Opening NEW Frontiers of Efficiency & Productivity with Mobile Power

IF YOU SUPPLY THE SUPPLY CHAIN, YOU BELONG AT MODEX.

The greatest supply chain show on earth.

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NEWCASTLE SYSTEMS

Presented by:

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Core Dynamics

INBOUND

Handle Full Pallets

11% (2015)

16% (2014)

Handle Full Pallet/Case/Split Case

44%

Handle Full Pallet & Case

26%

Handle Case & Split Case

19%

OUTBOUND

Handle Full Pallets

9% (2015)

9% (2014)

WHAT IT MEANS:
More breaking bulk and labeling required

Bigger & Bigger

CAPEX INVESTMENTS

Average Capex Investment

$1.2 million (2015)

Median Capex Investment

$266,130 (2015)
$252,000 (2014)

EMPLOYEES

Average # in a Distribution Network

287 (2015)
249 (2014)

FACILITY SIZE

Average Sq. Ft. in Network
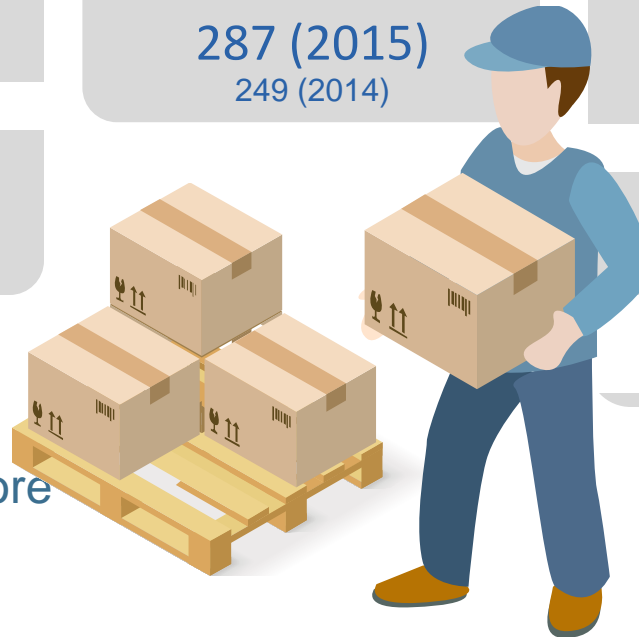
570,700 (2015)
502,325 (2014)

Median Sq. Ft.

246,341 (2015)
195,455 (2014)

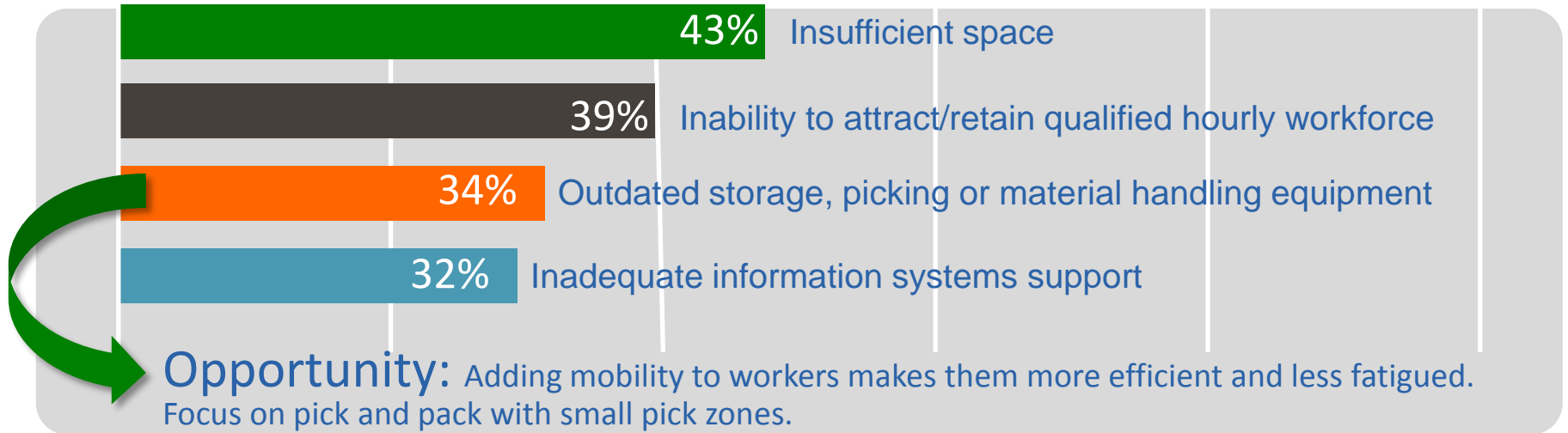Growth was particularly strong in networks with square footage of 500,000 and greater.

