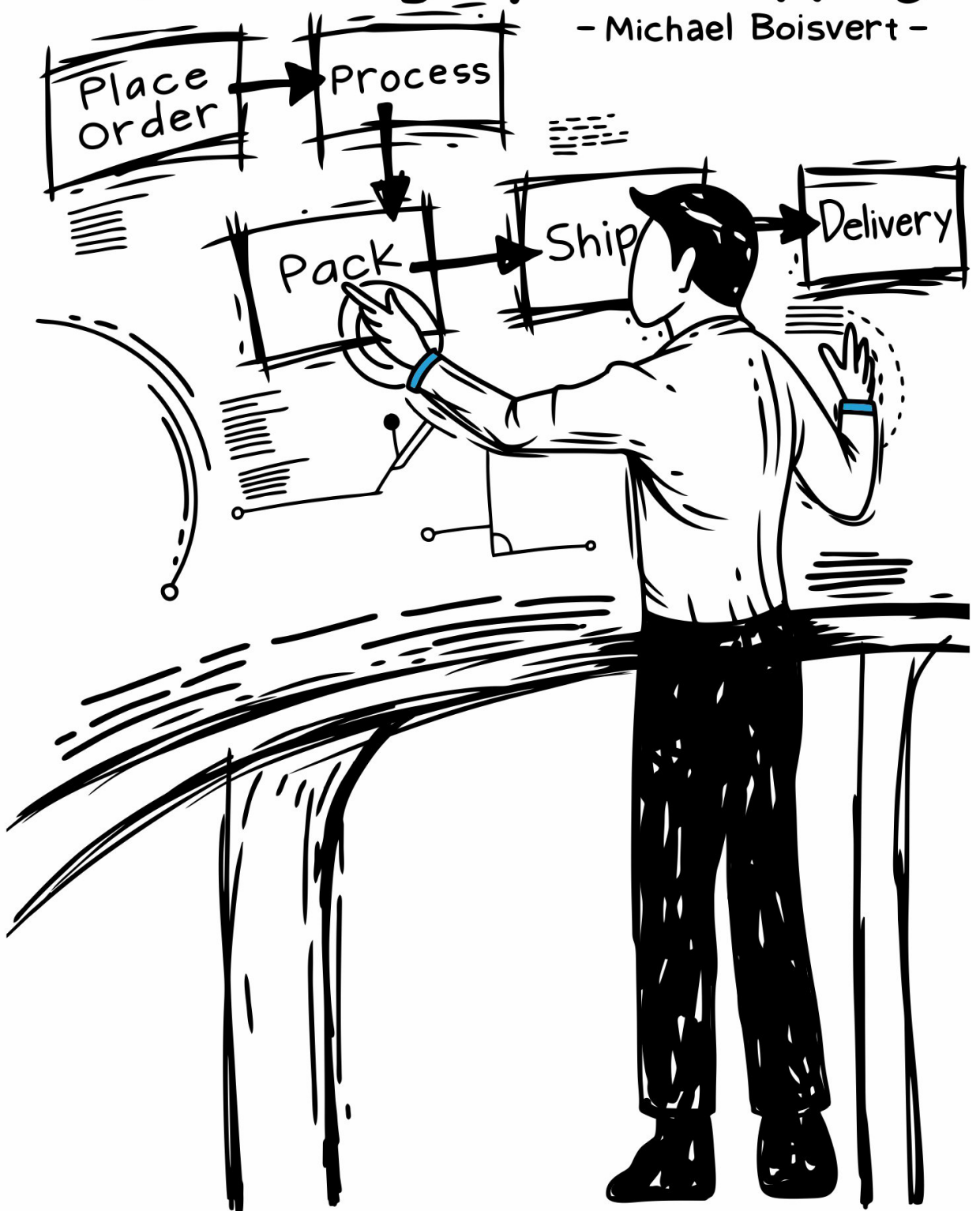


Supercharge your Shipping

- Michael Boisvert -



CONTENTS

PREFACE	1
GAINING A COMPETITIVE ADVANTAGE THROUGH SHIPPING OPTIMIZATION	2
DATA PLATFORM READINESS	3
VISUALIZE YOUR SHIPPING PROCESS	6
CRYSTAL BALL	7
CONCLUSION	10

PREFACE



Business Intelligence has given us renewed respect for the role of Business Process Workflows.

