



THE
Farnsworth
GROUP

Usage & Attitude of Gas vs Battery OPE Among Homeowners and Landscapers

Trends over time

September 2022

Prepared for



Powering good.



BACKGROUND – SETTING THE “LANDSCAPE”



Housing Starts

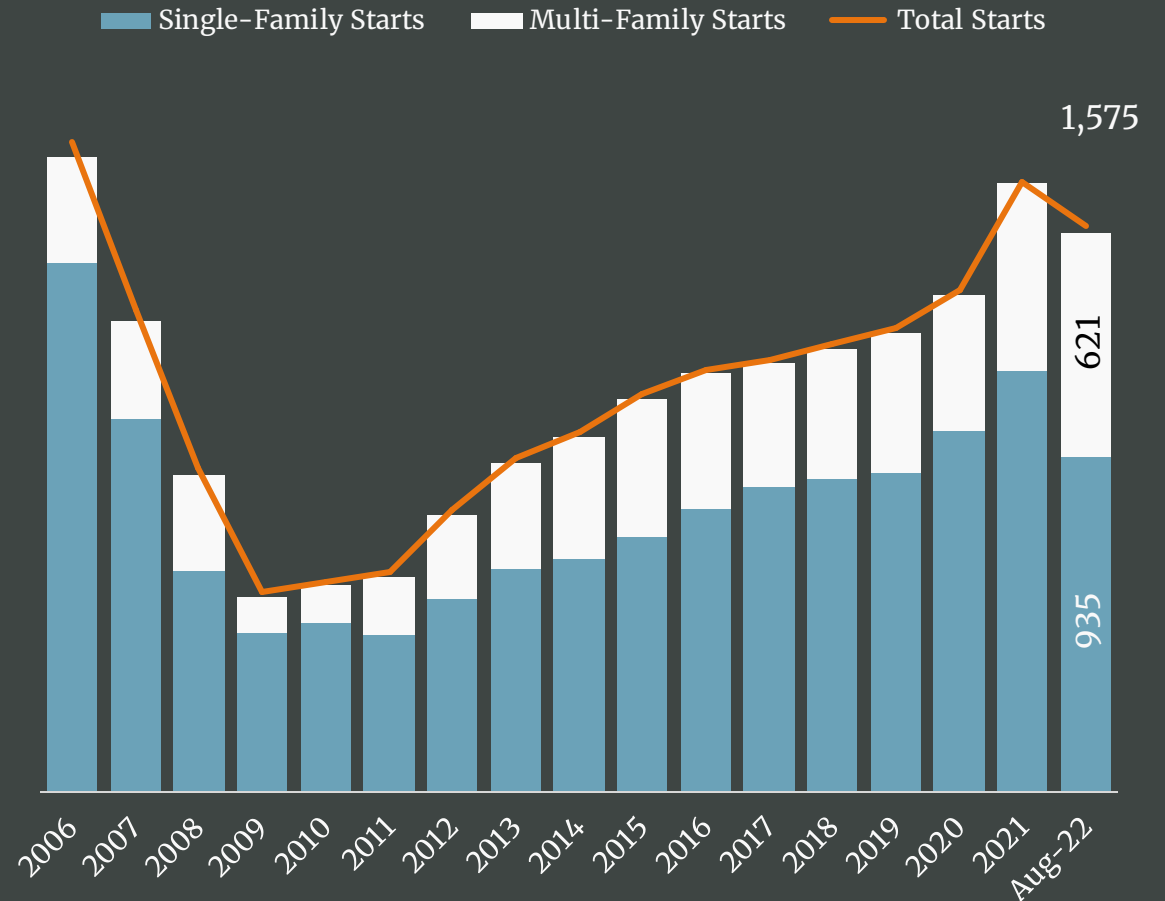
Weak Economy = Less Purchase New Homes

Housing starts refers to the amount of new residential construction projects beginning each quarter. Housing influences industries such as the raw materials, employment, construction, etc.

- strong economy = more purchasing new homes
- weak economy = less purchasing new homes

Due to increases in material prices, interest rates, labor costs, land costs, regulatory costs; production is slowing in an already undersupplied housing market.

