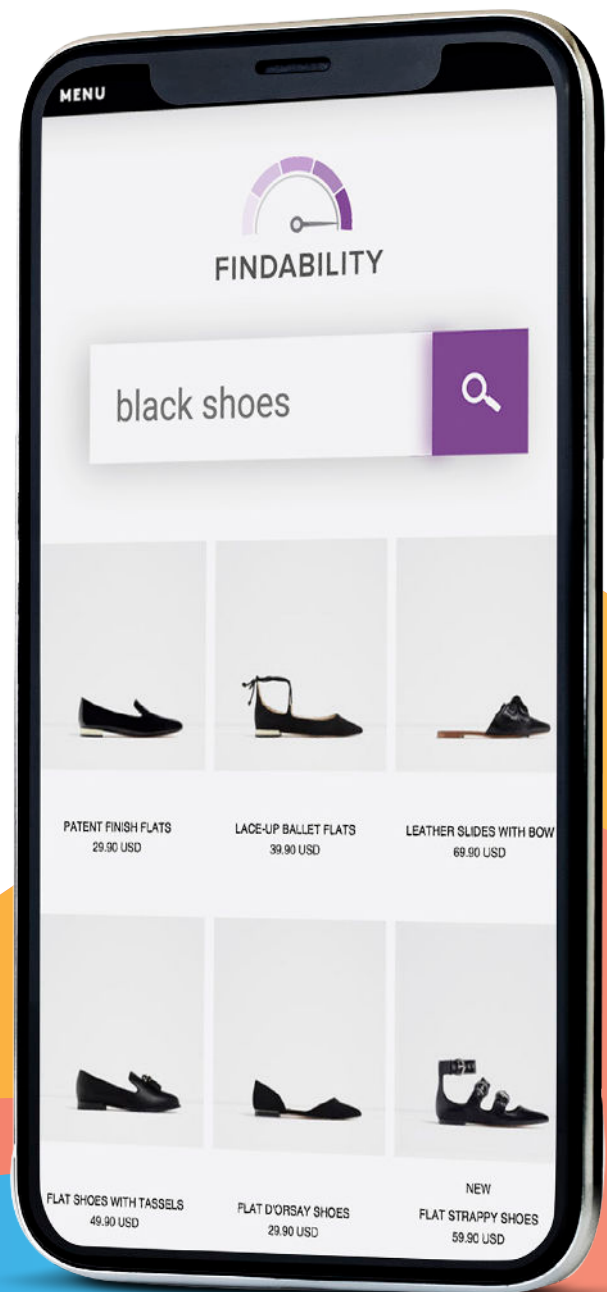


Personalize Commerce Search:

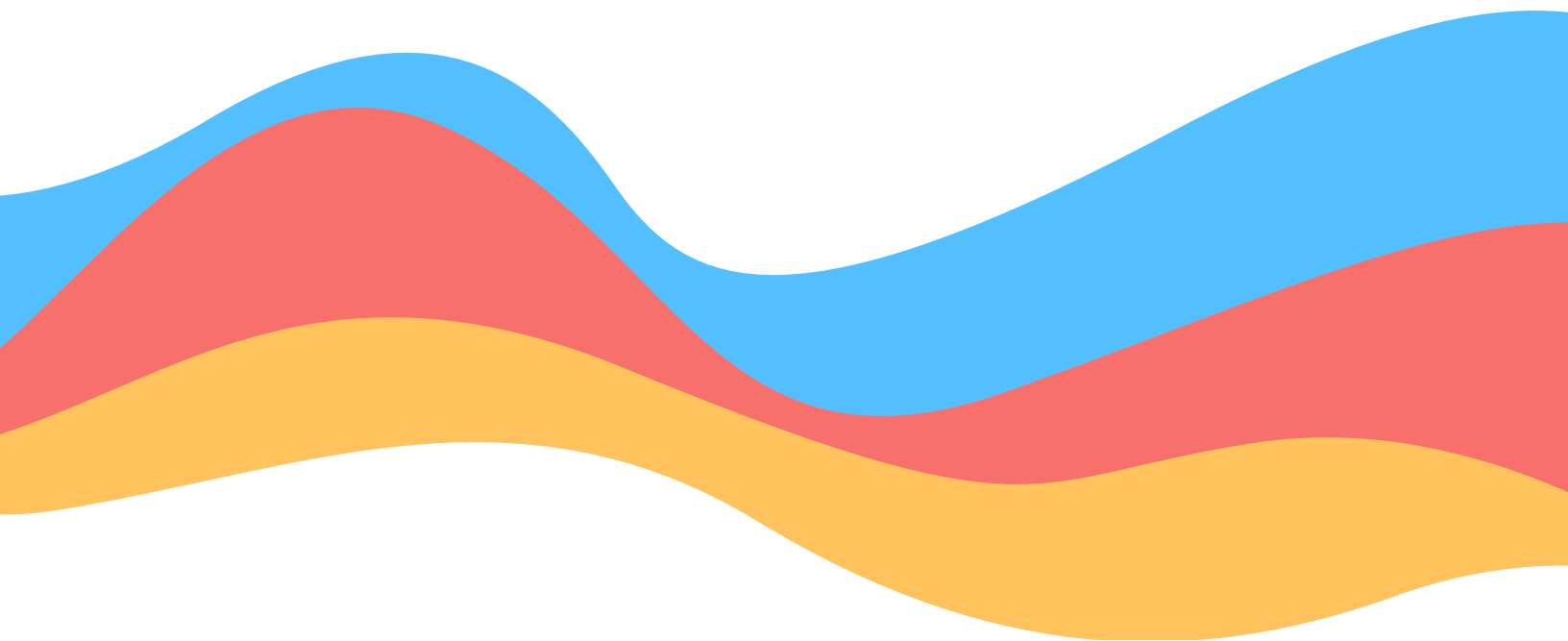
How to Improve Findability at Every Touchpoint

