MAY 2016 VOL.2 NO.4

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WORD FROM THE EDITOR

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Industry 'experts' keep suggesting that the end is nigh for mobility — particularly when it comes to new development. Have we really come to the end of the trail? Unlikely, according to this year's Mobile World Congress, which was held in Barcelona in February. We take a look at some of the more interesting technologies and trend predictions to come out of the event.

This issue is full of mobility-focused articles and case studies — mobility being one of the key components of managing a field service team.

We've also corralled some of the industry's best and brightest when it comes to field service software, for a long-term look at where things are headed. 2025 is less than a decade away and should be in the crosshairs of any forward-thinking field service manager. Software is no longer about scheduling and logistics or fleet tracking alone. Our virtual roundtable on the topic covers 'the next big thing' and the increasing importance of integration, as we inch ever closer to the dawn of widespread internet-connected devices.

I hope you find this issued packed with useful information. As always, your comments are welcome, so please feel free to drop me a line and let me know your thoughts.

Kind regards,

Dannielle Furness

Editor

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MAY 2016

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DONE AND DUSTED

THE REVOLUTION IS OVER

Less than a decade into the so-called mobile revolution and experts are calling it officially over, but what does that really mean?

It's not even 10 years since the release of the first iPhone and there have been five major upgrades since — more if you count the incrementally 'improved' S models. Samsung joined the smartphone fray in 2009, Apple announced the iPad in 2010 and it's been full steam ahead ever since. The average user will have spent a few thousand dollars on hardware alone in the intervening years; much more in the case of the truly dedicated.

The impending release of each subsequent phone, tablet or hybrid model elicits rabid speculation and the rumour mill inevitably goes into overdrive. 'Drastic' physical changes, such as Apple's move to the lightning connector on the iPhone 5, are enough to cause virtual worldwide meltdown. In the latest case of conjecture, the company will reportedly remove the headphone socket from the iPhone 7 — cue outrage from the market and threats to jump ship to another manufacturer's product. With every improvement comes the promise of better battery life, which generally fails to materialise.

We've become so attuned to the concept of improvement — smaller, faster, lighter, thinner and better resolution — that many have questioned where it could possibly go next, and all of it makes you wonder how tech analysts managed to fill their days back in the early 2000s. According to experts, there's nowhere left to move, as we've hit the practical and physical limits when it comes to screen size, battery life and network capacity. So that, as they say, is that. We've come to the end of the mobile revolution. Meaning what, exactly? Not much, as it happens.

Don't sound the death knell

As with the internet revolution, and the PC revolution that preceded it, the end of the era doesn't mean that the technology is redundant — far from it. When analysts decree that a technological time period is over, it generally just means that the previously experienced lightning speeds of take-up and development start to slow — it's so commonly used it's become part of the fabric of society, rather than old hat. Even in the face of decline, smartphone sales are currently estimated at around US$323 billion per annum, so even with a 1–2% annual decrease, it's probably not time to panic yet.

It seems there's still life in the market yet, if some of the info coming out of the Mobile World Congress (MWC) is to be believed. Billed as the 'world's biggest mobile fair', this year's event was held in Barcelona in February and attracted over 100,000 visitors. While handheld device development may have plateaued, there were a few standout technologies on show at MWC and trends worth keeping an eye on.

Shining a light

New to the party, Li-Fi (Light Fidelity) technology is being hailed as a potential successor to Wi-Fi, albeit in limited application. Developed by French start-up Oledcomm, Li-Fi promises speeds up to 100 times faster than Wi-Fi and uses frequencies generated by LED light sources to transmit information as opposed to radio waves. LED lamps flicker on and off imperceptibly thousands of times per second, so some refer to Li-Fi as the 'digital equivalent of Morse code', according to recent media reports. Lamps are fitted with

FEATURE

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a microchip, effectively turning them into hotspots. Demonstrations at MWC showed a smartphone placed under an office lamp that began to play video.

It's fast, theoretically showing testing speeds of 2000 Gbps, which means users could "download the equivalent of 23 DVDs in one second", according to Oldecomm founder Suat Topsu.

The downside is that devices must be placed directly in light, meaning connection through walls isn't possible. The technology's weakness may also be its strength, as this limitation could mitigate the risk of data theft. While Li-Fi may not be a broadscale replacement for Wi-Fi, it has the potential to relieve burden if we hit the predicted 50 billion internet-connected devices expected by 2020. The spectrum for radio waves used by Wi-Fi is finite, so Li-Fi may finds its place in limited environments such as schools, hospitals and aircraft. Apple is reportedly looking at including Li-Fi capability on the iPhone 7.

5G will save us

The next generation in wireless technology is expected to increase downloads speeds by about 10 Gbps and to dramatically reduce latency, meaning that a full HD movie will take only a couple of seconds to download. We'll need 5G in operation if the much-heralded 'IoT' becomes a reality.

Many of the companies exhibiting at MWC were focused on 5G, some claiming to be '5G ready'. According to comms sector analyst Juniper Research, much of the talk is just that — talk. Until 5G standardisation is resolved, manufacturer claims of readiness and platform trials are more marketing than reality. The frequency bands operators will utilise for 5G have yet to be finalised, and Juniper suggests that many hurdles must be overcome before the next generation becomes commercially available. Juniper points to 2020 as a realistic time frame and suggests that many operators are jumping the gun in promoting themselves as 'ready'. It expects manufacturers and operators to optimistically market LTE-A or LTE-A Pro services as '5G' once the 1 Gbps barrier has been broken, but sees 2025 as the jumping point for rapid adoption.

> Li-Fi may finds its place in limited environments

Steps to standardisation

IoT was, perhaps unsurprisingly, another focal point at MWC. It feels like we've been talking about this for decades, but it has been a concept divided in terms of reaching standardisation. Reports suggest that agreements between consortiums, including the Open Interconnect Consortium (OIC) and the UPnP Forum, will lead to the convergence that successful deployment demands. Certified products are likely to be forthcoming in the next 12 months from players such as Intel, Microsoft, Samsung and Cisco Systems.

Mobility on the move

So, while many claim we're at the beginning of the end for mobile, it's perhaps not quite accurate and there are still plenty of advances on the horizon, particularly when it comes to simplification and standardisation. It's easy to forget that entire industries have risen out of the upsurge in mobility — ridesharing, for example — which are now commonplace yet unimagined a few short years ago. A lot can happen in a decade, so 2025 could be interesting.

ENTERPRISE

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simPRO SOFTWARE

Serious Job Management

THE FIELD SERVICE CHALLENGE: INTEGRATE AND MODERNISE

Rob Stummer, Managing Director ANZ, IFS Australia and New Zealand

You're probably already sold on the idea that field service management software improves the efficiency of service operations and the utilisation of labour and assets such as motor vehicles or spare parts.

In fact, with software vendors expanding field service management offerings in recent years, they have almost become a no-brainer. The flip side is that they no longer guarantee you a competitive edge.

But what if I told you that most companies could further improve their service efficiency with enterprise solutions that are integrated with or include field service management?

I'm not just talking about integration with systems for invoicing and accounting, or even asset life cycle management. What if you could use data to change the way you deliver service across the entire supply or value chain?

Many industries still operate in silos. This is particularly the case with service and we see poor information exchange between business units at two levels. The first is within organisations and the second is between the owners of assets and service companies.

Better information flows could greatly improve coordination of service across different areas — with huge potential to improve efficiency and lower costs.

Integration between systems can add significant efficiency improvements. As an example, WA-based Pindan Asset Management recently implemented IFS Applications to support a mobile-enabled enterprise solution for a Department of Housing maintenance works and services contract for 6000 houses across Western Australia.

Equipped with mobile devices, Pindan's technicians work in a completely paperless environment, accessing information shared between Pindan and the Department of Housing to support each work order. To achieve this, integrated functionality managing projects, asset maintenance, supply chain, financials and human resources was required. The result has been increased useability and higher productivity.

"We are currently processing on average four to five work orders per person a day, and in 12 months' time I foresee this being around six or seven work orders being processed a day through further efficiencies," said Stephen Arndt, general manager, Pindan Asset Management.

There are a host of potential technology benefits in the pipeline. At IFS, we have been developing Enterprise Operational Intelligence technology to turn 'big data' into something useful. We can create a real-time map of the entire value chain and link it to enterprise software to monitor processes via key performance indicators to deliver on strategic goals.

In our experience you need to have an integrated real-time overview of the business to inform actions that reduce costs and enhance value. In the past that sort of actionable intelligence typically wasn't available until some predefined point — a two-week, monthly or even yearly report. Real-time access to data, however, lets you make decisions that affect current operations rather than the end of the week or even later. With an Enterprise Operational Intelligence (EOI) platform, raw transactional data from IT systems is consolidated into a single dynamic management layer, providing powerful situation awareness.

In the very near future, a host of new technologies — like Enterprise Operational Intelligence, 3D printing, wearable devices and the Internet of Things (IoT) — will boost efficiency even further.

New assets will be smarter and more reliable than those seen before. With the IoT, many will communicate directly back to their original manufacturers or designers and a collaborative approach to service will be required.

Integrating new technologies will be crucial, which means your software systems must be modern and agile enough to adapt. Implementing systems in isolation — without linking them to a big-picture enterprise solution — may lead to disappointing results.

The fewer systems and databases you have, the more effectively you can analyse service operations and act on business intelligence. Ideally, you want all information about people, finances and assets (both yours and the ones you service) to be in the one place — a single source of truth to change the way you deliver service.

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PRODUCT WATCH

CORDLESS POWER TOOLS

Milwaukee has introduced the Next Generation M18 FUEL Drill Drivers, Hammer Drills and Compact Impacts. Built from the ground up, they feature patented cordless technologies, POWERSTATE brushless motor, REDLITHIUM 5.0 Ah battery pack and REDLINK PLUS intelligence hardware and software to deliver enhanced performance, durability and run-time for the professional tool user.

With advancements in the battery, electronics and motor, the devices reduce downtime on the job site and dramatically increase efficiency and productivity for the user.

The M18 FUEL drills, hammer drills and impacts feature a POWERSTATE Brushless Motor engineered with higher grade magnets, which produces higher output power and speed under heavy load. In addition, REDLINK PLUS Intelligence has been upgraded with improved heat management capabilities to handle the higher power output of the motors. The user can now benefit from the convenience of a compact design without the need to forgo power.

Boasting a lightweight and compact design, the impact driver and wrenches have been developed to deliver faster driving speeds and more control, subsequently minimising downtime between applications for demanding job site tasks. Built to maximise control and precision, the drivers now feature a 4-mode drive control that includes a self-tapping mechanism that will vastly reduce the amount of time the user spends changing screw heads. The wrenches will also feature a 4-mode drive control that includes an auto shut-off function that stops the tools after one second of impacting to prevent overdriving fasteners and damaging materials.

Techtronics Industries (Milwaukee)
www.ttigroup.com

PERSONAL PANIC BUTTON

The React Sidekick personal panic button enables wearers to reach a wide network in the event of an emergency. The device pairs with the React Mobile safety app via LE Bluetooth 4.0 for activation even when the user's phone is locked or out of reach. A single click alerts a user-defined, predetermined contact list.

The worker safety device features GPS tracking functionality, which advises alert recipients of the wearer's location. It comes with an activity clip and carabiner loop for easy attachment.

Myionu
www.myionu.com.au

PAPERLESS HEAVY VEHICLE PRE-START CHECKS

Techs4Biz has released a new electronic pre-start checks app from Pervidifor for use with heavy vehicles, plant and equipment. The app enables operators and inspectors to ensure heavy machinery meets safety requirements.

The app enables organisations to easily and cost-effectively track and manage pre-start and fleet safety inspections. Drivers and operators complete pre-start inspections using possible deficiency drop-down values, taking pictures and employing voice-to-text data entry functionality.

The app features include: automatic reporting, automatic corrective actions, and proactive triggers and notifications, all of which are emailed directly to a nominated address.

Techs4Biz
www.pervidi.com.au

Toyota's ability to provide the service and backup network to support forklifts at each of its outlets met one of Elders' key requirements.