Housing Starts: New vs. Existing
(in thousands)



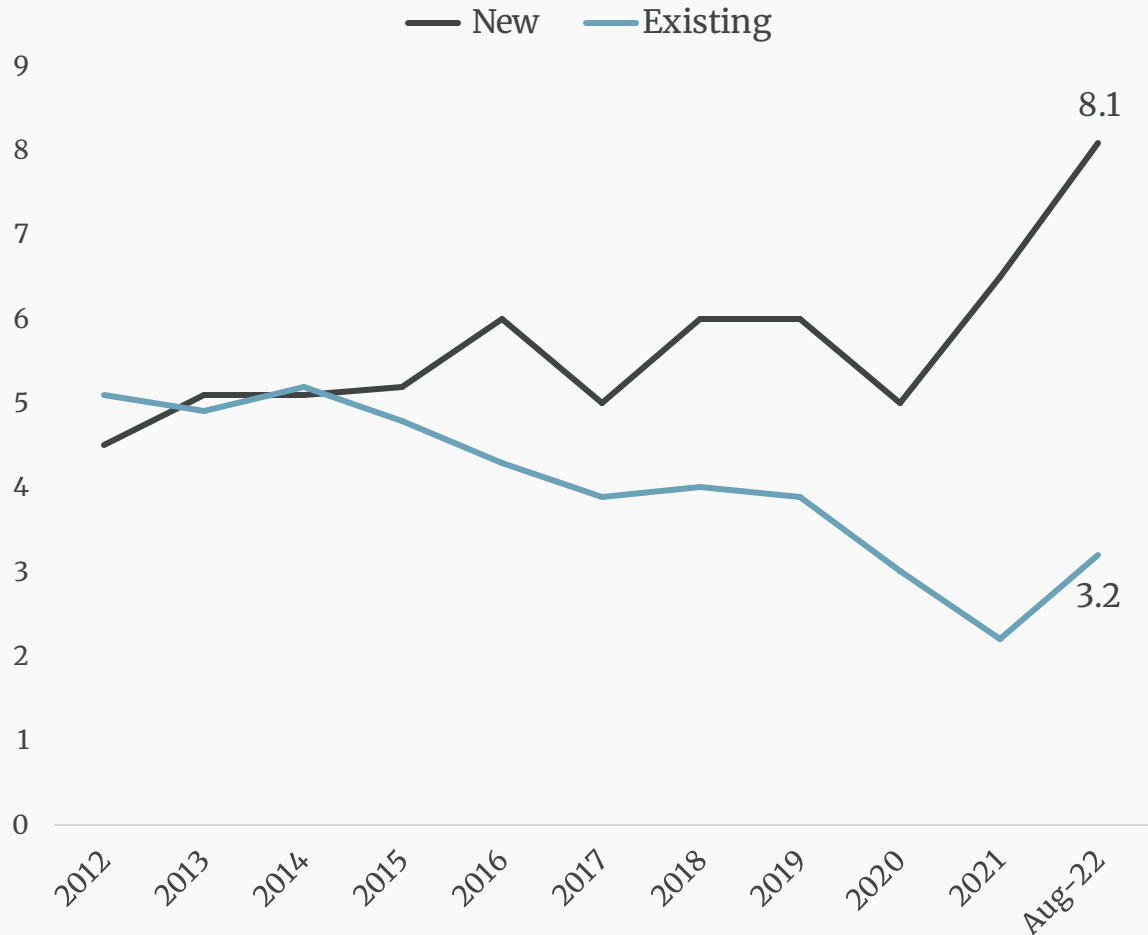
*If year as axis title, data refers to annual average. If not, data refers to average of the given timeframe.

Source: U.S. Census Bureau. (2022). *Monthly New Residential Sales, 2022*. and National Association of Realtors. (2022). "Existing-Home Sales."

Supply



Monthly Supply of New and Existing Homes



*If year as axis title, data refers to annual average. If not, data refers to average of the given timeframe.

Source: U.S. Census Bureau. (2022). *Monthly New Residential Sales, 2022*. and National Association of Realtors. (2022). "Existing-Home Sales."

Housing Inventory

New Home and Existing Home Supply Going in Opposite Directions

Current inventory of existing houses will deplete within 3.2 months. New Home supply has increased dramatically because of higher prices and declining affordability.

- High demand + low supply = rising home prices
- Low demand + high supply = falling home prices

For a healthy market, a six months' supply should be on hand. More affordable supply will continue to decrease median new home price, increasing demand for new rather than existing.

