

Quorso's Annual Retail
Trends Report 2024:

From Data Overloaded to Data Powered.

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Introduction.



It's been quite the 12 months for anyone in the data world. We may look at it as the turning point where organizations really started understanding the business value of AI solutions and the need to future proof their businesses in a data powered way.

Our 2024 annual retail trends report dives deep into this theme, summarizing insights from our work with leading retailers at the cutting edge of this trend.

This includes a deep dive into the topic of Artificial Intelligence. Going beyond the hype to build a greater understanding of how these tools can be helpful in a store ops context, whilst also building an understanding of how they must fit into human experiences to be valuable. We go deep into two core areas where retailers are using these powerful tools today. Firstly, using data to simplify the daily work of store operators and secondly, enhancing the effectiveness of field leaders and teams for modern operations. Finally, we help people understand how investments in this area need to go beyond the standard questions of a traditional investment case to ensure they also future proof you for a more data powered world.

Enjoy reading and we hope it helps you become more data powered today.

Julian Mills,
Co-Founder & CEO, Quorso

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We may look at it as the turning point where organizations really started understanding the business value of AI solutions and the need to future proof their businesses in a data powered way.

The State of Data Overload in Retail: Understanding the Impact and Paving the Way Forward.

In today's fast-paced retail environment, data is the lifeblood that drives decision-making and strategic planning. However, an intriguing question arises: "How much data are you sending to your stores?" This is one of the first questions we pose to Store Operations teams when engaging with them at Quorso. Our experience, backed by extensive data reviews with some of the largest retailers, unveils a surprising reality. The sheer volume of data funneled into each store and, by extension, to district leaders, is not just substantial – it's overwhelming.



The Astonishing Reality of Data Overload

Most retailers are dispatching over 20k data points each week, across more than 30 reports, accessible through 20+ different systems to every store. This amount multiplies for district and other field leaders, who not only manage multiple stores but also receive additional data specific to their broader oversight role. And this is only getting worse, given the 50x increase in business data in the last decade.

This immense flow of information has tangible effects. A staggering 86% of people worldwide report that the sheer volume of data complicates decision-making in both their personal and professional lives.

Source: The Decision Dilemma by Oracle and Seth Stephens-Davidowitz, New York Times bestselling author.

Consequences of Excessive Information

The repercussions of this data deluge are multifaceted:

- **Decision Fatigue:** Echoing Barry Schwartz's insights in his 2004 book, "Why More is Less," we observe that an abundance of data leads to decision fatigue and dissatisfaction. The paradox of choice in a retail context translates to mental exhaustion and unhappiness among decision makers.
- **Decision Inconsistency:** A common observation – ask ten district managers to interpret the same set of data, and you'll likely get ten different conclusions. Retail requires leadership and people management skills, not just analytical prowess.
- **Reduced Productivity:** Our interviews with field leaders reveal that up to 50% of their week is consumed by data analysis. While this is work, it doesn't necessarily translate to productivity or value until it informs action.
- **More Complex Onboarding:** The average manager needs to be trained on far more systems, processes and reports in this data-saturated environment.

Source: Quorso customer surveys.

Embracing Data-Driven Decision Making

This situation doesn't undermine the value of data-driven organizations. In fact, 97% of people globally believe data can help them make better decisions, and 78% find organizations leveraging technology for data-driven decisions more trustworthy.

Source: The Decision Dilemma by Oracle and Seth Stephens-Davidowitz, New York Times bestselling author.

The Transition to Being Data-Powered

We stand at a technological juncture where data can be harnessed to drive decisions and streamline workflows. As we delve deeper into this report, we will explore how organizations can transition from being overwhelmed by data to being powered by it. We will use our resources to examine the extent of information being dispensed, its impact on companies and employees, and the strategies to harness the true power of data in retail.



Scan QR code
for data audit.

Learning AI

Contrastingly, Learning AI approaches problems differently. Machine learning algorithms can use historical labeled data as either actioned or not. The machine itself will self-optimize to establish more precise relationships between various inputs. As the labeled dataset grows, the accuracy of predictions improves, showcasing the dynamic nature of Machine Learning.

We break down this distinction as it helps us get to a few useful conclusions:

1. AI is only useful when you are dealing with an amount of data and relationships where human intelligence cannot make the right optimal decisions.
2. In order for **Learning AI** to work you need a huge amount of “labeled” data to optimize.

