Until the AEMP Telematics Data Standard took effect in 2010, the usability of fleet tracking technology in a mixed fleet environment was hampered by an inability to consolidate data on different makes and models of equipment. The AEMP standard was intended to solve the problem by making key metrics available in a common data format, but a sizable IT budget has been needed to collect and integrate metrics from multiple OEM systems and other sources.

Today, that gap is being filled with subscription services that bring telematics information from both OEM and aftermarket systems into a single website with no IT investment required by the contractor. Information such as tire pressure and fuel dispensing from other applications is also being imported into some services.
The result: easy one-stop management of mixed fleets. From a single map showing the physical location of every piece of equipment in the fleet to information on equipment utilization, fuel burn, preventive maintenance schedules, jobsite activity and more, managers can now monitor multi-brand heavy equipment fleets from one online command center that provides both the big picture and drilldown capabilities.

Data from these services can also be integrated into a contractor’s enterprise software for job costing and other purposes, providing an important new tool for evaluating fleet productivity and profitability.

Providing an important new tool for evaluating fleet productivity and profitability

Merging Data
The fragmentation of telematics data dates back to the birth of the technology a decade ago. From the beginning, every major OEM had its own proprietary telematics system with its own website, its own way of reporting data, and typically no option to export information to an external application. Third-party platforms developed to track machinery that lack factory-installed telematics produced yet another pool of data that could not be integrated with information gathered by manufacturers’ own tracking devices.

All of these factors made a centralized view of mixed-fleet operations hard to come by.

Contractors either had to retrieve and merge the data manually, write an expensive software program to automate the process, or deploy aftermarket telematics systems fleet-wide - even on assets already equipped with OEM solutions. That created hardware redundancies along with extra costs, but it was the only way to standardize data collection across the fleet for consolidated reporting.

The AEMP standard paved the way for easier data aggregation by making key OEM telematics information exportable in an XML document, but contractors still have needed to allocate in-house or outsourced IT resources to import and integrate data from all sources electronically. Most have lacked the resources or the time to handle that kind of project.

All in One View
The new subscription services make that extra work unnecessary. The services themselves handle all integration needs, fusing data from OEM and aftermarket systems into a single mapping and reporting interface for at-a-glance visibility into the entire heavy equipment fleet. The most advanced offerings allow users to drill down to details like fuel burn or maintenance schedules by jobsite, equipment type or even individual machine with a few clicks.

The new subscription services make that extra work unnecessary.
maps, track equipment utilization across the entire fleet as well as by jobsite, show how much fuel a single piece of machinery or an entire jobsite is consuming, manage fuel consumption against multiple jobsites. It also enables providers to compare performance against budget, track maintenance needs and repair records by jobsite or individual machines, and much more. In some cases, users can also sort reports by OEM, analyze data by machine category, and click to access real-time weather reporting from each jobsite to quickly ascertain whether low real-time utilization rates are caused by rain- or snow-related work interruptions.

New data such as idle times will be incorporated into these services in the coming months as OEMs respond to the newest update to the AEMP standard. Other metrics slated to be made available under the updated standard include engine running status, PTO hours, switch input events, fuel level, average load factor, ambient air temperature, load counts, payload totals, active regen hours and fault codes.

Beyond Telematics
Some of these subscription services are also able to incorporate information from outside of the telematics sphere to provide additional efficiencies in monitoring fleet operations. Data can be imported from almost any equipment-related application, not only eliminating the need to check those sources separately but also enabling that data to be combined with telematics metrics to produce new insights on costs and performance.

Integrating tire pressure information, for example, can provide near-real-time alerts on potentially dangerous tire pressure and temperature anomalies as well as the precise location of the machine experiencing the problem. Adding information from RFID-based fuel dispensing applications can help contractors precisely quantify fuel consumption for each machine and jobsite. Load measurement data collected by third-party companies with the help of sensors can be combined with cycle times to determine whether haul trucks are working to capacity -and so on.

Unifying all this information provides never-before-available opportunities for smarter equipment management, from better asset allocation to improved fuel and cost controls, site-by-site performance comparisons, and a full range of other operations improvements.

Once, only the largest contractors had the resources to create and maintain this kind of information hub. Today, it’s accessible to contractors of any size as a service. That, as they say, is progress.