Home Value

Increased home value = more purchase power

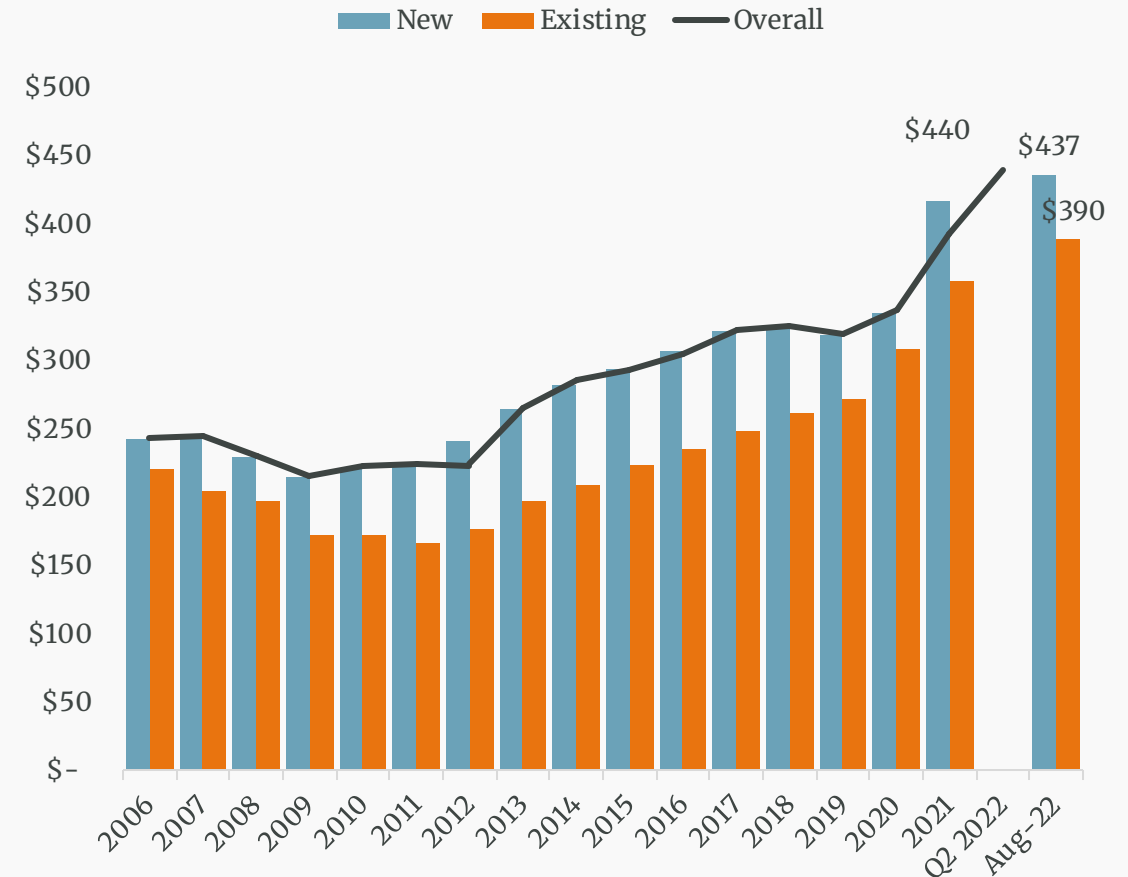
Changes in home values impact consumers' equity and their remodeling or purchasing power. A large difference between new and existing home values produces greater pressure on new home sales. A smaller gap suggests higher demand for new homes.

- Increased home value = more purchase power
- Decreased home value = less purchase power

In 2021, existing home values surged upward—more than a 20% increase. However, as new home inventory increases, existing home inventory remains low; the gap between has closed.



Median Sale Price of Houses Sold
(in thousands)

