How to Choose a Wireless Lift Truck Management System to Optimize Your Supply Chain

Sponsored by:

I.D. Systems

Presented by:

Kenneth Ehrman
President

ProMat 2013
AN MHIA INTERNATIONAL EXPO
McCORMICK PLACE CHICAGO JAN 21-24
www.ProMatShow.com

MHI

What Is It? Basic Concept of Operations of a Wireless Vehicle Management System (VMS)

Two-way wireless communications

Communication node
(Wi-Fi, UHF, cellular, or hybrid)

Software & database
(hosted at local site, or remotely hosted)

Wireless computer on each vehicle

Software accessed via Internet, LAN or WAN; reports delivered via email

Who Uses It? VMS is Becoming Best Practice for Fortune 500 Companies

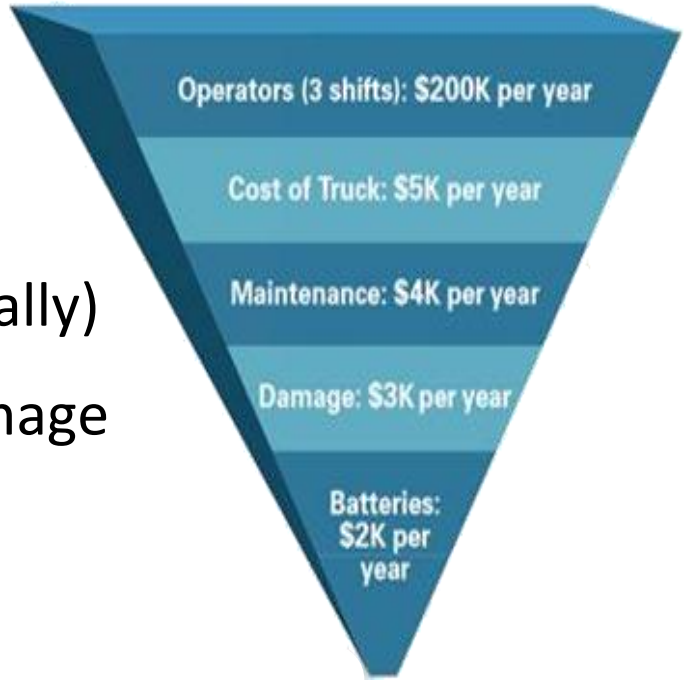
- Some of the prominent organizations that have deployed wireless VMS:

Why? Industrial Truck Safety

- Governments regulate industrial trucks (e.g. OSHA rule 1910.178)
- Major issues: driver training/accountability/access control; equipment operation/safety checks
- Forklift accidents are one of OSHA's top 10 concerns
- Annual violations of OSHA forklift regulations: approx. 3,500

Why? Fleet Costs and Productivity

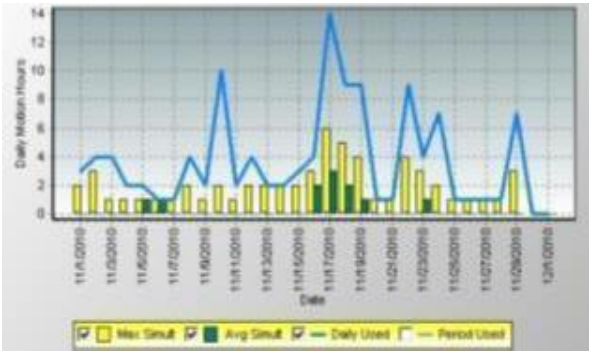
- Labor costs (1-3 drivers per vehicle)
- Acquisition costs (c. $25,000 average)
- Maintenance (15% of truck cost annually)
- Accident costs (injuries/time lost, damage to facility/goods/trucks)
- Energy costs (batteries or fuel)
- Asset utilization/work output
- **Typical cost per vehicle per year: $150,000-$200,000**