WHAT IT MEANS:

Larger spaces, more employees, more walking, more opportunity to remove waste and improve processes with mobile power.

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Staying Resilient

Issues Affecting Warehouse/DC Operations This Year

43%	Insufficient space
39%	Inability to attract/retain qualified hourly workforce
34%	Outdated storage, picking or material handling equipment
32%	Inadequate information systems support

Opportunity: Adding mobility to workers makes them more efficient and less fatigued. Focus on pick and pack with small pick zones.

Lean Six Sigma: 8 Wastes

Defects

Efforts caused by rework, scrap and incorrect information.

Overproduction

Production that is more than needed or before it is needed.

Waiting

Wasted time waiting for the next step in a process.

Non-Utilized Talent

Underutilizing people's talents, skills & knowledge.

Transportation

Unnecessary movements of products & materials.

Inventory

Excess products and materials not being processed.

Motion

Unnecessary movements by people (ex. walking).

Extra-Processing

More work or higher quality than is required by the customer.

Mobile Power Helps Eliminate These Costly Wastes

Motion   **Waiting**   **Overproduction**   **Defects**   **Transportation**

Familiar Scenario?

How Much Do These Footsteps Cost?

Number of minutes (per hour) spent walking to a static printer or computer desk:	20 minutes
Average labor rate (with benefits) per hour:	$22
Number of work hours per week:	40
Number of operators:	1
▼ COST ▼	
Cost per year of unnecessary walking:	$15,253
Hours wasted per year:	693

Make Existing Hardware Mobile

Ergonomic Workstations with Integrated Power

A selection of available options:

Mid-sized Powered Cart

Powered Picking Station

Stand-alone Power Pack

Mobile Power Improves Efficiency

Picking

Receiving

Safety

Shipments

Cost Per Pick

Labor

Touches

Fatigue

Errors/Defects

Mobile Power Can Improve Dock to Stock Metrics

RECEIVE

INSPECT & RELABEL

CROSS-DOCK

Case in Point
Leading Off-Priced Retailer

Increased productivity with powered cart deployment:

Cases received per hour without cart	**16.6**
Cases received per hour with cart	**27.1**
Increase in receiving volume	**63%**

63%

Increase in receiving volume

Leading Off-Priced Retailer

75%

Reduction in overtime

Reduction in overtime 75%

due to increase in productivity

Time saved 870.75

with cart deployment per year (hours)

Leading Off-Priced Retailer

$5,000

Reduction in labor costs per operator

Dollars saved with powered cart deployment:

Per day	**$37.09**
(2 shifts @ $11.50/hr, 270 days/yr)	

Per year	**$10,013.63**
(2 shifts @ $11.50/hr, 270 days/yr)	

![Newcastle Systems logo]

Receiving Work Study

Scenario 1

STEP	TASK	TIME (seconds)	VALUE
1	Lift Gate/Pull Paperwork	20	=
2	Walk to PC/Waiting	150	🚫
3	Scan Barcode	5	+
4	Lookup PO Info	10	=
5	Print PO	10	🚫
6	Walk Back to Load	120	🚫
7	Inspect QC/Verify Items & Qty	360	+

STEP	TASK	TIME (seconds)	VALUE
8	Walk Back to PC/Waiting	150	🚫
9	Print Labels	60	+
10	Walk Back to Load	120	🚫
11	Apply Labels for Putaway	120	+
12	Find Material Handler for Putaway	120	🚫

