The Future of Logistics –
What Does the Future Hold for Freight Forwarders?

Professor John Manners-Bell
Ken Lyon
Foreword - Kewill

The freight forwarding industry is in flux. Amid a rash of consolidations and acquisitions, small- and medium-sized forwarders find themselves struggling to remain competitive with their bigger brethren.

For today’s forwarders, the pathway to profitability lies with process automation and value-added services – a two-pronged approach that reduces errors [thus improving customer service] and differentiates your business with customized add-on services. And the best way to achieve both of those goals simultaneously is through technology. Cloud computing gives freight forwarders, particularly the small- to medium-sized forwarders, the logistics toolkit they need to remain nimble in a highly competitive market with thin margins.

Thanks to the small upfront investment and quick implementation made possible by the Cloud, forwarders can begin offering integrated additional services such as consolidation, warehouse management, enhanced customs and compliance, as well as the receiving, handling and distribution of goods. Best of all, the Cloud delivers supply chain functionality that’s essentially on par with the complex legacy systems still being used by many forwarders – all for pennies on the dollar. That, in turn, helps level the playing field and prevents smaller operations from getting boxed out of the marketplace.

Evan Puzey, CMO

Kewill
Introduction

In many respects the international freight forwarding sector has changed very little over the past few decades. A freight forwarder’s role is to facilitate the movement of goods around the world, acting on behalf of importers and exporters. In addition to dealing with Customs organisations, preparing documentation and finding the best, cheapest or quickest routes, a forwarder also buys and sells space on board ships or airplanes. It is the latter role that accounts for the majority of their revenues and hence largely characterizes the dynamics of their business model.

Unfortunately this buy/sell ‘middle man’ role, means that margins can be very thin in a hypercompetitive market. Opportunities to differentiate product offering can be few and far between and success or failure of a forwarder can come down to its buying power in the market (to drive down rates) and its ability to execute efficiently and with the lowest possible overheads.

The importance of technology to freight forwarders cannot be overstated. Freight rates and oil prices are highly volatile; the market is undergoing structural changes as patterns of demand evolve with opportunities disappearing as quickly as they arise; and an uncertain global economic situation means that forwarders need to be attuned and responsive to macro-trends.

Unfortunately, many forwarders, even some of the largest, lack the tools that would give them the visibility and hence the agility to prosper in this challenging market environment. In this document we will discuss the key trends that have shaped the freight forwarding industry as it exists today; we highlight some of the problems facing the industry and discuss how the latest technology innovations can help forwarders navigate a successful path through uncertain times ahead.
Until the 1990s, the freight forwarding sector was a largely ignored or undervalued sector of the transport industry. However, the globalization phenomenon and what could be termed ‘the rise of Asia’ changed this perception as manufacturers, retailers and investors realized that global logistics networks were required to underpin international supply chains. As we will see, this brought about major mergers and acquisition activity, which still characterizes the industry to this day.

However, globalization is no longer the only macro-trend in town. Although it is still at work and should not be dismissed, there are a number of other trends helping shape the market for forwarders as well as the strategies they have adopted in order to survive.

Yield Dilution

One of the longest term trends in the industry has been dilution of yields, which means that forwarders have to work harder to maintain their revenues. There are a number of reasons for this, including a shift in modes from air to sea. Global manufacturers have found ways in which to flex their supply chains to utilize lower cost sea freight rather than more expensive air cargo. A key driver behind this trend was the economic downturn, which prompted shippers to look at ways to de-cost their supply chains whilst still maintaining their efficiency. Restructuring production schedules has been part of this, as well as encouraging consumers to pre-order, removing much of the risk of holding too much inventory.

Even higher value producers, such as consumer electronics companies, have adopted sea freight strategies, although air cargo uplift is often employed to meet the global demands of new product releases. After an initial surge, the ongoing demand is often met by shipments moved by sea. Computer peripherals, such as screens, that were often moved by air are now far more likely to be shipped by container. This may seem counter-intuitive as sea freight transit times are increasing as shipping lines introduce slow steaming in order to reduce fuel costs.

This shift has been most pronounced on the Asia-to-Europe and Asia-to-US trade lanes – the two most important – indicating how vital this has been in reducing lucrative, high value volumes to the detriment of the freight forwarding sector.

