

CASE STUDY · AEROSPACE MANUFACTURER · BUSINESS INTELLIGENCE

Ask the ERP a question, get an answer

A chat assistant that turns plain-English business questions into database queries against the ERP and returns the results, with the query shown for checking.

AI assistant

Business intelligence

ERP data

Natural language

INDUSTRY

Aerospace manufacturing

TEAM

Purchasing, operations, finance

DELIVERED AS

Internal web chat app

CONNECTED TO

ERP database and reporting snapshots

THE PROBLEM

What was getting in the way

- The ERP holds hundreds of tables, and answering a new question meant someone who knew them well had to write the query.
- Every new question became a request and a wait, so people made decisions on older numbers or rebuilt them by hand in spreadsheets.
- Different people wrote different queries for the same question and got different answers.
- Heavy reports run against the live system can slow down the people using it.

HOW WE SOLVED IT

What we built

- A chat page where anyone can type a business question in plain English.
- The AI is given a detailed map of the ERP: tables, columns, keys, relationships, status codes and the plant's own business rules, plus existing reports as worked examples.
- It writes the query, runs it and shows the results as a table. The SQL is displayed next to the answer so an analyst can check it or reuse it.
- It knows the difference between live data and the end-of-day, week, month and year snapshots, and uses snapshots for trends so the live system is not burdened.
- Guardrails limit the number of rows returned and how long a query may run, and queries are written so they do not block production work.
- Results download as a spreadsheet file. The AI can be a hosted model or one run locally, so a plant that wants its data kept in-house has that option.

From question to answer

1

Ask
Type the question the way you would say it out loud.

2

Translate
The assistant uses its map of the ERP to write the query.

3

Run
The query runs with row and time limits.

4

Review
Results appear as a table, with the SQL shown for checking.

5

Export
Download to a spreadsheet, or ask a follow-up question.

The assistant

One screen. The answer, the query behind it and the export button are all in the same place.

assistant.internal / ask

Which five suppliers have the most open order value right now?

Here are the five suppliers with the highest open purchase order value. Open orders only, largest first.

▸ View SQL

```
SELECT TOP 5 s.name AS supplier, COUNT(*) AS open_orders,
SUM(po.total_amount) AS open_value
FROM purchase_orders po WITH (NOLOCK)
JOIN suppliers s WITH (NOLOCK) ON s.id = po.supplier_id
WHERE po.status = 'Open'
GROUP BY s.name
ORDER BY open_value DESC;
```

SUPPLIER	OPEN ORDERS	OPEN VALUE
Northwind Fasteners	14	\$88,420
Harbor Metals	9	\$74,150
Delta Precision	11	\$61,905
Summit Coatings	6	\$40,310
Ridgeline Supply	7	\$33,760

↓ CSV

5 rows · 3 columns

assistant.internal / what-it-knows

What the assistant works from
Loaded once, used for every question

✓ **Every table and column**
Hundreds of tables and views, with names, meanings and keys

✓ **How tables relate**
Joins, composite keys and foreign keys, so results match the ERP

✓ **Your business rules**
Status codes, custom fields, and which columns mean what at your plant

✓ **Live vs. history**
Trend questions use daily, weekly and monthly snapshots instead of the live system

✓ **Your own reports**
Existing stored procedures serve as worked examples

Question, query and result. The SQL is always visible, so answers can be checked and the query reused.

Illustrative screens rebuilt with sample data. No customer, supplier or employee information is shown.

The difference on the floor and in the office

Answers without a report request

People get numbers when they need them, not after a queue of report requests.

Checkable answers

The query is shown with every result, so it can be verified, saved and reused.

Shared definitions

Business rules live in one place, so the same question gets the same answer for everyone.

Lighter load on the live system

Trend and period questions use snapshots, which keeps production transactions responsive.

Time back for the reporting team

Analysts spend their time on new analysis instead of one-off lookups.

Your choice of AI hosting

Use a hosted model, or run one locally when data must stay on the internal network.