REACHING FOR GROWTH

Elders provides a broad range of agricultural products and services through 370 outlets primarily located in rural and regional areas right across the country, which meant it had unique requirements when it was time to tender for a new forklift provider.

Elders' fleet manager, Jeff Howarth, said Toyota's ability to meet the requirement of having one forklift at each of its outlets — and provide the associated service and backup network — was one of the key factors that tipped the balance in the company's favour.

"It was a critical consideration for us, given that the nature of our business means we're operating in some pretty remote locations," Howarth said.

"Being able to not only supply the forklifts, but most importantly [to] provide service and backup — either directly or through reliable local agents right around the country — was very important to us."

Toyota Material Handling Australia (TMHA) has made a concerted effort to open factory-owned and -operated branches in regional areas. The company has representation across metropolitan areas, particularly on the east coast, and is now looking to regional areas to broaden its reach. This means ensuring infrastructure is in to show potential customers that the company is serious and committed to the region.

Howarth explains that being situated largely outside urban areas also means the reliability of Elders' equipment is vital.

"We need to be confident that our equipment is well built, robust and up to the task. We've been impressed with the Toyota forklifts and they've proven to be reliable and capable of handling any job we require."

TMHA's willingness to meet with Elders and recommend the best solution for its needs was also a deciding factor in its decision.

"Toyota's on-site inspection made the selection process easier. Toyota took the time to come out to assess our needs and make recommendations about the type of equipment we needed to ensure our order met our specific requirements.

"This was a real point of difference between Toyota and some of the other providers we considered, and it's one that we really appreciated," Howarth said.

With the benefit of Toyota's advice, Elders settled on a range of 8-Series FG forklifts with capacity from 1.8 to 3 tonnes. The forklifts are currently in operation at 50 of its branches throughout Australia.

Toyota's award-winning 8-Series forklifts contain a number of leading safety features — including its System of Active Stability (SAS) technology. which helps prevent tip-overs.

Other safety features include an Operator Presence Sensing system, which stops the forklift from moving unless the operator is correctly seated at the controls; and an Active Mast Function Controller, which can sense instability by limiting the mast angle and speed according to the height and weight of the load.

The 8-Series also offers a large, easily accessible workspace with a wide foot area, a tight turning circle for improved manoeuvrability, ergonomically designed controls, excellent forward visibility and a comfortable and fully adjustable operator restraint suspension seat with added lumbar support. The powerful and fuel-efficient engine is tuned to minimise noise levels in enclosed environments, while Toyota's hydraulic lifters help lower engine noise and reduce maintenance.

Howarth explains that the forklifts are used primarily to load and unload trucks and customers' vehicles.

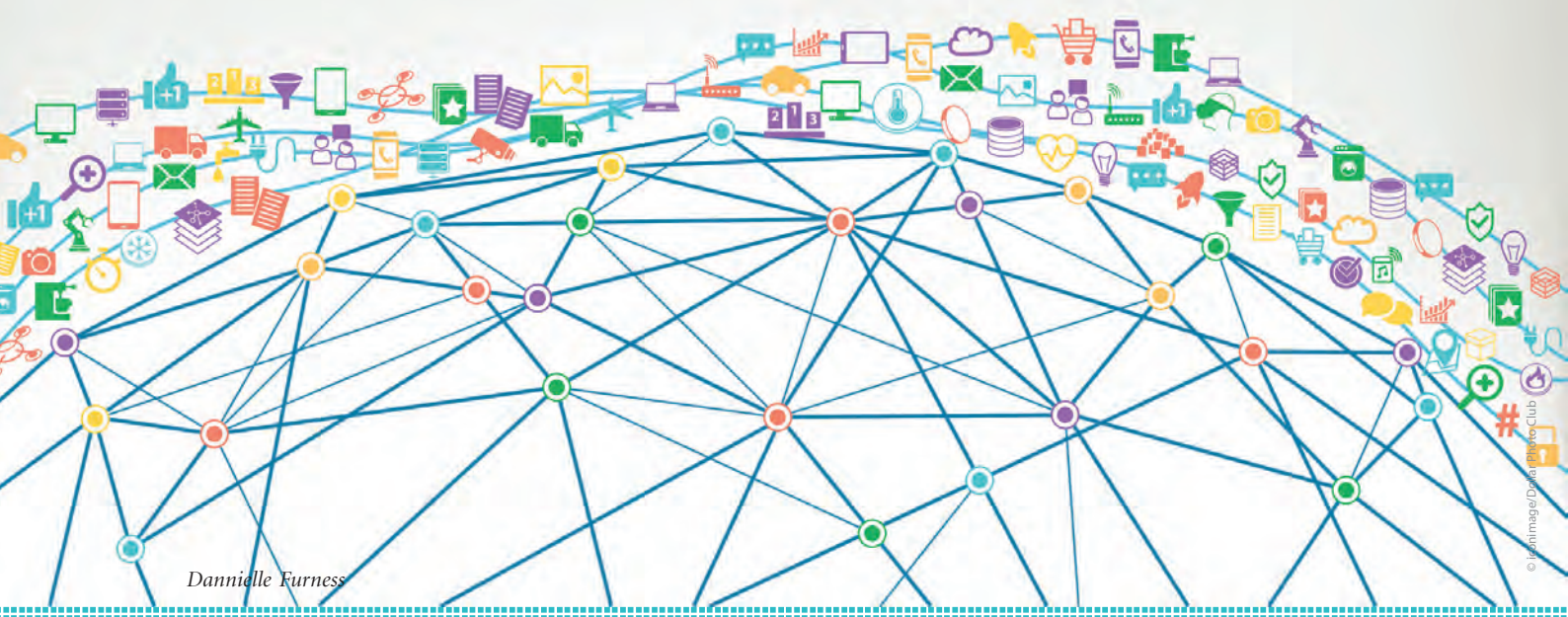
"They handle a pretty broad range of goods, from pallets of fertiliser to feed or fence posts," he said. "They are comfortable for our staff, easy to operate and are well suited to our needs. They don't miss a beat."

After positive experiences with other Toyota products, the quality and reliability of the Toyota equipment came as no surprise to Elders.

"Our procurement manager had used Toyota forklifts in the past at another company, and he had good experiences there, so we knew what to expect with the new forklifts," Howarth says.

"We also run a couple of hundred Toyota Prados in our fleet that are used by our staff when visiting customers' properties. As you'd expect, many are in pretty remote locations, so the toughness and reliability of the Prados makes them a good option for us."

Toyota Material Handling Australia Pty Ltd
www.toyotamaterialhandling.com.au



Dannielle Furness

FIELD SERVICE SOFTWARE

2025 AND BEYOND

Organisations around the globe are facing unprecedented change, thanks to converging digital forces. Now's the time to rethink processes and adopt a more efficient business model, according to our roundtable participants.

While it's not uncommon for smaller enterprises to still rely on inefficient paper-based systems to facilitate field service processes, underestimating the significance of converging technologies threatens to leave some businesses behind. The rate of change we have seen since the introduction of smartphones and subsequent mobile devices has been rapid, to say the least, and while we may tire of hearing some buzzwords, such as IoT, the significance of these developments shouldn't be underestimated.

We wanted to look a decade down the track, so we spoke with a few of the industry's most knowledgeable, including Jonathan Eastgate, Chief Technology Officer for simPRO Software, as well as David Younger and Ron Hayward from The Service Manager.

FSB: What's the 'next big thing'?

Eastgate: For the field service industry, the burning question for companies today is 'how do you effectively mobilise the workforce?' Why? Firstly, because customers now expect faster turnaround times — they want it fixed now. Secondly, because optimised productivity is vital to every business. It's expensive to maintain a mobile workforce, so you want to keep the billable hours up. It's just not feasible any longer to have field staff coming into the office to get job cards — they need to be out on site. We're in the middle of the age of mobility and most customers have embraced this.

The next big thing, however, is the Internet of Things (IoT), which is simply the connection of any device with an on/off switch to either the internet or another

device. This ranges from small appliances such as lamps or signs, right through to larger items including refrigerators and diesel generators. With this interconnectedness, we'll see field services go from a reactive endeavour to a higher prevalence of service level agreements (SLAs) under a more proactive servicing model. It will change the landscape significantly.

Younger: We see the biggest change as being the commercial adoption of the IoT. By way of example, in HVAC&R, on-premises planned maintenance is a timely method for avoiding break/fix situations. Using non-passive RFID, it's possible to detect heat build-up and vibration, which means that an existing field service schedule function can be alerted and a planned maintenance schedule brought forward to avoid any machine downtime. Break/fix is costly and therefore the least desired situation.

Think about car wash businesses — Australia's largest supplier of car wash machinery has a contractual obligation to customers to resolve a break/fix situation within four hours. If this doesn't happen, they are liable for lost income. Utilising the inherent functionality in IoT minimises the likelihood of breaching this agreement. The flow-on effect is that insurance premiums become lower as exposure to risk is mitigated, so it's far-reaching.

FSB: What about further integration — what else can be achieved?

Eastgate: In the next 20 years, mobile will continue to grow, but the rate of growth will be entirely dependent on people's attitude to technology adoption. IoT is the ultimate integration — we'll see everyday household items reporting status straight to service providers and alerting them if there is an issue, in many cases before the customer even notices. This, of course, will trigger a service response.

Hayward: Australia is home to a lot of mid-sized field service businesses that 'grew like Topsy'. They've probably got four or five software applications that don't talk to each other — a back office accounting system; a spreadsheet macro that the service manager was raised on and lives by; and a new 'cool' cloud app that handles OH&S and quality audits, and which works perfectly in the field via tablet but in isolation of the business' operating system. These systems often feature customisation written by a 'space cowboy' who no longer works for the software company that sold it. Companies are left with the burden of additional customised report writing to try and pull the whole thing together and then along comes an overseas ERP vendor with the 'perfect' solution. The problem with this is that SME field service companies often cannot afford this type of solution.

As technology changes, platform tariff operators are emerging, covering the total cost of service over the economic life of the technology. They are the new vanguard. These 'platforms' take away integration and provide automated tools to anticipate API changes and manage them from within the platform itself. This means that old-style integration processes are no longer required. They are here now and continue to emerge over 2016/17. Remember that hardware (devices/handsets/Wi-Fi/GPS) with its own software is also being disrupted and coming together in black box solutions. Watch this space.

FSB: What do potential buyers need to think about when evaluating all of the available options?

Eastgate: The first thing is to think about whether the business is capable of deploying the software internally and if it can sufficiently adapt to what is being installed. A change management strategy will need to be put in place to ensure a successful implementation. Remember that no one software platform will do exactly what you want and you need to be prepared to adapt.

This will mean looking at the existing processes and capabilities within the business and recognising whether the proposed software offering will improve or replace a particular process. It comes down to a clear value proposition and whether there is a measurable return on investment.

David Younger, CEO, The Service Manager

"We see the biggest change as being the commercial adoption of the IoT."

It is also important to consider scalability. Purchasing a program simply because it's cheaper might not be a sustainable solution. Most companies need a product that will grow with the business and won't cause unnecessary problems down the track.

Buyers should also look at the vendor's development commitment — is the software continually being upgraded, maintained and evolving? Is the vendor investigating and investing in development to support IoT?

Finally, consider the hardware being used — is the software device agnostic? You shouldn't need to reinvest in hardware because the solution on offer won't work on a particular operating system or

Jonathan Eastgate, Chief Technology Officer, simPRO Software

"We'll see field services go from a reactive endeavour to a higher prevalence of SLAs."

device. It needs to be capable of keeping up with changing technology.

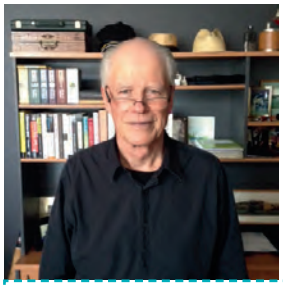
Younger: There is a third amazing disruption transition taking place and it's in accounting — particularly the accounting vendor market. Xero is becoming a network provider, especially in the banking and third-party developer community. Already its banking algorithms are better than most ERP functionalities, which are now left to catch up because of Xero's disruptive effect. The trading account and its associated working capital is another example — there are now applications that provide ERP functionality at a reasonable price. Using these other best-of-breed applications limits the role of the accounting package in a field service environment to compliance and taxation only.

