bitside

Full modernization of a business application with AI

Moving faster without losing control.

KWCON KIRCHZARTEN · NOVEMBER 9, 2026

Stephan Herold · bitside GmbH

ABOUT US

bitside

IT consulting that makes the difference.



THE SPEAKER

Stephan Herold

Managing Director bitside GmbH

01 ARCHITECTURE AND STRATEGY CONSULTING
Business-critical systems, strategy and system design

02 PROJECT LEAD AND LEAD DEVELOPMENT
Modernization projects in the insurance industry

03 MODERNIZATION AND DIGITALIZATION
Policy and sales systems, TAA, partner, workflow

THE COMPANY

bitside is an owner-managed IT consultancy from Cologne. We build AI agents, automate document processing and modernize legacy system landscapes.

SELECTED CLIENTS

ZURICH · Barmenia Gothaer · helvetia · R+V · HUK COBURG · Mecklenburgische Versicherungsgruppe · iu Internationale Hochschule · REWE DIGITAL · Handelsblatt · JOHNSON · FernUniversität in Hagen

THE PROJECT

bitside

One core system, in numbers.

A platform operator, started 24 years ago, with more than 50% market share in pharma orders in a regulated market, is modernizing its system completely while it keeps running.

2.4 M

lines of code in about 28,000 files

2,200

tables in the database

500,000

orders per year by PDF and fax alone, some of them handwritten

> 50%

market share in the industry

Big enough for big gains. Too critical for experiments.

THE STARTING POINT

The business logic is not in one place. It is everywhere.

Five business domains, spread across every system.

The logic of a single order sits in the portal, the workflow, the database and the templates, all at once.

