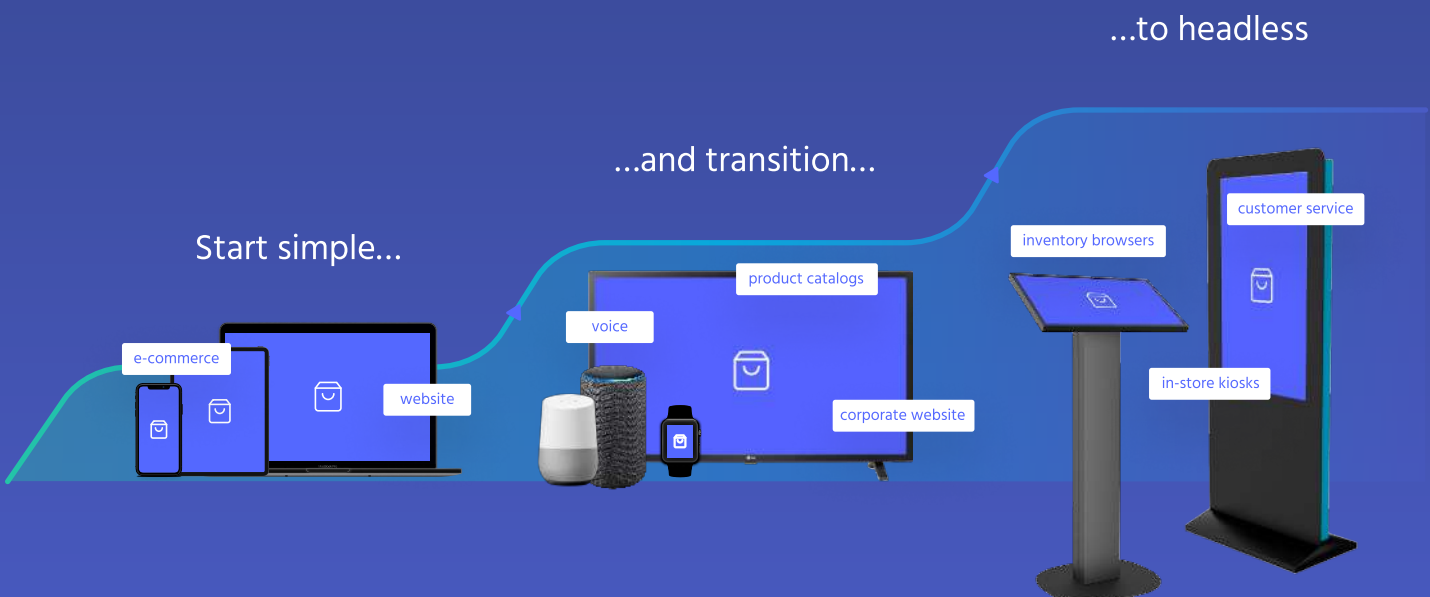# Search: the first brick in your new headless architecture

ACCELERATE YOUR HEADLESS COMMERCE TRANSFORMATION WITH SEARCH

When we think about site search, especially in retail, we usually think only about the search bar of an ecommerce store. While this is a correct, and probably the most obvious manifestation of search, it is also only a partial representation of what search is — and what it can bring to your business.

