



FIVE WAYS FIELD SERVICE AUTOMATION SUPPORTS SUSTAINABILITY – AND SAVES MONEY TOO!

INTRODUCTION

Many companies have implemented widely publicized sustainability programs in both their consumption of energy and in the products they produce. Bank of America, Citigroup, Cisco, HP, IBM, The Home Depot, and Wal-Mart have all initiated systems that have increased their energy efficiency, reduced paper consumption, cut greenhouse gas emissions and decreased fuel consumption. Social responsibility wasn't the only reason for their sustainability programs. In every case, the aforementioned companies also saved money as well. In fact, in most cases a two percent increase in upfront costs resulted in a twenty percent savings over time.

Field service organizations are often a large contributor to the sustainability efforts of their parent corporation. For example, AT&T has committed to deploying 15,000 alternative fuel vehicles by 2018 (they have already deployed 7,500) and Verizon saved 207,653 gallons (and approximately \$662,000 at \$3.19/gallon) of fuel just from reduced idling time.

But alternative fuel vehicles and reduced idling times aren't the only ways that field service organizations can contribute to a company's sustainability efforts. By implementing a field service automation system, like FieldAware, field service organizations can not only eliminate paper, reduce printer ink cartridge and toner consumption (and waste), cut fuel costs, decrease energy consumption, shrink their carbon footprint, and reduce part packaging but also save money as well.

Following are five ways field service automation solutions support sustainability – and save money. It usually doesn't take more than a few months to realize the business and social benefits of a cloud-based, made for mobile solution.

“Basically we were all paper. It was paper work orders, paper invoices, paper everything. It was difficult to coordinate everyone because it was all manual.”

*Jeff Devine, President
Allied Glass &
Aluminum Products*

1. ELIMINATE (OR DRAMATICALLY REDUCE) PAPER CONSUMPTION

According to the Paper Calculator, if the U.S. reduced its consumption of virgin copy paper use by ten percent from 2009 levels, it would save 22.8 million trees, reduce greenhouse gas emissions equivalent to taking 481,000 cars off the road and keep over 60,000 trucks of solid waste out of landfills and incinerators. With more than 34 billion sheets of paper used in the U.S. (at \$0.06 per sheet), a ten percent reduction in use would not only save trees and greenhouse gas emissions, it would also save U.S. companies and consumers more than \$2M.

Field service automation systems, like FieldAware, enable field service organizations to “go paperless”. Quotes and work orders are created electronically either at the home office or in the field. Customers can sign off on the quote or completed work electronically, and field workers can attach a photo or voice memo to the work order (you can’t do that with paper!) that verifies that the work was performed. And invoices don’t have to be printed and mailed – they can be automatically emailed from the mobile smartphone or tablet instead.

As a result, paper consumption is eliminated (or drastically reduced) and:

- Greenhouses gases produced during paper manufacturing are eliminated
- Fewer trees are harvested
- Paper costs are reduced (approximately \$75,000/year for company with two hundred field workers)
- Postage costs are reduced (approximately \$100,000/year)
- Time period from work order completion to invoice is reduced an average of 300 percent

2. REDUCE PRINTER INK OR TONER CARTRIDGE CONSUMPTION AND WASTE

According to A Greener Refill, for every 100,000 print or toner cartridges that are used (and not recycled), 21,162 pounds of aluminum are wasted along with 40 tons of plastic and 26,417.2 gallons of oil. It also takes more than 1,000 years for an ink or toner cartridge to decompose in a landfill. And for companies, the costs of paper outlined above are just the beginning. Ink jet printer per page costs (cost of printer and ink cartridges) average around \$.25 per page and laser printer per page costs (printer and toner cartridges) at around \$.15.

Going “paperless” with a field service automation solution not only reduces paper

Eliminating paper quotes, work orders and invoices can save field service companies more than \$100,000 a year in printing, paper and postage costs.

consumption it drastically decreases consumption of ink and toner cartridges. And, unlike paper processes where a quote, work order or invoice can be misplaced, field service automation systems capture and retain every detail of every job, every time. This virtually eliminates revenue leakage and ensures accurate, on time billing. It also:

- Reduces the quantity of new ink and toner cartridges produced
- Decreases the number of ink and toner cartridges which must be processed and shipped for recycling
- Saves up to \$312,000 (ink jet) or \$187,200 (laser) per year in printing costs

3. REDUCE FUEL COSTS

Many companies are beginning to limit their reliance on nonrenewable energy sources – like the oil that powers more than 95.4 percent of the U.S. Transportation Sector. As noted in the introduction of this paper, AT&T and Verizon are both investing heavily in vehicles that can operate on alternative fuels. Beyond emissions that include carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxides and particulate matter, oil remains a finite resource – one that cannot be replenished.

And sustainability isn't the only reason for field service organizations to decrease fuel consumption. According to Field Technologies Online, 90 percent of field service managers reported high fuel costs as the number one obstacle to meeting their field service objectives. And according to the U.S. Energy Information Administration, although year-to-date fuel costs are lower than 2012, recent prices are rising above those of last year.

Field service automation systems like FieldAware, can help companies reduce their fuel consumption – and fuel costs - in a number of ways. They include:

- Optimized scheduling that enables companies to assign jobs that are geographically close to a single technician and crew.
- Elimination of trips from the field to the office to pick up or drop off paper-based work orders.
- Increased number of calls resolved the first time (no second or third trips for missing parts or skipped tasks).