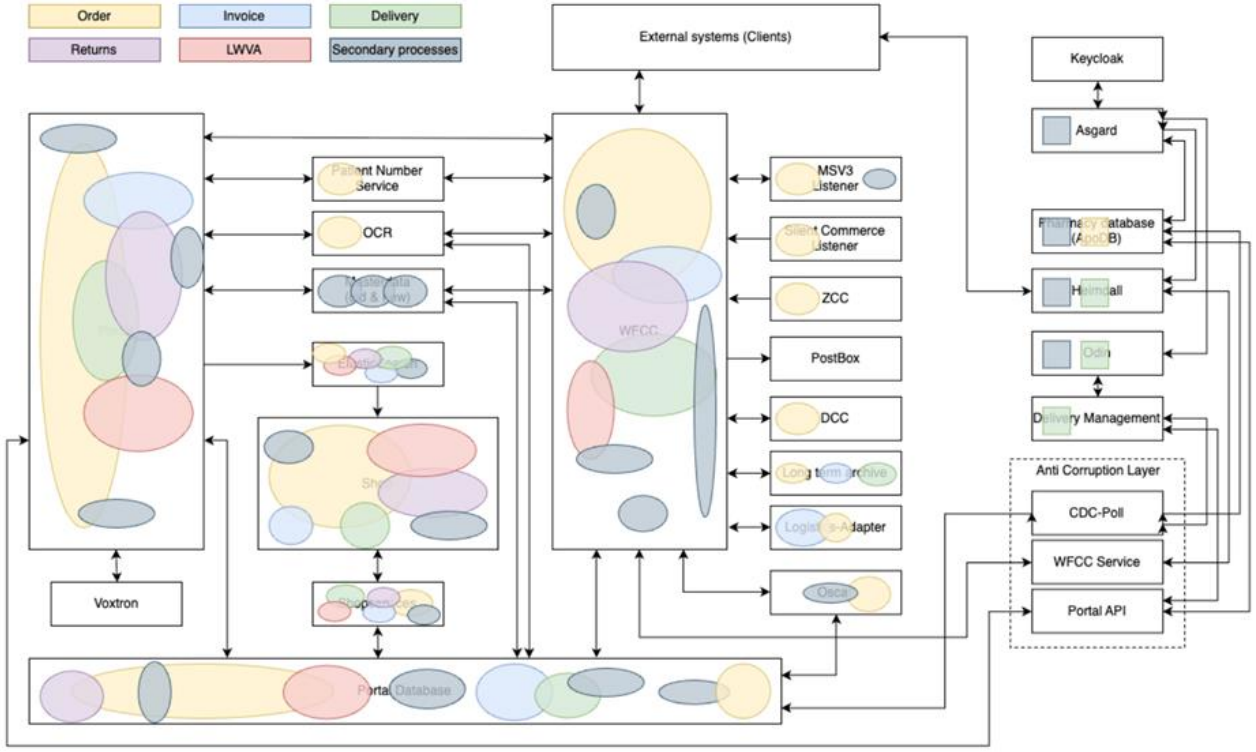


Fig. 2: Existing systems with business processes

WHAT THIS MEANS

Every change becomes detective work.
The knowledge is in code, configuration, database and in people's heads.

Regulation demands proof.
Every requirement must be testable and backed by evidence.

A big bang is not an option.
The old system must keep running while it is taken apart and replaced step by step.

bitside

This is how everyone uses AI today. Is that all?

Chat with a knowledge base

Ask questions about the docs, get answers with sources.

Coding assistant

Write code faster, tests, refactoring.

Meetings → tickets

Summaries, ticket texts, meeting notes.

"AI, go explore!"

Fails quietly: samples instead of full coverage, never comparable.

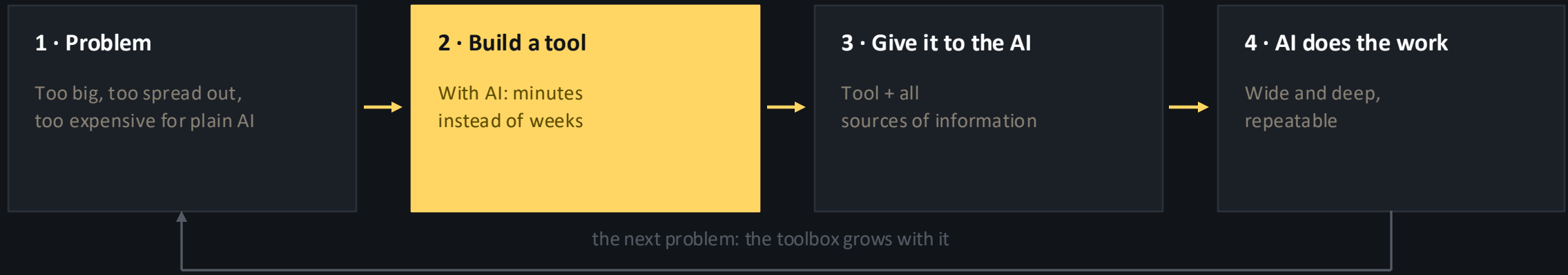
We do this too. It helps.

But it makes people a few percent faster, not the whole project many times faster.

THE CORE IDEA

bitside

Today, tools can be built in minutes.
With them, AI can handle what would otherwise be too much for it.



The next step for AI in projects is more than chat. It is tools that give the AI the right context.

