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Test the Navigation Before You Build It: A Fixed-Fee Findability Study for One Agency Website

Information Architecture: a content inventory, card sorts and tree tests with real users, and a navigation and taxonomy the build team can implement

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Executive Summary

Most agency websites were not designed so much as accumulated. Every office added its pages, every reorganization renamed a few sections, and every relaunch moved the content into a new template without asking whether anyone could find it. The result is familiar: tens of thousands of pages, navigation that mirrors the org chart, three pages that say three different things, and a contact center answering questions the website already answers.

The usual response is to fund a redesign or a CMS migration. Neither fixes findability on its own. A migration moves content; it does not reorganize it. A new visual design over the same structure produces the same lost users in a better-looking site. The 21st Century Integrated Digital Experience Act (2018) asks agencies for websites that are searchable, consistent, not duplicative and designed around user needs. That is a structural requirement, and structure can be tested before anyone builds it.

This paper is for the web or digital director who champions the site, the OCIO digital services or web operations lead who owns the platform, the program manager or contact-center owner who feels the cost, and the COR who buys the work. It describes Avalon Technology Services' Information Architecture service, which starts with one engagement:

- **A fixed-fee findability study of one agency website.** One unclassified public website or portal, one primary audience, seven to eleven weeks. A content inventory and analytics review, a top-task exercise, one card sort, a proposed structure and taxonomy, and a tree test with one revision cycle. It ends with a validated sitemap, a navigation and labeling specification, a taxonomy and metadata schema, a page-level redirect map and governance recommendations. The structure ships with its test scores attached. The market band for this scope is \$60,000 to \$150,000 firm fixed price.

The illustration later in this paper works through the effort. The base case is nine weeks and 486 hours at borrowed market-norm rates, or \$57,240 to \$91,260, with a \$74.3K planning fee at the midpoint, well under the \$350,000 simplified acquisition threshold.

Avalon studies and recommends. The study builds nothing, migrates nothing and certifies nothing. Decisions about the structure, retiring content and acceptance of the work remain the agency's.

Why People Cannot Find Things

Any two of these phrases in one meeting usually mean the site has a structural problem nobody has tested.

What the agency says	What it usually means
"People can't find anything on our site."	The navigation is organized around the agency, not the tasks users came to do
"We have tens of thousands of pages and nobody knows what's current."	No inventory, no owners, and no rule for retiring content
"Our search is useless."	Search is compensating for a structure that does not work, and is indexing duplicates
"Every office wants its own link on the homepage."	Labels and placement are settled politically, without user data
"The call center keeps answering questions the website already answers."	The answer exists but sits where users do not look, under a label they do not use
"Our navigation basically mirrors our org chart."	Users must understand the agency before they can find a form

Three routing questions keep this service distinct from its neighbors. If the problem is the screens of one application, that is Avalon's separate UI/UX Design or User Testing & Feedback Analysis service. If it is Section 508 conformance, that is Accessibility Modernization. If it is a service journey across phone, mail and web, that is CX Strategy Development. This study restructures the content and navigation of one website.

Why Agencies Skip the Test

- **The web team knows the site.** That is the difficulty. Internal teams reliably reproduce the org chart because they cannot unlearn it.
- **The new CMS will fix it.** A migration moves content into new templates. Without a tested structure, it moves the same problems.
- **Search will cover the gaps.** Search helps users who know the right words. Search logs usually show how often they do not.

- **A card sort is enough.** A card sort shows how users group content. Only a tree test shows whether they can find things in the proposed structure.
- **The Paperwork Reduction Act seems to forbid it.** It shapes research with the public; it does not prohibit it. The pathway is settled in week one.

The Authorities and Where the Study Fits

Authority	What it says	What it means for this study
21st Century IDEA Act (2018)	Agency websites should be searchable, consistent, not duplicative and designed around user needs and data	The study produces tested, documented progress against those requirements for one site
U.S. Web Design System and digital.gov guidance	Shared navigation patterns and guidance for federal websites	The structure uses USWDS navigation, breadcrumb and page patterns where the site uses them
Section 508 (2017 refresh incorporates WCAG 2.0 Level AA)	Criteria such as 2.4.5 Multiple Ways, 2.4.6 Headings and Labels and 3.2.3 Consistent Navigation depend on structure	The structure sets the preconditions for those criteria; it is not a conformance audit
Plain Writing Act (2010)	Public content in clear, plain language	Navigation labels are written in users' words and tested
Paperwork Reduction Act (44 U.S.C. ch. 35)	OMB clearance for collecting information from 10 or more members of the public; agencies often use generic clearances	A dependency: the research pathway is decided in week one by the agency's PRA officer
Federal records rules (36 CFR ch. XII)	Records are disposed of only under an approved schedule	Every page flagged for removal goes to the records officer first

WCAG 2.1 and 2.2 are current W3C guidance; the federal legal standard remains the one the 2017 refresh incorporates. One note on what this work is not: information architecture is not part of the Risk Management Framework, maps to no security control and contributes nothing to an ATO. The one security benefit is hygiene. The inventory surfaces orphaned pages and forgotten subdomains, which the agency's security team may want to know about.