When we founded our company FreshBI, we thought that we'd be building beautiful dashboards from dawn till dusk.

Over time we came to realize that the dashboards are only as good as their anchor in the business's strategic objectives and the processes that make up the business.

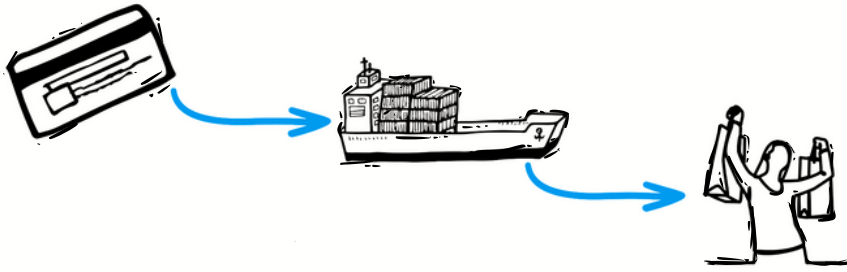
With this realization we now begin every project by documenting and visualizing the business processes that support the core purpose of the dashboards that we are building.

The Shipping Process is one that lends itself well to visualization because it moves fast and has a low tolerance for error. Amazon for example, has a target error rate of less than 1 error per 2,200 items shipped.

Well designed Dashboards can expose the whole process, focus in on its deficiencies and guide actionable steps to remediating mistakes and instantiating permanent process improvements.

So with that, we bring you some of our perspective on what it takes to Optimize your Shipping Operations for e-commerce.

GAINING A COMPETITIVE ADVANTAGE THROUGH SHIPPING OPTIMIZATION



E-commerce Retail is steadily catching up to Bricks & Mortar., With its share roughly 20% of total retail sales, e-commerce has gained approximately **2% share of total retail sales** YOY over the past 8 years.

If you're in the e-commerce game then you know that a lion's share of your competitive advantage resides in your ability to fulfil orders cost-effectively and on-time.

Fulfilling Orders Cost-effectively and on-time requires 3 essential elements:

- A Connected Shipping Process
- Visibility of your whole process
- Continuous Monitoring & Improvement

If all it takes is 3 steps to succeed, then why do some companies struggle with optimizing their-product fulfillment ?

Each case is unique but we've noticed a common thread - a lot of investment goes into system selection and configuration and not enough into Visibility. In a process as complex and important as Shipping, Visibility begets all good things - identifying weak links & bottlenecks, real-time monitoring, predictions and clearly visible opportunities for improvement.

This e-book is designed to inspire you and show you that the barrier to optimizing your shipping is not as high as you may have understood.

DATA PLATFORM READINESS

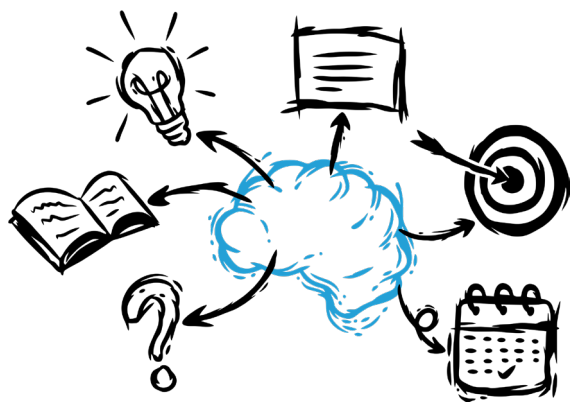
WHAT IS A DATA PLATFORM?