Understand, compute and improve Findability, one of the most important metrics in your digital customer experience toolkit



Executive Summary

Until today, Commerce Search engines have failed to deliver the personalized experience today's impatient consumers seek. Legacy Commerce Search solutions have lacked the real time ability to truly measure and respond to consumers' ever changing behavior. This paper defines why Findability is the essential metric for Commerce Search highlighting how it positively impacts the entire customer experience and ultimately increases not only engagement, but overall revenue across channels.



Search is Fundamental

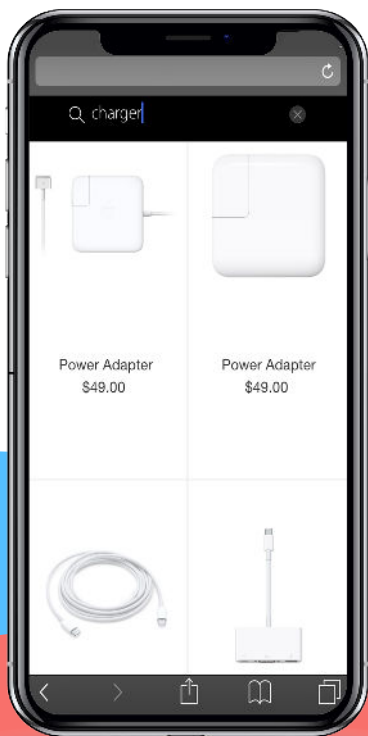
Search is the key to finding information online and is often the first step taken on the path to product discovery. It is frequently the customer's entry point, and their first impression of your brand's digital shopping experience. Search is unique in that it is the single place in the digital shopping journey where shoppers communicate with technology in natural language and expect instant and personalized responses. Search represents 1:1 communication and is perhaps the most impactful process to influence and enhance the shopper's experience. Effective Search accelerates product discovery and drives conversion by delivering the most relevant results for each unique Search query. The challenges – and rewards – are compounded in omnichannel scenarios. Today's impatient mobile consumer expects speedy access to accurate and relevant information, products, and services. Search, one of the most steadfast tools in ecommerce, has now become the final battlefield to engage consumers in a cross-device world.

In fact, research published widely from Brigham Young University's Professor Michael Hendron indicates that up to a third of online shoppers use site search. Those who use site search are particularly important to commerce as buyers are 90 percent more likely to use search compared to those merely browsing. The retail industry can no longer accept a Search success rate of only 50%, and this is driving the urgent need for a remedy to this failing. Hendron coined the term "Findability" to measure the accuracy of the responses delivered by Search.

To succeed in Search, Findability needs to be manifested as a practical and accessible measure and not merely as a concept or idea. This paper explains to retailers how to implement Findability as a core business performance metric. To that end, a deeper understanding of the complex challenges inherent to Search, including human psychology, is needed to formulate, define and ultimately optimize Findability for both business performance and enhanced customer experiences.

Findability tells us if consumers find what they're looking for and therefore, tells us if a consumer had a pleasant shopping experience and will ultimately make a purchase.

Findability provides a quantified, data-driven metric to understand if shoppers' searches are locating the items they wish to buy.



Commerce Search: A Complex Problem

What counts as a successful search experience when the exact same products leave a consumer happy one day and frustrated the next?