Winning in today's ultra competitive online and offline world is about creating a world class omnichannel experience for your shoppers, no matter the touchpoint. Headless architecture is technology du jour for a reason: it enables exactly such journeys for modern shoppers while giving retail tech teams fewer headaches and more agility.
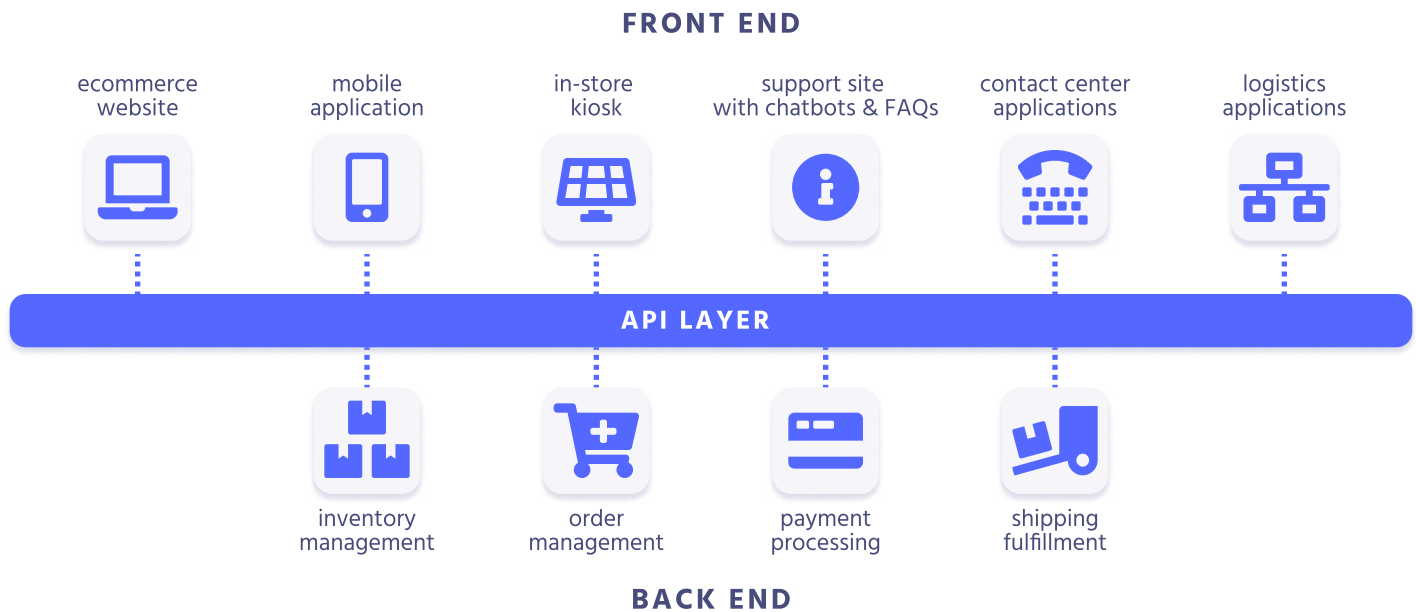
In this guide, we will show you why search is a critical lever for creating a successful headless commerce journey.

...to headless

...and transition...

Start simple...

e-commerce

website

voice

product catalogs

corporate website

inventory browsers

customer service

in-store kiosks

A refresher: what is Headless commerce?

Headless commerce is the separation of the front end of an ecommerce experience from the back end, allowing for thus far unprecedented architectural flexibility. The commerce logic behind your store, delivered through an API, serves as a core body to which you can attach as many "heads" as you want. Heads are customer touchpoints where transactions take place, or the systems used to support employees like merchandisers, warehouse staff and customer service representatives. Example of heads include:

- **Ecommerce website**
- **Mobile application**
- **In-store kiosk**
- **Support website including FAQs and chatbots**
- **Contact center apps**
- **Logistics apps**

FRONT END

| ecommerce website | mobile application | in-store kiosk | support site with chatbots & FAQs | contact center applications | logistics applications |

API LAYER

| inventory management | order management | payment processing | shipping fulfillment |

BACK END

Headless separates the presentation layer of a store from the business-critical processes like order and inventory management, payment processing, or shipping. Doing this allows businesses to separate development and solely focus on customer interaction without worrying about the impact on critical back-end systems.

The advantages are numerous, including easier and increased scalability, increased agility with the ability to experiment on the front end, and more customization options to make sure every experience is on brand.

(Re)defining search

On the front end, a robust, advanced search solution can power some of the most important parts of the user experience. In addition to the search box and search result pages:

• **Navigation menus** of a web store are powered by search: it's searching through the main categories of products a store sells.

• **Category pages** are search: it's searching for all the products of a given category.

• **Landing pages** are search: it's where the searcher arrives after clicking on an ad or a search result, and what will lead the searcher to convert. And it goes on for **product recommendations, product carousels** on the homepage, etc.

The delivery of any product and content the shopper came for can be powered and managed by a search solution, on the web store as well as across channels.

It gets even more interesting on the back end. A robust search solution can be the place where you aggregate product data from all your systems in order to deliver it where it's needed — whether this data lives in a single, but complex source such as in monolithic architectures, or multiple, simpler-to-connect sources in headless architectures.

