

Revamp Site Search To Jump-Start AI, Chat, And Personalization

by Mark Grannan

July 19, 2018

Why Read This Report

Far from being “old school,” site search is essential to the success of high-profile areas such as artificial intelligence (AI), personalization, and conversational engagement. But the site search market itself is in flux: Google is exiting search, retiring both service and appliance offerings, and long-time enterprise solutions like Endeca no longer sell as standalones. Digital business pros must harness search taxonomies and rules as the key to unifying content repositories and supporting next-generation “conversational” experiences. Digital business leaders in healthcare, retail, financial services, and other industries must master the market forces and options for site search — or jeopardize the projected ROI of their investments in these high-priority, emerging business areas.

Key Takeaways

AI, Personalization, And Conversational Engagement Make Site Search Hip (Again)

AI technologies, new engagement types like chatbots, and the need to personalize customer experiences despite data difficulties are all pushing site search higher on the investment priority list for digital businesses.

Choose One Of Four Packaging Models

Investing in site search capabilities can take four different paths: a dedicated, full-stack search solution; search bundled into a packaged solution; cloud platform search services; or search add-ons that boost practitioner functionality or relevance.

Before You Commit, Assess Critical Areas: Code Base, Tools, Scale, And Relevance

Be sure you understand a search solution’s code base to better understand your ability to customize, whether the practitioner tools meet your team’s needs, and the degree to which you can scale to right-size to meet your content and query needs. Assess the solution’s features for relevance and the ability to use transactional, customer service, location, and other data to tailor search results.

Revamp Site Search To Jump-Start AI, Chat, And Personalization



by [Mark Grannan](#)

with [Fiona Swerdlow](#), [Mike Gualtieri](#), Erin Sellers, Benjamin Arnold, and Diane Lynch

July 19, 2018

AI, Chat, And Personalization All Depend On Site Search

Digital experience (DX) leaders have five top priorities this year, including omnichannel redesign, analytics, customer service, personalization, and emerging touchpoints — all of which directly benefit from search capabilities.¹ However, many digital experience programs deliver stagnant site search results, effectively pushing customers into the open and eager arms of Amazon and Google. The result? You lose control of how customers discover your products. As DX teams reestablish their relationship with customers, site search becomes an increasingly important tool.

DX teams will invest in site search to realize three key benefits. They want to:

- › **Reorient personalization's thorny customer data relationship toward explicit intent.** Fifty-two percent of digital business pros can't access and leverage the full customer profile they need to personalize their customers' experiences, and 37% cite regulation and compliance as a key barrier to further develop and deepen their personalization initiatives.² Consequently, marketers need to rely increasingly on explicit variables to maximize relevance for their customers — and an explicit search query is the logical place to start.
- › **Fix diverse UIs and text input methods and embrace conversational engagements.** Search can be more important than browser-based navigation when screen real estate or user patience is in short supply, as on smartphones. In 2018, 39% of business decision makers are exploring emerging channels such as chatbots and voice as a DX priority, up from 27% in 2017.³ Search technologies underpin many of these emerging channels (e.g., asking a virtual agent a question is similar to a search), potentially uniting these initiatives.
- › **Harness AI technologies to parse intent and optimize for relevance at scale.** Natural language processing (NLP) and machine learning (ML) carry a stronger business case than some of their AI cousins.⁴ The ability to parse and understand incoming queries or customer service requests creates new opportunities to mine data for insights. Additionally, ML algorithms allow practitioners and data scientists to uncover and optimize data for ideal, relevant search experiences.

