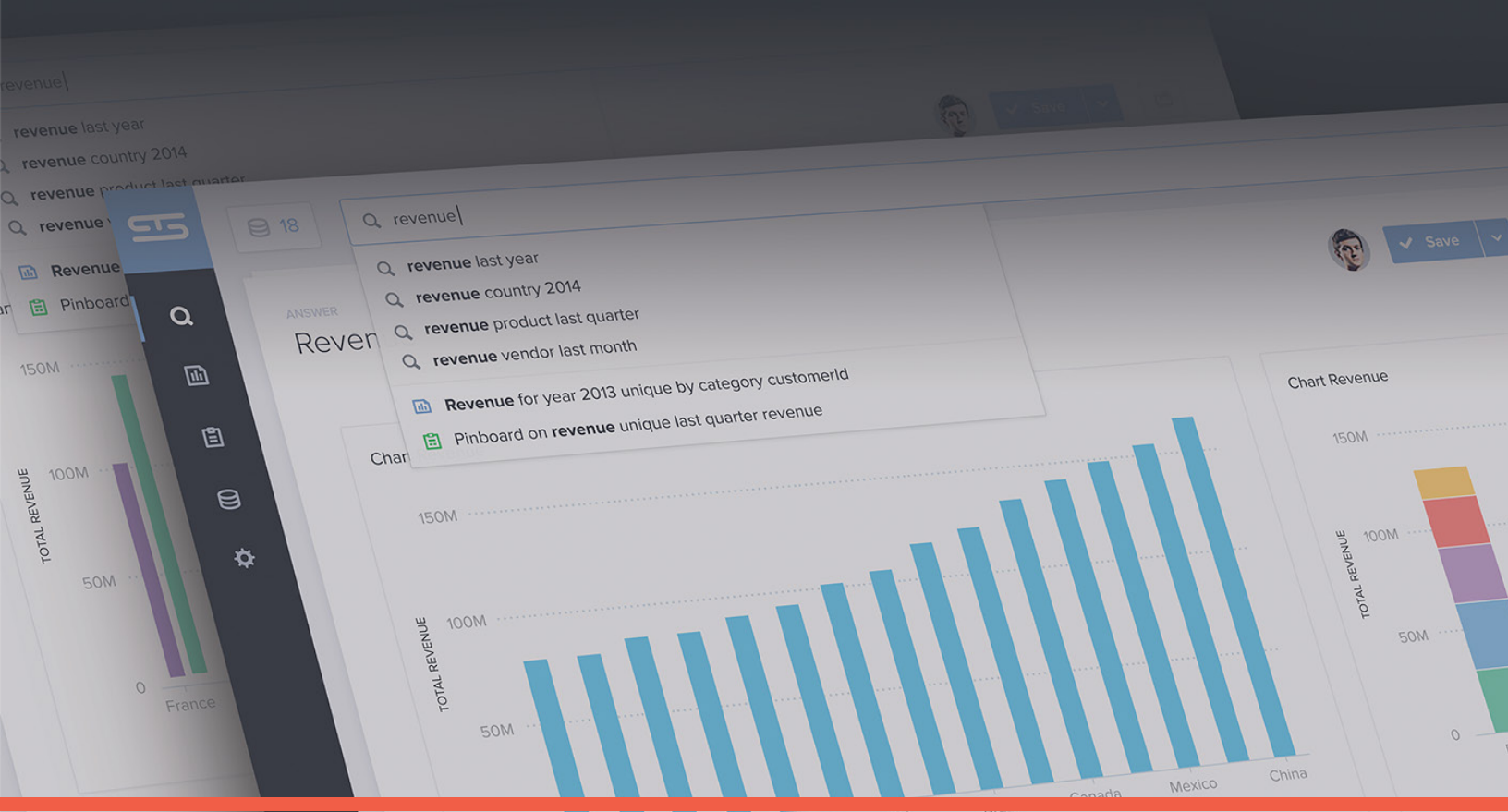
THOUGHTSPOT

WHITE PAPER

The Case for Search-Driven Analytics

How a New Breed of Search Engine is Solving BI's Adoption Problem



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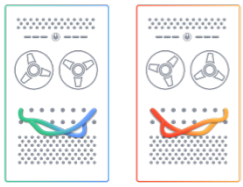
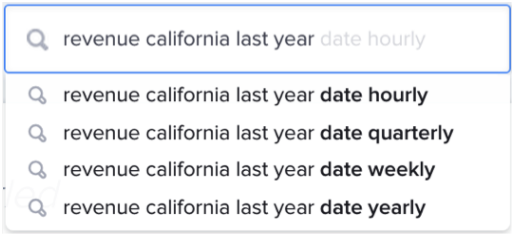
Since the earliest days of computing, business leaders have been looking for ways to gain faster and easier access to their company data. In the early days of the mainframe this was a complex process taking months to create even the simplest "green bar" report.