RECOMMENDATIONS

CATEGORY NAVIGATION

The first bit of your headless architecture, even if you are still monolithic

The numerous opportunities that a headless architecture represents, as well as the range of application of search for retailers, can be daunting. However, retailers can take a step-by-step approach to pave the way for the future, while unlocking significant ROI in the short term.

Research shows that retailers investing in advanced search have 2x conversion rates more in search, drive more revenue out of it, and that users of high quality site search are 3.4x more likely to convert, click, subscribe, or take other actions desired by the business. A first simple step to headless is to enhance your existing ecommerce site search with a robust, headless- ready, API-first search solution. It will allow you to index your product catalog into the search solution using pre-built integrations or APIs, then design search components for your front end. You can even start with the search box and search result pages only.

Let's talk about your front end. You can start by using commerce search frontend blueprints such as Algolia's Unified InstantSearch for Ecommerce, which packages search best practices in a boxed, full-page size overlay that doesn't interfere with your existing website. Here is a livecoding video showing how to implement it on your website.

And there you are: even if your stack is still based on a monolithic commerce platform, you've just built the first bit of your headless architecture.

YOUR COMMERCE PLATFORM

SHOPPERS

b2c website

consumer app

You can then customize this front end, or start implementing additional elements like search-powered category pages, related items or federated search.
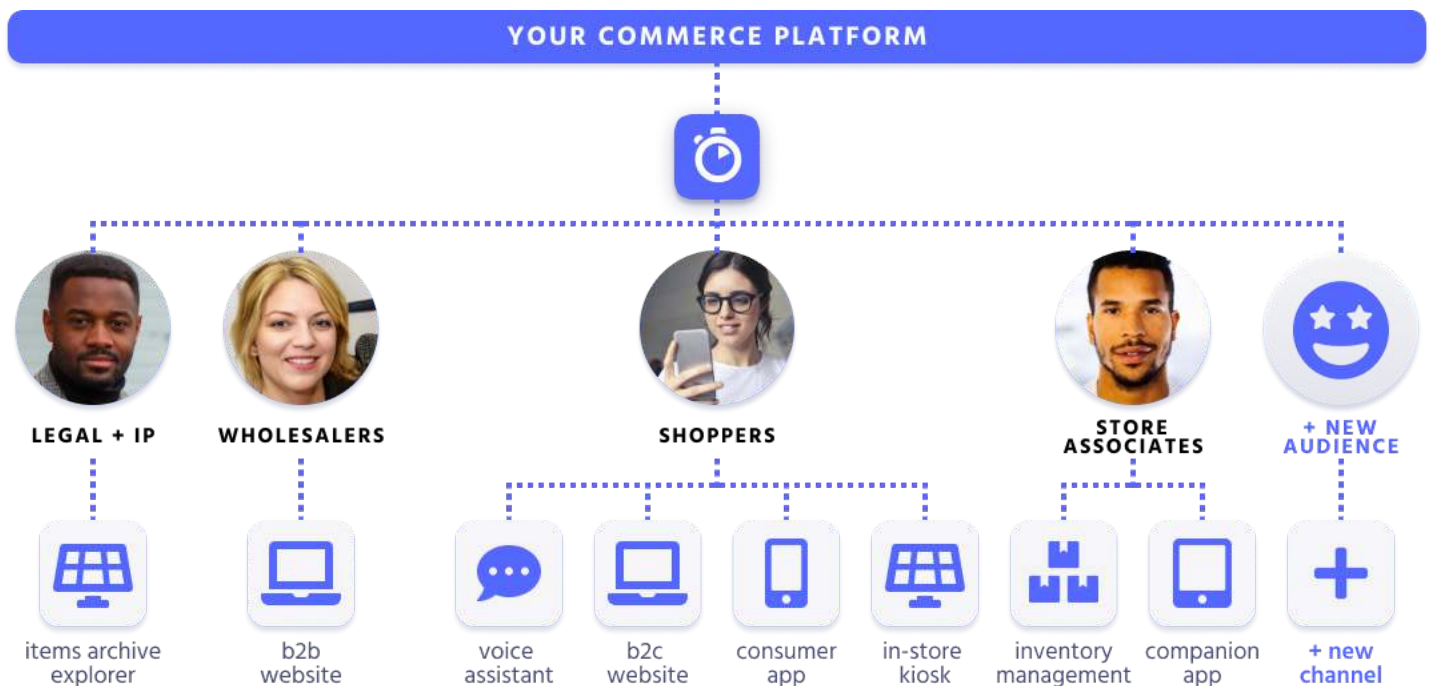
Iterating on the front end and switching additional components of your front end to the new search solution will make you and your team more used to headless.