For a number of years, we have also been witnessing the waning importance of intercontinental trade volumes to the sector. We asked respondents to our survey which lanes they thought had witnessed the highest growth – and intra-Asia came up as the fastest growing for yet another year. This has a profound effect on freight forwarders. Not only are intra-Asian movements much cheaper than those to either Europe or North America but also the global forwarders have far less strength in this segment than they do in Asia-Europe or Asia-US trades. This is especially the case in China-Japan trade.

Relationship with global trade

The global logistics industry is already seeing a major change to the relationship that drove its development for the last three decades and before. On average, between 1990 and 2008, real GDP grew at 3.2% a year, whilst world trade grew at twice this rate. This relationship was considered to be ‘hard-wired’ – that is, until the financial crisis of 2009. The 2:1 ratio has since been replaced with more like a 1:1 correlation, meaning that most trade forecasts were firstly affected by the downturn and secondly by a structural change in market growth.

Why is this? There are several reasons. The first is that developed countries – including the Eurozone – have yet to fully recover and therefore there is less demand for imports of consumer goods. Second, developing countries have been forced to focus their investment on domestic infrastructure to maintain economic growth. China is the best example of this. Third, the global economic downturn has created more protectionist policies, which have acted as a drag on international trade. Fourthly, governments around the world have actively suppressed short term consumer demand in their own economies. And finally, the outsourcing trend to the Far East in 1980s, 90s and 2000s was a ‘one-off gain’ for international trade. Since then the increase in volumes has been incremental, as most production processes that could be unbundled and out-sourced to remote manufacturing locations in Asia, already have been.
Regionalization, Near-sourcing and Emerging Markets

Also in terms of changing patterns of goods flows, it seems that manufacturing and retailing is making a return from globalization to regionalization of supply chains. This involves a transformation from traditional East-West and West-East flows to complex networks of developed and emerging markets. What is the evidence for this?

- Global flows of goods are becoming more disparate. In the early 1990s two thirds of global flows of goods moved through the top 50 routes. Two decades later this had fallen to just over a half.
- Cross-border flows of goods, services and finance from emerging markets accounts for 40% of the world’s total, up from 14% in 1990.
- South-south trade has grown from 6% of all goods flows in 1990 to now around a quarter.

This shows that trade is re-balancing – with obvious consequences to shipping lines, air cargo carriers and freight forwarders.

At the same time, near-sourcing is becoming more important. This involves repatriating manufacturing from remote locations such as China to regions closer to the end consumer market. In North America this is usually Mexico and in Europe, this could be North Africa. The reasons for near-sourcing include:

- Reducing transportation costs
- Increasing control over suppliers (such as better managing quality of end product)
- Labour costs increasing in China and elsewhere in Asia
- Supply chain risks being factored in to overall costs
- Increasing speed to market

One of the major impacts this will have, if the trend continues, will be that road freight services will prosper at the expense of international air and sea, a worrying prospect for forwarders.

The ‘factory Asia’ concept, which has characterized global manufacturing in recent years (i.e. an Asian network of cooperating component manufacturers supplying Western markets), has already led to the regionalization of upstream supply chains. Trade in intermediate parts throughout Asia is enormous, with assembly of components largely being undertaken in China. The reason for this is that with its huge population, China has the ability to mobilize huge, low cost work forces to undertake low value adding activities for companies such as Apple.

However another dynamic is at work that is far less developed: the regionalization of downstream distribution channels.

By this I mean the development of consumer markets in Asia, Africa and Latin America. Not only will intermediate goods manufactured in Asia stay in the region, so will finished product.

This will occur due to the development of a more affluent society. By 2020, it has been estimated that 1.8 billion people in emerging markets will enter a ‘consuming class,’ spending $30 trillion, up from $12 trillion today.
How will the industry evolve?

The freight forwarding industry has low barriers to market entry and exit, which has resulted in high levels of fragmentation. According to Ti’s own calculations, on the Herfindahl-Hirschman Index (which measures levels of industry concentration), the freight forwarding sector is classified as ‘unconcentrated’ and this situation has prevailed despite years of consolidation since the early 2000s driven by companies such as DHL. What might be called ‘Tier One’ freight forwarders (named in the chart) account for around 41% of the total market. The top five forwarders combined held a 23.9% market share.