So, What About ChatGPT?

Recent advancements in tools like ChatGPT and image recognition technologies have propelled AI into the limelight. These systems, a type of Learning AI primarily based on neural networks, mimic human brain function and learn from vast datasets. However, their capabilities are not universal. While excelling in specific tasks, they lack generalizability, struggle with reasoning and planning, essential for business, and require substantial resources for training both in their training data and computation.

It is therefore important that retailers know what type of AI they are looking at, and what use cases it can help them achieve...i.e. You can't just use ChatGPT for everything.

The fascinating aspect of the technologies underlying AI lies in their varied objectives and capabilities. The two types distinctly align with two broad types of intelligence first articulated by Daniel Kahneman in “Thinking Fast and Slow”.

- **System 1 thinking:** our intelligence that is fast and intuitive operating effortlessly like vision, language, perception. Intelligence based primarily on Learning AI, e.g. neural nets, has outperformed in this area (i.e. computer vision and natural language).
- **System 2 thinking:** our intelligence that is slow and deliberate, requiring concentration and effort. Tasks that demand analytical and critical thinking dominate this and often require an initial more rule based approach than optimized with some learning.

The Four categories of AI that can help retail ops today

We believe there are four broad categories of AI today assisting retailers. In the table below we provide an overview of the objective they are helping a company achieve and the types of use cases they help them drive.

1. **Expert Systems:** These assist in decision-making, enhancing various operational aspects like sales recovery, staffing efficiency.
2. **Predictive systems:** These focus on forecasting to optimize resource allocation, covering areas like demand planning and inventory management.
3. **Computer vision and robotics:** These technologies interpret and react to the physical world, finding applications in monitoring shelf availability and automating labor-intensive tasks.
4. **Natural Language Processing:** NLP aids in understanding and generating human language, facilitating customer service and personalized marketing strategies.

The diversity in AI's capabilities underscores a crucial point: despite its versatility, AI isn't universally applicable. Similar to human aptitudes, AI technologies exhibit specialization and require the integration of various systems and approaches for optimal effectiveness.

AI is a Means to an End, not the End Itself

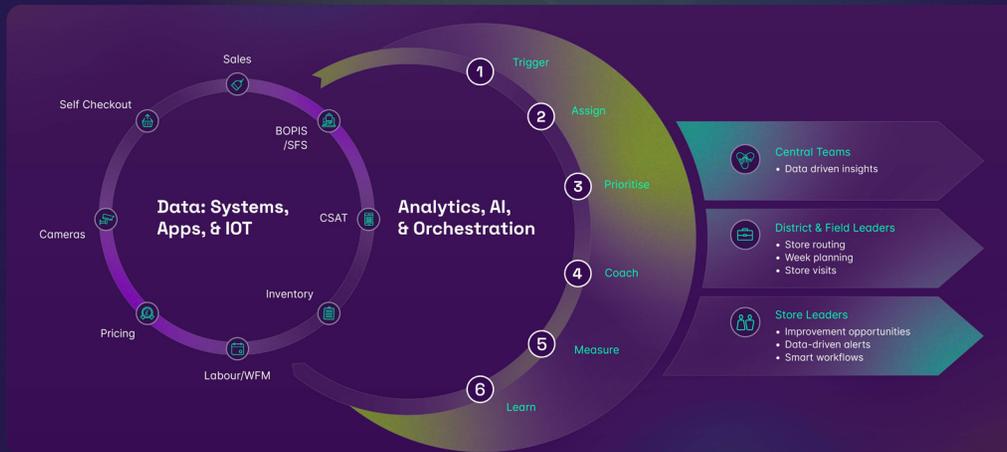
Ultimately, the significance of AI in retail—or any sector—transcends its technological allure. AI is a tool, a means to an end, rather than an end in itself. This perspective is vital in retail, where the allure of new technology can sometimes overshadow practical objectives. Retailers must prioritize understanding their specific goals and align their technological choices accordingly. The focus should be on leveraging AI to achieve tangible outcomes, rather than being swayed by the technology for its own sake.