What the Study Does

The study covers one named public website or portal and one primary audience. It works from the agency's own analytics, search logs and CMS exports.

Workstream	Activities
Inventory and analytics	Crawl of the site, content inventory with a redundant, outdated and trivial (ROT) flag on every page, Digital Analytics Program traffic overlay, search-log review of top, failed and zero-result queries
Top tasks	Stakeholder interviews and a top-task exercise that ranks what users come to do
Card sort	One open or hybrid card sort with the primary audience, designed to fit the agency's PRA pathway
Structure and taxonomy	Sitemap, navigation and hub pages on USWDS patterns, URL structure, plain-language labels, and a field-level taxonomy and metadata schema mapped to the CMS
Tree test	Unmoderated tree test of the proposed structure against top tasks, success and directness targets agreed in advance, one revision cycle
Migration and governance	Page-level redirect map, removals flagged for records review, ownership matrix, review cadence and search recommendations

Research With Real Users

The card sort shows how users group the agency's content and what they call it. The tree test then strips away visual design and asks users to find answers in the proposed structure, task by task. Before the test runs, the agency's decision-maker agrees

success and directness targets for each task. After it runs, the scores are reported as found, the structure is revised once where tasks failed, and the final structure ships with its scores attached.

Card sorts typically use 15 to 30 participants per audience. With members of the public, that crosses the Paperwork Reduction Act's threshold of 10, so the study either runs under a generic clearance the agency holds or is designed with nine or fewer public participants and labels any staff proxies as proxies. That is why the scope holds to one primary audience: each added audience multiplies recruiting and clearance work.

Inventory, Triage and Records

The inventory gives every page a recommended action: keep, merge, rewrite or retire, each traced to crawl, analytics or research evidence. Retiring is a recommendation, never an action. Every page proposed for removal is listed for the records officer before anything is unpublished, and every moved page gets a 301 redirect in the migration map.

Deliverables

Deliverable	Format
Content inventory and audit workbook	Spreadsheet, one row per page
Findings report (analytics, search logs, top tasks)	Written report
Card sort and tree test results	Report plus raw data (CSV)
Validated sitemap	Diagram plus spreadsheet
Navigation and labeling specification	Written specification
Taxonomy and metadata schema	Spreadsheet, field level, mapped to the CMS
URL redirect and migration map	CSV or spreadsheet
Governance recommendations	Ownership matrix and review cadence
Executive readout	Briefing deck

A content model specification for the CMS team is an option. Every deliverable is produced to conform with Section 508, is written to be vendor neutral, and belongs to the agency.

Where the Study Stops

The study stops at the specification. Visual design, components and prototypes belong to Avalon's UI/UX Design service. Usability testing of designed screens belongs to User Testing & Feedback Analysis, Section 508 audits and remediation to Accessibility Modernization, and cross-channel journeys to CX Strategy Development, all separate Avalon services. CMS implementation, templates, search-engine configuration, rewriting pages at scale, ongoing SEO work and license resale are out of scope.

What the Evidence Can and Cannot Claim

The accurate statement is narrow: the study produces tested, documented progress against the IDEA Act's searchable, consistent, not-duplicative and user-data-driven requirements for one site, and the structural preconditions for the WCAG navigation criteria. It does not make the site compliant with anything.

