



CERTAINTY IN UNCERTAIN TIMES

Data analytics and BI professionals share how they're enabling retail businesses to innovate and adapt

Exasol

The analytics database

CONTENTS

UTILIZING THE POWER OF DATA DURING COVID-19

3

SECTION 1: ADAPTING TO THE NEW WORLD OF RETAIL

4

SECTION 2: HOW TO MEET CHANGING CONSUMER NEEDS

9

SECTION 3: STRENGTHENING OPERATIONS FOR LONG-TERM SUCCESS

13

SECTION 4: THE STRATEGIES BEHIND ACCELERATED DECISION-MAKING

16

RETAIL'S CHECKLIST OF CERTAINTY

19



Data-driven strategies from

**FTSE 250^{AND}
FORTUNE 500**

**retail and e-commerce
organizations**

UTILIZING THE POWER OF DATA DURING COVID-19

COVID-19 has created a retail landscape that is moving at a rate that no-one could've predicted or fully prepared for. Both traditional retailers and e-commerce businesses are under enormous pressure to accelerate decision-making on operations, merchandising and supply chains to meet the immediate needs of consumers and secure the long-term stability of retail.

Never before has there been a more urgent need for data analytics and Business Intelligence (BI) professionals to help retail businesses act quickly, responsibly and accurately. Not only to deliver products to consumers as quickly and safely as they can, but to **develop the strength, agility and innovation that will help businesses emerge from the pandemic with resilience.**

Today, data analysts are playing a core role in the team of professionals who are helping retail businesses move at a speed not thought possible until now. With a steady finger on the pulse of change, **data professionals not only have the power to predict shifts in consumer behavior and optimize supply chain logistics**, but they also play a critical role in helping decision-makers prioritize efforts, readjust plans and bring support to those most in need.

We interviewed and surveyed data analytics and BI professionals from leading retail and e-commerce businesses in the **FTSE 250 and Fortune 500 lists** to find out which data-driven strategies and actions they are taking each day to help build stronger businesses, stronger communities and a stronger industry – today and in the future. In this report, we'll explore:



How businesses can adopt a more prescriptive approach to data analytics



The ways retail businesses can build resilience and develop new offerings



How to accelerate decision-making with modernized data stacks



The data-driven strategies that are meeting ever-changing consumer habits

SECTION 1:

ADAPTING TO THE NEW WORLD OF RETAIL

There's no denying that COVID-19 has reshaped the priorities of retail businesses across the world. As an industry on the front line of the pandemic, departments are increasingly collaborating with and relying more on data professionals to help them make decisions that will strengthen cash flows, protect consumers and workers, support business continuity and meet customer needs – both in the short- and long-term.

To understand more about how organizations are navigating the new world of retail and e-commerce, we investigated the impact COVID-19 has had on the function and use of data analytics within some of the world's biggest retail businesses.

**77% OF RESPONDENTS BELIEVE
COVID-19 HAS MADE ANALYTICS
MORE BUSINESS CRITICAL.¹**

¹ 'Data analytics in the time of COVID-19' survey result, April 2020

THE URGENT NEED FOR DATA ANALYTICS

Since the pandemic began, there has been **an unprecedented spike in online traffic for retailers** – particularly for supermarkets and FMCG suppliers. In order to meet consumer demand and enable fulfillment, both in the short- and long-term, it's vital business are able to measure and

21% OF RETAIL BUSINESSES WILL SEE AN INCREASE IN DATA ANALYTICS SPEND IN THE SHORT-TERM, WITH 27% INCREASING SPEND IN THE LONG-TERM.

OUR ONLINE CAPACITY IS CURRENTLY RUNNING AT LEVELS WE PREDICTED WE'D GET TO IN 8 YEARS.

HEAD OF DATA, RETAIL BUSINESS, APRIL 2020

monitor these new data streams and use analytics to turn this information into valuable insight that will help power operations and accelerate decision-making. This has resulted in a sharp increase in data analytics investment, with **86% of retailers planning to increase or keep their data analytics spend the same over the next 12 months.**