The reason for this fragmentation is that, apart from a telephone, computer and an office (even this is a luxury in some parts of the world) little overhead is required. The most valuable asset freight forwarders have (whether large or small) is the knowledge of their employees and their commercial ability to cut deals.

This is not an incidental comment on the state of the industry. Instead this market dynamic goes to the very heart of how the industry works and the very real challenges this presents to the market leaders. To compete with the host of small, low overhead forwarders, the market leaders need to leverage their:

- Global reach (including end-to-end solutions)
- Buying power
- IT systems
- Knowledge capital
- Value added service capabilities.

In many cases this has led to the acquisition strategies that in turn have led to consolidation of the industry (see below). Buying rather than building scale and functionality is a much faster way to market and a strategy pursued by many Tier One players. Exceptions to this rule include Expeditors International and to some degree Panalpina. Expeditors in particular has maintained that it wishes to remain a ‘pure play’ forwarder, eschewing the addition of value added warehousing services, for example. Its management focus has remained fully on leveraging its presence, particularly in the transpacific trades, and it has been highly successful in doing so. Looking at the five key success drivers listed above, it has leveraged its buying power, IT systems, global reach and knowledge capital without seeing the need to spread its capabilities more thinly by expanding its value added service capabilities.

Adding end-to-end capabilities and value added services

One obvious way in which freight forwarders have been able to leverage their relationships with multinational shippers has been to append a variety of either upstream or downstream value adding services to provide a one-stop shop.

In the country or region of origin, for example, freight forwarders have been offering upstream consolidation services for some time and undertaking quality control on behalf of retailers based in Europe or North America. Downstream, instead of just moving containers to the retailers’ or manufacturers’ warehouse, many freight forwarders are able to offer an integrated service that includes receiving, handling and distribution of goods. In theory this integrated end-to-end solution should also provide customers with the visibility to make routing decisions or for the freight forwarder to do this on their behalf.

In order to assemble this range of services and the geographic capabilities required to provide these solutions, forwarders have often either acquired value-adding logistics providers or entered into strategic alliances with contract logistics companies. Having said this, technologies will soon allow small forwarders access to the same level of visibility as their larger rivals, meaning that acquisition or ownership of each part of the supply chain will not necessarily be as important as it once was.

Chart 2: Global freight forwarder market share
The large, diversified logistics companies certainly see their value-adding services as a very important part of their business proposition. In its last results, Panalpina’s management commented: ‘[Our] logistics [division] continued to strengthen its position as a differentiator by expanding its value-added services and end-to-end offering for international customers, especially in the technology and fashion sectors.’

**Forwarder profitability**

Despite very similar business models, the diversity in levels of profitability between companies is remarkable. The chart below shows the considerable variance between best-in-class profitability and those forwarders performing least well. It is also evident that scale is no guarantee of profitability. Some small players have very good margins, but at the same time, some make big losses.

It is impossible to identify one single reason for this range of profitability. Rather, company profitability is linked to a mix of the following:

- **Buying power** – Buying power in the industry is important. A freight forwarder with large volumes can obtain better rates from a ship/airline. However the freight forwarder then has a choice. It can either benefit itself from the lower rates by not passing them on fully to shippers or it can use these lower rates to grab market share by operating at lower margins. However a large turnover does not equal large buying power. Even in some very big forwarders, buying power is not necessarily utilized to its full potential. Many local forwarding offices may be working independently of a centralized purchasing system, which means that the overall enterprise will lose out on this particular advantage. The flip side is that a corporate-wide deal between a forwarder and carrier may not be as good as one which could be agreed locally. Flexibility is key, especially in volatile markets.

- **Overhead** – Some companies will be better at operating with lower overheads than others – and this will include offices and IT. In many respects this comes back to the quality of the management making decisions on investment.

- **Management and staff** – Freight forwarding relies heavily on the ability of staff to buy and sell effectively. It needs well experienced and high quality personnel who are motivated and well managed. Expeditors profited by holding on to its staff during the downturn experienced in 2009 and this positioned the company well when the market bounced back soon after. Other companies have been affected by the inability to retain key staff following an acquisition, meaning not only a flight of experience and expertise, but also in many cases their customer base.

- **Technology** – Some freight forwarders have started to refer to themselves as ‘technology companies that move goods’ rather than ‘freight companies that use technology.’ The importance of getting a technology strategy right is critical to its success or failure.

