Asset Management for Construction Equipment, Tools, and Materials

Streamlining project logistics and improving equipment performance and longevity

EZ OfficeInventory

TABLE OF CONTENTS

ABSTRACT

This whitepaper will talk about the challenges faced by the construction industry, and how construction asset tracking software features can help you overcome them. We will also outline some common construction workflows used by EZOfficeInventory customers to optimize construction asset management and increase their ROIs.

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The Construction Industry: An Overview

The construction industry is one of the most profitable avenues for businesses today. North America has a global market share of around 10 percent, raking in over a trillion dollars in 2015. The market is fairly diverse, with residential, industrial, commercial and infrastructural construction work spreading the risks generally experienced by workers in a particular field.

The Scope of Construction Assets

The construction industry deals with a wide variety of equipment, ranging from large engineering vehicles to portable drills and building materials. Below are some major construction asset categories and the list of items that fall under them:

1. Heavy Equipment

This could include a large variety of construction assets, such as equipment used for tunneling, earth moving, material handling, or transporting. This could include forklifts, tippers, trenchers, etc. These are normally tracked individually, with unique asset tags that can identify custody and location.

2. Hand and Power Tools

These can either be small tools (such as crimpers or clamps), or general tools (such as mixers and drills). Different construction companies might organize their tools differently, but most like to track them in bulk. This helps them easily check larger quantities out to specific teams on the field.

3. Consumables and Building Materials

Construction companies need building materials and consumables in large quantities. These might refer to materials such as wood, stone, metals, or minor items such as sealants, path warning tape, and more. These are also tracked in bulk, but are not checked back in as they are usually consumed.

All this equipment is used by a diverse set of contractors, whether they work in mechanical, electrical, or specialty fields. Depending on the field, of course, construction equipment can vary greatly. A firm specializing in drywalling will use vastly different resources to a company working on the field in oil and gas engineering. Their equipment tracking needs, however, have a lot in common.

Equipment Management Challenges in the Construction Industry

Given the wide range of equipment construction companies have to deal with, equipment management across different construction sites can be a complex and time-consuming process. Here are some equipment management challenges faced by the construction industry today:

Information Gap:
Incomplete or inaccurate information can really restrict project oversight. This lack of visibility over ongoing work operations can make it difficult to make informed, data driven decisions. Furthermore, information gaps can hinder workflows and reduce the efficiency of your crew on job-sites.

Workforce Accountability:
Given the vast volume of equipment involved in the construction sector, keeping track of inventory flows can be a real challenge for project managers. This increases the risk of equipment being stolen or misplaced. A survey found that 92% of respondents in the construction industry have experienced theft. This could influence all your teams, such as those on the field, in warehouses, or at the office.

Time Management:
Managing projects and maintaining workplace efficiency across different locations can be a challenge for operations managers in the construction industry. This means that time management becomes a major concern, with most projects going over schedule by 10% to 30% of the original project duration. This can have hugely adverse effects, increasing costs and lowering credibility.

Data Handling:
The construction industry is expanding. This means that work sites are getting denser in terms of crew members, construction equipment, and the scope of work. These project sites generate vast amounts of data which is not always easy to capture and organize through manual means.

Workplace Safety:
Worker safety continues to be an issue plaguing the construction industry. With an average of 64,000 non-fatal injuries to workers each year, the construction sector leads all other industries in the total number of work related injuries. This is the result of remote area operations, a lack of communication of safe work practices, and the inability to execute these safe practices efficiently.

Construction accidents can add up to 10
billion dollars to construction costs each year.

Automating Construction Equipment Management

The construction industry is one of the fastest growing in the United States. However, it remains the least digitized. The McKinsey Global Institute estimates that the world will need to spend $57 trillion on infrastructure by 2030 to keep up with global GDP growth. This alone should be incentive enough for players in the construction industry to look for ways to improve productivity and project delivery through new technologies and better practices.