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	Expert Systems	Predictive Systems	Computer Vision and Robotics	Natural Language Processing
Objective	Assist human decision making	More accurately predict the future to allocate resources	Understand images and videos and react to them	Understand and generate language
Use Cases	<ul style="list-style-type: none"> Recapture lost sales Improve attachments Reduce shrinkage Improve staffing Help colleague performance Improve CSAT Spotlight operational measures 	<ul style="list-style-type: none"> Demand planning Labor forecasting Space planning Inventory allocation Customer segmentation Price optimization 	<ul style="list-style-type: none"> On shelf availability Queue lengths Labor automation Reducing shrinkage 	<ul style="list-style-type: none"> Customer assistance Training Personalized marketing
Primary Type of Intelligence Required	System 2		System 1	

Unlocking AI's Potential in Store Operations: A Quorso Perspective.



In the dynamic world of retail, AI's potential in store operations is vast yet largely untapped. At Quorso, we're pioneering the integration of AI in this field, focusing on three key areas:

Leveraging Machine Learning

By collecting thousands of daily actions from teams in Stores, to drive improvement, we have a very rich labeled data set to optimize. Core areas include:

- **Personalizing actionable insights:** we can continuously optimize the actionable insights being provided to users, improving the accuracy of personalized suggestions that will drive the most value (initial approaches have improved accuracy from mid 60% to 90%+).
- **Exploring innovative use cases:** We're collaborating with retailers to explore new AI applications like market basket analysis and attachment cross-sells, all tailored to the unique needs of individual stores.
- **Enhancing Comparison and Cohort Analysis:** Quorso's AI considers various factors like demographics and weather for appropriate store comparisons. We're delving into unsupervised learning to improve these analyses, focusing on distinguishing correlation from causation.

The Role of Large Language Models

The rise of ChatGPT has sparked curiosity about the applicability of large language models (LLMs) in business. Despite concerns about data security and information overload, we see potential in LLMs in two areas:

- **Summarizing text analysis:** e.g. customer service reviews and attaching these to insights and value.
- **Personalized training materials:** accommodating diverse needs from language differences to disabilities.

Future AI Possibilities in Retail

Looking ahead, we're exploring further AI advancements such as enhancing computer vision for store operations and expanding neural network applications beyond language and games. These innovations could offer predictive insights in retail operations, marking a significant leap forward.



Find out more
about AI in retail:
quorso.com

Achieving Greater Simplicity in Store Ops.

A common aspiration among retailers we engage with at Quorso is the desire to simplify store operations. When we think of simplicity we think of the great quote by Steve Jobs.

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Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple. But it's worth it in the end because once you get there, you can move mountains.

But what does simplicity look like in a retail context, and how can it be achieved, especially for those managing the store's operations?

Identifying opportunities for simplification in Store Ops

As a thin margin industry, retail is already notorious for its highly efficient operations. Huge work goes into making every process as simple as possible to maximize efficiency. Everyone has a story similar to, for instance, measuring the number of steps to unload a truck onto the shop floor and then re-engineering how the delivery palettes are stacked to make the process more efficient.

In labor modeling around 80% of store labor is work that cannot easily be removed (unless there are significant advancements in robotics and computer vision) - cashiering, cleaning, stocking etc. Constant investments are being made to make these even more efficient but the impacts are marginal, a constant trade off between automation with cost, efficiency and service. The big chunk of work that has consistently increased in relative size while we've been getting more efficient elsewhere and has not yet properly been addressed is "administrative work". Running at 15-25% of total store hours (and north of 50% for leaders above store level), the majority of this work is related to creating/reviewing analysis and tasks, performing an increased amount of audits and troubleshooting multiple IT systems.

Why have we added so many tasks and reports?

There are good and bad reasons behind this increase.

The good reason is that we've increasingly realized that inputs lead to outputs and the collection of data is part of retail's engineering mind to use it to improve processes further. As one VP Ops told us "the challenge with all this data is all of it is useful, it's just only useful in a small minority of time".

The bad reason is what one COO calls "the comfort blanket approach" to data and tasks, a report is created to justify a strategic initiative and give evidence of its use. The report was relevant for a while but can quickly become redundant.



How a Data-Powered Approach Can Aid Simplification

A data powered approach looks to simplify work in three core areas:

1. Removal of time-soaking, non value add analysis

With tens of thousands of data points and 30+ reports to review each week store managers struggle with time and expertise for in-depth analysis. Often we hire managers to run stores and people but make them business and financial analysts.