Every forward-thinking company should prioritize mirroring their physical shipping processes in the digital world. If your logistics still rely on paper manifests or manual scheduling, pause now—your top priority should be digitizing every facet of your operation. Without a comprehensive digital counterpart, achieving rapid insights or leveraging AI for shipping efficiency is virtually impossible. A digital clone of your shipping workflows is essential to becoming an industry leader in logistics.

For many businesses, this starts with ERP systems and shipping management software. That's a solid foundation but only scratches the surface of a true digital twin. Any company managing substantial logistics data (read: "all shipping-dependent businesses") should invest in a robust data warehouse.

At its simplest, a data warehouse could provide defined views fed directly from your shipping and inventory systems. For instance, platforms like ShipStation, Freightview, or EasyPost offer built-in analytics tools for tracking deliveries, carrier performance, and shipping costs. Combine this with tools like Google BigQuery or Power BI, and even small to mid-sized operations can gain powerful insights. e audiences in Instagram. How will you know if you are not intentionally tracking your customer segmentation and related sales lift with each campaign.

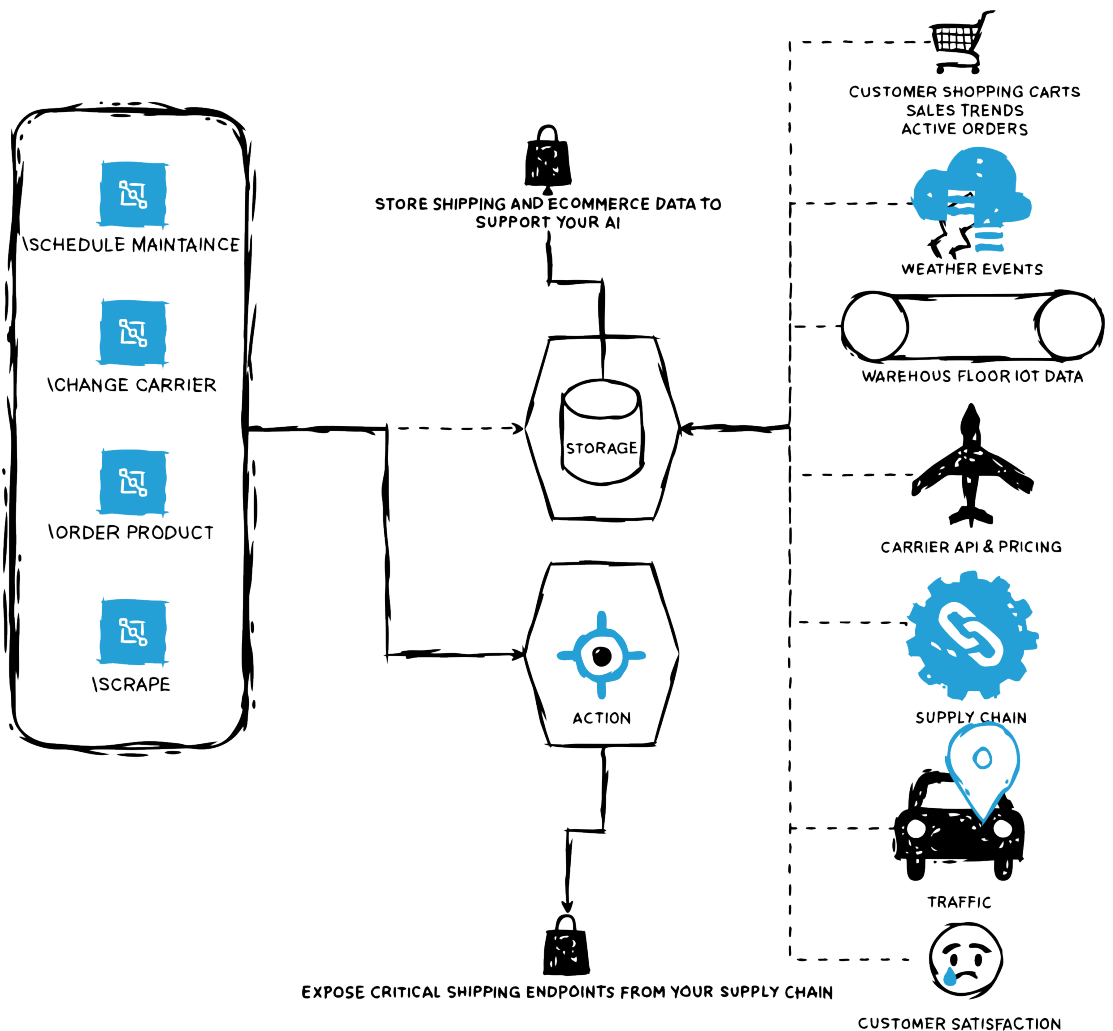
Larger operations often require more advanced, customized infrastructures that go beyond data lakes and dashboards. A key focus should be building APIs that expose generic, reusable actions to streamline operations and enhance customer experience. APIs for tasks like placing orders, changing carriers, or automating customer notifications—such as emailing an apology for a late delivery—are essential. These APIs act as the connective tissue between your systems, enabling real-time integration with CRMs, warehouse systems, and other digital tools.