The traditional BI reporting and analysis tools used today were developed in the late 1980s. These systems allowed IT teams and analysts to curate reports for business users to consume. Then in the late 1990s and early 2000s, BI started moving to the Cloud, and fancy dashboards and visualizations started popping up, followed by the rise of mobile BI apps in the late 2000s. While progressive, all of these innovations have followed the same assembly line delivery process, with IT and analyst teams creating dashboards and reports for business (non-technical) users to consume.



Wait time: **Months**
Mainframe Printouts
1950s-80s

Wait time: **Weeks**
Legacy BI Reports
1980s-Present



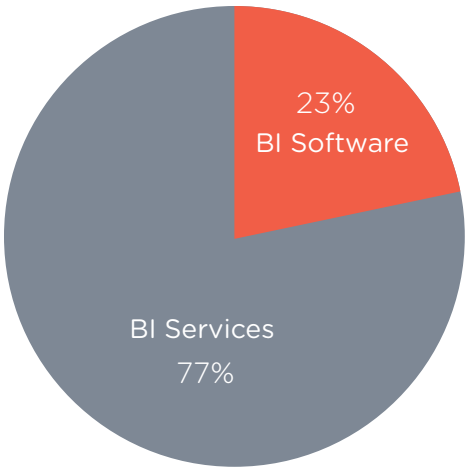
Wait time: **Seconds**
Instant Search Results
Now

Many believe this "assembly line" BI delivery model is broken. The Data Warehousing Institute (TDWI) states that it takes the average trained analyst 4 to 7 days to create just one report. Compare that with the response time of typical consumer web search and it's easy to identify with a "BI Opportunity Gap" between what business users expect from BI technology and what the tools are actually delivering today.

ThoughtSpot has been developed to provide business users with zero training, instant access (sub-second) to information via a search bar.

A The State of Business Intelligence

Gartner states that the BI market is nearly $70 billion per year, making it a top 5 segment of the Enterprise Software market. The worst kept secret about all this annual spend is that well over 75% of that $70 billion is spent on professional services.



$68.9 Billion

Source: TDWI

With legacy BI technologies, making BI consumable for the business user is very challenging and expensive work.

The disappointing part is that the adoption rate of business intelligence tools is extremely low. According to TDWI, the adoption rate of BI tools has stagnated between 18%-24% for the past decade.

22%

Average adoption rate of BI tools and services

That means that for every 100 business users you have licensed for a BI tool, on average only 22 of them actually use the product. That means that ~75% of your money (license and delivery cost) is wasted. For the mature technology marketplace, this is simply unacceptable.

Why are BI adoption rates so low?

If you take a look at any BI tool on the market today and try to create a report, you will quickly realize one consistent problem: it takes a highly trained person to make it work. It takes over 4 days for a trained analyst to create just one report, and most BI projects have dozens, if not hundreds, of reports and/or dashboards that need to be built. And that is all work that takes place after the analyst has had numerous requirement-gathering sessions with the business.

5.5

Average # of days it takes a trained analyst to create one report

Think about the total cost here for a moment:

Total cost = **Loaded cost of trained analyst by day (5.5 days on average) per report** X **Total number of reports**

On the positive side, the output created by trained analysts can be impressive. The resulting graphs, charts and dashboards can be very appealing to the eye of a business person. The challenge is the "next question."

The "Next Question" Challenge

Upon looking at a report or graph, business users will typically have questions that immediately pop into their head. Generally, these questions cannot be planned for in advance by the analyst, so if the business user wants an answer to this new question, they must re-enter the BI assembly line and wait for 4 to 7 days.