CHANGING BUSINESS USAGE OF ANALYTICS

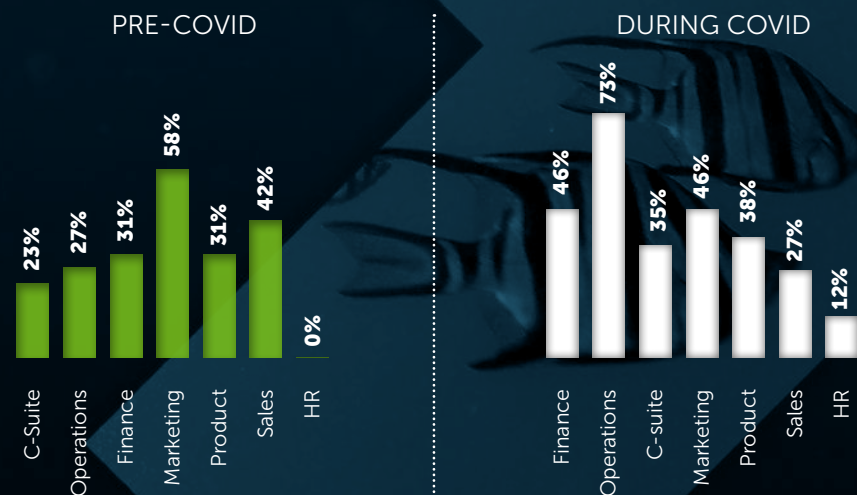
**HR, OPERATIONS,
FINANCE AND
MERCHANDISING
HAVE SEEN THE MOST
SIGNIFICANT UPTAKE
OF DATA ANALYTICS
SINCE COVID-19.²**

As priorities have shifted over the past few months, a sharp change has occurred in the way organizations use data analytics to make business-critical decisions with agility and minimal risk.

Operations and Finance teams have now become the biggest power-users of analytics as they are increasingly using data to shape the direction of wider organizational strategies, as well as visualize the short and long-term impact of the pandemic.

WHICH FUNCTIONS OF YOUR BUSINESS HAVE MOST UTILIZED DATA ANALYTICS BOTH BEFORE AND DURING THE COVID-19 PANDEMIC?
RESPONDENTS WERE ASKED TO SELECT TOP THREE

RETAIL AND E-COMMERCE



ADOPTING A MORE PREDICTIVE APPROACH TO DATA ANALYTICS

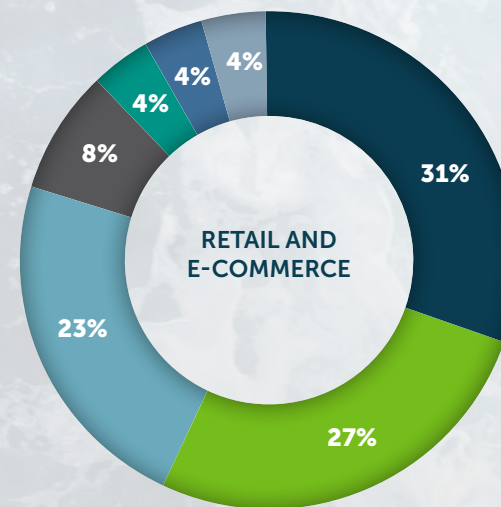
**MODELING SHIFTS
IN CUSTOMER
BEHAVIOR AND THE
IMPACT OF REVENUE
REDUCTIONS ARE THE
MOST VALUABLE DATA
ANALYTICS FUNCTIONS
AMID THE COVID-19
PANDEMIC.³**

For retail and e-commerce businesses, scenario modeling and forecasting have become the **most valuable uses of data analytics during the pandemic**. This demonstrates how mature teams are adopting a

more prescriptive approach to analytics, relying less on diagnostic or descriptive methods to show past behavior and more on predictive analytics to look forward. **An approach that is extremely valuable when it comes to anticipating changes in product demand and supply chain operations.**

As the landscape changes daily, it's vital that businesses are able to update models as quickly as they need, so that they can unearth the business-critical insights that will help them deliver more products to those **most in need, safer operations and a more resilient, innovative business model.**

IN WHAT WAYS IS DATA ANALYTICS WELL PLACED TO ADD MOST VALUE DURING COVID-19?



MODELING SHIFTS IN CUSTOMER BEHAVIOR

MODELING THE IMPACT OF REVENUE REDUCTIONS (REFUNDS/DISCOUNTS/LOWER DEMAND)

FORECASTING SUPPLY CHAIN REQUIREMENTS

FINDING COST SAVINGS

MODELING NEW CUSTOMER VALUE PROPOSITIONS

FORECASTING HUMAN CAPITAL REQUIREMENTS

PREDICTING PURCHASING TRENDS

FORECASTING DEMAND AND MANAGING CASH FLOWS

**27% BELIEVE MODELING THE
IMPACT OF REVENUE REDUCTIONS
HAS BEEN THE MOST VALUABLE
FUNCTION OF DATA ANALYTICS
DURING COVID-19.⁴**

For retailers, using data analytics to forecast demand and manage cash flows, liquidity profiles and working capital dynamics has become increasingly important during COVID-19 – **particularly for those with physical stores**. Using both historical and predictive data to assess financial strength will help businesses

navigate immediate challenges such as mitigating the impact of lost income, being unable to move stock and paying expenses like rent and suppliers. This also helps businesses explore the viability of strategies such as modernizing and innovating e-commerce infrastructures.