WHAT'S INSIDE?

Operational Data: A shipping data platform should prioritize storing key operational data, such as order details, shipping statuses, tracking numbers, carrier performance metrics, and customer interaction records. This data forms the foundation for analyzing performance trends, optimizing logistics, and delivering exceptional customer experiences. Historical datasets, including carrier delivery times and route performance, are invaluable for predictive analysis and strategic planning, while maintaining customer communication logs supports personalized service and issue resolution.

Live data: On-demand data, like real-time shipment locations and carrier availability, plays a critical role in responsiveness and transparency. By integrating live updates into the platform, businesses can re-route packages during disruptions, notify customers proactively about delays, and dynamically adjust carrier assignments. This ensures operations remain agile and customers receive accurate, timely updates.



SO ALL I GET IS A BIG, DUMB, STATIC DATASET?

Your data platform is more than just a library of data, if designed properly it should be the host of a third, semi-intelligent layer: the **API**.

Exposing key actions through APIs—such as placing orders, changing carriers, and sending automated emails—is essential for operational efficiency. These actions allow seamless integration with other systems, enable automation, and support real-time decision-making. For example, an API that triggers “Sorry your order is late” emails ensures proactive communication with customers, maintaining trust even during setbacks.

These actions can be triggered via an AI prompt or automatically when certain events occur. This is an often overlooked area of dataplatforming.



SUMMARY

A well-designed shipping data platform delivers benefits like enhanced operational visibility, improved carrier performance management, and enriched customer satisfaction. By enabling data-driven decisions and proactive customer communication, businesses can achieve greater efficiency and maintain a competitive edge.

