



KEY DRIVERS FOR TRANSPORTATION MANAGEMENT IN THE AGRICULTURAL INDUSTRY

ABERDEEN

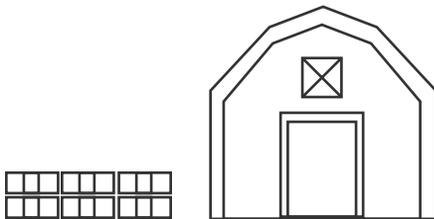
AGRICULTURAL TRANSPORTATION DRIVERS

In the Agricultural industry, there are three key segments where transportation management plays a significant role in providing visibility, communication and compliance. There are underlying similarities across all three, but distinct differences as well. Visibility, communication / collaboration, and regulatory compliance play key roles in each segment. However, the actual application of these requirements varies greatly.

1

INBOUND

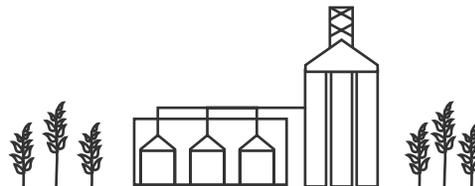
Freight to the farmer



2

OUTBOUND

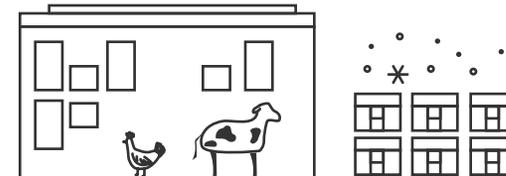
Freight from the grain processing centers



3

OUTBOUND

Freight from protein processing manufacturers of animal products



INDUSTRY PRESSURES ON TRANSPORTATION MANAGEMENT



DELIVERIES

Customers demanding **faster** and **more frequent** deliveries

CHARGES

Volatility of freight costs and /or fuel costs surcharges (e.g., rates, accessories, fuel)

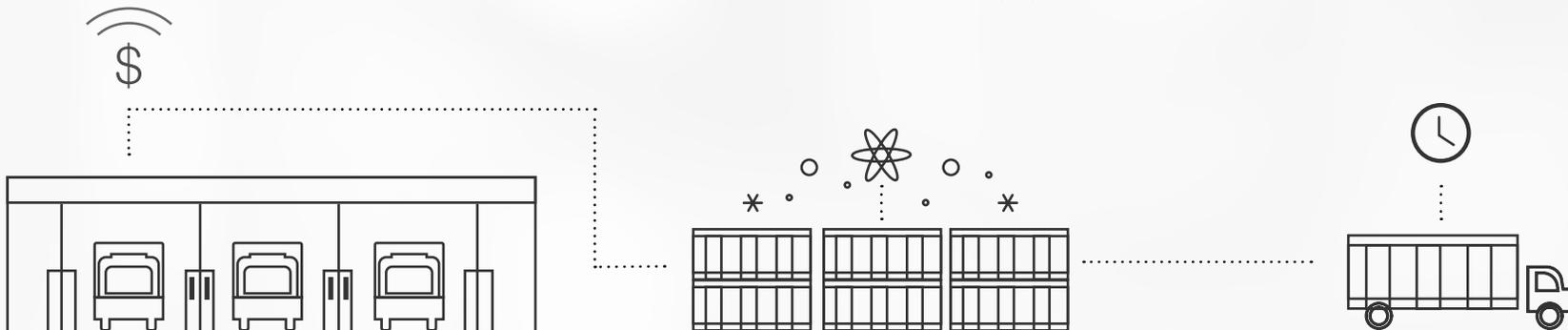
REGULATIONS

Growing complexity of **transportation security** and government regulations (e.g., local, state, national, or international trade) and the ensuing rising costs

SERVICE

Carrier **service-related** challenges (i.e., capacity challenges, carrier liquidity / viability concerns)

The figure above indicates the top pressures directly related to the agricultural industry that shippers and carriers face in managing their transportation.





FASTER DELIVERIES

For farmers, having visibility into the real ETA for inbound shipments of fertilizer and seed so they can schedule their crews and equipment to unload is essential. For outbound shipments from the grain processing centers (corn, wheat, beans, etc.), visibility is needed for timing and scheduling of the transport because of the special equipment needed for temperature and moisture control. Such equipment is required for starch, glucose, sugar, syrup, and similar products. For protein providers, scheduling issues due to constantly shifting output from the manufacturing plant and the resulting customer order changes, require dynamic scheduling of equipment to match product requirements and routings while avoiding spoilage.