Accurate	Not accurate
A structure tested with real users, scores attached	Makes the website "IDEA-compliant"
Labels and navigation that support WCAG navigation criteria	Delivers Section 508 compliance
Search recommendations from the agency's own logs	Search will be fixed
A page-level plan the build team can execute	Guarantees fewer calls or higher task completion

Questions the Contracting Officer Will Ask

Question	Answer
Does the research need PRA clearance?	The agency's PRA officer decides in week one: a generic clearance the agency holds, or a design with nine or fewer public participants
What about privacy?	Card sorts and tree tests collect minimal personal information; nothing is recorded without a consent process, and data stays in agency-approved storage
Is Section 508 testing included?	No; conformance testing is a separate service
Will content be deleted?	No; removals are recommendations, flagged to the records officer first
Is there a conflict of interest?	Deliverables are vendor neutral, and Avalon accepts organizational conflict of interest mitigation language for any later build
How is it accepted?	Per deliverable, against criteria in the SOW, including the tree-test targets agreed in advance

How a Study Runs

Phase	Timing	What happens
Inventory and analytics	Weeks 1–2	Crawl, inventory, analytics and search-log access, PRA pathway decided, dependencies dated
Research	2–3 weeks	Stakeholder interviews, top-task exercise, card sort
Structure and taxonomy	2–3 weeks	Sitemap, navigation, labels, taxonomy and metadata schema
Validation	1–2 weeks	Tree test, one revision cycle, final scores
Handoff	1 week	Redirect map, governance recommendations, executive readout

The total is seven to eleven weeks. Recruitment and the PRA pathway drive the research phase, so the clock is tied to a dated dependency schedule. A slip moves the schedule, not the price.

What the Agency Provides

- One decision-maker authorized to approve the structure and the tree-test targets.
- Analytics and search-log access in week one.
- A roster of content owners, and their time to confirm keep, merge or retire calls.
- Help recruiting participants, or approval to recruit externally.
- The PRA officer's determination, and a records-officer contact.
- Approval of any card sort and tree test platform the study uses.

What Is Not Included

Included	Separate work
One public website, one primary audience	Added audiences, sites or languages, priced as change orders
Navigation and labeling specification	Visual design, prototypes and building the site
Redirect and migration map	Running the CMS migration or rewriting pages
Structural preconditions for WCAG navigation criteria	Section 508 conformance testing
Public, unclassified content	Intranets (priced separately) and classified environments

How Avalon Staffs It

Avalon takes one engagement at a time, works business hours, and works on unclassified properties only. Avalon's founder manages the engagement and the dependency schedule. A named IA/UX lead, hired or subcontracted for the engagement, with a portfolio of card sorts and tree tests, leads the research and the structure,

supported by a subcontracted UX researcher. Both are identified before the proposal and listed in it. Avalon has no past federal engagements under this service. FAR 15.305 says an offeror without a record of past performance may not be evaluated favorably or unfavorably on that factor; what protects the agency is named personnel, a fixed price, a small scope and deliverables it can inspect.

Requirement	How it is handled
IA/UX lead and researcher	Named personnel whose experience and investigation level match the agency's requirements, listed in the proposal
Research tools	A card sort and tree test platform the agency holds or approves, subscribed per engagement as a pass-through cost; nothing is resold
Access to analytics and the CMS	Accounts the agency provisions; work stays in the agency's own tools
Participants	Recruited with the agency's help or approval; Avalon holds no research panel
Insurance and contract vehicles	Any coverage the solicitation requires is a condition of award; Avalon does not hold a GSA Schedule or a governmentwide contract today

Key personnel substitution requires CO approval. Avalon never evaluates a structure it later builds.

Pricing and How to Buy

Engagement	Market-norm range	Avalon
Findability study: one website, one audience, card sort and tree test, 7–11 weeks	\$60K–\$150K	Firm fixed price, milestone billed; illustrative \$74.3K
Findability assessment: inventory, analytics and recommendations, no primary research	\$20K–\$45K	A smaller first step
IA as a line item inside a redesign or migration order	\$15K–\$50K	Priced at the same rates

Large estates and multi-site consolidations run higher and are not the entry engagement. The study sits under the \$350,000 simplified acquisition threshold and can be bought as an open-market purchase. IA inside a larger redesign or migration order can be subcontracted to Avalon by a prime. Avalon does not hold a GSA Schedule or a governmentwide contract today, and it does not resell software or licenses.

The best time to buy is before the migration contract is scoped, so the build team prices a tested structure instead of a copy of the old one. A study with non-severable deliverables also suits a July to September purchase from operations and maintenance funds.

Illustration: One Website, One Audience, Nine Weeks

The figures below are a planning illustration for one representative unclassified public website with one primary audience. They are not a quote and not a result from any engagement.

Labor Loading

The IA/UX lead works at three-quarters time, the UX researcher at half time and the project manager at one-tenth time, at 40 hours a week. The IA knowledge base lists no rates, so each role borrows a band from the related UX services: \$120 to \$190 an hour for the lead, \$110 to \$185 for the researcher and \$140 to \$185 for project management.