FORRESTER

Forrester Research, Inc., 60 Acorn Park Drive, Cambridge, MA 02140 USA
+1 617-613-6000 | Fax: +1 617-613-5000 | [forrester.com](#)

© 2018 Forrester Research, Inc. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies. Unauthorized copying or distributing is a violation of copyright law. Citations@forrester.com or +1 866-367-7378

Analyze Your Business Needs To Select One Of Four Packages

Site search options for digital business and experience leaders are both growing and changing. Google is notably exiting the site search business; it shuttered its search service as of April 1, 2018, and will close down its search appliance in 2019. Other big-name solutions, such as Endeca, are no longer available as standalone products but rather ship with bigger offerings (in the case of Endeca, that's Oracle Commerce Cloud). Choosing — or even knowing if you need to invest in — a site search solution isn't simple.

Choose From Site Search Products, Bundles, Platform-As-A-Service, Or Add-On Modules

Forrester has interviewed site search vendors and digital business leaders to understand what businesses need from site search vendors and solutions. From those insights, we've grouped solutions into four categories (see Figure 1):⁵

1. **Site search products.** This category comprises full-stack search, best-in-class, best-of-breed, and standalone products. Businesses can buy these site search solutions as standalones — that is, separate from other products that the vendor sells and supports. Because these solutions are products rather than features, they tend to compete with one another, which is especially true for prebuilt integrations with eCommerce solutions that don't come prepackaged with strong search (e.g., Magento). Vendors like Episerver and RichRelevance added site search relatively recently and primarily include it with a broader personalization or DX bundle, but they still sell their solutions as standalones today.
2. **Bundled site search.** This category includes a diverse group of former best-of-breed solutions and build-to-embed solutions. Vendors acquired and subsequently embedded the former into broader solutions (e.g., Oracle acquired Endeca, and Adobe acquired Omniture's Search&Promote). Other vendors recognized a client need and rolled out stronger solutions that stopped short of a standalone product (e.g., Acquia and Crownpeak). This group of solutions is so varied that potential buyers should analyze whether a given embedded capability meets their needs sufficiently to avoid the need to acquire a standalone solution.
3. **Platform-as-a-service (PaaS) search services.** If engineering-centric organizations have made a strong commitment to a specific cloud platform (e.g., Amazon Web Services or Microsoft Azure) or have invested in a solution that runs natively on those platforms, PaaS search services could prove the logical option. In some cases, the solution provider offers bare-bones features at no added expense, supports the PaaS search service for increased functionality and performance, and then partners with a full-stack solution for the most advanced use cases (e.g., Sitecore's advanced search relies on a partnership with Coveo).
4. **Site search add-on modules.** If the digital business has already made a strong investment in a full-stack search solution or has built its own solution using open source components, it may still find that functionality for the practitioner, such as a marketer or other business stakeholder, could

Revamp Site Search To Jump-Start AI, Chat, And Personalization

be better. In this case, add-ons can improve everything from the ability to understand a query (e.g., Twiggle’s NLP capabilities) to giving merchandisers the tools to build and manage campaigns (e.g., Innovent’s FindTuner). This list is intentionally short, as there are many solution-, vertical-, or use-case-specific add-ons available in the market.

FIGURE 1 Site Search Vendors Package Their Solutions In Four Ways

Site search product vendors	Bundled site search (with CMS, eCommerce, etc.)	PaaS search services	Search add-on modules
<ul style="list-style-type: none"> • Algolia • ATTRAQT • BloomReach • Cludo • Coveo • Elastic • Episerver • Funnelback • GroupBy • Loop54 • Lucidworks • Mindbreeze • Reflektion • RichRelevance • SLI Systems • Unbx 	<ul style="list-style-type: none"> • Acquia (Search) • Adobe (Target) • Crownpeak (Search G2) • Oracle (Commerce Cloud) 	<ul style="list-style-type: none"> • AWS CloudSearch • Azure Cloud Search Appliance 	<ul style="list-style-type: none"> • Innovent (FindTuner) • Twiggle

Note: These lists are illustrative rather than exhaustive. Funnelback, SLI Systems, and Unbx were unable or unavailable to participate.