The second requirement is to ensure that the total cost of delivery is accounted for, which includes the cost of in-house IT. Ideally this should be carried out by new IT managed service providers featuring well-trained experts who value remote control with a preventive focus rather than the 'break/fix and charge by the ticket' model favoured by traditional operators.

The ultimate is cloud replacement of internal IT, but provided by a platform tariff operator that is accountable for combined and total delivery. The current exception to this is mobile data costs, which are still the realm of telcos. 4.5G leading to 5G testing over the next four years will spell the end of this and mobile data will be included in the total platform tariff operator's priced delivery. This is already the case, with some operators in a 48-month contract provisioning for two tablet replacements to ensure best-of-breed technology and experimental data inclusion being factored in for some pilot customers.

FSB: How far in the future should buyers be looking?

Eastgate: Whatever happens in the next five years will set the stage for the next five, and so on. There are definite leap points in the evolution of technology. If you look across global markets, there is a three-year variance cycle between innovators or early adopters and the laggards when it comes to technology. Fortunately, Australia falls into the former category.



Ron Hayward, Marketing Manager, The Service Manager

"Field service, depending on the technician's workflow, requires a 24-, 48- or 60-month technology update cycle."

Hayward: Technology's speed of advancement is compounding. Field service, depending on the technician's workflow, requires a 24-, 48- or 60-month technology update cycle. Platform tariff operators understand this and the first consulting function is to determine the workflow needs of the field service operator and choose one of these cycle options. The replacement of devices (and therefore the operating system) must take place in concert with the needs of the customer. So too, customer expansion may necessitate the platform tariff operator to transfer from one of the three cycle options to another, so flexibility is important.

FSB: Should software be treated as a standalone product, or is it important to consider software at the same time?

Eastgate: The first step is to look at the software alone and pose the question 'will it work for the business?' Software is the core of the business and it needs to be flexible in terms of updates and upgrades. The second step is to then work out the hardware requirements and consider the software adaptability in terms of the applicable operating systems.

Younger: We believe that both must be considered. The main hardware vendors (eg, Apple, Samsung, Microsoft and the emerging Huawei) will change over time. All have their own agenda in bringing new technology advances to users. There is also an element of planned obsolescence to their behaviour. Having said that, a platform tariff operator has to be responsible and accountable in its delivery and to anticipate these technology happenings, accommodating them into their platform and tariffs. As disruptors in field service, they will emerge to fulfil this industry requirement.

RUGGED MOBILE PRINTERS

Zebra Technologies has launched the ZQ500 mobile printer series for field-based applications.

The 3″ ZQ510 and 4″ ZQ520 printers are portable, print-on-demand devices that combine a military-grade design with simple functionality for printing solutions for the transportation and logistics, manufacturing and government markets.

The lightweight ZQ500 series can be used for a variety of mobile applications including e-citation, parking enforcement, field sales and service receipts, transportation tickets, car rental receipts for vehicle return, proof of delivery and utility readings and invoices.

The printers feature a simple design offering an intuitive display with only three large buttons and no menus — increasing accuracy for gloved hands and fingers.

Featuring a rugged military-grade design for durability and reliability in tough environments, the ZQ500 series offers: IP54 (or IP65 with optional exoskeleton case) rating for protection against dust and liquids; MIL-STD 810g military qualifications for shock, vibration and temperature exposure; cold temperature compensation automatically optimises and balances print speed and quality in cold temperatures — suitable for direct-store deliveries (DSD) that require colder transportation; protection for the media from being ejected when the printer is dropped.

The ZQ500 series comes standard with the latest Bluetooth Smart Ready 4.0 (low energy) connectivity, Print Touch device pairing and support for all major smartphone and tablet operating systems. These printers are also Zebra's first to support a secondary Bluetooth channel for simultaneous operations — enabling developers to create new device management solutions and helping increase worker productivity.

Zebra Technologies
www.zebra.com

MOBILE SCANNER

Honeywell Sensing and Productivity Solutions has announced the release of the Voyager 1602g pocket 2D Bluetooth scanner, which delivers affordable, high-performance scanning into the hands of mobile workers.

The compact Voyager 1602g scanner easily fits into the pocket, but is equipped with high-performance barcode scanning technology found in full-size handheld scanners.

The ergonomically designed Voyager 1602g scanner can be coupled with tablet-based retail POS systems, mobile point-of-sale solutions, inventory management, backroom/stockroom, in-store customer engagement and even non-retail scanning uses such as transportation applications and salesforce automation.

Featuring an oversized scan button, soft touch plastics, white LED aimer and a lightweight design, the Voyager 1602g makes scanning easy. The device is capable of reading barcodes off smartphone screens — mobile coupons, e-tickets, digital wallets and digital loyalty cards.

The Voyager 1602g incorporates Bluetooth wireless technology that allows freedom of movement of up to 10 metres and a user-replaceable battery tested to last for 2250 scans in a single 12-hour shift, which can be rechargeable on a standard microUSB.

Honeywell Ltd
www.honeywell.com.au

ASSET TRACKING

Trimble Asset Tracking is a flexible solution that offers complete visibility into the location and utilisation of assets, from a convenient portal. Users know where towed assets are and how they are being used, through on-demand and detailed activity reports, which allows better management of asset performance and costs.

Trimble Asset Tracking offers simple deployment with anytime, anywhere access and allows stolen assets to be located and unauthorised use identified through real-time alerts. Idle and rarely used trailers can be identified easily and real-located, improving overall asset optimisation.

When integrated with Trimble Fleet Management, the solution provides total visibility of vehicles and assets within one interface. The Live Map view shows real-time status and location of towed, powered and non-powered assets. The long-life, rechargeable battery emits location alerts for up to three months on a single charge.

Real-time alerts are initiated if a unit changes location or has been disconnected and also offers 'wakes on motion' functionality for instant location reporting.

Trimble Field Service Management
www.trimble.com

EARPLUGS

Happy Ears earplugs combine noise reduction and sound reproduction. Ordinary earplugs tend to muffle both lower and higher frequencies, which can lead to a tinny, muddy sound. Happy Ears deliver an average noise reduction of around 20 dB at all frequencies, meaning the ears are protected from harmful noises with no reduction in sound quality.

The construction of the earplugs — featuring a hardened 'foot' at one end and a soft 'leg' at the other — helps to preserve sound quality while providing high levels of protection and comfort. The earplugs are made from ABS in the core and thermoplastic elastomers (TPE) on the outer surface and all materials are medically approved.

In addition to blocking the ear canal, the firm 'foot' means that the sound reaching the ear is both clear and crisp. When the earplug's soft hat is placed in the outer ear, it automatically moulds itself according to the shape of the ear, becoming almost round. The soft material then tries to return to its original oval state; this creates pressure against the outer ear canal, ensuring a secure fit.

John Morris Group
www.johnmorrisgroup.com

RUGGED TABLET CASES

Powered Life has released a range of rugged cases to protect the Microsoft Surface Pro tablet.

The cases range from the Incipio ORD Sleeve, for users needing to protect the device while in transit, through to the STM Dux Case for Surface Pro 4 — a military-grade rugged case, suitable for harsher environments.

The Incipio ORD Sleeve for Surface Pro 3 has a protective nylon exterior and a soft faux fur lining, providing protection at all angles. Pockets and two pen holders make it easy to carry around. If keeping the Surface Pro safe from drops and bumps is important, features such as handles, carry straps and sealed ports provide extra levels of protection.

At the upper end of the scale, the Incipio Capture Case is engineered for durability. This multilayered case features an adjustable 360° rotating handle and comfortable strap for secure grip. Shock absorbent layers give it maximum drop protection; however, keeping it charged and in use all day is easy with sealed but accessible ports including power and USB.

The STM Dux Case for Surface Pro 4 is built for true rugged protection. This case is tested to meet or exceed US Department of Defense Standard 810F/G durability tests, yet works seamlessly with the Type Cover and pen. Ports are protected but accessible and the case is ventilated.

Kensington BlackBelt 1 for Surface Pro 3 is another military-grade choice, with a strong, cushioned TPU layer that meets military-grade MIL-STD-810G testing for all-around protection against drops and scratches.

Other options include Trident Cyclops Case with dust filters and a patented audio design that redirects sound to the front of the screen.

Powered Life
www.poweredlife.com.au

IN-VEHICLE MONITORING SYSTEMS

SAFETY THROUGH BEST PRACTICE TELEMATICS

While the external environments facing light and heavy vehicle fleet operators differ, operational efficiency and organisational safety are two areas all operators can target to maintain a competitive edge and growth.The use of telematics, commonly known as in-vehicle monitoring systems (IVMS), continues to grow through the Australian transportation industry as operators take advantage of both operational and safety benefits such technologies provide.

Telematics technologies play a role in aiding operator compliance, with the National Transport Commission (NTC) encouraging all within the chain of responsibility to "adopt telematics to increase compliance, safety and productivity outcomes within audit-based schemes, safety management systems and industry schemes".

To better understand the potential of IVMS, National Road Safety Partnership Program (NRSPP) consulted leading figures from the transport industry — including operators, drivers, insurers, technology providers and researchers — to promote collaboration and improve business and safety outcomes.

Real-world applications

Operators have introduced telematics for various reasons ranging from managing specific issues such as driver speed and

fatigue through to full integration with job dispatch and onboard displays.

A clear understanding of what an operator wants to achieve is the key in selecting what parameters to measure and therefore the technology suite that will meet current and future needs. To derive safety benefits, telematics should also be seen as one component of a broader 'safety culture' that had to be fostered by management with the active participation of all employees.

Benefits on the ground

NRSPP engaged with operators of both light and heavy vehicle fleets for a first-hand account of their experiences. There was significant crossover in the benefits reported despite difference in fleet types and challenges in quantifying benefits.

While there were differences in operator goals and implementations, the primary areas telematics systems were seen to target were improved driver behaviour and enhanced operational efficiency. Improved driver behaviour led to: increased fuel efficiency, reduced maintenance and a reduction in incidents resulting in lower insurance premiums and downtime costs.

Operators were also able to: improve productivity through real-time allocation of their resources, ensure driver compliance with vehicle use policies, manage infringements and public complaints, and improve company reputation and customer service through enhanced performance.

First-hand feedback

Operators emphasised that positive results can only be achieved through an understanding of which data needs to be collected. While relevant parameters will vary, speed, braking and fatigue were commonly recorded. An effective back office must also be created to manage and act on data collected.

From a safety perspective, there was great variation in technologies used and implementation among operators, ranging from telematics being an integral part of continued improvement in driver performance through individualised driver training to simply ensuring compliance with speed and fatigue regulation.

Implementation — five key considerations

There are some common factors required for the successful implementation of a telematics system. These can be grouped into the following five areas.

1. Clearly defined goals

- Understand risks to be managed and the leverage to operational efficiencies.
- Ensure the system chosen will provide the desired results.
- Process should be a collaborative decision between providers and operators.
- Ensure telematics is a component of a safety culture.

What are your expectations?

Successful IVMS implementation requires that both provider and operator have a clear understanding of expected outcomes.

Understanding which risks will be managed by the system and what is needed to leverage operational efficiency is critical. Telematics won't provide results on their own. To contribute to improving safety, telematics is one component of a 'safety culture' and can help provide the right data and evidence to allow organisations to manage and reduce risk. Similarly, improvements in performance are unlikely to occur without an overarching drive towards continued productivity growth. Other systems or additional resources may need to be put in place to manage IVMS implementation.

Selection of technology

While operators should research telematics technologies that are available, choosing the technology should be in collaboration with providers.

Beyond improvements to safety and operational efficiency, telematics may have implications for an operator's ability to claim fringe benefits taxes and fuel rebates — all systems installed must be compliant with relevant legislation, for example — and diligence is necessary to ensure installed systems are compatible with all vehicles across a potentially varied fleet.

2. Consider current and future trends

- Select suitable technology infrastructure for current and future needs.
- Understand the limitations of technologies to avoid a costly retrofit.

