefulness of the translated content. In this case the Localization team worked with their stakeholders to identify a success metric that would be meaningful for them and would work for Localization.

Tracking customer responses to the question “did this information help you solve your problem” allows us to assess the usefulness of our translated articles, using the same metric that we use for our English articles. We might consider that as long as we achieve a score that is within 5% points of what we achieve in English, the MT output quality would be acceptable and the article in local language would be adding value to our customers. This metric could also be used in conjunction with the bounce rate to evaluate whether users stay on the machine translated page or switch to English.

As a Globalization leader, you have responsibility for releasing localized products which match the core (usually English) experience. You also need to demonstrate operational excellence by satisfying various cost, resource and time constraints. To meet your objectives, you have a key dependency on product teams, since they are responsible for internationalization. Your development team can avoid dealing with numerous defects in the localized versions by producing internationalized software in the first place. This approach will also facilitate the automation of the localization process.

On the other hand, if a product is poorly internationalized, you will need to develop many work-arounds, issues will be replicated across locales and efforts to fix those issues later in the process will be amplified. So, how do you hold product teams accountable with regard to internationalization? How

do you track compliance and progress over time? How do you motivate product teams to improve world-readiness without direct authority?

An industry best practice to address these problems has been to develop world-readiness score cards and communicate this data in meetings, emails and newsletters to increase visibility and motivation. One great aspect about data is that it leaves little room for discussion. It is hard to argue that a product is poorly internationalized when you provide a world-readiness score supported by a list of open internationalization defects. Data takes emotions out of the equation.

To put in place a world-readiness scorecard, we recommend the following steps:

1. **Define clear internationalization requirements.** Internationalization requirements need to be documented so product teams understand your expectations. Those requirements will also serve as the basis to measure the score associated with each product. The higher the score, the more the product meets the requirements.
2. **Create a scorecard system.** Different aspects need to be considered when developing internationalized applications. Some aspects relate to enablement, others to localizability. Enablement refers to the internationalization effort which ensures that all features included in the core (English) product will continue to work globally by supporting data input/output from various scripts, date formats, currencies, etc...Localizability represents the internationalization tasks that focus on making localization possible such as string externalization, multilingual build environment setup, ability to easily switch locale, etc.
3. **Use standard defect keywords.** When products fail to meet the internationalization requirements, defects should get logged into a bug database using a standard bug classification (e.g. INTL-LAYOUT, INTL-HARDCODED, etc.). This will enable you to generate globalization score cards, hopefully automatically.
4. **Publish results.** Once products get assessed, you can start publishing their world-readiness scores. Initially, it is important to educate product teams about the process and methodology used to come up with the world-readiness score. This avoids bad surprises. Once everyone is informed about the program, you can share the results more broadly and work with product teams to improve their score if necessary.
5. **Prepare get-well plans.** Each product team will have its own set of internationalization issues and will seek guidance from the Globalization team on how to address those. The get-well plan serves this purpose. It documents the areas where the product fails to meet the internationalization requirements and provides suggestions on how to address those gaps. The get-well plan can also include internationalization checklists for more problematic areas.
6. **Develop a World-Readiness Educational Program.** If product teams struggle with developing well-internationalized products, we recommend creating an internationalization course to highlight general pitfalls and best practices.

**7. Provide globalization libraries and promote standards.** Some product teams may struggle with globalization because they rely on home-grown libraries which do not offer strong international support. To reduce these issues, we recommend leveraging standard libraries with built-in support for internationalization, such as ICU, MomentJS, Int'l React, etc.

By implementing a score-driven world-readiness program, you will be able to assess products and measure progress over time. You will also implement a gamification mechanism. Product teams will compete against each other to get a high world-readiness score. This will reduce pressure on your team to chase product teams down. They will actually come to you to seek guidance and support.



Susan's company wanted to increase their global footprint and user base. Susan, a technology company Globalization Lead, set out to evaluate the benefits of launching the company app in an additional locale.

To make a business case, Susan needed to define the criteria for applying resources to a given market (defined by variables that include size, growth, risks from the government, risk to users, and value to our business). Susan needed data that can sufficiently inform and ultimately guide the decision-making process.