Recent trends have shown the construction industry itching towards technological incorporation. As an example, a large Middle Eastern construction firm worked with a software company to build a predictive analytics engine to prevent equipment breakdowns on-site for its fleet of construction vehicles. This saved millions of dollars in downtime, fuel costs, and maintenance expenses.

The convergence of technology and construction has brought great benefits to the industry. One such development has been in the field of equipment management. An equipment management software such as EZOfficeInventory helps construction companies monitor, organize and report on their construction equipment with ease. This enables them to hold employees accountable for items in their possession, draw up work orders to ensure things get done on schedule, and plan out asset maintenance in advance. In this way, automating equipment management is great for companies wanting to lower costs, improve ROI, and increase the efficiency of their crew across the board.

EZOfficeInventory's Features for Construction Industry Workflows

Scheduling

Create, assign and prioritize tasks in real-time. Issue work orders and email alerts to all your workers and subcontractors.

Repair and Maintenance

Track equipment lifecycles, send automated alerts for preventive maintenance, and compile usage and maintenance data with ease.

Audits and Reports

Generate custom reports which give you greater visibility into your operations, and help you make more informed business decisions.

Mobile Control

Use our mobile apps to monitor activity on remote sites and stay up-to-date regarding ongoing projects from any place, at any time.

User Listings

Users can be sorted into different categories, with distinct pools of equipment based on their location or the types of items they need.

Tool Crib Management

Give tool crib attendants the ability to quickly check items in and out so that field teams are never idle or waiting for equipment.

Work Orders

Monitor performance across different teams and work areas. Generate progress reports to keep tabs on project progress.

Carts For Tracking Equipment

Identify, track and locate materials and equipment across different worksites using Carts. These can be assigned, moved, and more.
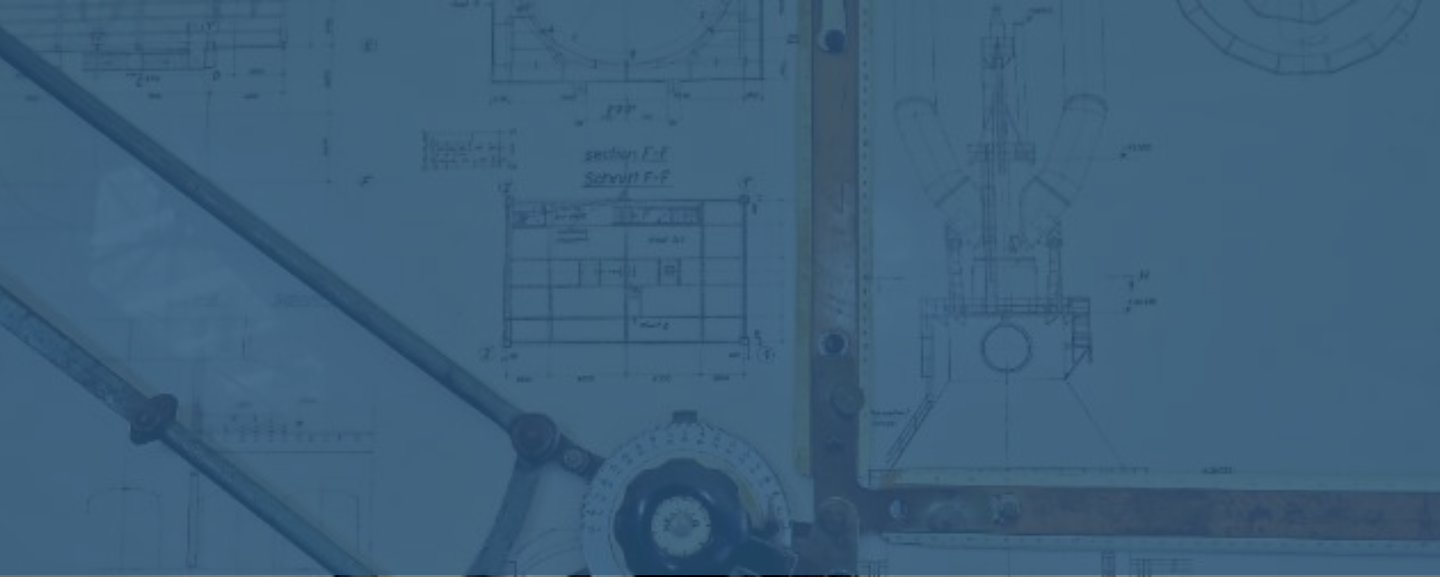
Inventory Management

Manage inventory across different locations, ensuring you're never low on stock by creating POs as soon as you receive low stock alerts.

