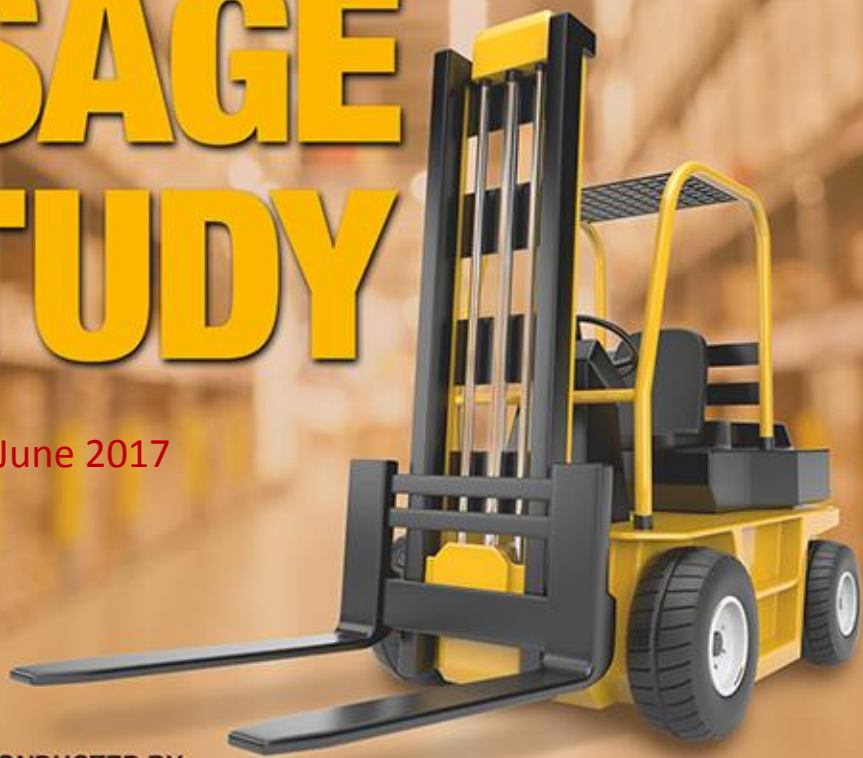


# LIFT TRUCK ACQUISITION & USAGE STUDY

June 2017



CONDUCTED BY:

**PRG**  
PEERLESS RESEARCH GROUP

**MODERN**  
MATERIALS HANDLING



## Introduction & Methodology

❏ This study is the latest wave of this research conducted on behalf of *Modern Materials Handling* magazine to better understand how lift truck are acquired and how fleets are being managed and maintained. Where available the report compares this year's findings to 2016 and 2015 results.

❏ Specifically, the study examines:

- ❏ Lift trucks in use and planned for acquisition
- ❏ Lift truck acquisition
- ❏ Impact the economy has on lift truck acquisitions
- ❏ Usage of approved vendor lists for lift trucks
- ❏ Lift truck maintenance arrangements and parts procurement
- ❏ Use of technology for managing lift truck fleet
- ❏ Respondent demographics

❏ Methodology:

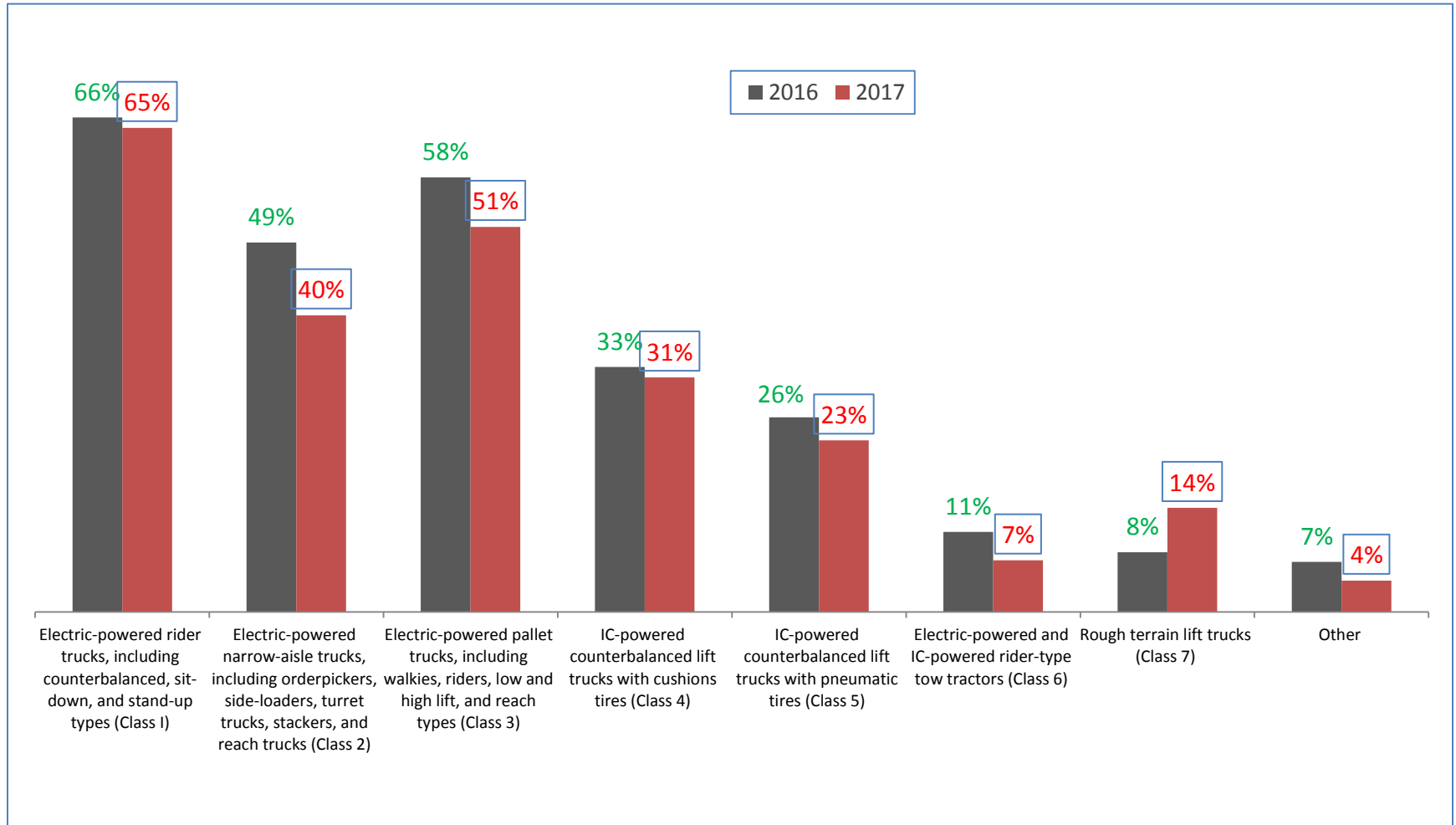
- ❏ Method: E-mail
- ❏ Sample: Subscribers to *Modern Materials Handling* magazine
- ❏ Respondent qualifications: Involvement in the evaluation and purchase of lift trucks for their facility
- ❏ Field & Response

	2017	2016	2015	2014
Fieldwork	June	July	June	June
# of usable returns	144	151	205	310

- ❏ Margin of error: At a 95% confidence level, results are projectable at a margin of error of +/- 8.6%.



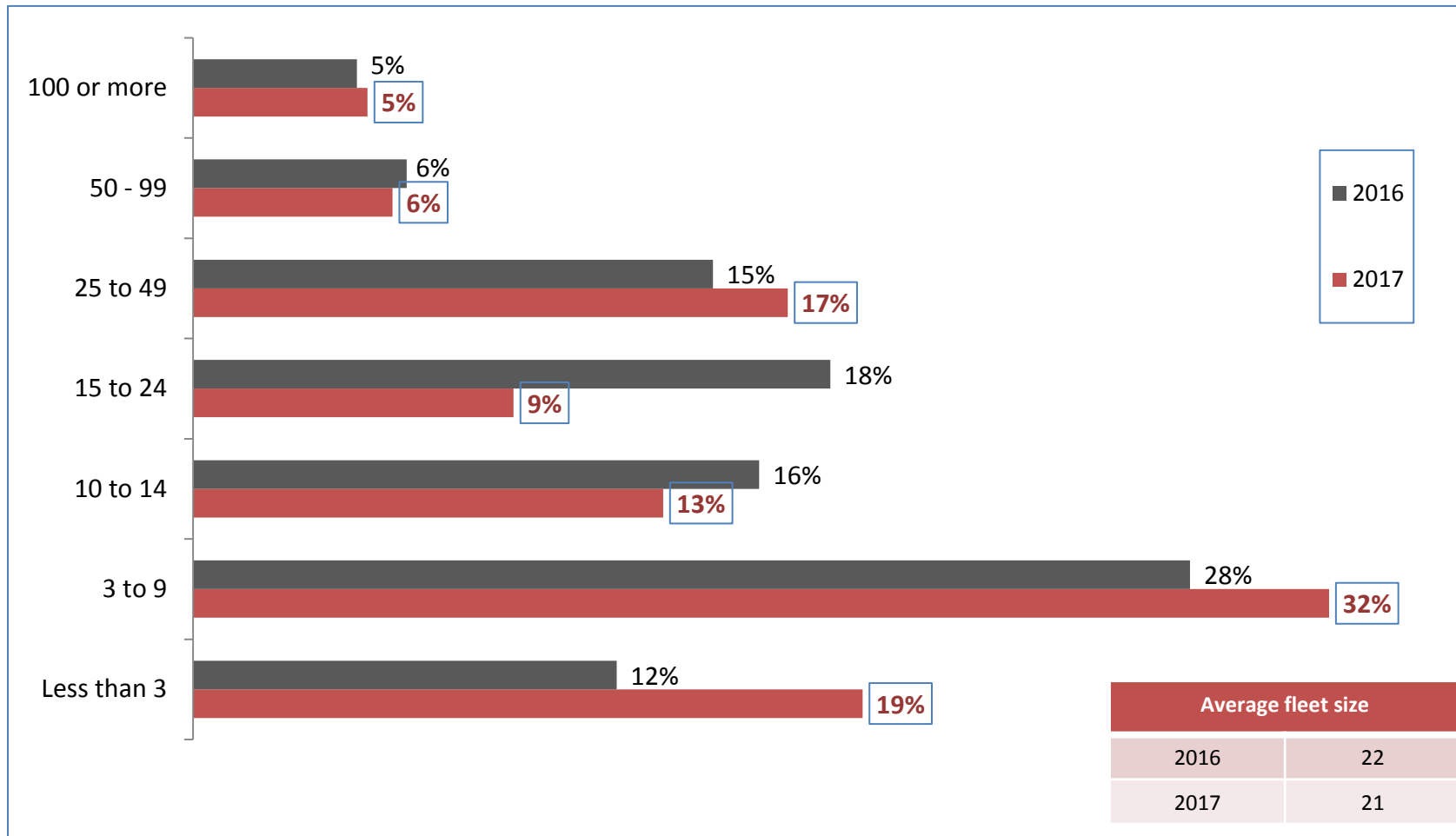
## Types of lift trucks in use at facilities



*What type(s) of lift trucks are in use at your facility?*



## Size of lift truck fleets

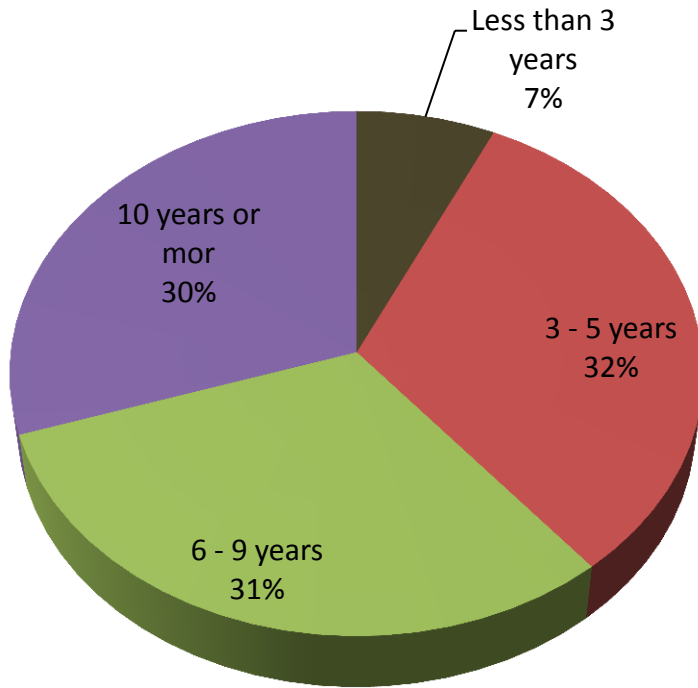


*In total, approximately how many lift trucks are currently in use at your facility?*



