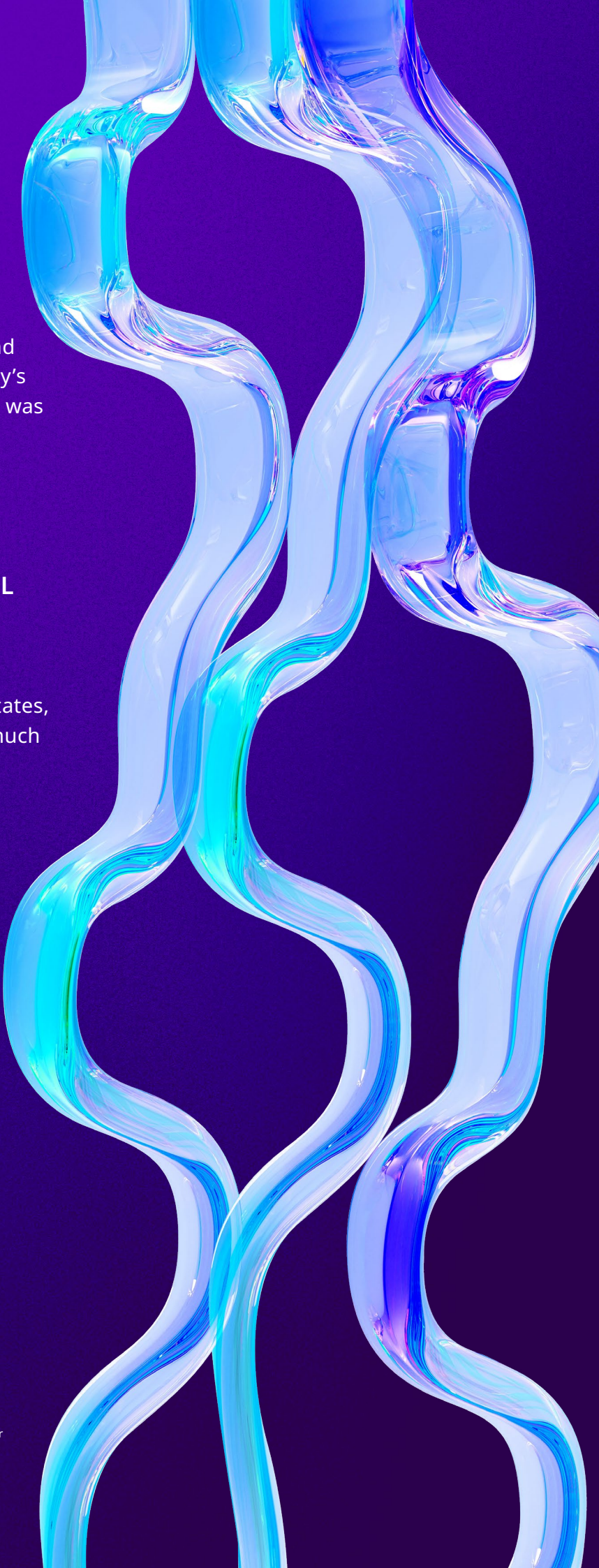**RWS**
Language Weaver

ARTICLE

HIGHSPEED
language in action

A day in the life of AI-powered
machine translation in the life sciences

Pharmaceuticals Ltd.[1] specializes in developing advanced medical treatments across its 20 globally distributed offices and laboratories. Three years ago, the company's senior leadership decided a new approach was needed for its document translation.

The key drivers for doing so at the time were two impending pieces of legislation:

1. **THE EUROPEAN UNION CLINICAL TRIALS REGULATION (EU CTR)**
   This would see stricter timelines on Pharmaceuticals Ltd.'s responses to requests for information by member states, meaning the company would require much faster translation turnarounds.

2. **THE US-BASED INFLATION REDUCTION ACT (IRA)**
   With the regulation set to lower prescription drug prices, Pharmaceuticals Ltd. foresaw the need to substantially lower its drug development costs without adversely impacting drug efficacy or patient safety.

1. A fictional pharmaceutical organization with fictional staff (i.e., 'Alex' and 'Jordan') created to demonstrate potential use cases of Language Weaver for companies within the life sciences sector. Any resemblance to real organizations or people is unintentional and purely coincidental.

So, Pharmaceuticals Ltd. turned to Language Weaver AI-powered machine translation to help it proactively address the implications of the legislations, and create a more robust, uniform translation methodology across its global operations.

78% of surveyed pharmaceutical companies expect to cancel early-state pipeline projects in the wake of IRA legislation.[2]

By integrating Language Weaver throughout its global applications and software stacks, Pharmaceuticals Ltd. gained instant access to translation speeds of 100,000s per minute across 3,000+ language combinations, at a substantially lower cost than via its previous fully human translation methods.

