CASE STUDIES IN BUSINESS AND LANGUAGE

Translating Into Success

Cutting-edge strategies for going multilingual in a global age

Edited by Robert C. Sprung

American Translators Association
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Foreword

The transformations in the language industry following the groundswell of globalized trade are nothing short of revolutionary. In under 10 years, the translation and software-localization businesses have evolved from a cottage industry into the global business imperative. According to the European Commission, the translation-services market is valued at over US$30 billion annually and is growing at 15–18 percent per year.*

By the early '90s, the major US software companies were averaging seven languages per each product shipped internationally. They were learning that the longer it took to enter foreign markets with translated product versions, the greater the revenue loss. Today, with an emphasis on simultaneous shipment, the larger companies publish products in over 30 languages. By 2005, Microsoft alone predicts increasing this number to 80 languages.

Ever more companies are beginning to understand the complexity and commitment behind going global—which permeates every facet of an organization's structure. This includes language-investment strategies, language-processing technologies, translation systems, quality-assurance guidelines, and market education. The Web is only accelerating this trend.

Despite such growth, the language industry is experiencing a severe shortage of talent and information to meet this demand. Major professions like accountancy, medicine, and law enjoy well-established educational paths, certification and professional standards, trade organizations, and savvy consumers. Meanwhile, the equally quality-critical language industry is struggling to develop all these trappings of a profession, and to establish standards and best practices for conducting its business.

Translating Into Success is a landmark publication. It documents the strategic importance of translation and localization in the global marketplace. Through case studies and process reviews, readers can learn from the experts, and benchmark their own operations to those of companies with leading language solutions. This is a collection of hard-won, real-world solutions for the language professionals—ranging from practitioners like linguists, designers, and software engineers, to project managers and purchasers of language services—who are helping fuel this global revolution.

—Michael Anobile, founding member and managing director,
Localisation Industry Standards Association (LISA), Geneva

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* 1996 MLIS Program, *Translation Market Study.*

Introduction

These are heady times for the language industry. Riding the wave of globalization, companies are finding that to sell beyond their borders, they must communicate in their customers' language.

A surprising amount of ink is spent on the premise that translation is on the way out. English is the world's *lingua franca*, the argument goes, particularly after the arrival of the English-dominated Internet. Most people can speak English, and translation adds large expense and time to product development and international commerce.

The facts say otherwise. Consider these touchstones of a booming language industry:

- The worldwide market for translation and software or Web localization services is large and growing. Market watchers at Allied Business Intelligence peg it at US$11 billion for 1999, growing to US$20 billion in 2004.[1]
- Non-English-speaking Internet users will exceed English-speaking users by January 2001. According to Forrester Research, business users on the Web are three times more likely to purchase when addressed in their native language.[2]
- In fiscal 1998, over 60 percent of Microsoft's revenues came from markets outside the United States. In that same period, revenue from translated products exceeded US$5 billion. Microsoft executes over 1,000 localization projects a year.
- *Newsweek*, *Glamour*, *Discover*, *People*, and *Rolling Stone* magazines are now available in Spanish or Portuguese. *Reader's Digest* reached 600,000 Brazilian readers in 1998, with 1.7 million reading the publication in Spanish and Portuguese; *Glamour en español* now sells 500,000 copies. *Time*, *The Wall Street Journal*, and CNN have Spanish editions as well.
- The world's population of translators is flourishing. According to a study for the European Commission, there are practically 100,000 people translating professionally in Western Europe.[3] A separate study estimates 317,000 full- and part-time translators worldwide.[4] Translator

1. Allied Business Intelligence, *Language Translation*, 1998.
2. Rose Lockwood, "You Snooze, You Lose," *Language International*, August 1999.
3. Rose Lockwood, "Bigger Than a Bread Box," *Language International*, June 1999.
4. Allied Business Intelligence.

organizations are thriving: the American Translators Association (ATA) has 7,000 members in 58 countries—double the total of seven years ago.

Much of the translation performed today is required by regulatory authorities or prompted by liability and safety concerns. An Italian sedan in Madrid requires a Spanish service manual. An American mutual fund in Luxembourg may require a German prospectus. A French medical device in Tokyo requires Japanese instructions and labeling.