Code Base, Tooling, Scale, And Relevance Are Key To Best-Fit Solutions

Investing in site search maturity is difficult; it can involve years of practitioner change management (e.g., moving from rules to algorithms), and for many reasons, corporate finance may not be ready for new licensing models (e.g., from appliances to SaaS subscriptions). Furthermore, many integrations will involve IT or a systems integration partner (e.g., with back-end repositories and other front-end tools). Digital leaders must invest the time and energy to shortlist and run proofs of concept and should align their requirements with the solution in four critical areas:

- › **Code base: proprietary versus open source.** IT, legal, and, to a lesser degree, data science teams often care about the underlying code base. For open source, two prominent projects and supporting companies have emerged — Elastic, supported by Elastic, and Solr, supported by Lucidworks — and many solutions are already built on one or the other.⁶ On the other hand, proprietary solutions often align more tightly with a vertical industry (e.g., Mindbreeze’s healthcare focus), partnership (e.g., Coveo’s partnership with Sitecore and Salesforce), or other scenarios.
- › **Tooling: merchandisers and marketers versus developers.** To increase conversion and grow customer engagement, marketing and eCommerce professionals need specific tools, such as merchandising rules management, testing, and lightweight algorithmic optimization. Solutions like ATTRAQT, BloomReach, and Reflektion have made this user base their core focus. Conversely, solutions like Algolia maintain a heavy focus on the developer, with an API-first product strategy and robust documentation. Coveo, Elastic, Lucidworks, and Mindbreeze often sell into more complex scenarios and thus support more developer documentation.⁷
- › **Scale: content index and user queries.** One principal architect at a North American retailer advises: “Ask yourself: How often does your body of objects change? How many factors impact that, such as price and availability? Those are critical when selecting the right architecture.” Basic site search based on an index of a few thousand content objects is simple, but the scenario changes significantly when you have millions of objects, with many changes per day or week and hundreds of queries per second. Many search vendors have a sweet spot regarding scale, and it’s often apparent in their pricing tiers, so be sure you’re not too far outside that range.
- › **Relevance: streaming data feeds and user targeting.** Not all solutions are equal. One digital leader at a telecommunications company explained: “We know what type of phone the client is on — iPhone or Android — so we should be able to serve relevant results accordingly. However, it’s hard to share the logic from site search into other areas, and vice versa.” Search relevance is a cousin of personalization, and in some cases, it’s the engine behind product recommendations. The more context you have, the more likely it is that you’ll be able to determine intent and serve accurate content. At the high end, the system should evolve and learn so you can understand customer behavior and automate the link to relevance scoring.

Waste No Time: Invest In Search, But Focus On Success Metrics

Why invest in your site search capabilities? Can't you just rely on what you already have in place? In short, no. Your customers expect fast, relevant search capabilities on your site, just as they experience them on any search engine. It's a tall order, so invest in using metrics to build your site search business case. We see that increased:

- › **Self-service translates to lower cost of service and increased conversion.** Measure self-service in time-to-meaningful-engagement, whereby engagement metrics like time-on-site drop but conversion and loyalty rates rise. If the customer doesn't need to call the customer service line because she easily found what she needed online and trusts that answer, everyone wins.⁸ In general, any friction you can remove from a customer's experience is healthy.
- › **Content reuse leads to higher content quality.** Measure content reuse in overall content volume (i.e., decrease in the number of assets) and the number of channels where your customers consume that content. Over time, fragmented content repositories will benefit from centralized access and management (taxonomy), and the customer will find the best content regardless of where it lives; for example, in a community knowledge article rather than a product marketing description.
- › **Customer insights lead to better engagement.** Measure customer insights maturity in three ways: 1) customer profile health (the degree of completeness and accuracy, especially for behavioral data) across your channels; 2) dynamic audience segmentation maturity (as opposed to static segments that become outdated); and 3) targeting and relevancy effectiveness (did desired behavior XYZ rise?). Overall, the ability to monitor and improve relevance and effective engagement should be apparent to your practitioners. For example, based on similar search/journey patterns, contact center agents can more easily see what search and navigation to assist.