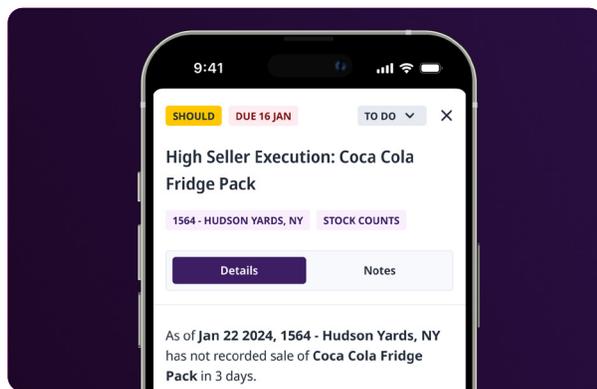
Modern data analytics and AI tools can surface the most critical actions needed, eliminating hours spent in analysis.

2. Smart and dynamic tasks and audits

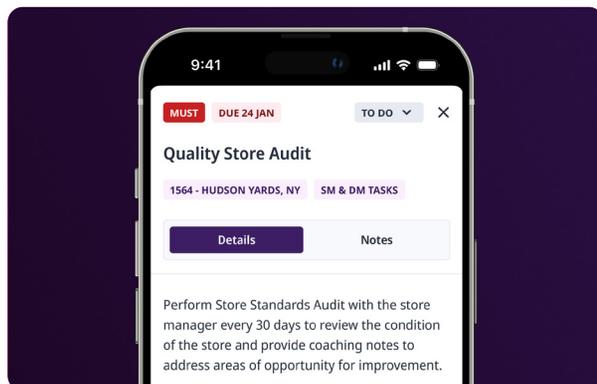
Increasingly, audits are necessary due to regulation and operational complexities. The approach of sending out checklists, however, has its issues. As one EVP Store Ops mentioned, "I'm tired of going into stores where a task has been blindly ticked off but clearly not done. I also have no idea which of these tasks are actually driving value to my business".

A data-informed approach can make these tasks less about extensive checklists and more about targeted actions with contextual training combined with measured follow up.

Example 1 - High velocity SKUs



Example 2 - Store audit



3. Rationalization of systems

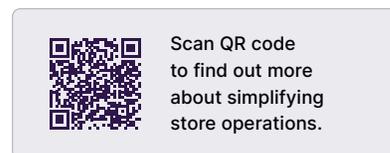
To go back to Steve Jobs, in 2008 he introduced an "ipod, a phone, an internet communicator"...all in one device... the iPhone. A device that simplified our access to so many essential items making it one of the most important devices any person carries today.

A similar approach is needed for retail systems. Simplifying access to essential information through unified systems can significantly reduce the time spent managing multiple tools. With one customer we work with, DMs had to log into 12 different systems to get simple store related information e.g. store attributes, store team information, delivery days.

Beginning the Journey to Data-Powered Simplicity

Achieving greater simplicity is not a one-shot journey and as we have discovered, requires a strong roadmap with the right tools to achieve it. There are 100s of different processes stores need to manage today, and unifying them, prioritizing them with data and removing systems is a multi-year journey. But as the proverb says "the best time to plant a tree was 20-years ago, the second best time is today".

Check out our assets that we use with retailers to help them become more data-powered.



Legacy approach: Rely on replenishment cycles and highly manual gap scans to raise issues.

New approach: Data surfaces which SKUs are statistically out of line with expectations and surfaces them.

Legacy approach: Checklists (often data based) and report analysis.

New approach: Targeted data informed opportunities and recorded and measured feedback from previous store audits.

The Evolving Role of the Field Leader: Embracing Data-Driven Strategies.

At the 2023 Store Operations Council in Washington D.C., a significant theme emerged: the urgent need to future-proof the role of the District Leader. This position, pivotal in bridging strategy and execution, is increasingly recognized as central to an organization's performance and adaptability.

The Shift in Field Leadership

Historically, District Leaders were the standard-bearers, tasked with ensuring that each store reflected the highest standards. Their approach, rooted in experience and intuition, was effective when consumers prized consistency in brand experience.

However, this approach faces challenges today. The shift in consumer preferences, with 71% expecting personalization, demands that stores adapt to their local context. Additionally, the retail leadership landscape is evolving, with younger, less experienced managers emerging post-COVID, necessitating more support and coaching.