⁴ 'Data analytics in the time of COVID-19' survey result, April 2020



SECTION 2:

HOW TO MEET CHANGING CONSUMER NEEDS

COVID-19 has fundamentally changed the way consumers behave. From the products they buy to the way they buy them, this pandemic has re-written the rulebook for 21st-century shopping.

As the speed with which businesses need to react to fluctuating supply and demand intensifies, **so does the need for stronger data analytics.**

However, as data professionals, you're able to provide leadership teams with insights that can help identify which products and solutions are needed, when. And by showing your customers that you're there for them during this pandemic, you'll not only help strengthen financial stability in the short-term, but you'll also retain their loyalty far into the future.

Here are **3 of the top data-driven strategies leaders are implementing to meet both existing customer needs and future customer behaviors.**

PRIORITIZING THE MOST IN-NEED

WE'RE USING DATA MODELING TO IDENTIFY ELDERLY PEOPLE AND KEY WORKERS WITH THE INTENTION OF SERVING THEM PERSONALIZED PROPOSITIONS TO HELP THEM THROUGH THE CRISIS.

HEAD OF DATA, RETAIL BUSINESS, APRIL 2020

During this crisis, a top priority for retailers, particularly FMCG businesses, is to **prioritize the availability and delivery of essential products** to those most in need. Leading supermarkets are leveraging data analytics to not only identify vulnerable cohorts based on historical, regional and government data, but are also using operational data

to identify ways they can make vulnerable shoppers a priority and keep them safe both on and offline. Alongside this, behavioral scoring and transactional data can be used **to create personalized propositions to these specific consumer groups through offers, discounts and priority access.**

BUILDING CONSUMER CONFIDENCE

**USE MULTI-TOUCH ATTRIBUTION
AND CONSUMER DATA TO
UNDERSTAND WHAT IT IS
YOU SHOULD BE OFFERING
YOUR CUSTOMERS.**

HEAD OF DATA, RETAIL BUSINESS, APRIL 2020

For retailers to emerge from this pandemic resilient, **it's vital that they strengthen their cash flow and increase sales** with both existing and new customers. However, businesses need to do so without appearing opportunistic or insensitive to the crisis.

By using multi-touch attribution data, alongside the analysis of changing consumer shopping habits, retailers are able to diversify products, develop new

merchandising and marketing strategies, and design shopping experiences that are based on today's consumer needs.

As a result, retailers can build trust with customers by showing they are actively listening to their needs and desires, strengthening competitiveness and building resilience.

PREPARING FOR THE 'NEW NORMAL'

While it may be impossible to fully predict what the 'new normal' looks like, **businesses can begin to piece together a picture of post-COVID-19 consumerism based on today's shopping habits.**

**DATA ANALYTICS IS HELPING
US WORK OUT WHAT TACTICAL
DECISIONS WE MAKE RIGHT NOW,
AND WHAT PLANS WE PUT IN
PLACE FOR THE "NEW NORMAL."**

DATA ANALYTICS SURVEY
RESPONDENT, APRIL 2020

**THERE'S GOING TO BE
MORE DESIRE TO UNDERSTAND
HOW DATA CAN HELP US
MANAGE LIFE IN THIS
POST-COVID WORLD.**

CHIEF INFORMATION OFFICER,
E-COMMERCE BUSINESS, APRIL 2020

The dramatic shift towards online shopping means that **it's vital for every business to have a modernized e-commerce or omnichannel site that collects data that can feed into predictive forecasting.** With the right data analytics and BI tools, businesses can use this data to create e-commerce sites that deliver seamless customer experiences, and support operations that fulfill orders quickly and that can be flexibly adapted to reflect changing market dynamics.

SECTION 3:

STRENGTHENING OPERATIONS FOR LONG-TERM SUCCESS

Alongside using data to meet new consumer habits, data analysts are increasingly collaborating with wider teams throughout their organization to ensure back-end operations run smoothly.

