



BMDS fast tracks major infrastructure projects across Germany with *open source* and *agent-based AI*

The Federal Ministry of Digitalization and State Modernization (BMDS) worked with Capgemini and European partners on a sovereign solution that accelerates approval of new energy and transportation projects

Client: Federal Ministry of Digitalization and State Modernization (BMDS)

Region: Germany

Industry: Public Sector

Client challenge:

BMDS aimed to address lengthy and complex planning and approval procedures for critical infrastructure projects, which were often delayed by more than six months beyond the legally defined limit.

Solution:

In collaboration with BMDS and six European technology partners, Capgemini developed a modular, AI-enabled approval platform designed to support administrative staff throughout the entire end-to-end process.

Benefits:

- Substantial end-to-end acceleration of planning and approval processes
- Reduction in application processing time
- Full transparency and traceability of AI-supported results
- Scalable and reusable AI modules across different legal contexts and applications

After launching a wide-ranging project to apply AI to support more effective administration throughout the German government, The Federal Ministry of Digitalization and Government Modernization (BMDS) partnered with Capgemini to develop a flexible foundation for ongoing innovation. The result was a modular AI platform that will expand visibility into acceptance processes while clearing the path for further innovation, in part by being published as an open-source solution.



Driving digital transformation in public administration

BMDS plays a central role in advancing efficient, transparent, and legally compliant administrative processes across Germany. However, planning and approval procedures for critical infrastructure projects remain highly complex, requiring extensive documentation and strict adherence to regulatory frameworks.

These factors, combined with largely manual workflows and increasing procedural demands, often result in prolonged processing times and significant administrative burden. To address these challenges, BMDS launched the SPARK initiative to leverage artificial intelligence in supporting administrative decision-making. In doing so, the ministry intended to improve efficiency, consistency, and transparency while maintaining full legal accountability.

Ensuring the success of this initiative meant bringing in external expertise, which led BMDS to select Capgemini as one of the key partners within an innovation partnership model, in which role we worked closely with specialized European technology providers.

Building a modular and scalable AI solution

Capgemini led a diverse and interdisciplinary team consisting of six partners. Together, these organizations designed a fit-for-purpose modular AI solution aligned with real-world planning and approval workflows.

The first step of the project was understanding what case workers required from the planning and approval processes. This information was gathered via a thorough research phase, after which the team design and developed the modules based on guidance from intended users. The project was delivered using an agile methodology that relied on close collaboration between BMDS and Capgemini together with its partner ecosystem.

Implementation then followed a structured and phased approach, beginning with the development of a prototype, after which the project underwent integrated testing to achieve operational readiness.

The project team particularly emphasized seamless integration with existing administrative platforms using standard interfaces, ensuring compatibility with established workflows while minimizing disruption.

Following the solution's rollout, the end-to-end system now supports administrative staff throughout the entire approval process, from document preparation and formal review to substantive review, objection review, and AI-assisted drafting of administrative outputs. Each module is configurable and reusable, enabling application across different processes and ensuring scalability beyond a single use case.

Validation mechanisms were embedded throughout the solution to enable continuous user feedback and ensure high-quality, legally robust outputs. This approach ensured that technical innovation, legal compliance, and user requirements evolved in parallel throughout the project lifecycle.

Delivering measurable impact and enabling future innovation

The project has successfully delivered a robust, scalable, and trustworthy AI foundation capable of supporting a wide range of administrative procedures beyond its initial scope. Early validation results have demonstrated significant improvements in efficiency, including an acceleration of approval processes, while maintaining high standards of quality, transparency, and explainability.

From the outset, the project placed strong emphasis on modularity, flexibility across legal frameworks, and the responsible use of AI, ensuring that explainability, validation, and trustworthiness were embedded as core design principles.

As the final step, BMDS, Capgemini, and the associated tech partners will publish the solution as an open-source offering that can be re-used by anyone. Meanwhile, the team has prepared the solution to go live on the first integrated platform in North Rhine-Westphalia, which will support accelerated approval procedures under the Federal Emission Control Act. Further extensions to additional administrative platforms and processes are expected, broadening the solution's impact across the public sector.

By embracing AI, BMDS is not only improving operational efficiency but also redefining how public administration functions in a digital era. The initiative positions the ministry as a pioneer in modern governance and lays the foundation for future advancements ranging from AI-supported workflows to more advanced, agent-driven systems. This will enable the pursuit of key infrastructure projects that will introduce innovations that impact citizens throughout Germany.



This award underlines that Germany can play in the top league when it comes to AI in administration. Our technical solution uses so-called agentic AI and shortens procedures that currently take months to days. We will now make this technology available as open-source code and offer it piece by piece in the country for reuse. In this way, we are creating a blueprint for the use of artificial intelligence in approval procedures and at the same time strengthening our digital sovereignty.”

Dr. Karsten Wildberger,
Federal Minister for Digital Affairs

Source: [Deutschland gewinnt internationalen KI-Preis](#)



The cooperation with Capgemini and its sovereign consortium was the right choice for the BMDS. The solution that the team developed goes well beyond our initial ambition and will be a centerpiece of the renewed way the German administration works.”

Holger Lehmann,
Project Lead, BMDS

About Capgemini

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