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CASE STUDY · MARLUC SYNOPSIS

Duolingo AI-first

IMPLEMENTED 2024 ONWARDS · TECHNOLOGY AND SOFTWARE · US · BAND C · CLAIMED ONLY

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Duolingo's chief executive told staff in April 2025 that the company would be AI-first and would stop using contractors for work AI can handle. Generative AI sped up course creation, by the company's account; a public backlash followed and one staff rule was dropped in 2026.

ABOUT THIS SYNOPSIS

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date. Check the original source before relying on any figure.

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 used to create and validate course content, plus AI features in the app such as Video Call.

Implemented: 2024 onwards. Grade: band C, Process change, Claimed only.

Headline result, as reported: 148 new courses built in under a year with generative AI, by Duolingo's account; AI use was dropped from performance reviews in 2026

1 · The case

The facts, as reported by the 7 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Duolingo. Language-learning app company based in Pittsburgh, listed on Nasdaq and describing itself as the world's leading mobile learning platform. 64.9 million daily active users and 13.1 million paid subscribers in the third quarter of 2026. Canvas block: 4. Operations and process. Also 5. People and skills, 3. Customers and proposition.

Business challenge

The challenge. The chief executive, Luis von Ahn, wrote that teaching well needs a massive amount of content and that creating it manually does not scale. By the company's account, building a single new course could take years, and its first 100 courses took about 12 years.

Who implemented it

In-house (In-house): Duolingo's own content system and tooling; model suppliers are not named in these sources.

Technology (SEAM pillar E)

SEAM types: T3 API integrations. Deployment: Not reported. Vendors and products: Duolingo Video Call.

Where it was built in: In the course content production process, through a shared content system and internal tooling, and in app features such as Video Call. Models and vendors are not named in these sources.

What changed

Before: small teams built each course from scratch over years, by the company's account. After: a base course is created and customised for many languages using generative AI to create and validate content. Contractor numbers fell by about 10% by early 2024; later contractor and headcount changes are not reported. [1] [2] [3] [4] [5] [6] [7]

What it cost

Not reported

What it saved

148 courses created and launched in under a year, against about 12 years for the first 100, by the company's account. In November 2026 the chief executive said the number of product experiments was up about 90% year on year and that AI is supercharging them. Cost savings: Not reported. [1] [2] [3] [4] [5] [6] [7]

Governance and control

The chief executive set the direction and the rules himself, in a memo to all staff. The memo promised training, mentorship and tooling. A spokesperson said in 2026 that teams' work depends on human judgement and that AI tools do not make decisions or replace the people building the product. The company says generative AI is used to create and validate content against its quality standards. Independent review of content quality: Not reported.

S2 · Accountable owner · Claimed
The chief executive set out the AI-first direction and its rules in a memo to all staff, and later withdrew one of them. [1] [4]

A1 · Safe use · Claimed
The memo promised training, mentorship and tooling for AI in each function; a written AI use policy is not reported. [1]

A2 · Human in the loop · Claimed
A spokesperson said teams' work depends on human judgement and that AI tools assist and do not make decisions. [4]

A3 · Monitoring and assurance · Claimed
The company says generative AI is used to create and validate content against its quality standards; no independent evaluation is reported. [2]

A4 · Vendor AI · Not reported
Not reported.

A5 · Agent controls · Not reported
No agents described.

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Course output: 148 courses launched in under a year, more than doubling the catalogue, by the company's account.

– Faster product testing: experiments up about 90% year on year, by the chief executive's account.

– Growth continued: daily active users rose 29% to 64.9 million and revenue 14% to $309 million in the third quarter of 2026.

DID NOT

– The announcement drew a public backlash, with longtime users saying they were deleting the app, per Fortune. The chief executive said he did not expect the blowback.

– Daily active user growth slowed through 2025, to 30% year on year in the fourth quarter, per CX Dive. It reports that backlash over the chief executive's comments about AI contributed to second-quarter user growth of 40%, at the low end of expectations.

– Evaluating AI use in performance reviews was withdrawn after staff asked whether they were being pushed to use AI for its own sake.

– The chief executive said in 2026 that AI-written code can be hard to debug and that AI is not consistently reliable when writing stories for the app.