This is not only critical for fulfilling consumer demand, but it is also vital for increasing agility across the supply chain, as well as improving brand competitiveness and profitability.

Here, we explore the ways both leading retailers and e-commerce businesses are using data analytics to strengthen supply chain processes to ensure that customer needs can be met now and in the future.

STREAMLINING DAILY OPERATIONS

By visualizing the outbreak of COVID-19 and analyzing workforce capacity in real time, senior leadership teams can **project operational demand and reduce disruption** by identifying regions most impacted by store, warehouse or distribution closures. This visibility allows teams to divert resources, prioritize operations and put in place support procedures to assist and protect workers and customers.

WE'VE USED DEMAND FORECASTING TO SEE HOW MANY PEOPLE WE NEED IN SUPPORT POSITIONS, SUCH AS CUSTOMER SERVICES TEAMS ON THE PHONE AND THOSE NEEDED TO FACILITATE IMPORTING CHALLENGES.

CHIEF INFORMATION OFFICER,
E-COMMERCE BUSINESS, APRIL 2020

STRENGTHENING TODAY'S SUPPLY CHAIN

DURING COVID-19, OUR DATA TEAM HAS BEEN SUPPORTING THE SUPPLY CHAIN WITH BOTH TACTICAL AND STRATEGIC SUPPORT.

HEAD OF DATA SCIENCE AND ANALYTICS,
RETAIL BUSINESS, APRIL 2020

To overcome immediate supply chain challenges, **many data professionals are using scenario-planning strategies to manage fluctuations** and operations throughout the supply chain from suppliers, merchandising and logistics through to fulfillment.

With better visibility over supply chain processes, and with access to accurate product data and analysis, businesses can better optimize inventory management and replenishment for high-demand products. **This also allows them to streamline warehouse and distribution logistics, as well as examine the effectiveness of their supplier network.**

ANTICIPATING FUTURE DISRUPTION

**A LOT OF THE LONG-TERM
SUPPLY CHAIN DECISIONS ARE
MADE USING SIMULATIONS AND
SCENARIO PLANNING SO THAT
WE CAN FIND WAYS TO REDUCE
UNCERTAINTY IN THE FUTURE.**

HEAD OF DATA SCIENCE AND ANALYTICS,
RETAIL BUSINESS, APRIL 2020

Leading retailers are beginning to look past short-term scenario planning, focusing their efforts on creating post-COVID simulations so they are able to **plan for future opportunities and roadblocks**. Based on these insights, professionals can begin

to design operational and supply chain strategies that defend against potential future challenges, such as dealing with both COVID-19 and Brexit in December and long lead-times from suppliers.



SECTION 4:

THE STRATEGIES BEHIND ACCELERATED DECISION-MAKING

Retail businesses have always needed to react quickly to changing consumer demand. However, amid COVID-19, businesses are under increasing pressure to innovate and adapt at a speed faster than ever before.

To help you make smart decisions fast, it's critical to have in place advanced data analytics technology. But to unearth these insights and implement data-driven strategies across stores, e-commerce and supply chains, retailers need a strong data stack that can support both short-term operations and long-term initiatives.

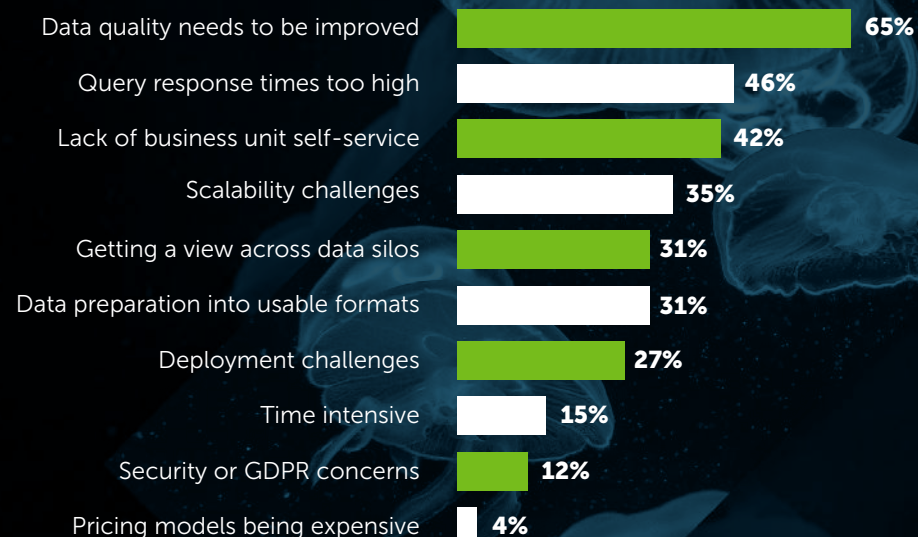
Here, we explore which solutions and strategies leading organizations are implementing for success and what is holding them back from delivering excellence.

