

Basic requirements for architects and software developers who want to use AI tools

- A **generic basic concept**, that can be adapted to different processes, technologies or tool stacks that can be used jointly by distributed development teams.
- **Minimal training time**, intuitive use of processes and tools, as components can be exchanged as needed.
- Generic, but **fully customizable**: e. g., no-code/low-code interface for multi-AI agents.
- **Modular and flexible**: use of individual components (tools) or the entire process chain from RE + DEV + QA + CI/CD.
- Coverage of the **entire software lifecycle**: from conception and development to long-term maintenance services (SLA).
- **No vendor lock-in**: use of the most suitable tools at any time, including leading open-source solutions.
- **100 % data sovereignty and security**: customer data and knowledge.

AI-supported software development starts at a new level

SSI DevBuddy™ supports the following roles in the software development lifecycle:

1. Business Developer / Sales Perspective
2. Product Owner (PO)/Proxy
3. Software Architect
4. Scrum Master
5. Developer
6. QA Manager / Tester
7. DevOps Engineer



„SSI DevBuddy™ simplifies complex tasks throughout the entire software development lifecycle with the help of AI-powered prompts. The included role descriptions, functions, and sample prompts serve as practical guidance and inspiration.“

SSI DevBuddy™ – a framework for all development steps

AI assisted Software Development Tasks	Steps
1. Requirements Engineering	●
2. Automatic Generation of User Stories and Acceptance Tests	▼
3. Effort Estimation	▼
4. Automatic Product Backlog and Sprint Planning	▼
5. Automated Code Generation (including Unit Tests)	▼
6. Code Review, Documentation and Quality Assurance	▼
7. Bug Detection and Bug Fixing Support	▼
8. Basic Security Analysis (i.e. NIS-2 compliance)	▼
9. Automated CI/CD Deployment and Services	▼
10. Integrated AI Assisted User Support	●

The SSI DevBuddy™ can be used either for individual software tasks

- or the steps can be linked to form a process chain
- reducing effort, costs, and time
- while improving code quality.

SSI DevBuddy™ enables four key advantages for developers:

- Time savings through automation of repetitive tasks
- Code quality through AI-supported standards, testing, and refactoring
- Knowledge retention through access to project-specific and generic expertise
- Data sovereignty and security through local or GDPR-compliant use



Developers find working with SSI DevBuddy™ particularly flexible because it can be used both as a chat integrated into the development environment and as an automated agent. In addition to the free and flexible use of LLMs, other tools can be integrated very easily.

However, SSI DevBuddy™ is not just another tool, but a tailor-made solution that transforms the entire software development process – individual AI tools or chained AI tools for all steps – tailor-made and perfectly integrated

Areas of application for SSI DevBuddy™:

- a) New development**
Support for the complete creation of a new software solution – from the initial concept to rollout, including requirements analysis, code generation, and deployment.
- b) Maintenance and further development of existing software** – expansion or optimization of existing software. SSI DevBuddy™ analyzes existing structures, adds new features, or resolves technical debt.
- c) Migration** – Modernization or technological renewal of existing software. SSI DevBuddy™ supports technology change, refactoring, replacement of individual layers, or complete “big bang” migrations.

Hierarchical knowledge bases Individual knowledge

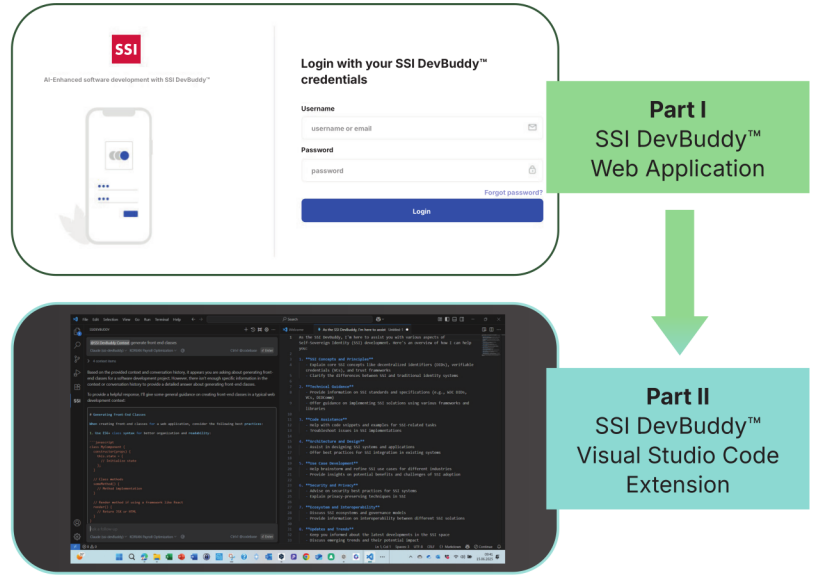
Three-layer structure:

- 1. SSI knowledge base**
Industry best practices & design patterns
- 2. Generic "customer" knowledge base**
Technical and regulatory framework conditions applicable for all projects of this company.
- 3. Customer project knowledge bases**
Product- or project-specific framework conditions

This structure ensures that the AI can access the truly important and correct information.



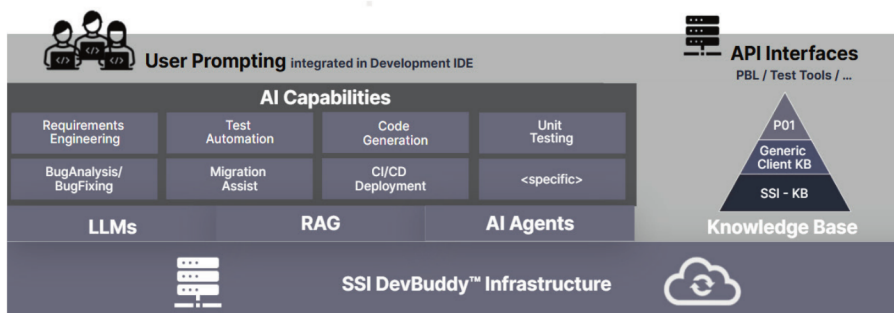
Core components of SSI DevBuddy™ Knowledge Base and Code Generator



Core components: hierarchical knowledge base, RAG, LLM

AI-supported software development uses agent-based AI to support and improve requirements engineering, code generation, and testing. This accelerates traditional development and reduces development and lifecycle costs.

By using SSI DevBuddy™, integrating PBL-Items, and supplementing them with powerful connectors and agents, the entire software lifecycle is efficiently designed in a flexible framework – with greater efficiency, security, and quality.



Conclusion:

SSI DevBuddy™ accompanies the entire software lifecycle – from the initial idea to operation (end-to-end). The automation and contextualization of all steps saves time, increases quality, and makes development predictable and traceable – regardless of whether it is new, existing, or being migrated.

» With the AI-powered automation of SSI DevBuddy™, we were able to revolutionize our software migration. Intelligent code transformation and test automation halved project runtime and significantly improved code quality. Our development team was able to focus on strategic innovations, while SSI DevBuddy™ reliably took care of repetitive tasks. «

You know the requirements for your future software. The SSI DevBuddy™ is the way there.

No matter what industry you're in or how big your company is, SSI DevBuddy™ adapts to you, your requirements, and your software.

Let's talk about your project. Free consultation.



Ethan Caldwell, CTO, Quantis AI