CONTGUARD

SHIPPING WITH INTELLIGENCE

RELIABLE HEALTHCARE IN A DIGITAL WORLD:

THE NEED FOR VISIBILITY AND CONTROL IN THE PHARMA SUPPLY CHAIN

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Reliable Healthcare in a Digital World:

THE NEED FOR VISIBILITY AND CONTROL IN THE PHARMA SUPPLY CHAIN

YOUR INVESTMENT INSIDE THE WAREHOUSE IS HUGE, YOUR TECHNOLOGY BEST-IN-CLASS, AND YOUR VISIBILITY COMPLETE. AND YET, WHEN YOUR CARGO LEAVES THE WAREHOUSE, YOU'RE SUDDENLY LEFT IN THE DARK.

According to Gartner, *"By linking physical and digital assets, and leveraging technology advancements — such as cloud, Internet of Things (IoT), **advanced analytics or artificial intelligence** — companies are in the position to redefine their supply-chain processes and practices. This will allow improved customer experience and operational efficiency, and [allow businesses to gain] a competitive advantage. The challenge for supply-chain leaders, however, is to deliver upon the company's new digital business model. This can be done by aligning the supply-chain operating model and digital investments"* [1]

Total visibility should be of paramount importance to manufacturers, as with the emergence of new technologies, it is becoming the new standard. On top of this, compliance regulations for traceability are

becoming more common, to improve stability and quality as well as to fight illicit trade and the counterfeit industry. Manufacturers that don't have total visibility and are failing to adapt to this new standard could risk falling behind, and are missing out on revenues that range from reducing cost of inventory and handling to improving production and security.

When it comes to the pharmaceutical industry, these problems are exacerbated even further. Due to the high risk of the cargo, Pharma is known as one of the most conservative industries in relation to adopting the latest technologies. Companies are nervous, they cannot allow themselves to be opened up to more risk than is necessary when health and safety are the stakes in the game.

TRENDS IN THE PHARMACEUTICAL INDUSTRY

The Pharma industry tend to use sea freight over air-freight to transport medicines as it is cheaper. However, the increase in touchpoints needs to be managed carefully. Every year 0.5 million tons of pharmaceutical products are transported by air, compared to 3.5 million tons by sea. Pharma tends to use sea freight for most of the medicines, however the air for expensive, unstable/sensitive medicines, and vaccines.

THE PROMISE OF DATA IN ACHIEVING VISIBILITY AND CONTROL

Your business needs accurate data insights into all of the touchpoints below that have historically been unknown, such as loading and unloading, in-port transportation and truck or train for first and last mile. Once this has been achieved, visibility and control can be delivered for a more effective move towards digitization and Industry 4.0.

POINT TO PONDER: THE LIMITATIONS OF LOGGERS

Temperature loggers are used in the Pharma industry to monitor drugs when they are in transit. Meant to record the condition of the medicines, these are both inexpensive, and simple to procure and maintain.

However, in today's digitized world, that's where the benefits end. Loggers cannot compete with intelligent shipping and supply chain tools. Limited to retroactive data, they can only provide information after the fact, taking away the ability to react to problems in real-time. On top of this, they can only tell you what happened and when, unable to give valuable context about why something went wrong and how you can better prepare for next time.

In contrast, real-time shipping intelligence provides valuable data and contextual analysis of a wide variety of metrics, from temperature and humidity, to security breaches, location, quality control and more.

The black hole

| Container Provider | Customer warehouse | Truck | Port gate | In port transportation | Loading dock | Boat | Unloading dock | Port of destination | Train | Customer destination warehouse |

70% of the world's goods are in transit at all times with almost no visibility & control [1]

$55B[2] direct losses, $220B[3] indirect losses

- 2017 Berg Insights benchmark
- Lloyds loading lists – referencing BSI report (2016)

- Maritime Security – An introduction – 2nd edition 2016
- (Butterworth Heinemann)

UNDERSTANDING THE SPECIFIC SUPPLY CHAIN BENEFITS OF DATA VISIBILITY FOR PHARMA

SECURITY/THEFT PROTECTION:

Attackers are interested in stealing sensitive information, private patient healthcare data, and physical property, too. There is a black market for stolen cargo, including illicit trade and counterfeit, and the average cost of cargo theft in the United States generally agreed to be between $15-$30 billion.[1] This bracket is so large because forensic evidence is hard to come by after incidents occur. On top of this, employees may take advantage with route deviation, fraud, or misuse of vehicles or cargo in transit. The supply chain, both digital and physical is a weak point unless businesses have a comprehensive and holistic view of each moving part.

COMPLIANCE:

When it comes to Big Pharma, compliance is many companies' top concern. Changes in regulations happen often, and businesses need to be aware of the expectations and legalities of complying with organizations such as the US Food and Drug Administration (USFDA) and the European Medicines Agency (EMA). Traceability is a measure beginning to be enforced by compliance agencies. Risks are evolving and interconnected, and without full visibility of the supply chain this be tough to handle. While the risks of non-compliance in IT might be a cyber-attack or brand damage, in Pharma – there is a real and potential risk to human safety.

