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CASE STUDY · MARLUC SYNOPSIS

Bayer E.L.Y. agronomy assistant

IMPLEMENTED 2024–2025 · AGRICULTURE AND FOOD · UNITED STATES · BAND D · CLAIMED ONLY

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Bayer's Crop Science division built E.L.Y., a generative AI assistant that answers agronomy and product questions for its sales teams and agronomists. Bayer says more than 1,500 frontline employees in North America use it, answering customer questions 60% faster and saving up to four hours a week.

ABOUT THIS SYNOPSIS

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The impact band, proof marker and SEAM view are MarLuc's opinion. The organisation is not a MarLuc client and has not reviewed or endorsed this synopsis. Names and trademarks belong to their owners.

NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

AI used: Generative AI assistant with retrieval over Bayer's agronomy and product data (E.L.Y.).

Implemented: 2024–2025. Grade: band D, Task support, Claimed only.

Headline result, as reported: Response times to customer questions improved 60% and up to four hours a week saved per user, by Bayer's account, August 2025

1 · The case

The facts, as reported by the 4 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Bayer. Bayer Crop Science, a division of Bayer AG, sells seeds and traits, crop protection products and digital farming tools, and advises farmers through field teams and distribution partners. E.L.Y. is deployed for frontline staff in North America. Canvas block: 5. People and skills. Also 3. Customers and proposition, 6. Data and technology.

Business challenge

The challenge. Farmers ask their agronomic advisors detailed questions about products, performance and application rates. Advisors searched online materials, messaged colleagues and gathered information from several sources while the farmer waited hours or days, by Bayer's account. Its global generative AI business lead said accurate answers typically require years of specialised expertise or reference manuals.

Who implemented it

EY (Consultancy): Helped Bayer Crop Science build the 90-day proof of concept..
Microsoft (Model or cloud provider): Leading technology partner; the model was built in the Microsoft Azure environment..
In-house (In-house): Bayer Crop Science digital and agronomy teams built, tested and rolled out the tool..

Technology (SEAM pillar E)

SEAM types: T4 RAG / vector search over your own data, T7 AI agents. Deployment: Not reported. Vendors and products: Microsoft, Microsoft Azure.

Where it was built in: Internal web and mobile assistant for frontline staff, grounded in agronomic data, field trial results and product label guidance through retrieval-augmented generation.

What changed

Before: advisors gathered answers from scattered materials and colleagues, taking hours or days, by Bayer's account. After: frontline staff ask E.L.Y. in natural language and receive answers within seconds, and Bayer reports response times to customer questions 60% faster. [1] [2] [3] [4]

What it cost

Not reported

What it saved

Up to four hours a week per employee, by employees' reports cited by Bayer; Bayer says frontline staff can reinvest thousands of hours every week. No money figure published. [1] [2] [3] [4]

Governance and control

Bayer says the pilot was validated by agronomists, and EY says answers were scored against subject matter experts with an automated validation process. The tool is for internal staff; grower-facing use has not started. Bayer's chief information officer said assessing return weighs financial and sustainability outcomes. Accountable owner and accuracy monitoring in live use: Not reported.

S2 · Accountable owner · Claimed
Bayer Crop Science's chief information officer and a global generative AI business lead speak for the programme; a named owner of answer quality is not reported. [1] [4]

A1 · Safe use · Claimed
The tool is for internal staff; Bayer has not yet offered it to growers, by its chief information officer's account. [4]

A2 · Human in the loop · Claimed
Staff advisors receive the answers and advise farmers; Bayer says the pilot was validated by agronomists. [2]

A3 · Monitoring and assurance · Claimed
EY says answers were scored against open-source models and subject matter experts, with an automated validation process, during the proof of concept. [1]

A4 · Vendor AI · Not reported
Microsoft and EY are named partners; vendor controls are not reported. [1] [2]

A5 · Agent controls · Not reported
Bayer describes E.L.Y. as built on an agentic architecture; agent controls are not described. [3]

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Faster answers to customer questions, by Bayer's internal benchmarks.

– Time saved for frontline staff, by employees' reports.

– Adoption by more than 1,500 frontline employees in North America, by the chief information officer's account.

DID NOT

– Not reported

UNPROVEN

– Accuracy in live use; EY's account of 'outstanding accuracy' comes from the 90-day proof of concept.

– Effect on sales or on farmers' results.

– Value for farmers directly, as grower-facing use has not started.

Timeline

Mar 2024 Bayer announces a pilot of an expert generative AI system for agronomy, built with Microsoft and EY [2]

Aug 2025 E.L.Y. named 'AI-based AgTech Solution of the Year'; Bayer reports 60% faster responses to customer questions [3]

Dec 2025 Chief information officer says over 1,500 frontline employees in North America use E.L.Y.; grower-facing use not yet started [4]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: Not applicable. Grade: D, Task support. Proof: Claimed only. Level of change: Task support.

The SEAM view and lessons learnt

E.L.Y. rests on curated agronomy and product data that Bayer already held, and its first users are Bayer's own staff, who can catch a wrong answer before a farmer acts on it. That is a sensible order of rollout for advice with financial and safety consequences. The figures are internal benchmarks; an outside check of accuracy would strengthen the case before any farmer-facing launch.

1. Ground an assistant in curated proprietary data with a clear owner.
2. Roll out to expert staff before customers.
3. Benchmark accuracy against experts and keep measuring it in live use.

Evidence

Score 1 of 4. Self-reported: Bayer's releases, its chief information officer's interview with AgFunderNews and its consultancy's client story. The award organiser says its recognition is opinion and not a statement of fact.

Evaluation method. Self-reported company figures: internal benchmarks and user-reported time savings.

Sources disagree. Bayer's August 2025 release says response times to customer questions improved by 60%; in December 2025 its chief information officer described a 60% increase in productivity. AgFunderNews reports both that over 1,500 agronomists tested the tool for about a year and that over 1,500 frontline employees use it.

Status. Ongoing: internal tool for North American frontline staff; grower-facing use not started as of December 2025.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/bayer-ely-agronomy-assistant

[1] EY: How Bayer is unearthing agronomy's future with generative AI (client story)
https://www.ey.com/en_uk/insights/consulting/how-bayer-is-unearthing-agronomy-future-with-generative-ai

[2] VKTR (Bayer press release via PR Newswire): Bayer pilots unique generative AI tool for agriculture (March 2024)
https://www.vktr.com/the-wire/bayer-pilots-unique-generative-ai-tool-for-agriculture/

[3] AgriMarketing (Bayer news release): Bayer selected recipient of 'AI-based AgTech Solution of the Year' (August 2025)
https://www.agrimarketing.com/s/154718

[4] AgFunderNews: Bayer's 117bn data points and decade-old data culture drive AI advantage, says CIO (December 2025)
https://agfundernews.com/bayers-117bn-data-points-and-decade-old-data-culture-drive-ai-advantage-says-cio

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