**Chart 3: Freight Forwarder Revenues and Margins**
The last few years have seen considerable mergers and acquisition activity as all the major logistics companies have sought to increase their presence and capabilities in the global market.

Some highlights of this trend include:

- The purchase of Exel by Deutsche Post. Exel itself was the product of a merger between contract logistics company Exel and forwarder Ocean Group (including MSAS). Deutsche Post had already acquired a number of other large forwarders, notably Danzas, AEI and ASG.

- Deutsche Bahn’s acquisition of German forwarder Schenker and US forwarder Bax Global.

- UPS’s acquisition of two US forwarders, Fritz and Menlo (formerly Emery).

- CEVA’s acquisition of EGL.

- Geodis’ acquisition of OHL.

- Kuehne+Nagel’s acquisition of ReTrans.

- XPO’s acquisition of Norbert Dentressangle and Con-way.

The reasons behind these purchases vary by company, but have a unifying logic in reflecting the trends in the market for freight forwarding as outlined in the sections above. For example, DP-DHL was created out of its acquisition of both Exel and Danzas, a logistics division that combines the ability to move large volumes of freight both by sea and air with the road transport and warehousing capabilities of its contract logistics business. This is also the case with Kuehne+Nagel, which has aggressively built up its contract logistics/road freight network in order to complement its freight forwarding business.

There is another aspect to the strategic trends in the freight forwarders market. As in the case of UPS, a number of express parcel companies are trying to claim part of the business that has traditionally been undertaken by freight forwarders. This is particularly the case in air freight services for the electronics business, but is also seen in other sectors. Shipping lines too have sought to capture the upstream and downstream spend of their clients by establishing forwarding units: Damco (Maersk) and Yusen (NYK) are cases in point.
"In the future, highly functional systems operating as a single application – covering every aspect of operations from pricing, order management, shipping, warehousing and transportation management – will emerge. These will be available as subscription services in the public ‘Cloud,’ accessible via a variety of computing platforms.” – Ken Lyon

The functional boundaries between different systems are breaking down as logistics operations evolve into leaner, more agile services. Traditional on-premise/homegrown applications supporting order processing, transportation management and warehouse management are examples of the dedicated solutions that struggle to maintain data and process flows across organisations as they evolve. A new generation of application services will emerge that perform the same functions of existing applications, but as a continuous service.

Twenty years ago, the Logistics division of UPS in Europe developed a platform combining order management, inventory management and cross docking along with transportation management. This single system was ‘bonded’ by the Dutch Customs authority under an innovative licensing arrangement that had recently been introduced by the EU, enabling any orders or inventory in the system to be effectively ‘in bond’ irrespective of location, including while in transit. This provided tremendous flexibility for UPS clients who were using the system to support their high velocity supply chains. This was very innovative at the time, but illustrated the value of flexible systems that could rapidly adapt to new processes or functions in line with business demands.

As application development technologies have evolved into toolsets that can combine ‘objects’ or blocks of functionality very quickly to assemble new solutions, linking to other systems via standard interfaces or ‘services’ is quite common. Access to the required computing and storage infrastructure available as ‘cloud services’ is both inexpensive and technically straightforward. They are also accessible across almost any computing device from desktop PCs, tablets or mobile phones thanks to the ubiquity of the Internet.

The question is, can the organisations wishing to exploit these platforms do so without fundamentally challenging the entrenched (and often inflexible) process flows preventing them from competing in the market effectively?
When Apple introduced the iPhone in 2007, it wasn’t the first smartphone, but it was the most successful implementation of a mobile device that could really exploit the Internet for processing information. Now, again thanks to the Internet, mobile devices will be the primary platform for providing, consuming and manipulating data. Across supply chains this is very powerful, as many of the participants require access to data at almost any point in the chain, at any time.

Mobile devices generate data constantly; data related to location, status, and identity are all available and capable of being shared on demand. New applications, or apps, are being developed that can adapt to whatever form factor the recipient’s device requires. The traditional internal data centres operated by large enterprises have had to expose their databases to an unprecedented degree to support the demand for data from managers and trading partners across the supply chain. If they are unwilling or unable to meet this demand, they are circumvented, with users migrating to commercially available alternatives and paying the monthly usage charges on their credit cards.

