

Fleet Management – World 2018

A complete set of eight unique reports - offering in-depth analysis and unique insights into the global fleet management market.

This package offers more than 1000 pages of excellent reading and comprises the following titles in Berg Insight's IoT Research Series:

Fleet Management in Europe

Fleet Management in Russia/CIS and Eastern Europe

Fleet Management in the Americas

Fleet management in China

Fleet Management in South Africa (including Africa outlook)

Fleet Management in Australia and New Zealand

Trailer and Cargo Container Tracking

The Global Construction Equipment OEM Telematics Market

Please find below the summaries for each of the reports included in this package.

Summary

Executive summary

Fleet management (FM) is an ambiguous term used in reference to a wide range of solutions for different vehicle-related applications. Berg Insight's definition of a fleet management solution is a vehicle-based system that incorporates data logging, satellite positioning and data communication to a backoffice application. The history of fleet management solutions goes back several decades. On-board vehicle computers first emerged in the 1980s and were soon connected to various satellite and terrestrial wireless networks. Today, mobile networks can provide ubiquitous online connectivity in many regions at a reasonable cost and mobile computing technology delivers very high performance, as well as excellent usability. All of these components combined enable the delivery of vehicle management, transport management, driver management and mobile workforce management applications linking vehicles and enterprise IT systems.

Commercial vehicle fleets play an essential role in the economy in both North and Latin America. In North America, there are approximately 14.4 million GVW 3–8 commercial vehicles in use. Around 18 million lighter vehicles including GVW 1–2 vehicles and cars with no GVW are also used by enterprises or public entities. In Latin America, the number of commercial vehicles in operation is estimated to 26.7 million, out of which 5.9 million are heavy trucks and 20.8 million are light commercial vehicles. Berg Insight is of the opinion that the market for fleet management in the Americas is in a growth period which will continue in the years to come. The advanced North American market will remain on a growth track, not the least driven by regulatory developments such as the ELD mandate. Latin America has traditionally presented a very different scenario, often requiring an educational process in order to extend the perception of fleet management beyond security-related aspects. The Latin American fleet owners have however also started to embrace functionality for optimisation of fleet operations to an increasing extent.

Berg Insight expects the FM market to continue to show healthy growth in 2017–2021. In North America, the number of systems in active use is forecasted to grow at a compound annual growth rate (CAGR) of 15.0 percent from 6.7 million units in 2016 to 13.5 million units

by 2021. The penetration rate in the total population of non-privately owned commercial vehicles is estimated to increase from 22.9 percent in 2016 to 41.7 percent in 2021. In Latin America, the number of systems in use is projected to increase from 2.5 million units in 2016, growing at a CAGR of 12.9 percent to reach 4.7 million units in 2021. The penetration rate in the region is estimated to increase from 9.7 percent in 2016 to 17.0 percent in 2021.

Verizon has as a result of an ambitious acquisition strategy captured the pole position in the fleet telematics space in terms of size. The combination of Verizon's Networkfleet, Telogis and Fleetmatics operations under the same ownership has clearly cemented the US-based carrier as the overall leader from a global perspective. In the Americas, Verizon is estimated to outnumber the closest competitors by a factor of three. The runners-up include Trimble, Geotab and Omnitracs which have all surpassed 500,000 active fleet management subscribers in the Americas as of the end of 2016. Zonar Systems is the fifth largest provider in the region, now majority-owned by Continental while Daimler Trucks North America has retained a minority stake. Additional top players with estimated installed bases in the range of 200,000–300,000 active units include Teletrac Navman, KORE Position Logic and Sascar. Solution providers estimated to have more than 100,000 active fleet management units in the Americas are Spireon, BSM Technologies, Synovia Solutions, Fleet Complete, NexTraq, Gurtam, Pósitron and GPS Insight. The remaining top vendors having estimated installed bases in the 60,000–100,000 range include Autotrak, WideTech, CalAmp, Pointer Telocation, Azuga, Encontrack, Ituran and OMNILINK. The South African telematics leader MiX Telematics is moreover estimated to capture the final position on the top-25 list.

