



White Paper Number 3

November 2015

How Big Data Are Transforming Reporting and Analytics in Air Cargo



Introduction

As air cargo becomes more competitive, executives and managers need factual data instantly, and without asking anyone to provide it. Here's a typical reason why: on short notice, an air cargo president and his sales team are meeting their largest customer halfway around the world. The customer wants to renegotiate the whole contract. For the air cargo team, negotiating a new deal based on factual data is not a "nice to have" but an essential tool to ensure an agreement that benefits both parties.

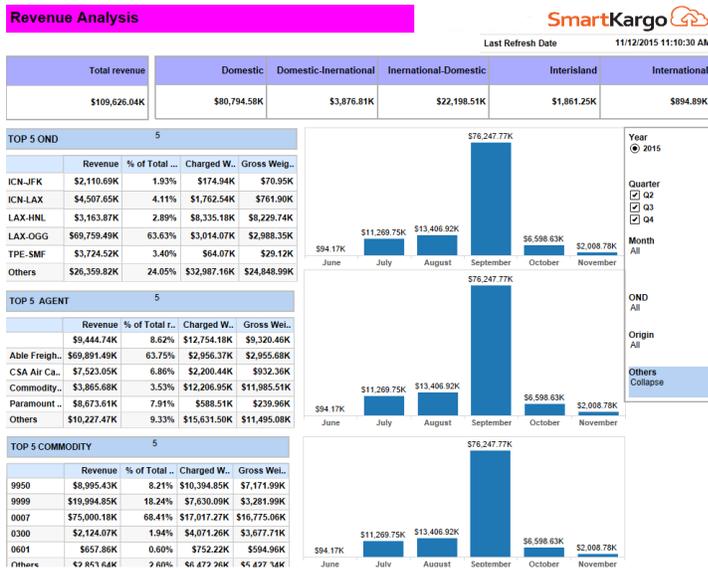
The air cargo industry has demanded such data and analysis for a long time. In the typical scenario, scores of airline IT people or expensive consultants are digging deep into multiple systems each day and running reports that may be able to be "exported" into something executives and others can quickly understand – like an Excel spreadsheet and charts. These then are circulated to various business departments, and perhaps submitted to accounting for a revision because of adjustments that came in after initial report was run. Finally, a reconciled and reasonably accurate picture is ready for executive review. It should not be that hard. And it need not be.

Today's executive demands data from today – without having to ask anyone for anything!

Giving Air Cargo Better Information Tools

Airlines are one of a number of industries that are investing in Big Data. Carriers have long generated enormous amounts of data across their operational and commercial departments, especially on the passenger side. Revenue management has evolved over the past 30+ years, using a range of historical, demand, and competitive information to maximize revenue per available seat mile. This is taken for granted in the cabin – why not do the same in the belly of the aircraft?

Airline IT departments have long been the gatekeepers – and, candidly, often barriers – to information access. Legacy systems simply could not deliver what executives and functional managers needed, because 1) the old systems were built to generate information after the fact, so-called batch processing, which often lagged events by days, weeks, or even months; and 2) untrained users could not access the information; and 3) even IT experts could not query the system without significant effort.



What is Self-service BI?

Self-service business intelligence (BI) enables users to create and access specific sets of BI reports, queries, and analytics themselves—without IT intervention. The platform helps people ask and answer streams of questions and follow their own path to insight — on their own and in formal or informal groups.

Empowering Users to Generate Insights

Technologies like SmartKargo now provide a way to capture granular information at every stage of the supply chain or transportation network. Widespread Internet availability varied web-based services have enabled multiple service providers, each handling one part of the shipment, to consume as well as transmit data in real time without paying the exorbitant charges typical in the past. Cloud-based platforms are ideal for such data gathering initiatives and provide scalable storage and computing power – these systems can grow as the business and data demands grow. Algorithms similar to those on the passenger side are now available to analyze such data and convert the same into meaningful information that managers and executives can instantly use. That’s a game changer!

Mobility – in the specific sense of mobile computing capability – is another enabler of data. Together with a Cloud platform and ubiquitous connectivity, mobility is creating new

opportunities to both gather and distribute data. For example, a cargo agent can use platforms like SmartKargo to scan shipments in the warehouse or on the ramp, or create an air waybill from anywhere on a smartphone, and in doing so make the data instantaneously available for analysis. Similarly, applications installed on a tablet or smartphone can now provide executives a detailed understanding of how the business is running without having to be wired to a computer in his or her home office.

For customers, too, new-generation cargo solutions like SmartKargo also provide an analytics platform that enables them to see, understand, and act upon data from the transaction system. The analytics platform provides all business users the answers they need to be more productive, efficient and effective, and promotes total visibility across all functions and departments.