REGULATORY REQUIREMENTS

Regulatory requirements also affect all three segments. For the farmer, fertilizers must be treated similarly to explosive material, which requires unique handling and documentation to meet regulatory requirements. The output of grain processes for food products such as syrup and starches require approval from the food and drug administration or equivalent agencies outside the US. In-transit monitoring for environmental controls on temperature and moisture are also required. The same is true for the protein industry, particularly on the refrigeration of frozen goods. Trailers lose a degree every two hours, so routing and timing of delivery to a port requires close monitoring operationally to avoid spoilage, along with compliance documentation.



VOLATILITY OF CHARGES

Accessorial charges are a challenge for all segments. For the farmer, it can be wait times due to poor communication on ETA. For grain processors, slot scheduling for customer delivery (starch, glucose, sugar, syrup, etc.), can result in wait times and / or present capacity mismatch issues, causing some deliveries to be greater than site capacity, leading to unnecessary charges. For meat producers, late changes in schedules can result in equipment mismatches, which may also lead to charges. For all segments, other issues could have an impact, but the unique scheduling and visibility challenges are primary driver of charges.



CARRIER RELATED CHALLENGES

For the farmer, shipments of fertilizers are usually in bulk or bags that require special handling due to their explosive nature. Grain processors will be shipping bulk which may require tilt mechanisms or tankers to handle liquids in some cases. These bulk shipments must also be matched to customer holding capacities to avoid any overages that must be disposed of. Tracking and tracing of products is critical for compliance requirements. Meat producers require refrigeration and insulation to protect the products that may endure multiple routing options and packaging configurations. In each case, specialized equipment and handling must be matched to the product and the routing to avoid spoilage.

BEST-IN-CLASS MATURITY MATRIX

BEST-IN-CLASS OUTPERFORM ALL OTHERS IN THE FOLLOWING AREAS OF TM

■ Best-in-Class ■ All Others



VISIBILITY AND COMMUNICATION ARE CRITICAL FACTORS FOR THE AGRICULTURE INDUSTRY

■ Best-in-Class ■ All Others



69%* | 44%

Online visibility into in-transit shipment status

* 57% more likely



63%* | 37%

Vendor enablement — forwarder, carrier, broker (integration via EDI, XML, portal, and SaaS)

*70% more likely



62%* | 20%

Driver app (handheld device) status and dock scheduling updates until last mile proof-of-delivery

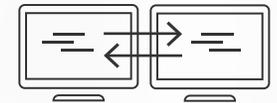
* 3.1x more likely



53%* | 16%

Multiparty-portal - book and manage dock **appointment slots** online, arrive. Load / unload

* 3.3x more likely

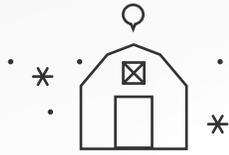


48%* | 30%

Online trading **partner collaboration**

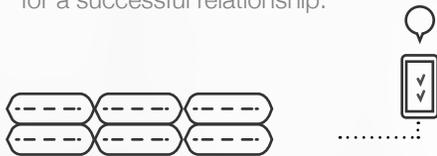
*60% more likely

In addition to the unique load handling requirements that the three agricultural segments have, visibility and scheduling also have sector-specific needs. As the figure above indicates, the capabilities that Best-in-Class companies have in place for visibility and scheduling compared to the competition are significant advantages in the agricultural business. Visibility often depends on the access to data, which is based on the communication tools in place when dealing with information outside the four walls of the organization.



FARMERS

For farmers, communication is 100% of their visibility. The shipper and carrier are both dependent upon the accessibility of the farmer, who is seldom in an office with a computer at their disposal. As such, communication with the farmer regarding the ETA for a shipment — the most critical piece of information — is typically via mobile / text. The farmer must schedule their crew to be available to handle the unloading based on arrival of the shipment. If the shipment is late, it means extra labor cost for the crew and if it's early, they might incur wait charges. The farmer, depending on their actual location, may be difficult to reach if there are any scheduling adjustments. In the case of a new carrier, they are operating from an address which may not represent the location of the actual delivery point on the farm, which only adds to the frustration on providing an accurate ETA. In cases such as this, direct communication with the farmer is essential, making handhelds / mobile devices mandatory for a successful relationship.



