

## **Crown Connectivity Series**

**Changing Metrics – and  
Mindsets – in the Warehouse  
Part Three: Four Keys to Unlocking  
Value from Forklift Connectivity**



## Introduction

Crown has been providing forklift connectivity and fleet management solutions since 2005. During that time, we have worked closely with our customers to help them integrate forklift fleet management into their businesses. Through that process we've learned valuable lessons about technology adoption in material handling.

This is Part Three of the Crown Connectivity Series. The series includes the following:

- Part One: Five Goals the Connected Warehouse Can Help You Achieve
- Part Two: Optimizing the ROI of Forklift Fleet Management Through Phased Implementation
- Part Three: Four Keys to Unlocking Value from Forklift Connectivity

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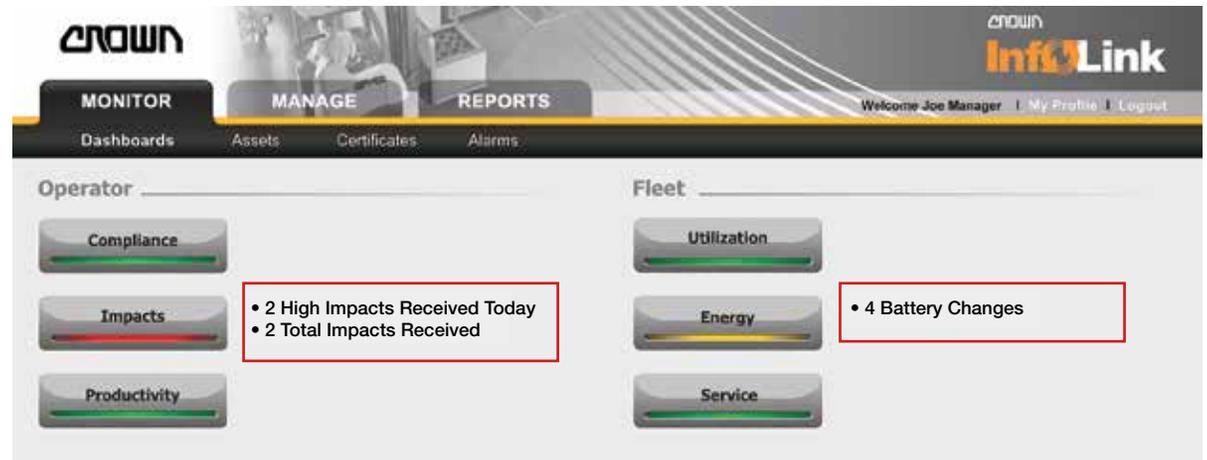
## Material Handling at a Crossroads

The pressure to reduce costs in the supply chain is relentless. Almost every material handling organization is evaluating the role of technology in improving warehouse productivity and efficiency, including forklift-based features that are transparent to operators. For example, features may range from regenerative lowering to those that impact virtually every aspect of the operation, such as driverless forklifts.

Forklift connectivity and fleet management is a strategy that has demonstrated its ability to deliver measurable improvements in warehouse management.

There are two components to a forklift fleet management program: maintenance and operations. The maintenance component collects and consolidates information from forklift service events to better manage costs, standardize processes and extend forklift life. The operations component involves collecting data on forklifts and operators to improve safety, utilization and productivity.

Collecting real-time data requires that forklifts be equipped with a communications terminal that integrates with the forklift's electronics to collect and wirelessly communicate data on impacts, energy consumption, utilization, location and other factors. This transforms the truck from an isolated piece of equipment into a



Wireless communication devices integrated with the forklift's electronics enable real-time data collection.

networked device and brings data-driven decision making to the warehouse floor.

Yet, despite the relative maturity of the technology and the benefits being realized by users, only 13 percent of respondents to a November 2013 *DC Velocity* magazine survey had purchased forklift fleet management.

Nearly half of respondents had researched forklift fleet management but had chosen not to purchase, primarily due to an inability to quantify value and justify return on investment, and also the belief that it was too difficult or costly to implement. Those are two issues that material handling organizations and forklift vendors must work together to address.

One significant step forward has been made with the availability of cloud-based forklift fleet management systems. Cloud-based deployment minimizes the need for additional IT hardware and allows systems to be brought online much faster than on-premise deployment. This also opens up the benefits of forklift fleet management to smaller warehouses.

If an organization can't successfully implement forklift fleet management, there is almost no chance it will be successful with more complex technology initiatives such as forklift automation. The corollary is also true: A successful forklift fleet management implementation can serve as the foundation for increased use of warehouse technology in terms of both organizational experience and increased control over key operating metrics.

## Four Keys

Through our experience with forklift fleet and operator management implementations, Crown has identified four keys to realizing value from the connected forklift.

### 1. Clear Goals

Forklift fleet management's versatility – it can be used to monitor a wide range of warehouse metrics – is part of its attraction. But it can also be a drawback if an organization doesn't establish clear goals prior to the implementation. An organization that implements forklift fleet management to solve a specific operating issue is more likely to have success than an organization that implements forklift fleet management with the plan of determining where it can deliver value post-implementation.

