

The Actual Cost of Legacy Applications and How to Measure Them

~7 minutes

Self Assessment

Summary

If your core applications are 10+ years old, you're already paying a premium - whether it shows up on a budget line or hides in day-to-day operations. This short guide surfaces the *seen* and *unseen* costs of legacy systems and offers a simple framework to uncover them in your agency.

80% of federal IT budgets go toward maintaining legacy systems

The Costs You Can See

① Maintenance & Support:

Whether maintaining in-house or through a COTS vendor, legacy systems come with rising costs and shrinking returns, relying on staff knowledge that's hard to replace and vendor solutions often stagnate without updates.

② Licenses & Point Integrations:

Juggling a patchwork of outdated licenses and connectors to keep legacy systems operational while modern platforms already paid for - like Microsoft PowerApps or PowerBI - sit underutilized, capable of doing far more with less effort and cost.

The Costs You Don't See (But Definitely Pay)

① Hours of Workarounds:

Manual data entry, double-keying forms, local spreadsheets, and ad-hoc reports - these are workaround processes created to compensate for gaps in legacy systems.

② Decision Latency:

When data lives in disconnected systems, leaders rely on delayed reports or manual reconciliations. That lag limits visibility, slows decision-making and makes it harder to respond to shifting priorities.

According to research, organizations spend between 60-80% of their IT budgets on maintaining existing systems.

The Talent Cliff: Retiring Workforce & Knowledge Risk

Many legacy systems were built and maintained by a handful of experts. As they retire, the cost of finding or contracting specialized skills rises - and institutional knowledge walks out the door.

Common realities we see:

- 1-2 individuals truly understand how the system works end-to-end.
- Documentation is thin or outdated; implicit rules live in code and people's heads.

Key questions to ask:

1. What is the operational impact if your top maintainer is unavailable for 60-90 days?
2. What if a critical report or automated task fails while your in-house expert is on leave?

These scenarios often trigger emergency spending and program disruption

42% of critical business knowledge is at risk when key personnel retire. Most legacy systems only have 1-2 people who truly understand them.

What “Good” Looks Like (Outcomes to Aim For)

Modernization isn't just a tech swap. The right target state yields measurable gains

- **Time back to programs and workflows:** Fewer steps, fewer handoffs, quicker reporting.
- **Data you can trust (and act on):** Consolidated sources, real-time reporting.
- **Security & compliance by design:** Automated controls mapped to modern frameworks (NIST, HIPAA, PCI as applicable).
- **Scalable systems:** Skills and platforms that can scale to your processes and adapt to your people.

According to a 2024 EY survey, nearly 70% of government agencies cite legacy infrastructure as their top hurdle for modernization.

A Note on Data Risks:

IBM's Cost of a Data Breach Report found that average breach costs of legacy infrastructure is now at \$4.4 million while organizations that invest in even modest automation improvements can reduce these costs by 10%.

Building a Modernization Plan

You don't need a big-bang rewrite. The most successful state programs follow a phased, outcomes-first path:

1. Baseline & Business Case

Quantify your hidden costs. Align on top 2-3 outcomes (e.g. reduce licensing turnaround by 30%, cut manual reconciliations by 50%).

Visible Costs (Annually)		Hidden Costs (Annually)	
System Maintenance (# of devs x hrs/wk x \$/hr x 52)	\$ _____	Workarounds (# of users x hrs/wk x \$/hr x 52)	\$ _____
COTS Subscription (when applicable)	\$ _____	Specialized Labor (when applicable)	\$ _____
Other Hosting / Licenses	\$ _____	Other	\$ _____
Other	\$ _____		
Subtotal	\$ _____	Subtotal	\$ _____

2. Proof-Point Projects

Target a high-volume workflow to eliminate a specific bottleneck (e.g. duplicate entry).

3. Security & Data Foundation

Implement identity, access, and logging standards; consolidate the authoritative data sources required by your use cases.

4. Scale and Standardize

Expand to adjacent processes. Reuse patterns and components. Build internal capability while retiring legacy processes in waves.

5. Operate & Optimize

Monitor outcomes, not just uptime. Continue to reduce cycle times and manual work.