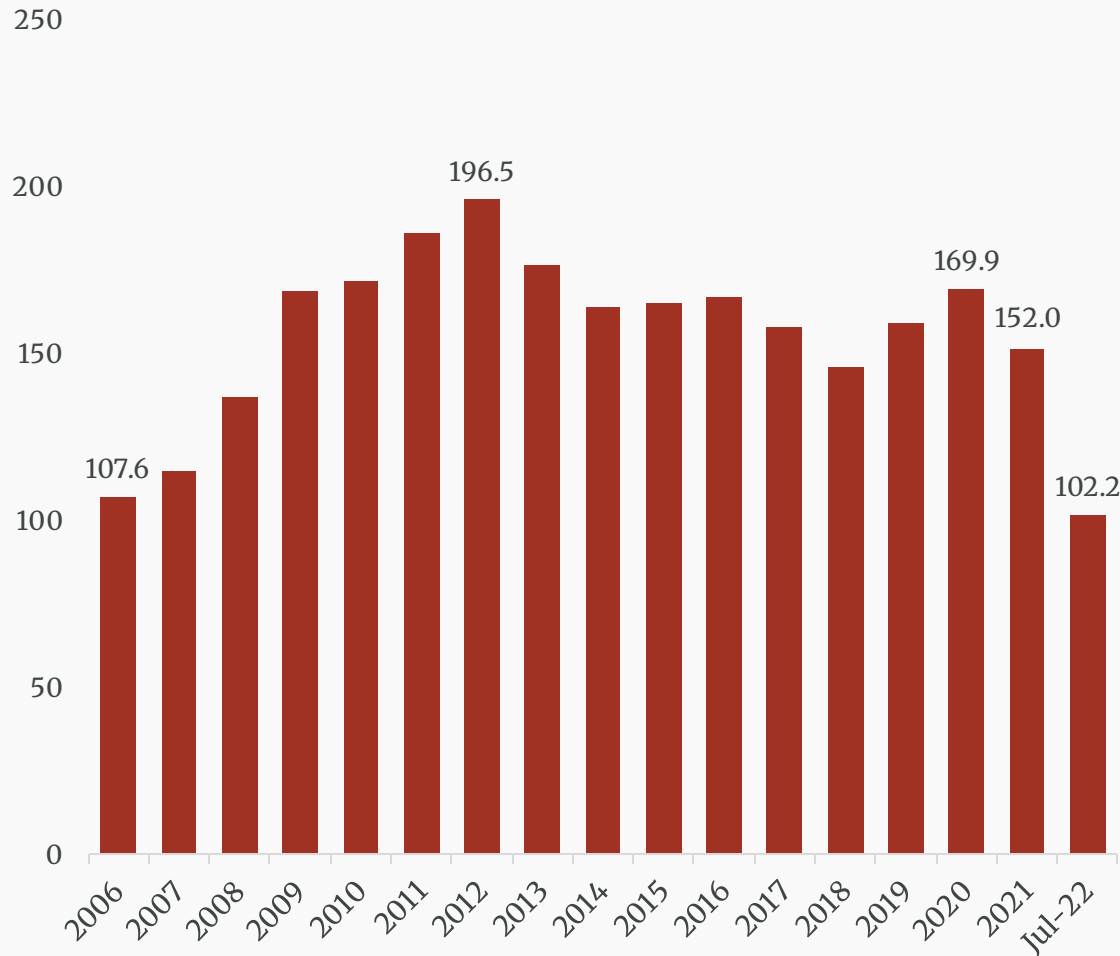


*If year as axis title, data refers to annual average. If not, data refers to average of the given timeframe.

Source: U.S. Census Bureau. (2022). *Monthly New Residential Sales*. and National Association of Realtors. (2022). "Existing-Home Sales."



Housing Affordability Index



*If year as axis title, data refers to annual average. If not, data refers to average of the given timeframe.

Source: National Association of Realtors. (2022). "Housing Affordability Index."

Housing Affordability

Weakening pool of home buyers

The Housing Affordability Index measures whether a typical family earns enough to qualify for a mortgage, based recent income and home value records.

The index is at it's lowest point in nearly 20 years due mostly increasing home prices, increasing mortgage rates, and incomes not keeping up with inflation. The result forces would-be buyers to delay their purchase.



