



Enhance Supply Chain Efficiency
and Visibility with Hive-Zox

**How Embracing Digital
Transformation Can Help
Pharma Companies Mitigate
Risk Exposure**

Are the unpredictable costs of pharmaceutical shipping taking a toll on your business?
Are you concerned about the quality of your medication during shipping and the safety of your patient?

Imagine a solution that not only monitors key environmental factors in real-time, and optimizes routes analysis, but also reduces costs all in one centralized system. In today's fast-paced, technology-driven world, pharmaceutical companies face immense pressure to optimize their logistics operations and mitigate risk exposure.

Hive-Zox, a leading provider of digital solutions, empowers pharmaceutical companies to embrace digital transformation and achieve greater efficiency and visibility than ever before.



Introduction

In this report, we delve into the changing dynamics of the pharmaceutical logistics world and the crucial role that digitalization and risk management plays in driving operational excellence.

With Hive-Zox at the forefront, companies can embrace a seamless transition towards digital transformation, paving the way for enhanced efficiency, real-time visibility, and effortless integration of digital solutions into existing systems.

In the dynamic world of pharmaceutical shipping, staying ahead of the competition is essential. Hive-Zox offers a holistic solution that directly tackles the common pain points experienced by shipping companies catering to the pharmaceutical sector.

Join us as we explore the benefits and opportunities that come with adopting **Hive-Zox** in your pharmaceutical logistics operations.



Challenges Faced by Pharmaceutical Logistics in Today's Environment

In today's complex and ever-evolving business landscape, the importance of a company's value creation is increasingly understood to be intricately linked to the performance of its end-to-end supply chain [1].

Industry leaders in the pharmaceutical supply chain are coming to the realization that the perceived complexities of sourcing APIs (active pharmaceutical ingredients), excipients, formulations, and packaging are not significantly different from other intricate supply chains.

Sectors such as high-tech and electronics also rely on global sourcing strategies to drive efficiency and competitiveness

This shift in perspective highlights the critical role that supply chain risk management plays in enhancing overall business performance and underscores the need for companies to upscale their supply chain processes to stay ahead in today's dynamic business environment.



Pharma supply chain leaders are dealing with most global issues that all industries face. These concerns have reached executive agendas, stakeholder questions, and quarterly earnings reports. Geopolitical issues have created disruptions and risks in global supply chains that are unprecedented, and unanticipated constraints are higher than ever. Trade disputes have impacted duties and tariffs in cross-border shipments. Cyberattacks have caused disruptions in business continuity. National industrial policies have changed business incentives and protections in many countries [1].



These challenges, specifically in the pharmaceutical industry, impact various aspects of the supply chain, from procurement and manufacturing to distribution and patient care.



Pharmaceutical Logistics Pain Points

1. Stringent Regulations and Compliance

The pharmaceutical industry is heavily regulated, with strict compliance requirements for every step of the supply chain. These regulations cover aspects like product quality, safety, efficacy, storage, and distribution. Maintaining compliance across all these regulations can be a significant challenge, requiring specialized expertise and meticulous documentation.

2. Temperature Control

Many pharmaceutical products are sensitive to temperature fluctuations, requiring strict temperature controls throughout the supply chain to prevent spoilage or degradation. Maintaining the cold chain can be challenging, especially during transportation and storage. Any temperature excursions can compromise product quality and efficacy, leading to potential safety risks and product recalls.

3. Supply Chain Complexity

The pharmaceutical supply chain is complex, involving multiple stakeholders, including manufacturers, distributors, pharmacies, and healthcare providers. Coordinating these various players and ensuring timely delivery of products can be challenging.

4. Counterfeit Drugs and Supply Chain Security

Counterfeit drugs pose a significant threat to patient safety and public health. Pharmaceutical companies need to implement robust security measures to prevent infiltration of counterfeit drugs into the legitimate supply chain. This includes measures like serialization, track and trace systems, and tamper-evident packaging.

5. Sensitive Data

With the increasing globalization of the pharmaceutical supply chain, ensuring visibility and traceability of products is crucial. Lack of real-time data can lead to delays, inefficiencies, and increased risk exposure.

6. Short shelf-life inventory management

Pharmaceutical products often have short shelf lives and require careful inventory control to avoid spoilage and waste.

7. Evolving customer demands:

The rise of personalized medicine and e-commerce necessitates greater flexibility and agility in pharmaceutical logistics.

By embracing digital transformation and leveraging platforms like Hive-Zox, pharmaceutical companies can address these challenges by improving supply chain visibility, enhancing regulatory compliance, optimizing temperature control, and ensuring data traceability throughout the supply chain. Improving automation can streamline operations, reduce human error, and increase overall efficiency. [4]

Supply Chain Visibility: A Pharmaceutical Imperative

In the complex and dynamic Pharmaceutical global landscape, ensuring a secure and reliable supply chain is critical to success, but it is also a significant challenge. Sudden logistics disruptions can lead to stockouts, product recalls, and even patient harm.