ENVIRONMENTAL EXPOSURE:

Pharma is under intense pressure to ensure consistent and predictable environmental exposure, which includes measuring and staying on top of natural and unnatural temperatures and humidity both in the warehouse and out. This is difficult as there are many handoffs throughout a journey, and cargo will be loaded and unloaded from one vehicle to another many times, with no electricity, no connectivity, and no guarantee of product stability. Smart storage has been valued at almost $500 billion [2], and yet all manufacturers are aware that there should be just as much importance on monitoring in transit. When a drug is exposed to high temperatures this could cause recalls, leading to bureaucracy and administrative headache. Something as simple as a traffic incident or an unexpected thunder storm can have a ripple effect on drug effectiveness, stability and quality.

ADOPTION OF INDUSTRY 4.0:

Most of the current technological development that will comprise the fourth industrial revolution ("Industry 4.0") is being harnessed to perform specific tasks or solve specific problems. These solutions are fragmented and partial - digital islands in the ocean of data. Undoubtedly, the true value lies in connecting those technologies in order to maximize the return on investment in new technologies that march the industry forward. Without aggregating this innovation, and all data collected in the process, there is no way to continuously optimize the supply chain for maximum effectiveness of the latest technology and move towards Just-in-Time production and other game-changing business models.

[1] https://losspreventionmedia.com/insider/supply-chain-security/
unreported-cargo-theft-incidents-make-it-difficult-to-grasp-scope/
[2] https://www.prnewswire.com/news-releases/warehousing-and-
storage-global-market-report-2018-300597190.html

PHARMA SOLUTIONS:
SHIPPING WITH INTELLIGENCE

Data alone is not enough. To enable safe transition into the benefits of Industry 4.0, businesses need visibility across the entire shipping route, warehouse to warehouse, with real-time container monitoring for stability. Companies also need to be able to gain real-time insights into this data across their entire organization, and not just at the top levels, or delivered to data analysts.

When done correctly, (see sidebar [3]) this will impact on the three pillars of manufacturing: Logistics, Quality and Security, addressing the specific issues of the Pharma industry in a holistic way.

[3] https://www2.deloitte.com/us/en/pages/about-deloitte/articles/
press-releases/deloitte-and-mapi-manufacturers-digital-supply-
chain-expectations-outspace-reality.html

POINT TO PONDER: THE 'VANITY' OF OVEROPTIMISM'

According to a study conducted by Deloitte* and the Manufacturers Alliance for Productivity and Innovation (MAPI), "51 percent of respondents believe their DSN (Digital Supply Network) maturity is at least "above average" when compared to their competitors, even though only 28 percent of the respondent companies have begun implementing DSN solutions".

This sheer vanity or "over-optimism" of executives shows they are failing to recognize their need to stay on top of disruption. Failing to take action could have disastrous implications. According to Deloitte, these survey results suggest "supply chain transparency should be the number-one operational goal for many manufacturers, as it represents the key to significant efficiency gains. Yet only 6 percent of survey respondents are part of a manufacturing ecosystem in which every member can see each other's data. Clearly, there is room for improvement in terms of DSN adoption."
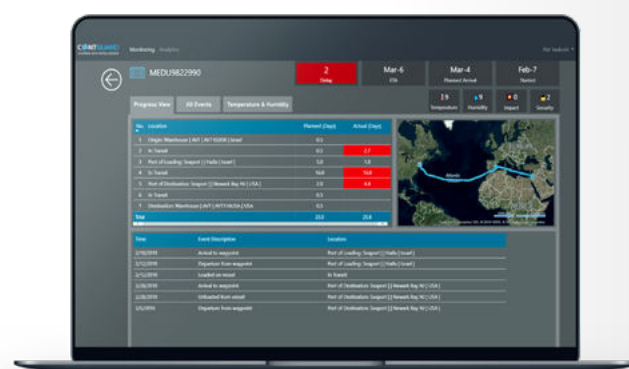
🛒 LOGISTICS

Visibility with data-driven BI insights are foundational to being able to address the specific needs of the Pharmaceutical industry, identifying blind spots and the places to optimize efficiency.

With this intelligence supply-chain managers can prepare for any scenario, and take proactive steps to improve logistics costs, as well as reduce the costs of inventory in transit and safeguard stocks with better planning of inventory. It also allows companies to reduce production costs by enabling Just-In-Time production.

🎖 QUALITY

Preventative monitoring is the future of the supply chain. Make sure the cargo stays in top shape and ensure standardized compliance with real-time monitoring of temperature, humidity and impact – especially important in the Pharmaceutical industry.