Selecting cost-effective infrastructure to meet current and future needs can present a challenge. It is vital operators consider the limitations of the technology they install to ensure that it is appropriate for the task to avoid a costly retrofit or an unworkable system.

For example, telematics systems generally relay data via the mobile telephone network, with the option to use satellite transmission when out of range. An incident alert system transmitting via satellite may be unable to acquire line of sight in a rollover, so if rollover is a key concern for a vehicle fleet operating outside mobile network coverage, then this is a key factor to be considered.

3. Gaining employee acceptance

Drivers interact with telematics technologies both in their vehicles and as a result of management actions taken based on the data collected. Driver acceptance of these technologies is therefore reliant both on what is installed in the vehicle and on management policy.

Specific strategies may be required to clearly communicate to drivers a consistent message as to where telematics fits into a company's safety and operational goals. Telematics also offers opportunities for recognition of drivers for excellent performance. Operators may see additional employee acceptance by setting targets for teams rather than individuals, resulting in 'peer pressure' towards improved driving behaviour.

All systems installed must be compliant with relevant legislation.

4. Real-time monitoring and feedback

Driver side

Drivers can receive warnings in real time from the telematics system when certain parameters are breached. Real-time rating of driving performance and detailed reports delivered to the driver via a tablet or screen are also possible.

Operator side

Tracking the location of all vehicles via telematics drives productivity benefits as operators can allocate resources most effectively and provide an immediate response in an incident. Drivers can be re-routed or reallocated as required.

Systems were put in place to give real-time feedback to relevant managers when preset parameters were breached. These were either actioned immediately or logged for further follow-up, with over-speed and fatigue events common parameters resulting in immediate notification. Tracking can enhance safety in remote areas, with emergency management protocols activated based on parameters such as time spent in a single location or failure to report in.

Both heavy and light vehicle operators took advantage of 'geofencing', with immediate notification when a vehicle entered or exited a specified zone. 'Waypointing' to ensure drivers stay to a predetermined route to optimise safety was also a common operator-side implementation.

5. Management feedback

Managing information

Operators must introduce effective policies and procedures to take action on the large amount of data that telematics systems can collect. Feedback should take into account in-vehicle feedback drivers have already received. Technology does not reduce incidents alone; it requires appropriate and effective actions by management.

Effective data management is critical for telematics to be useful and effective. Data collected can only be actionable and meaningful if an effective back-office structure is present. Whether data management is outsourced or completed in-house, it is important that appropriate knowledge and resources are available for data to be useful. Operators should consider where IVMS and its associated data management fit into its core business.

Accountability

To achieve accountability, supporting systems should be built around the safety and operational goals of the telematics system. Effective accountability systems ensure that all drivers and vehicles are always monitored and breaches are acted on. Drivers must be held accountable for all breaches that occur and their supervisors must be accountable for acting on telematics data collected. This can be managed either through audit or compliance-based approaches, depending on operator size and structure.

Preventing complacency

Systems must be in place to prevent driver and management complacency. Without regular feedback, drivers may feel that they have no reason to pay attention to their driving habits, while management may end up having a narrow focus on 'trouble' drivers. Even if it falls within acceptable limits, change in a driver's performance may be an early indication that they need help. Recognising and acting on this increased risk gives management an additional opportunity to improve workplace safety and employee welfare.

Taking corrective action

Operators experienced with telematics take various approaches in how they use collected data and policies on driver behaviour; however, all emphasised the importance of consistency, taking immediate action and the possibility of 'false positives'. It is common to test vehicles and telematics systems to ensure their accuracy before engaging with drivers regarding a breach. Readings indicating poor driver behaviour, such as harsh braking or acceleration, may be functions of routes taken and this information can be used to improve safety by optimising routes.

Tailored driver training

Beyond using telematics to enforce standards of driver behaviour, operators can use them to improve driver behaviour through data-based, individualised counselling and driver training. A common coaching strategy centres on creating driver performance reports, which score drivers against predetermined indicators. These reports can be integrated with training and coaching strategies or become the impetus for their creation. Use of video recorded in-vehicle can also be used as a basis for training.

For either approach to be successful, operators must be able to recognise at-risk behaviour, demonstrate to drivers the required improvements and implement an action plan that includes further follow-up. Drivers can also be given direct access to collected data to encourage sharing of experiences and the creation of a 'safety culture'. Sharing in-vehicle video footage can personalise the safety issue, enhancing driver 'buy-in' to an organisational culture that prioritises safety.

Evolution over time

Operators should consistently re-evaluate the parameters they measure and the thresholds they deem acceptable. Overlaying data to create heat maps of crashes versus such factors as time of day or presence of 'black spots' may help identify relevant variables and set breach parameters. These 'black spots' may also indicate infrastructure risk, so operators can then work with asset managers such as road agencies to improve safety outcomes and the safety of the road network as a whole.

LIQUID WASTE FILTRATION BIN

Disposal of liquid waste from a range of industries — especially waste containing solid residues — is difficult, costly and can sometimes cause unexpected damage. The Smart Sinks filtration bin is a fully mobile system suitable for both indoor and outdoor applications and is suitable for tradespeople needing to clean equipment when working in high-rise construction sites or remote locations.

Based on a standard 'wheelie bin', it comes with its own water supply that is recirculated back through the unit. The unit can also be used in conjunction with a 'wet vac' when cutting concrete or using a hole saw; the wet vac is emptied into the Smart Sinks filtration bin and solid waste is separated from the wastewater.

The design incorporates three disposable bags, a valve and visual indicators that simplify use. The filtration bags concentrate the solid material so that the bags from each of the three stages of filtration can be lifted out and disposed of as standard rubbish. The primary filter collects up to 92% of waste material, with subsequent filters ensuring that all waste is removed.

Smart Sinks
www.smartsinks.com.au

ONLINE MINING EQUIPMENT BENCHMARKING

Big Iron Consulting has released an online mobile mining equipment cost benchmarking app, Mining Toolbox. The app is designed for both PC and tablets and gives mining and earthmoving clients the ability to quickly benchmark the costs of operating their mobile earthmoving equipment.

With over 12,000 data points and 100 models of equipment, Mining Toolbox is a comprehensive tool for determining baseline numbers to use for benchmarking, feasibility studies or bids.

Mining Toolbox allows users to tweak dynamic cost models to see the impact of pulling different levers and answers life-cycle questions such as: "If I can get my engine life out to 20,000 hours, what kind of impact will that have on the life cycle cost?".

Big Iron Consulting
www.big-iron.com.au

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Courtney Smith

FROM PAPER TO GLASS

In today's age of mobile technology, using pen and paper is a cumbersome form of data capture that leaves an ecological stain on the Earth. In fact, dealing with excessive paperwork is a pain point for workers across the FM industry, so making it simpler increases morale and lifts performance. Given that electronic records are now legally binding documents, it's only a matter of time that all FM companies see the huge benefits of moving from paper to glass.

On any given day, workers will have to carry around documentation and fill out job-specific forms (ie, inspection reports), work safety forms — and timesheets. We're seeing many companies get bogged down with paper, so we believe the time is right to evaluate going 100% digital.

While glass represents huge value for companies in terms of time savings and costs, the implementation and planning often requires planning and process mapping to identify the best outcomes outside the constraints of paper.

For companies still using paper-based systems for field staff, the process generally involves the following steps:

1. Head office creates a property inspection report form.
2. Head office arranges the printing of the form in custom book (expensive carbon pads).
3. The form gets dispatched to site.
4. The worker fills out the form.
5. The forms are transported back to head office.
6. The forms are processed by being entered into the system.

Moving to an electronic system will usually involve the following:

7. Head office creates property inspection report form.
8. The worker fills out the form.
9. Form workflow notifies exceptions to specific managers.

Six business processes are reduced to three with the addition of custom exception reporting without additional data entry. When FM businesses add up all of the time and resources spent on those three processes, it presents a clear case for moving to electronic data capture from the field. In cases where geographical distances between the hub and spokes are great, the case is even stronger.

Another benefit of going digital is that it gives management team members the ability to effortlessly analyse large amounts of operational data to make business decisions. For example, there is a significant lag when paper is used as the mechanism for collating data such as timesheets.

Algorithms can also be applied to flag events of key importance, which can eliminate the need for manual data analysis. Using the timesheets example once again, administration staff can be notified who *hasn't* filled in their timesheets as opposed to having to process all records to identify the missing pieces in the puzzle.

In 2013, KONE Elevators identified the impact smartphone technology could have on its operations and was eager to find a better way to capture data from the field. After an introduction from Australia's leading mapping provider, Courtney Smith (Co-Founder, Vertical Matters) met Rae Raymond (National Operations Manager, Service) and a proof of concept for the KONE Guardian project was born.

At the core of the project, KONE Elevators recognised that it needed to improve its safety management systems, remove the amount of paper wastage throughout the organisation and increase organisational productivity.

Improve safety management systems

By going digital with its safety management systems, it was able to set new standards for safety in Australia and make innovative use of GPS technology. Vertical Matters worked with KONE to develop a 'lone worker' application that supports technicians working unaccompanied faced with potentially high levels of risk. With workers being required to carry their smartphone devices on their person at all times, the 'stagnant alert' was developed, which notifies nearby workers if a device has remained still for five minutes.

Paper wastage

By going digital with its forms (including Timesheets and Safety), KONE was immediately able to reduce paper usage by 95%. When it is considered that the KONE team includes over 1000 workers spread across Australia, the reduction of the company's carbon footprint has been substantial.

Organisational productivity

Once the key requirements of capturing form data digitally had been satisfied, the scope was broadened to identify further operational benefits for KONE. Using the KONE Guardian Application, workers now access information relating to customer equipment including type and characteristics. Previously, obtaining this information would require phone calls and/or carrying around bulky asset registers.

By filling out timesheets using mobile devices, they have cut four of the six organisational processes involved with this task. They no longer have to print and deliver the forms out to site and then process them in the office.

Many companies get bogged down with paper

© iStockphoto.com/Skip ODonnell

With the KONE Guardian Application, all the workers have to do is fill out their timesheets and the data feeds into KONE's ERP. Vertical Matters also helped create an Uber-like system for the support with its customer care department being able to visualise on an interactive map the location of its technicians so it can dispatch accordingly.

KONE Elevators was able to reduce its carbon footprint and make significant organisational gains by moving from paper to glass. Rather than be clouded with a "well we've done it this way" mentality, they made the decision to innovate and it's reaped dividends. The implementation of mobile applications to perform key operational activities does come at a cost to the company — but so do inefficient layers of administration and staying in the past.

Vertical Matters

www.verticalmatters.com.au

PRODUCT WATCH

FIELD SERVICE MANAGEMENT SOFTWARE

The latest version of IFS Field Service Management (5.6.3) is now available and features a number of enhancements.

The software now features a Windows 10 mobile client and app, in addition to Android and iOS. Built on the same framework and with the same feature set as the other mobile clients, the new Windows 10 client offers users the same robust and intuitive software experience for Windows Phones, tablets and Windows 10 laptops.

IFS Lobby Leveraging is an innovative Lobby architecture released in IFS Applications 9 and the new version comes preloaded with several Lobbies that present real-time information in an easy-to-understand graphical view. The FSM Lobbies have been specially designed for mission-critical functions such as service managers, inventory and logistics, financials, and repair and depot.

Field engineers can now receive iOS notifications on iPhones, iPads and on the Apple Watch, for important updates sent through the FSM mobile application. They can accept or reject assigned tasks and, with one click, launch the FSM mobile application to display task details.

Users can now monitor business data and summarise updates on the Activity Bar within the application via activity feeds. This allows users to track important data and, with one click, see when it was updated, what updates occurred and who made the changes. The activity feeds can also be filtered to only show specific updates, such as only when a critical value on a record is changed.

The product also features an optimised UI for Android tablets, Inventory Lot Tracking and enhanced configurability allowing users to create the optimal user experience.

IFS Australia
www.ifsworld.com/au

RUGGED TABLET RANGE

The Casepad range from RuggedPad is designed to support front-line workers in emergency services, health, transportation, engineering, logistics, utilities and retail.

