ZEBRA

Optimising Efficiencies in Oil, Gas and Petrochemical with Mobile Computing & Industrial Scanning

Help Your Teams Work More Effectively With The Latest Mobile Technology

An atmosphere of cautious optimism has returned to the oil, gas and petrochemical sectors of late. While it's some way off the $115 reached in 2011, the barrel price of Brent Crude has now stabilised above $50. And though investment fell by between 40 and 60 per cent from 2014 to 2016,[1] one benchmark of industry confidence – mergers and acquisition activity – has risen again. The value of deals in the first half of 2017 topped $135 billion, compared to $87 billion in the same period in 2016. While consolidation accounts for some of the deals, the wider availability of credit, the need to rebuild reserves and cautious optimism are lead causes.

During the market downturn, IT was one area where budgets were reduced as companies across the industry reassessed priorities and shelved potential hardware and software investments. Today, many facilities still use paper and pens in some areas of their workflows, with others relying on older mobile devices.

While investment was put on hold, mobile computing technology continued to advance at pace. So much so that with analysts predicting that oil and gas companies will increase CAPEX by 7% in 2017,[2] there's a strong case for looking afresh at how mobile technology can help your teams work more effectively, productively and – most importantly – safely. As well as new devices, supporting software and applications have evolved too, smoothing the way devices are rolled out, managed and maintained, and significantly reducing your ownership costs compared to older models. The following table looks at some of the applications and benefits of using mobile computers across key workflows.

1. PwC
2. Barclays's latest E&P Spending Survey

THE TALENT SQUEEZE

By 2018, up to 50 per cent* of all engineers and geophysicists will be eligible for retirement from the industry. While mobile computing cannot solve the talent shortage, it can help empower less experienced workers to get up to speed more quickly. Easy to use devices can connect colleagues to one another instantly, and provide your teams with access to powerful apps, guided workflows, operating manuals, 'how to' videos and much more.

* Oilandgasiq.com, The Great Crew Change: An Extinction Level Event in the Making?

Mobile Computing & Industrial Scanning in Oil, Gas and Petrochemical

APPLICATION	BENEFITS
DYNAMIC MAINTENANCE TO KEEP THE DRILLS RUNNING, TRUCKS HAULING AND CONVEYORS ROLLING	
■ Identify plant and equipment with geo tags ■ Provide engineers with remote access to maintenance histories, logs, and manuals ■ Generate work orders and notifications on the spot ■ Enable engineers to report using standard forms and to schedule follow up maintenance and order spares ■ Connect engineers with experts anywhere in the world, and share images and video from the field to help teams collaborate on and resolve issues	Mobile computers allow tasks to be sent direct to engineers in the field. They can also spend less time looking for equipment and confirm they are working on the right items by scanning NFC, barcode or RFID tags. And with access to colleagues anywhere in the world through their devices, as well as manuals and how to guides – they're more likely to be able to resolve issues first-time, reducing maintenance (and overtime costs). With the option to order parts and schedule follow-up maintenance, engineers are also better equipped to proactively maintain infrastructure to prevent costly downtime.
MANAGE RISK AND IMPROVE SAFETY	
■ Enable users to easily check equipment, capture measurements and identify anomalies ■ Accurately take readings and share these across the organisation in real-time ■ Conduct health and safety checks and remotely file forms prior to commencing work ■ Improve workforce safety with guided workflows	With safety your number one priority, mobile computers can play a lead role in helping you to protect your site and personnel. Forms on mobile devices can mandate that health and safety checks must be carried out before applications can be used. Devices can also flag measurements / readings that are out of the normal range, while the Push-to-Talk function of Zebra's mobile computers ensures that teams are always connected with colleagues or dispatch in case of emergencies
ENSURE THE RIGHT STOCK OF PARTS AND EQUIPMENT IS ALWAYS ON HAND AND OPTIMISE EFFICIENCIES	
■ Scan items quickly as they arrive and move through your warehouse ■ Perform cycle counts easily and accurately ■ Track and trace all items to reduce incidents of loss and theft	Labels such as barcodes, RFID and NFC tags can be attached to workers, vehicles, stock, equipment, machines and much more, to give each of them a digital signature. Capturing these digital signatures increases real-time visibility into what's happening across your operations, helping your teams to make more informed and better decisions. Take the warehouse. Capturing data on stock as it arrives, is put away, packaged and shipped, helps to ensure that you always hold the right amount of parts, spares, and inventory to maintain your equipment and reduce storage costs.

Selecting The Right Devices

The oil and gas sector puts unique demands on technology. For starters, mobile devices are often shared across teams and shifts, so they need to work non-stop. Then there's the elements – it may be constantly wet, temperatures can be extreme, and salt, dirt and dust might be ever-present, while users tend to be tough on their devices, frequently knocking and dropping them.

In addition, despite the fact that significant efficiencies can be gained from digitising workflows throughout operations, many facilities have yet to push mobile computing into areas where explosive vapours are present.

With these issues in mind, Bartec has teamed up with Zebra, the market leader in robust enterprise class devices, to engineer a range of rugged mobile devices. The scanners and computers are certified to operate safely in explosive areas (Zone2/Div2 and Zone1/Div1), to work non stop, and to be powerful productivity partners, whether your people are working in the warehouse or outside in some of the world's most demanding places. And as the devices can work in offices or hazardous environments, IT teams only need to integrate one solution across the entire organization.