TOTAL TIME: 20.75 Minutes

= Necessary Tasks   **+** Value Added Tasks   🚫 Wasted Tasks

![MODEX 2016 powered by MHI logo]

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Eliminate Wasted Tasks

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Receiving

TAKE AWAY

Mobile Power can help you:

- Remove motion, waiting and transportation waste
- Reduce labor by as much as $10K
- Increase receipts by as much as 60%
- Reduce improperly labeled products
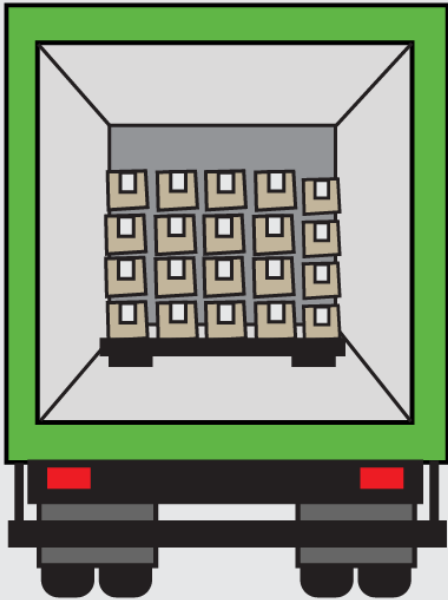- Reduce inaccurate inventories

Picking

TAKE AWAY

Mobile Power can help you:

- Label at point of use
- Enter data to a full-sized screen
- Pack & label at site of pick:
  - less touches
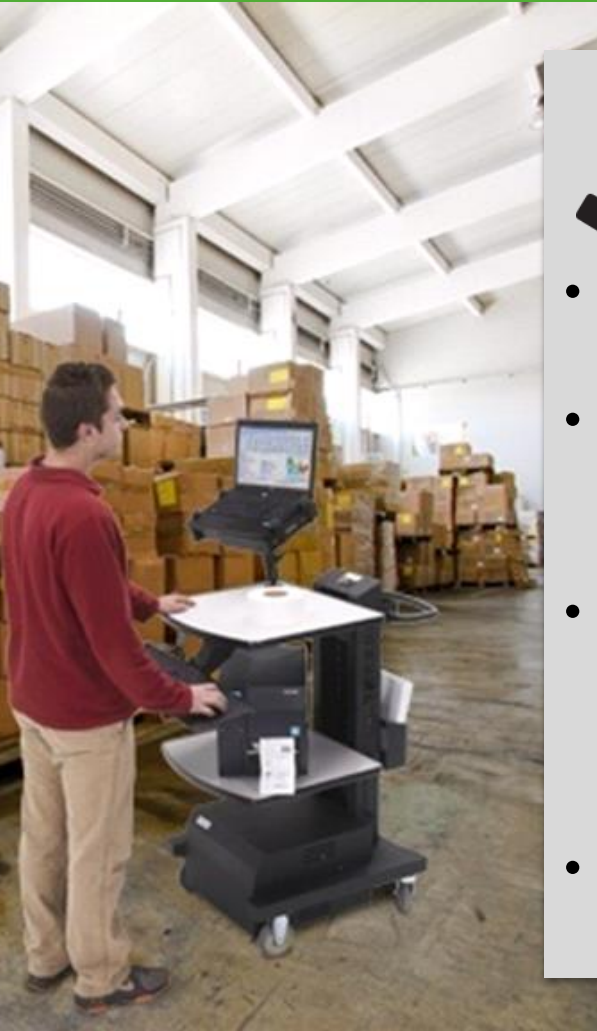 - less errors
  - increased throughput
- Reduce cost/pick

Shipping

TAKE AWAY

Mobile Power can help you:

- Process goods directly at the pallet
- Remove motion, waiting and defect waste
- Keep printing and labeling at the dock
- Increase shipment accuracy and volume

TAKE AWAY

- Focus on a few areas like motion and transportation

- Engage teammates with Kaizen or continuous improvement event to eliminate the waste

- Get dirty, move things, add visual signage, ask employees for insight and ensure they know what you want to accomplish

- Low cost improvements help change your DC from cost center to profit center

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