The range comprises 8.3″ and 10″ fully rugged Intel Quad Core tablets with Windows 8.1 and 4G/LTE in an IP65 format. The lightweight devices are certified water- and dustproof and designed to withstand a 1 m drop. An optional MIL Standard-designed case version increases the drop height to 1.8 m.

Casepad devices feature extended battery life and last for a full 9 h. The battery is additionally removable and swappable, ensuring downtime is kept to a minimum.

There is provision for in-vehicle docking with dashboard dock for connection to power charging, ANPR cameras and external antennas.The Casepad can support multiple camera ANPR and in-vehicle video applications.

Ruggedpad
www.ruggedpad.com

LIFE JACKET

Wilhelmsen Ships Service has launched a life jacket specially designed to safeguard workers in offshore environments. The Unitor Inflatable Lifejacket features a 170 N buoyancy rating and a Hammar automatic hydrostatic release system. While designed specifically for rugged conditions, it is also allows for free movement and is lightweight.

An interlocking lobe bladder inflates automatically when needed and self-rights the user in under 5 s, even when they are unconscious. The design of the jacket forms a wave barrier which ensures water is not channelled to the user's face, protecting airflow.

The high-visibility, heavy-duty nylon jacket is compliant with ISO 12402-3 regulations. It offers manual inflation, features reflective tape and comes with a whistle for attracting attention.

Wilhelmsen Ships Service
www.wilhelmsen.com

TOUGH AND TRUSTED

From 'first response' at fatal road accidents to saving sheep in a storm, Warrnambool State Emergency Service needs tough and trusted capital equipment that can be relied on every hour of every day of the year.

Charged with assisting the local community in road accident rescue, land and sea searches, and support with storm damage, the Warrnambool SES unit, based on Victoria's wild south coast, is made up entirely of volunteers who are on-call 24 hours a day, 365 days a year.

Controller Giorgio Palmeri — responsible for fleet procurement — worked closely with the team at Westar Trucks in Melbourne's west to find a truck that offered flexibility and unflappable reliability.

The unit settled on a 2014 NPS 4x4 Crew Cab — a hard-nosed workhorse that could perform across a variety of jobs and environments.

Palmeri said that one of the reasons for choosing the Isuzu N Series over its competitors was the advantage of the crew cab four-wheel drive.

"The 4x4 can be used literally everywhere. We take it to road crashes on urban highways, into country paddocks and along rugged cliff-top trails.

"This is a replacement for a competitor crew cab model from the mid-1980s, so it's a massive improvement on comfort, safety and performance — it also has loads of traction and ground clearance," Palmeri said.

The NPS crew cab model comfortably seats seven, which means the SES team can travel safely in one vehicle to an incident site — a huge benefit when lives are on the line.

The safety suite of the Isuzu N Series also ensures the SES crew arrive safely every time, even when up against challenging and often highly dangerous situations.

Driver and passenger airbags are standard across the N Series range, along with an anti-lock braking system (ABS), seatbelt pre-tensioners and double side-intrusion bars.

"The other reasons we opted for the NPS was at 6500 kg it offered a higher GVM than competitors, all while seating six passengers and the driver — a big plus for us," Palmeri said.

"The NPS is that little bit smaller, has better handling and visibility, and the synchro gearbox makes it that much easier to drive. Everyone agrees it drives like a car.

"With a range of team members getting behind the wheel, it's definitely easy to jump into and drive in high-pressure situations, meaning minds are kept firmly on the task at hand.

"Its overall driveability and the Hill Start Aid function certainly mean that our less experienced drivers feel confident getting behind the wheel in any situation as well."

Power is not an issue for this 'go anywhere' unit either. With max power of 114 kW @ 2600 rpm and max torque of 419 Nm @ 1600–2600 rpm, Adam's drivers can tackle just about any driving situation with confidence.

Warrnambool SES also installed a second alternator with a 7000 W inverter to accommodate the pneumatic light tower with its four 1000 W floodlights. Built onto the body of the NPS, the light tower is employed in a range of situations, from power outages caused by storm damage to rescue and relief missions.

Additional steps and handrails have been added in the build, along with an air compressor, an alloy bull bar and 15,000 lb winch to make sure every box is ticked for whatever job is thrown their way.

It's up to the SES unit to tackle all road traffic accidents and rescue situations in the area, and they can be called at any time of day or night.

"We attend over 150 incidents a year just in the Warrnambool area. Around 20 of those were road crashes and the remainder centre around tackling the elements in storm cover and rescue operations, so we need to carry a lot of equipment," Palmeri said.

"As we use the truck for road crash and storm emergencies, we need to have all our tools easily accessible. The Isuzu is equipped with plenty of lockers and drawers for stowing rescue and recovery gear.

"We're very impressed with the truck. It's ticked all the boxes for us and it's been an invaluable addition to the team."

Isuzu Australia Limited

www.isuzu.com.au

Daniel Cran, Managing Director, LogMeIn APAC

SUPPORT OF THINGS

There has been a lot of talk about how the IoT will revolutionise the world. Some say it will fundamentally change the way people interact with the world around them, others say it will generate trillions in economic value, but many have lost sight of its true potential.

Significantly for field service teams, connectivity opens doors for direct access to customer feedback that has until now been possible only through third parties such as retailers. With consumers becoming ever more connected, these contact points will only continue to expand. The challenges currently facing businesses in customer engagement and support are only the tip of the iceberg.

The problem is that the Internet of Things (IoT) is still a fairly abstract concept to many — connecting seemingly 'dumb' things to enable the sharing of data. From a business perspective, what does it really mean? As we see it, the value of the IoT in the 'here and now' is as an equally connected and pre-emptive customer support structure that meets the needs of today's ever more connected customer — we call it 'The Support of Things'.

When we developed LogMeIn Rescue, it was in response to a transformation of the workforce that altered end-user expectations and business needs. As end users increasingly demand a quick resolution to service issues and businesses strive to keep their support costs down, our cloud-based remote IT support solution enables instant deployment of a technician, providing a simple way to look at a user's screen or evaluate a device's diagnostics.

The next logical step was to develop visual inspection capability, and we see this as vital to any business that offers reactive support. As any support technician knows, sometimes a customer problem can be as simple as a loose connection, an unplugged device, a jammed printer or a missing piece of wiring.

Problems like this are obvious after the fact, but can be surprisingly easy to overlook initially. The Rescue Lens feature offers instant visibility and means that irksome issues can be resolved without unnecessary technician deployment.

Truck-rolls are expensive and techs aren't always guaranteed to have the right part onboard, so visual verification of the problem prior to any further action is a valuable tool for any service business.

Rescue Lens allows end users to use smartphone or tablet cameras to stream live video back to the support technician, quickly and easily. It's a simple matter of downloading an app (Android or iOS), entering a PIN code to ensure security, then streaming the video back.

Australia's relative geographic isolation from the United States and Europe has created a market of early adopters — we are keen to look at how technology can be pushed further and how it can be used in alternative ways. We find that our cus-

> Irksome issues can be resolved without unnecessary technician deployment.

tomers are building use-cases on a daily basis, as they determine new ways to both implement Rescue Lens for productivity and service-level improvements and to make use of the IoT in general.

Fuji Xerox is a longstanding LogMeIn customer and is commencing a pilot of the Rescue Lens feature. The company supports customers across 14 countries in the Asia–Pacific region and, as with many service enterprises, historically worked under a break/fix methodology. Implementing visual inspection capability is expected to deliver improvement in two ways: 1) expensive truck-rolls are minimised — the cost benefit here is obvious; and 2) as a value-add to resourcing.

The second is a less expected advantage and a clear example of customers building their own use-case. Having that visual capability means that companies can send junior or less experienced field technicians out to site with more confidence. Senior techs can remain in the back office and offer remote support. If the on-site tech is working on a new piece of equipment or struggling to find the fault, the live-video stream provides a valuable tool to assist with diagnostics and to resolve issues quickly. To that end, it also serves as a cost-effective and important means of providing staff training.

Major telcos including Telstra and Optus see the inherent value and are now looking at how to incorporate this functionality to further their own service offering. Every business has the same goal — to make the customer happy — so anything that reduces support expense and facilitates a faster customer resolve represents a great opportunity for field service businesses.

The IoT will change the face of field service as we move further from a reactive approach to proactive service scheduling and maintenance. At this stage, many companies still struggle to see the inherent opportunity and to understand how benefit will be derived, because the break/fix model is so prevalent still. Think about how much easier a pay TV technician's life would be if he could see how the customer had connected their set-top device without having to physically go to the premises.

We partnered with SATO to help deliver the world's first IoT label printer. While printers are theoretically already 'connected', SATO wanted much more than the ability to send print jobs. Using our Xively solution, SATO was given hundreds of functions to track and monitor — in real time — printer usage, error incidents, paper and ink supply levels and whether additional accessories were enabled.

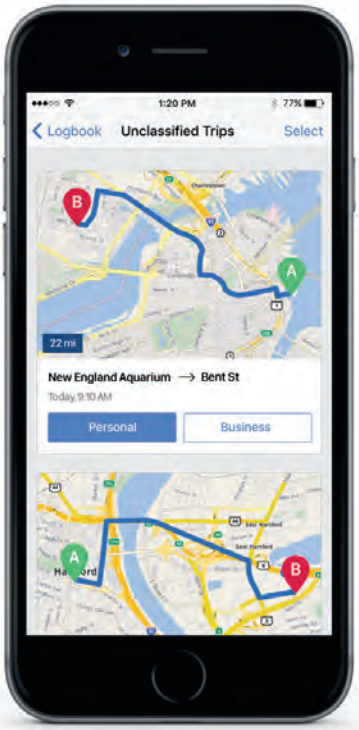
Xively utilised Heroku and salesforce.com to build both customer-facing and SATO-facing apps that give users the power to remotely control and monitor each printer, and then store that data in Salesforce. A SATO service rep could, for example, change any of 300 settings on a printer like the darkness of the print or the language settings. The Salesforce integration also allows for automated triggering of issues before the customer knows about them. For example, customers can set up notifications to let them know when they are running low on ribbon or labels. There are benefits across the board:

- 24-hour/365-day monitoring of printers to identify problems before they occur.
- Improved operating rates and efficiencies including elimination of unplanned downtime for SATO customers through analysis of logged data.
- Reduced SATO service costs by understanding printer issues before sending in service technicians.
- Overall Xively helped SATO achieve its goal of creating a truly interactive product that allows for always-on customer service with an automated feedback loop that improves service across the board.
- Increased customer satisfaction with user-configurable alerts for things like low ribbon or other common errors.

We are at the beginning of exciting times in terms of being able to improve customer satisfaction, attraction and retention. Companies that will benefit most will be those that recognise these potential opportunities and develop new ways to utilise technology to further their own offering.

LogMeIn Australia Pty Ltd
www.logmein.com

LOGBOOK APP



Delivering work-related apps that enable employees in the field to be more efficient has become mission critical. Telogis has announced its Logbook app, which is said to increase the productivity of mobile workforces by electronically logging — via a quick swipe on the screen — whether kilometres driven were business-oriented or personal. The app has been optimised for iOS devices including iPhone, iPad and Apple Watch and is available from the App Store.

The app is an extension of the Telogis Mobile Enterprise Management (MEM) software platform and was developed specifically for commercial drivers, mobile sales representatives and supervisors who drive a vehicle for both personal and business use. Built from the ground-up and optimised to take advantage of iOS advanced security features like Touch ID, Logbook simplifies authentication, tracking and distance-travelled designation while meeting stringent tax regulations in specific European Union countries including the United Kingdom as well as in Australia.

Logbook empowers drivers and field reps to view their recorded kilometres and classify their completed trips by swiping one way or the other on their mobile devices. Full integration with vehicle telematics ensures accurate and complete distance-travelled records so organisations can confidently claim tax deductions and gain more insight into their professional fleets. Through the platform, supervisors can identify classified kilometres, assign unclassified trips to individual drivers and generate personal-versus-business kilometres-travelled summaries within detailed reports.

The Australian Taxation Office has approved Telogis Logbook for use with mobile devices.