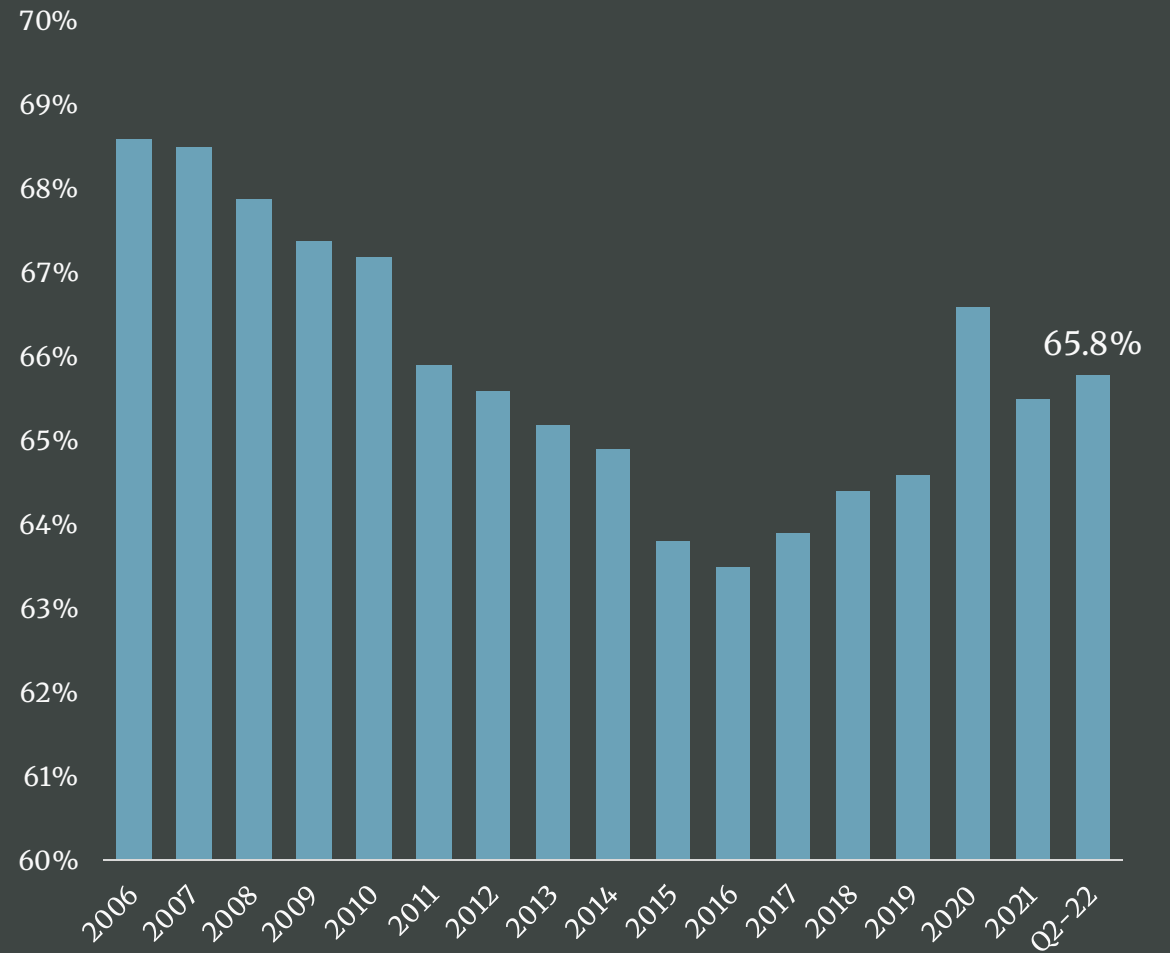
Homeownership Rate

Rate contributes to high demand and low inventory

The homeownership rate represents the percent of homes owned by their occupants—computed by dividing the number of owner-occupied housing by the total number of occupied units.