Not only would it now be able to address the two specific regulations easily, but having instant, secure, and accurate machine translations available at all times meant Pharmaceuticals Ltd. was best equipped to meet other continually evolving regulations. In addition, it would enable multilingual real-time colleague communications, appraisal of the widest range of research papers, and more, across every region and market in which it operated.

The global regulatory information management system market size was estimated at **$2.02 billion in 2023,** with projected growth at a CAGR of **10.4% from 2024 to 2030.**[3]

Let's look at just some examples of how staff at Pharmaceuticals Ltd. derive significant benefit from Language Weaver throughout their working days.

2. Survey commissioned by PhRMA and conducted in November-December 2022
3. Grand View Research, 'Regulatory Information Management System Market Size, Share & Trends Analysis Report By End-use (Pharmaceutical Sector, Medical Device Sector), By Region, And Segment Forecasts, 2024 – 2030'

Meet Alex.

Alex is a principal investigator at Pharmaceuticals Ltd. They've arrived at the lab in London ready to deliver the greatest impact they can through their work.

First on today's to-do list is finalizing the eligibility criteria for the new hypertension clinical trial in Lithuania. As a country with a high prevalence of hypertension in the male population[4], Alex is hoping to recruit a large cohort.

The criteria have already been signed off in English, but Part II of the EU CTR states that all patient-facing documents must always be in the local language(s). So, Alex hits translate in their word processor that has Language Weaver integrated via API and the text appears in Lithuanian within seconds. Alex then sends the translated document to the regional team in Vilnius for sense-checking before participant recruitment begins.
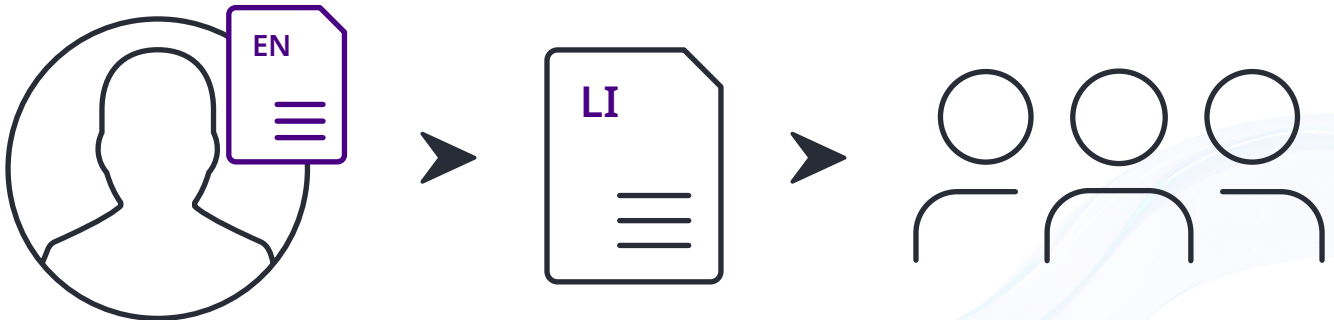
4. World Health Organization, 'More than 700 million people with untreated hypertension'

As Alex is sending the email, they receive another from their co-investigator in Argentina. It arrives in Spanish, and Alex's Spanish grades at school weren't great, but no matter, Alex again simply clicks 'Translate' for it to immediately appear in English.

The relief is short-lived, however, once Alex reads that a team member has been signed off work with an unexpected illness. They were a critical part of the team and are not expected back for the foreseeable future, which could put the Argentinian part of the hypertension trial in doubt if left unresolved.

As Argentina is another country with high levels of hypertension[1], not to mention a strategic market overall for Pharmaceuticals Ltd., stopping the trial simply isn't an option. So, Alex jumps on the company's internal messaging app which has Language Weaver integrated to contact the co-investigator and assess the situation.

It's 6 a.m. in Buenos Aires, but Alex knows their colleague starts early. Alex types only in English and the co-investigator only in Spanish, but each receives the other's words in their own native language allowing them to converse in real-time.

Following the conversation, Alex speaks to Jordan in HR to source a replacement for the Argentinian team. However, Jordan is uncertain about the country's rules on hiring temporary staff in such a highly regulated industry.

So, they visit the Argentinian government's labour law website and utilize the Language Weaver integration on their web browser. This loads the relevant documents in English instantly and accurately. Jordan gets stuck into scrutinizing them.

Back to Alex, who has a midday meeting scheduled with the Head of IT—based in Germany—and Pharmaceuticals Ltd.'s Head of Pharmacovigilance in Japan. The Japanese team is shifting to Electronic Clinical Outcome Assessments (eCOA) to better cope with the higher volumes of documentation it receives as a result of the increasing number of trials it conducts.

Though this meeting is effectively just a sign-off from the three parties, getting to this point has required multiple stages of adaptation, formatting, and testing of eCOA formats. Both the ongoing multilingual conversation and the creation of the Japanese eCOA app have only been economically viable since Pharmaceuticals Ltd.'s full integration of Language Weaver. By Alex's estimate, the project would have taken months longer and required a far higher budget prior to Language Weaver.