Telogis
www.telogis.com

CLOUD-BASED JOB MANAGEMENT SOFTWARE

simPRO has introduced a major enhancement to its cloud-based job management software, which promises to make it easier for trade services business to get paid for work in a timely manner. The new capability, which is offered in partnership with payment solutions firm IntegraPay, provides clients with three easy payment options that will make collecting payments quicker and more efficient.

Clients' payments can now be processed in the field as soon as a job is completed using the simPRO Connect mobile app. Alternatively, customers can pay online directly from their invoice with one click, or the supplier can take payment details over the phone and enter them directly in the system.

The feature is available across simPRO's suite of products and is designed to make it easier for users to get payment by streamlining and integrating the invoicing and collections processes.

Managing cashflow is a big challenge for small business, as many do not have the option to defer key payments such as bank debt and wages. simPRO's enterprise and service job management software provides immediate access to quick payments to improve cashflow management. Future enhancements will support direct debits, BPAY and recurring payments such as repeat bills, memberships, software-as-a-service and subscriptions. The system's online dashboard simplifies direct debit payment management and businesses can access personal details and payment information, add new customers or amend payments 24x7. All information displayed is live and all changes are applied instantly.

simPRO Software
www.simPRO.com.au

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Vital information for your business

DEPLOYMENT DISASTERS...

...AND HOW TO AVOID THEM

Managing mobile teams presents a unique set of challenges, particularly when it comes to providing IT services. Mobile workers expect the same level of continuous access as those in the office and IT departments need to support business with the same efficiencies. Knowing the challenges beforehand will go a long way to ensuring a smooth deployment.

There are 12 specific challenges organisations face when expanding a mobile workforce. We take a look at what they are and the solutions that will help overcome them.

IT service delivery

Automate patch management and upgrades

Managing a large mobile deployment device by device can be an administrative nightmare. Ideally, the same systems management suites used on the internal wired network can be extended to the mobile environment, allowing those devices to be managed 'over the air'. To avoid impacting productivity, patches and upgrades should be applied after-hours, or at other times when users aren't actively using or logged onto their devices.

'Bandwidth-aware' capabilities ensure that systems management occurs not just at an appropriate time, but over a connection with appropriate speed. Depending on use patterns and the connections available, that optimal connection may vary: over a cellular network after-hours, while a device is in range of a corporate Wi-Fi connection in a parking garage, connected via home Wi-Fi or mounted in a docking station.

Keep trouble tickets in check

A mobile environment adds new variables to the application-delivery equation including intermittent connectivity, access over third-party networks, and a need for more complex security and authentication schemes.

The ideal solution incorporates flexible policy control

It is difficult for typical workers to recognise when a problem is connection related as opposed to device or application related, or to conditions on the host network or server.

A solution that manages the complexities of connections on the worker's behalf, effectively taking these problems out of the equation, has been shown to greatly reduce the number of help desk calls. This not only lowers support costs but eliminates the lost productivity that those support calls represent.

Achieve reliable operation without burdening IT

Just as the wireless infrastructure should be 'hands off' for the user, it should be 'hands off' for IT as well. Active load balancing and automated failover built into a solution allow 'set-and-forget' operation. A proactive alerting capability allows the IT department to manage by exception and receive automatic notification of problems or potential problems, without having to constantly monitor the deployment. Oftentimes, they can intervene before issues impact workers and trigger trouble tickets.

Organisational security

Enforce security without hampering workers

Protecting data and devices from unauthorised access is important, but sometimes requires a balancing act. Whether single-factor passwords are sufficient or two or multifactor strong authentication is called for, authentication needs to be straightforward and a lost connection shouldn't require workers to have to perform repeat logins.

Devices need verification that security precautions are active to avoid introducing malware that would place the enterprise and its user community at risk. Data streams need to be encrypted to protect corporate information and, in some cases, to meet regulatory requirements. An ideal solution accounts for all of these security concerns, in a way that doesn't burden the user into having to take extra steps, and protects assets in a way that is as hands off as possible.

Protect against stolen devices or unauthorised access

A mobile device configured to access internal applications and data that is lost or stolen can be a huge security risk. The ability to immediately quarantine a lost device or to recognise that a device is being used by an unauthorised person protects the corporate network.

Digital certificates may also be used to verify that only devices that have been preapproved may connect to corporate resources, which prevents a user from using corporate credentials to connect via an unsecure home machine or other personal device. A common practice is to automatically place any newly distributed device into immediate quarantine on the first connection, so the administrator can verify the configuration and user identity before allowing full access.

Protecting data and devices from unauthorised access is important, but sometimes requires a balancing act.

Gain control over workers, devices and networks

Mobile assets are constantly on the go and this presents challenges that don't exist with fixed assets tethered to a wired network. Administrators need control over use access through authentication that integrates with corporate directories for easier management. This includes control over which devices may connect and the users who are authorised to use them, as well as control of access by specific applications and over which networks.

The ideal solution incorporates flexible policy control. Devices and users may be given a degree of freedom to access the internet and use other applications. Alternatively, they may be tightly locked down so that only specific applications are allowed access, only over authorised networks, with enforcement via controls that cannot be bypassed.

User experience

Foster user acceptance and manage change

Mobile workers are like any other — their focus is on doing their job. If technology is too cumbersome, the entire mobile deployment may fail. Furthermore, users themselves may introduce problems of their own making. Putting too many options in their hands might allow them to accidentally cripple their devices, open security holes or bog down the access networks.

The best solution is one that requires minimal user intervention and makes the underlying technology as transparent as possible.

Make wireless network use seamless

Most mobile deployments require multiple cellular networks, often augmented with Wi-Fi access points, to provide reliable coverage throughout the organisation's entire service area. Mobile workers shouldn't have to log in to separate networks, worry about making configuration changes or deal with the other intricacies and complexities of mobile access.

Ideally, the mobile environment mimics the in-office wired experience. It furnishes a single sign-on; allows the worker to access multiple networks as though it were a single network; does it all within a single persistent session so workers only have to log in once; and pushes down any necessary configuration changes without user intervention. This user-transparent experience is also easiest for the IT department to support.

Deliver seamless access to more applications

The number of applications and types used by mobile workers is growing, beyond scheduling and dispatch. More and more, customer and task-specific applications are being deployed that are an integral part of doing the in-field job. They can include CRM, work-order management, GIS and mapping, parts inventory databases and many more.

Voice-over-IP, camera software and video software enable new capabilities for communicating from the field. These applications are rarely, if ever, designed with mobile access in mind, where connections break without warning (for instance, when a user goes out of range), which in turn makes the applications prone to crash.

The easiest way to manage the problem is with a solution that allows any software used in a LAN environment to be used in a mobile environment. It is also useful to prioritise application traffic that is critical or time-sensitive over less-critical traffic.

Business operations

Gain visibility into use of corporate assets

Investments in wireless technology including devices, networks and the supporting infrastructure are like any other business investment and it is important to know they are performing and delivering properly. An ideal solution will deliver visibility on three levels:

- Real-time visibility: Lets administrator immediately see which devices are causing problems and take immediate action.
- Proactive alerting: Notifies administrators that devices or users are in need of attention, so that IT personnel don't have to spend time watching for problems, but can focus instead on fixing them.
- Reporting and analytics: Allows administrators and managers to see the big picture of service delivery, know when assets are being underutilised and plan for the future.

Keep wireless access charges in check

As cellular carriers replace unlimited-use data plans with usage-based rates, enterprises face a new cost-control challenge — analytics capability that monitors network use for appropriateness and, combined with a finely tuned set of policies, helps administrators keeps unnecessary tasks off of cellular networks.

User transparent connection management switches automatically to free or lower cost Wi-Fi where it is available. Measures such as compression and link optimisation can significantly reduce bandwidth consumption while improving performance.

Be ready to scale

For organisations that have overcome the preceding eleven challenges of a mobile environment, the twelfth is scaling the mobile environment. Successful organisations have often extended their original mobile deployments to new users, including additional classes of mobile workers and even executives, sales personnel and other 'road warriors'.

While some of these users might be served by an SSL-VPN or IPsec VPN, their organisations have determined they can be more effectively served by a solution with the richer feature set and user transparency afforded by a solution that handles the specific demands of a fully mobile workforce.

Wireless Data Solutions Pty Ltd
www.wirelessdata.com.au

MOBILE BUSINESS MANAGEMENT SOFTWARE

Sage 300c from Sage Business Solutions combines the features of the Sage 300 accounting and business management solution for small and medium companies with new technology to support increasingly mobile workforces.

Sage business management solutions offer more than traditional ERP systems. With the flexibility to work anywhere, and a simple HTML5 browser-based user interface that shortens a user's learning curve, Sage 300c allows SMBs to focus on their business without the worry of managing or keeping up with technology changes.

Deployable in the cloud and accessible anywhere, anytime and from virtually any device, Sage 300c will be introduced progressively over four releases. The initial release includes the home page, bank services, tax tracking, payment processing, general ledger, accounts receivable and accounts payable, with further modules added over the coming months.

SAGE Business Solutions
www.sagebusiness.com.au

GPS TRACKING SOFTWARE

Navman Wireless has announced the release of its newest GPS software platform, Navman Wireless DIRECTOR.

Navman Wireless DIRECTOR helps businesses gain efficient fleet management habits through data about their workforce. The platform comes following months of R&D and product collaboration between the engineering teams of Navman Wireless and its newly combined sister company, Teletrac Inc.

The software empowers customers with actionable data in an easy-to-use platform. Its scalable features go beyond fleet tracking to include everything from analysing driver behaviour, to receiving instant alerts, robust safety reporting and custom geofences.

Navman Wireless DIRECTOR includes a powerful mapping solution, comprehensive messaging capabilities and workflow forms, helpful user alerts, extensive vehicle maintenance, instinctive user search functions and robust driver behaviour analysis.

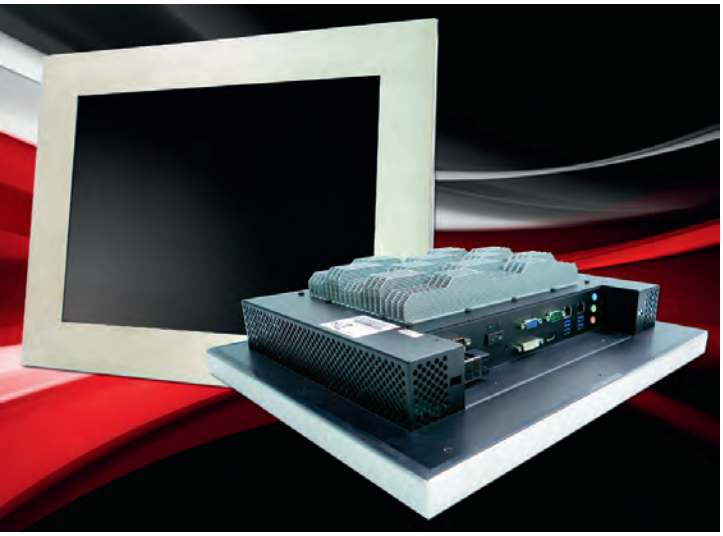
The software's new complete driver and vehicle behaviour solution, Safety Analytics, provides a view into fleet activity showing driver and vehicle behaviour in real time, promoting better behaviour of company vehicle fleets. Composed of a visual event viewer and driver scorecards, the software feature enables businesses to monitor and replay unsafe driving events that occur on the road. The real-time scorecard function creates comprehensive reports summarising unsafe road behaviour and provides side-by-side driver rankings.

The software platform is completely web based, accessible to global fleets in a variety of industries and is hosted on the Amazon Web Services (AWS) cloud platform.

Navman Wireless Australia
www.navmanwireless.com.au

RUGGED TOUCH PANEL COMPUTERS

Backplane Systems Technology has released Perfectron's LIF Series of Rugged Touch Panel Computers with Intel CPUs onboard.



The devices support a wide range operating temperature and wide range voltage input 9–24 VDC/100–240 VAC (optional). With DC input, the system can operate perfectly in an extended temperature environment from -30 up to +60°C. The specially designed anti-removable USB port at the rear of the panel PC provides a secure space for a USB connection and avoids unexpected remove or stole. LIF series support rich I/O features such as VGA, DVI, COM, LAN, USB, Audio, and also mPCIe expansion slot.