Visibility into and across supply chains is the key to efficient and effective supply chain management. Many of the efforts to provide this transparency in the past have floundered due to either organizational or technical challenges in accessing and sharing the data. As consumer technology has encouraged the development of user-friendly and open interfaces, it is now possible to share information in a similar fashion to that exhibited by social media platforms. The combination of these two developments has addressed many of the technical challenges preventing supply chain visibility in the past. It requires both scale and the interconnectivity of a large population of users across many different and variable organisations. As this trend is exploited, it will become more common to view the entire ‘chain of custody’ as orders move through the supply chain.
Most smaller forwarders are using technology to manage their businesses, but usually this has happened as a result of necessity rather than as part of a strategic decision process. As technology has advanced, costs have come down and capability has increased. The general availability of solutions running in the cloud and available on a monthly subscription basis has been a game changer. Much of the functionality now available ‘on demand’ is a match for the existing solutions developed internally (at great cost) by the large integrated carriers and multi-national logistics companies.

The significance of this is that the operating costs of cloud solutions are very low and their ability to scale, also ‘on demand’, provides tremendous flexibility. These solutions are usually developed using modern development tools and frameworks, enabling changes or adjustments to take place and be implemented very quickly. This is a significant advantage when attempting to support customer demands for flexible and adaptable supply chains. The larger forwarders have developed solutions over many years to support the business requirement of predictable, rigid operating practices capable of handling huge volumes of orders and shipments. These platforms are usually a mix of tightly integrated applications that are expensive to maintain and difficult to change. As technology continues to bring us many more sophisticated devices, especially mobile devices, the users in these large companies expect that they will be able to use these tools in concert with their corporate systems. This raises issues of security, interoperability and data ownership.

The information services functions in these companies face a daunting prospect of supporting the needs of the business while dealing with a tsunami of different demands for access to more data, increased functionality and managing the retirement of legacy systems and implementing new ones. The smaller forwarder, using solutions in the cloud, may not yet have access to technology that is as tailored and feature-rich as a dedicated in-house solution, but if it can get a very large percentage of that at much lower cost and available within days, it will at last be able to compete – and win.

**How do the technology needs of small forwarders differ from larger competitors?**

“Agile solutions aimed at smaller forwarders will be developed in contrast to predictive, rigid ERP processes more suitable for the forwarding giants.” Ken Lyon
A supply chain can generate huge amounts of data as orders and shipments pass along it. At each stage, data is entered, validated and often combined or merged with similar elements, resulting in very large data sets. With more and more sensors and internet enabled devices being introduced, the volume of data is set to explode. A great deal of attention has been given to the science of big data analytics – analysing massive data sets to make sense or meaning. But for many of the interested parties, this will only work if the data itself has meaning and context. In other words, lots of container numbers or part numbers taken from a particular stage in the transportation chain are of little use unless the routes involved and the related commodities comprising the part numbers are also available. This means that many of the big data efforts up to now have focused on cleansing and validating historic data.

The implications for many companies will be that whatever computing platforms they use to operate their businesses, they will need to scale massively in terms of the volumes of data they will be expected to handle. The applications will also need to maintain the links between the data to provide the relevant context sufficient for subsequent analysis.

If artificial intelligence engines are deployed across these platforms at some point in the future, they will be operating under the assumption that the datasets on which they work will be accurate and coherent. Anything less will result in incomplete analysis, or perhaps worse and certainly more expensive, inaccurate conclusions driving future operations.

What is ‘Big Data’ and how can forwarders exploit it?

“Large collections of operational data. Integrity must be confirmed before it can be exploited. Conclusions based on incorrect data are worthless.” Ken Lyon
As many supply chains involve a multitude of different partners, managing them is sometimes allocated to 4PLs or Lead Logistics Providers (LLPs). These organisations have overall responsibility for coordinating and managing all of the parties used to operate the supply chain on behalf of the principal or supply chain owner.

The key to managing anything of this nature, particularly on an international basis, is supply chain visibility. This has been a critical necessity for many years. And while some companies and operators claim they have it, very few really do. The global integrated carriers come closest, with their sophisticated track and trace capabilities, but these only work well when the entire supply chain operates within their realm, using their assets. In fact, the truth is that most global chains use a variety of logistics service providers, transportation service providers and others. As soon as the chain of custody of a particular order or shipment transfers to another party, the granularity of visibility changes.