Crew Management

Receive real time status updates on crew members deployed to different job-sites, in terms of what they do and with which assets.

For more features, click here.

Project Management Workflow

Here's an example of the Project Management Workflow used by some of our customers. This could be **useful if you carry out process-based tasks involving construction assets**. As an example, below we reference a company that does construction work on jobsites for its clients. This is how they would use EZOfficeInventory:

1. The required items are gathered into a Cart.

2. The Cart is associated with a Work Order. The Work Order given a unique title number.

3. The Work Order is then assigned to a group of users.

4. Details about the client and the project are added to the description.

5. The Cart is checked out when the date of the Work Order comes around.

6. The costs incurred and the rate of progress are added to the Work Order by the staff.

7. Over time, items are checked back in for scheduled services and replacements sent.

8. Upon completion, construction tools and assets are checked back in and inventory consumed.

With this, **all actions taken on your construction equipment have been logged -** from the moment the equipment was assigned to a Work Order, to when it was formally checked back in.

Item Dispatch Workflow

Here's an example of the Item Dispatch Workflow used by some of our customers. This could be **useful if you process large quantities of consumables for dispatch**. As an example, below we reference a company that sends building materials to large construction firms. This is how they would use EZOfficeInventory:

1. New inventory is added into the system as it is purchased.

2. An order is received from a client.

3. The relevant inventory is added to a Cart using Barcodes or QR Code scans.

4. The Cart is checked out to a specific user and location.

5. The inventory in the Cart is consumed upon reaching to location.

6. The Cart is marked Complete.

As you can see, this kind of workflow **helps companies save time and stay on top of different client needs** by organizing deliveries into Carts.

Assembly and Installation Workflow

Here's an example of the Assembly Installation Workflow used by some of our customers. This could be **useful if you need to coordinate the installation of assets across locations**. As an example, below we reference an installation company that sources dozens of parts and assembles them into units before installation. This is how they would use EZOfficeInventory:

1. An installation order is received from a client - such as for HVAC installation.

2. Individual HVAC parts are added to the system as soon as they are received from vendors.

3. A Cart is created, consisting of parts that will eventually form an assembled HVAC unit.

4. As items proceed along the fabrication site, the location of the Cart is changed.

5. When the items have been assembled into a unit, the Cart is moved from the 'Ready for Production' state to the 'Ready for Delivery' state via a custom field.

6. The Cart is checked out to staff for delivery to a particular jobsite.

7. When the items reach that installation site, the location of the Cart is changed one last time.

8. The assembled unit is installed, and the Cart is marked Complete.

As you can see, this kind of workflow **improves organization around dozens of moving parts, and improves productivity** across the board.

The Value Added by EZOfficeInventory

- **Information Sharing**

  The audits module in EZOfficeInventory improves accuracy of information, which can be particularly useful for long-term projects where change is harder to keep track of.

- **Analytics**

  The use of paper makes it difficult to capture and analyze data. The detailed reports feature in EZOfficeInventory can provide insights into asset utilization, ensuring maximum productivity. You can also create Custom Reports, setting your own scope for the kinds of data points you wish to analyze. These reports can be downloaded and shared across your organization.