The LIF series devices feature a high-brightness LCD panel for easy readability under industrial conditions. The 15″ LCD supports XGA resolution (1024 x 768) with 5 wires resistive touch, which makes LIF series panel computers suitable for applications such as automation, HMI and warehouse management.

The special anti-remove USB 2.0 port on the back side of the chassis can be closed with its cover by screws. It provides a secure space for USB and avoids unexpected removal. It also provides dust resistance, making it suitable for outdoor applications.

Backplane Systems Technology Pty Ltd
www.backplane.com.au

MAINTAINING CONTACT

Tasmanian-based Contact Electrical was founded in Launceston in 1986. Over time the company evolved into the Contact Group, expanding to Hobart and Burnie and further diversifying services to include design and project construction, as well as general electrical services.

Contact Electrical needed to improve its systems, particularly when it came to dispatching emergency jobs. The company's process required many calls to members of the fleet to try and establish who was available and who was closest to the job, which consumed valuable time and impeded significantly on business productivity levels. The company decided to implement Fleetmatics REVEAL for GPS tracking, which immediately improved response times.

Since the implementation, Contact Electrical has visibility of each vehicle location on a live map, enabling it to assign new jobs to the nearest vehicle in real time and increasing productivity through time savings. The state purchasing manager for Contact, Adam Moore, said, "Being able to locate your fleet in real time is a big benefit. It saves calling four or five staff and checking their location just to find the nearest one."

A lack of visibility into fleet location had also left Contact susceptible to unwarranted customer disputes. Without access to accurate job time, date data, vehicle location or driver activity, it was difficult for the back office to know whether a dispute had any merit. In the case of one customer complaint, the client phoned to say that a job had been left unfinished. A quick check of the Fleetmatics REVEAL app resolved the confusion instantly, meaning that time was not wasted unnecessarily.

"We were able to check our Fleetmatics app, only to discover we never had any vehicles in that area. They soon figured out it was another electrical company that had been servicing their business and not us," said Moore.

Under the previous system, Contact Electrical was unable to effectively manage company fleet fuel purchases, as there was no facility for verification of fuel card transactions against specific company vehicles. This left the company open to fuel card abuse, escalating costs unnecessarily.

Fleetmatics REVEAL features fuel card integration, meaning that purchases are easily verified to ensure they are assigned to the correct vehicles. It also allows the management team to track every fuel dollar and to produce fuel efficiency reports to ascertain which vehicles are meeting target efficiency ratings.

"We have had incidences in the past where employees have used fuel cards assigned to another individual, meaning that the vehicles being fuelled weren't in line with the cards being used. Fleetmatics REVEAL enabled us to iron out those problems quickly and efficiently," said Moore.

It's not all about economic savings, however, as increased fleet and driver safety is another benefit of GPS vehicle tracking. Before Contact Electrical decided to implement such a system, it had no way of knowing how drivers were behaving. Employee safety is paramount to the company, so the real-time visibility of Fleetmatics REVEAL was a key motivator. Alerts and notifications are sent when unsafe driving habits are practised and management can immediately react in the event of a vehicle breakdown, or any other situation which puts the driver at risk.

"We know where the guys are if something was ever to go wrong. We have had a broken down vehicle and Fleetmatics allowed us to quickly locate it and send assistance immediately," said Moore.

Since Contact Electrical has transitioned to Fleetmatics REVEAL for GPS vehicle tracking, the company has enjoyed improvements across the board; faster response times, fewer customer disputes, better fuel and fleet management and increased safety.

"We get great support," said Moore. "It's an advanced system with more benefits and better value for money."

Fleetmatics
www.fleetmatics.com.au

SUPPLY CHAIN MANAGEMENT

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The Trans-D Yard & Dock Management System from Sonar Technologies places an emphasis on safety, security and regulatory compliance in transport sites and depots. Trans-D provides full visibility and control through real-time management of docks and trailers, prime movers, trucks and vans. The result is increased operational efficiency and productivity through the optimum utilisation of assets, including human resources.

Trans-D offers control and monitoring of freight movements including departures, arrivals and load types, ensuring drivers are directed to the most appropriate dock on arrival at a depot. The system also monitors service history, type of vehicle and how goods are loaded, which increases safety levels. Movement tracking and seal recording means that goods can be scanned on arrival to ensure that the load has not been tampered with and optionally includes a camera feed.

The Tug Mobile app directs the driver to the optimum route, taking into account depot traffic rules and scheduling. The in-built Scheduler provides the means to pre-plan operations and have the system generate and assign necessary tasks. The system is scalable and can be used in both large and small depots.

Sonar Technologies Aust Pty Ltd
www.sonartechnologies.com

ERP AND ANALYTICS PLATFORM

Pronto Software has unveiled a new face for its ERP and analytics platform, Pronto Xi 730, in addition to a broad range of enhancements that make the solution faster and easier to use. The cloud-based solution features a new web interface, offering access from any device with an internet connection.

Other features include: simplified general ledger hierarchies that deliver faster period end processing with out-of-the-box reports that allow users to set up data structures and produce custom financial reports; seamless integration to Pronto Xi CRM, Sales and Inventory modules; an enhanced Pronto Xi Project application that makes it easier to manage projects by activity and duration; Mobile Service with on-site invoicing and payment receipting for faster call-to-cash processing; and an employee portal to streamline administrative tasks including timesheet entry and leave management.

Pronto Software Pty Ltd
www.pronto.net

TOOLBOXES

The Ridgeback range of toolboxes designed specifically for utes consists of four main product groups available in a variety of models to suit the needs of any application.

The PT Range is a premium heavy-duty product suitable for the harshest applications. It includes four drawers and shelving. The LT Range is a standard heavy-duty toolbox and comes with one adjustable shelf. The FT Range features a fliptop lid for easy access and the UB Range is designed for installation under the vehicle tray, providing additional storage.

All Ridgeback toolboxes are constructed from 2.5 mm high-strength aluminium. Chromate treating and powder coating improves durability and quality door locks and weatherproof door seals ensure that contents are safe. The toolboxes feature gas struts for ease of door lifting.

Ridgeback Service Bodies
www.ridgebackbodies.com.au

Peter Dickinson, CEO, Greentree

MAKING THE MOVE TO MOBILE ERP

As businesses weigh up their mobile options, the working world is moving progressively towards more flexible working hours and a workforce that is increasingly needing to access business information remotely.

While this is largely being led by field service workers, your sales force, operational staff, marketing and management teams aren't far behind. This has been driving mobile access across the length and breadth of companies, into their core enterprise business systems.

But what do we actually mean by 'mobile' access? While it is a term that is currently being used a lot, mobile software access has in fact been around for decades. Despite often being used interchangeably with 'cloud', mobile access should be available via a browser or native app from both on-premise and cloud-hosted software. But it is only quite recently that having mobile access directly into your ERP system or other core business management software has become really viable.

There have been any number of early-adopter scenarios in the mobile ERP app space over the past few years. As with any disruptive technology, we've seen a high rate of churn and increasing fragmentation. But what has also evolved has been a raft of valuable learnings as the number

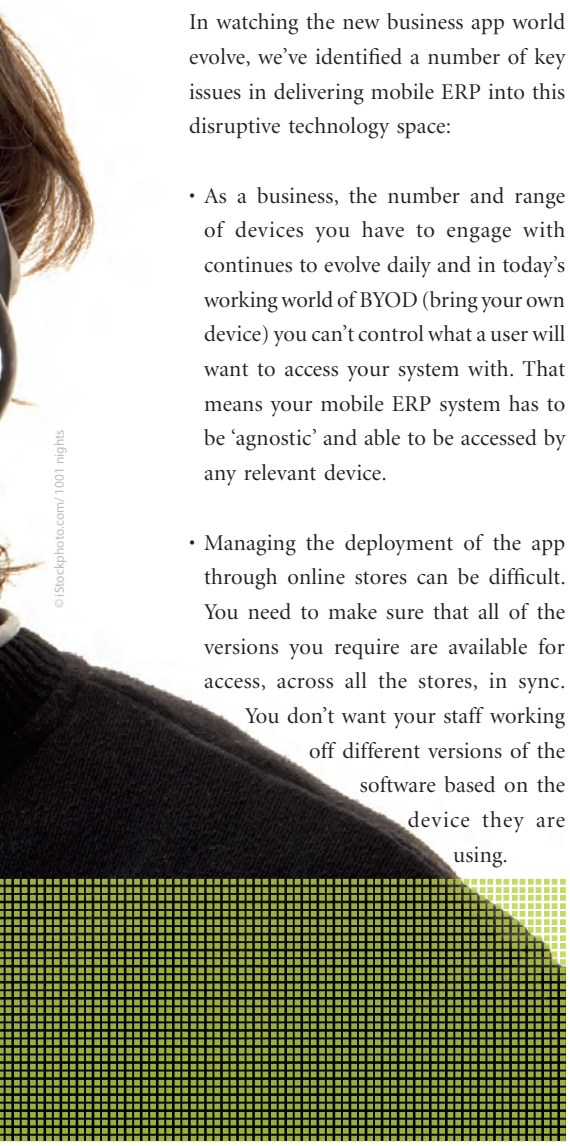
of application technologies, devices and platforms continue to explode.

Not without issues

In watching the new business app world evolve, we've identified a number of key issues in delivering mobile ERP into this disruptive technology space:

- As a business, the number and range of devices you have to engage with continues to evolve daily and in today's working world of BYOD (bring your own device) you can't control what a user will want to access your system with. That means your mobile ERP system has to be 'agnostic' and able to be accessed by any relevant device.

- Managing the deployment of the app through online stores can be difficult. You need to make sure that all of the versions you require are available for access, across all the stores, in sync. You don't want your staff working off different versions of the software based on the device they are using.



- Security remains a big issue, especially with the potential for data being hacked and devices being lost. If your staff members are accessing your core business systems off their own devices, you need to be very sure about device and software security.

Delivering the same experience

There are some very specific issues as well. One-size-fits-all might work in the small end of the mobile-app market, but for most mid-sized companies their ERP software and core business systems have quite a high level of configuration and customisation.

Truly mobile ERP options are available now

That functionality needs to be delivered via the mobile interface as well. This is very difficult for native apps to achieve and any browser-based apps need to be designed to accommodate customisation as well.

As a result, a number of early adopters have been stung with integration issues. Two-way mapping between the app and existing customised business management systems have created a number of major project budget blowouts. While there are some pre-built interfaces now being provided this is still a big issue, particularly if you have to connect into more than one system.

Finally, most of your users are going to want to have mobile access for more than one device. It is quite likely your average field service manager will want mobile access on a laptop, tablet and phone. Not only do you want to avoid paying three different licence fees for one user to access the same software, you want to be sure that you aren't multiplying any syncing or compatibility issues and creating an even bigger headache than the one you are trying to solve.

Software that is built to last

However, as with any software purchase, it's not just function you need to think about. Delivering information to the smaller screens on most mobile devices creates a whole new range of issues in terms of how you engage with your business management software.

The multicolumn forms, large tabular displays and dashboard displays that make sense on your desktop seldom translate well to the mobile world. First and foremost, the display needs to be easy to read and easily scrollable with touchscreen control.

Any forms you are using need to be easy to complete — if you are operating off a device with a touchscreen, selecting the fields for data entry and any drop-down options need to be achievable for those that have larger fingers and thumbs. Finding your way around the information should also be just as easy as any other user experience with the software — the menu should be clear and easy to navigate with a comprehensive search function in place.

If you can achieve all of this, the great thing is that you and most of your staff will only need minimal training to get up and running on the mobile version of your business software. So long as the browser-based screens are intuitive and genuinely embrace the terminology and functionality that you experience in using your personal mobile devices, then a lot of the 'technical' device training has been done.

No reason to wait

That is just one of the reasons why you shouldn't wait to embrace having mobile access to your core business systems. At the pace change is happening, there is not going to be a 'better time'. The sooner you are able to empower your staff remotely and/or in the field with the information they need, in real time, the greater the benefit you're going to get from your 'mobile' investment.

Truly mobile ERP options are available now. The functionality, security and capabilities will continue to evolve as the platforms, technology and devices that support them continue to progress and develop alongside them. Waiting is only going to create a bigger gap.