Contrast this process with how easy it is to get answers in the consumer world, where we can search for almost anything on our computer or mobile devices and get an answer back in a second. Why can't business users get instant gratification out of their data at work?

The issues we outlined were the lead story guiding Gartner's 2014 Magic Quadrant for Business Intelligence. Gartner stated the following:

"No one vendor is addressing...
'...business user requirements for ease of use' and
'...enterprise IT driven requirement'"

Today's BI tools are hard for business users to leverage and difficult for IT to configure and support. As a result, Gartner essentially downgraded the entire industry by moving all the leaders in Gartner's Visionary Quadrant to the left as compared to the year before. A stinging blow to a well-established industry.

B Search is Eating Software

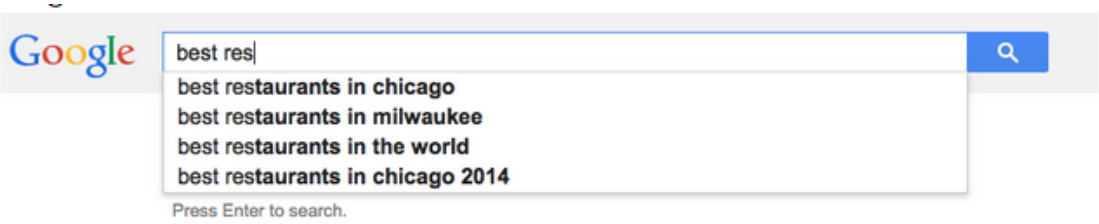
In 2011, Marc Andreessen the famed wonder kid out of the University of Illinois, co-founder of Netscape, and venture capital mogul and CEO of Andreessen-Horowitz, stated in a Wall Street Journal article that "Software is Eating the World."

What he meant was that traditional, long-standing businesses were being replaced or entirely transformed by intelligent software. For example, consider what Amazon did to the retail business. Today, every retailer, large and small, must have a website and/or an app where consumers can shop. Further, traditional retailers have to figure out how to best maximize real-estate when competing against a massive organization like Amazon, who has no store fronts or their associated costs.

When you look at the most prominent feature of today's best consumer web services, search is the most prominent feature. We search for products on Amazon, restaurants on Yelp, companions on Match, flights on Kayak, taxis on Uber...everything is a search away. If software is eating the world, search is eating software. Think about how many times you have personally used a search engine today. Consumer self-service access to information is changing the way the world interacts with information and, as a result, how business works.

So you may ask, why is the search engine so transformative? Let's look at the most popular example of a search engine, Google. First, the interface is simple and easy, just a box and button, but this basic interface gives any consumer access to arguably the most complex and powerful supercomputer in the world.

For instance, let's say you are doing a search looking for the best restaurants in Chicago.



Before you get to the "t" in "restaurant," Google knows, based on your location and the beginning of the query, that you are likely looking for the best restaurants in Chicago, so it prompts you with the correct suggestion. Once you hit "enter," you will get an answer back instantaneously. Then you can interact with the data.

At this point you can have a conversation with your data. Maybe you want to refine your search, then look for and look for Italian food, then look for the best-rated, reasonably priced restaurant located near where you live. Lastly, you get the phone number or reservation site link so you can book a table. Five quick searches later and you've got your answers.

Imagine if your first request had been for a report from the BI assembly line on the best restaurants in Chicago. Would I wait 4 to 7 days to get the answer? Would you have even remembered your next question?

The First BI Tool Designed for the Business User

Quick, simple, and fast - that is the power of search. ThoughtSpot is introducing analytical search to the enterprise, bringing to rows and columns of data what Google brought to webpages.

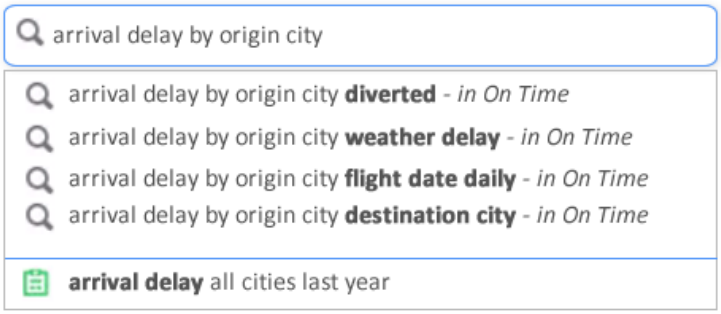
ThoughtSpot's approach to BI is unique. The company's founders were not BI engineers with decades of history building the legacy BI systems of the past. If you want true change, you have to look at the problem you are trying to solve in a completely different manner. ThoughtSpot's founders and engineers are some of the brightest minds out of Google, Bing, Amazon, and Yahoo. They saw the BI problem as solvable through search.