Much of the remainder is required by a simple marketing analysis. Once a product exists, translating it—typically a small percentage of the total product cost—may open up new and lucrative markets. Twenty years ago, IBM might have gotten away without translating technical manuals, claiming that the engineers reading them spoke enough English. Today, most exporters face local competitors—consumers in Taipei or Moscow will gravitate toward the product in their own language, not the one in the strange packaging. Companies are finding that *the cost of not translating* poses too great a risk to international sales.

These are some of the foreign-language-related services for which demand has skyrocketed in recent years:

- *translation*—the core skill of converting text from one language to another, whether on hard copy or electronically.
- *internationalization*—designing a product (e.g., software) so that it supports usages around the world (e.g., number, date, and currency formats) and can be easily adapted and translated for individual local markets.
- *localization*—taking a product (ideally, one that has been internationalized well) and tailoring it to an individual local market (e.g., Germany, Japan). "Localization" often refers to translating and adapting software products to local markets.
- *cross-cultural consulting*—booming areas are marketing to ethnic minorities in a given country (e.g., Hispanic or Chinese communities within the US) and name verification to ensure that a proposed product name is effective and inoffensive in other languages. A name is *de facto* accessible to *all* other language communities when it appears on the Web.
- *multilingual design*—typesetting and desktop publishing in foreign languages.

- *multilingual technology and tools*—these range from automatic hyphenators in different languages to terminology-management tools that ensure consistency in translated documents.
- *machine translation*—using a computer to perform a first-pass translation.

A note on usage: companies that specialize in software localization are quick to distinguish themselves from "translation companies." However, those outside the language business proper are not as likely to draw such distinctions. In this introduction, "translation business" and "language industry" encompass the entire range of services listed above.

WHY THIS BOOK?

The emerging language industry is sorely in need of "best practices"—standards of excellence which can assist in communications between clients and vendors, and also aid in the training of those entering the industry. This book aims to help fill that gap. Each case study strives to capture actual achievements, not merely theories or opinions, that have broader relevance in the language industry. Case studies are written by recognized authorities and leading practitioners, including those who helped pilot the multilingual effort at Microsoft, Hewlett-Packard, Time Warner, Ericsson, and the European Commission.

These case studies help answer the fundamental questions in global communications today:

- How do we control language costs while maintaining quality?
- How do we reduce translation cycle time to improve time-to-market?
- How do we develop a scalable language process that can keep up with our company's growth?
- How do we stay on top of language-technology developments?
- How do we look at language strategically, to leverage our brands and products worldwide?

The "language industry" is largely an industry in name only—a convenient rubric for a patchwork of sole practitioners, in-house language departments, and small translation companies. Translation is often literally "mom and pop," with husband-and-wife teams of translators operating from home. Although a recent wave of mergers and acquisitions has created a half-dozen US$50-million companies, the market remains highly fragmented, with no player holding much more than one percent.

One result of this fragmentation is a lack of accepted quality standards. Despite the inherently cross-cultural nature of their work, translators are not held to any international standards for quality. Since the translator or localizer in Amsterdam and the one in Tokyo are doing *exactly the same thing*, the industry seems tailor-made for such professional standards, particularly given the inability of the general public to evaluate language work. Some national standards or "certifications" do exist, but they vary radically from country to country in both rigor and enforcement. A translator in Germany or Argentina may meet nationally accepted requirements in education and professional practice—the term "publicly sworn translator" means something very specific both to language practitioners and to the broader public. In many other countries, however, meaningful standards are either absent or so new and inadequately promoted that consumers are unaware of them. The customer is thus usually left to fend for himself in selecting a language solution and evaluating a foreign text.

The educational system certainly plays a role. In Europe, which has been translating successfully for centuries, educational institutions are more firmly entrenched than in the US, where translation is largely fueled by a relatively recent boom in global trade. In the United States, one of the largest purchasers of translation services, a handful of educational institutions offer degree programs in translation. It is difficult to hold translators to rigorous standards when so many are needed and so few are trained.

Part of the problem, too, is that translation professionals have long had an image problem. The portrait of translators derived from most reference books is not flattering—you might find that the Italians coined the catchphrase *traduttore, traditore* (translator, traitor). Purchasers of language services are often unaware of the skill needed to recast text in a foreign tongue—the typical response to a translation request in many US corporations used to be: "Get a secretary to do it." Translation is often thankless; ask a dozen marketing managers for their experience, and their only memories will be of translation errors. A professional translation does not enjoy praise—it merely avoids criticism.