- **Preventive Maintenance**

  EZOfficeInventory's sophisticated Services and Maintenance module helps make asset maintenance an organizational norm. It helps managers keep track of the equipment lifecycle, and implement preventive maintenance to reduce equipment downtime.
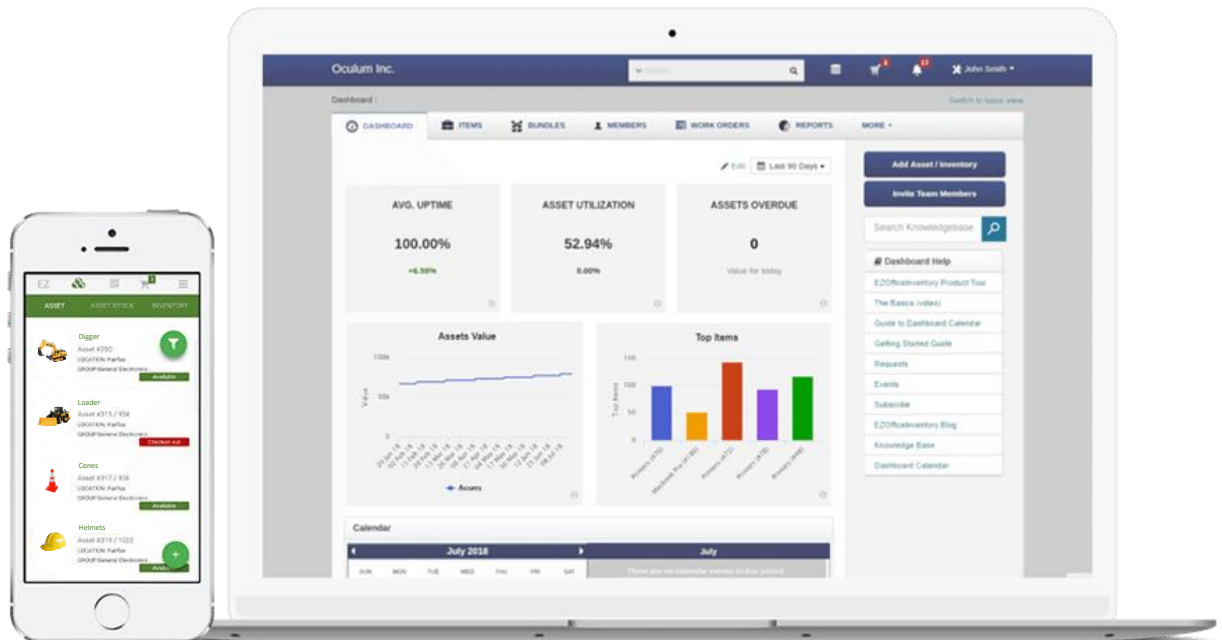
- **Better Time Management**

  The ability to bundle items together and take mass actions on large groups of assets helps companies reduce the time taken to locate and manage tools and equipment across different job-sites. Bulk label scanning also makes processing items much quicker.

- **Increased Accountability**

  EZOfficeInventory helps restrict access to certain groups of assets and increases transparency in the handling of all tools and machinery. Moreover, real-time updates relating to equipment also increase employee accountability.

EZOfficeInventory: An asset management solution with best practices built right in

The construction industry is expanding and the recent convergence of construction and IT has presented new opportunities for the industry to complement this expansion. Equipment handling remains a significant challenge. Considering the volume and variety of equipment the construction industry has to deal with, a robust and easy to use asset tracking solution is the need of the hour to streamline workflows and increase workplace efficiency. EZOfficeInventory, in this regard, provides all the features necessary for a business to improve its work operations, increase workforce accountability, reduce processing time, and enhance equipment longevity. This helps save construction businesses time as well as money.

If you want to learn more about how EZOfficeInventory can help your business execute best practices for asset management, go to the next page for more details.

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About EZOfficeInventory

We launched EZOfficeInventory in 2011 to help equipment intensive organizations increase efficiency and reduce costs. Together with thousands of our customers, we've developed and refined best practices in asset management. By removing technology related inefficiencies and enhancing employee productivity through the optimal usage of assets, EZOfficeInventory enables businesses to focus on core strengths. Armed with this knowledge, we've served all kinds of businesses – from enterprises to SMBs, and from non profits to industry leaders!

Get started with asset management today.
Try out our free 15 day trial – no credit card required!

Start your free trial

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