



Panasonic

Utilizing Mobile Solutions for More
Effective Oil & Gas Asset Management

Enhance Asset Tracking

TOUGHBOOK®

Managing assets is important in any industry, but perhaps nowhere more critical than in oil and gas. Assets can be spread out over thousands of miles and can include everything from multi-million-dollar drilling equipment to pipelines, truck fleets and the oil itself. Add to that a distributed workforce, thousands of replacement and spare parts in scattered warehouses, and the remote locations of most drill sites and refineries, and you have a situation where you risk losing track of your assets.

An innovative mobile asset management solution can track assets so they can be located, maintained, and utilized at full capacity, helping to improve operational efficiency, worker productivity and safety, while keeping costs down.



Why is Asset Management Important?

Companies managing the wide variety of oil and gas assets need to know where they are at any given moment, who is using them, and if they are safe and in good operating condition. If equipment can't be located quickly or is damaged, the resulting downtime can result in decreased production and revenues.

Asset management is also critical for maintaining an accurate record of spare parts. If workers at a drill site need a specific pump to replace one in need of repair, they need to find it and get it to the job site as quickly as possible. Thanks to the asset management solution program, the replacement part can be located at the closest facility in real time lessening, or avoiding altogether, costly down time.

Today's oil and gas producers and operators are pushing the limits of conventional drilling and support equipment in an effort to keep America "energy independent". They may be drilling multiple horizontal wells from single pads, trying new bits and mud motors to increase penetration rates, or installing next-generation rig floor designs to slash the time required from spudding a well to sale of the oil.

In the oil and gas industry, technology is your friend.

The ability to be mobile is critical in oil and gas. Drill sites, equipment and spare parts are spread out all over the world. By equipping your personnel in the field with mobile asset management solutions, they can stay connected to vital apps and resources. They can access and analyze critical data in real-time—collected manually through physical inspections or automatically via IoT sensors—providing insight into asset performance and the overall business.

For example, by using remote monitoring and other automated control technologies, drillers are able to avert hazardous circumstances, improving safety, while at the same time maintaining constant awareness of well performance.

Additional technologies such as fleet monitoring via GPS, subsea seismic surveying, oil flow rates and pressures all generate useful data. The real challenge comes from consolidating all of that information into usable, functional, and actionable knowledge.

Keeping assets working with minimal downtime contributes to better economics for oil production.

How can I use mobile technology to better manage my assets?

Automated system modules can deliver historical reports and graphs that characterize normal operating conditions for a specific well or refinery run. But because this data is a part of a larger database, it can be used to calculate precise production data. The oil being produced is most definitely an asset, and if you can manage and monitor it, that's a money saver.

In addition, process control items such as alarms can be programmed to alert the end-user that a well has begun to run too long or not long enough. Users can even be alerted after hours through call-out programs that can page or call. Again, it's managing control of one of your most important assets, your oil.

While much of the legacy technology was tied to corporate headquarters and IT departments far away from where the heavy work was being done, the development of more portable, made-for-the field equipment now lets workers integrate with these legacy systems from pretty much anywhere in the world. Thanks to cloud-based and IoT (Internet of Things) technology, connectivity to applications, remote assets (such as those offshore or in the middle of nowhere), and even compliance and inspection reports can be tied into the corporate IT systems from virtually anywhere.

As long as there is a connection, either by cellular signal, satellite or wi-fi, real-time data from the field can be transmitted. In many cases, for example remote flowmeters that measure product flow through pipelines, the data is transmitted from the sensors and then collected by the mobile device, which can then be read by the field user or saved and transmitted back to a main office for analysis. By looking at the data, workers can better manage pipeline assets by virtually inspecting and repairing them before they become a safety problem and/or one which can result in lost revenue.

The use of technology in the oil and gas industry isn't just letting machines do what people used to do. It's actually enhancing and improving what people do, making every element in the process more efficient.

For example, inspecting pipelines, drill sites, refineries, storage tanks and offshore platforms generally meant expensive helicopter flights, erecting scaffolding or climbing up very tall ladders. It could also mean very expensive downtime. Now, drone technology allows workers as well as management the opportunity to accomplish any of the above tasks simply by controlling a camera-laden drone. The safety factor alone is significantly enhanced by using drones for inspections. Even in cases of incidents such as a fire, drones operated by mobile devices are used to fly over and send back real-time data (such as air quality and wind direction) and live pictures so first responders know the best way to approach the situation.

Asset management technology can take many forms such as CPM, HMI Software, High and Low Power AC Drives, PAM, Continuous Ultrasonic Level Measurement Devices, Flow meters, Process Engineering Tools, Process Safety Systems, PLCs, Control Valves, DCS, Enterprise Asset Management, Radar Level Devices, RPO, SCADA Systems and Transmitters.

All these technologies provide data that can be accessed, analyzed and managed on a rugged mobile computer or tablet that can be taken out into the field, the drilling shack, or even offshore. Consumer-grade smartphones and off-the-shelf laptops and tablets can't stand up to the harsh conditions found in virtually any oil or gas scenario.

In addition, safety is paramount, and most companies in the industry won't allow off-the-shelf consumer devices into refineries or in the oil patch due to the danger of static or RF discharge, which could ignite fuel sources.

To do it right, you need a product that was designed to work under these difficult conditions and is certified to be safely used around hazardous materials.



Enter Panasonic

TOUGHBOOK®

Panasonic is a leader in the field of safe, mobile ruggedized solutions.

Panasonic TOUGHBOOK® rugged laptops, tablets and handheld computers are part of a complete solution combining hardware, software and services for those who work in harsh oil and gas environments every day. TOUGHBOOK devices are purpose-built, and they have the dependability needed to achieve safe and successful use.



+ But dependability isn't the only reason these products work so well in the oil and gas industry. Consider some of these features:



They are built to military standards for rugged durability that can withstand dirt, dust, salt, chemicals, extreme weather, shocks, and accidental drops.



The displays respond to glove-touch and are viewable in rain, sunlight or at night.



They offer long-life batteries.



RJ45 Ethernet and serial ports can collect data from external equipment.



Panasonic's reliable, rugged devices have the lowest failure rate in the industry, which helps control costs over time.¹

Hazardous Locations Certification

Workers in the oil and gas industry routinely face the risk of flammable gases, mists or vapors. Several Panasonic TOUGHBOOK rugged laptops, tablets and handhelds can be configured to operate in hazardous locations with potentially explosive environments. ANSI/Class 1 Div 2 certified models include TOUGHBOOK 20, 31, and 33 laptops and 2-in-1s, and TOUGHPAD FZ-G1 and FZ-M1 tablets.

For more information about how Panasonic's rugged line of laptops, tablets and handhelds can help manage your assets the oil and gas industry, explore our [website](#) or visit the [Knowledge Center](#).

¹Based on a comparison of Panasonic actual data for our TOUGHBOOK family of devices to PC Magazine reader-reported data for competitors, 2018.