The tide is turning, however, largely because of the strategic nature of translation. Billions of dollars are spent each year on translation and related services—a tiny fraction of the value of the actual products being sold. Poor translation means lost revenue through lower acceptance abroad, or even a potential product recall. Inefficient translation means lost revenue through slower time-to-market. Given the importance of the multilingual versions we create, the market is quickly raising the bar on translation quality.

On the customer side, professional organizations like the Society for Technical Communications (STC) and the Software Publishers Association (SPA) have raised awareness of multilingual communications for their members. Leading trade publications increasingly feature serious stories on translation (not merely rehashing apocryphal gaffes such as Chevy's decision to market the "Nova" in Latin America, where "no va" means "doesn't run" in Spanish). Consider that *Adweek* now stresses global branding, with regular features on pitfalls in international advertising. Crossing cultures and languages has become a mainstream obsession: consider recent cover stories in *Newsweek* (on the booming Hispanic and Spanish-language market within the US) and *National Geographic* (on "global culture").[5]

Trade and professional organizations have made progress in industry standards. Many countries have professional translator associations (e.g., the American Translators Association in the US, SFT in France). The ATA, sponsors of this book, have made great strides in promoting the profession of translator, and have taken on the daunting task of developing a standard for translation certification in the United States. The Localisation Industry Standards Association (LISA), based in Geneva, helps bring together customers and suppliers in the software business. One case study in this work features the LISA Quality Assurance Model, which several companies have successfully implemented to set standards for language projects. Translators in other countries are striving to organize and establish new quality standards, while broader international organizations such as Germany's DIN are pushing for international translation standards.[6]

Educational institutions have broadened their offerings in the language professions. In the United States, the Monterey Institute of International Studies and Kent State University both offer degree programs in translation and related fields, and are training a generation of translation producers and consumers with cutting-edge strategies and techniques. And publications such as *Language International*, for which the present writer serves as editor, strive to provide a written record and forum for this emerging profession.

The language industry has started appearing on the radar screens of major market-research companies like Forrester Research and Gartner Group. A few translation market-watchers have emerged—which implies that there is a growing market worth watching. Rose Lockwood, who is represented by a case study in this volume, has helped elevate the discourse surrounding language professionals, by situating their work within the context of an

5. *Newsweek*, July 1999; *National Geographic*, August 1999.
6. DIN preliminary standard 2345; Web site: www.din.de.

InfoCycle—the creation of a company's information and its subsequent life cycle as it appears in varying forms and versions. Lockwood's *Globalisation* study was the first to analyze and quantify the industry formally.[7]

THE CASE STUDIES: A ROADMAP

Translating into Success may serve as a casebook for those already working in the industry, or those seeking to enter it. We have organized the book into five thematic sections, which give a cross-section of a complex industry in rapid growth and transition.

Section I: Cross-Cultural Adaptation

Effective translation bridges the gap between cultures, not merely words. The case studies in this section show that the most effective way to make a product truly international is to make it look and feel like a native product in the target country—not merely to give it a linguistic facelift by translating the words of its documentation or user-interface.

Bernhard Kohlmeier describes how Microsoft effectively localized *Encarta Encyclopedia* into several languages, by creating and adapting content so that it would appear to be a native product. The foreign versions of this online encyclopedia actually differ from country to country; the achievement was not only gathering the appropriate resources to make editorial decisions, but also developing and managing complex work processes so that the project could be completed in a very short timeframe. The technical and procedural innovations in managing this project—which included some 33,000 translated articles totaling 10,000,000 words—serve as an invaluable source of best practices. Kohlmeier offers memorable examples of the way Microsoft modified its foreign-language versions to increase sales and avoid potential embarrassment abroad.