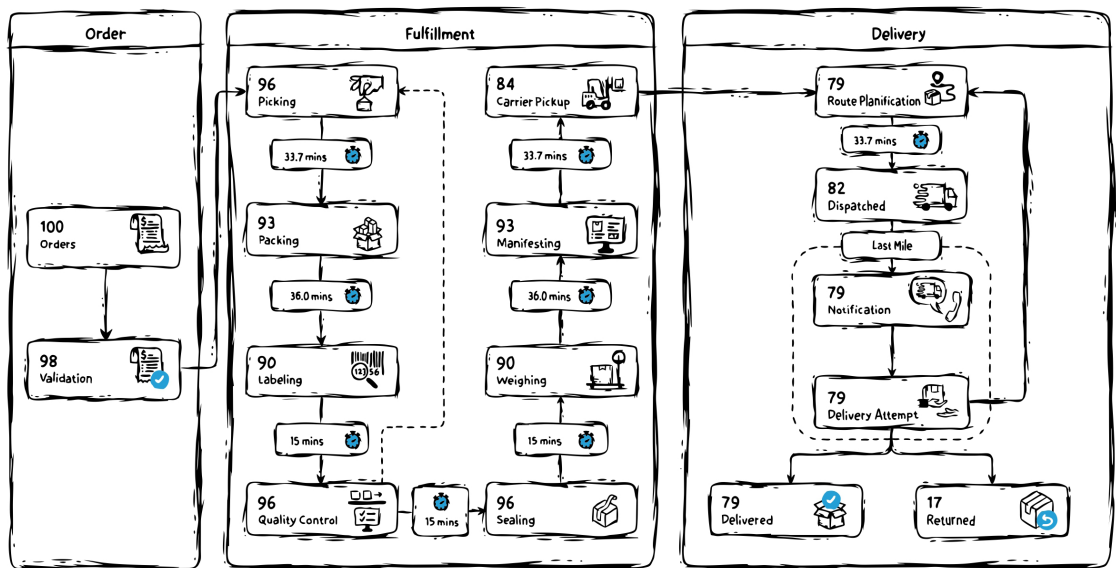
VISUALIZE YOUR SHIPPING PROCESS

As you muse about how to Visualize your Shipping Process, you're invited to conceptualize with us, Shipping Optimization Manifested, Interactive and Optically Enhanced. Our brains are optimized for understanding through illustration - 8,000 times faster and clearer than through words - and therefore having access to a dynamic illustration of the complexities of your Shipping Process is the luxury that you obtain through access to a dashboard like this.

The characteristics of such a dashboard for Optimizing Shipping are:

- That it tells the story of what happened / is happening within your Shipping Process
- That it Explains what shipping bottlenecks exist and why
- And that it advises what actions could be taken to optimize the Shipping Process, Reduce Shipping Costs and Increase Customer Satisfaction.

**By way of example, the dashboard below measures the Sales Lift for an e-commerce company manufacturing and selling commercial drones*



To get a feel for how it does its job, take a look at the full flow chart how it clearly illustrates the whole Shipping Process.

Processes that are experiencing bottlenecks are flagged as needing attention.

Hovering over any of the process times triggers an AI prompt about the bottlenecks responsible for the process time in question and advice on what actions can be taken to reduce shipping bottlenecks and increase customer satisfaction.

Dashboards like this that visualize the essence of your business and play a decentralized advisory role to increase profitability and cash flow, are more than a tool for managing your Shipping Process. It is a sanity check, a reference for all meetings across the organization that deal with Shipping, an asset to drive strategy, an always-ready presentation about shipping.

CHRYSTAL BALL

If your default approach to shipping data is that for every physical event in your logistics network—whether it’s an order being placed, a package being shipped, or a delivery delay—there is a digital counterpart, predicting and optimizing future states of your shipping operations becomes straightforward. The advent of super-fast computing has triggered a new information arms race, and companies that achieve high digital parity in their shipping processes today will be positioned to fully leverage these advancements as they mature



Currently, we interact with generalized LLMs (like ChatGPT) trained on vast amounts of open and closed data sources. While they excel at general knowledge and conversation, these models lack insights into your specific shipping network. Looking ahead, the next decade will likely bring Business LLMs (BLLMs) trained on logistics-focused data and capable of interfacing directly with your shipping data platform. The question is: Is your shipping operation ready for this transformation?

The implications of these specialized BLLMs are revolutionary for logistics:

- 1. Universal Query Language:** Natural languages like English or Spanish become the de facto query language. No specialized knowledge of SQL or scripting is needed to extract actionable insights from shipping data.
- 2. Digital Assistants for Every Role:** BLLMs will act as a “second opinion,” instantly analyzing shipping routes, carrier performance, and delivery metrics, while communicating effectively with team members and even customers.

While such advanced BLLMs are not yet widely available, businesses can start integrating with current LLM technologies. For instance, existing ChatGPT plugins can analyze your shipping data, classify delivery feedback (read: sentiment analysis), and even generate tailored customer communications. Tools like CoPilot can accelerate day-to-day tasks, from automating repetitive actions to providing intelligent recommendations.

