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CASE STUDY · MARLUC SYNOPSIS

Alberta AI agents for legacy systems

IMPLEMENTED 2025–2026 · GOVERNMENT AND PUBLIC SERVICES · CANADA · BAND C · CLAIMED ONLY

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Alberta's technology ministry built AI agents on Anthropic's Claude models to review and rebuild decades-old government software. It says the agents reviewed 466 million lines of code in about 20 hours and that in-house AI builds cost up to 95% less; the figures are its own and unaudited.

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date.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: AI coding agents built on Anthropic's Claude models, plus Copilot and Gemini for staff.

Implemented: 2025–2026. Grade: band C, Process change, Claimed only.

Headline result, as reported: AI agents reviewed more than 466 million lines of government code in about 20 hours, by the Government of Alberta's account

1 · The case

The facts, as reported by the 5 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Government of Alberta (Ministry of Technology and Innovation). Provincial government of Alberta, Canada. Its Ministry of Technology and Innovation maintains more than 1,280 applications and 3,400 collections of code across 27 ministries. Canvas block: 6. Data and technology. Also 4. Operations and process, 7. Partners and suppliers.

Business challenge

The challenge. The province said much of its technology is decades old, and that modernising it conventionally would cost roughly $2 billion and take more than a century. Culture Alberta describes the code as largely undocumented and never systematically security-reviewed.

How it was addressed. Over 18 months the ministry built its own AI tools, including a team of AI

Who implemented it

Anthropic (Model or cloud provider): Supplied the Claude models used to build the AI agents.
Google Cloud (Model or cloud provider): Supplies AI tools and infrastructure for what it calls the agentic layer, by its own statement in the province's release.
In-house (In-house): Ministry of Technology and Innovation: built and ran the agents and the modernisation programme.

Technology (SEAM pillar E)

SEAM types: T7 AI agents, T3 API integrations. Deployment: Not reported. Vendors and products: Anthropic, Google, Microsoft, Claude, Claude Code, Google Gemini, Microsoft Copilot.

Where it was built in: Agents scan the ministry's code repositories for security weaknesses and documentation gaps, write and test fixes, and help rebuild legacy applications; staff use Copilot and Gemini.

What changed

Before: legacy systems maintained conventionally and new systems often contracted out. After: AI agents review and document code and help rebuild systems, with engineers approving changes, by the province's account. The minister says in-house AI builds now replace some contracted work and that vendors must adapt. [1] [2] [3] [4] [5]

What it cost

Not reported. The minister cited one system built in-house for $2.5 million against a lowest bid of $54 million, per BetaKit.

What it saved

By the province's account: up to 95% less time to modernise critical systems and work sped up as much as 20 times; the minister said some in-house builds were 95% cheaper and took 95% less time. Not independently verified. [1] [2] [3] [4] [5]

Governance and control

Engineers reviewed and approved every AI-written patch, per Culture Alberta relaying Anthropic. Staff tools are deployed with usage and governance policies, by the province's account. Owner of the agent programme, testing results and independent assurance: Not reported.

S2 · Accountable owner · Claimed
The Ministry of Technology and Innovation led the work under Minister Nate Glubish, by the province's account. [1]

A1 · Safe use · Claimed
Copilot and Gemini are deployed to staff with usage and governance policies, by the province's account. [2]

A2 · Human in the loop · Claimed
The ministry's engineers review and approve every patch before it ships, per Culture Alberta relaying Anthropic's account. [5]

A3 · Monitoring and assurance · Claimed
Agents test applications against security controls on each pass, per Culture Alberta relaying Anthropic; no independent assurance reported. [5]

A4 · Vendor AI · Not reported
Not reported.

A5 · Agent controls · Claimed
Agents write fixes but engineers approve each one before release, per Culture Alberta relaying Anthropic. [5]

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Speed of code review: 466 million lines in about 20 hours, by the province's account.

– A subsidy portal first built in five months was rebuilt in four to five days, per Culture Alberta relaying Anthropic.

– Quebec signed a five-year agreement with Alberta to share AI tools, training and code.

DID NOT

– Not reported. Culture Alberta notes independent verification of the 95% saving does not exist because the work is not finished.

UNPROVEN

– The 95% cost and time saving across the full modernisation.

– Security and quality of AI-rebuilt systems in production over time.

– Effects on jobs: the province did not say how many, if any, may be affected, per HRD Canada.

Timeline

Sept 2025 Alberta AI Academy launches to train public servants [1]

Jul 2026 Province reports AI agents reviewed 466 million lines of code and publishes 21 Velocity White Papers [1]

Jul 2026 Alberta and Quebec sign a five-year agreement to share AI tools, training and code [2]

Jul 2026 Minister tells contractors that vendors who do not adapt to AI may lose government work [3]

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 operating model change (Level 3, band B). Software review and rebuilding are redesigned around agents with engineer approval; a shift from contractors to in-house AI builds is stated by the minister but not yet shown in procurement figures.

The SEAM view and lessons learnt

Alberta pairs agents doing the bulk of the work with engineers approving every change, and it has published its method openly. The open question sits at the join with suppliers: the minister has told contractors their pricing must change, but the savings that would justify that are the province's own estimates. For any large organisation, the transferable points are the approval gate on AI-written code and the need to measure savings against what the work would actually have cost.

1. Keep a named engineer's approval on every AI-written change to live systems.
2. Measure savings against real bids and budgets.
3. Plan the effect on suppliers and staff before changing how work is sourced.

Evidence

Score 1 of 4. Self-reported: government releases and the minister's statements, with technical detail from the vendor relayed by press; no audit.

Evaluation method. Self-reported government figures and vendor statements; Culture Alberta notes the cost and speed figures are the province's own estimates and unaudited.

Sources disagree. The province's release names Anthropic and Google as AI suppliers; Culture Alberta's account of the code review names only Anthropic's Claude Code with Opus and Sonnet models.

Status. Ongoing: modernisation under way; Quebec agreement signed in July 2026 for five years.

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/alberta-ai-agents-legacy-system-modernisation

[1] Government of Alberta release, republished by the Alberta Weekly Newspapers Association: Alberta sets North American standard for AI
https://kutd.awna.com/releases/alberta-sets-north-american-standard-for-ai/

[2] Government of Alberta release, republished by the Alberta Weekly Newspapers Association: Alberta and Quebec join forces to put AI to work
https://kutd.awna.com/releases/alberta-and-quebec-join-forces-to-put-ai-to-work/

[3] BetaKit: Alberta's AI push is rewriting the rules for government contractors
https://betakit.com/albertas-ai-push-is-rewriting-the-rules-for-government-contractors/

[4] HRD Canada: Alberta plans to replace 185 aging systems with AI-built applications
https://www.hcamag.com/ca/specialization/transformation/alberta-plans-to-replace-185-aging-systems-with-ai-built-applications/581547

[5] Culture Alberta: Alberta is using AI to rebuild $2 billion worth of government software
https://www.culturealberta.com/articles/alberta-is-using-ai-to-rebuild-2-billion-worth-of-government-software-and-quebec-just-signed-on-to-c

Government of Alberta (Ministry of Technology and Innovation) website: https://www.alberta.ca

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