Robert Sprung writes about *Time* magazine's first appearance in a foreign language. The key to success was that the publication did not merely duplicate its English version, but tailored contents specifically to Latin America. The case study illustrates the challenges of recreating the voice and style of a text for a different culture—the same principles apply, whether the text is journalism, marketing copy, or technical documentation. The project required a robust, scalable work process that could convert 10,000 words every week into Spanish and Portuguese in little over 48 hours, which required not

7. Rose Lockwood, *Globalisation: Creating New Markets with Translation Technology*, London: Ovum, 1995. The current version (1998) is published by Equipe Consortium (www.equipe.net).

only a top-notch team of language experts, but also cutting-edge communications and publishing technology. The case also illustrates the potential for international brand leverage—*Time*'s series on Leaders for the New Millennium included multilingual content in its English magazine, the Latin American edition, CNN en español, and the Web.

Susan Cheng shows cultural adaptation at work in a small, cutting-edge e-commerce company, chipshot.com. When this firm decided to market golf equipment to Japan via the Internet, they used specialized software and work processes to localize their e-commerce site. The case study illustrates the importance of understanding current marketing idioms in a given culture, and applying these in the localized version of a Web site, regardless of the language of the user-interface. Cheng illustrates how Web translation differs from translating for traditional media, and gives us an inside view of workflow and resources used, with copious graphical examples.

Section II: Language Management

Smart companies understand that translation is a strategic imperative. It requires complex planning and analysis, with significant investment of time and resources to achieve the ultimate goals of lower translation costs, higher quality, and shorter turnaround time. These cases show how some companies are lifting decision-making for translation and language issues to the highest levels, rather than treating it as an afterthought or low-end administrative work. Given that the success of their core products is riding on translation quality, the move seems long overdue.

David Brooks describes Microsoft's efforts to bring translation and localization costs under control. Microsoft spends hundreds of millions of dollars each year on localization, with translation in the critical path to product delivery. Finding an optimal way to cut costs and time was thus hardly optional, but a key to survival and success in the global marketplace. In spite of its mammoth size, the company takes a very entrepreneurial and creative approach to problem-solving, and the innovations it employed, which are outlined here, apply to small companies as well as large ones—with implications far beyond the software industry. Brooks, who helped craft the localization effort at the world's largest software company, focuses on the need for true global design of products, and for cost-basis accounting to rein in skyrocketing localization expense. He discusses the application of quality and cost metrics to translation at Microsoft, applying Andrew Groves's dictum, "If you can't measure it, you can't manage it." He also steers the reader's gaze toward cutting-edge solutions that have not quite arrived: "Linguistic technologies such as speech recognition, natural-lan-

guage-based search engines, and machine translation will redefine the scope of localization. These technologies are being commercialized, and will soon become mainstream utilities."

Cornelia Hofmann and *Thorsten Mehnert* describe language innovations at Schneider Automation. Multilingual efforts there break down the traditional categories of "translation" and fit into the broader context of "multilingual information management." The authors argue that "the information of tomorrow is quite different from the documentation of today." Consider these examples:

- Information is increasingly integrated into products (e.g., online help or on-screen messages).
- Products are increasingly "information-intensive" (e.g., car navigation systems containing large volumes of translatable data).
- The Web is blurring the distinctions between traditional documentation categories (technical documentation, marketing literature, or customer support).

The authors advocate abandoning a "silo perspective" that processes individual "documents," and propose an integrated approach that thinks in terms of recyclable "information objects." The real-world examples in this case study have far-reaching implications for translation in a wired world.

Andrew Joscelyne introduces another facet of the language business—translation for public and quasi-public institutions. Organizations like the European Commission, the IMF, and other international bodies are among the largest employers of translators and language services in the world. Many of their problems are specific to the nature of such organizations, their needs and decision-making structures. Others are similar to the challenges faced by firms, large and small, in the private sector. Joscelyne shows that international organizations like the Organization for Economic Cooperation and Development (OECD) can innovate as well as their private-sector counterparts.

Section III: Localizing the Product

This section offers three facets of the complex processes of "localization" and "internationalization." Internationalization means designing a product so that it can be easily adapted to local markets. Examples include developing a computer operating system so that it can support complex foreign character sets like Chinese or Japanese, international date formats, and sorting sequences. A product that takes into account the various *possibilities of*

adaptation around the world is said to be internationalized. Localization is commonly defined as the process of taking a product—hopefully one that has been well internationalized—and adapting it to a specific *locale* or target market or language group (translation is thus a subset of localization). An example may help illustrate the point: designing an automobile chassis so that the steering wheel could be installed on *either* the right or left would be a case of internationalization. The decision to actually make a given batch of cars left-steering would be a case of localization.