Expand your omnichannel strategy by adding more heads

As you start getting used to this architecture, you can start thinking about replicating this model to other customer touch points. The advantage of starting with search is that, once your catalog is indexed, you can leverage it from every other application of your environment.

If the other components of your commerce stack (payment processing, order processing, …) offer relatively flexible implementations, you can create commerce experiences where shoppers can buy your products on new devices and channels, including mobile apps, voice assistants, etc.

If your stack is not quite there yet, there are still plenty of touch points where delivering a state-of-the-art catalog search and browse is valuable.

YOUR COMMERCE PLATFORM

LEGAL + IP — items archive explorer

WHOLESALERS — b2b website

SHOPPERS — voice assistant, b2c website, consumer app, in-store kiosk

STORE ASSOCIATES — inventory management, companion app

+ NEW AUDIENCE — + new channel

- **Mobile application for your store associates:** it allows them to efficiently browse the catalog, quickly see what's available in store or in nearby stores, when advising shoppers. It can also suggest items for cross-selling on the fly to the store associates. It improves experiences for in-store shoppers, and increases productivity for store associates. This is even more true in the COVID world, as store associates frequently rely on online channels such as WhatsApp to communicate to customers and recommend products.

- **In-store kiosk:** using your catalog indexed through your search solution, you can build an application for shoppers to browse your catalog by themselves, with pricing, availability and in-store directions for each item at their fingertips. Not only does this allow for a rich self-service experience for shoppers who prefer it, but it can prevent them from exiting your store when all the store representatives are busy.

- **Call center tool:** customer care representatives are a key contact point with shoppers for certain retailers. Some even leverage the call center as an additional sales channel, with shoppers placing orders over the phone. Whether consumers need help with products they purchased, or want to buy new ones, customer care representatives will benefit from an advanced, easy to use product catalog, with all the information they need to best answer consumers, including advanced availability data, restocking dates, etc.

This is just a small snippet of the possibilities.

Show results from all your content sources, build unified experiences

Modern shopping experiences are more than simply buying. They are inspirational. Consumers expect more than boring product catalogs when they interact with retailers, on the web or anywhere. It is therefore critical to add your editorial content (new collection announcement, lookbooks, buying guides, reviews, etc) to the experience or help desk content for shoppers looking for it.