Most vehicle manufacturers now offer factory-installed fleet telematics solutions either independently or through partnerships. Examples of OEMs which have introduced systems in the Americas include Daimler, Volvo, Paccar, Navistar, Ford, GM, Hino, Isuzu, MAN, Scania and Iveco. The OEM telematics initiatives in the Americas have intensified in recent years. Large installed bases of OEM telematics systems are now found on the North American market, not the least for systems powered by established aftermarket fleet management solution providers. The volumes are so far substantially smaller in Latin America. The adoption is however expected to take off also in this region. Solutions supplied by the OEMs are anticipated to increase in importance across both continents in the Americas in the coming years.

Summary

Executive summary

Fleet management is an ambiguous term used in reference to a wide range of solutions for different vehicle-related applications. Berg Insight's definition of a fleet management solution is a vehicle-based system that incorporates data logging, satellite positioning and data communication to a backoffice application. The history of fleet management solutions goes back several decades. On-board vehicle computers first emerged in the 1980s and were soon connected to various networks. Today mobile networks can provide ubiquitous online connectivity at a reasonable cost and mobile computing technology delivers very high performance, as well as excellent usability. All of these components combined enable the delivery of vehicle management, transport management, driver management and mobile workforce management applications linking vehicles and enterprise IT systems.

Commercial vehicle fleets play an essential role in the European economy. According to official statistics there were 36.6 million commercial vehicles in use in EU23+2 in 2014. The 5.8 million medium and heavy trucks accounted for more than 75 percent of all inland transports, forming a € 250 billion industry. Approximately 0.8 million buses and coaches stood for 9.3 percent of all passenger kilometres. The greater part of the 30.0 million light commercial vehicles (LCV) in Europe was used by mobile workers and for activities such as distribution of goods and parcels. Last but not least, there are an estimated 12.6 million passenger cars owned by companies and governments.

Berg Insight is of the opinion that the European fleet management market has entered a growth period that will last for several years to come. Individual markets may however suffer temporary setbacks, depending on the local economic developments. The number of fleet management systems in active use is forecasted to grow at a compound annual growth rate of 16.4 percent from 6.6 million units at the end of 2016 to 14.1 million by 2021. The penetration rate in the total population of non-privately owned commercial vehicles and cars is estimated to increase from 15.6 percent in 2016 to 31.6 percent in 2021.

A group of international aftermarket solution providers have emerged as the leaders on the European fleet management market. Berg Insight ranks TomTom Telematics as the largest vendor in Europe at the end of 2016 with 609,000 subscribers in the region. Masternaut still holds the number two spot. Transics is ranked as the largest player in the heavy trucks segment with an estimated 120,000 active units installed. Other significant players include European companies such as Microlise, ABAX, Viasat, Bornemann, Trakm8, Quartix, OCEAN (Orange Business Services), EcoFleet, GSGroup and Vehco and international players like Verizon, Trimble and Teletrac Navman from the US, Astrata Europe from Singapore and the South African telematics providers Ctrack (Inseego) and MiX Telematics.

All major truck manufacturers on the European market offer OEM telematics solutions as a part of their product portfolio. Mercedes-Benz, Volvo and Scania launched their first products in the 1990s followed by MAN in 2000, Renault Trucks in 2004, DAF Trucks in 2006 and Iveco in 2008. A major trend in the past years has been the announcements of standard line fitment of fleet management solutions. Since the end of 2011, Scania is rolling out the Scania Communicator as standard on all European markets and includes a ten year basic service subscription. The new generation of the Actros trucks from Mercedes-Benz contains the FleetBoard vehicle computer as standard in all EU28 countries since October 2011. Volvo is going in the same direction offering Dynafleet as standard in Europe. New MAN trucks are now equipped with RIO as standard replacing MAN TeleMatics introduced in July 2012. DAF launched its new optional fleet management solution DAF Connect that has been developed in-house in September 2016. The leading OEMs in Europe are Scania, Daimler and Volvo with 172,000, 99,000 and 99,000 active FM subscribers respectively at the end of 2016.

The consolidation trend continues and numerous M&A activities have taken place in 2017. In January, Viasat Group acquired MobileFleet (majority stake adding about 23,000 subscribers). In February, Princip was acquired by W.A.G. Payment Solutions which is among the six largest European providers of payment solutions for road mobility. Viasat Group continued its acquisition spree in May 2017 when buying ICOM in Bulgaria. One of the largest transactions this year was when Investcorp acquired ABAX in June 2017, paying NOK 1.8 billion (US\$ 210 million). Isotrak acquired UK Fleet Management technology business VeriLocation in June 2017. The latest transaction was done in July 2017 when TIMKEN acquired Groeneveld Group that owns Groeneveld ICT Solutions.