Therefore, in today's landscape, supply chain visibility is no longer an option for pharmaceutical companies; it is imperative. By embracing transparency, these companies can reduce risk, improve quality, enhance their reputation, and foster better collaboration. A more secure and reliable supply chain will result from these efforts, ensuring that patients

have access to the medications they need. Today and tomorrow, increasing risks are poised to affect supply chains significantly. In this scenario, it is imperative to prioritize resilience. Effective risk management and mitigation strategies are essential to mitigate these risks without the need for costly investments in redundant partners and operations.

Building resilience to potential future disruptions remains a top priority, especially for companies operating in intricate environments with strict delivery schedules and significant cost pressures.

“***In this business landscape, improving supply chain resilience means increasing operational efficiency and reliability, agility, and speed to market, and achieving a greater control over risk exposure. It is therefore becoming an increasingly critical imperative for the pharmaceutical industry.***

One of the most effective levers the industry can deploy to increase resilience is improvement in supply chain visibility. With greater ability to see potential supply chain disruptions, pharmaceutical companies will increase their ability to execute mitigation activities. [2]

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Leading the way in this digital evolution, Hive-Zox is offering a reliable and easily integrated system that promises enhanced efficiency and visibility in pharmaceutical logistics.

The advent of cutting-edge technologies has paved the way for unprecedented advancements in supply chain operations, and the pharmaceutical sector is primed to embrace these innovations. With Hive-Zox at the forefront, companies can stay ahead of the curve, ensuring competitiveness and sustainability in an increasingly interconnected world. Let us delve into how Hive-Zox can revolutionize pharmaceutical logistics, elevating processes to new heights of efficiency and effectiveness.



How Hive-Zox Enables Digital Transformation

Hive-Zox has been at the forefront of this automation revolution with its CMaaS (Connected Monitoring as a Service) proprietary solution. Products like the Hive Platform, Real-time IoT devices, and Active Trackers provide accurate and real-time data monitoring during shipments. Hive-Zox's products can be easily set up, programmed, and tailored to specific shipments on-demand. Professionals can track and manage real-time data in one centralized platform where all the up-to-date information on their shipments resides.

In addition to its core products, Hive-Zox's ConnectedLabel is an agile and cost-effective solution. A quicker temperature report for quality assurance, immediate release to patient, saving you time, money, and potentially even lives! Hive-Zox offers a holistic solution that directly tackles the common pain points experienced by shipping companies catering to the pharmaceutical sector.



Addressing Risk and Ensuring Quality in the Pharmaceutical Supply Chain

Hive-Zox offers a comprehensive suite of digital solutions designed to address the unique challenges of pharmaceutical logistics. These solutions will provide you with many benefits.



Easy Integration and Customization

Easy to use and seamlessly integrating with your existing systems: Hive-Zox's Platform is easy to use and sends data directly to your ERP or other systems offering scalability and real-time monitoring of product conditions during shipment. Hive-Zox offers a unique pool of proprietary devices that can be easily set up, programmed, and tailored to specific shipments on-demand. You can track and manage every real-time data in one centralized platform, where all the up-to-date information on your shipments resides. Forget the hassle of preprogrammed devices that must be shipped to clients, risking potential errors. Hive-Zox's over-the-air programming capability allows you to make last-minute adjustments, saving time, and delivering medicines at the correct temperature to patients.

Quick Facts

Seamless integration

Hive-Zox's platform integrates with existing systems. It offers real-time monitoring and scalability

Customizable Solutions

Choose your level of support. High storage capacity ensures meticulous record-keeping.

Real-Time Alerts

Received alerts for temperature, humidity excursions and Events anytime and anywhere.

Customized Solution to your specifics:

Choose the level of support that meets your needs. With high storage and measurement capacity of 32000 records, more than 6 months worth, rest assured that every detail of your pharmaceutical shipments is meticulously recorded and preserved. Also, with custom communication intervals between real-time alerts (from 1 min to once a day) you will stay connected and informed. Real-time alerts for temperature or humidity excursions, anytime, anywhere.

Cloud-Based Temperature Monitoring:

Hive-Zox's real-time temperature monitoring system provides continuous visibility into product temperature throughout the supply chain. This ensures that pharmaceutical products are stored and transported within the required temperature range, preventing spoilage, and maintaining product efficacy.

Cloud-Based Location and Condition Monitoring during pharma shipment in one solution:

This feature allows the shipping company to track the exact location and condition of pharmaceutical shipments in real-time, ensuring that products are handled and stored correctly throughout the delivery process, reducing the chance of spoilage or damage. In one comprehensive solution it is possible to monitor from temperature and humidity to light, location, tilt, shock, pressure, and acceleration. Monitoring a myriad of sensors at the same time will ensure that your package is under constant surveillance.

Integrated Regulatory Compliance Management:

Digital transformation ensures better compliance with regulatory standards through end-to-end traceability [3]. Hive-Zox's integrated compliance management platform automates regulatory reporting, ensuring adherence to industry standards and regulations. This simplifies compliance processes, reduces the risk of non-compliance, streamlines data management, and immediate release. Hive-Zox's devices and platform are already approved by the main airlines and have all the necessary compliance certifications. Hive-Zox solution has been fully validated and audited by top global pharmaceutical companies.