Basic VMS: How Every Fleet Can Benefit

- For these issues… …VMS offers

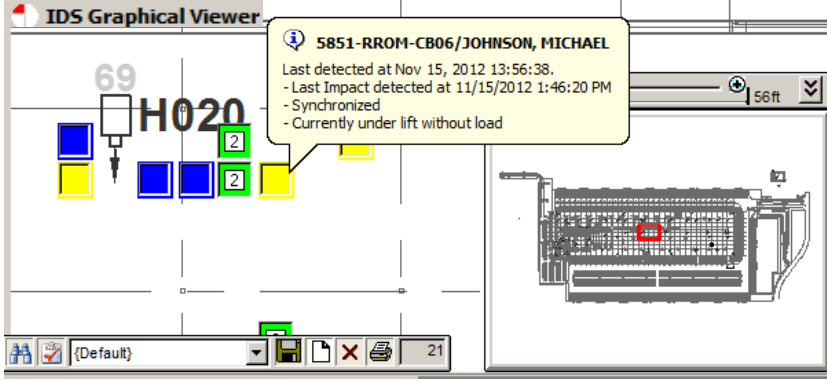
Operator training compliance	Electronic vehicle access control
Accidents/ damage	Automatic impact management
Enforcing vehicle inspections	Electronic safety checklists
Maintenance control	PM scheduling & enforcement tools
Optimizing asset utilization	Productivity metrics & control

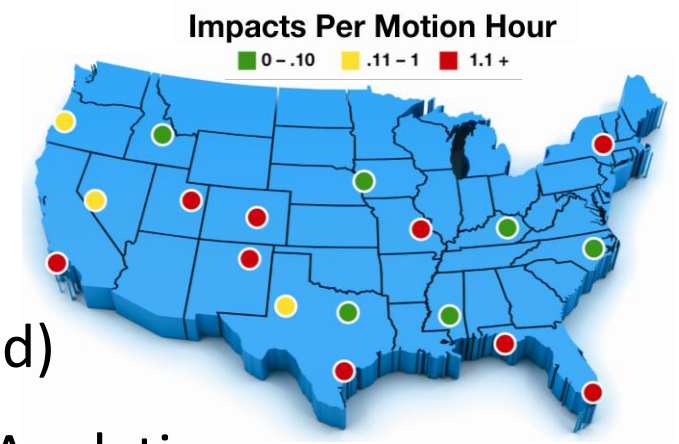


Key Capabilities to Evaluate When Choosing a Basic VMS

- **Access control**
  - Ability to ensure that only qualified drivers can operate your industrial vehicle. Capability should not be cumbersome to the operator.
- **Impact management**
  - System should eliminate "false impacts" and record level of severity. Ability to take different actions based on impact severity is important.
- **Electronic checklists**
  - Simple Q&A flow important to driver acceptance. Question/answer randomization important to ensure driver compliance.
- **Maintenance mgt.**
  - Important that usage metrics are available for all vehicle types with automatic data upload and automatic notification reports.
- **Productivity metrics**
  - System should provide standard reports with the ability to customize as needed. Auto-email feature ensures that reports are easily obtained and reviewed timely.