Role	Rate band	Base hours
IA/UX lead	\$120–\$190/hr	270
UX researcher	\$110–\$185/hr	180
Project manager	\$140–\$185/hr	36
Total		486

What the Study Costs

Scope	Hours	Rate-band range	Midpoint	Tool cost
Compact (7 weeks)	378	\$44.5K–\$71.0K	\$57.8K	\$480
Base (9 weeks)	486	\$57.2K–\$91.3K	\$74.3K	\$630
Extended (11 weeks)	594	\$70.0K–\$111.5K	\$90.8K	\$750

The base case is 486 hours, or \$57,240 to \$91,260, with a \$74.3K planning fee at midpoint rates, inside the \$60,000 to \$150,000 band. The compact case runs \$44,520 to \$70,980; at low rates it falls below the band floor, which is a reminder that the band is a market norm, not a formula. The extended case runs \$69,960 to \$111,540. Tool subscriptions at an assumed \$300 a month add a few hundred dollars.

As a cross-check, the knowledge base's minimum loading (half time for the lead, a quarter for the researcher) over seven weeks gives 238 hours, or \$28,420 to \$44,730. That lands in the \$20,000 to \$45,000 assessment band, not the full study, which is why the assessment drops the primary research.

Why Inventory Comes Before Migration

The inventory changes what a migration costs. The page counts and ROT shares below are assumptions that crawl data replaces in the first two weeks; content-owner review assumes 2 minutes a page.

Site	Pages crawled	ROT share	Pages to migrate	Records review rows	Owner review hours
Small site	5,000	20%	4,000	1,000	167
Mid-size site	15,000	35%	9,750	5,250	500
Large site	40,000	50%	20,000	20,000	1,333

A migration scoped before triage prices every page. One scoped after triage prices only what survives, with records review as a dated dependency rather than a surprise. No findability outcome is claimed here; this is page arithmetic.

What the Agency Brings to the Readout

The model prices the study; it claims no saving. The agency can test the fee against its own contact-center cost. At an illustrative \$8, \$15 or \$25 per assisted contact, the \$74.3K fee equals 9,288, 4,953 or 2,972 contacts, about 774, 413 or 248 a month over a year. Whether that many shift to self-service is something the agency measures, not something Avalon promises.

Common Pitfalls

Pitfall	How to avoid it
"While you're at it, rewrite the pages"	Content production is a priced option, not part of the study
Design or build creep	The deliverables table goes into the SOW verbatim; the study stops at the specification
Political navigation	One decision-maker; tree-test data settles disputes
Card sort without a tree test	The structure is not validated until users find things in it
Removing content without records review	Every removal flagged to the records officer first
Agency dependencies slipping	A dated dependency schedule; slips move the clock, not the price
Compliance oversell	No claim that the site becomes IDEA- or 508-compliant, or that search is fixed

Conclusion and Next Step

Most hard-to-use agency websites are not missing a redesign. They are missing a structure that was tested with the people who use it, before anyone paid to build it.

The natural first step is the fixed-fee findability study: one website, one audience, seven to eleven weeks, under the simplified acquisition threshold, ending in a validated sitemap with its test scores, a taxonomy the CMS team can implement and a page-level migration map. Where primary research is not yet possible, the findability assessment is a smaller start. To discuss a site, contact Avalon Technology Services at contact@AvalonTechServices.com.

Appendices

Appendix A: Glossary

Card sort

A research method in which participants group content items and name the groups, showing how users think about the content.

Tree test

A research method in which participants find answers in a text-only version of a proposed structure, measuring success and directness per task.

Directness

The share of tree-test participants who reach the right answer without backtracking.

ROT

Redundant, outdated or trivial content flagged during the inventory.

Taxonomy

The controlled set of categories and metadata fields used to organize and tag content.

Top task

One of the few tasks most users come to a website to complete.

Appendix B: Illustration Assumptions

All values are planning assumptions for one representative unclassified public website. None is drawn from a specific agency, a real site or a completed engagement.

Assumption	Value	Basis
Property	One public website, one primary audience	Planning assumption
Duration	7, 9 or 11 weeks at 40 hours a week	KB phase durations
Loading	Lead 0.75, researcher 0.5, PM 0.1 of full time	KB team ranges; full loading
Rates	Lead \$120–\$190, researcher \$110–\$185, PM \$140–\$185 an hour	Borrowed from related UX services
Tool cost	\$300 a month, pass-through	Assumed
Triage inputs	Page counts, ROT shares, 2 minutes a page	Assumed; crawl data replaces them
Price check	Base fee \$74.3K	Inside \$60K–\$150K; under the SAT

Appendix C: References

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