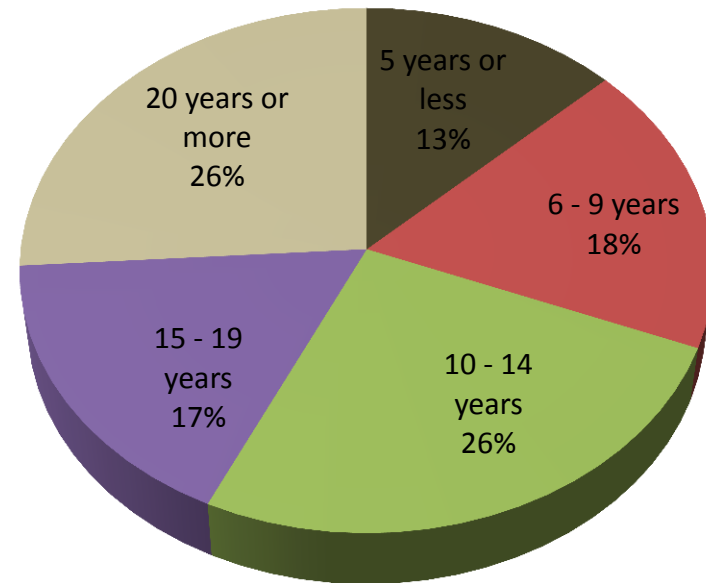
## Age of lift trucks

*Average age of lift trucks*



	2016	2017
Average age	7.5	8

*Oldest lift trucks*



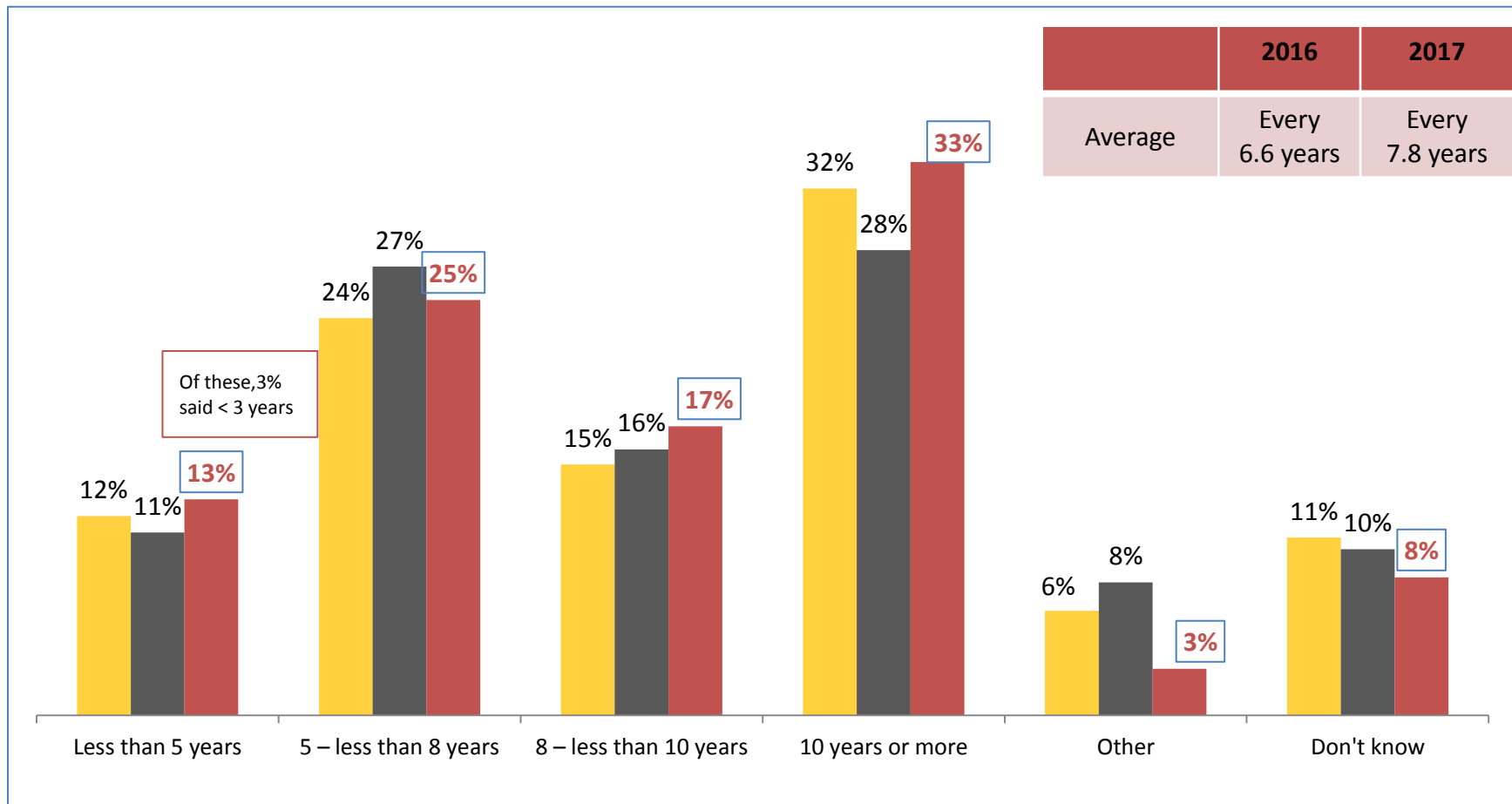
	2016	2017
Average # of years	15	14

*Approximately, what would you say is the average age of the lift trucks in your fleet?*

*And, what would you estimate the age of your oldest lift truck currently in use to be??*



## Replacement and retirement schedules

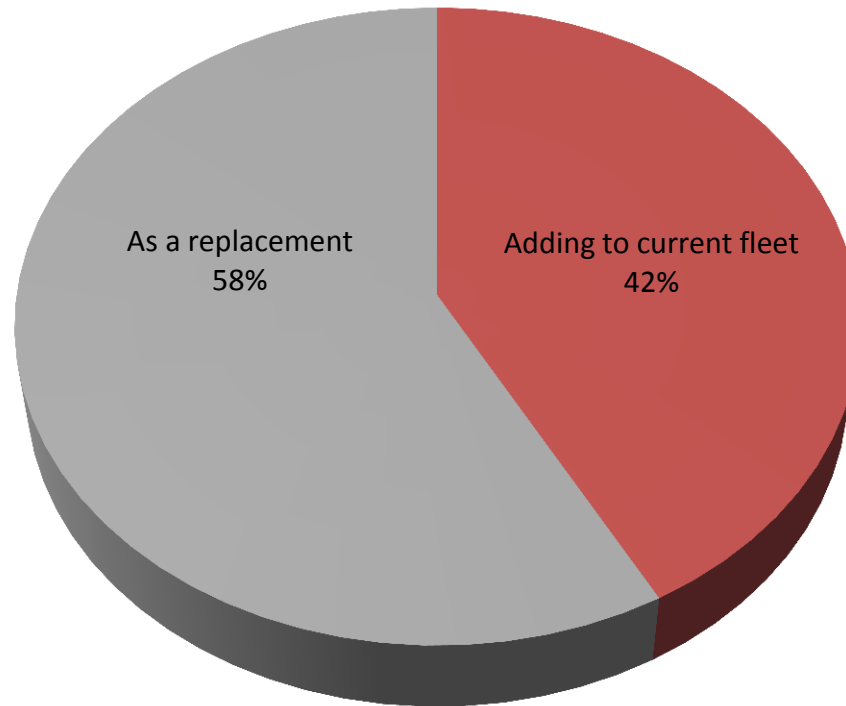


How often do you typically replace lift trucks?



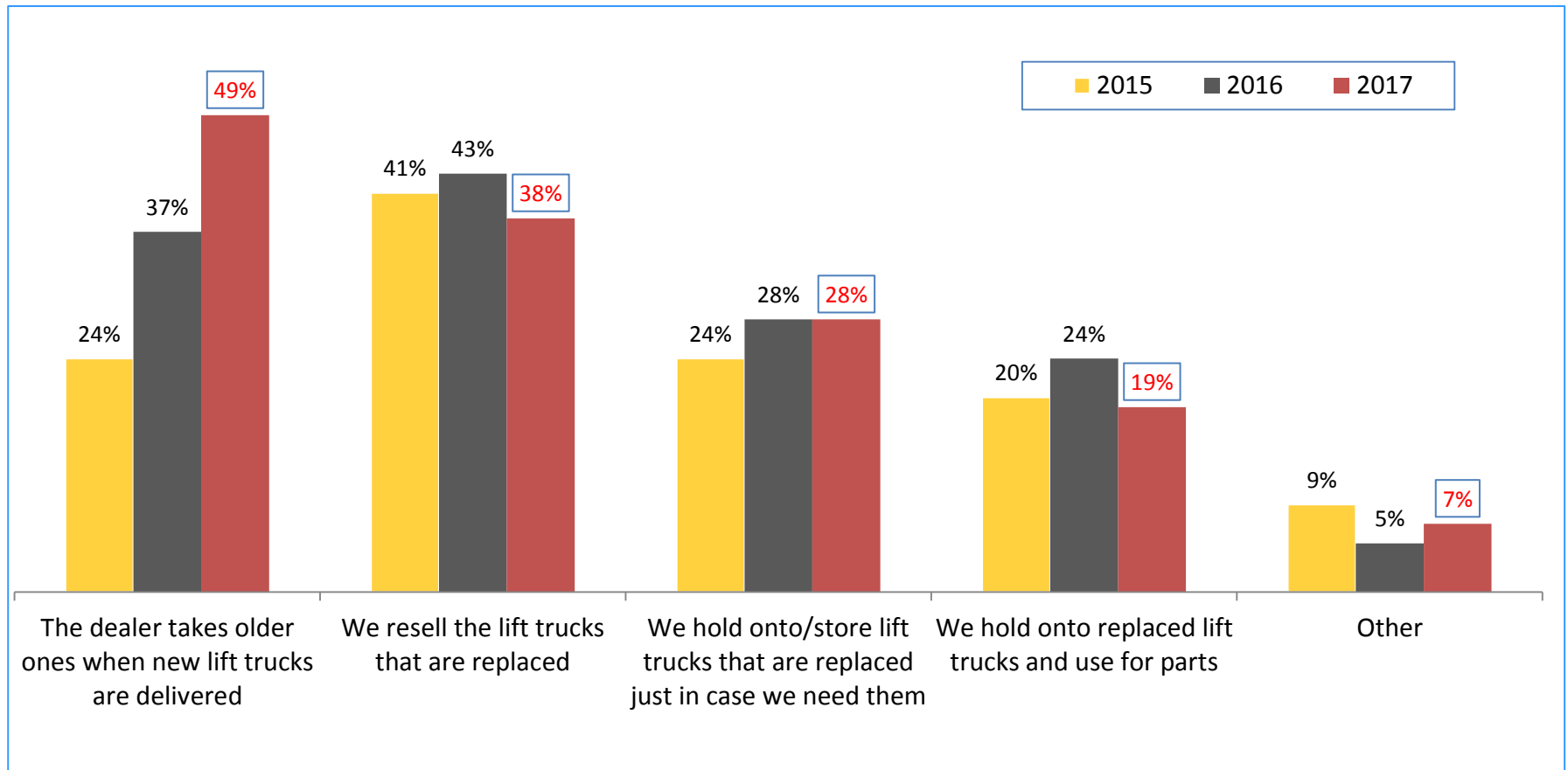


## Whether lift truck acquisitions will be an addition or a replacement



*What percent will be an addition to your fleet and what percent will be replacing trucks now in use?*

## How companies are handling rotation & disposal of lift trucks



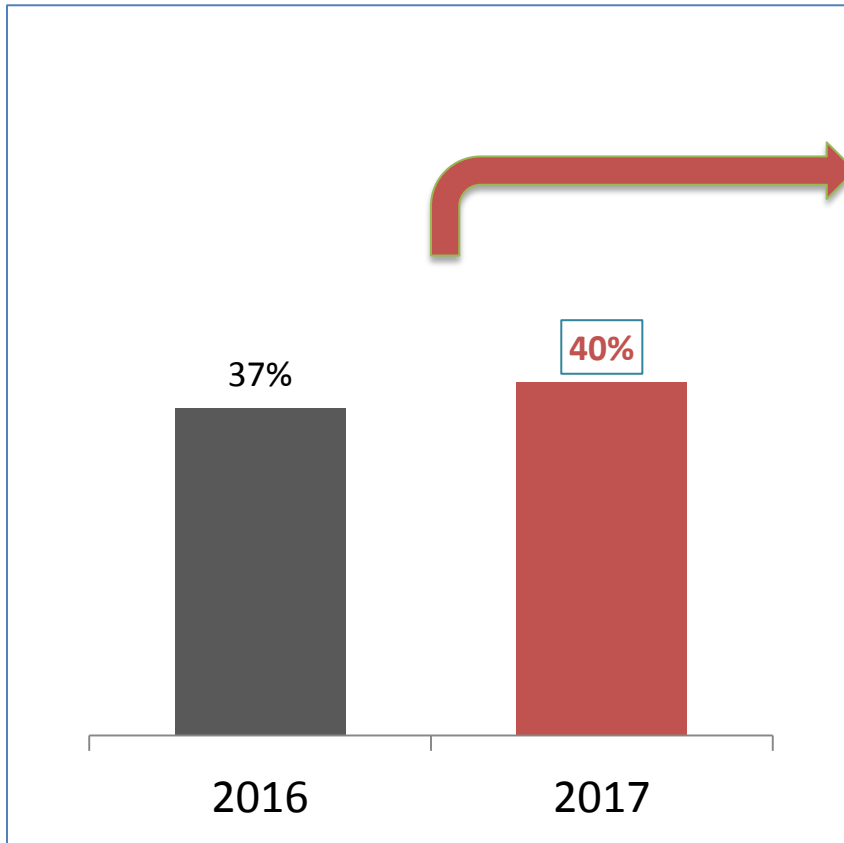
*For the lift trucks you buy, what are your practices regarding lift truck rotation or disposal?*



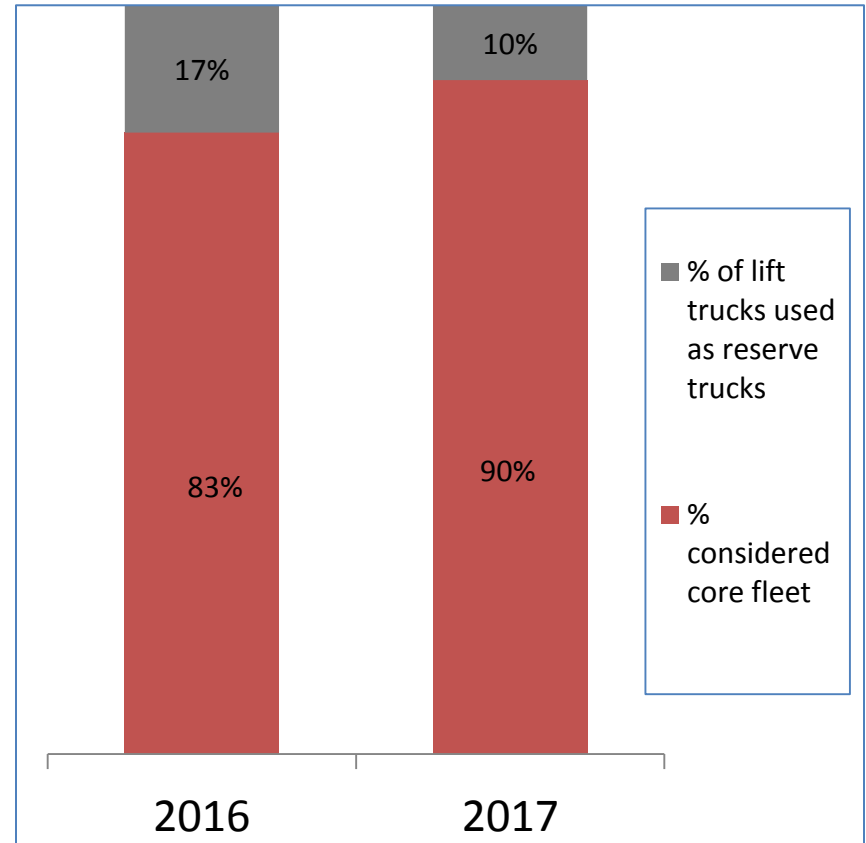


## Future lift truck fleets

*Companies operating a core fleet of lift truck*



*Composition of fleet: core fleet vs. reserves*

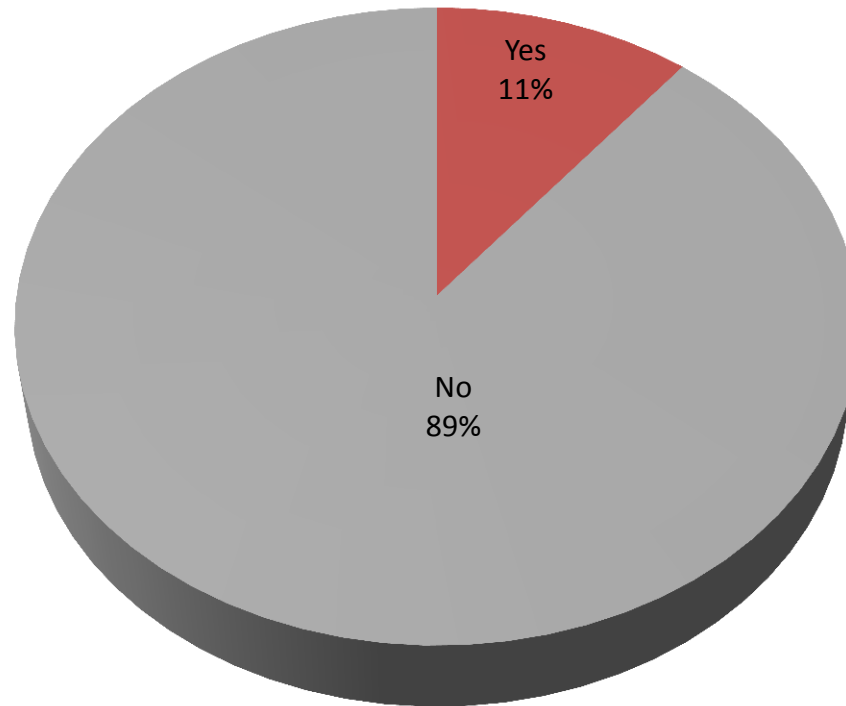


*Do you operate a core fleet of lift truck?. In other words, a fleet of trucks you use regularly vs. a less-utilized reserve fleet.*