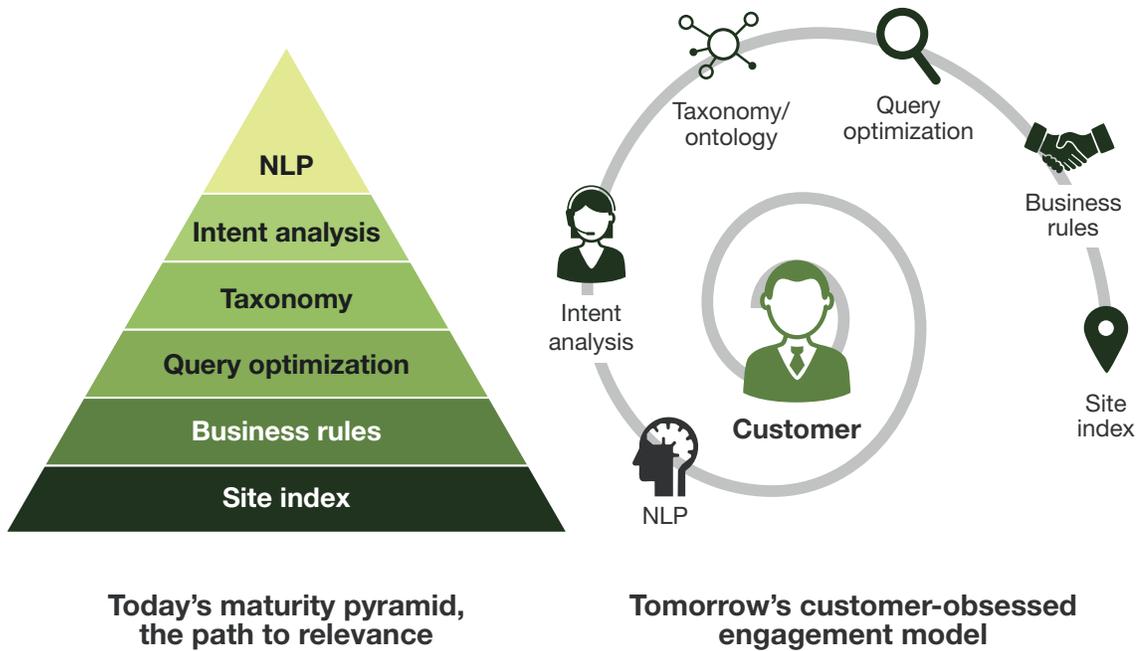
What It Means

Flip Search Around To Lay Conversational Engagement Foundations

Digital business leaders adopting cutting-edge search capabilities are pushing a new paradigm: Start with the customer and end with the content experience (see Figure 2). This paradigm is wildly different from the traditional search mentality of "I have content; you have a request; let's match them as best we can."

Making this switch will require new technologies to better understand customer intent. Those technologies, including NLP, are here, but organizations don't understand or distribute them well. However, businesses that do prioritize customer profiles as foundational elements and then layer on AI technologies like NLP at a foundational level will be able to have proper "conversations" with their customers across touchpoints and over time.

FIGURE 2 NLP And ML Enable Customer-Centric Search Architectures For Future Conversational Engagement



Engage With An Analyst

Gain greater confidence in your decisions by working with Forrester thought leaders to apply our research to your specific business and technology initiatives.

Analyst Inquiry

To help you put research into practice, connect with an analyst to discuss your questions in a 30-minute phone session — or opt for a response via email.

[Learn more.](#)

Analyst Advisory

Translate research into action by working with an analyst on a specific engagement in the form of custom strategy sessions, workshops, or speeches.

[Learn more.](#)

Webinar

Join our online sessions on the latest research affecting your business. Each call includes analyst Q&A and slides and is available on-demand.

[Learn more.](#)



Forrester's research apps for iOS and Android.

Stay ahead of your competition no matter where you are.