Summary

Executive summary

Fleet management (FM) is an ambiguous term used in reference to a wide range of solutions for different vehicle-related applications. Berg Insight's definition of a fleet management solution is a vehicle-based system that incorporates data logging, satellite positioning and data communications to a backoffice application. The history of fleet management solutions goes back several decades. On-board vehicle computers first emerged in the 1980s and were soon connected to various satellite and terrestrial wireless networks. Today, mobile networks can provide ubiquitous online connectivity in many regions at a reasonable cost and mobile computing technology delivers very high performance, as well as excellent usability. All of these components combined enable the delivery of vehicle management, transport management, driver management and mobile workforce management applications linking vehicles and enterprise IT systems.

Commercial vehicle fleets play an essential role in the economy in the CIS and Eastern Europe, where several countries are part of important Pan-European transport corridors. The total of around 10 million heavy commercial vehicles in the region account for a major share of the inland transports. Motor vehicles are for example involved in about 70 percent of the total inland transportation in Russia. In Europe, medium and heavy trucks account for over 75 percent of all inland transports, forming a € 250 billion industry. Moreover, the greater part of the total 15 million light commercial vehicles in the CIS and Eastern Europe are used by mobile workers and for activities such as distribution of goods and parcels.

Berg Insight is of the opinion that the fleet management industry is in a long-term growth phase. Key drivers in Eastern Europe and the CIS include cost reductions related to fuel savings and regulatory developments such as ERA-GLONASS and the Platon electronic toll collection system which increase the awareness of telematics. The number of fleet management systems in active use in the region is forecasted to grow at a compound annual growth rate of 13.5 percent from 4.8 million units at the end of 2016 to 9.1 million by 2021. The penetration rate in the total population of non-privately owned commercial vehicles is

estimated to increase from 14.2 percent in 2016 to 24.2 percent in 2021. The Russian market accounts for a significant share of the region's total installed base and is forecasted to grow from 2.1 million active FM units at the end of 2016 to 3.5 million units by 2021.

The leading FM solution providers in terms of installed base in the CIS and Eastern Europe include diverse players from a number of countries. Belarus-based Gurtam is the leading FM software provider, having surpassed the milestone of 500,000 vehicles under management in the region. Arvento Mobile Systems from Turkey and TechnoKom based in Russia are the first and second runners-up, followed by Turkish Mobiliz and the Russian players NIS (MTS), SCOUT and Navigator Group. Additional top-15 players include Russia-based Omnicomm which has around 100,000 active FM units, as well as Infotech in Turkey, Fort Telecom and SpaceTeam in Russia, the European market leader TomTom Telematics, Princip in the Czech Republic, the major truck OEM Scania and Secret Control which is based in Hungary. With the exception of TomTom Telematics and Scania, the major international solution providers based in Western Europe, North America or South Africa are yet to reach the top-15 list for this region.

The expectations for the future fleet management market in Eastern Europe and the CIS include a gradual convergence with the developments in Western Europe. Eastern Europe is already tracing the most developed European markets closely in terms of system functionality and service models. The major Russian solution providers have historically mainly served large corporations with standalone software systems which are paid upfront and hosted in-house, whereas subscription services traditionally mainly have been adopted by SMBs. Cloud services based on recurring service fees have however now become a greater focus also for major enterprise fleets on the Russian market and the domestic FM solution providers are increasingly pushing for a transition towards SaaS-based models. Another key trend on the European market is factory-fitment of OEM telematics, which is offered by most of the major truck manufacturers. The local manufacturers in Russia/CIS have however not yet fully embraced this development and the OEM fleet telematics activities remain comparably limited in the region. The local commercial vehicle manufacturers in the CIS market are also expected to gradually introduce proprietary telematics systems including vehicle tracking, remote diagnostics and other fleet management functionality, driven by regulatory developments and increasing competition from Western truck OEMs.

