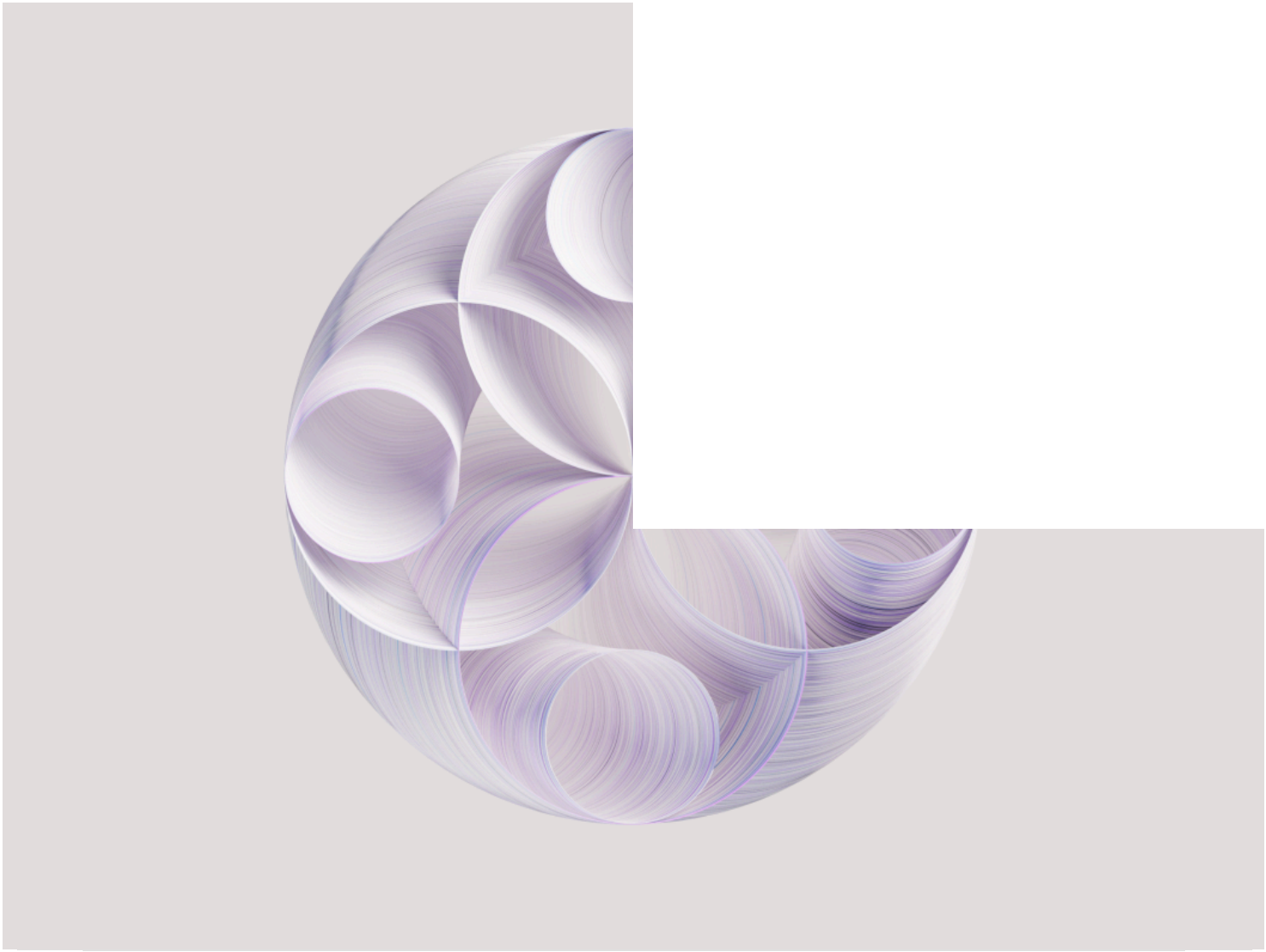
IBM develops watsor generative AI solutio provide fact-based in for the Austrian feder forces

The Federal Ministry for National Defer (BMLV) and IBM



A need for quality assurance, trust and transparency

The Austrian Ministry for National Defence (BMLV) maintains a Central Documentation Department (ZentDok), which places particular value on user trust and transparency. ZentDok sought an AI solution that would enable quality assurance while remaining in accordance with the human-in-the-loop principle, where human interaction is still required. With any potential solution, ZentDok stipulated that sources should be traceable, the risk of hallucination should be reduced to a minimum, and the user should be informed of the quality, relevance and reliability of the sources.