DATA STACK ROADBLOCKS

**POOR DATA QUALITY,
HIGH QUERY RESPONSE
TIMES AND LACK OF
SELF-SERVICE ARE THE
BIGGEST PAIN POINTS
FOR RETAIL USERS.⁵**

As we move into an unpredictable second half of the year, it's **vital that organizations have a mature data stack in place that can help teams drive change quickly and put in place solutions that will support e-commerce and product fulfillment.** However, poor concurrency, slow query turnaround times and legacy data infrastructures are impacting the speed at which organizations can make decisions and adapt to the ever-changing behaviors of consumers.

WHAT DATA STACK CHALLENGES DO YOU CURRENTLY EXPERIENCE? RETAIL AND E-COMMERCE



⁵ 'Data analytics in the time of COVID-19' survey result, April 2020

ACCELERATING DATA ACCURACY

**IT'S NOT JUST ABOUT THE
SPEED IN WHICH RETAILERS
COLLECT DATA; IT'S ABOUT
THE QUALITY AND PRECISION
OF DATA ANALYTICS THAT
SETS LEADERS APART.**

RETAIL DATA ANALYTICS LEAD,
EXASOL, APRIL 2020

For retailers to meet consumer demand and deliver services at the speed with which they're necessary during this pandemic, concurrent data must be collected, utilized and visualized by different teams each day. To improve this process, leading businesses have begun to streamline the aggregation of data so they can access it through

a single viewpoint, regardless of where it is stored. **With a centralized integrated view, they are able to solve complex challenges faster, accelerate time to value and increase transparency.** These solutions are also validating data to guarantee its accuracy, ensuring that decisions can be made with precision and agility.

MODERNIZING DATA ANALYTICS

To further streamline decision-making processes, leading organizations are using open integration frameworks and acceleration layers to enable them to perform advanced analytical tasks on large volumes of data. These intelligent solutions not only help reduce Total Cost of Ownership (TCO) and break down silos but also **give organizations the power to unlock analytics as fast as they need them.**

**46% OF PROFESSIONALS
FIND HIGH QUERY RESPONSE
TIMES A BARRIER TO
OPTIMAL ANALYTICS.⁶**

RETAIL'S CHECKLIST OF CERTAINTY (MAY 2020 EDITION)

Today's data analysts are under pressure like never before. Being expected to deliver swift responses against a backdrop of disjointed data stacks, ever-changing consumer behaviors and supply chain disruptions isn't an easy task.

However, with the right technology and strategies in place, it's possible to push the boundaries of data analytics. To reveal not only the insight that will help support customers at a time when it's most needed, but also to help businesses emerge from the pandemic positioned for future profitable growth.

Follow our checklist for the strategies leading retailers are implementing today to support and fulfill customer needs, strengthen cash flow and supply chain operations, and accelerate digital innovation.

Adapt internal processes so that you can meet the requirement of wider teams who may not have previously utilized data analytics



Use **scenario modeling** to visualize the impact of revenue reductions and projected cash flows



Utilize **data modeling to prioritize vulnerable customers** and develop personalized propositions to both new and existing customers



Use **demand forecasting** to analyze operational efficiency and reduce disruption



Streamline supply chain operations through simulation and scenario planning



Accelerate innovation cycles and **prioritize** e-commerce operations



Invest in centralized cloud-based platforms and open integration frameworks for advanced data analytics





GET THE INSIGHT YOU NEED NOW FOR FAST, ACCURATE BUSINESS DECISIONS

Exasol's analytics database enables you to make smart data-driven decisions at speed. Acting as a data acceleration layer, Exasol turns retail data into value as fast as consumer behavior is changing, so you can innovate and adapt operations, supply chains and products to meet emerging customer needs.

Exasol's in-memory, high-performance database processes 100s of TBs of data within milliseconds, whether it's in the cloud, on -premises or both.



To find out more about how we can help you manage and predict demand, as well as talk through any challenges you may be facing, contact Farah Brown at Farah.Brown@exasol.com.

Visit www.exasol.com/en/crisis-response for more information on how Exasol is supporting businesses through the crisis.