Source: The Decision Dilemma by Oracle and Seth Stephens-Davidowitz, New York Times bestselling author.

Data-Driven District Leaders: Pioneering Performance

The concept of data-driven leadership, popularized by Michael Lewis's 2003 book "Moneyball," is increasingly relevant in retail. Just as the Oakland A's leveraged data to outperform wealthier baseball teams, retail district leaders can harness data to understand local nuances and the unique strengths of each store.

Quorso's evidence suggests that data-driven district leaders significantly outperform their peers:

- Sales performance is typically 0.5 - 1.7% higher vs plan.
- Shrink rates are 7% lower.
- Operational compliance improves by 12-17%.

Enhanced Coaching through Data

A key contributor to this success is the transformation of leaders into effective coaches, akin to strategies used in sports. Personalized improvement plans, fitness regimes, and tactical approaches are all data-informed in sports and can be similarly applied in retail.

With robust data and analytics, District Leaders can offer targeted support and coaching, enhancing team performance and directly linking their actions to success.

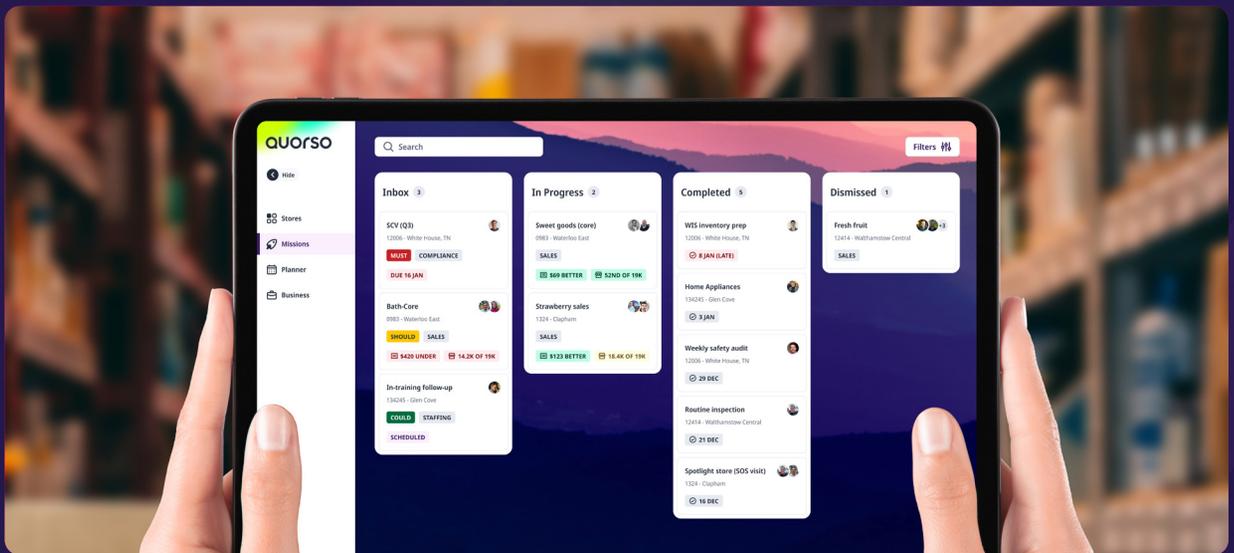
Embracing 'Moneyball' in Retail

The application of data-driven strategies should extend beyond central analytics teams or digital functions. Empowering field leaders with data-driven tools not only elevates their performance but also fosters better engagement and coaching across their teams.

The time is ripe to equip your retail teams for success with data-powered tools, setting a new standard for retail leadership.



Navigating the Interaction Between Employees and Ever Smarter Tools.



At the dawn of Artificial Intelligence in the 1960s, there was a debate between two dominant camps building these tools.

Initial Artificial Intelligence purists pushed for fully autonomous systems, where AI operates independently of human intervention. The other perspective championed Intelligence “augmentation” (IA), emphasizing the collaborative relationship between humans and computers. Pioneers like Douglas Engelbart led revolutionary ideas like the graphic user interface and the mouse.