*Approximately what percent of your overall fleet comprise your core fleet vs. reserves?*



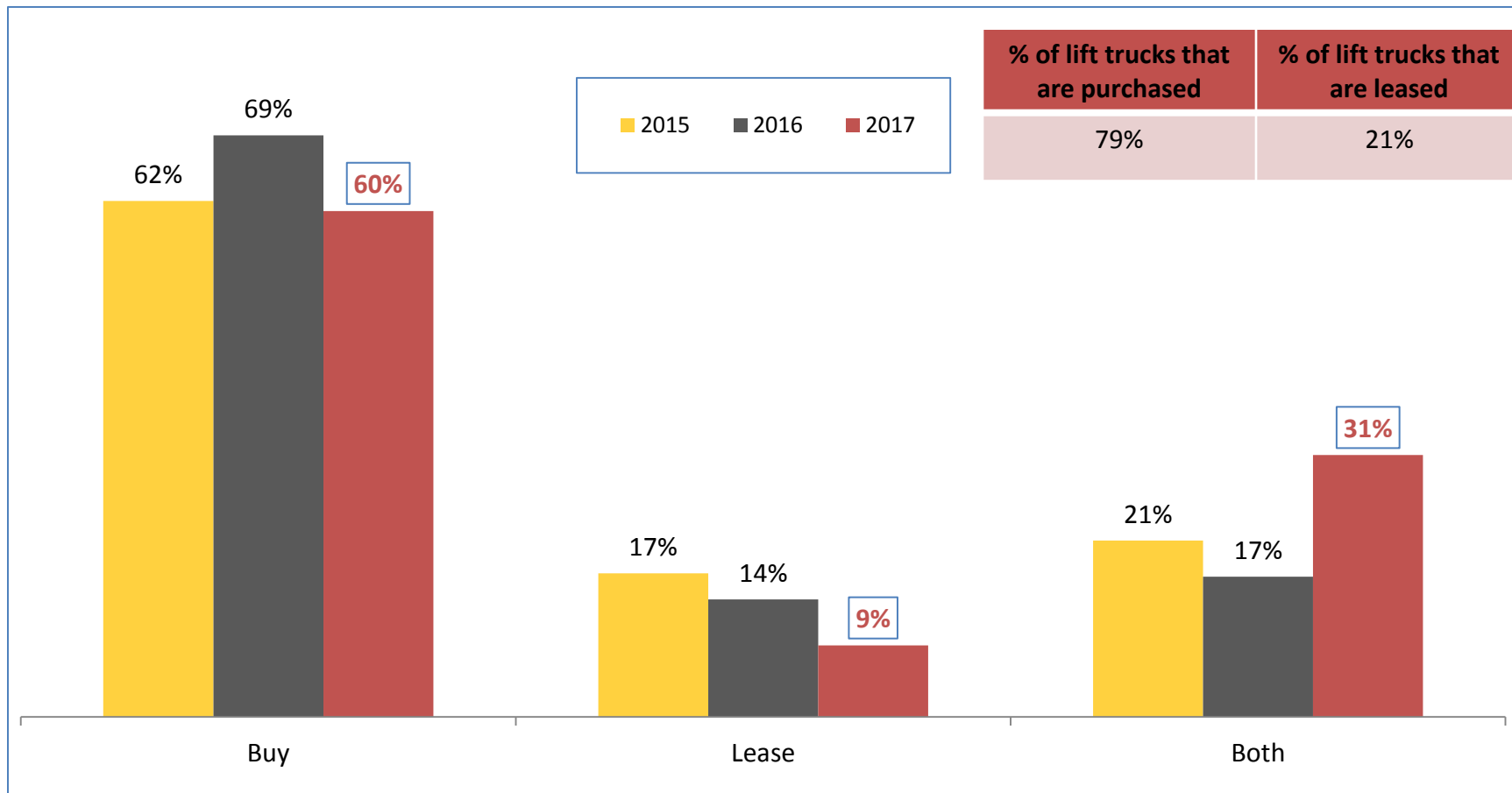
## Usage and adoption of autonomous or semi-autonomous forklift technology



*Are you using or planning to evaluate/acquire any kind of autonomous or semi-autonomous forklift technology (i.e. dual mode or remote control based that allows for "dual mode" operation of a forklift or AGV -- these can either be operator-driven or will operate autonomously by flipping a switch)?*

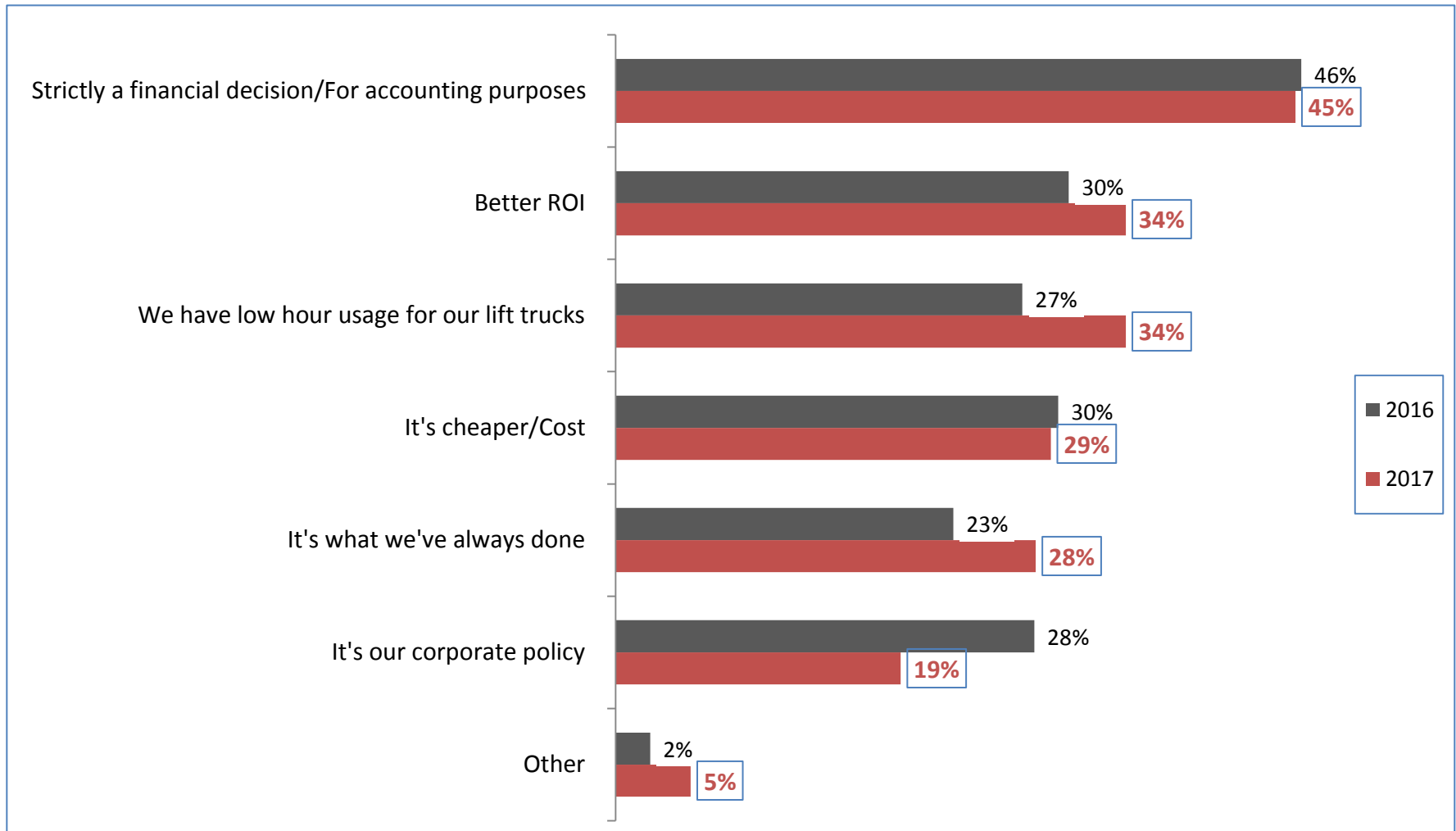


## How lift trucks are acquired



*Do you typically buy lift trucks, lease them or both?*

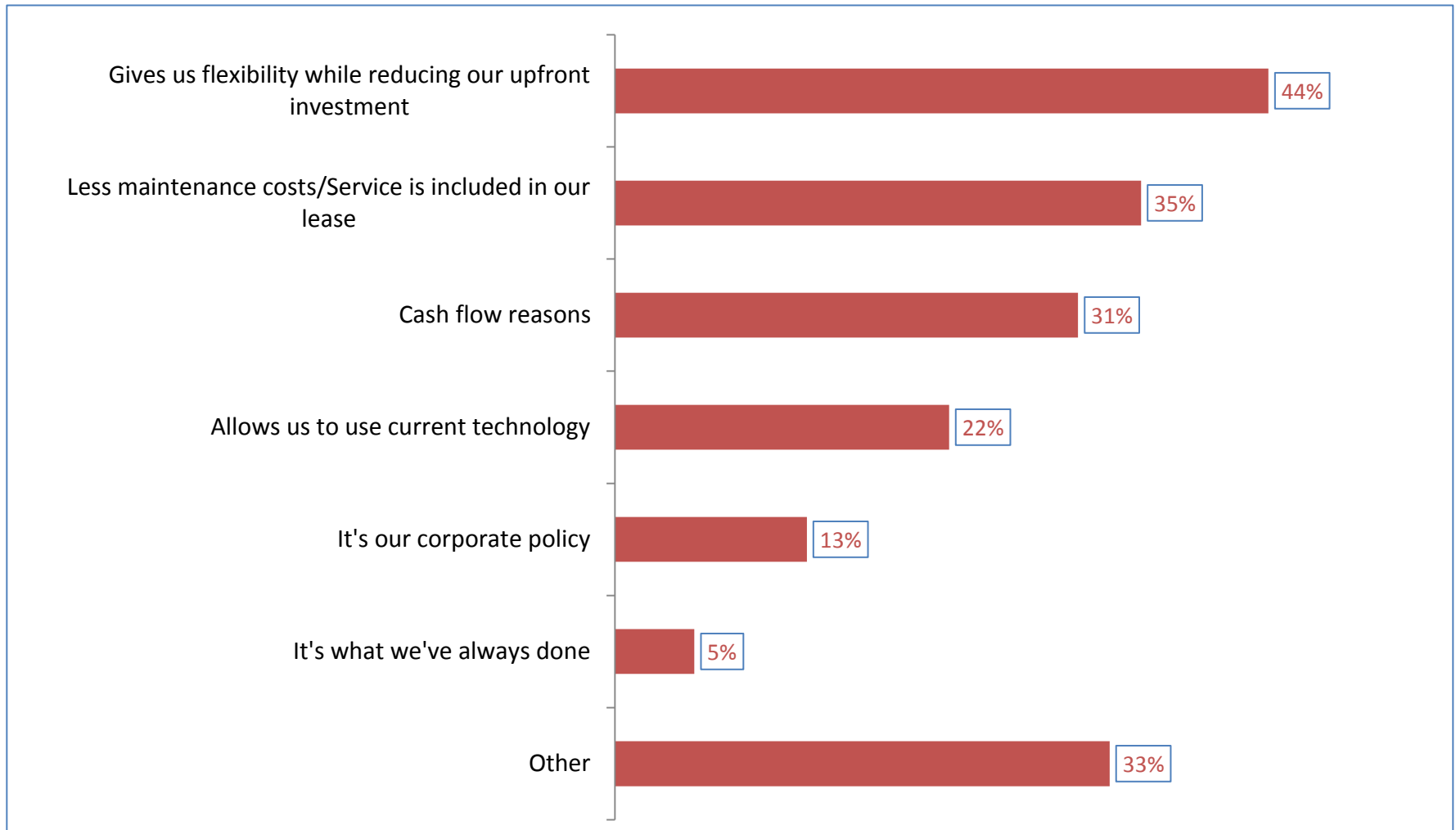
## Reasons for buying lift trucks



Why do you typically buy lift trucks?