Summary

Executive summary

Fleet management (FM) is an ambiguous term used in reference to a wide range of solutions for different vehicle-related applications. Berg Insight's definition of a fleet management solution is a vehicle-based system that incorporates data logging, satellite positioning and data communication to a backoffice application. The history of fleet management solutions goes back several decades. On-board vehicle computers first emerged in the 1980s and were soon connected to various satellite and terrestrial wireless networks. Today, mobile networks can provide ubiquitous online connectivity in many regions at a reasonable cost and mobile computing technology delivers very high performance, as well as excellent usability. All of these components combined enable the delivery of vehicle management, transport management, driver management and mobile workforce management applications linking vehicles and enterprise IT systems.

Commercial vehicle fleets play an essential role in the Chinese economy and are crucial for the development of the country. Road transport represents around 75 percent of the total goods transports on the Chinese market measured by weight, corresponding to almost 31 billion tonnes in 2013. The total ownership of trucks in China reached almost 17.9 million vehicles in 2011 according to official statistics. Around 2.5 million buses are moreover estimated to be in operation in the country.

Berg Insight is of the opinion that the Chinese fleet management market will experience steep growth in the next coming years. The development is boosted by a combination of political decisions to track selected trucks and buses and the explosion of e-commerce which forces logistics companies to improve the fleet management efficiency and customer service by enabling tracking of goods status information. National, provincial and regional initiatives to reduce pollution in the transport sector are moreover expected to speed up the renewal of the operating fleet of trucks and buses. This development along with increasing factory-fitting of telematics platforms together foster increased FM adoption on the Chinese market. The

number of fleet management systems in active use is forecasted to grow at a compound annual growth rate of 22.9 percent from 2.1 million units at the end of 2014 to 5.9 million by 2019. The penetration rate in the total population of registered commercial vehicles including trucks and buses is estimated to increase from 9.0 percent in 2014 to reach 19.8 percent in 2019. Track & trace systems dominate the market and the installed base so far includes a notable share of low-end systems with comparatively limited functionality.

The Chinese fleet management market includes numerous players that have installed tens of thousands of telematics systems for fleet clients. Top providers with installed bases of more than 100,000 units include E6GPS and Etrans. There are furthermore a number of players with installed bases in the range of around 50,000–100,000 units, including Beijing Zhongdou Technology (Ccompass), Shenzhen Huabao Electronics Technology, Shenzhen Weitongda Electronics and 666GPS. Other players with installed bases of approximately 50,000 units include Zhengzhou Shenyang Science & Technology, Shenzhen SOFAR Communication, Shanghai Transun Telematics Technology, Sinocastel, Baoding Beier Electronics and Aerospace Intelligent. Also a small number of international aftermarket solution providers have entered the Chinese fleet management market but the installed bases of the foreign providers remain limited. Among the few international providers that have entered this market and achieved installed bases of at least 1,000 units are Trimble, MiX Telematics, Microlise and Navman Wireless.

Some Chinese commercial vehicle OEMs have introduced telematics systems. In the truck segment, a small number of OEMs stand out as more prominent in terms of fleet telematics activities – most notably Foton and Shaanxi Automobile Group. There are further a number of telematics initiatives among the bus manufacturers from players such as Yutong and King Long Group. The latter is also known as the Three Dragons and includes the brands King Long, Golden Dragon and Higer. Multiple telematics offerings have been launched within the group. Also a number of other truck and bus manufacturers are exploring opportunities related to fleet telematics, but many OEMs still have little or no activity in this space. The automotive industry players on the Chinese market are in the future expected to increasingly equip new commercial vehicles with telematics systems in line with government initiatives.

Summary

Executive summary

Trailer and cargo container tracking is a subsegment of asset tracking and aims to increase operational efficiency and make logistics chains more secure. Berg Insight's definition of a real-time tracking solution is a system that incorporates data logging, satellite positioning and data communication to a backoffice application. Trailer tracking can be part of fleet management solutions including both trucks and trailers. The history of fleet management solutions goes back several decades while tracking and monitoring of shipping containers came in focus after 9/11. Today, mobile and satellite networks can provide ubiquitous online connectivity at a reasonable cost and mobile computing and sensor technology delivers high performance as well as excellent usability. All of these components combined enable the delivery of supply chain management, security management and operations management applications linking trailers, containers, cargo and enterprise IT systems.

In order to make freight transport efficient, products are packed into collective logistics units which can remain intact throughout the delivery chain. Smaller logistics units such as boxes and pallets are often grouped into larger units and loaded on semi-trailers, swap bodies, air freight unit load devices (ULDs) or intermodal shipping containers. These loading units can be applicable to one or more modes of transport. Semi-trailers are mostly used in road transport, swap bodies can be transferred between road and rail transport, ULDs are used in air freight transport and shipping containers can be carried on several transport modes. More than 20 million intermodal containers and over 13 million trailers are in use worldwide.

