Equipment Manual AI Assistant with Source Citations for Machine Manufacturers

Fuji Corporation made its manual library answer back

FUJI Smart Doc is grounded entirely in Fuji's own technical documentation. It cites the exact page and diagram behind every answer, runs in Japanese, English and Chinese, and handles up to 14,000 questions a month.

~158K	~135K	90%	3
Questions answered to date	Technical documents indexed	Customer-facing conversations answered	Languages served from one system

THE CHALLENGE

A manual library too big for keyword search

A programmer needs the exact lighting conditions for imaging a part before placement on a PCB. A technician mid-repair needs to know which grease to use, and how much. An operator staring down a stalled line needs an answer now, before the delay turns into real downtime.

All three reach Fuji's manuals through the same members-only customer portal, which holds everything needed to run a production line: machine and software manuals, upgrade reports, and specification guides, refreshed regularly with minor revisions. A keyword search across a library that size could only ever get each of them partway there.

THE MANUAL PROCESS THIS REPLACED

Search by keyword.
Users needed to enter the appropriate keywords to locate relevant information.

Around twenty minutes to an answer.
Scrolling dense documentation to find the page that held it.

The manual could be out of date.
Weekly reports carry the latest updates, but manuals take time to catch up.

WHAT GOT BUILT

FUJI Smart Doc, organized by machine model line.
AI chat agents grounded only in Fuji's own documentation, so an answer can never come from anywhere else.

PDF Viewer, the capability that decided it.
Every citation opens the exact source page, with the relevant text highlighted and the diagrams shown in place.

Three languages held to one accuracy bar.
Japanese, English and Chinese, all measured against the same target Fuji set.

A corpus that keeps itself current.
Documents uploaded to Fuji's portal flow into the knowledge base without a separate re-upload step.

ABOUT FUJI

Fuji Corporation designs and builds high-speed, high-precision SMT placement machines and other electronics assembly equipment, as well as robotics and automation systems, from Chiryu, Aichi, Japan. Its machines are installed in more than 70 countries, and the large majority of sales come from outside Japan. Beyond manufacturing, Fuji applies robotics and automation to logistics and healthcare, addressing societal challenges and working toward a sustainable future.

AT A GLANCE

INDUSTRY
SMT placement machines and other electronics assembly equipment, robotics, and automation. Fuji Corporation, Chiryu, Aichi, Japan

FOOTPRINT
Installed in more than 70 countries, with the large majority of sales coming from outside Japan

OBJECTIVE
Turn a technical manual library into answers a technician can find, and verify, in seconds

KEY USE CASES
Machine documentation, maintenance and troubleshooting, sales partner enablement, customer self-service

SOLUTION
CustomGPT.ai. FUJI Smart Doc: AI chat agents with PDF Viewer, grounded only in Fuji's own documentation, organized by machine model line

CORPUS
Approximately 135,000 indexed documents from uploaded PDF manuals, bulk archives, direct URLs and a website crawl

LANGUAGES
Japanese, English, Chinese

ACCESS
Inside Fuji's own members-only portal and secure logon, to customers, sales partners and internal staff

KEY ADOPTION CONSIDERATIONS

Equipment manuals, troubleshooting and the limits of keyword search: five things Fuji would not compromise on

A manufacturer whose manuals govern maintenance and safety decisions carries an obligation a general knowledge base does not. If you are building the same shortlist, these are the five that decided whether a deployment was viable at all.

1 **Verify, don't just trust.**
A user has to be able to check an answer against the original manual before acting on it. On a maintenance or safety decision, a confident wrong answer does more damage than no answer at all.

2 **Real accuracy in Japanese, not only in English.**
Fuji held every chatbot to the same 80% success bar. English cleared it easily. Japanese had to earn it, and was refined on Fuji's feedback until it did.

3 **Security that fits inside what already exists.**
The front end had to work within Fuji's own secure logon, with no side door for unauthorized access.

4 **A corpus that updates itself.**
New manual revisions had to flow into the assistant automatically, rather than through a re-upload process someone could forget.

5 **One system, every audience.**
Sales partners, customers and internal staff all needed to reach the same grounded answers, from one system rather than a separate tool each.

HOW IT WAS BUILT

Built and tested in that order, opened only when both held up

Started with the deciding requirement.
Fuji evaluated multiple vendors on accuracy and on one capability no other vendor offered: a way for a user to open the source page and verify an answer.

Built the hard part first.
PDF Viewer existed nowhere else, so CustomGPT.ai and Fuji worked in close, ongoing dialogue to get an initial version running before anything else was built.

Tested with the people closest to the content.
The first agents, in English, Japanese and Chinese, were tested for months and released to sales partners before any customer saw them.

Opened the gate last.
FUJI Smart Doc reached customers only once the viewer, the languages and the access model had all held up.

WHY FUJI SELECTED CUSTOMGPT.AI

Verification, alongside the answer.
PDF Viewer remains Fuji's non-negotiable requirement wherever a wrong answer could lead to a maintenance or safety issue.

A knowledge base that keeps itself current.
Manuals flow from Fuji's own portal straight into the knowledge base, so approximately 135,000 documents stay up to date without extra work.

Refined through real use.
PDF Viewer kept improving on Fuji's ongoing feedback, including through the months it took to bring Japanese to the same bar as English.

“We have had customers come up to us unprompted at trade shows saying how much they appreciate having FUJI Smart Doc. Because the information needed for troubleshooting and maintenance can now be accessed immediately, field engineers and customer support teams can respond significantly faster, which has contributed to improved customer satisfaction. It has been a popular addition to the services we provide.”

FUJI CORPORATION · NAME AND TITLE PENDING

THE CAPABILITY THAT DECIDED IT

Every answer opens the exact page it came from

Every machine documentation agent has citations enabled. An answer comes back with a citation, and clicking it opens PDF Viewer at the exact page the answer was drawn from, the relevant text highlighted and any diagrams shown in place.

For a manufacturer whose maintenance and safety decisions turn on the details, that is what lets a technician act on an answer rather than go and check it somewhere else.

A YEAR AFTER OPENING TO CUSTOMERS

The answers are holding up at scale

MEASURE	TO DATE
Questions answered	**157,701**
Conversations	**43,898**
Documents indexed	**~135,000**
Answer rate, customer-facing chatbots	**90%**
Answer rate, all chatbots	**84%**
Monthly queries, current	**10,000–14,000**
Time to find an answer	**~20 min → near-instant**

Ninety percent of customer-facing conversations now end in a usable answer, and 84% across every chatbot Fuji runs, including the internal and partner-facing ones. Individual user numbers have doubled over the past year, on a system that opened to customers only a year ago.

Fuji sees the remaining 16% as room for improvement. Conversations that end in a fallback get reviewed, and either the person who asked gets a follow-up, or the source content gets fixed so the same question does not fail twice.

WHAT THIS MEANS FOR YOU

Where a wrong answer has consequences, verification earns the deployment

A citation that opens the source page.
In a technical or regulated setting, that is what wins permission to deploy at all.

Hold every language to one bar.
Shipping English and calling it done would have left most of Fuji’s customers behind.

LOOKING AHEAD

Operators, technicians, and programmers can now locate relevant information more efficiently than through keyword searches alone. Usage has increased since the customer launch, and the knowledge base keeps growing as new documentation is published.