June 2017

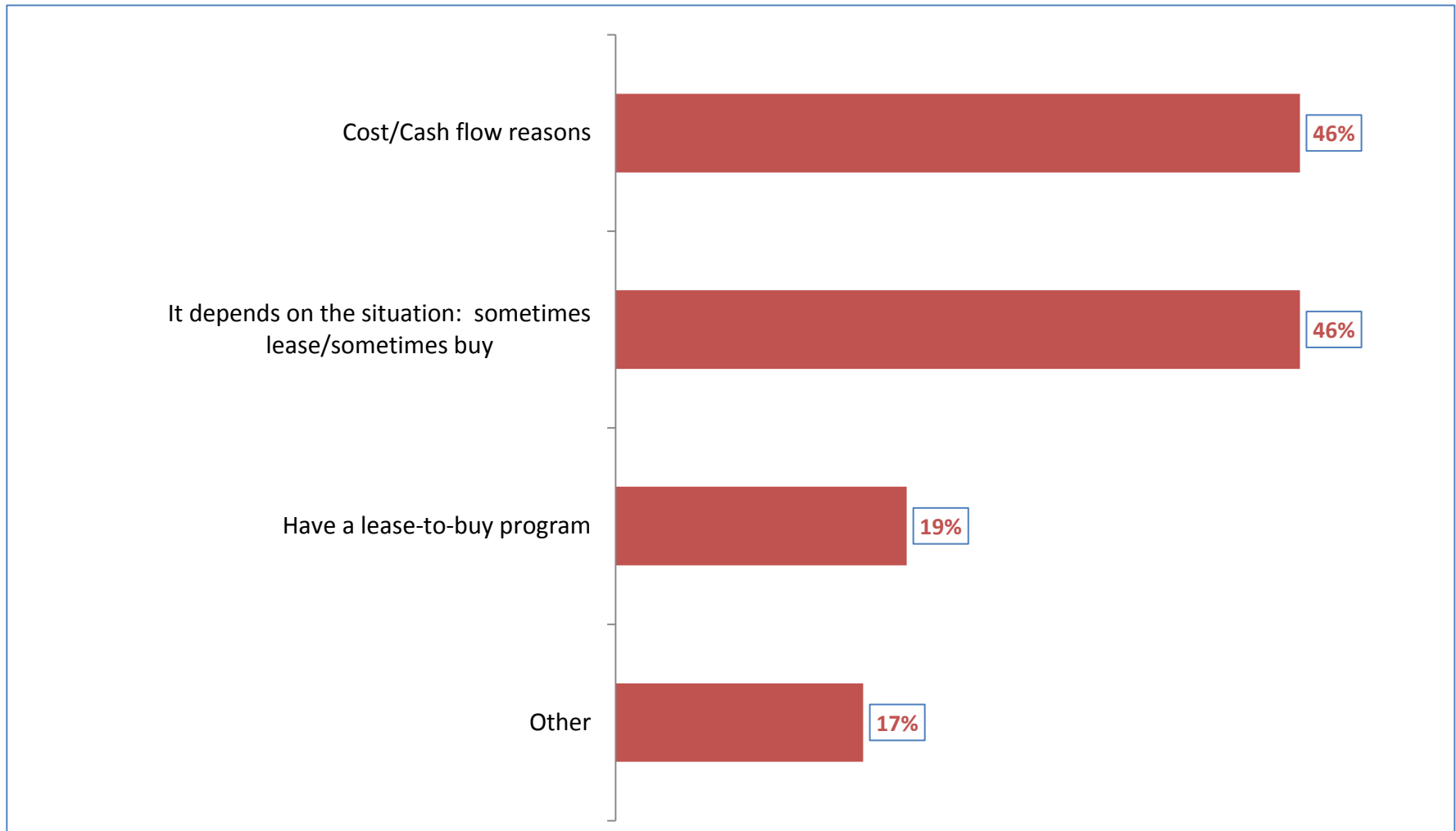
## Reasons for leasing lift trucks



Why do you typically buy lift trucks?

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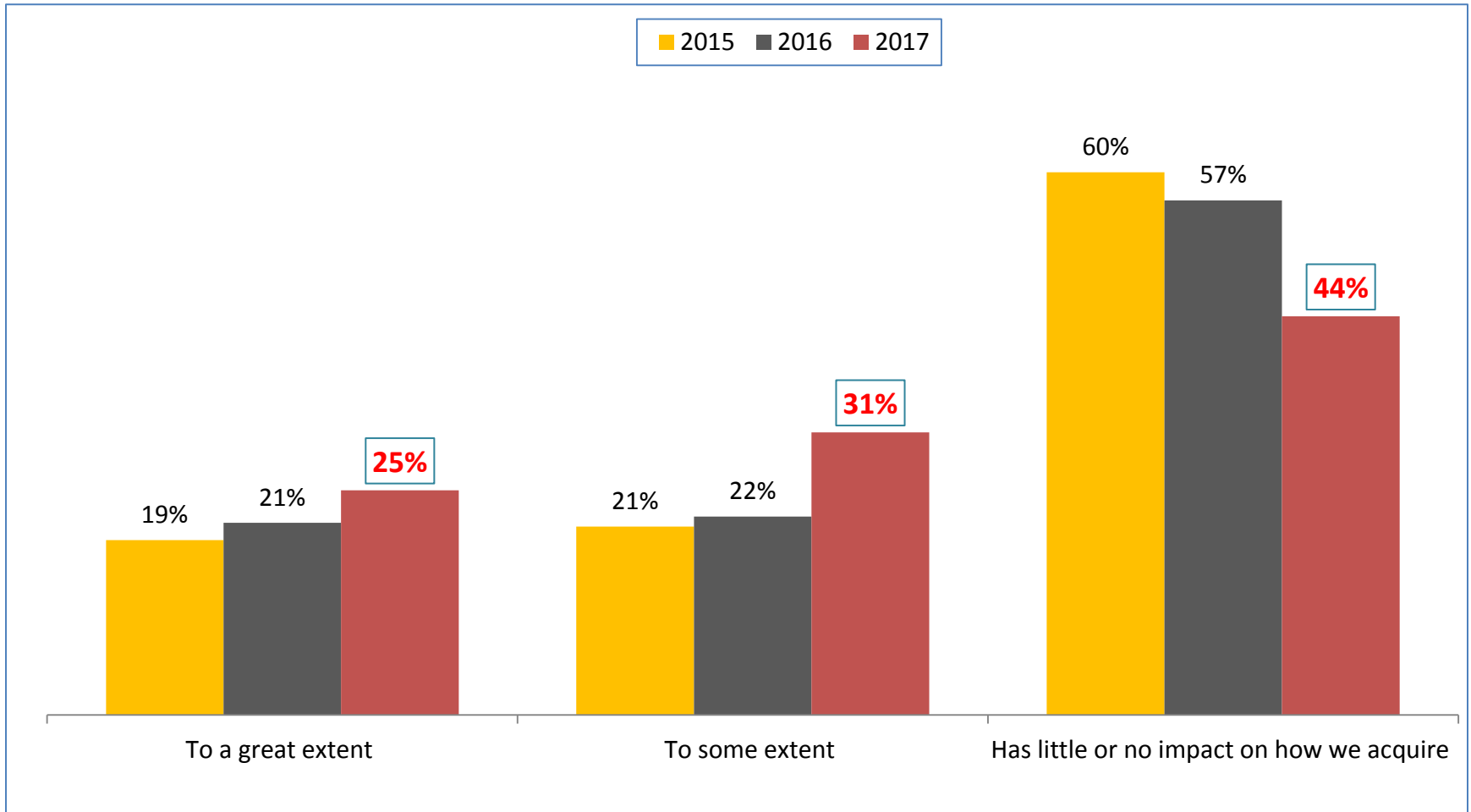
## Reasons for buying AND leasing lift trucks



Why do you typically buy lift trucks?

June 2017

## Level of impact the economy or market factors have on lift truck acquisitions



*To what extent does the economy or market factors influence how you acquire lift trucks?*





## Reasons the economy has a great impact on lift truck purchase decisions

We try to keep our fleet of material handling equipment to less than 10,000 hours .

Annual budgets reviewed semi annually

Better market = more sales thus the need for equipment

Capital expenditures are put on hold if the company is not doing well

Cash flow

Cash flow

Cash flow in and out

Cost and forecast

Cost to revenue potential, other facility expenses driven/allowed by market factors.

Depends on the Business; Volume helps in deciding

Harder times allows for cheaper unit.

If business is good, we have greater opportunity for approval of purchases

If business is slow we don't buy them.

If we are not making money capital expenses are cut

If we're not making money, we don't buy new trucks

It all depends on the potential projects that come up during the year and the commitment that comes from the customer.

Rates being the biggest indicator

Really depends on how our sales are progressing and then our staffing levels.

Slow times we save our funds.

The economy determines what monies will be available.

The need to preserve capital is the main driver.

Unstable economic conditions disrupts business needs to grow.

We are NGO

We have to have sufficient revenue available for purchases

When our profits are less, we don't purchase new equipment.

Work load

*Please explain how the economy/market-related issues impact your purchase decision.*



## Reasons the economy has some impact on lift truck purchase decisions

### Availability

Based on sales and life of lift trucks

Better economy increased demand more work.

Budget allocation is dictated as to whether we have the money in any fiscal year

Cash available for capex units

Cash flow

Could effect expense budget

Currently requirements

e.g. - a supplier/customer going out of business and wants to sell

If demand and prices are high, we may hold off.

IF IT GETS BUSY WE HAVE A NEED IF IT IS SLOW WE HAVE NO NEED

If its good we would probably be leasing them.

If sale are good we will buy.

It's all based on business levels and company growth

Lease means lower monthly cost

Make do with what have if sales/profits down too much

May run the lifts longer in a down cycle

Money available for capital projects

Not selling product can't buy new trucks.

Projected volume and hours factor into our annual Cap Ex analysis.

Put off purchasing a new truck until the economy improves.

Shipping more products require additional units and wears out equipment faster.

Supply and demand

The more volume and use the likely hood we will lease.

Try to prepare for good times when times are bad, but need to be cautious.

We are able to acquire newer lift trucks when the market conditions are favorable - increased capital.

When market is good we replace early

When money is tight we hang on a little longer

When the economy is good, we are busier and have a higher need for equipment.

When they are going up in sales for trucks and I am forced to use the ones I have until they are up to no good

*Please explain how the economy/market-related issues impact your purchase decision.*



## Reasons the economy has little or no impact on lift truck purchase decisions

Because we have learned through trial and error our current approach is best

Business has only moderately impacted by macro-economic forces

Business needs, if the market is up we need better or more equipment. If market is down we need less equipment.

Buy based on equipment reliability and age

Depends which way the supply demand on the markets.

It typically doesn't. we use our trucks till they are at end of life and when we replace we consider all options for best cos and case scenario.

IT'S A MATTER OF NEED

Low use per year typically buy only when expanding our facilities

Managing fleet size relates to forecast of sales. We maintain a specific production capacity for our peak business.

Price & timing

Purchase based on need.

School District we only purchase equipment when we have money allotted or budgeted for

Tax purposes and application at the time.

Unrelated to economy, only based on our business needs

We buy/replace our material handling equipment as needed to run our facility.

We get new trucks when our lease is up.

We lease or buy has our business grows

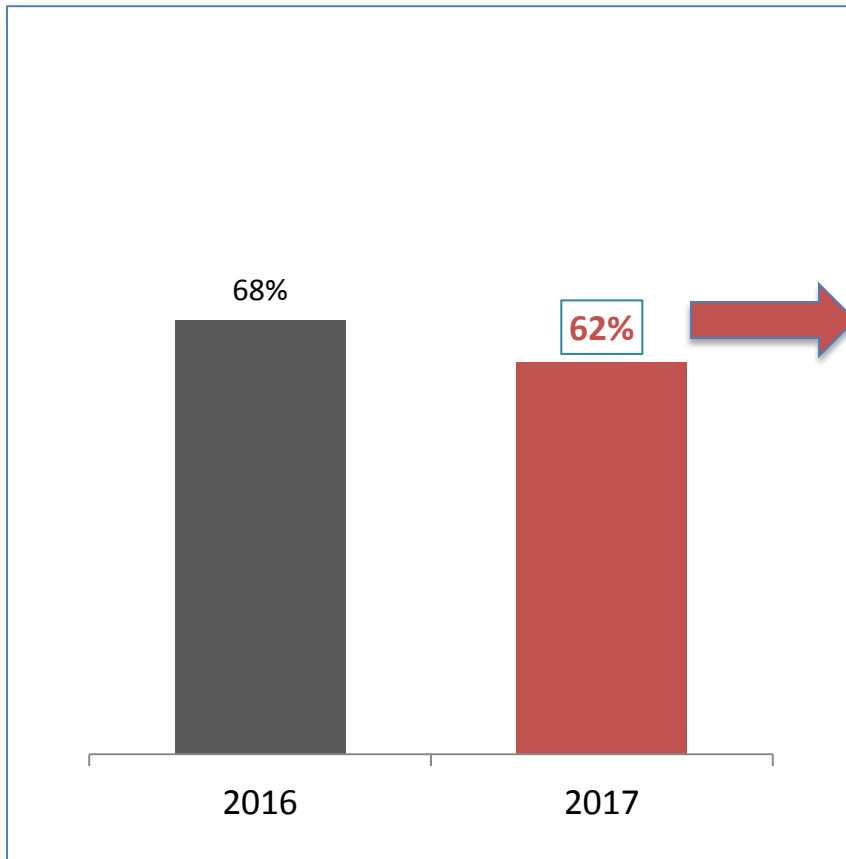
We may elect to defer a purchase if our sales numbers are lacking

*Please explain how the economy/market-related issues impact your purchase decision.*



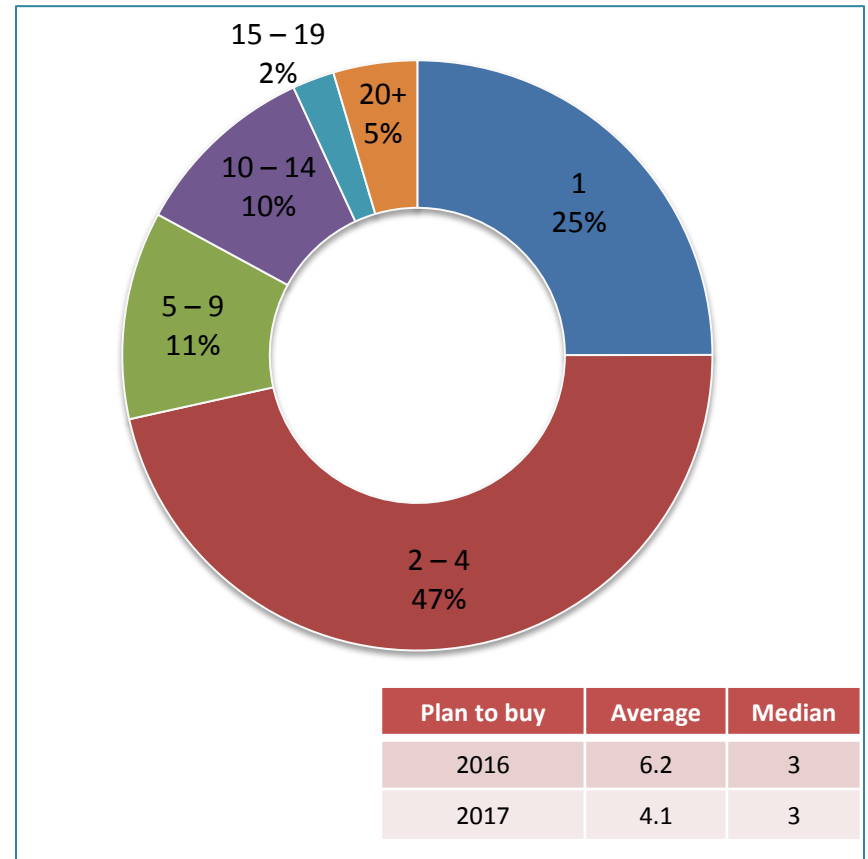
## Lift truck purchasing

*Likelihood of buying/leasing lift trucks within the next 24 months*



Are you likely to buy or lease lift trucks within the next 12 - 24 months?