Search is a complex multi-dimensional problem with so many interdependencies among numerous variables that each attempt to create a solution shifts the understanding and definition of the problem itself. Search often delivers a frustrating and inadequate shopper experience and remains expensive to retailers.

This inadequacy stands in sharp contrast to Web Search and other consumer tools such as Google and Amazon which are dedicated to browse and discovery; and can be traced back to two simple, fatal flaws:

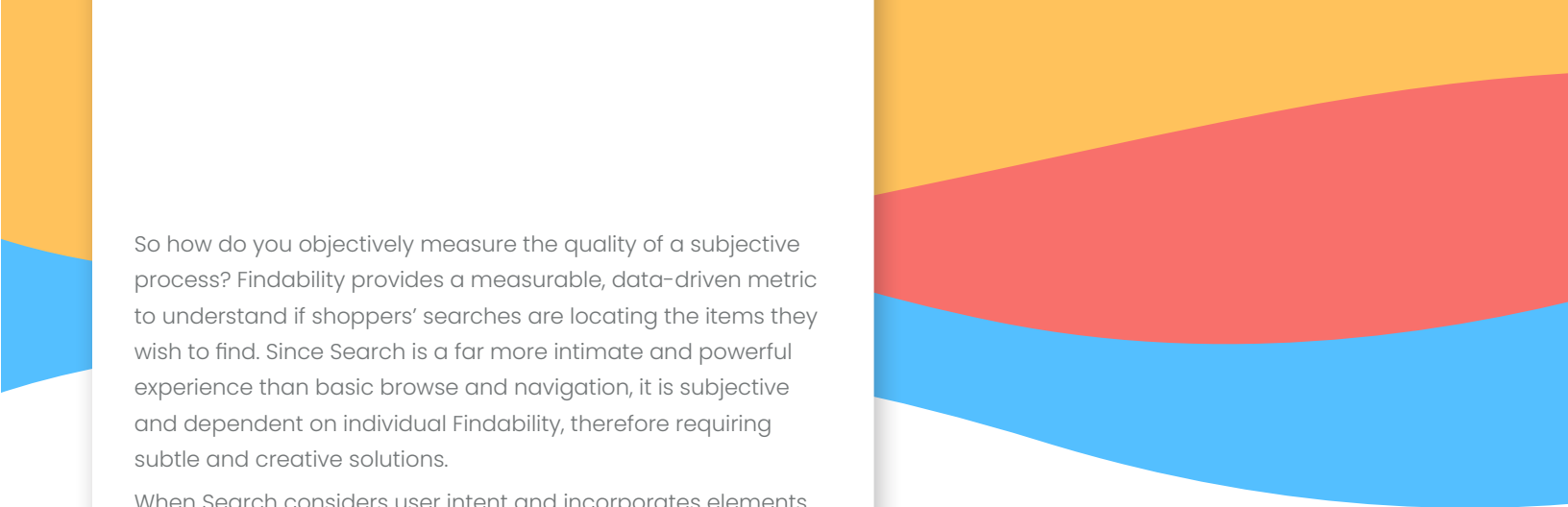
- Search is merely designed to display results and not to deliver a gratifying shopper experience
- The consumer context and intent are ignored

Somewhere along the way, Commerce Search started feeling more like browsing a library card catalog than an intuitive, enticing, playful experience. The industry decided that shoppers really wanted a print out of a bunch of plain, dull links that attempted to list the right items for everyone in descending order of relevance.

Even worse, Commerce Search started down the misguided path of finding one right product for every query. As a result, retailers adopted the very limited and absolute criteria of conversion as a way to measure the effectiveness of Search.

These old and limited notions represent a disservice to today's retailers and shoppers. Today, the adequacy of Search resides as much in the process as in the ultimate results. Pinterest and Instagram offer great examples of immersive, engaging experiences that seduce users. That is, the proper understanding of a successful search is in fact subjective.

We know that a successful Search for one individual might in fact be a failure for another. For example, an iPhone user is seeking a replacement phone charger for their phone and searches for "charger", resulting in two pages of laptop chargers. These results are incorrect, irrelevant, and ultimately frustrating. Simultaneously, if another consumer is seeking a replacement laptop charger and conducts the same query for "charger" on the same site, they would consider those results valid and feel they had a successful and pleasant Search experience. Similar examples may be found in every vertical of the retail business.



So how do you objectively measure the quality of a subjective process? Findability provides a measurable, data-driven metric to understand if shoppers' searches are locating the items they wish to find. Since Search is a far more intimate and powerful experience than basic browse and navigation, it is subjective and dependent on individual Findability, therefore requiring subtle and creative solutions.