Real-time updates about goods in transit rather than the retroactive information you would receive from loggers provides more accurate insights into the metrics that matter- temperature humidity, impact and even third-party information such as traffic or weather data. This is the basis for an ongoing proactive quality control approach: react in real-time to save the cargo, or protect your brand equity and stakeholders by pulling the product and organizing a replacement if you have early warning that the cargo is spoiled. With the use of this data, you can also make sure that incidents are not repeated, taking advantage of Root Cause analysis, understanding why something went wrong, who is responsible for the failure and what you can do to prevent it from happening again.

🔒 SECURITY

Safeguarding the Pharma supply chain and maximizing the ability to assume ongoing compliance across the board needs security involved early and continuously throughout the process. A must-have is 24/7 monitoring, with real-time data tracked by GSM, GPRS & Satellite.

In order to deter thieves, using a well-known company that has a great track record can help, especially as nearly 100% of cargo theft is based on insider-information. Make sure that your provider can deliver forensic analysis of what went wrong in case of any lapse in security. You'll need to know who, what, where and when, not just for incident response – but to prepare for next time. Granular detail of location can be an alternative for a live security escort, providing a strong tool against fraud or misconduct, with analysis into any route deviation at the earliest possible stages.

ACTIONABLE DATA-DRIVEN INSIGHTS UNCOVERED FROM INTELLIGENT SHIPPING

01 IDLE TIME:

Recognize how much of transit time is used efficiently, and where you can make changes to speed up routes and delivery. One manufacturer found that his cargo was idle for 55% of transit time, while another found a 20% efficiency gain by choosing an alternate route to the same destination.

02 ENVIRONMENTAL IMPACT:

Keep on top of key metrics like temperature and humidity. One customer found that 45% of shipments were exceeding the recommended temperature range, which in the Pharma industry could put doubt into the results of a drug or a trial.

03 COST SAVINGS:

Revenue at integrated companies is out-performing competitors by as much as 20%. Visibility into malicious behavior can save lost revenue due to theft, excess demurrage costs and spoilage. These savings are a competitive differentiator that can make a measurable impact to your bottom line.

[4] https://www.irms360.com/blog_post/top_10_supply_chain_and_warehousing_trends_2017

DIGITALIZE YOUR GOODS IN TRANSIT- A BLUEPRINT FOR THE DIGITALIZATION OF YOUR PHARMA SUPPLY-CHAIN

SET UP AND CONFIGURE WITH YOUR UNIQUE BUSINESS GOALS

What are your current KPIs? How do you define your specific challenges? What do you hope to find out? Progressive deployment allows a phased approach to digitization.

COLLECT DATA AND MONITOR YOUR GOODS 24/7

Shine a light into the blind spot of your supply chain and start uncovering the metrics that matter. Around the clock monitoring provides ultimate peace of mind.

ANALYZE YOUR INSIGHTS AND MAKE PLANS FOR THE NEXT STEPS

Learn what your quality, supply chain and security weak spots are, and receive actionable insights for improvement.

OPTIMIZE YOUR OPERATIONS USING ACCURATE BUSINESS INTELLIGENCE

Make smart changes to your business process to enhance quality and security, such as changing routes, vendors, or security protocol. Next- re-assess the realities of your 'Black hole' and decide where to point data-led decision making next.

Set up and configure with your business goals

Collect data and monitor your goods

Analyze your insights and plan

Use Business Intelligence to optimize for performance

OUR PERSPECTIVE ON THE VULNERABLE AREAS OF YOUR SUPPLY CHAIN

Contguard has developed a groundbreaking smart shipping solution that integrates the most advanced technologies in order to enable pharma industry supply-chain managers and smart manufacturers to remove blind spots in their supply chain and reduce their overall risk. This granular level of transparency and control of goods in transit will assist in making data-based decisions, optimizing logistics, selecting the safest, fastest shipping routes, avoiding unnecessary risks, and helping to ensure full regulatory compliance.

Once Contguard's lightweight, highly secure IoT device is attached to your storage unit (e.g, containers, trailers, loose cargo), it immediately begins reporting critical information - such as location, temperature, humidity, impact, and security data – around the clock. Our AI-based, cloud-based technology processes this data, together with third-party data, into real-time alerts, insights, and predictions on our web and mobile platform, specifically tailored to your business needs.

ABOUT CONTGAURD

Contguard is a global company that offers end-to-end service for managing goods in transit by providing shipment data, business intelligence services, and actionable insights.

Our leading-edge technology and professional services give you the data insights you need, so you can fully manage your supply chain online and make proactive decisions, helping to ensure your goods arrive on time, in full. The results? Maximum efficiency, resource optimization, risk mitigation, and major reduction in cargo loss.

Founded by a team of logistics engineers, supply chain experts and big-data specialists, Contguard provides end-to-end visibility of cargo in transit, supporting shipments to any destination in the world. Our revolutionary IoT and AI-based technology is helping industry-leading companies around the world transform their supply chain.

Contguard has some exciting features in the pipeline, in order to take the future of end-to-end digital supply chain to a whole new level. Get in touch for a demo!

Get in touch to schedule a demo →

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