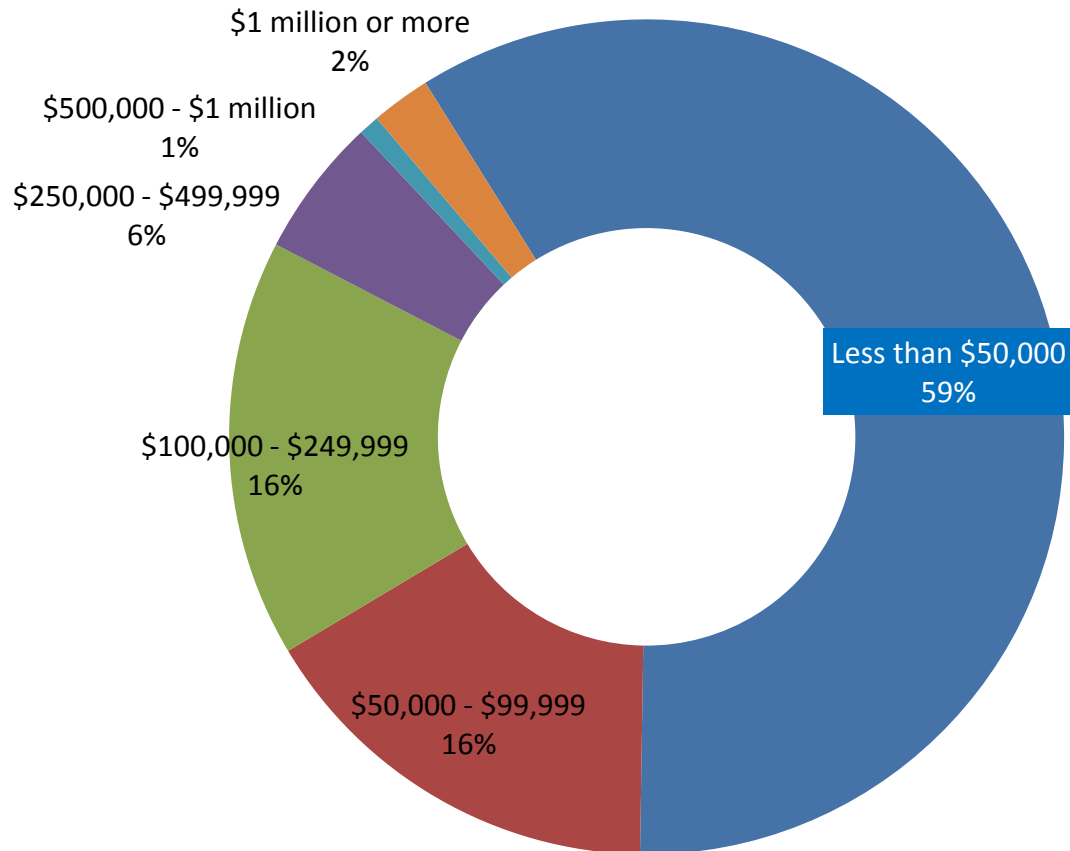
*Number of lift trucks plan to buy/lease within the next 24 months*



How many lift trucks do you plan to buy in the next 24 months?



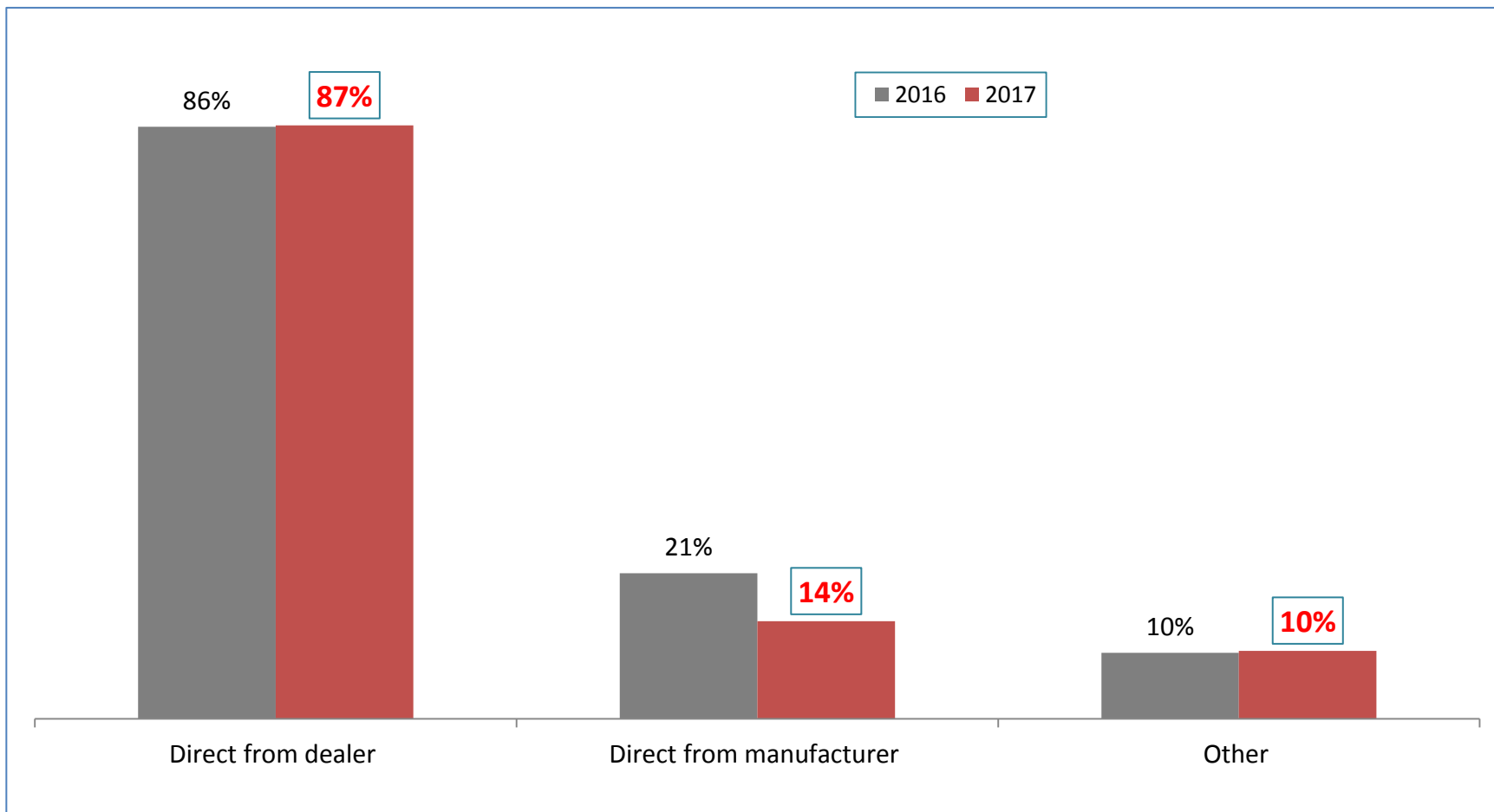
## Spending plans for the coming 12 to 24 months



	Average spend	Median spend
2015	\$151,500	\$49,500
2016	\$151,610	\$58,334
2017	\$119,040	\$42,210

How much do you plan to spend on lift trucks in 2017?

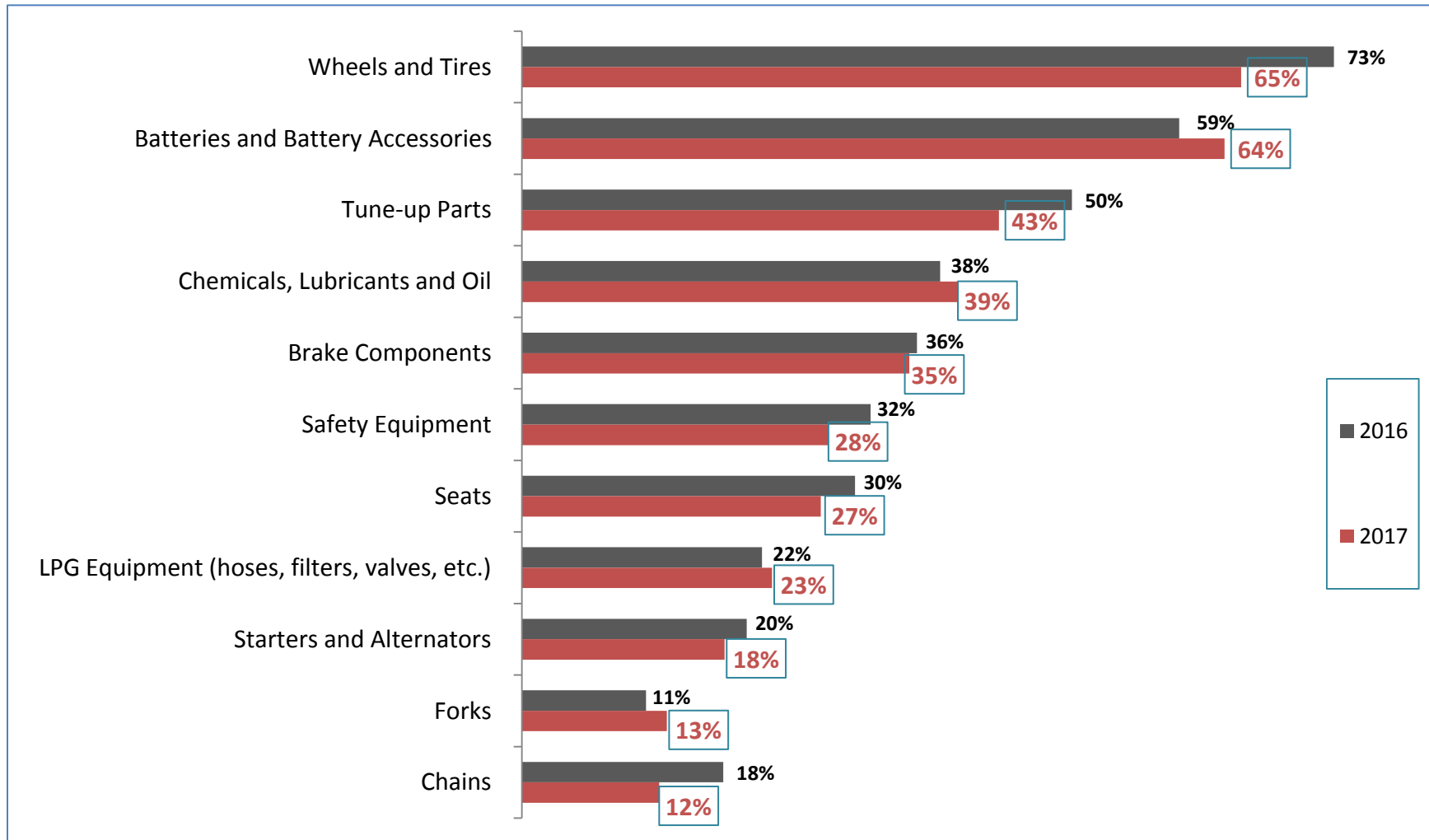
## Sales channels



*From which channel(s) do you commonly purchase lift trucks?*



## Parts likely to purchase or replace

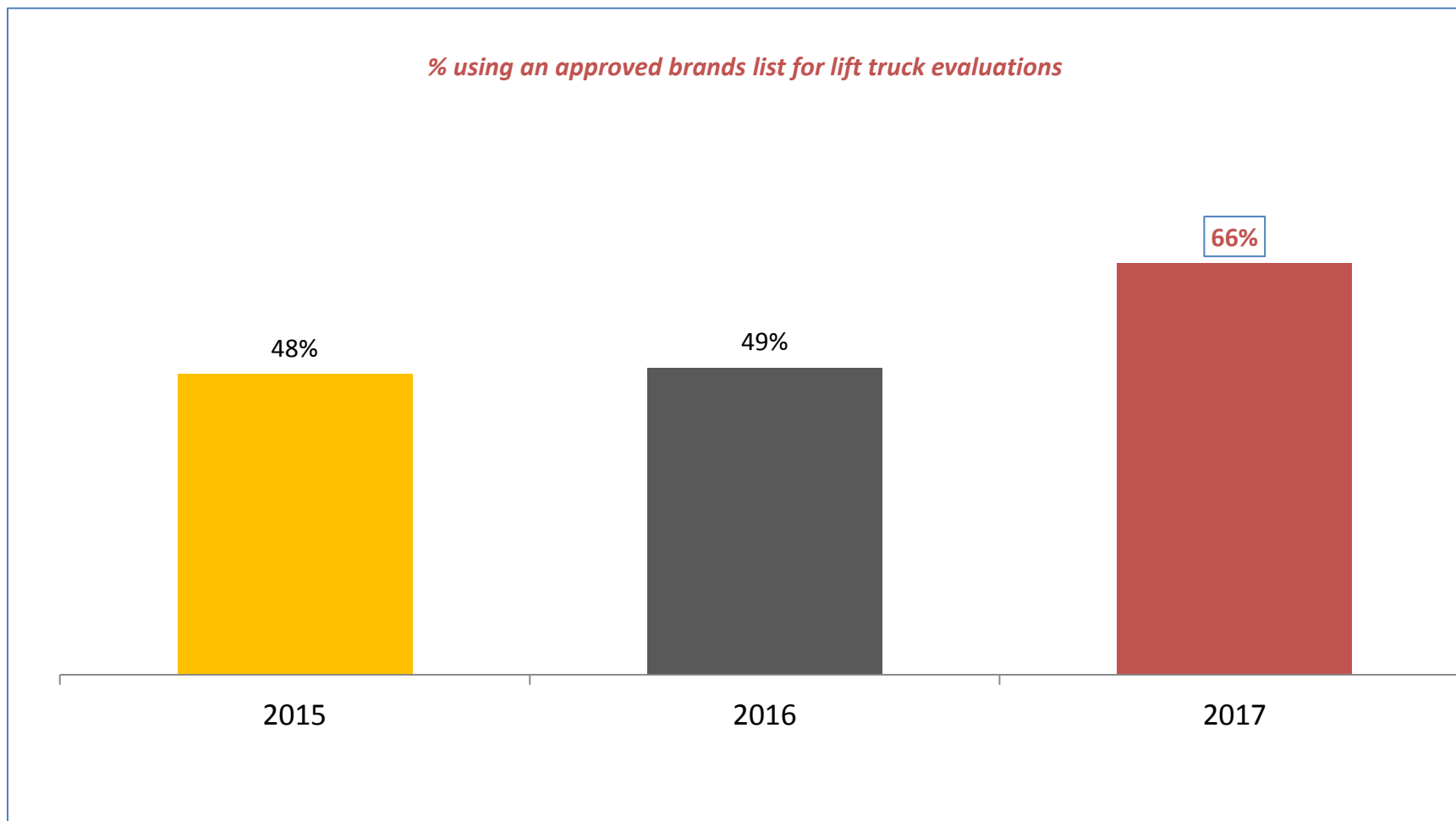


Which lift truck parts are you likely to purchase/replace in the next 12 months?