Localization is most commonly associated with the software industry, since it is one of the largest consumers of such services. However, we define it more broadly, to include the adaptation of any good or service to a target market, since the principles applied in both cases are similar. These three case studies offer invaluable insights with application far beyond the computer desktop.

Karen Combe outlines Hewlett-Packard's approach to localization. HP experienced dramatic growth in international sales, and with it a rising demand for language and localization services. The case study is particularly interesting in its illustration of the principles of partnership and communication between a customer and a language vendor. The innovations here point the way for a truly collaborative and strategic effort in tackling complex language problems. We also see how managing the human aspects of language projects under intense pressure is as critical as managing the technical complexities. Combe describes how Hewlett-Packard strove to apply founder David Packer's classic "management by objective" philosophy to localization and translation—HP's Information Engineering department benchmarks its language program based on cost, on-time delivery, and quality. The results are impressive.

Suzanne Topping turns our attention to cutting time-to-market at Kodak, where she helped implement new approaches in use today. "Indeed there will be time," T.S. Eliot once said. Clearly, he was not writing about the localization industry, where "yesterday" often seems too generous a deadline. As soon as word spread that a new Kodak camera was available or soon to be released in the US, consumers in other markets were impatient for delivery—which would be impossible without translated instructions and associated software. In the not-too-distant past, consumers abroad felt like a younger sibling receiving a hand-me-down: their brethren in the US would enjoy version 4, while they had to sit by patiently with version 3. The Web has changed that for good: since the world knows the instant a new product or version is available, the goal is to come as close as possible to *simultaneous release* of foreign-language versions of a product. Topping shows how Kodak

worked toward this goal, which entailed reengineering product development to accelerate translation. Her study is a blueprint for many technology companies seeking to cut time-to-market.

Ricky Thibodeau shows how localization is a strategic imperative for small companies no less than for the big players. He reveals the techniques in use at MapInfo, a smaller but no less potent software developer. His is a lesson in the sheer economic power of localization: although MapInfo has only 450 employees worldwide (three quarters of them in North America), its products are available in 58 countries and 21 languages. He provides comprehensive analysis of MapInfo's decision-making as it refined its localization strategy. He shows how MapInfo transitioned from a model where translation was performed by its distributors to a hybrid model involving other third parties and a shored-up internal team. Thibodeau provides detailed descriptions of the company's tools and techniques—useful in an era when many firms keep such competitive advantages hidden from public view. Perhaps this is with good reason, given the impressive results MapInfo has achieved: they cut localization costs by 25 percent, in addition to reducing cycle time and improving quality.

Section IV: Language Tools and Techniques

This section covers language technology and process. Advances in these areas have been impressive, ranging from specialized tools for language professionals (electronic dictionaries and terminology management, for example) to specialized models for project management, budgeting, and communication.

Siu Ling Koo focuses on innovative approaches to controlling quality. LISA has developed a quality-assurance model for language projects, including standardized methodology for classifying errors. Koo's firm has supplemented the model with sampling techniques, so that portions of a language project can be tested, saving time on QA. If a sample has fewer than a predetermined number of errors, it passes; if not, it fails. She has been applying the model for a significant period, and illustrates the potential application of quality metrics to translation—a sign of a maturing industry embracing modern management techniques.

Gary Jaekel describes terminology management at Swedish telecom giant Ericsson. His case study offers an object lesson in the benefits of controlling the words we use. Terminology management typically involves a system for cataloguing, updating, retrieving, and managing terms. Without it, there would be far greater danger of using incorrect or inconsistent terminology. Terminology management is critical for reducing cost and turnaround time

on translation projects: if translators are given standard, approved glossaries of terms on which to base their translations, quality will be far higher with greater consistency. Jaekel here outlines how he helped create a terminology department that ultimately produced a product with over 15,000 core terms. Terminology is blossoming as its own discipline. Kent State's Sue-Ellen Wright, for example, oversees a growing number of graduate students pursuing this field. Terminology management is hardly an ivory-tower theory: Microsoft recently took a significant share of Trados, a prominent maker of commercial software for exactly that purpose.