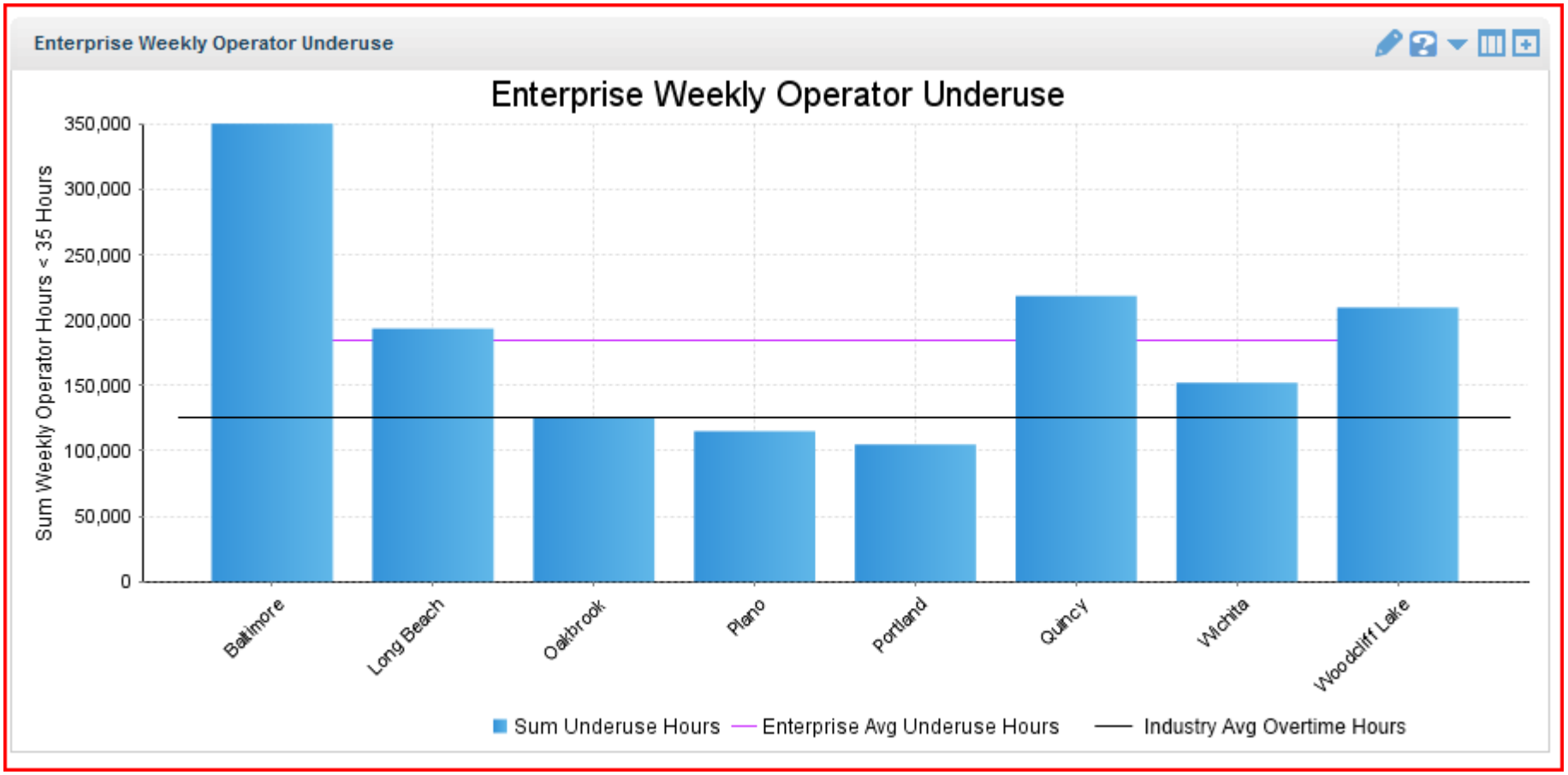
Other, Advanced VMS Capabilities





- Text messaging
- Battery management
- Visibility/location tracking
- Task analysis/cost center allocation
- Monitoring travel (loaded vs. deadhead)
- Enterprise Business Intelligence/Data Analytics
- Maintenance point monitoring (lift motor, oil pressure, etc.)
- Automatic data exchange with existing systems (e.g. CMMS)
- Compatibility with EE/LPS vehicles, ultra-harsh environments

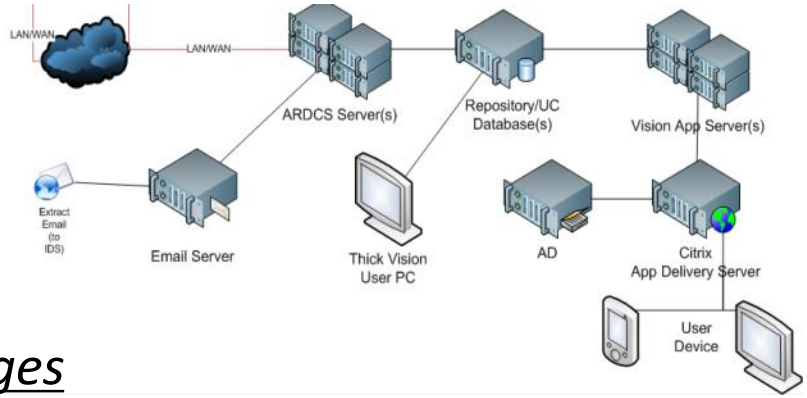
Analytics: Latest Advance in VMS Technology