As a result, ThoughtSpot has been designed as a search-based BI user interface. The focus is not only front-end ease of use, but enterprise scale and security, as well as speed and simplicity of deployment.

- The search-based UI makes the system easy for everyone to use, with little to no training required.
- The solution has been built for scale and security from the ground up.
- ThoughtSpot's Analytical Search Appliance has been designed to take production deployment times from something you measure in months and years, to something you measure in days or weeks.

The Transformational Impact of Search-Driven Analytics

Let's say you are in the transportation business and want to analyze arrival delays by city of origin. As the businessperson, what do you do? Call the BI assembly line? Try to find the report that someone might have created months ago that you think might have the answers? With ThoughtSpot, all you do is search for it.



As a business person with zero training, instantly you will get a response. Just like Google, you are guided through information that has been ranked based on relevance. Click here to request a demo.

With ThoughtSpot, it's now possible for untrained business users to have a conversation with their corporate data in the following ways:

- Type a new search like, the "Top 10 origin cities based on arrival delay."
- See that Toledo is the worst origin city for delays – which destination does this affect most?
- See that Chicago is the most affected destination - and know which top customers are most affected by the these delays?
- Which products are top customers buying?
- How much would losing these customers affect your bottom line?
- Who is the account representative handling this account that should reach out to set up a meeting?

This quick conversation with the data contained seven queries; all of them returned in under a second, despite being calculated across billions of rows of data.

D ThoughtSpot Unique Delivery Approach

ThoughtSpot is delivered as an Analytical Search Appliance. The appliance is a sophisticated combination of hardware and software that contains all you will need to deploy ThoughtSpot rapidly.

The ThoughtSpot Analytical Search Appliance includes:

- HTML5 Interface
  - Simple, elegant search interface that offers search suggestions as you type and calculates answers on the fly to return instant results
- Analytical Search Engine
  - Exploits existing relationships in the data to guide the search experience while hiding the complexity of database schemas and queries from the end user
- In-Memory Relational Cache
  - Fully embedded in-memory relational cache for rapid computation on billions of rows
  - Built with an MPP (4 high-powered servers), scale-out architecture for speed and scale to terabytes
- Distributed Cluster Manager
  - Runs the entire BI stack (traditional BI server farm)
  - Distributed framework with enterprise fault tolerance and high availability for both software and hardware

The enterprise system is traditionally delivered as a 2U (smallest possible form factor) appliance containing 80 cores and a terabyte of in-memory capacity. The system can be stacked incrementally to scale up the cluster as data requirements grow and communicates over 10G and/or 1G networks.

> *“It’s a product that people have been expecting, but hasn’t been in the market until now.”*
>
> **Taylor Culver**
> AVP - Product Mgmt & Data
> SterlingBackcheck

Deployment is as simple as racking the appliance, providing it with networking, pointing it to the data source or sources you want to search and caching the data (which generally takes less than an hour). Once data is cached, you are ready to search.

Summary

Billions have been spent on BI tools, yet the adoption rates and corresponding return on investment are some of the worst in the enterprise software industry. ThoughtSpot's mission is to provide easy access to data at "human scale" and unlock the failed promise of the BI industry for the untrained business user. By focusing on end user ease-of-use and backend simplicity, the system is both simple for business leaders to use as well as easy and fast to deploy for IT.

About ThoughtSpot

ThoughtSpot has built the world's first search-based, data analytics solution for the enterprise. Anyone can use ThoughtSpot with zero training to ask questions, analyze company data, and build reports and dashboards - all in seconds - using a browser-based search interface. ThoughtSpot's Analytical Search Appliance combines data from on-premise, cloud and desktop data sources, can scale up to terabytes of data, and can be deployed in hours. The company's founding team has previously built market-defining search and analytics technologies at Google, Amazon, Oracle and Microsoft. For more information on ThoughtSpot, please visit thoughtspot.com