Here is how Cratejoy, a subscription box retailer, offers their customers not just a delightful search experience, but also content to meet them wherever they are on their shopping journey — and speed it up.
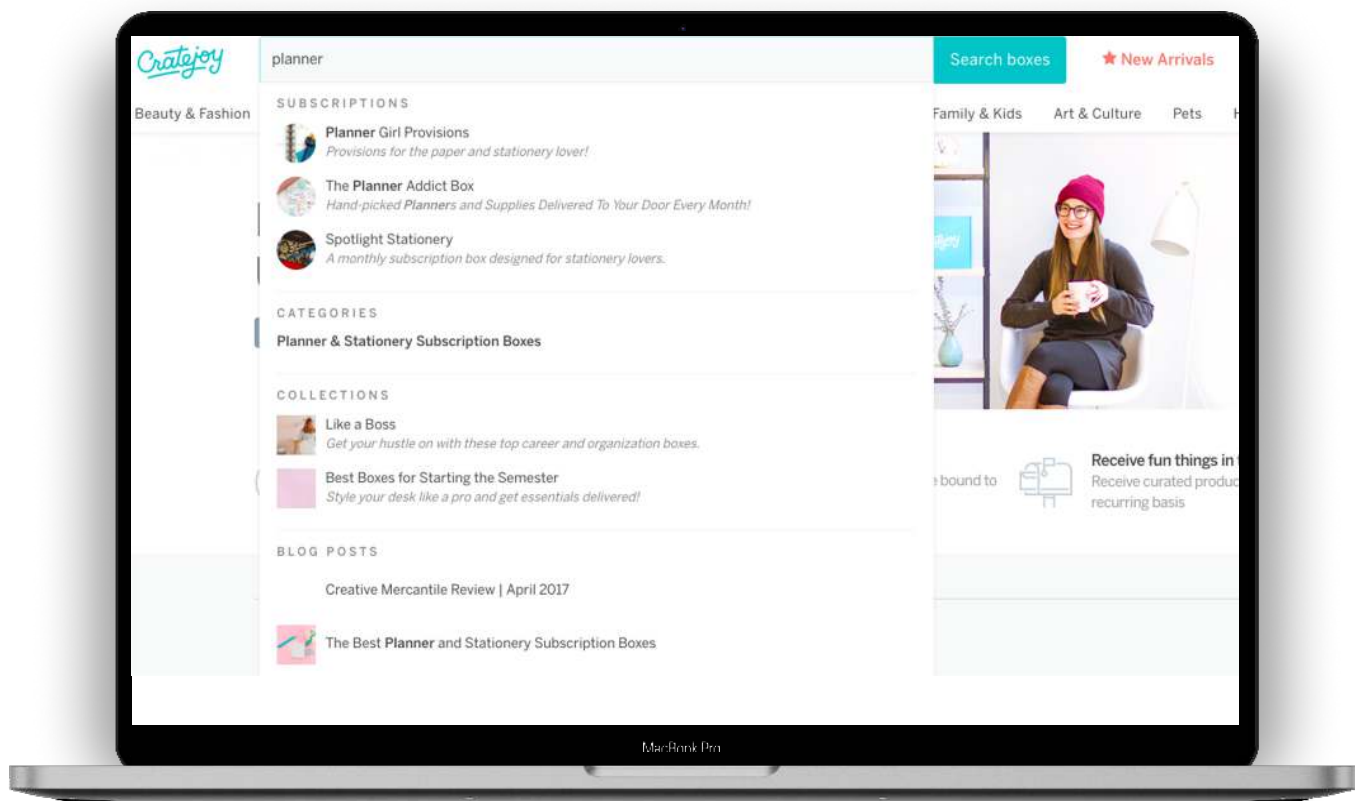
This content might live in different systems than your product catalog. Here again, investing in search as your first step into a headless architecture has a key advantage: a robust search solution will be able to index, via API or a crawler, this content from any of those sources. It will then be a matter of iterations to deliver this content alongside your products in the heads you built.

Bonus benefits of headless architecture

In addition to creating great experiences across channels, a headless commerce architecture enables **easy cross-channel personalization**. Relying on a single search platform and its personalization engine to power experiences across channels means that you can provide consistent personalized experiences to your shoppers. As they interact with your brand across touch points, your search engine's AI algorithms will learn more about their preferences, and personalize accordingly, making every user experience more rewarding.

By decoupling the front end from the back end, a headless commerce enables you to customize your front end and build **an experience that is perfectly on brand on every channel**.

For your merchandising team, headless architecture, especially when leveraging a search solution, lets them merchandize and manage the experience on all devices **from a [single, user-friendly tool](#), without relying on IT**.

But the most impactful benefit of a headless commerce architecture is for your IT teams. They'll be able to deploy and scale omnichannel experiences easily, using the most relevant framework and language for each platform. Headless also allows rapid changes to the front end without disturbing the back end, leading to **faster iterations and time to market, as well as easier experimentation**.

Replace your back end implementation component by component

As we've covered in the previous pages, starting with search is a relatively easy yet impactful way to begin your transition to a headless commerce architecture. Once you get used to the principles of such architecture, and after deploying a few new heads, you can take the next steps into your transition, and start switching additional components of your commerce stack to headless solutions, such as payments processing, CMS, and your commerce back end.

A number of solutions for adopting headless commerce are available, including Commercetools as a commerce platform, Netlify as CMS, Mobify as storefront, and Algolia as search solution — and more are on the way.

Algolia helps retailers build personalized Search and Discovery experiences on every channel. With its search-as-a-service API, advanced developer tools, and customizable front-end libraries, Algolia makes any commerce platform a headless commerce platform that accelerates speed of innovation, drives more conversions and customer engagement, and increases GMV. Algolia increases commerce team's productivity with a visual merchandising tool, a user-friendly dashboard and advanced search analytics.

To learn more, visit **algolia.com**   **ALGOLIA.COM**