The rate increased by two percent in 2020 because of COVID-19 and nesting. Homeownership has since stabilized and is in-line with historical norms.

Homeownership Rate



U.S. Census Bureau. (2022). *Homeownership Rate in the United States*.

Household Growth

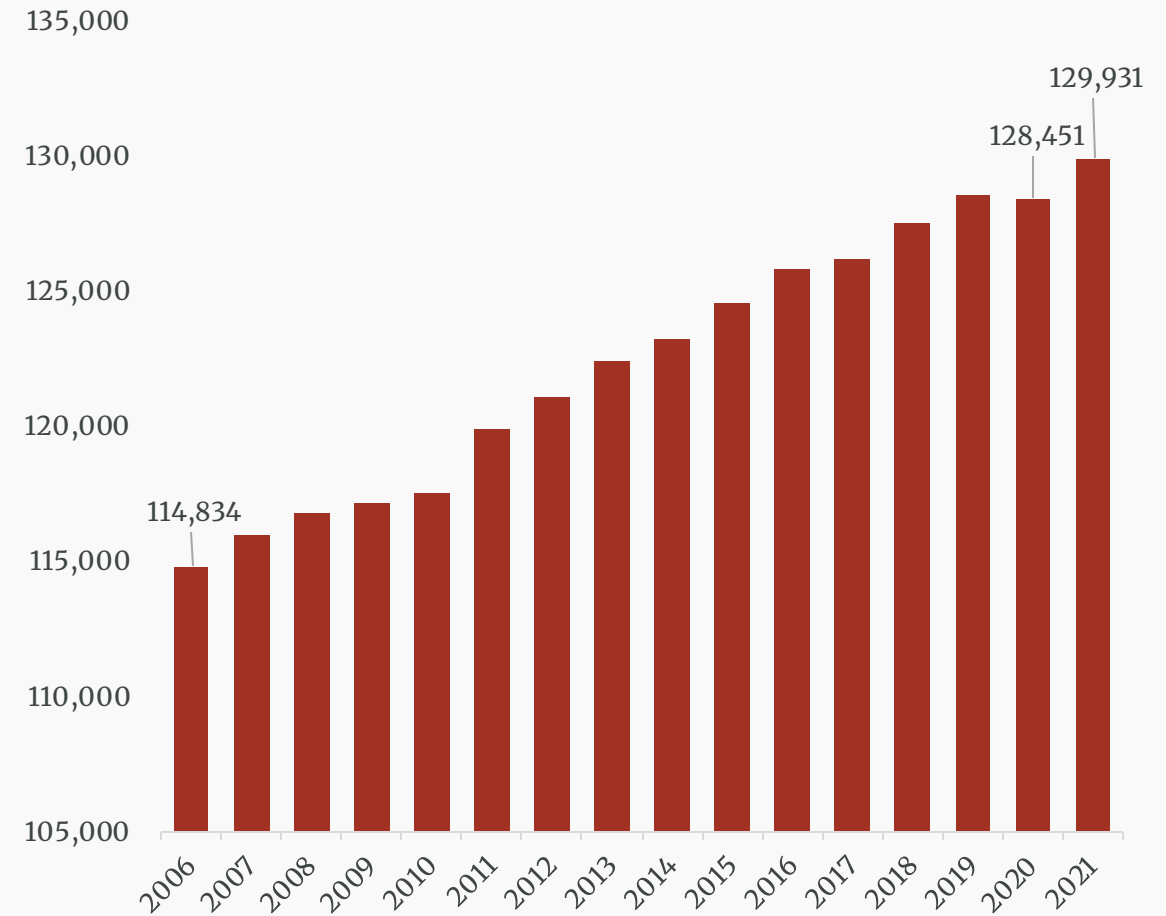
More households = more buyers and renters