Below are questions Susan used to qualify available data as relevant to her market evaluation:

- Do we already have an audience in this market?
  - Collect data on monthly and weekly active users, weekly sign ups and activation rate, user locales, and monthly use of products/features.
- Is the audience ready for our product?
  - Collect data on users' behavior, i.e. number of social media users, Smartphone owners, digital market share, and competition. Combine with complimentary data around users' lifestyle (education level, male-female labor force participation, distribution of per-capita GDP, etc.), digital ad spending, English proficiency.
- What kind of engagement has the current audience shown on our product?
  - Collect data on the number of tickets we receive on average from this region and what sentiment users in this region have expressed.
- Is there any historical analogy and/or projection on how successful the business will be in that market?
  - Collect markets' data that can be used as analogies to model the expected number of new users if we provide a localized experience, and formulate a potential growth percentage measure, possibly in low- and high-bound activation rate.
- What are the risks associated with launching in this region?

- Benchmark if other companies are already successful in the market. What are the targets we are planning to achieve within a set time frame? What is the market share we are going after?
- Consider the timing—what needs to be true for us to go into that region? What are the guiding principles for GTM strategy? What if we do not go now—what are the losses? If not now, when?
- Collect country scorecards on political stability of the region, on legal restrictions tied to content/app, on costs that need to be dedicated to de-risk the region (building a legal entity, work with Trust and Safety to fine-tune the content we share in the region, etc.).
- What are the extra costs and/or technical debt associated with this launch?
  - Collect data about whether supporting a new language would introduce technical complexities (as in the case of right-to-left languages), if it needs baseline product quality work.

Data can sometimes suggest a clear cut answer—go or no-go. However, in some cases or for some regions, data is controversial or incoherent, and its interpretation is key. For example, whereas all data seems reassuring and suggest making an investment in a specific market, the ever changing political situation might call for some caution, or a poor internet infrastructure might recommend launching a light version of the app, if not at all.

Data is not going to make a decision and is not going to comprehensively explain it all, but can inform on what it is likely to succeed or fail. You may find Colin Powell's 40:70 rule for decision making helpful: as a rule of thumb, every time we face a tough decision we should have no less than 40% and no more than 70% of the information we need to make a call. The rule allows us to be informed and at the same time trust our intuition.



The Business Site core team & the Globalization team received a request from the Singapore team to support English-India as an additional locale available on the Business Site. An English-speaking audience that visits the Business Site currently accesses one of two English locales available on the site: English US or English UK.

However,

- the English US site displays content relevant to users in the United States (all campaigns, features, products available in the US);
- the English UK site displays content relevant to users in the United Kingdom/Great Britain (all campaigns, features and products available there).

Product availability and services offered are vastly different in the UK/US and in India.\*\*

\*\*Because of that, users in India are shown products and services that are not yet available in

their region, as well as insights specifically for the UK/US. This can lead to a negative user experience when users are noticing that the site promotes content that is irrelevant to them.

The goals are:

- Improve the Business Site experience for users from India (and for English-speaking users from Asia in general) and increase content relevancy.
- Build foundations for local teams to communicate with business account users on brand (e.g. by enabling blog for India/SEA (South East Asia) in English that are separate from the UK or US blog).
- Scale this experience to the entire SEA region just by redirecting traffic from those geos to the new site locale.
- Increase traffic to the site by enabling the local team to actively promote the business site because the experience will be more relevant to their audience.
- Define how to measure success and measure impact in executing on goals. For example, how do I know that the business site experience has improved for users from India, and how do we measure it?

How do I build a recommendation on how to improve the user experience for our audience in India? And what data is going to be useful to inform my decision-making process? The analysis can be split into two parts, opportunity sizing and evaluating operational feasibility.

### **Opportunity sizing:**

- Collect data on English-language traffic originating from India both for acquisition and audience's behavior;
- number of sessions, new sessions, new users, users', bounce rate, page session, average time per session, etc.
- number of SMBs and larger businesses in India.
- Run a competitive analysis to understand who serves an en-IN site for business audiences.
- Collect SEO results that drive traffic to India (unique keywords, etc.).
- Enquire about long-term strategy in the region (monetization, launch of new products, etc.).