This doesn't mean that forklift fleet management has to be a single-issue solution; most users derive multiple benefits from their system. But it does mean that having a clear goal in the early stages is the best way to ensure the system gets integrated into management processes. Once progress has been made on the initial goal, new goals can be defined.

The goals an organization might consider in relation to forklift fleet management include reducing impacts, increasing equipment utilization, streamlining compliance, improving operator productivity and reducing service costs. See the paper Five Goals the Connected Warehouse Can Help You Achieve for more information on setting specific goals.

One of the most effective tools for ensuring continuous improvement is a scorecard that benchmarks the current state and documents initial results. Once initial goals have been achieved, the bar can be raised further and goals can be expanded to create a continuous improvement process.

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## 2. Relevant, Timely Data

While establishing a clear goal has proven to be the single most important factor in determining the success of forklift fleet management, the ability to achieve that goal is compromised without the right data at the right time.

In today's digital world, the challenge is as likely to be too much data as not enough. Forklifts can provide a wealth of data to a management system, including logging each impact and the time; monitoring energy use and battery charge; tracking the time a truck is sitting idle without an operator; and the actual and average travel and lift times for each operator.

The forklift fleet management systems must be designed to present this data to busy managers in a way that makes efficient use of their time while providing the basis for decision making. That requires information to be timely and to have appropriate context. It's also important that the system includes interactive features that can communicate and record results.

Forklift fleet management systems rely on three types of information delivery to meet these requirements: alerts, a dashboard and detailed reports.

**Alerts:** Alerts can be delivered to managers via email, text message or the management dashboard, and provide immediate notification of events that require attention, such as impacts or operating conditions that exceed preset thresholds. Alerts can be a powerful tool in managing change if they are set up properly.

One common mistake when configuring alerts is to set them up to trigger based on target thresholds that are too aggressive. For example, if alerts are triggered when forklift utilization dips below 50 percent in a facility that has traditionally had a 40 percent utilization rate, nuisance alerts will be issued while management is still collecting the data required to address the issue.

**Management Dashboard:** The forklift fleet management dashboard needs to provide managers with a quick overview or snapshot of operating trends within the warehouse. This allows managers to monitor trends and take action before they reach critical levels and trigger an alert. A well-designed dashboard can enable a shift from reactive to proactive management by providing managers a quick visual overview of key operating trends and a clear path for quickly drilling into issues that require attention. The dashboard also needs to address the needs of different members of the management team as forklift fleet management is most effective when the multiple managers are engaged with the system.



Mobile technology will increase the value of real-time forklift data by putting it at the fingertips of managers wherever they are.

**Detailed Reports:** Based on the information presented by the management dashboard, managers need the ability to drill down to isolate problems. This is where the depth of data provided by a forklift fleet management system becomes important. It should give managers the ability to quickly and accurately isolate root causes of issues such as low utilization or low productivity related to specific operators.

### 3. Consistent Management Commitment

Forklift fleet management is a tool that puts the onus for its success squarely on management. It's tempting with any technology for managers to be engaged during the early stages and then to shift their focus once they believe the technology has been successfully implemented. That's exactly the wrong approach with forklift fleet management; engagement with the system needs to grow – not diminish – following startup. If management doesn't stay engaged with the system and consistently demonstrate that data from the system is being used to evaluate performance, there is little chance for sustainable change.

Often the limitations are departmentally based. The maintenance or safety department, for example, may be excited about the potential of forklift fleet management to drive change but ultimately lack the required level of support from production. The data to drive change is available, but if supervisors don't hold operators accountable, their behavior won't change. Senior management needs to communicate their support of their program, as well as ensure support extends across departments, and departments are working together to achieve defined goals.

### 4. Site Preparation

Implementation problems based on inadequate site preparation can dampen enthusiasm for new technology and discourage adoption. One of the keys to site preparation is getting all stakeholders involved in the planning process, including affected departments (maintenance, operations and safety, among others) as well as IT.

Early participation by IT can identify potential issues and help ensure the proper infrastructure is in place to support forklift fleet management. IT can also guide the decision about whether data from the system should reside on-site or if a cloud-based implementation is preferred.

In addition, data-sharing processes should be defined and documented to ensure that the right information is shared with the right departments at the right time. These processes may ultimately evolve once the system is in place, but establishing them in the beginning increases the likelihood that forklift fleet management will be used by all departments that can benefit from it.

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## Conclusion

Forklift connectivity and fleet management uses technology that is proven and reliable to deliver insight into truck utilization, compliance, safety and operator productivity. Currently this technology is being underutilized by the industry because of concerns over cost and complexity. These concerns are common to technology implementations across all industries and should be taken seriously. However, there is now sufficient experience with forklift connectivity to ensure that implementation issues can be resolved relatively quickly and that significant value can be realized if the organization sets clear goals. Organizations that address these issues directly today will realize the benefits of forklift connectivity in the short term while positioning themselves to build on the technology foundation it provides in the long term.

Crown's award-winning line of forklifts maintains a reputation for advanced product design, engineering and technology, and integrated manufacturing processes. Offering a broad range of forklifts, as well as automation and fleet management technologies, Crown seeks to provide customers with forward thinking and innovative products designed to improve performance and lower operating costs. Headquartered in New Bremen, Ohio, with regional headquarters in Australia, China, Germany and Singapore, Crown operates a global service and distribution network.

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