This has resulted in many companies exploring the notion of establishing a supply chain ‘control tower’, through which all activities are coordinated and controlled. In essence, a multi-party visibility hub that interconnects and interoperates with the information systems of all of the involved parties.

These entities take a long while to set up and depending on the technologies involved, require constant adjustment. At best, they can provide a central point for understanding the general location and status of the supply chain activity. They may also be able to provide the ability to drill down into a specific system for more detail. However, for the full concept to be realized, any information about any activity in the chain needs to be made available instantly to the appropriate parties across the supply chain. Technology is moving towards achieving this goal, but it is as much an operational and cultural challenge for the interested parties as it is a technical one – but one that must be addressed before the rewards of such a concept can be realized.
The freight forwarding industry is evolving at a relentless pace. The large forwarders are increasing their scale not only to leverage their buying power with carriers and their geographic scope but also to develop their range of services, especially those that add value and increase margin. As an illustration of this trend, the past few months have seen XPO Logistics buy Norbert Dentressangle, Geodis buy Ozburn Hessey Logistics and Kintetsu World Express buy APL Logistics. At the same time, many of these logistics giants have struggled with operational issues not least related to legacy IT systems. In a dynamic environment that requires market players to be agile and fast moving in order to maximize the many opportunities which exist, how well suited are these logistics giants?

At the same time, small- and medium-sized freight forwarders are being forced to evolve. Not only do they have to become smarter and more efficient in an environment where manual data entry is still widespread, but they have to enhance their commoditized offerings. For some, this means that they will develop their levels of expertise in niche sectors with higher barriers to market entry in order to differentiate their services. Others will evolve from pure forwarders to fully developed logistics providers, increasingly offering customers integrated logistics services. The technology systems they can offer will be critical to their customer proposition.

What does this mean in terms of technology requirements? At the SME forwarder level, technology solutions will need to be quick and easy to implement, providing much higher levels of end-to-end visibility that will allow them to compete effectively against much bigger opposition. At the other end of the spectrum logistics giants will need cloud-based solutions that remove the need for huge internal support functions. These solutions will require the capability of adding broader logistics services as needed.

The forwarders who are able to exploit the opportunities of big data will also prosper. Understanding the implications of the data will enable them to improve their forecasts and consequently their negotiating position with carriers. The potential of a cloud-community will also facilitate better sharing of data relating to trends in the industry.

So who will win out in this battle between the SME independent forwarders and the logistics giants? It is clear that scale can be a help but it is also a hindrance in terms of agility and the implementation of innovative technology solutions. However for SMEs to prosper they will need to become smarter in order to succeed, grow and lock in customers. This means they must exploit the opportunities that the democratization of technology has brought about as well as using the experience, expertise and decision-making capabilities of their greatest assets – their employees.
About the Authors

John Manners-Bell
John Manners-Bell is CEO of Transport Intelligence and Hon Visiting Professor at London Metropolitan University. John has over 20 years’ experience in the global logistics industry with both operators and consultancies.

Ken Lyon
Ken Lyon is the Managing Director of Virtual Partners and is one of the pioneers of information development and supply chain collaboration within the logistics industry. Ken has over 30 years’ experience and is a member of Ti’s advisory board.
About Transport Intelligence

Transport Intelligence (Ti) is one of the world’s leading providers of expert research and analysis dedicated to the global logistics industry. Ti utilises the expertise of professionals with many years of experience in the mail, express and logistics industry to develop a range of market leading web-based products. Ti reports, profiles and services are used by the world’s leading logistics suppliers, consultancies and banks as well as many users of logistics services.

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About Kewill

Kewill, a Francisco Partners portfolio company, is a global leader in multimodal transportation management software, providing organizations with a comprehensive end-to-end platform for managing the complexities of transportation, logistics and trade compliance.

The Kewill MOVE platform helps companies reduce costs, manage volatility and gain greater visibility across the logistics value chain. Trade, Transport, Store, Comply, Manage and Integrate- the Kewill transportation management platform gives you the insight, agility and tools you need to deliver better customer service and streamline global supply chain execution for strategic advantage.

The Kewill platform supports supply chain execution activities for over 7,500 companies in more than 100 countries.

www.kewill.com

To Find Out More

For more information please contact Ti’s Commercial Director, Sarah Smith, E: ssmith@transportintelligence.com T: +44 (0) 1423 330736.