Should it be clear that there is an opportunity there, one would move into the analysis of

### **Operational feasibility:**

- Technical, Design and Localization Support needed to launch and maintain the site.
- Cost of SEO optimization.
- List of products available and unavailable for India to quote the number of editorial time needed to adapt the site for the market.
- Run cost analysis for adaptation of editorial insights and launching a separate blog.

In a situation like this one, data is informative, but not resolute. Data informs us and enables us to make the most rational of the decisions, but does not guarantee a 100% success.

## Main takeaways

Regardless of where you are in your localization business analytics journey, here are the main takeaways to keep in mind:

- Foster a data-driven culture and create a data-driven strategy.
- Understand your data and the story it is telling. Know your audience and build partnerships with other business units.
- Provide your stakeholders with insights and a story, not a data-dump
- Use existing tool sets to create dashboards.
- Give ownership to an individual or team to manage the data and the reports.
- Start collecting data as early as you can.
- Streamline data collection. Data collection should be easy to perform on a regular basis.
- Avoid creating processes to collect data manually. Ideally data just needs to be extracted from production without having to be entered manually first.
- Make sure you can collect cumulative data without having to manipulate previous reports when you are ready to run a new report.
- Never rely on one lonely metric.

And finally, the way you present data matters. It is a way of communication and your audience should be able to understand it. Make your presentation simple:

- Make your data readable. Use 1,000,000 instead of 1000000. If you are presenting one number format (1M), use the same abbreviation (0.1M instead of 100K). Skip decimals unless they really really matter (15.34% becomes 15%). Right-align your numbers. Do not repeat the same information. Remove bars and columns, axes and gridlines, legends and borders. You get the idea—make the data easy to read and focus on the right message.
- Do not use 3D graphs. They are difficult for the brain to process. Use 2D.
- Avoid pie charts. They look pretty, but it is hard to judge relative differences in area or circles. They could have too many pieces that are so very confusing. If you have more than three items, use a different chart.
- Do not rely solely on color when presenting data. Think of people who are color blind. When you use color, make it mean something, like separating weekdays and weekends, for example. Use color consistently throughout your report.
- Be consistent. Use the same time references on all charts (Monday through Sunday, for example). Use the same order of items for all charts in a category. Order of items should mean something too.

## Epilogue: Our Final Words

There are literally millions of books, articles, guides, and classes online and in person dedicated to strategy topics. Most of them cover a tactical approach to strategy—tips and tricks. Some mention the thinking process but rarely are there any answers to the posted questions.

The questions we raise in this book might not have all the answers either. However, now you know where to look for them and how to validate the answers you found. You can articulate the problem you are solving and prove with data that it is the right problem to solve for the business. You can create your own plan including resources, technology, and languages, justify it, and set up metrics and reports to manage expectations of the many stakeholders you now know you have.

In this Playbook, we attempted to connect the strategic-thinking process to real-life situations. We showed you how Globalization strategy fits into your company strategy, amplifies your business in international markets, and guides your execution and technology. There are charts, graphs, tables, and examples to help you apply Globalization thinking models to your current organization and roles.

The tips and best practices we shared might or might not apply to your team and your organization. You will have to do the work of thinking through your own strategy using this book as a foundation, a guide through today into the future.

The twelve contributors to this book solve strategic puzzles every day—in various roles, various companies, with various results. There is no one way to do anything when it comes to Globalization strategy. But there is always *the right way for you* and your organization. You need to be prepared to make the right decisions when the right time comes. It was our intention to prepare you for such a time.

This book is your compass to your Globalization strategy journey to global success for your multilingual customers and your company. Go be exceptional and let us know how this book helped you on your way.