Supplemental Material

Survey Methodology

We conducted Forrester's Q1 2018 Global Digital Business And Experience Online Panel Survey among 108 digital experience professionals. Forrester fielded this survey in Q1 2018 to end users who are involved in digital experience technology decisions at their organizations. The sample consisted of organizations across industries and included third parties for relevant questions, as third parties become deeply entrenched partners for many digital experience initiatives.

Please note that there may be some sample bias. While Forrester fielded the survey to a global audience, the majority of respondents came from North America; they also came from an uneven distribution of industries and from companies of various sizes. This survey was not fielded to a random sample. The majority of the respondents came from readers of Forrester reports, which may have biased this sample. This survey is not guaranteed to be representative of the population. Unless otherwise noted, statistical data is intended to be used for descriptive and not inferential purposes.

Revamp Site Search To Jump-Start AI, Chat, And Personalization**Companies Interviewed For This Report**

We'd like to thank individuals from an Asian telecommunications company, a North American analytics services firm, two North American digital agencies, a North American digital community, and a North American retailer as well as individuals from the following companies, all of whom generously gave their time during the research for this report.

Adobe	Elastic
Algolia	Episerver
BloomReach	Lucidworks
Cludo	Mindbreeze
Coveo	RichRelevance
Crownpeak	Twiggle

Endnotes

- ¹ Source: Forrester's Q1 2018 Global Digital Business And Experience Online Panel Survey.
- ² Source: Forrester's Q1 2018 Global Digital Business And Experience Online Panel Survey. See the Forrester report "[The State Of DX 2018: Priorities Thwarted By Legacy Foundations.](#)"
- ³ The survey response "explore new touchpoints for digital experience (e.g., signage, chatbots, Alexa skills, etc.);" rose from 27% in 2017 to 39% in 2018. Source: Forrester's Q1 2018 Global Digital Business And Experience Online Panel Survey and Forrester's Q1 2017 Digital Experience Delivery Online Survey. See the Forrester report "[The State Of DX 2018: Priorities Thwarted By Legacy Foundations](#)" and see the Forrester report "[The State Of Digital Experience Delivery, 2017.](#)"
- ⁴ See the Forrester report "[TechRadar™: Artificial Intelligence Technologies, Q1 2017.](#)"
- ⁵ It's worth noting yet another category: cognitive search and knowledge discovery, which comes from an enterprise search or analytics and data science heritage. This category only slightly overlaps with a few of the site search providers (e.g., Coveo, Elastic, Lucidworks, and Mindbreeze) but mainly serves more-complex enterprise and data science needs. See the Forrester report "[The Forrester Wave™: Cognitive Search And Knowledge Discovery Solutions, Q2 2017 \(Updated\).](#)"
- ⁶ See the Forrester report "[Spice Up Your Digital Experience Platform With Open Source Flavors.](#)"
- ⁷ The data scientist focus carries site search into the realm of cognitive insights platforms.
- ⁸ See the Forrester report "[Customer Service Reboot: The Rise Of The Gig Economy.](#)"

We work with business and technology leaders to develop customer-obsessed strategies that drive growth.

PRODUCTS AND SERVICES

- › Core research and tools
- › Data and analytics
- › Peer collaboration
- › Analyst engagement
- › Consulting
- › Events

Forrester's research and insights are tailored to your role and critical business initiatives.

ROLES WE SERVE

Marketing & Strategy Professionals

CMO

B2B Marketing

B2C Marketing

Customer Experience

Customer Insights

- › eBusiness & Channel Strategy

Technology Management Professionals

CIO

Application Development & Delivery

Enterprise Architecture

Infrastructure & Operations

Security & Risk

Sourcing & Vendor

Management

Technology Industry Professionals

Analyst Relations

CLIENT SUPPORT

For information on hard-copy or electronic reprints, please contact Client Support at +1 866-367-7378, +1 617-613-5730, or clientsupport@forrester.com. We offer quantity discounts and special pricing for academic and nonprofit institutions.