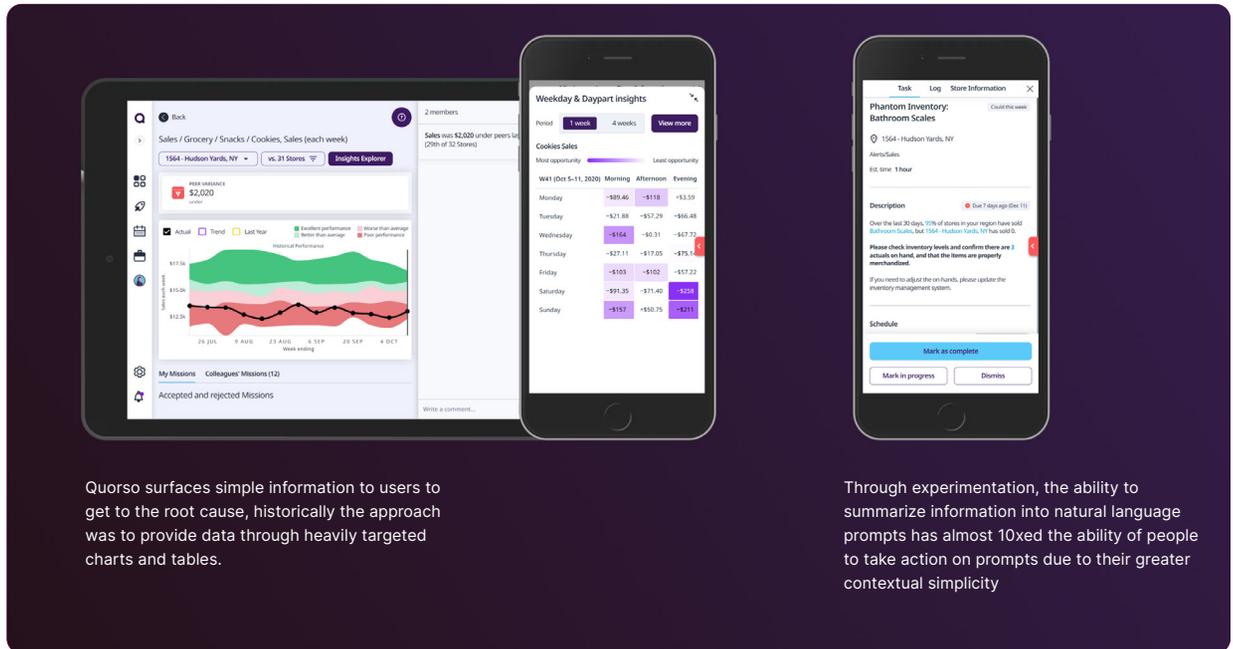
The evolving disciplines of user experience and user interface design highlight the merging of these philosophies. They underscore that while advanced analytics are critical, the human element in the equation is equally, if not more, vital.

At Quorso, our commitment to enhancing user experience and design has yielded several key insights on optimizing user engagement. Here are some of our primary learnings:

Accessibility - the need to go beyond heavy numbers and charts

Traditional business communication often relies heavily on data and visualizations. We've shifted towards integrating core insights into more intuitive, natural language prompts. Summarizing the overwhelming data visuals on the left of image 5.1 to more context-driven prompts on the right (while still allowing users access to this information if they need it). This shift has led to a 4x increase in the execution of valuable actions, demonstrating the power of contextual language in enhancing comprehension and engagement.

Lesson for AI - the analytics may be fancy but make sure they are also accessible.



Quorso surfaces simple information to users to get to the root cause, historically the approach was to provide data through heavily targeted charts and tables.

Through experimentation, the ability to summarize information into natural language prompts has almost 10xed the ability of people to take action on prompts due to their greater contextual simplicity

Delivering rapid value - Addressing the impatience of Modern users

In the realm of product development, there's a pivotal concept known as the "Magic Metric," which is the key indicator of a product's ongoing value to users. For Quorso, this metric is directly tied to how users perceive the product's value, particularly in their ability to initiate actions that enhance store performance. This understanding guides our development in several ways:

- 1. Streamlining Workflows:** In the e-commerce sector, the "three click rule" is a widely recognized principle suggesting that user abandonment rates spike if they can't find what they need within three clicks. While recent studies suggest this rule isn't entirely accurate, the underlying idea remains relevant. Continuous refinement of workflows is essential to simplify user navigation and enhance their experience.
- 2. In-App, Contextual Learning:** The most effective digital tools are those that are incredibly user-friendly, to the point where they're almost instinctual to use (consider how even a toddler can navigate an iPhone). The optimal approach to user onboarding and training is through intuitive design, leading to an expectation that learning should be integrated within the tool itself. By enhancing our in-app, contextual prompts, we've observed that new users engage in 4.5 times more actions on average.