On this afternoon's schedule, Alex is reviewing the newly translated findings from the team based in Delhi and chairing all 17 of Pharmaceuticals Ltd.'s co-investigators—based around the globe—to explore strategies for Phase II of the trial.

It's a large co-investigator group, but with the growing trend for greater patient diversity, equity, and inclusion (DEI) in clinical trials, Alex anticipates the need for decentralized trials is only set to increase in the coming years. Thankfully Pharmaceuticals Ltd. is way ahead of the curve, with previous linguistic obstacles that would have prevented such work long since smoothed out.

It's just another day for Alex at Pharmaceuticals Ltd., and just another instance of Language Weaver accelerating their time to impact through AI-powered translations.
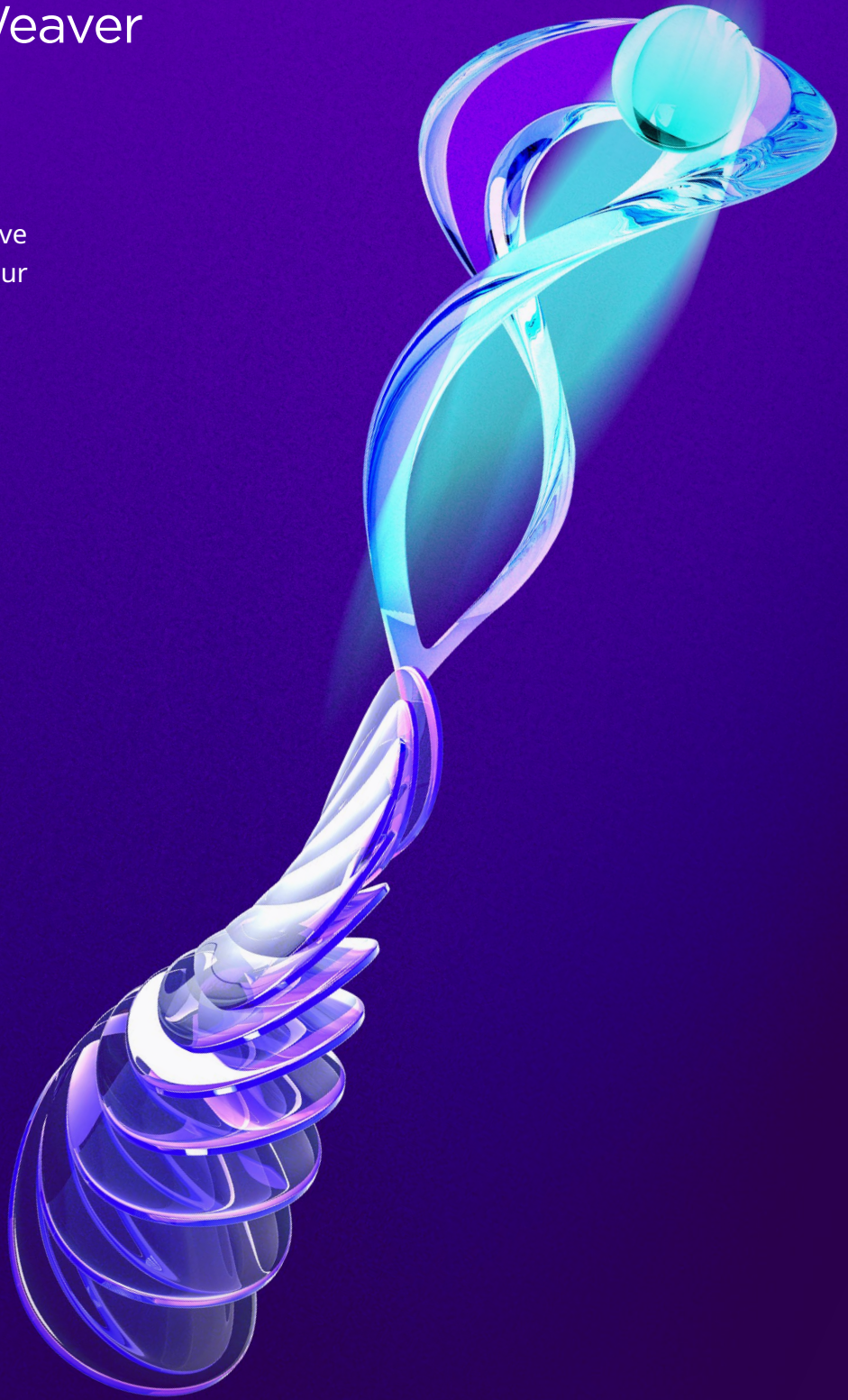
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Language Weaver

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markets, uncover insights and deliver superior customer experiences.

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