SmartKargo is especially useful for the executive teams by instantly providing reliable, up to-date information. And they can choose from high-level, aggregated views, mid-level detail, or super-specific data – all the way down to the AWB level if they choose. The multi-layered security model allows access to be restricted by rank, role, or department, maintaining controls while ensuring that everyone who needs to know has access to the information that supports their function. The developers spent a lot of time and used industry best practices to design reports and screens that enable users to quickly visualize what's happening. Patterns and trends can be seen at a glance. Problems can be flagged early. The right decision can be swiftly made.



SmartKargo's easy-to-use and intuitive BI delivers advanced analytical capabilities to provide competitive advantage and improve customer service. Using data discovery, visual analytics and what-if analysis, users can explore large data sets to identify trends and outliers and act more quickly.

Three Types of Content for Three Kinds of Users

Management Dashboards for executives and department heads, delivering summarized, global views to help them take strategic decisions. Examples:

- Revenue Analysis – sales and financial views
- Target vs Actual analysis

Management dashboards thus allow you to quickly answer questions like these:

- What are sales totals by region, origin, destination, and agent?
- What are the top revenue-generating routes, agents, customers?
- Are we on target to meet the financial projections? Which are best and worst performing areas?
- What are trends in revenue by sales agents?

Operation Dashboards for department heads and managers, to monitor and report their operations. Here the system provides industry-standard KPIs aimed at increasing customer service and operational efficiency. Examples:

- Agent/station Performance

- C2K Reporting
- Booking Analysis: booked vs. flown, and conversion rate analytics
- Flight Manifest Analysis
- Receivables management: collections and aging

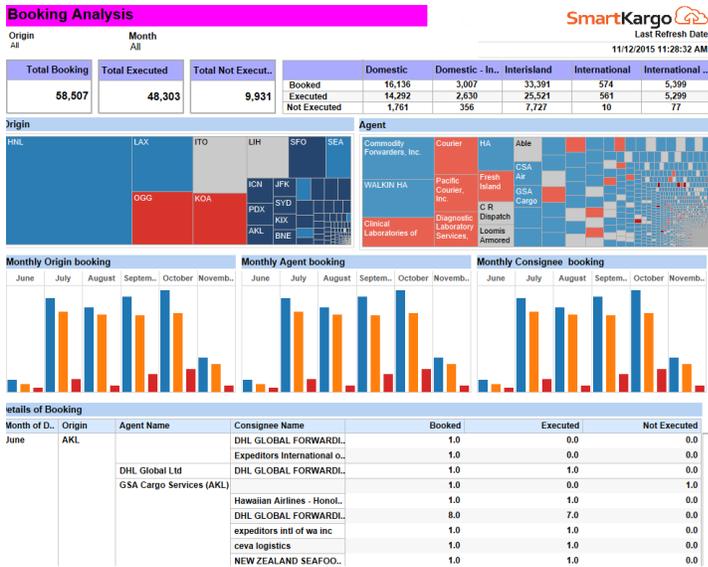
Operation Dashboards thus allows you to quickly answer questions like these:

- Where are the bottlenecks in my operations that negatively affect customer service?
- How is my local station/employee operation efficiency? How are we doing compared to industry benchmarks?
- What is my conversion rate for bookings to sales?
- What are my outstanding receivables, and how old are they?
- What's my available capacity vs. utilization by route?

Ad Hoc Business Intelligence (BI) Analysis for business users who want to analyze information — looking for associations and deriving insights — through visually appealing interfaces. Finely detailed application data is easily available for ad hoc analysis. Users can quickly create customized views to answer specific questions that support decision making. Exporting and sharing all this information is as simple as point and click.

Ad hoc analysis thus allows you to quickly answer questions like these:

- How often does an agent get spot rates? What are the specific trends? Who gives the spot rate, who gets the rate? And was that transaction profitable?
- What is the impact to the bottom line if I change a route? Which customers would be impacted? Do they also use my other routes? How often?
- What are the trends in shipments by origin and destination? Commodity, seasons?
- Who are my worst performing agents, and routes? What are the trends?



SmartKargo's approach extends the benefit of BI to everyone. It accommodates increasing numbers of users, processes growing volumes of information, and scales, all while maintaining high performance.

Everyone from senior executives to analysts get their questions answered fast, and make data-driven decisions soon after.

Summary and Conclusion

Driven by changes in logistics and the advance of the Internet and other information systems, the demands of shippers are increasing and morphing. Air cargo needs not just to catch up, but to jump ahead. The SmartKargo analytics platform is seamlessly integrated with the transaction system, and provides clear visibility to enable the entire organization to become industry leaders and, perhaps more important, to be prepared for accelerating pace of change in the coming years.