elastic

OAK RIDGE National Laboratory

CUSTOMER STORY: SEARCH Public sector · Federated enterprise search · Earlier search tool → Elastic

8,400 users and 1.4 million interactions put ORNL's institutional knowledge within reach

Oak Ridge National Laboratory (ORNL) built SEEK, an on-prem federated search platform on Elasticsearch with retrieval augmented AI summaries, helping 8,400 unique users find the lab's institutional knowledge over 10 months.

8,400	1.4M	55%	400K
Unique users across the lab in 10 months	Total interactions in the same period	Higher UX score than the old system	Searches in 10 months, about 1,500 a day

The challenge

- ✕ Long-tenured experts retired and turnover climbed, taking tacit knowledge with them.
- ✕ The earlier search tool indexed everything, so results were a junk drawer of irrelevant material.
- ✕ Private saved content surfaced in results, confusing users and eroding confidence.
- ✕ Moderate-sensitivity SharePoint data could not go to a cloud service, ruling out packaged cloud search.

The solution

- ✓ SEEK queries SBMS, ServiceNow, SharePoint, ORNL Today, and Finder at once.
- ✓ Elastic Learned Sparse EncodeR (ELSER) matches full natural-language questions semantically, not by keyword alone.
- ✓ AI summaries from Microsoft Azure OpenAI for Government link every statement to its source file.
- ✓ Indexing is scoped to lab-wide content and refreshed nightly, so results stay trusted and current.

How it works

1. Ask
Staff enter a full question in one pass

2. Retrieve
ELSER searches the indexed lab content

3. Summarize
Azure OpenAI for Government drafts an answer

4. Verify
Every statement links to its source file

Before

- Indexed everything; results were a junk drawer
- Confidence eroded; staff fell back on long-tenured colleagues
- Knowledge held in people and lost as they left

After

- → Scoped, trusted sources; results people believe
- → Grounded summaries linked to the exact source file
- → New staff ask questions from day one, not after reading a 1,200-page manual

> **"At launch, they wanted zero AI in it, and we had to put disclaimers everywhere. Now everyone has shifted, because they've gained a lot of trust in SEEK and in the AI."**
>
> — Jason Patrick, IT PMO Project Manager, Oak Ridge National Laboratory

Why it matters beyond one lab

The same pattern applies at any institution: Scope what you index, ground the AI in real sources, and earn trust before you extend. That trust is already pulling the platform forward. ORNL is building its first agent on the SBMS policy content with Elastic Agent Builder and a second for lab emergency response, with one agent per organization's subset of data expected next.

See how Elasticsearch powers federated enterprise search with grounded, source-linked AI answers or start a free trial →

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