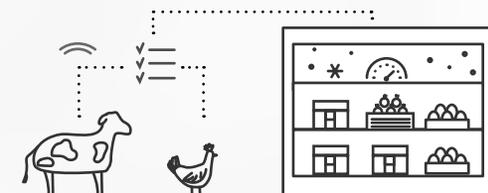
GRAIN PROCESSORS

For grain processors, the slot scheduling capability is extremely important, at both the point of shipment, as well as at the point of delivery due to equipment and handling requirements. The customer site might pose difficulty if the transport vehicle must perform some special operations to unload. In some cases where repetitive replenishment is being performed during the day, the back and forth does simplify the complexity and scheduling.

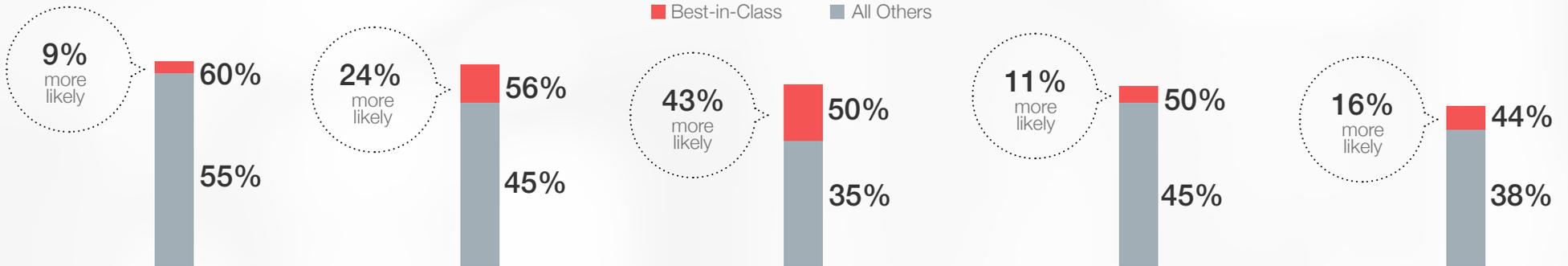


PROTEIN MANUFACTURERS

For protein manufacturers, the slot scheduling capability at the point of shipment is very important, given the need to maintain temperature over the course of the routing to avoid spoilage of any frozen goods. The nature of the protein business requires real-time adjustments at the manufacturing level due to the variability of the grade and quality of the animals, which could shift output from premium cuts at higher margins to commodity products, or conversely from lower to higher margins. Regardless, the production and output schedule could change delivery plans based on revised customer orders. The product changes can also dictate the routing, and therefore, the type of equipment needed to handle the routing and refrigeration, particularly for international shipments, which have more stringent requirements. Communication / collaboration on schedules and routing between the shipper and the carrier are critical on a real-time basis to ensure safe and timely deliveries.



BID AND SELECTION PROCESS: COMPLIANCE AND EQUIPMENT ARE BIG FACTORS



Ability to monitor **regulatory compliance**

Automated **carrier selection** based on known data and rules

Strategic **bid allocation** based on business performance of carriers

Automatically **audit invoices** against electronic rate tables by Best-in-Class

Collaborate and **synchronize data** with carriers, suppliers, and trading partners

Sourcing and bidding for agricultural segments require carriers to be on an approved list of those that can handle the product, shipment, unloading, and compliance. After determining the approved list of viable carriers, the bidding processes begins.



REGULATORY COMPLIANCE

The ability to monitor regulatory compliance is a necessity in the agricultural industry for all segment levels. As the figure above indicates, this ability alone restricts the carrier list availability to some degree with 60% of the Best-in-Class and 55% of All Others having the capability.



AUTOMATED CARRIER SELECTION

As the figure above indicates, Best-in-Class companies are more likely to have automated this carrier bid and selection process based on known data and rules. However, within these rules, there can be nuances at the equipment level that could be subject to change, particularly for the protein segment.