DEVICE	KEY FEATURES	EXPLOSION PROTECTION
MC92NOex **The 2 million-selling MC92 is purpose-built for use in rugged environments**	■ The world's most proven and rugged mobile computer ■ Engineered to incorporate feedback from millions of users ■ Tougher than competing devices ■ Integrated barcode and RFID reader ■ Exceptionally fast processor ■ Quick and accurate scan engine ■ Configurable to your tasks with three advanced OS options (including Android), seven scan engines and six interchangeable keypads	**Explosion protection type** **ATEX** ■ EX II 3G Ex ic IIC T6 Gc ■ EX II 3D Ex ic IIIB T80°C Dc IP 64 ■ -20 °C ≤ Ta ≤ +50 °C **Certification** ■ EPS 14 ATEX 1 782 X **NEC / CEC** ■ Class I Div 1 / 2 Group A, B, C, D T6 ■ Class II Div 1 / 2 Group F, G ■ Class III **Certification** ■ UL File E321557 Vol. 1 Sec. 5

DEVICE	KEY FEATURES	EXPLOSION PROTECTION
TC75 **Simple to use professional grade touch computer build for the needs of the enterprise**	■ Rugged and ready for every day enterprise use, inside and outside the four walls ■ Advanced noise cancelling technology and high performance audio with speakers that are four times louder than consumer devices ■ Screen works when wet and with gloves on ■ Choice of Android™ or Windows 10 IoT Mobile Enterprise operating systems to tailor the device to your apps ■ 4G/LTE (TC75 Series Only) and 802.11a/b/g/n connectivity for anywhere, anytime access to information ■ Compatible with Zebra's Mobility DNA, a suite of mobility enabling applications, development tools and utilities ■ Most advanced scan engine in its class with longer range data capture capability	**Explosion protection type** **IECEx** ■ Ex ic IIC T5 Gc ■ Ex ic IIIB T100 °C Dc IP 65 ■ -20 °C ≤ Ta ≤ +50 °C **Certification** ■ applied for **NEC / CEC** ■ Class I Div. 2 Group A, B, C, D T5 **Certification** ■ applied for
BCS3600 series **The first, ultra rugged 1D/2D scanner that's built for your toughest environments**	■ Virtually indestructible ■ Lightning quick scan performance ■ Will catch any 1D/2D barcode – in virtually any state ■ Scans 70,000 barcodes on one charge ■ Has 50% more power than competitors' models ■ 2.4m drop spec ■ Wide range of options including high density, direct part mark, standard and extended range scanners ■ Cabled & Bluetooth Version avaliable	**Explosion protection type** **IECEx** ■ Ex ic IIC T6 Gc ■ Ex ic IIIB T80 °C Dc IP 64 ■ -20 °C ≤ Ta ≤ +50 °C **Certification** ■ EPS 16.0050X **NEC / CEC** ■ Class I Div 1 / 2 Group A, B, C, D T6 ■ Class II Div 1 / 2 Group F, G ■ Class III **Certification** ■ UL File E321557 Vol. 1 Sec. 5

Lowering Your Total Cost Of Ownership

The way mobile devices are prepared for the field (e.g. staged with software and applications), updated, managed, and maintained, are the biggest factors in your overall total cost of ownership. For that reason, Zebra backs its Android devices with a suite of Enterprise software, called Mobility DNA, that ensures you drive the most value from your devices, at the least cost. It includes:

- **MOBILITY EXTENSIONS**™ – to fortify your Android apps with a range of security measures, including authenticating users, controlling apps, managing software updates, encrypting data and many more. Zebra also offers an Enterprise Mobility Development kit, with a comprehensive set of API codes – to make the most of all the features of its devices – and an enterprise browser to build feature-rich, web-based apps.

- **MOBILITY TOOLS** – to make it easier to prepare devices, including StageNow™, whereby a scan of a barcode will load all software and apps onto each device, and an Enterprise Home Screen to create a consistent user experience, brand feel and log-in.

- **PRODUCTIVITY TOOLS** – including All Touch Terminal Emulation, which turns clunky green screens into easy, engaging and touch-based apps – with little manual intervention; Simulscan™ that provides a simple interface to capture data from multiple labels in one scan; PowerPrecision™ to monitor battery performance; and DataWedge™ to easily integrate captured data – from scans to images – into your apps.

- **COMMUNICATION TOOLS** – ready-to-go solutions to help your teams collaborate include Workforce Connect™, a Push-to-Talk (PTT) Voice over IP client that makes it easy to make and receive calls from virtually any device, use enterprise-class messaging and create discrete call groups.

THE CASE FOR STANDARDISING

Over the years many oil and gas companies have acquired a mixed estate of mobile computers. This can create problems: support costs increase, there's a need to keep on top of multiple software updates, and different training programmes need to be offered to users. These problems can be bypassed when basing your mobile devices on a single brand. What's more, Zebra's devices come with a range of software to reduce total cost of ownership. They're also supported for up to 8 years – providing long term assurance over your investment. And if you select from its growing range of Android options, you can lower costs further by providing the robust devices your business needs to increase up-time and reduce breakages, with a simple interface that many of your users will know, so they'll require less training.

FOR MORE INFORMATION ON HOW ZEBRA AND BARTEC'S RANGE OF MOBILE SCANNERS AND COMPUTERS CAN HELP YOUR TEAMS COLLABORATE MORE EFFECTIVELY, DO MORE, MORE QUICKLY, AND STAY SAFE, CONNECTED, AND BETTER INFORMED, PLEASE CONTACT US AT: WWW.BARTECMOBILITY.COM

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