Household growth combines census population projections and headship rate—the percent of people heading households.

Historically, the nation rises by 1 to 1.2 million households per year. In 2021, households rose by 1.48 million.



Total Households
(in millions)



*Updated year behind. 2021 data available in 2022.
Source: U.S. Census Bureau. (2022). *Total Households*.

Consumer Confidence

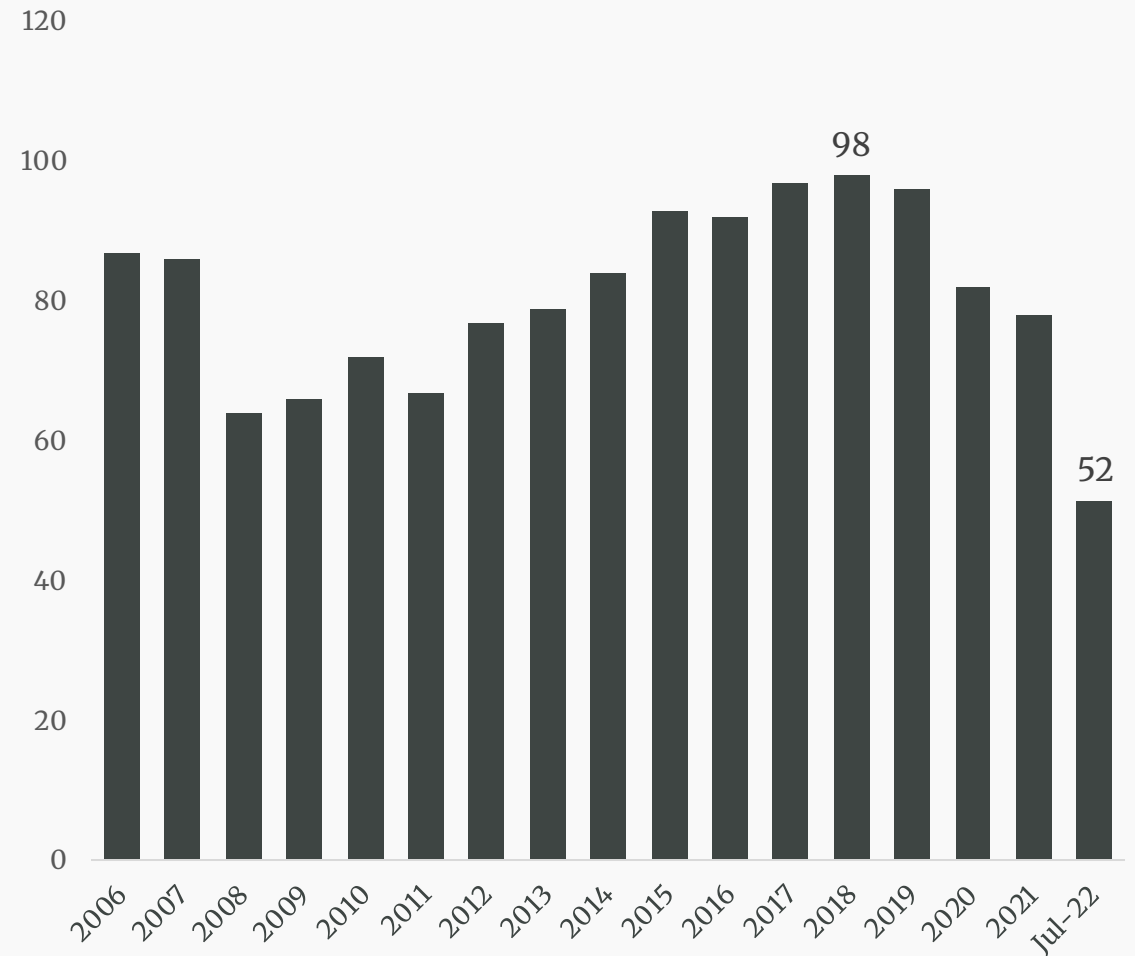
Confidence drops = reduced spending

University of Michigan produces the Consumer Sentiment Index, a consumer confidence measure. The index details consumer attitudes and buying intentions.

In 2022, consumer confidence declined to levels not seen in over a decade. Lower confidence often results in lower spending among consumers.



University of Michigan: Consumer Sentiment



*If year as axis title, data refers to annual average. If not, data refers to average of the given timeframe.

Source: University of Michigan: Consumer Sentiment.



Contractor Confidence

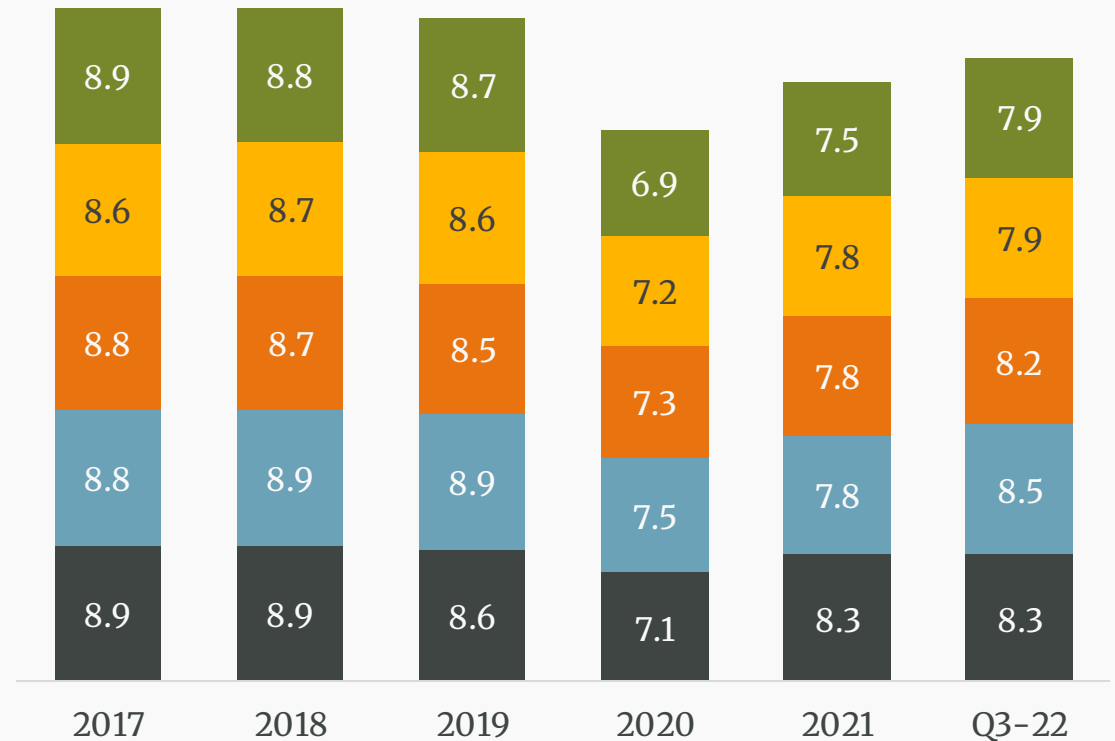
Confidence grew as market recovered

The Farnsworth Group tracks business confidence among five trades: remodelers, exterior contractors, mechanical contractors, finish contractors and landscape contractors.