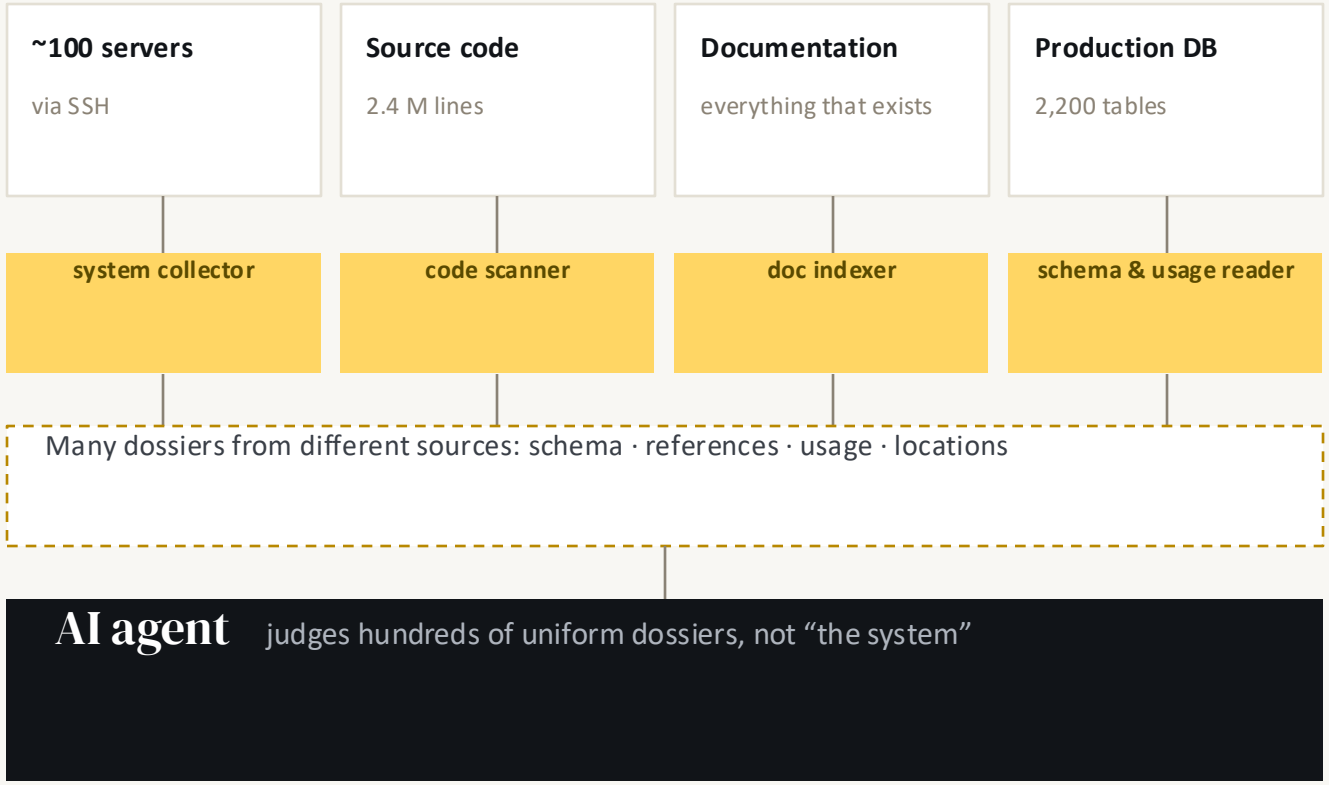
bitside

Divide and conquer: first the sources, then the tools, then the task.

1
ANALYZE THE SOURCES
What is there?
What is inside?

2
ONE TOOL PER SOURCE
Get to the information fast

3
FULL ANALYSIS
The actual task, across everything



THE ANSWERS

What is it used for?

What depends on what?

What is dead?

Complete, comparable, repeatable. “Go explore” can't do that.

THE RESULT

bitside

2,200 tables. One day.

Business purpose, dependencies and usage for each table, with sources. Checked against live production data.

All numbers about the system come from exactly this measurement of reality.
None of them is in any documentation.

