STRESZCZENIE POPULARNONAUKOWE (WERSJA ANGIELSKA)

Summary of the project:

This project develops European AI-driven methods to translate and adapt scholarly content - bridging linguistic gaps, shaping accessible knowledge for different audiences, and ensuring that vital research truly reaches the people who need it. We confront three main hurdles: (1) numerous researchers and students are restricted by language barriers, limiting engagement with important scientific findings; (2) even when translation exists, content often remains too dense or too specialized for lay audiences; and (3) there is a lack of effective workflows that carry these adapted materials to their intended communities.

To tackle these challenges, our consortium integrates state-of-the-art machine translation, automated summarization, semantic indexing, and video-based storytelling into one streamlined workflow. A core goal is to reshape complex academic documents - research articles, conference proceedings, outreach texts - into dynamically narrated videos, detailed yet understandable summaries, and localized translations accessible at multiple expertise levels. Users can pause videos to request clarifications, ensuring a truly adaptive learning experience. This "human touch" sits at the heart of our approach: we emphasize media education, audience research, and strategic communication, so that each translated and transformed output genuinely resonates with target groups ranging from schoolchildren to lay citizens and policy makers.

By joining specialists in computational linguistics, media education, and strategic communication from Poland, France, and Switzerland, we will deliver practical tools that fit current publishing systems while upholding Open Science standards. Crucially, we plan to involve the ultimate audiences - students, journalists, nonprofits - in testing these solutions. The result is a production system that seamlessly converts cutting-edge science into richly engaging, clearly communicated, and culturally adapted outputs for broader society. Ultimately, we foster more inclusive, democratic, and trusted science by ensuring that knowledge in any language or format remains comprehensible and widely disseminated.

Relevance to the topic addressed in the call:

Our project directly addresses the CHIST-ERA 2025 "Science in Your Own Language" (SOL) call by developing multimodal machine translation and knowledge adaptation solutions for scholarly content. Specifically, we respond to two core aims in the call text:

1. **Machine translation of scholarly documents:** We employ AI-based translation to convert research articles, metadata, and outreach across multiple European languages. This addresses specialized jargon and domain-specific terms, aligning with the call's requirement to handle "intricate cross-references, terminology and phraseology" at document level.
2. **Seamless, interoperable access to multilingual data hubs:** Our pipeline ensures that outputs - multilingual text, summaries, video scripts, and adapted content - can be integrated into open data repositories. We rely on standard formats, enabling reuse in Europe-wide infrastructures (e.g., CLARIN, EOSC), fulfilling the call's vision of 'tools for interoperable access' to diverse collections

By emphasizing iterative testing of our translation and transformation modules, we also satisfy the call's request for "demonstrations of new approaches to knowledge access," complete with user-centered performance evaluation and reproducibility metrics. Through carefully designed data management plans and open licensing, we further the Open Science aims of the SOL call, ensuring academic and lay audiences benefit from research in a language and format they understand. This approach expands scientific reach, fosters trust, and supports a more inclusive research culture - ultimately advancing the CHIST-ERA mission of shaping forward-looking, human-centered technologies for Europe and beyond.