

How to Get Value Out of the Search Capability in Your WCS Strategy

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Web customer service (WCS) applications and suites are a key means of cutting costs and improving customer service via communication that customers prefer and embrace; search technologies underpin and can help achieve many of those values. Customer service managers, customer experience managers, support desk managers and others will benefit from weighing what's currently possible against richer potential futures with WCS.

Key Findings

- Effective search and content analytics technologies are key to knowledgebase-powered self-service, email response management, Web chat and virtual assistants.
- Search technology is a catchall term for a variety of technologies that have differing values and impact. The technologies can be much more effective when resources are available to understand how they work, what they can be used for and how best to deploy them.
- Most knowledgebase-oriented products are delivered with search technologies bundled; some search vendors have developed knowledgebase products as part of their specialization strategies. Key functions in such specialized products hinge on workflow and business process that address the products' main goals.
- Information architects or search managers (or workers with both functions) are pivotal to achieving, measuring and improving customer-experience metrics.

Recommendations

- Staff a WCS project such that information architects and search managers can contribute to improved relevancy calculations, metadata collection and measurement.
- Use the staff, as possible, before product selection to evaluate its search capability and compare it with other products.

- Regularly, for example, weekly or monthly, review the most common searches and actually check the results. If issues surface, strive to identify root causes and proactively communicate and apply solutions to the customer base before more searches are run.
- Seek new bodies of knowledge that can provide better answers to questions current knowledgebases struggle to address.

Analysis

WCS, like the Web itself, depends on the drill-down capability of search engines to make information swiftly retrievable from vast repositories. Without search, navigation trees are inherently less efficient for locating information. Searches are also becoming increasingly nonintuitive as the box-and-button search format used by Google and its ancestors becomes second nature to users. To establish an effective search capability, organizations must follow the same processes they use for any search project (see "Your Enterprise Search Project: The Outward Spiral").

Organizations planning a WCS implementation must create a strategy that includes all the channels users will seek, implement each channel with a long-term view, and build a justification based on each channel's value. A knowledgebase for self-service will fail if justified only on caseload reduction or inquiry deflection. A strategy that serves multiple channels and functions with a WCS solution is the easiest way to prove the value of a new solution. ROI calculations must focus on potential revenue and cost deflection. In many cases, such calculations will depend on effective search capability, because search is a fundamental and familiar means by which workers and customers find information swiftly.

The true value of a knowledgebase for self-service is not possible without a long-term commitment to ongoing fine-tuning and enhancing, which is true, in large part, because of the search technology at its heart. The key focus of a knowledgebase for self-service is to achieve sufficient relevance of response such that users find what they need in a timely fashion about four out of five times, which will ensure their continual use of the WCS site and prevent them from abandoning it. The key aspects of search technology are fine-tuning and configuration. In many cases, 10 years or more have been invested in developing interfaces that allow administrators to delicately adjust how results are selected to improve the speed of locating documents.

A knowledgebase for self-service consists of the following five categories of knowledge, where search applies different criteria to each:

- Agent knowledge: The contact center agent is a repository of information about corporate products and services, as well as problem resolution. Capturing agent knowledge in a self-service knowledge engine can speed delivery of services and training of individuals. Search is also used regularly to locate expertise; authors, most expert users and those who modify documents can be located as can the documents themselves. Clients tell Gartner that anywhere from 20% to 80% of searches conducted in their systems appear to be for people instead of documents.

- **Corporate knowledge:** This is the total body of knowledge necessary to deliver on the strategic aims and objectives of an organization. It provides product and service information, and can typically be accessed by any internal corporate Web citizen. Typically, the head of operations takes responsibility for this information's upkeep and delivery, or, in a sales-oriented organization, the head of sales takes responsibility. Generally for an extra cost, most search vendors provide the connectors necessary to access such information effectively, or federators to touch corporate information stores.
- **Social knowledge:** Many people belonging to social networks post information on bulletin boards and blogs. By gathering and analyzing the information written about your corporate products and services, you become aware of the public perception of your organization. Collect this information and store it centrally for self-service access, because your customers often know more than you about your products and services. Use social knowledge to expand your corporate thinking, taking into account what is being said about your organization. Sentiment analysis and market intelligence are in the realm of many search vendors' capabilities. In some cases, search vendors have worked on federated or index-based incorporation of external data in existing projects.
- **Partner knowledge:** If you have partners in your supply chain, they are often the ones dealing directly with your customers. Collect and store information they develop for Web-based, self-service access by other partners within the supply chain so you have a common way to resolve problems and queries. Also, use this base to bring new partners online as quickly as possible, and to check the quality and content of interactions your partners have with your most valuable asset — your customers. Such knowledge will not automatically be included in public search engines. Such search sites do not include corporate knowledge unless specific items of corporate knowledge are tagged as accessible to their spiders. By opening some areas of corporate knowledge to public self-service engines it is possible to have your internal information listed with publicly searched results. Alternatively, partners may be granted access to a software-as-a-service search engine you populate or an internal search engine.
- **Hosted community knowledge:** In developing and deploying theme-based community forums, a group of like-minded people impart valuable information that can be collected, filtered, authored and provided back to the community or other areas for self-service search. Use these forums to capture knowledge. Or provide a community with access to the knowledge repository to store its own specific information, which can be accessed and retrieved by that community only.

