AI Agent-Based Process Automation Proof-of-Concept

Industry	AI Consulting	Client	AI Consulting Client
Role	AI Product Manager/AI Solution Architect		
Key Result	The practical applicability and value of automating a Product Development Process with AI agents were successfully demonstrated, leading to negotiations for full-scale implementation.		

Situation	Task	Action	Result
The client faced serious problems in their Product Development Process (PDP) – the process for preparing new confectionery products for the European market, as well as modernizing, changing, or retiring existing products. This process was extremely lengthy and unpredictable due to its complex, iterative nature and numerous interactions with various enterprise functions. This led to market entry delays and difficulties in managing the product lifecycle.	In my role as a Product Manager, my task was to demonstrate to the client the value of automating a critical Product Development Process using artificial intelligence agents. The goal was to show the potential for significant time reduction, increased predictability, and improved transparency through analytics. The final result was to be a working Proof-of-Concept (POC) that would confirm the viability and effectiveness of this approach.	**Detailed Target Process Modeling:** I meticulously modeled and aligned with the client the target state of the Product Development Process, mapping complex routes, iterations, and interactions. **Identification of AI Agent Automation Fragments:** Based on the modeled process, specific fragments and activities that could be effectively automated with intelligent agents were identified. **Development of Technical Specifications for AI Agents:** Detailed technical specifications were prepared, describing the logic, functions, interactions, and requirements for each AI agent. **Selection and Application of Advanced Technologies:** For the POC, leading frameworks for multi-agent systems were used: Crew AI and MS Autogen. **Development of a RAG (Retrieval-Augmented Generation) System:** In the second phase of the project, I developed a functional RAG system for storing and retrieving the organization's knowledge about the process. **POC Demonstration:** I organized and conducted a demonstration of the working Proof-of-Concept, showcasing the automated process fragments and the capabilities of the RAG system.	**A Working Proof-of-Concept (POC) with Agent-Based Architecture:** The practical applicability and value of automating the Product Development Process based on AI agents were successfully demonstrated. **Confirmed Potential for Process Acceleration:** The POC showed the potential to reduce product preparation time by up to 5 times, which is critical for the client's market competitiveness. **Foundation for Process Analytics:** The project demonstrated the possibility of creating an analytical system that allows tracking each product at every stage of development, increasing process transparency and manageability. **Client Conviction:** The client was impressed with the demonstrated capabilities, which led to negotiations for a full-scale implementation of the developed approach. **Technical Foundation for Scaling:** The developed architectural solutions and RAG system laid a solid technical foundation for the further development and scaling of the system within the organization.