VMS Deployment & Support Considerations

- Vendor's track record/long-term success
- Technical architecture flexibility to meet your specific site and enterprise IT requirements
- Ability to work on all vehicle models, with OEM concurrence on installation to ensure vehicle warranty
- Ease of system configurability and wireless upgradeability
- Ease of vehicle-to-vehicle hardware swaps or replacement
- Number and quality of resources dedicated to system implementation, maintenance and support

VMS Technical Considerations

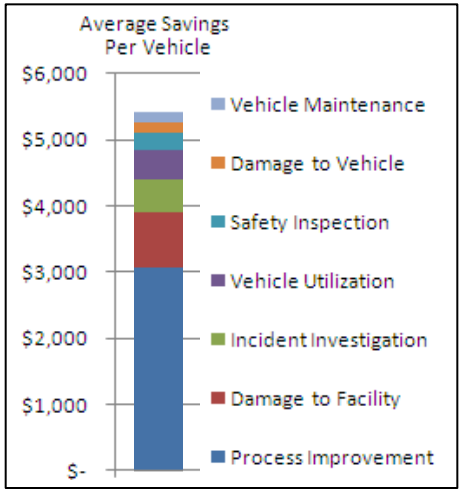


Major Choices	*Primary Advantages*
Site hosted locally	100% network ownership; fastest communication speed; failsafe controls; no remote hosting costs
Site hosted remotely	Best maintenance and support; easiest software installation and upgrades; no internal IT costs
Central hosting for entire enterprise	Economies of scale; consolidated maintenance/ support/software management
Wireless using Wi-Fi	Utilizes existing network; no other infrastructure
Wireless using UHF	Lowest TCO; most secure; least support required
Wireless using cellular/hybrid	Least infrastructure and internal IT support; fastest to deploy; typically lowest upfront cost

VMS Economic Value Proposition

- Based on independent 3rd-party research, basic VMS functions save an average of $1,900 per vehicle per year, mainly by reducing damage, capital and maintenance costs
- Depending on application, advanced VMS can save a site up to $7,000 per vehicle per year, with an average of >$5,000

	Market:	Retail Distribution		Grocery Distribution		CPG Mfg/Whsing		Heavy Mfg/Whsing	
Area of Benefit		Gain	Saved/Vehicle	Gain	Saved/Vehicle	Gain	Saved/Vehicle	Gain	Saved/Vehicle
Vehicle Utilization		4%	$ 358	3%	$ 269	5%	$ 448	8%	$ 716
Vehicle Maintenance		6%	194	6%	194	3%	97	3%	97
Process Improvement		2%	2,640	1%	1,320	3%	3,960	5%	4,400
Damage to Vehicle		50%	146	50%	146	50%	146	50%	146
Damage to Facility		50%	830	50%	830	50%	830	50%	830
Incident Investigation		50%	488	50%	488	50%	488	50%	488
Safety Inspection		10%	275	10%	275	10%	275	10%	275
Total Annual Benefit per Vehicle:			$ 4,931		$ 3,521		$ 6,243		$ 6,952
Typical Time to Cashflow Positive:			6 Months		7 Months		5 Months		4 Months



Analytics Economic Value Proposition

- 500-vehicle enterprise can spend >$100 million/year on MHE
- VMS is site-centric best practice; executives have limited ability to fully analyze data across all enterprise sites, or compare with peer industry
- Analytics drives fleet reductions and increased utilization/ productivity through whole-enterprise asset analysis and visibility of peer industry averages
- With typical enterprise fleet utilization at 50%, Analytics can add >$25 million/year to a 500-vehicle enterprise's bottom line

PROMAT 2013
AN MHIA INTERNATIONAL EXPO
McCORMICK PLACE CHICAGO JAN 21-24
www.ProMatShow.com

For More Information:

Speaker: kehrman@id-systems.com

Home Page: www.id-systems.com

Visit I.D. Systems at

ProMat 2013 Booth **4181**