Subsequently, it should provide a customizable user interface and user-friendly access management.

As there is no “off-the-shelf” industry solution for these requirements, IBM Austria dispatched a multidisciplinary IBM® Client Engineering team to work with the ZentDok team. Together, they developed a Minimal Viable Product (MVP) to test the requirements for their feasibility. Using the following features, the resulting “ChatZentDoc” clearly stood out from other solutions:

- Provision of qualitative, high-quality responses based on verified, reliable sources.
- Selection of optimal sources from the data set, on the basis of which the response would be generated.
- Connection to existing systems and daily updating of the knowledge database.
- Referencing of sources to verify the correctness of the response, build trust in the AI, and allow further research.
- Integration of a feedback function to provide the ZentDok team with the option to continuously improve the solution.

The solution: ChatZentDoc—interaction with your own data in natural language

The IBM Client Engineering method offers customers the advantage of being able to familiarize themselves with the products they use under the guidance of experts. ZentDok is a longtime user of IBM technology for data collection and has also been using IBM Watson® Explorer solution for natural language processing (NLP) since 2016. So, BMLV decided to move ahead with IBM watsonx.ai™ AI studio technology.

With ChatZentDoc, an interface has emerged that uses NLP to provide fact-based responses. In the specially developed front end, users can query the database and isolate answers using filter options. The responses can be exported along with the

source documents. ChatZentDoc runs using information that is updated daily, to ensure the necessary timeliness. In this way, a so-called OSINT (Open-Source Intelligence Tool) was created, which can also be used for other applications in the public administration.

Highly efficient collaboration, despite an ambitious schedule

Colonel Klaus Mak, who leads ZentDok, describes the collaboration with IBM as profound and highly professional: “The quality of the first presentation positively surprised us all. No project has worked so quickly so successfully.”

The next step will be to create a test environment in which users of other departments can test the capabilities of the tool. In doing so, there is a need for training and education in dealing with generative AI and NLP: “We are entering a completely new world here. User prompting is the essential thing, and the user’s capability will become more and more important.”

Ability to act in times of overwhelming floods of data

“Open-source intelligence,” explains Benedikt Klotz of IBM, “is universally usable in areas that need to search and analyze quantities of unstructured data. AI solutions for the public sector always posed a particular challenge in terms of security and regulatory provisions such as GDPR, the IT Security Act and the EU AI Act. The experiences gained in this pilot also benefit other business areas within the economy that deal with sensitive data.”

Mak views AI as a powerful tool in dealing with hybrid threats: “You can observe the data floods with human intelligence, but not assess them. However, their evaluation and classification are the prerequisite for the ability to remain capable of acting in the light of risk scenarios.”

“ The quality of the first presentation positively surprised us all. No

project has worked so quickly so successfully.”

Colonel (Col) Klaus Mak
Head of the Documentation Center (ZentDok) at the National Defence Academy (NDA)
Austrian Armed Forces (AAF)

A platform for trusted generative AI

The Austrian IBM Client Engineering team is continuing to develop the resulting AI platform to deploy it in other environments. With the help of IBM Consulting®, MVP engagement continues so that ZentDok can evaluate further requirements. As a next step in the collaboration, it plans to use watsonx.ai as a product for trusted generative AI. Mak sees great potential in the tool, as well as training needs, before the tool is deployed and run in a legally safe way.

In contrast, Mak does not expect the solution to result in job losses, a common fear in the context of generative AI. The human-in-the-loop principle understands insights that generative AI extracts from unstructured data as support for human decision-makers who always have the final word. Therefore, according to Mak, more highly-qualified personnel are needed, rather than fewer. “I’m glad we were able to do this,” he says, “and I would like to thank IBM for running this process very quickly and smoothly.”

About The Federal Ministry for National Defence (BMLV)

The Federal Ministry of Defence (German: Bundesministerium für Landesverteidigung, sometimes shortened to BMLV or Verteidigungsministerium) (link resides outside of ibm.com) of Austria is the ministry in charge of all matters relating to military affairs, especially the Austrian Armed Forces.

Solution components

- IBM® Client Engineering →
- IBM Consulting® →
- IBM watsonx.ai™ →