Berg Insight estimates that shipments of remote tracking systems with cellular or satellite communication capabilities for cargo loading units including trailers, intermodal containers, air freight cargo containers, cargo boxes and pallets reached 0.8 million units worldwide in 2015. Growing at a compound annual growth rate of 25.0 percent, the shipments are expected to reach 2.3 million units in 2020. During the same period, the installed base of remote tracking systems is forecasted to grow at a compound annual growth rate of 23.2 percent from 2.9 million units at the end of 2015 to 8.1 million units by 2020. Trailer tracking is the largest market segment, estimated to account for 56.8 percent of the total installed base

of tracking units deployed on trailers and cargo containers in 2015. Intermodal container tracking is the second largest segment with an estimated installed base of 0.9 million tracking units at the end of 2015.

Berg Insight ranks ORBCOMM as the largest provider of tracking solutions for cargo loading units, having a significant installed base of trailers as well as containers. The company has in the past years been highly involved in M&A activity related to real-time asset tracking, including notable acquisitions such as Euroscan and WAM Technologies. The latter was involved as a subcontractor in AT&T's major project for Maersk which has rolled out a system for real-time tracking of its entire fleet of 270,000 refrigerated containers. The project is one of the largest cellular-based industrial IoT deployments of its kind and effectively positions AT&T as one of the leading providers of tracking solutions for cargo loading units. The North American trailer telematics market is dominated by ORBCOMM, SkyBitz and Omnitrac which all have more than 200,000 active units, while Spireon and I.D. Systems have surpassed 100,000 units. The European trailer telematics market is considerably smaller and leading Europe-based players with 20,000–50,000 active trailer units include Idem Telematics, Blue Tree Systems, Schmitz Cargobull and Novacom. Mecomo and Agheera are strong vendors in the adjacent swap body segment. Other providers with more than 50,000 active units include FreightWatch International and Numerex, having the lion's share of their installed bases in the general cargo and container tracking segments respectively. Other major players in the container tracking space for example include Envotech and Savi Technology, while notable vendors in the segment of air freight cargo tracking include OnAsset Intelligence and Sendum Wireless. There are moreover providers offering tracking services based on disposable devices such as Zenatek.

Berg insight anticipates that there will be a strong focus on increased supply chain visibility and transport security in the coming years. Tracking of trailers and intermodal containers is increasingly common and technology advancements allow for ever-smaller logistics units such as individual pallets or cargo boxes to be tracked at a reasonable cost. Acceptance of remote tracking solutions will first be established in specific usage scenarios such as high-value, time-critical or refrigerated goods. Decreasing hardware costs, improved battery life and the emergence of LPWA technologies are expected to impact the market positively and foster wide-spread adoption of cargo tracking solutions in the coming years.

Summary

Executive summary

In spite of the country's weak economic performance, Berg Insight is of the opinion that the market for fleet management in South Africa is in a growth period which will continue in the years to come. The number of FM systems in active use is forecasted to grow at a compound annual growth rate (CAGR) of 12.6 percent from 1.1 million units at the end of 2016 to 1.9 million by 2021. The penetration rate in the total population of non-privately owned fleet vehicles used by businesses is at the same time estimated to increase from 24.1 percent in 2016 to 39.6 percent in 2021. South Africa is a relatively mature telematics market and the penetration is comparably high from an international perspective. Far from all deployments are however full-scale advanced FM solutions. A notable share of the installed fleet telematics systems on the South African market is represented by low-end tracking systems, e.g. light FM solutions, including SVR systems extended with basic FM features.

The South African fleet management market is dominated by five players with broad telematics portfolios which are all headquartered in the country and have installed bases of over 100,000 FM units each. Berg Insight ranks Cartrack and MiX Telematics as the largest providers of fleet management solutions in South Africa, both having estimated installed bases in the range of 150,000–200,000 active units in the country, followed by Ctrack and Altech Netstar. Tracker has also provided more than 100,000 active FM systems in the country where some of them are powered by TomTom Telematics. Other renowned international providers active on the market include Pointer Telocation and Geotab. Foreign telematics players have however generally not managed to achieve any top-ranking market shares on the South African fleet management market so far. Additional examples of domestic aftermarket players include Digit Vehicle Tracking (Digicell), GPS Tracking Solutions (Eqstra Fleet Management), SmartSurv Wireless, Autotrak and Autowatch Telematics (PFK Electronics). Commercial vehicle OEMs including Daimler, Scania, MAN and Volvo Group have moreover introduced fleet telematics solutions in South Africa, though the adoption levels generally remain relatively modest so far.