UNPROVEN

– How much of the user and revenue growth is due to AI: the sources do not separate it.

– The quality of the AI-built courses: no independent evaluation in the sources. The new courses mainly cover beginner levels.

– How many contractors were affected after the April 2025 memo, and whether the headcount rule was applied: Not reported.

Timeline

Jan 2024 About 10% of contractors offboarded; spokesperson says part could be attributed to AI [3]

Apr 2025 148 new courses launched, built with generative AI [2]

2025 Chief executive tells the Financial Times he did not expect the blowback [4]

Feb 2026 Fourth-quarter 2025 results: daily active user growth slows to 30% year on year [6]

Apr 2026 Chief executive says AI use has been dropped from performance reviews [4]

Nov 2026 Third-quarter daily active users up 29% to 64.9 million; Duolingo extends its AI video call feature to all paid subscribers and sunsets its Max tier [5]

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: B. Grade: C, Process change. Proof: Claimed only. Level of change: Process change.

Process change (Level 2, band C), claimed as an operating model change (band B). Content creation was rebuilt around generative AI. The staffing rules in the AI-first memo are only partly evidenced, and one was withdrawn in 2026.

Graded C, claimed B. Course content creation was rebuilt around generative AI and the output is public. The wider operating model set out in the memo is only partly evidenced: about 10% of contractors left by early 2024, and the rule on AI use in performance reviews was withdrawn in 2026.

The SEAM view and lessons learnt

The technology did the job it was given: more course content, faster. The difficulty sat at the join between the change and the people affected by it. A memo written for staff was published, drew a backlash from users, and had to be clarified. A rule that measured AI use, instead of results, was dropped a year later. For a larger organisation, the transferable point is to tie AI rules to outcomes and to plan how an internal message will read outside.

1. Measure staff on results, and let AI use follow from that.
2. Write internal AI announcements as if customers will read them.
3. Publish quality checks alongside claims of speed.

Evidence

Score 2 of 4. Self-reported: the memo, the course announcement and the results are Duolingo's own; the backlash and the withdrawn rule come from the chief executive's interviews as reported by Fortune.

Evaluation method. Self-reported company figures and press reporting: the chief executive's memo, a company announcement and earnings statements; AI's contribution to results is not independently verified.

Sources disagree. Fortune describes the memo as saying the company would replace contractors

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/duolingo-ai-first

[1] The Verge: Duolingo will replace contract workers with AI (April 2025, with the memo text)
https://www.theverge.com/news/657594/duolingo-ai-first-replace-contract-workers

[2] Duolingo (press release, via Nasdaq): Duolingo Launches 148 New Language Courses (April 2025)
https://www.nasdaq.com/press-release/duolingo-launches-148-new-language-courses-expands-access-popular-languages-including

[3] The Star (Bloomberg): Duolingo cuts 10% of contractors as it uses more AI to create app content (January 2024)
https://www.thestar.com.my/tech/tech-news/2024/01/09/duolingo-cuts-10-of-contractors-as-it-uses-more-ai-to-create-app-content

[4] Fortune: Duolingo CEO backs off from evaluating employees on their AI usage (April 2026)
https://fortune.com/2026/04/13/duolingo-ceo-luis-von-ahn-ai-usage-requirement-employee-performance-evaluations

[5] CX Dive: Duolingo CEO on how to monetize without degrading the free user experience (November 2026)
https://www.customerexperiencedive.com/news/duolingo-ceo-monetize-without-degrading-free-user-experience/873877/

[6] CX Dive: Duolingo looks to limit friction as key metric of growth slows (February 2026)
https://www.customerexperiencedive.com/news/duolingo-limit-friction-growth-slows/813414/

[7] Duolingo (GlobeNewswire, via Finviz): Duolingo Reports Third Quarter 2026 Results (November 2026)
https://finviz.com/news/414652/duolingo-reports-third-quarter-2026-results

Duolingo website: https://www.duolingo.com

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VERSION HISTORY

v1.1 15 November 2026 Added November 2026 detail: AI video call extended to all paid subscribers, Max tier sunset, and the chief executive's third-quarter statement.
v1.0 15 November 2026 First published