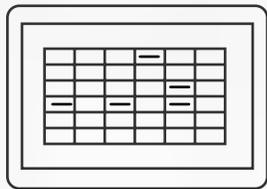


PRIOR PERFORMANCE

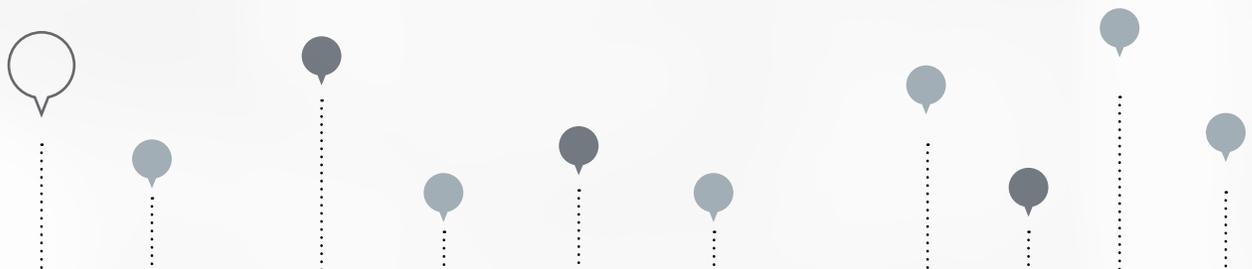
Sourcing and bid management is an area where carrier input on alternate routing might make a difference. Prior performance is also a factor — and for carriers that have specialized equipment, performance may be as straightforward as capacity and availability, or prior experience in dealing with a particular farmer or location.

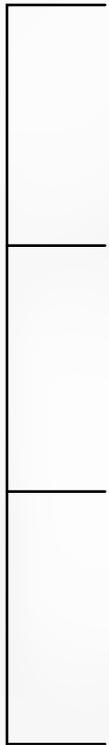
SETTLEMENT AND BACK OFFICE

	Best-in-Class Performance	Best-in-Class (Top 20%)	All Others (Bottom 80%)	BIC/AO
<p>AUDITABLE SYSTEM Integrated business applications serve as a complete and auditable system of record</p> 		71%	57%	124%
<p>SHARED DATA Data appears to be shared across applications seamlessly and transparently (e.g. same customer data is available to ERP and TMS)</p> 		53%	42%	127%
<p>TRACKING Tracking of total freight cost including accessories (e.g. detention and stop-off charges), fuel charges, and invoice dispute costs</p> 		50%	43%	116%
<p>CENTRALIZED PLATFORM Centralized transportation spend management platform in place, capable of multi-language, multi-currency</p> 		38%	32%	119%



Managing the transportation spend for shippers in the agricultural business can be complex for every segment, largely due to product requirements, scheduling challenges, and the accessorial charges driven by delays and complications.





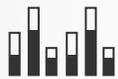
INTEGRATION

Having the transportation management solution integrated with the ERP simplifies the handling of the complexity of transportation spend.



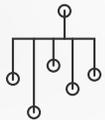
SHARED DATA

Sharing of the data across applications is also important — particularly in the protein segment where product manufacturing and scheduling changes can directly influence customer shipments and carrier requirements.



TRACKING

Tracking costs based on daily challenges can be a mess if it is left to spreadsheets or manual inputs. A formal TMS solution is needed to deal with the complexity, to ensure that bids incorporate all charges.



CENTRALIZED PLATFORM

Centralizing transportation spend management across multiple geo locations is also helpful, particularly where sources or customers might be in more than one country. Multi-currency and multi-language are a critical need in these cases.



SUMMARY AND KEY TAKEAWAYS



UNIQUE REQUIREMENTS

The agricultural industry has some distinct challenges facing it, depending on the segment of the business. The farmer requires the shipper and carrier to jointly resolve the communication challenge, so that repetitive business and costs can be minimized.

Grain processing centers must leverage their visibility and communication to overcome the challenges for scheduling and alignment of delivery, capacity, and equipment.

Protein manufacturers must have open collaboration with their carrier partners to dynamically adjust their equipment to accommodate scheduling changes and routings, ensuring product safety and avoiding spoilage.



COMMUNICATION

In every case, visibility, communication, and collaboration play significant roles in the process.

Our research indicates that Best-in-Class companies are much more likely to have the capabilities in place to address these unique needs compared to their competition.

Their results speak for themselves based on their compliance to contracts, schedules and delivery performance.



ERP INTEGRATION

Best-in-Class companies have their TMS solution integrated into ERP as the system of record.

For the agricultural industry, this is critical because of the need for close collaboration required between internal scheduling, customer orders, and the equipment needed to support many of the environmentally controlled shipments, as well as the product traceability.

Aberdeen recommends that companies adopt a TMS solution that is integrated at the platform level to leverage these scheduling and process areas in support of the transportation needs for the agricultural industry.

LEARN MORE
ABOUT TMS SOLUTIONS FOR
AGRICULTURE