Robert Sprung writes on technology and project-management innovations in regulated industries—those with a high degree of oversight or which must translate text that is subject to strict standards or regulatory audits. Consider the large volume of text translated for medical, pharmaceutical, automotive, legal, and financial firms—quality is obviously critical, but pressures continually mount to translate in ever shorter timeframes while containing costs. This case study focuses on cutting-edge solutions crafted for two Johnson & Johnson companies, ranging from ISO-compliant language processes to a custom corporate intranet to manage and control the translation cycle.

Section V: Language Automation

"Can't you get a machine to translate it?" This question seems to be on the lips of many vice presidents in charge of international sales and marketing. Do the math: a company with 10 user manuals totaling 1,000,000 words in English contemplates a move into 10 foreign languages; the price-tag for translation could easily top $3,000,000. With the stakes this high, and with the price of computer processing speed and storage dropping dramatically, pressures have been considerable to automate the language process.

Using computers to perform translation has been one of the holy grails of artificial intelligence (AI) since its inception. A machine that can translate is a machine that can think and write like a person. Easier said than done, it turned out. Although commercial machine-translation systems have been around for about 30 years, the vast majority of translation performed in the world today is still done by those pesky humans. This often surprises American marketing executives who are new to language and translation. Take the sentence "Mary had a little lamb." How do we know that "had" means "possessed" and not "ate" (as in, "John had a little beef and Mary had a little lamb"), "taught," "took advantage of," or, heaven forbid, "gave birth to"? The answer is that we don't know—cognitive scientists don't sufficiently understand how our brain places this particular lamb in a nursery rhyme and not a butcher shop. Since each language has unique "mappings"

of words to meanings, the computer can easily end up linguistically mistreating Mary and her lamb. And if the computer has a problem with Mary, what sorts of problems will it have with legal contracts or technical specifications for a nuclear power plant? Douglas Hofstadter, a pioneer in artificial intelligence, thinks that the computer might never be able to produce a reliable translation that reads coherently.[8]

Meanwhile, commercial pressures continue to impel innovations. Some think part of the solution lies on the *output* side, in the form of lowered user expectations. The search engine Altavista pioneered a Web-based machine-translation (MT) solution by partnering with Systran. Click on a Web address listed in the search engine, select a language, and *voilà*: a "translated" Web page free of charge. Don't expect a polished or even a particularly accurate translation, however. The system is good for "gisting"; by having most key words translated accurately with reasonably understandable syntax, you can often understand enough of the text to determine its basic meaning or at least context. If you need a polished translation or one on which the accuracy is verified, humans will have to get involved.

Another angle of attack is to refine the *input*. If you can simplify the text to be translated, the computer's problem will be greatly simplified. *Rose Lockwood* outlines such a solution implemented at Caterpillar over the course of years. This leading international manufacturer of heavy equipment looked at the cost and time involved in translation, and helped develop the concept of "controlled authoring." By dramatically limiting the vocabulary and sentence complexity, the company has achieved impressive results with machine translation.

Carmen Andrés Lange and *Winfield Scott Bennett* offer another machine-translation case study, this time from Baan Development in the Netherlands. Baan has successfully combined machine translation with translation memory, software used to store and manage terminology usage on an enterprise-wide basis. The authors also demonstrate that much of the challenge of implementing MT rests as much on the human as the technical side: many technical writers view their craft as more art than science, and are resistant to writing in a manner that they consider stilted or to using automated means in general. For machine translation to be viable in the long term, those who review the machine's output ("post-editors") are typically skeptical, and need extensive coaching and training if they are to support the effort.

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8. See Douglas Hofstadter, *Le Ton beau de Marot: In Praise of the Music of Language*, Basic Books, 1997.

Finally, language-technology watcher *Colin Brace* offers a glimpse into the European Community's implementation of Systran, a large-scale machine-translation system. Brace explains how the EC has gathered terminology and "trained" its system over the years, and has effectively customized Systran for specific types of EC documents. The case illustrates the extensive preparation involved in any MT implementation. There is currently no "all-purpose" MT solution on the market; one must invest in technology and human capital for a specific use. It may take several years and substantial investment to recoup the investment in an MT system—cautionary words for that overly optimistic US marketing manager we mentioned above. But as these three case studies illustrate, it may be worth the trip. And as the Internet further heightens demand for rapid translation, the coming years will no doubt bring us other dramatic developments.

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