Contact Globalization Strategy Navigation Team at [StrategyPlaybook@gmail.com](mailto:StrategyPlaybook@gmail.com)

## Appendix A: Technology Decision Drivers and Strategic Objectives

| Technology             | Description                          | Decision Drivers  | Strategic Objectives  |
|------------------------|--------------------------------------|---|---|
| Translation Management | A central hub connects various tools | <ul style="list-style-type: none"> <li>Number of supported</li> </ul> | <ul style="list-style-type: none"> <li>Faster time to market</li> </ul> |

|                     |   |  |  |
|---------------------|---|--|--|
| System (TMS)        | such as CMS, MT, manages assets, leverages existing translations, etc. (Multiple TMS's are not recommended) | <p>languages</p> <ul style="list-style-type: none"> <li>• Vendor strategy (single or multi-vendor)</li> <li>• Integration with CMS: number of systems to connect to; out of the box or proprietary</li> <li>• Project Lifecycle workflow automation</li> <li>• Asset management (owning TMs and TDs)</li> <li>• Project/Job tracking</li> <li>• Reporting/data for analytics</li> <li>• Data-driven decision making</li> </ul> | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> <li>• Enable global growth</li> <li>• Great user experience</li> </ul>                                  |
| Machine Translation | Machine Translation technology  | <ul style="list-style-type: none"> <li>• Type of content—how specialized is it? Is MT suitable for that content type?</li> <li>• Volume of content/Cost of translation</li> <li>• Turn around time</li> <li>• Quality required (good enough?)</li> </ul>   | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> <li>• Faster time to market</li> <li>• Enable global growth</li> <li>• Great user experience</li> </ul> |
| Terminology         | Establish and manage terminology, including   | <ul style="list-style-type: none"> <li>• Number of products</li> </ul>   | <ul style="list-style-type: none"> <li>• Great user experience</li> </ul>  |



|                                |  |  |   |
|--------------------------------|--|--|---|
|                                | lifecycle (add   translate   update   review   retire)                   | <ul style="list-style-type: none"> <li>• Scope of program (e.g. products, Marketing, web, learning content)</li> <li>• Type of products and industries (technical, specialized, regulated, ...)</li> <li>• Brand names</li> </ul>  | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> </ul>                                  |
| Query Management               | Tool to facilitate effectively raising and resolving translation queries | <ul style="list-style-type: none"> <li>• Volume of content</li> <li>• Complexity of content</li> <li>• Number of supported languages</li> <li>• Number of vendors</li> <li>• Number of stakeholders</li> <li>• Number of products</li> <li>• Reporting/Tracking</li> </ul> | <ul style="list-style-type: none"> <li>• Great user experience</li> <li>• Enable cost savings/efficiency</li> </ul> |
| Translation Quality Management | Identify, measure, control and improve the quality of localized content. | <ul style="list-style-type: none"> <li>• Number of brands supported</li> <li>• Vendor strategy</li> <li>• Volume of content</li> <li>• Number of supported languages</li> <li>• Insights to inform source quality</li> </ul>   | <ul style="list-style-type: none"> <li>• Great user experience</li> <li>• Enable cost savings/efficiency</li> </ul> |
| Outsourced Cost Management     | Cost tracking and budgeting for outsourced work,                         | <ul style="list-style-type: none"> <li>• Vendor strategy (single or multi-vendor)</li> </ul>   | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> </ul>                                  |

|                                |   |  |  |
|--------------------------------|---|--|--|
|                                | <p>connected to the PO/invoicing tools used by your Finance team - could be a part of a Program Management Suite</p>  | <ul style="list-style-type: none"> <li>• Number of products/projects</li> <li>• Finance department's requirements for PO and Invoice tracking, budgeting and amortization reporting</li> <li>• Cross-charging requirements</li> </ul>  |  |
| <p>Devops and integrations</p> | <p>Software and services for Engineering orgs enabling them to develop, test and deliver faster, more efficiently and at lower cost. Includes Development environments, Source Control, Build automation, integrations between Software Engineering tools, publishing tools</p> | <ul style="list-style-type: none"> <li>• Number of products</li> <li>• Build and release frequency (CI/CD, CL, monthly, etc.)</li> <li>• Complexity of Development environment (# of different SC repos, dev platform(s), product platforms)</li> <li>• hosted/on-prem dev environment</li> <li>• Size and complexity of SW Engineering (distributed, # of SW and QA engineers)</li> <li>• Security and compliance requirements (dev policies)</li> <li>• High Availability (HA) requirements</li> </ul> | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> <li>• Faster time to market</li> <li>• Great user experience</li> </ul> |