So long as you can fundamentally achieve the outcomes you are looking for from having mobile access to your software today, then you can bank on deriving incremental benefits as you progressively build your mobile capability in step with the technological developments being made.

Greentree

www.greentree.com

POWERING THE PUMPS

There's no question that the Australian landscape can be an unforgiving one. While the treasures buried in thousands of kilometres of wide brown land delivered a resources boom that lasted decades and kept the economy afloat, finding convenient access to the required fuel supplies that keep the wheels of industry turning is often difficult in such remote locations.

Caltex Australia has taken advantage of the abundance of solar energy available in the outback to facilitate development of what is believed to be a world first. Supplying 24-hour access to diesel in remote parts of Western Australia's Pilbara region has become more feasible with the construction of fully transportable, solar-powered retail fuel outlets at two key locations.

The Caltex Australia sites are located in iron-ore town Tom Price and Onslow, known for its wool exports. Both sites are more than 1300 km from Perth, are not connected to mains power and rely on the abundant solar energy of the region, along with on-site battery storage technology.

The Australian company is pioneering the environmentally friendly initiative to further extend the reach of its National Truck Network — said to be the largest truck refuelling network in Australia — comprising 200 dedicated truck stops and 300 truck-friendly sites across the country.

Caltex Network Development Manager for Western Australia Leon Calvetti said diesel customers driving between remote locations across the state were benefiting from the availability of the fuel whenever they needed it.

"The biggest challenge of supplying fuel in remote parts of Australia isn't getting fuel there — after all, we have fuel storage at the site and a great logistics team able to make regular deliveries," Calvetti said.

"The obstacle is powering the pumps so the fuel can get into the customer's tank — it's very expensive and inefficient to run a generator when there are only a handful of customers every day.

"It's also difficult to locate staff in the middle of the Pilbara many hours' drive from the nearest major town. By creating what we believe are the world's first fully solar-powered fuel facilities, we can efficiently provide diesel in some of the most remote locations of Australia."

The other benefit of these sites is that they can be relocated to meet fluctuating levels of demand. The nature of resources extraction across a vast area like Australia means that today's major sites will often become relatively unused in the future. If there is no longer the same demand, the portable nature of the depots means that an entire facility can be simply and quickly relocated elsewhere. The whole site is easily loaded and transported on the back of a truck.

"The whole design is tailored to Australian conditions, given the abundant sun and the long distances between service stations."

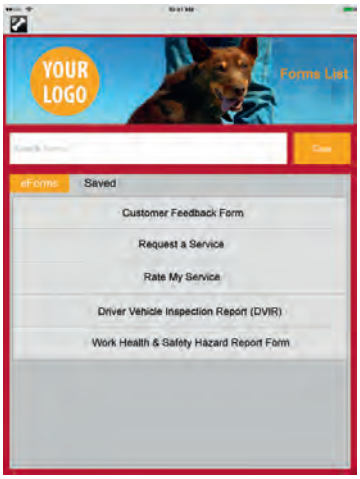
Calvetti says that, unlike many fuel outlets in rural Australia, the innovative Caltex sites could offer diesel 24 hours a day via a card payment system.

"These sites offer the same high-quality diesel available elsewhere across our national network and customers can access it at any time. But in such remote locations, with only a limited number of customers driving past, don't expect all the typical services available at other Caltex sites.

"While these no-frills facilities won't provide a pie, a can of soft drink or ice-creams, they will help keep drivers of heavy transport and four-wheel drive vehicles supplied with the diesel they need to get to the next town for a well-earned rest," he said.

Caltex Australia Petroleum Pty Ltd

www.caltex.com.au



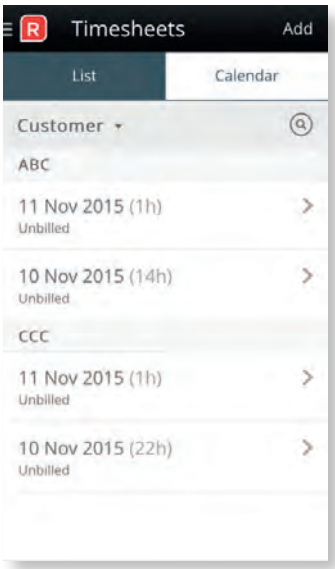
MOBILE FORM MANAGEMENT

Retriever Communications has released Paperbark, an easy-to-use mobile enterprise solution for creating and managing electronic forms. The application allows users to remotely interact with and capture data against corporate forms, straight from their mobile device.

Paperbark's flexibility allows enterprise users to configure the app to meet their specific needs in a matter of hours. Staff can easily update or create e-forms to replace existing paper forms. E-forms are placed into the Paperbark solution and made accessible to authorised users or groups securely via the mobile app. Mobile users are then able to use the electronic forms, which seamlessly capture important data and deliver them to back-end systems, streamlining processes and reducing wasteful double entry that comes with paper-based forms.

The product eliminates paper forms and processes, allowing businesses to minimise the costs associated with form distribution, collection and data entry. The e-form version control ensures that employees are using the most up-to-date forms, with updates pushed out to the application automatically.

Retriever Communications
www.retrievercommunications.com



MOBILE TIME-SHEET AND EXPENSE MODULE

Reckon Limited has released its time and expenses mobile application for Reckon One, giving small businesses the tools needed to easily track employee time sheets and expense claims and removing the need for paper-based record keeping.

Small businesses can use the time-sheets component to help with record keeping in the workplace. It offers time-sheet access to an unlimited number of employees or contractors for logging billable and unbillable time via mobile devices for a monthly fee.

The time-sheet component includes the ability to view full time-sheet history, filter time sheets by employees and track time against specific customers or projects. Included with the expense component is an intuitive expense entry workflow for employees and functionality that allows employers to control expense claim processing with approvals.

Other updates to Reckon One released today include a customisable bank widget on the dashboard and ABN validation for suppliers in the Core module. In the Invoices module, users can now preview invoice templates and navigate direct to payments made to a particular invoice.

Reckon Software
www.reckon.com.au

Image courtesy of Honeywell International Inc

THE PERFECT SERVICE VISIT

Freddy Fam, Product Marketing Manager, Honeywell Sensing and Productivity Solutions, APAC

A recent survey of 260 field service operations leaders gives insight into 'the perfect service visit': what drives customer satisfaction and how should it be measured?

It is well known that field service operators who achieve high levels of customer satisfaction are rewarded with superior customer loyalty and improved revenue growth. What is less clear is what exactly drives that high level of customer satisfaction, how field service leaders are measuring it and what is the interactive nature of those specific metrics.

Honeywell Sensing and Productivity Solutions recently collaborated with The Service Council to survey 260 field service operations leaders around the world. The survey focused on how service-oriented businesses were approaching the issue of revenue growth and more specifically how they were driving revenue growth at the point of service.

What makes a 'perfect service visit'

In pursuit of greater understanding of the connection between high levels of customer satisfaction with improving loyalty and revenue growth, Honeywell wanted to understand how field service leaders perceived the idea of the 'perfect service visit' as a function of customer satisfaction.

The approach was to determine which aspects of a field service visit helped companies to drive and define a strategy to improve customer satisfaction overall. As a leading data point and indicator, Honeywell began the survey into customer satisfaction looking at 'first-time fix' rates. The Service Council has documented the connection between first-time fix rates and customer satisfaction and shows that companies achieving less than 50% first-time fix have an average customer satisfaction rating of just 57%. This is in comparison to companies that have a 90% or greater first-time fix rate and a commensurate customer satisfaction average rating of 94%.

But what are the other components that make up the perfect service visit? In Honeywell's survey, three more well-known metrics were chosen that also contribute to customer perceptions of a high-quality, high-value service experience:

1. On-time arrival,
2. Repair/visit completed within 4 hours or an agreed timeframe, and
3. Billing accuracy.

These three metrics were added to the first-time fix metric and Honeywell asked survey respondents to rank them in order of their perception of importance to their customers. The rankings were one to four (with one being the most important and four being the least). The following table illustrates a slight departure in the ratings from the Asia Pacific region with the rest of the world and highlights the metrics that customers of the surveyed organisations rank as being the most important from a field service perspective.

How advanced document imaging can improve the billing process

As illustrated in the results, billing accuracy is vital in relation to customer satisfaction

levels for field service businesses, and they need to have the right technologies in place to facilitate accurate and timely billing.

Mobile imagers give field service workers a fast and reliable way to convert paper documents into electronic forms. Combining mobile imaging with wireless communication gives backend systems the documentation they need to start various processes hours or even days earlier than when paper-based processes are used. Transmitting document images wirelessly not only gives office workers a head start, it also saves considerable data entry time and prevents manual data entry errors.

Metric	North America	EMEA	Latin America	APAC
First-time fix	1.8	2.2	2.1	1.9
On-time arrival	1.9	1.8	1.9	1.8
Repair/visit complete within 4 h or SLA	2.8	2.3	2.7	2.7
Bill accuracy	3.5	3.7	3.4	3.7

International ranking of customer service metrics.

Images courtesy of Honeywell International Inc

One of the most beneficial uses of mobile document imaging in the field service industry is to capture billing details and then send the electronic image to headquarters for processing. This process provides several major benefits. First, it provides critical information needed for downstream planning and optimisation. Second, it shortens the billing cycle, because the billing department does not need to wait for a field service worker to return with paper documentation to begin preparing an invoice. Third, the process enables the organisation to work with electronic records instead of paper documents. Electronic forms are more accurate and cost less to prepare, process and archive.

Understand what customers want to improve service visits

Naturally there are many more facets of a customer facing interaction that are going to impact the perception of value and satisfaction other than these specific metrics above. However, until field service operations teams dig into the most important elements of their services that drive the highest level of customer satisfaction for their customers, they cannot begin to make specific investments to improve the workflows that impact these results. Regardless of whether the answers are improving workflows that are customer-facing or those that are between the back-office operation and technician, understanding what specific customers seek in one or more types of service offered is the starting point to truly improve bottom line performance.

In general the linkage between customer satisfaction, the right to earn more loyalty and the revenue growth associated with that is clear. The next step is to define the customers, the specific services they desire and their measures of customer satisfaction. Those companies that do this best, and build their customer-facing and back-office workflows to accentuate those customer values will not only win the hearts and minds of their customers, but they will earn the right to create a long-term, profitable relationship that increases value for both parties.

Honeywell Process Solutions

www.honeywellprocess.com

TALK FROM THE TOP

Mobile is changing the face of business. Yet, many business owners have been slow to adopt a mobile strategy despite the numerous benefits. Mobile offers significant return on investment in terms of improving efficiencies and offering greater business flexibility.

Intuit conducted a study in 2014 that found almost two-thirds (63%) of business owners using mobile devices and apps had saved 7.5 hours a week by using the technology. That's the equivalent of nine working weeks each year!

The research also found 37% of businesses had increased revenue by an average of 8% simply by being able to access their business data on mobile.

Another significant benefit of mobile and cloud technology is flexibility to work outside the office and still have access to vital data and tools needed to perform business functions; this flexibility is highly valued by employees.

A study by McCrindle Research found eight in 10 people would stay longer with an employer that offered the option of working remotely or from home. Further, more than half of employees were willing to take a pay cut in exchange for greater workplace flexibility.

Small business owners tell me time and again that mobile helps them boost productivity. For example, when they use their cloud-based accounting software, which includes a rich app ecosystem, they're able to perform many tasks on the go like invoicing, accepting payments and viewing business data.

You may be surprised to know that smartphone penetration in Australia reached 85% last year with these devices accounting for a staggering one-third of all e-commerce transactions. If mobile is not part of your business strategy, it should be.

With the rapid pace of change, I predict that businesses not optimised for mobile will be left behind their more nimble competitors. The good news is that once you've made the decision to adopt a mobile focus, the shift is quick and affordable for almost any business.

This is especially good news for small business owners that have to do more with less.

Brad Paterson is VP and MD, Intuit Asia Pacific. He is responsible for driving growth and overseeing operations. He leads a fast-growing, dynamic team to deliver disruptive business management solutions to small businesses, accountants and bookkeepers, and provide best-in-class support to customers.

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