A search's strength lies in its ability to deliver a single right answer as opposed to a list with hundreds of options. Too many responses and the customer will typically abandon the self-service activity and resort to phoning the contact center. The knowledgebase and search must be optimized with the target that a satisfactory result must be returned and be visible on the first screen of results about 85% of the time. Best practice dictates that the relevance of response should be about 93% to ensure consistent customer satisfaction. But Gartner has seen reports of up to 97% relevance of response achieved (see Note 1). Other means of measuring search that are more academically oriented and will be recognizable outside the customer service area include precision and recall, the specific meanings of which may make them too specialized for many projects and initiatives (see Note 2). Search technologies are highly varied, and organizations have many choices when seeking to improve their ability to retrieve the most relevant responses to

customers' requests. They can stretch their abilities to allow for richer queries, deepen their ability to analyze such queries and match them to documents, or more completely analyze documents and the behaviors displayed by users and document creators. Intention-based search may use a variety of cues to improve a search engine's ability to understand the intention behind a customer's question. Question-matched search seeks precise matches for the question posed. Case-based reasoning allows for questions to narrow the result to the best possible right answer.

Natural-language processing for plainly worded queries continues to show promise, as does analytical processes that examine documents with linguistic intelligence, statistical analysis and other means of comprehension. Semantic search may be based on Semantic Web technologies, which are specific ways of marking up and searching content with the intention of rendering the content effectively self-describing. Ultimately, this may improve search significantly. But in the near term, Semantic Web technologies are problematic (see "Taking Stands on the Semantic Web" and "Hype Cycle for Enterprise Information Management, 2009"). More immediately applicable in WCS, and popular for some time, is simply analyzing the semantic structure of support documents and queries to exploit the root structures of language to more effectively identify results.

Analyzing behaviors and examining actions external to the documents — reader behavior, other searchers' interests and activity elsewhere in a repository, but on documents that may be presumed to be related to the untouched documents — are all means of improving search results.

Documents may be crawled or otherwise ingested with varying degrees of depth, but the body of the document is not the only source of valuable information for improving findability. Document metadata is a key way of improving understanding of what individual documents may mean, including explicit and auto-generated metadata, such as the document authorship, and when and where it was created. Also valuable are holistic views of multiple documents' content to discern and establish relationships. Other valuable resources include data repositories and data feeds that are never captured directly in text, such as browser activity or author behavior. In general, the useful portions of documents and repositories go well beyond simple keyword-oriented locating methods, as public search engines, such as Google, have demonstrated.

The ability to find documents will become more challenging as the documents rely increasingly on video or imagery. Video search is particularly problematic because conventionally occurring metadata is sparse (filenames and authorship are not necessarily helpful) and visual lexicons are still undefined. How to search for shapes or actions is still being researched and will be years until commercially developed. And yet video's importance in customer service is expanding (see "Video in Customer Service Grows in Significance").

Additionally, it is important to provide perspective on documents relating to customer service to users who have not even entered the self-service area but have started with public search engines, such as Google or Bing. Bridging the enterprise's search results to public search engine indexes is a key strategy (see "Use Search Engine Optimization to Deliver Search Knowledge for Self-Service").

Service providers with a good knowledgebase for self-service that is supported by search (see "Magic Quadrant for CRM Web Customer Service") include:

- RightNow
- eGain
- KANA
- Moxie Software
- Presence Technology
- Eptica
- Trinicom

Search vendors with significant WCS experience include:

- Coveo
- HP (via Autonomy)
- Oracle (via its pending Endeca acquisition, and ATG)
- Vivisimo

Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Balance Customer Experience With Customer Service Productivity in Customer Service Automation Initiatives"

"Magic Quadrant for CRM Web Customer Service"

Note 1 Relevance

Relevancy is a general concept that indicates whether results of a search are appropriate. In WCS, the notion is measured in numerous ways, including:

- Whether users indicate that a given result addresses their question
- Whether users indicate they are satisfied after a self-service support interaction
- The degree to which a returned result satisfies a criterion in the content itself, such as term frequency, term frequency and inverse document frequency, or some other aspect of the included text

Note 2 Precision and Recall

In search measurement, the most common terms used for precise measurement are "recall" and "precision." Recall is a measure of what proportion of documents deemed relevant is returned in a

given set of documents, or whether relevant documents are found. Precision represents how successfully the search process recognized the relevance of those documents — how high they came back in the results set, in common parlance.

This is part of a set of related research. See the following for an overview:

- Roundup of 2011 CRM Web Customer Service Research

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