Cultivating Organizational Engagement: The Social Dynamics of Tool Adoption

In the digital age, the concept of network effects is clearly demonstrated by the rapid spread of popular social media platforms, where usage is driven by communal adoption. However, in a corporate environment, achieving widespread use of business tools is more challenging, as tools often become compartmentalized according to job roles.

Our analysis at Quorso reveals a strong relationship between the engagement of others and the overall tool usage within the organization, especially. Specifically, we found that in districts where District Leaders were highly active in using the tool, the engagement rates among store leaders were 103% higher compared to districts with less engaged leaders. This has driven us to build many more experiences to bring others into the application such as contextual business insights for leaders.

Lesson for AI - invest in tools that connect as much of the organization as possible.

Lesson for AI - invest in systems that get to value quickly.

Embracing the 'IKEA Effect': Balancing Discovery and Impact in User Experience

A common inquiry about Quorso's analytics revolves around how directive they should be. This question brings us to an intriguing balance, exemplified by companies like IKEA and Lego. These brands successfully harness the 'Ikea Effect', where users experience a heightened sense of achievement and satisfaction when they actively participate in the creation or assembly process.

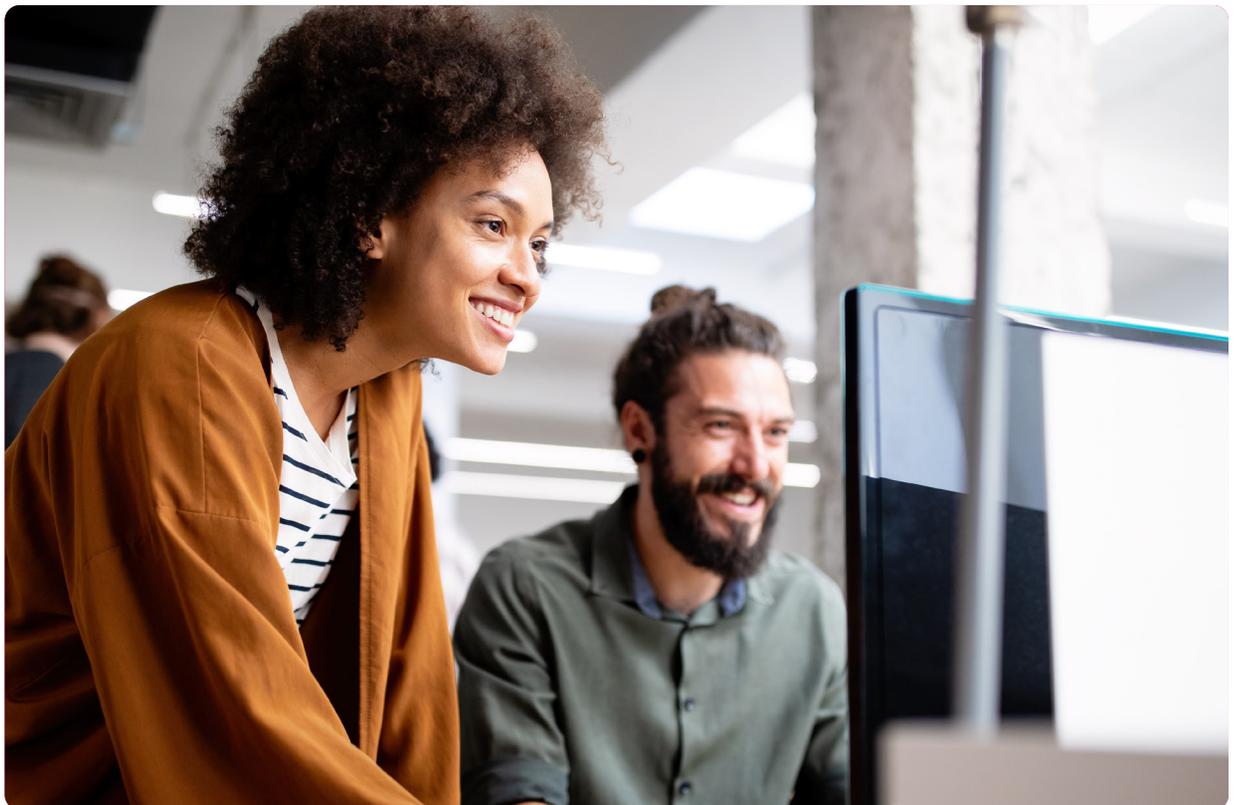
This phenomenon has significant implications for AI and system design. Systems that overly simplify tasks or make too many decisions for the user can inadvertently lead to decreased user engagement and hinder the developmental growth of teams. Users and teams often find more value and satisfaction in solutions when they have a hand in the discovery and problem-solving process. For us that means being careful about how prescriptive we design use cases within Quorso.