Summary

Executive summary

Berg Insight is of the opinion that the market for fleet management (FM) in Australia and New Zealand is in a growth period which will continue in the years to come. The number of FM systems in active use is forecasted to grow at a compound annual growth rate (CAGR) of 15.7 percent from almost 0.7 million units in 2016 to 1.4 million by 2021. The penetration rate in the total population of non-privately owned fleet vehicles used by businesses is at the same time estimated to increase from 14.8 percent in 2016 to 27.8 percent in 2021. The fleet management market in the region is today influenced positively by a number of different market drivers including regulatory developments such as health and safety regulations, road user charges and electronic work diaries.

A large number of diverse vendors are active on the FM market in Australia and New Zealand, including several of the leading international players as well as a plethora of small and medium-sized companies mainly focused on this region. Berg Insight ranks Teletrac Navman as the largest provider in Australia and New Zealand, having surpassed the milestone of 100,000 active units in the region in 2017. Verizon is now estimated to be the second largest player following the 2016 acquisitions of Telogis and Fleetmatics. The second runner-up is New Zealand-based EROAD which has more than 40,000 FM units in the region. South Africa-based Altech Netstar has also reached this level following the acquisitions of Pinpoint Communications and Ezy2c in 2015–2017. Other notable providers with estimated installed bases of 15,000–40,000 active units in Australia and New Zealand include the local suppliers IntelliTrac, MTDData, Smartrak, Coretex, Procon Telematics, Myionu and GPSEngine as well as international players including Fleet Complete (acquired Geotab's former reseller Securatrak in 2016), MiX Telematics and Ctrack. Top-ranking FM providers on the global market such as TomTom Telematics, Gurtam and Trimble have also expanded to this region. Additional examples of local players include Digital Matter and Directed Electronics Australia. The latter works with a range of vehicle OEMs on the local market. Commercial vehicle OEMs which have introduced fleet telematics solutions in the region independently or through partnerships include Isuzu, Volvo Trucks, UD Trucks, Scania, PACCAR, Toyota, Hino and Mercedes-Benz.

Summary

Executive summary

Berg Insight estimates that the global installed base of active construction equipment OEM telematics systems reached almost 1.8 million units in 2016. Growing at a compound annual growth rate (CAGR) of 21.3 percent, the active installed base is estimated to reach 4.6 million units worldwide in 2021. This includes all CE telematics systems marketed by construction equipment OEMs, either developed in-house or provided by the CE manufacturers in partnership with third-party telematics players. Berg Insight estimates that the European market accounted for almost 0.4 million active construction equipment OEM telematics systems at the end of 2016. The North American market is estimated to be slightly larger than the European. The Rest of World is moreover estimated to represent more than half of the global installed base of CE telematics systems provided by construction equipment OEMs.

Most major construction equipment OEMs have introduced telematics offerings for its customers either independently or in collaboration with telematics partners. OEM telematics systems are today commonly factory-installed as standard at least for heavier machines. Berg Insight ranks Caterpillar and Komatsu as the leading construction equipment OEMs in terms of the number of CE telematics systems deployed worldwide. Based in the US and Japan respectively, the two companies – which are also by far the leading construction equipment manufacturers in terms of market share – together account for more than one million telematics units today. Caterpillar's largest markets for its telematics offerings are North America and Europe while Komatsu has the largest share of its telematics units in Japan and China followed by North America and Europe. The runners-up include Japan-based Hitachi Construction Machinery and South Korea-based Hyundai Construction Equipment. The former has surpassed the milestone of 200,000 telematics units. Other notable OEMs include JCB, Volvo CE and Deere & Company which are based in the UK, Sweden and the US respectively. South Korea-based Doosan Infracore, Liebherr based in Switzerland and CNH Industrial which is headquartered in the UK further all have global installed bases of construction equipment telematics units in the low tens of thousands.