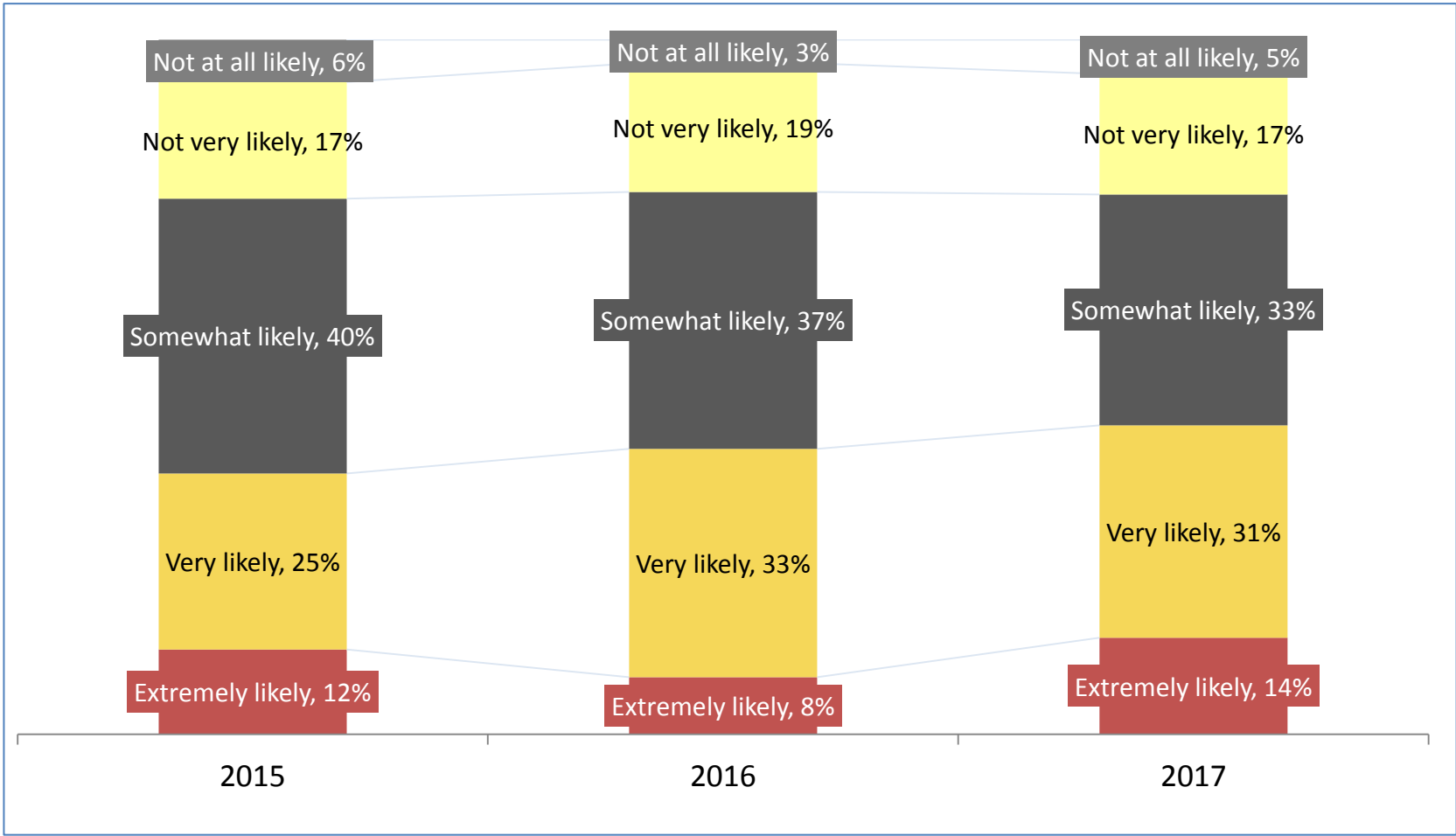


## Approved brands list usage



*Do you have an approved vendor list or 'short list' when purchasing lift trucks?*

## Brand loyalty



*How likely are you to evaluate manufacturers whose lift trucks you do not currently use?*



## Ways a vendor can get on an approved brands list

Allowing trying out the equipment and warranty and the sale person honesty.  
Be an American major lift truck company, preferably  
Be on the GSA schedule  
Best cost  
Best quality at the best price  
Better service, better price, and better warranty.  
Build a relationship before we need the next truck  
By building a partnering relationship versus showing up because they heard we where expanding.  
By constant communication with us and timely  
Call  
Capabilities  
Capability reliability maintenance  
Competitive bid proposal, fair warranty and other value added items.  
Contact Maintenance Manager and Purchasing Manager  
Contact me.  
Contact or visit facility  
Contact our purchasing and warehouse personnel  
CONTACT US  
Contact Us & preferably be within regional / local area  
Corporate policy  
Corporate purchasing contact  
Corporation decision  
Cost  
Cost and ROI.  
Cost, reliability or maintenance and ergonomics  
Cost, Value, service  
Cost/value  
Costs  
Current vendor handles are maintenance

*How can a vendor get the opportunity to get on your approved list? What do they need to prove?*



## Ways a vendor can get on an approved brands list

Data gathering.  
Demonstrate a quality lift truck with minimal downtime  
Dependable  
Durability and ruggedness. The ability to withstand the jobs they are expected to perform within our facility environment.  
Ease of use of vehicles vs competitor  
Economic competition/Service  
e-mail information on there product and explain why its better  
Equipment quality, application for our type of application, service that backs up the sales pitch.  
Exceptional service. Reliability  
Global capability, financial stability, safety, cost value strategies, technology  
Go to during business with city of Cleveland web site.  
Goes through corporate strategic sourcing and signs a corporate agreement.  
Good customer service  
Good price, service availability  
Good reputation  
Good value Good local service options  
Have a need that a current vendor can't supply something.  
Have a product we are interested in that fits the need and be a reputable company  
Have the proper equipment for the needs of the business at a reasonable cost. Service and support are also factors  
How they perform in the market.  
I do not want anyone to contact me.  
It all depends on business relationship the company and the vendor has.  
Long-term serviceability, reliability, up-to-date technology, cost-effective  
Made in the USA.  
Making sure that they don't knock over any of the purchases off when they drive  
Meet our needs-safety, performance, maintenance service  
Must have a proven record of quality customer service and service expertise.

*How can a vendor get the opportunity to get on your approved list? What do they need to prove?*

June 2017



## Ways a vendor can get on an approved brands list

Name brand
Need to meet the end users specifications
Needs to go through corporate
No seeking new vendors at this time
Nothing to prove....we look at price, quality of equipment for our application and other factors.
Parts availability and reliability
Patience
Place a unit on-site for us to evaluate at no cost
Price
Price and location of dealer
Pricing, options, delivery
Product is superior both in terms of performance and lower cost. we don't usually like to mix brands in fleet to any great extent as you have driver understanding and training issues. It would mean a vendor willing to do a wholesale trade out of most of our equipment.
Prove to us they're reliable
Provide the equipment package we require, acceptable delivery time and great customer service.
Proximity or responsiveness', total cost to own, and track record/access to current customers.
QUALITY AND DURABILITY
Quality of product and service.
Quality product, good support, good pricing
Quality, Service includes customer and parts & maintenance, Brand, Pricing, Availability etc
Reach out to us with pricing and service options.
Register as vendor, prove financial stability, not be on a barred contractor list (has not paid taxes etc)
Register with our purchasing department and meet our specifications.
Reliability and cost
Reliability, service and cost
Reliability, service, price

*How can a vendor get the opportunity to get on your approved list? What do they need to prove?*

June 2017



## Ways a vendor can get on an approved brands list

Safety, Reliability & Value

Send us the price, specs, and service performance of the brand and model.

Service at our city

Superior Capability, Purchase price, cost of ownership, durability

TCO, current tech, available and affordable service options.

they need to at least match our current vendors

They need to have a technology we are looking for.

They would need a track record and since we don't let them in, they can't get one. our primary vendors would have to mess up very badly to cause us to switch.

Trust and price and service

Value for the price

Value in service and acquisition cost

Value Quantified

Value, reliability

We already deal with all major equipment dealers for the Northeast .

We go to PROMAT and other material handling events. To get on the list they need to follow up with our inquiries. Several talk about contacting or site visits, most do not.

WE HAVE A COMPANY THAT DOES IT ALL AND I DO NOT REPLACE ANY COMPANY THAT WORKS !!!!!!!!!!!!!!!!!!!!!

We have a regular partner and do not seek other vendors.

We would demo all or most products in our area

When we are looking for lift trucks we evaluate truck features and cost from various vendors in the area.

When we have a need

When we have the need.

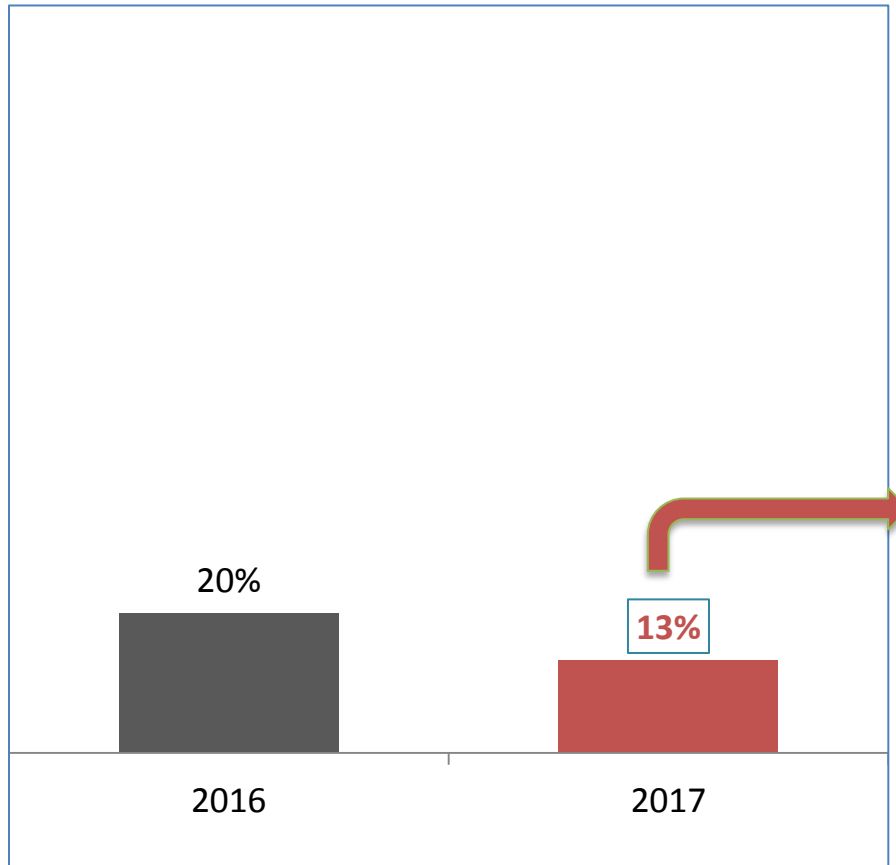
Word of mouth, compelling advantage over competition

*How can a vendor get the opportunity to get on your approved list? What do they need to prove?*



## Removal from a 'short list'

### *Not all vendors satisfy users*



### *What they did!!*

- Change in ownership
- Cost and service issues
- Dishonest, poor service
- Inability to perform service at an acceptable level
- Inaction in parts and coming into the US market.
- Lack of interest in a bid process
- Lack of performance according to the agreement
- Lack of service back up

Have you had cause to remove a vendor from your 'short list' in the last 2 years?

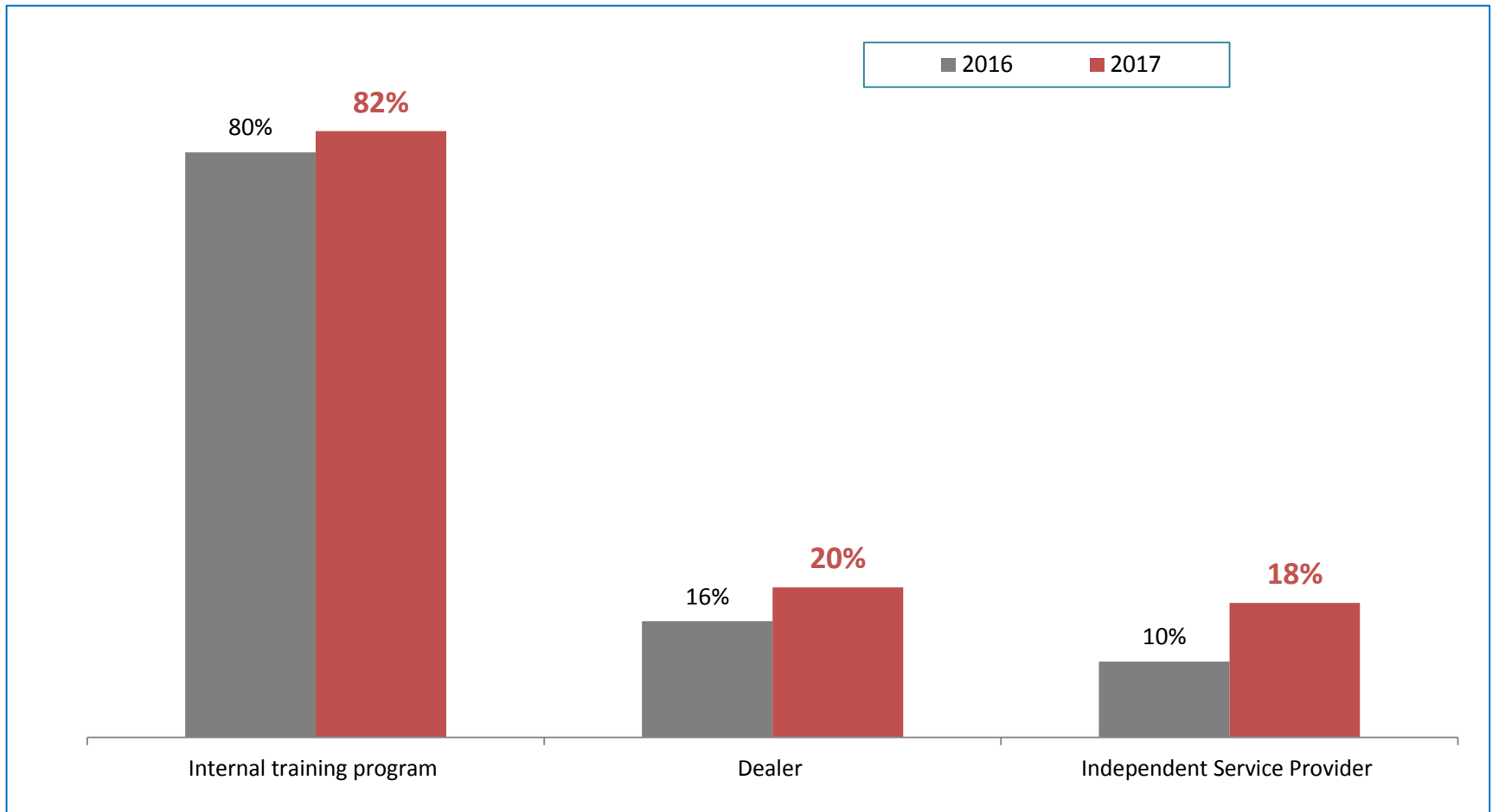
What did they do to force this action?