|  |  |  |  |
|--|--|--|--|
| I18N Tools   | <ul style="list-style-type: none"> <li>• Static Analysis - Analyze code to find I18N issues</li> <li>• Pseudo Localization - Software testing of localized UI strings</li> </ul>   | <ul style="list-style-type: none"> <li>• Develop Code?</li> <li>• Sale/distribute code outside of the US (or local source language)?</li> <li>• In-house v. vendor model for loc testing</li> </ul>                        | <ul style="list-style-type: none"> <li>• Faster time to market</li> <li>• Enable cost savings/efficiency</li> <li>• Great user experience</li> </ul> |
| Loc testing (categorise with i18n tools above, and maybe devops) | <ul style="list-style-type: none"> <li>• Bug tracking - tracking of localization errors in UI</li> <li>• Screen capturing tools - used to facilitate loc testing when software access isn't an option</li> <li>• Test case building tools— persona testing to ensure appropriate audience targeting</li> </ul> | <ul style="list-style-type: none"> <li>• Volume of UI localization</li> <li>• Access to software/hardware environment for testing</li> <li>• User base personas</li> <li>• Internal v. vendor testing resources</li> </ul> | <ul style="list-style-type: none"> <li>• Great user experience</li> <li>• Enable cost savings/efficiency</li> </ul>                                  |
| Program Management Suite   | Dashboard—Sits on top of TMS and other loc tools as a central point for managing all translation work  | <ul style="list-style-type: none"> <li>• 80% of everything a PM needs to do/access/review in a day in one location</li> <li>• Job Status</li> <li>• Cost data by job and PO/stakeholder</li> <li>• Quality data</li> </ul> | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> </ul>   |

|   |  |  |  |
|---|--|--|--|
|   |  | <ul style="list-style-type: none"> <li>• Links to key content repositories</li> </ul>  |  |
| In-house Resource Management/Time tracking Tool | Task Planning and Management for in-house resources with time tracking | <ul style="list-style-type: none"> <li>• In-house v. vendor model</li> <li>• Number of products/projects</li> <li>• Number of languages/in-house resources</li> <li>• Cross-charging requirements</li> </ul> | <ul style="list-style-type: none"> <li>• Enable cost savings/efficiency</li> </ul> |

## Appendix B: Data Inventory

Here is an inventory of all data and metrics that a Globalization leader might want to collect:

- Website
  - Visitor and session data
  - Conversions and conversion rate
  - Visits to conversion
  - Downloads
  - Page views
  - Bounce rate
  - Data split out by both country and language
  - Data split by source, i.e. SEO, SEM, organic
  - Raw MT acceptance level (via in page survey)
  - Browser language vs page language. If the site allows to view the pages in multiple languages, track if the bounce rate improves when a user changes the language
- Business data
  - Revenue
  - Revenue goals by region
  - # of customers
  - # of users in region (probably using a different language)
  - Deal size (with languages involved)

- Cost of adding/maintaining a language to product, documentation, website, marketing, training, etc. (internal/external)
- ASU (Active service units), Units sold per year, revenue per unit
- TAM (Total Addressable Market for products/product lines)
- Services—contacts, average cost of contact by channel (phone, chat, email, etc.), cost of parts/service dispatch
- English Tolerance (English Proficiency Index—EPI)
- Sentiment analysis (for product and marketing—it is an informative set of soft data)
- Market research and overall risk assessment (government report, product readability, infrastructure, digital ad spend, etc.)
- Customer satisfaction
- Usage data
  - Product usage, telemetry
  - Documentation and product training usage data
  - Customer feedback/Interview/CSAT
  - Web analytics data
- Operational data (internal efficiency measurement)
  - Budget spending
  - Team ROI/Headcount
  - Production data from TMS