Cost reductions and premium savings:

By streamlining operations, reducing risks, and optimizing resources, the pharmaceutical companies can achieve cost savings and potentially negotiate lower insurance premiums due to enhanced security and risk mitigation measures provided by the solution.

Optimizing delivery routes:

By analyzing data collected through the solution, the shipping company can optimize delivery routes to minimize travel time, fuel consumption, and overall delivery costs, ultimately improving efficiency and enhancing operational performance.

Comprehensive monitoring and compliance

1

Cloud-Based Monitoring

Track temperature, location, and conditions of shipments in real-time

2

Quality Assurance and Compliance

Automate reporting and adhere to industry standards and regulations

3

Cost Reduction

Streamline operations and optimizes resources for potential cost savings.

4

Route Analysis

Analyze data to minimize travel time and fuel consumption

Advanced Inventory Management:

Hive-Zox's real-time data and digital reports allow for more accurate and timely demand predictions, enabling businesses to adjust production and inventory levels accordingly. It also helps to minimize waste and enhance warehouse efficiency. This ensures timely delivery of products to patients while reducing stockouts and costs.

Data-driven decision-making:

The solution provides valuable data insights that can be used to enhance decision-making processes, improve operational efficiency, and identify areas for process optimization within the shipping company's logistics operations.

Paperless Documentation:

Hive-Zox's electronic documentation system eliminates the need for paper-based records, streamlining communication, and facilitating regulatory compliance. This improves efficiency, reduces errors, and enhances data security.

Reduced Risk:

By understanding their supply chain vulnerabilities, pharmaceutical companies can take steps to mitigate risks. This includes identifying potential single points of failure, diversifying their supplier base, and developing contingency plans.

Enhanced security measures:

Hive-Zox can help in identifying any tampering, diversion, or theft attempts during the shipment process, providing enhanced security measures to prevent such incidents and ensuring the authenticity and integrity of the pharmaceutical products being transported.

Controlled Quality:

Supply chain transparency allows pharmaceutical companies to track the quality of their products throughout the manufacturing process. This helps to ensure that all products meet the required standards and that patients receive safe and effective medications.

Enhanced Reputation:

Consumers are increasingly demanding transparency from the companies they do business with. By demonstrating their commitment to supply chain transparency, pharmaceutical companies can build trust with their customers and stakeholders.



Enhanced Safety and Decision-Making

Product and Patient Safety

Ensure safe transport of pharmaceuticals, crucial for patient well-being.

Data-Drive Solutions

Gain valuable insights to improve operational efficiency and optimize processes.

Paperless documentation

Streamline communication and enhance data security with electronic records.

Risk Mitigation

Identify vulnerabilities and develop contingency plans for the supply chain.

Improved Collaboration:

By sharing information with their suppliers and partners, pharmaceutical companies can foster a more collaborative environment. This can lead to improved communication, better coordination, and a more efficient supply chain.

Enhanced agility and responsiveness:

Proactive monitoring facilitates faster reactions to market shifts and unexpected events, minimizing disruptions and maximizing efficiency.

Boosting client satisfaction:

The accurate monitoring of shipments, timely deliveries, and enhanced security measures can contribute significantly to improving overall client satisfaction, leading to repeat business and positive word-of-mouth referrals.

High Data Accuracy and Security:

Ensuring data accuracy and security is crucial in the Pharma industry where sensitive information is involved. Hive-Zox devices deliver accurate temperature readings and never miss or lose data points.

Long-lasting non-lithium battery life:

Hive-Zox devices have mastered low-power consumption, offering over 50 days at 1hr communication intervals.

Monitoring Frozen Cold Chains without needing a Probe :

Operating at a wide temperature range, -30c - +70c: to stay always connected and informed even in extreme temperatures.

Compact but powerful solutions at competitive prices:

Experience smaller devices with unmatched performance.

Secure Cloud Platform:

Secure data storage on Swiss servers in compliance with local regulations, to ensure uninterrupted connectivity.

The logo consists of three interlocking hexagons to the left of the brand name.

Hive-Zox

Conclusion

Organizations partnering with Hive-Zox to optimize their processes have seen remarkable improvements in adaptability and oversight of product stability.

Starting from trial periods, Hive-Zox clients have immediately experienced a substantial reduction in manual inspections due to the automation of product release processes.

This approach not only enhances operational efficiency and reduces lead times and safety stock requirements but also minimizes human error through systematic processing and thorough documentation.

By cutting down on manual inspections, employees can focus more on value-added tasks.

Charles Bourbonnais, CEO of Hive-Zox, comments, *"Our customers are discovering new ways to extract value by linking and merging information via our platform, which enables greater automation."*

Partnering with Hive-Zox provides pharmaceutical firms with a reliable support system, enabling them to seamlessly navigate supply chain, regulatory, and commercial challenges.

If you're interested in exploring how Hive-Zox's cutting-edge solutions can benefit your organization, please do not hesitate to contact us.

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