*Note: Responses are representative*





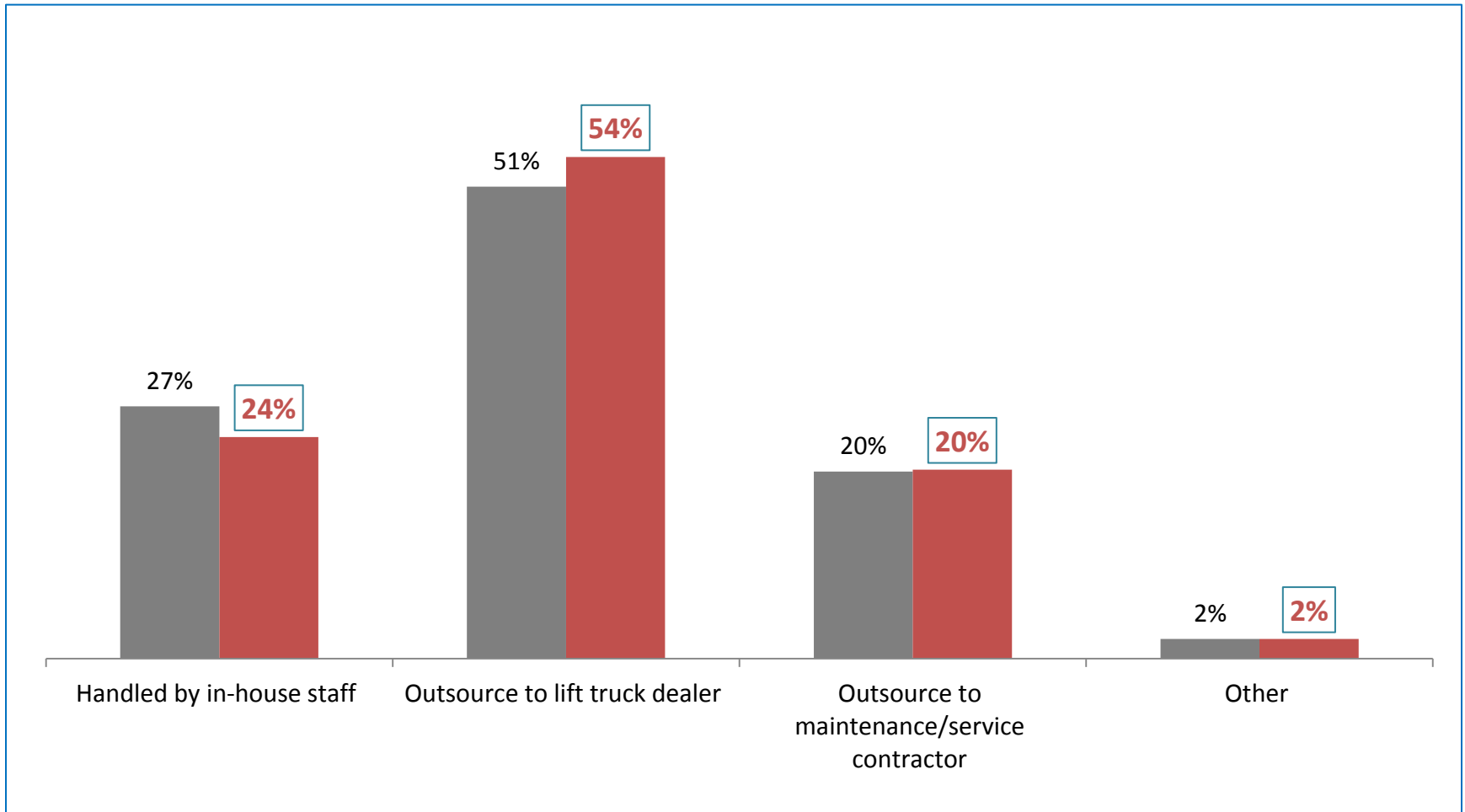
## Companies train operators with in-house training programs



*How are you training your lift truck operators?*



## Servicing and Maintaining lift trucks



How do you primarily service/maintain your lift trucks?



## Reasons in-house staff is primarily used to service/maintain lift trucks

Associated cost
Availability. We run 24-7.
Because I can oversee the repairs and verify the work being done
Cheapest
Cost
Fix it when it needs 'fixin'
In house cost
In-House
In-house expertise, dealer cost still higher than our own.
Is the way we do business
Just always did it this way, we have been exploring outside service
Less down time
More control
More cost effective
Real time repairs, better PM, and better care of the product.
Reduced downtime and cost
Response time
Save money
Scheduled maintenance
Staff
Way we do it
We do routine maintenance in house and use outside service for more complex needs..
We have a maintenance staff on-site at all times. Getting services scheduled is difficult and time consuming.
We have the staff
We manufacture engines and have a complete machine shop. Cost

*Why is this your preferred way to service/maintain your fleet?*



## Reasons primarily outsource service/maintain to the lift truck dealer

### Best Service

#1 - perception that this will reduce our liability #2 - you can't be good at everything so we let the professionals handle it

Assurance of safety/quality of repair

Best to have professionals do regular maintenance to keep our fleet in good working order.

Better cost

Better service

Better service and usually warranted

Certification

Company Policy

Consistency and expertise

Corporation decision

Cost, ability

Covers our warranty and is not our area of expertise.

Dealer has better knowledge of the equipment and has standard replacement parts on the service truck

Dealer maintenance

Do not have time to wait until repaired or maintained

Don't want to train my staff that is short to begin with

During warranty period, we outsource. Afterwards, we service in-house.

Ease

Easier to obtain correct parts when needed

experience personnel.

Expertise

Fleet knowledge

It is dictated

Just what we have usually done

Knowledge and parts availability

Knowledge of equipment

Knowledge of equipment being serviced.

Knowledge of equipment, quick to have parts, usually about the same cost

Knowledge of the product

Knowledgeable staff.

*Why is this your preferred way to service/maintain your fleet?*



## Reasons primarily outsource service/maintenance to the lift truck dealer

Lack in-house expertise

Less cost

Less cost in house

Lift truck diagnosis & repair is specialized and not our core focus

Low value relative to compensation rates for direct employees.

Monthly maintenance agreement. Fixed monthly cost. Returns dividends and end of year.

Most plants are lean in maintenance personnel. Main focus is to keep the plant running. Also lack of expertise.

No costs with pro maintenance contract.

No time/resources to do it ourselves

Not enough in house time

OEM dealer knows product best.

Relationship

Scheduled maintenance

Service and acquisition through one source

Service contract

Service expertise

Service is done properly, and on a regular basis

The dealer knows our lift the best

The liability is on the service provider. Also, not enough maintenance staff to perform lift truck service tasks.

THEY KNOW THEIR OWN PRODUCT

They own the equipment, they are responsible for the upkeep

To make sure that the trucks are not moving or have some kind of damage

We don't have enough equipment in one location to justify an in-house maintenance shop. we do some minor in-house work.

We have a great partner that helps us with all of our MHE fleet in 3 facilities. they manage our leases and purchases as well as our maintenance agreements.

We have gotten good service in the past and see no reason to change.

WE HAVE NO ONE HERE TO DO THE WORK

We have two brands of lift trucks at my facility. The dealers for these trucks provide PM service as well as repair service for "their" trucks.

They know the trucks better than anyone else and have excellent techs.

Works best for us

YOU BUY IT FROM THEM - IT IS THERE PROBLEM

*Why is this your preferred way to service/maintain your fleet?*

June 2017



## Reasons primarily outsource service/maintenance to a service/maintenance contractor

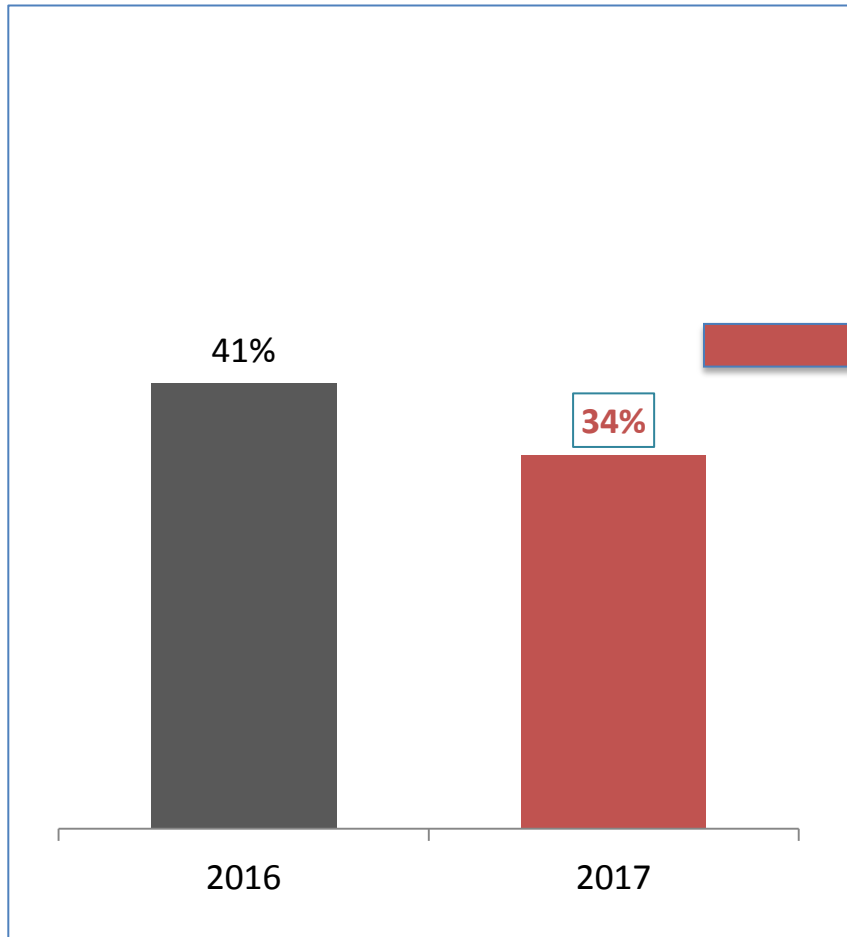
A combination of outsourcing and in house
Cost
Cost
Cost and man power
Dependable, reliable, service.
Less cost
Less issues with lease returns at end of life (lease)
Lift truck dealer
Long term relationship with technician
No idea, not my decision or recommendation
Not staffed for this
Our Maintenance Dept. is busy with other in-house/facilities projects.
Outsource
Outsource to maintenance/service contractor
Outsource with regular PM program.
Part of lease.
Solid relationship - excellent professional service
Training and liability reasons
Unknown/Unwilling to invest time to train our teams to do it themselves
We have a paper trail of what has been serviced and re-placed
We share

*Why is this your preferred way to service/maintain your fleet?*



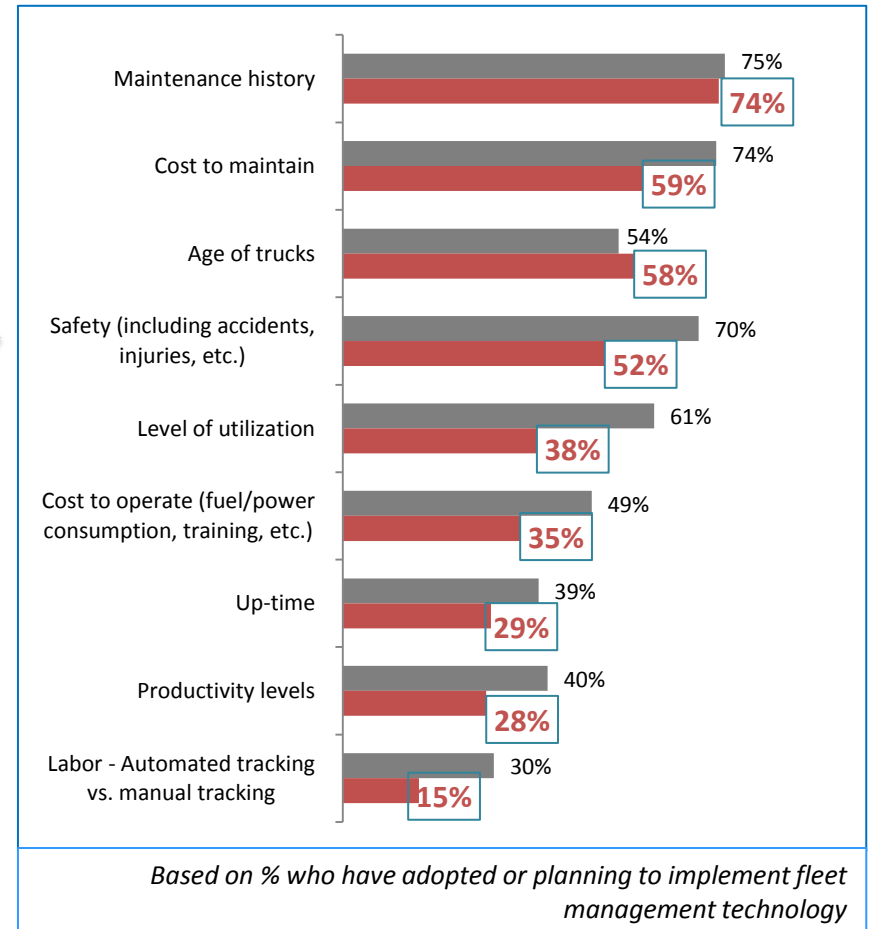
## Fleet management technologies target maintenance & cost

### Adoption of fleet management software



Have you adopted technology to help you manage your fleet?