4. REDUCE ENERGY CONSUMPTION

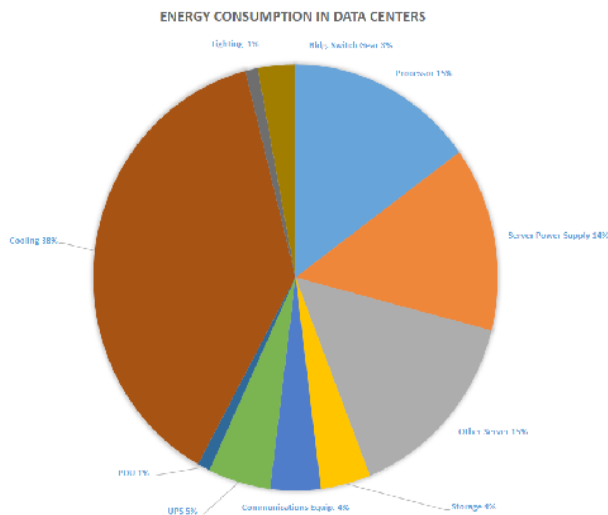
According to a study by ABB, there are 5.75 million new servers are installed every

Renew El Paso uses FieldAware on tablets to minimize fuel consumption and reduce paper usage. Signing proposals and invoicing no longer requires excessive use of paper and time. Tablets have become the new customer interface. Each service vehicle links up wirelessly with the home office to more efficiently serve customers.

Besides reducing the carbon footprint of the company, the FieldAware platform also streamlines asset management and reduces response time for service calls.

year. Ten percent of these servers are unused due to overly conservative capacity planning. These unused servers consume enough energy to power New York City for 53 days or offset the emissions of 6.5 million cars.

Emerson Network Power's information on data center energy usage illustrates that server underutilization is just the tip of the ice berg. Compute equipment in data centers consume only fifty-two percent of the overall power utilization in a data center.



Cloud-based systems can help companies reduce their energy consumption - and save thousands of dollars in data center support costs.

Therefore, as noted in Emerson's White Paper, Energy Logic: Reducing Data Center Energy Consumption by Creating Savings that Cascade Across Systems, by reducing server energy consumption, reductions flow across the entire data center infrastructure. In fact, they estimate that saving just 1 watt at the server level results in 2.84 watts of savings across the data center.

Cloud-based field service automation solutions can provide significant energy savings over premise-based systems. Not only do they eliminate the need for companies to install servers, storage and network infrastructure to support the system, they may be (like FieldAware) operated from a global cloud provider such as Amazon Web Services (AWS). At AWS, hundreds of thousands of organizations consolidate their data centers into a smaller combined footprint. This results in:

- Higher utilization rates (ten percent of the servers are NOT unused)
- Elimination of the waste that occurs when data centers are not operated near their capacity.

And those consumption and power reductions can result in real savings for field service organizations. If we assume that a company requires only four fewer servers that draw 500 Watts per hour, a company would save 8,760 KW (using Emerson's

logic). And at an average electric power cost of \$.12 KWh, a cost savings of \$1,051.20 in power alone.

5. IMPROVE MANAGEMENT OF CONSUMABLES AND REDUCE PACKAGING

One of the latest developments in sustainability is sustainable packaging. The goal of this effort is not only to utilize minimal packaging on all products, but also to reduce costs. The efforts do not stop at just minimizing the packaging however. Also included are goals for logistics efficiency throughout the lifecycle of the product.

Field service automation solutions can play a dual role in the effort to minimize packaging and improve the efficiency of nearly every product's logistics.

- Field service automation systems can be utilized in the shipping and delivery of products across town or around the world to optimize delivery routes and scheduling
- They can be used by field service organizations to "right size" parts inventory, reducing the number of "emergency" shipments and consolidating shipments into more cost effective, parcels and packages.

CONCLUSION

Sustainability efforts are important for companies that are interested in minimizing the environmental impact of their businesses. However, the result of these programs is not limited to solid reputations as good corporate citizens. In almost every case, sustainability also results in significant cost savings for the organization as a whole.

Field service automation can help field service organizations not only contribute to their companies' sustainability efforts, but also provide a foundation for substantial reductions in paper, printing, fuel, energy, shipping and packaging costs. More importantly, field service organizations can use the savings their field service automation systems deliver to expand into new markets, enhance customer service and increase the productivity of every field worker in every city or town they service.

Want to learn more? Contact us at sales@fieldaware.com or call us at 800-935-0736!

Field service automation systems can help companies "right-size" their inventory - reducing costs and improving customer satisfaction.

ABOUT FIELDWARE

We are re-shaping the field service industry! Our made-for-mobile, cloud-based software was designed from the ground up to provide ease of use with incredible flexibility – a combination that enables field service organizations to amaze their customers, astonish the staff and surprise the competition. Our software was architected as a mobile platform, with no incumbent legacy technologies to modify or migrate from.

Based on our founders' intimate knowledge of the unique needs of engineers and technicians in the field – and the operational personnel and management that support them – FieldAware is focused on providing field service organizations, both large and small, with:

- Intelligence about your Customers: So you can increase revenue, expand into new markets, differentiate your services and create customer advocates.
 - Intelligence about your Business: That enables you to increase the productivity of your staff (and keep them happy!), use company resources more efficiently, simplify your business processes and “right size” your parts and repair inventory.
 - We combine our software with the industry's best implementation, on-boarding and support services enabling companies to take full and rapid advantage of today's mobile environment.
 - To learn more about our solutions or to schedule a demo, contact your local FieldAware representative at fieldawaresales@fieldaware.com or by calling 800-935-0736.
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