When Search considers user intent and incorporates elements of shopper behavior, the probability of satisfaction is enhanced across all Search-enabled channels.

Findability allows you to measure and optimize a shopper's satisfaction and enjoyment. There is one hitch. You just need to get over the legacy metric of conversion.

Findability: A True Measurement of Search Performance

Revenue Per Session (RPS) and Conversion Rate (CR), the traditional metrics for measuring ecommerce site performance were valid when ecommerce was simply a dot-com site. In today's omnichannel world these metrics are no longer adequate as neither RPS nor CR accurately measure the performance or the intelligence of a Commerce Search engine. RPS and CR highlight the success or failure of the entire shopping journey, but lack the ability to discern which features or functionality led to a purchase. How can you measure the entire shopping journey with metrics that only consider those that succeed in making a purchase?

This is where Findability comes in. Findability defines how successful a Search query is at scale, with all shopper experiences on a given site – whether online or mobile. Findability shifts focus from more conventional metrics such as CR and RPS to the experience that leads to conversion.

Findability: How it's Measured

Although Findability is not a new notion, the challenge has always been how it is to be computed. How can you determine if a shopper feels their Search experience was positive and successful without actually asking them? Whilst the answer is simple, the solution or method is indeed complex.

In theory, the perfect Search system will retrieve only relevant results and exclude all non-relevant products from the result set. However, what may be relevant to one shopper may be irrelevant to another, therefore relevance is subjective to the shopper. Additionally, what is to be retrieved is dynamic and dependent on channel, display size, and individual shopper. The quantification of successful searches by a shopper requires a measurement approach that connects each query to the shopper's intent, context and every action and click.

Findability is a composite score averaged over the full process from the entry of a Search query until conversion occurs. Therefore, to calculate Findability, it is necessary to weigh various components of the Search query and observe how the shopper responds to the results in order to create a composite score that is updated throughout the shopper's journey.

FIGURE 1

Findability: How it's Measured

Findability is equal to the CTR on the first page (Page1) of results (or before pagination) without scrolling divided by the click distance (the distance from the top of the first page that the click occurs) minus the frequency of no results queries divided by the number of total queries.

Findability =

$(ctr(page1)) * 1 / \ln(1 + click_distance) - 0results / num_queries$

A Findability value decreases the more the user paginates, scrolls, or filters since the goal is to help consumers get to what they are searching for as quickly as possible.

Findability is calculated by assigning a relative positive and negative weight to a set of components related to the Search experience. It considers the query to Click-through Rate (CTR), the shopper's use of pagination, filters the bounce frequency and scrolling volume. Click-through impacts a Findability score positively, while an application of any of the others: bouncing, scrolling, filtering, or paginating impact a Findability score negatively since it is requiring a greater level of effort from the shopper to locate the results they desire. Findability is equal to the CTR on the first page (Page1) of results (or before pagination) without scrolling divided by the click distance (the distance from the top of the first page that the click occurs) minus the frequency of no results queries divided by the number of total queries.

$$\text{Findability} = (\text{ctr}(\text{page1})) * 1 / \ln(1 + \text{click_distance}) - 0 \text{results} / \text{num_queries}$$

The achievement of Findability depends on how good the click is in a result. This level of "goodness" of a click in a result is dictated by the level of effort and time prior to the query together with the degree of validity of the result (bounce ratio).

To be able to build an understanding of Findability in relationship to a particular query, there is also value in considering the agreement between the different occurrences of the same query across shopping sessions.

Findability can be calculated at various levels:

- by query
- by aggregation of queries
- by visit
- by aggregation of visits

A query can either:

- fail, resulting in no-results
- be redefined or laborious (sorted, required a facet, required pagination or scrolling)
- succeed, resulting in a click (with no direct bounce)

Making Findability truly effective (in the sense of serving to objectively measure the success/failure of every interaction with a Search system) is a challenging goal and yet, Findability provides a solid and objective basis of calculus to benchmark key strategic design decisions.

FIGURE 2

Findability: How it's Measured

Findability increases the shorter this journey is:

Case A: 100% Findability for the query “denim dress” when the visit sent one query only and a result is clicked with no bounce