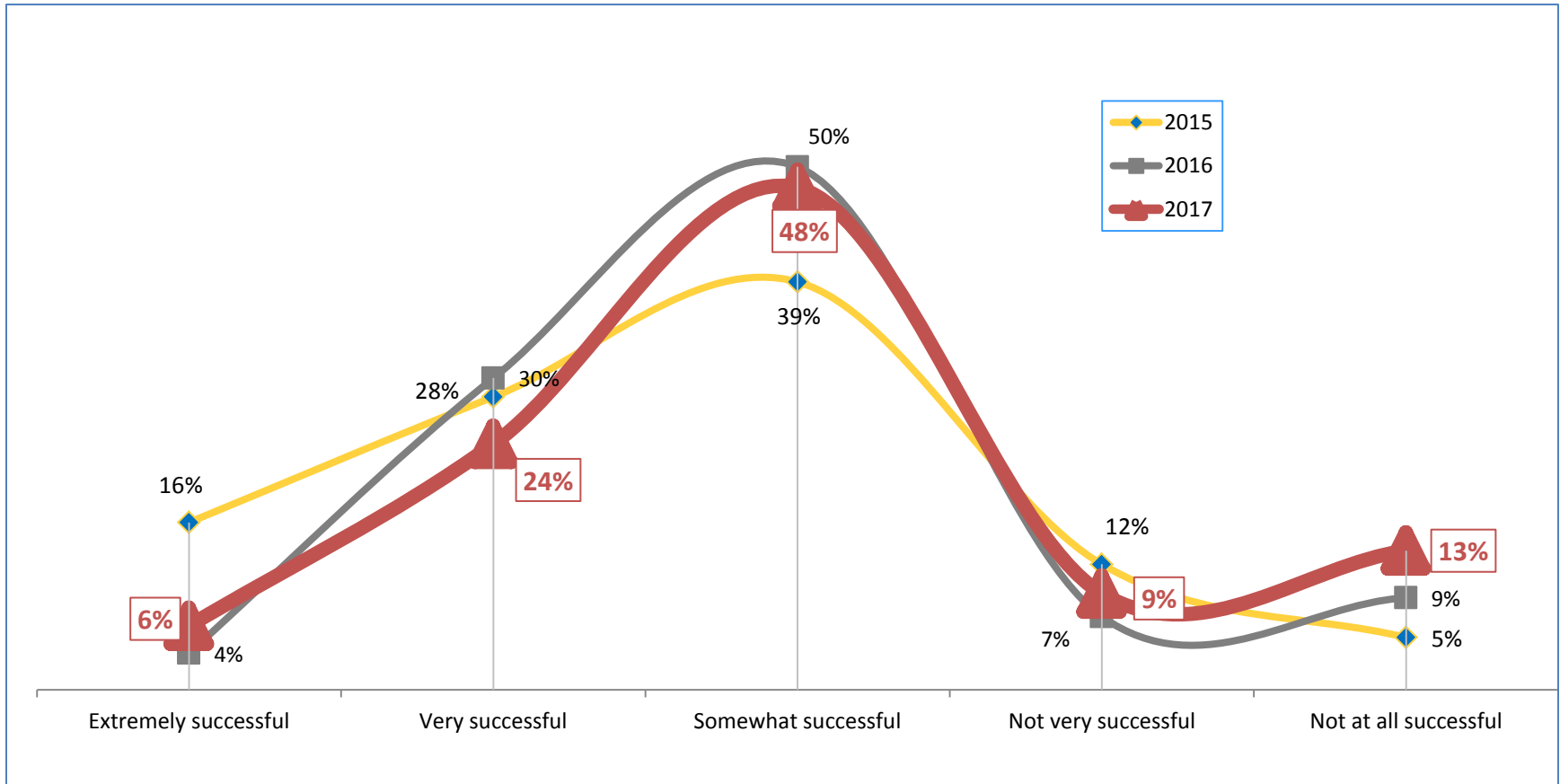
### Tracking usage with technology



If so, what are you tracking?



## Mixed results for fleet management technologies continues



*How successful is your fleet management technology implementation? Why not? If so, what challenges?*



## Reasons for neither using nor having plans to implement a fleet management technology application

Budget
Cannot justify need
Cause I don't have that in our trucks
Cost
Cost
Cost
Cost
Cost
Cost
Cost
DO NOT HAVE ENOUGH LIFT TRUCKS TO MAKE IT COST EFFECTIVE
Do not need to small size of fleet
Does not fit the economic model or ROI
Fleet too small
Funding pending
Has not yet been addressed to the senior leadership.
Have one with current system
High cost
If we had more lifts we probably would
In house skill set still learning
It has not been evaluated at the current time.
It is managed by our MHE equipment partner. they provide us all the reporting.
It take time of applying for the new change
Licensing, training.
Low hours, small fleet
Management
Many software solutions don't fit our needs

*Why are you not using/don't have plans to implement a fleet management technology application?*



## Reasons for neither using nor having plans to implement a fleet management technology application

### Money

Much of the current need is provided by our vendor partner. We are considering fleet management software in 2019

My not seeing it as useful at this time.

No a fit at this time

No need

No need for amount of trucks used here in our facility

No Time for that yet to

Not a huge costs

Not aware of or not sure we need this type of software

Not needed

Not needed for fleet size

Not needed in our application

Not needed on small fleet

Not on radar, other things more pressing

Not priority

OK with current

Ordering with new fleet coming in

Our size is limited

Plans to implement

Rely on 3rd party

See no need for it at this time

Size of fleet

Small fleet

Small fleet and maintenance vendor has some data available.

Small fleet do not need it.

Small fleet, cost outweighs any benefit to purchase, no ROI

Small fleet. 10 units is easy to keep track of. and we replace every 3 to 4 years

Software acquisition is controlled by corporate office.

Staffing, we are a small operation.

To find the right one

Use generic tracking internally

We have 4 lift trucks so an excel file works pretty good.

We have it

We manage trucks OK with in-house and dealer information

We're too small

*Why are you not using/don't have plans to implement a fleet management technology application?*



## Cost, time and talent are roadblocks to technology adoption

Changeover

Completing the installation across the entire fleet.

Correct data

Cost

Cost

Cost

Cost

Cost

Cost

Cost and knowledge of systems

Cost and time

cost and time for implementation./maintenance

Cost benefit

Costs

Currently not in the budget

Do not have one yet

Driver getting used to using it.

Finding the right one.

Getting a system that works for us.

Getting detailed records.

Getting management approval for funding

Getting the money

Getting used to it

In house skill set

Just ordered demo unit before deploying to entire fleet

Justifying the cost

Lack of perceived need

Licensing.

Maintained by servicing company

Management

Money

No software

Not enough trucks to justify cost.

Not needed in our application

Not required

Not using any - no need

Operator resistance leading to attempts to spoof results.

People

Scheduling lifts off the floor during operation hours.

Small fleet do not need it.

Space constrictions.

Staffing

Still evaluating options - not implemented yet

Taking advantage of the data

Technology

The implementation itself.

The trucks that are older cost the most money to upkeep them and this economy it's harder to do that then just sell them off

Time

Time to review

Tracking what we need

Tried it and didn't like it

Trying new software and training.

Uncertain economic conditions

We are too small for this

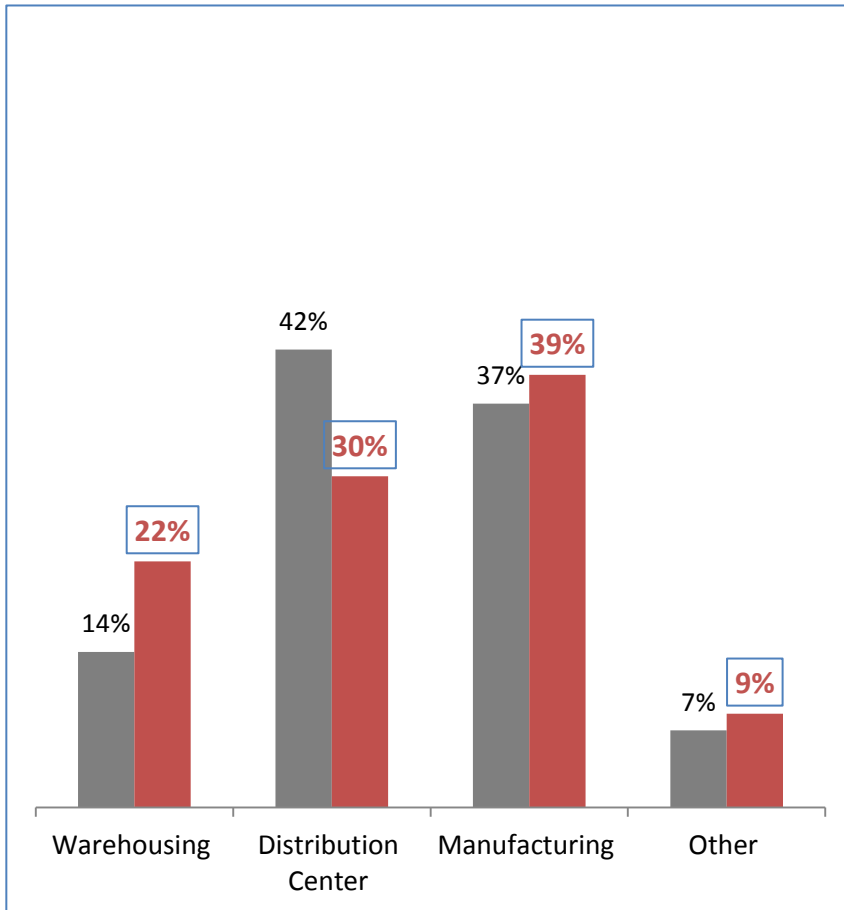
*What would you say is/has been your biggest challenge/obstacle in implementing and/or using a fleet management software solution?*

June 2017



## Respondent Demographics

### Primary activity at location



### Industry

	2016	2017
Food, Beverage & Tobacco	13%	9%
Plastics & Rubber	6%	8%
Paper/Printing	4%	7%
Automotive & Transportation Equipment	3%	7%
Fabricated Metals	8%	4%
Textiles/Apparel	5%	4%
Chemicals/Pharmaceuticals	5%	3%
Primary Metals	2%	3%
Industrial Machinery	5%	2%
Electrical Equipment	4%	2%
Furniture	3%	2%
Computers & Electronics	1%	2%
Aerospace	1%	1%
Other Manufacturing	8%	12%
Wholesale Trade	12%	11%
Retail Trade	4%	5%
3rd Party Logistics Provider	5%	6%
Transportation/Warehousing Services	4%	4%
Business/Consulting Services	1%	2%
Other Non-Manufacturing	6%	6%

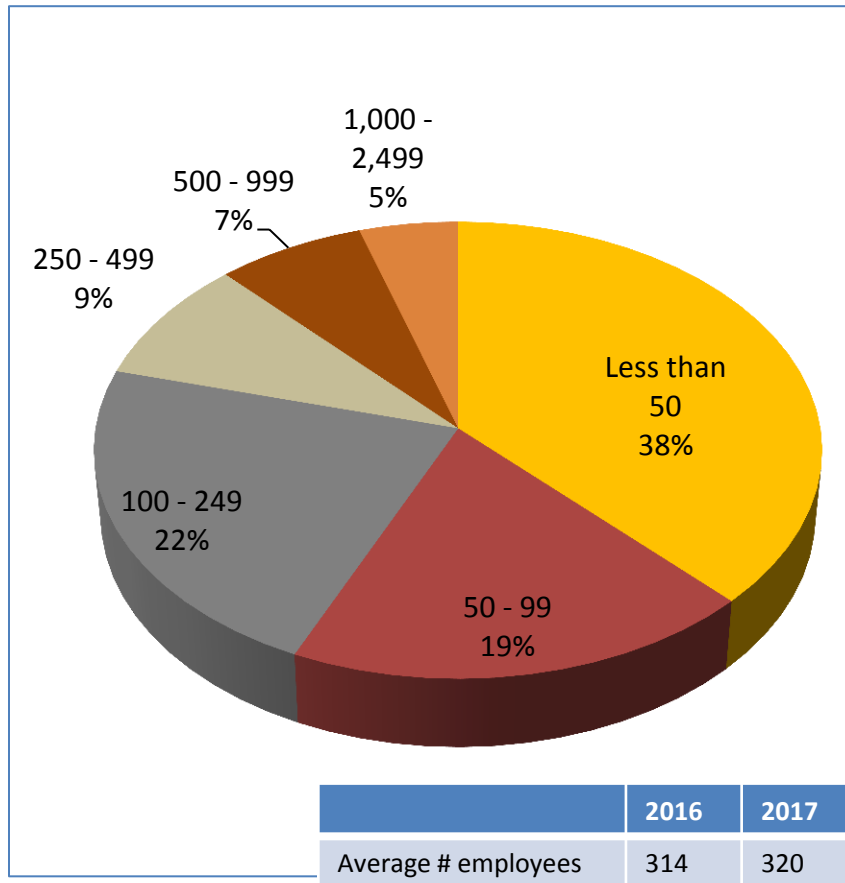
What is the primary activity at your location?

What is the primary product or service at your location?



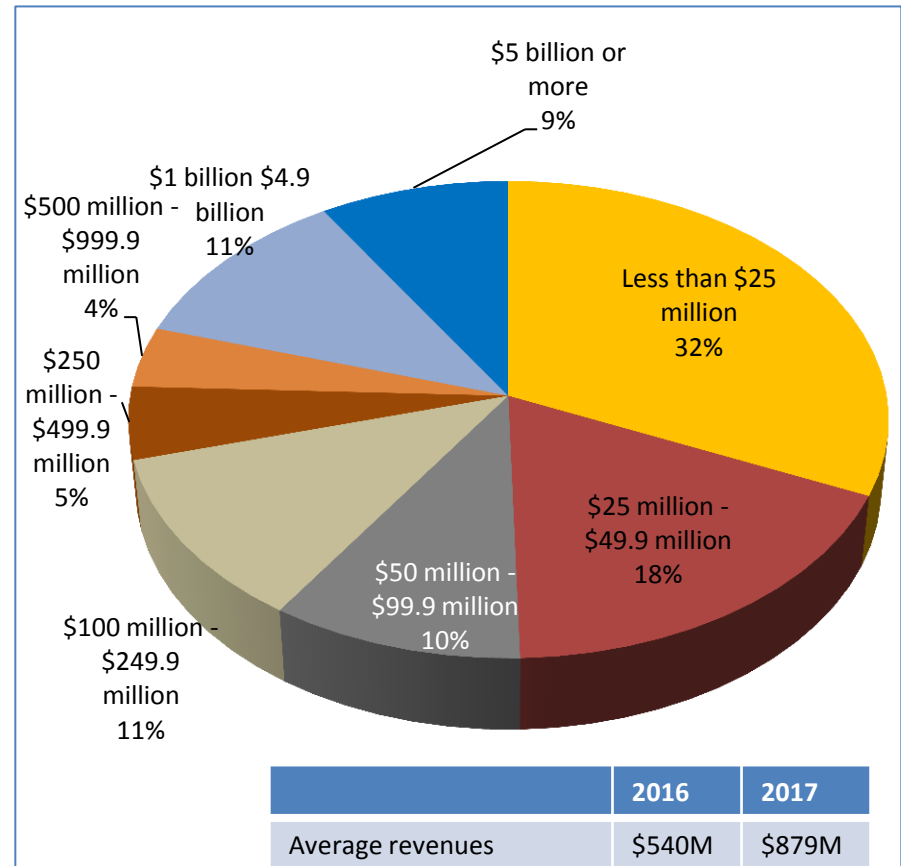
## Respondent Demographics

*Number of employees*



*How many employees are there at your facility?*

*Revenues in 2017*



*Which best projects your company's annual revenues for 2016?*