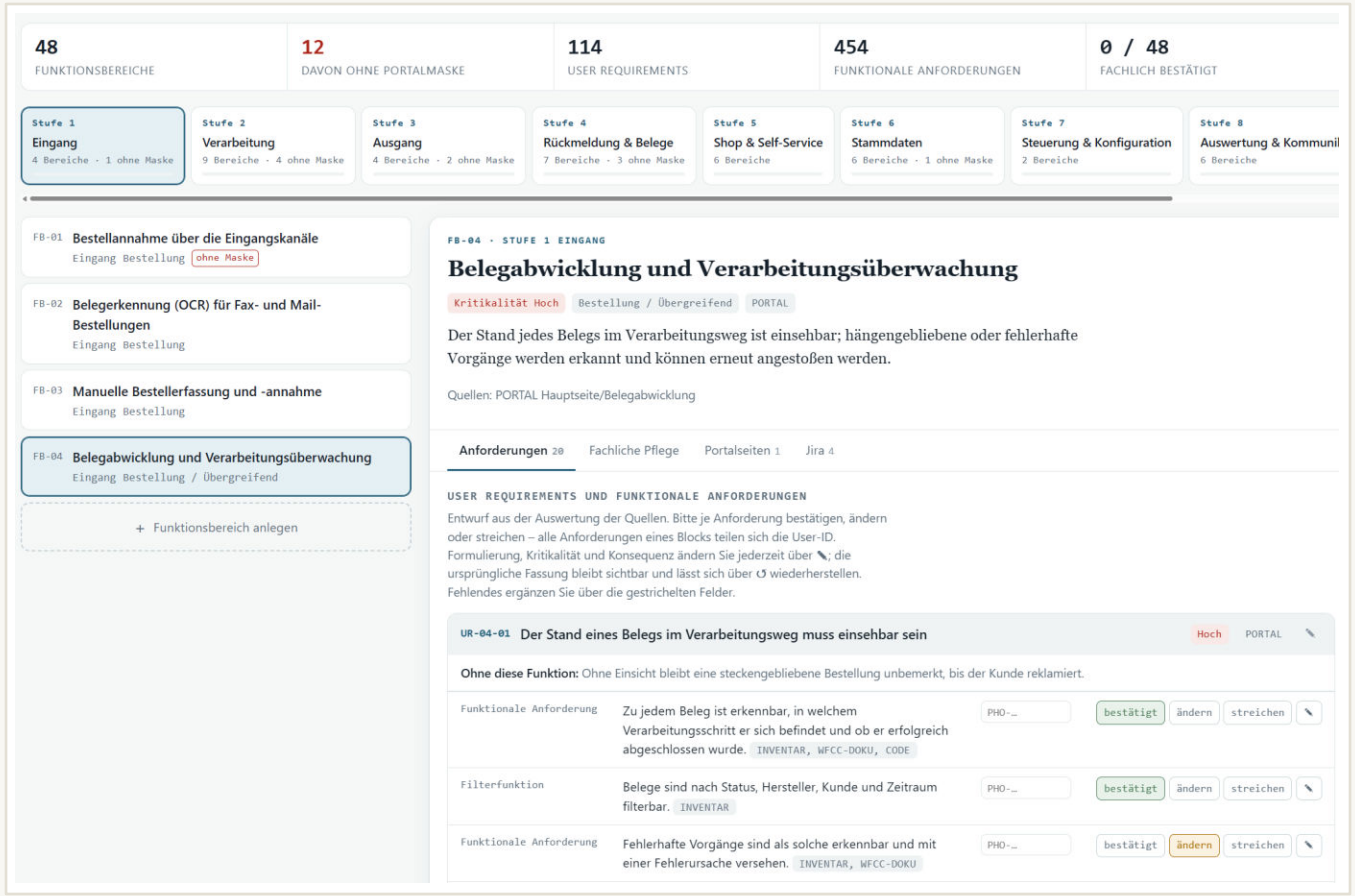
bitside

A web interface instead of three hundred Word documents.

Built in minutes.
First version in minutes, ready for real use after half an hour.

The interface can be thrown away.
The real value is the structured data: 48 functional areas, 114 user requirements, 454 requirements.

The business team works in it directly.
Confirm, change, delete, instead of endless comment rounds in Word.



Structured data becomes a clear coverage matrix in seconds

WITHOUT LOSING CONTROL

bitside

Who is actually in control? Two answers.

TRACEABILITY

1,979 source references for 454 requirements

Every statement has its source and its status: **fact** if the source says it directly, **inference** if it is concluded from it.

Repeatable pipelines instead of one-off answers. People make the decisions.

CONSOLIDATION

This speed creates chaos.

Throwaway tools are part of it. Everyone quickly builds their own toolbox.
The answer is **curate, don't forbid**: regular reviews (what helps? what can go?) and planned consolidation phases for docs, requirements, code and planning.

AI makes engineering discipline more valuable, not less.

Without consolidation phases, this speed will throw you off the road.

TAKEAWAYS

bitside

Five patterns you can reuse.

01

Find the sources

First analyze, then connect. At the start, nobody knows where the information is.

02

Build tools

Don't just tune prompts. Take a structured approach.
With AI, tools are quick to build.

03

Split the work

Fixed rules go into the tool, judgment goes to the AI.

04

Data is the real value

Tools are consumables. Throwing them away is fine.

05

Plan for consolidation

A fixed rhythm instead of tidying up on the side. That is how you keep control.

What worked here is not a special case. It is a method.

bitside

Moving faster without losing control.

The AI doesn't get smarter. Its toolbox does.

STEPHAN HEROLD · BITSIDE GMBH

bitside.de · herold@bitside.de

Let’s connect