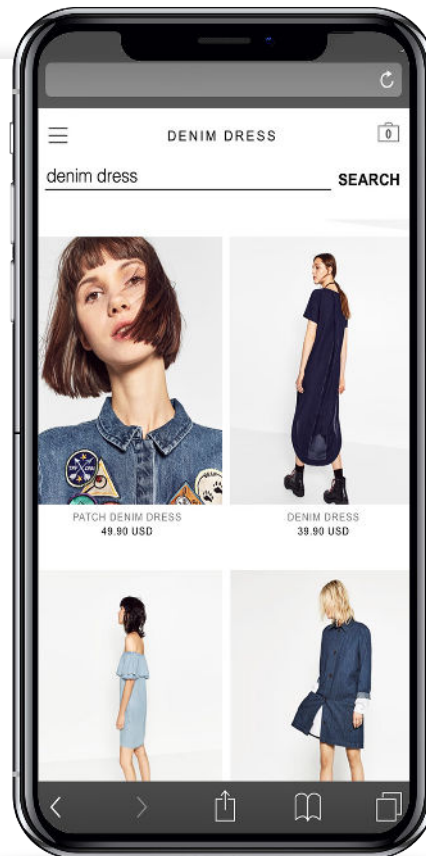
Case B: 0% Findability for the query “denim dress” when the query gave zero results

In between Case A and Case B there could be many scenarios such as:

75% Findability for the query “denim dress” if the query required a filter/facet. For example: Gender “Women” and/or style “Dresses”

50% Findability for the query “denim dress” if the query required various bouncing clicks before a successful click

25% Findability for the query “denim dress” if the query required both the use of filters/ facets as well as various unsuccessful clicks prior to a non-bouncing one



CASE A



CASE B

Note: The above metrics are rounded figures presented by way of example, only, to offer a simple understanding of how Findability works.

Impact of Findability Within Six Weeks

Findability helps retailers and brands to better connect with shoppers, enabling them to provide a shopper centric Search experience that helps shoppers easily find the items they seek.

Each online store analyzed below has its own dimensions and for each case what occurs and why it occurs needs to be analyzed independently. The selected cases show the impact within six weeks of a Findability-driven strategy that incorporates:

- instant/motion results
- in-session affinity detection
- type-ahead predictions
- auto indexing based on actual searches
- merchandising boosts and bury

Optimizing for maximum Findability leads to not only an increase in revenue per session, but also in the usage of Search. As is demonstrated by the metrics across verticals below, when shoppers are pleased with the results delivered, their usage of the Search function increases. When Findability is considered, the entire shopper experience is positively impacted and shoppers are empowered to quickly and easily find what they seek and complete purchases regardless of channel.



Jewelry & Accessories 3% Increase in Findability

- **+20%** increase in query volume
- **+15%** increase in visits that search
- **+25%** increase in revenue from search



Pharmaceutical 6% Increase in Findability

- **10%** increase in query volume
- **+4%** increase in visits that search
- **+22%** increase in revenue from search

1

Instant/motion results references the way results are visualized and delivered to the shopper, which is distinct from the traditional list/matrix of links or images with links. Find™ provides retailers with a wholly unique site Search solution inclusive of an interactive and engaging site display overlay that delivers an animated and engaging Searching experience for the shopper.



Electronics & Computer Related 2% Increase in Findability

- -50% decrease in no-results queries
- +10% increase in query volume
- +12% increase in revenue from search
- conversions from sessions that search = 5X other sessions



Grocery and Hypermarket 3% Increase in Findability

- +20% increase in query volume
- +7% increase in visits that search
- +5% increase in revenue from search

The New Era of Search

Findability by definition considers the individual and how they respond to a Search query, it considers the user's preferences, their behaviors and ultimately their actions very much in the way personalization individualizes the customer experience. Given that Findability is enhanced when user behavior is considered, adding personalization to search will only advance Findability. When personalization and Findability are combined they become even more powerful, leveraging auto-optimizing strategies that consider behavior, clickstream data in partnership with context and product attributes. Until today, Search has lacked innovation and the ability to truly deliver a 1:1 response, but with personalization and the ability to measure Findability, Search queries can become more relevant and intelligent than they have ever been before.

Algonomy is deeply rooted in the belief that shopping is personal and Search is a fundamental component of the shopping journey. By combining a sophisticated Search engine with personalization, Algonomy Find™ brings commerce search to life, considering the customer and their intent to accelerate Findability, product discovery, and ultimately conversion.

Find catches user intent from every interaction, be it navigation, recommendations, content or past purchases to enhance search experience.

ABOUT ALGONOMY

Algonomy (previously Manthan-Algonomy) is a global leader in algorithmic customer engagement powering digital first strategies for retailers and brands. With industry-leading retail expertise connecting demand to supply with a real-time customer data platform as the foundation, Algonomy enables 1:1 omnichannel personalization, customer journey orchestration and customer analytics. Headquartered in San Francisco and Bangalore, our global presence spans over 20 countries. To learn more, please visit algonomy.com.

CONTACT US

To learn more about Findability and Algonomy Find™ please contact us at hello@algonomy.com.



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