The journey toward a highly intelligent, automated shipping operation starts now. By preparing your data and adopting existing AI tools, you position your business to lead in the next wave of logistics innovation.

What could your data train an ML model to do?

- *Optimize Carrier selection and route planning*
- *Automatically trigger operational responses*
- *Present “buttons” from your data platform’s action list*
- *Dream up custom logistic strategies*

✕ LOGISTICS OVERSEER

The **Logistics Overseer** is the future of shipping intelligence, blending the vast knowledge of a large language model (LLM) with direct access to your entire logistics and operational data ecosystem. With this powerful tool at your disposal, mundane decisions and critical insights are handled with ease, leaving your team to focus on strategic planning.

✕ AUTOMATING MUNDANE DECISIONS

The Logistics Overseer excels at taking over repetitive and straightforward tasks, ensuring smooth operations without requiring constant human oversight. For instance:

- **Proactive Customer Notifications:** The system automatically detects delayed shipments and sends customized “Sorry your package is delayed” emails, tailored to the recipient’s preferred tone and language.
- **Supply Chain Adjustments:** Based on order volume and inventory levels, the overseer can place restock orders for shipping supplies like boxes, labels, or filler materials, ensuring you never run out of essentials.
- **Carrier Scheduling:** The system monitors carrier performance and automatically requests pickups or cancels unused slots, optimizing shipping costs without manual intervention.

✕ DELIVERING ACTIONABLE INSIGHTS

Every morning, the Logistics Overseer greets you with a personalized status report that highlights trends, anomalies, and opportunities. For example:

- **Sales Growth Insights:** “Good Morning, you had a 200% increase in sales for your new widget. I have some ideas on how to help:
 - Initiate new supply orders.
 - Notify the FedEx volume manager to secure additional capacity.”
- **Customer Sentiment Trends:** “Hello, customer satisfaction has dropped over the last four days. I have suggestions:
 - Summarize common complaints.
 - Visualize problem areas using delivery heat maps.
 - Offer to call customers directly for personalized follow-ups.”

Adaptive Decision Support

The Logistics Overseer isn't just reactive—it learns and adapts over time to better assist your team. Its role evolves as your business needs grow:

- **Dynamic Carrier Management:** When the overseer identifies patterns like recurring delays from a specific carrier, it can recommend alternative providers, negotiate new contracts, or create contingency plans.
- **Seasonal Demand Planning:** It predicts peak shipping times based on historical data, automatically scheduling additional resources or sending reminders to prepare for volume surges.
- **Warehouse Optimization:** The overseer flags underutilized storage space or bottlenecks in order processing, suggesting redistribution or automation opportunities.

✕ EMPOWERING HUMAN OVERSIGHT

Despite its automation prowess, the overseer recognizes the importance of human decision-making. Every insight comes with actionable buttons:

- *“Initiate supply order” triggers immediate restocks.*
- *“Summarize complaints” produces concise reports ready for review.*
- *“Visualize problem areas” generates detailed dashboards.*

These suggestions empower managers to act quickly, leveraging the overseer's intelligence while maintaining control.

✕ FUTURE SCENARIOS FOR THE OVERSEER

- **Customer Engagement:** Automatically detect unhappy customers and draft outreach messages, including follow-ups with discount offers or apologies.
- **Environmental Impact Tracking:** Monitor carbon emissions across your logistics network and recommend greener shipping options.
- **Real-Time Risk Management:** Identify weather or political risks affecting supply chains and suggest rerouting shipments or pausing high-risk orders.

The Logistics Overseer isn't just a tool—it's a partner in every step of your shipping process. By blending automated decisions with human insights, it transforms the way you manage logistics, ensuring every package gets where it needs to go, faster and smarter.

CONCLUSION

Companies like Amazon have set a new standard for speed and accuracy in the e-commerce space, creating a high-paced environment. Customers expect their goods to arrive fast and to be match what they ordered.

Ultimately, the winners will be those e-commerce companies that can trust their data and have full visibility of their Shipping Process and the parts of that process that require Optimization.