Lesson for AI - balance the intelligence of the systems versus how it helps your teams develop and grow.

Prioritizing Human Connection in Analytical Systems

In the realm of technological innovation, particularly with AI, it's essential to understand that the technology itself is just one component of a broader product ecosystem. The true value and effectiveness of AI systems lie in their ability to integrate with and enhance the human experience. Without a focus on intuitive design and user engagement, even the most advanced AI algorithms risk becoming costly tools with limited practical utility.

Therefore, it's imperative that analytical systems are developed with a human-centric approach, prioritizing ease of use, empathetic design, and meaningful interaction. This ensures that AI doesn't just process data but also connects with and supports its users, thereby fulfilling its role as an enhancer of human capabilities.



Making the Right Investments to Become Data Powered: Going Beyond the Standard Business Case.



Where should a store ops team start with making investments to become more data powered? Whether it's exploring an exhibition floor or a simple online search, the choice of options like the data itself is overwhelming.

Most companies will follow a classical framework to any investment, technology or otherwise:

- Deciding on strategic priorities
- Identifying the business need or justification
- Reviewing the market to select potential options
- Presenting ROI % payback period
- Building out the project plan
- Allocating the necessary investment

Such a formulaic approach can get companies focused on historical and, by now, outdated trends. In a data powered world, there are four factors that should be upfront in assessing the right investments, tools and direction:

What is the unique labeled data you are collecting?

As we described in the articles about AI, labeled data is critical to train and improve machine learning algorithms. Understanding and leveraging unique labeled data is critical. Retailers should focus on tools that help capture and classify actionable data specific to their business, rather than relying on generic, internet-sourced data.

Rapid learning and improvement

The world can move in very short cycles. 4-years ago BOPIS wasn't in the lexicon, 1-year ago no one knew what generative AI was. The lesson in this is to make sure that you can be agile and build upon any decisions you make, particularly in a world where 3-5 year investment horizons are the norm. The three categories important to learning and improvement being built upon are:

1. **Flexibility and speed to change:** for example how easy it is to add in or change use cases in a changing environment.
2. **Insight generation:** how does the investment you are making give you continuously better insights into your business.
3. **Innovation roadmap:** investment isn't for just a state in time so what is the roadmap of features and opportunities beyond the initial investment.

How does this fit into my organization and employee “stack”?

Retail has in many places grown to be a patchwork of different tools, systems and data sets. As we described in the need for simplicity, reducing the system overhead is essential. Tools that can orchestrate or consolidate approaches are a dramatic step forward, especially those that fit well with the technology stack of the organization.

Technology adoption also has cultural and behavioral consequences. Digitally native workforces expect to be able to pick up and use technology with minimal training and the tools you are using can be a promoter of the culture you wish to drive within the organization.

How does this fit with privacy and security requirements?

Of course this is already on any procurement requirement but it requires re-stating because of the rapidly evolving technology dynamics. 12 months in we see the ease at which Large Language Models can be prompt injected or jailbroken reminding us of the need to be diligent on how we use and look at data as well as the impacts of using it.

Source: assessing prompt injection risks in 200+ custom gpts, yu et al, 2023.

Beyond just a technological shift

Transitioning to a data-powered organization is more than just a technological change; it's a strategic shift towards being empirically driven in every decision and innovation. This approach, from Henry Ford's scientific management to modern Agile methodologies, has always been at the core of successful businesses. The key lies in adapting the path to success in the ever-evolving retail landscape.

Go to quorso.com to see testimonials from world-leading retailers, use cases, FAQs and our 2024 Retail Trends report.

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