In 2020, contractors expressed concern about market conditions and new business opportunities. However, their confidence rebounded in 2021 and remains solid in 2022. Backlogs have remained solid, leads are high quality.

Confidence in Gaining New Business (Next Six Months)

■ Remodel ■ Exterior ■ Mechanical ■ Finish ■ Landscape

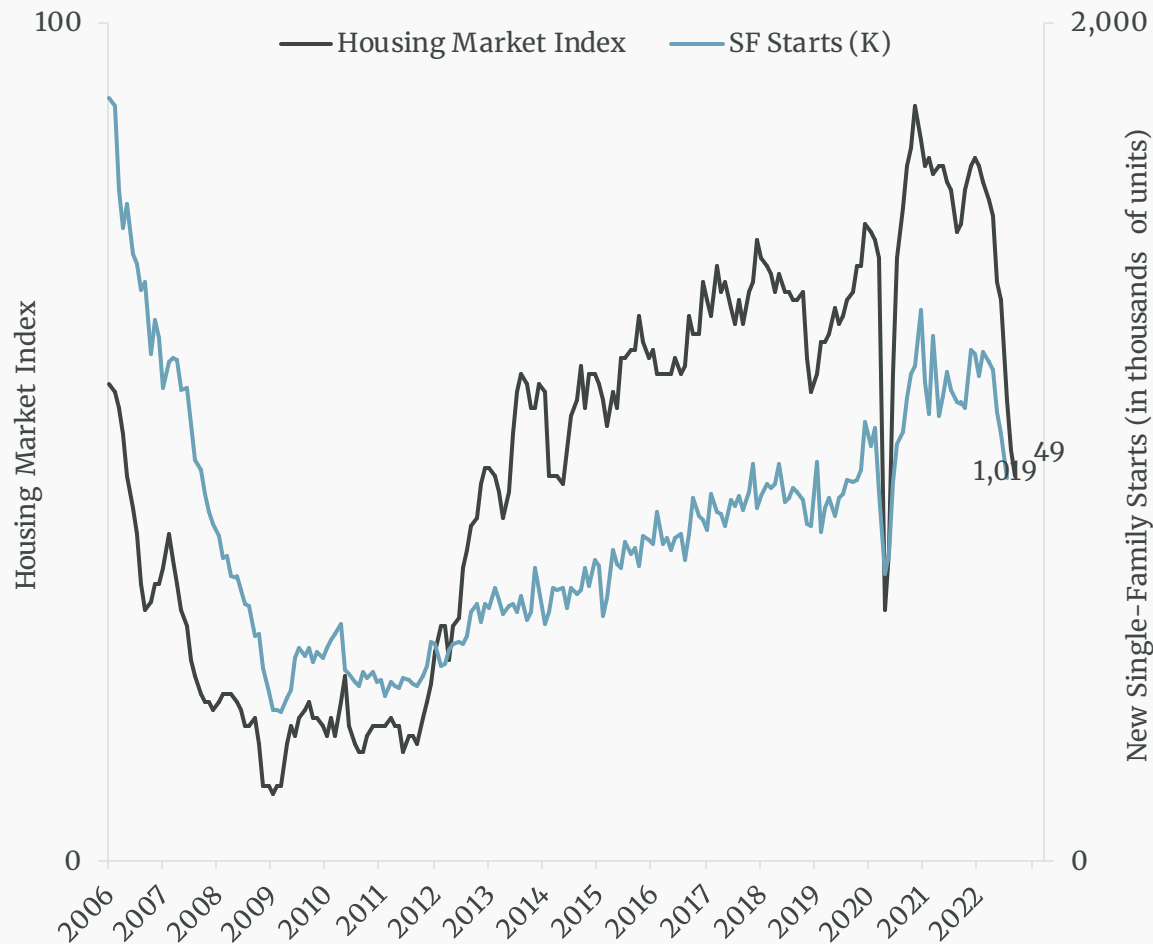


*If year as axis title, data refers to that year's Q4 average. If not, the data refers to the average of the given time.

Source: The Farnsworth Group. *Farnsworth Contractor Index*.



NAHB/Wells Fargo Housing Market Index (HMI) and New Single-Family Starts



National Association of Home Builders. (2022). *Housing Marketing Index*. Wells Fargo.

Builder Confidence

HMI has rapidly declined

The National Association of Home Builders (NAHB) tracks confidence and activity among home builders of current and future single-family homes in the *Housing Market Index (HMI) and New Single-Family Starts*.

The HMI dropped 9 months in a row. Home Builders now have a more pessimistic than optimistic view of the future.



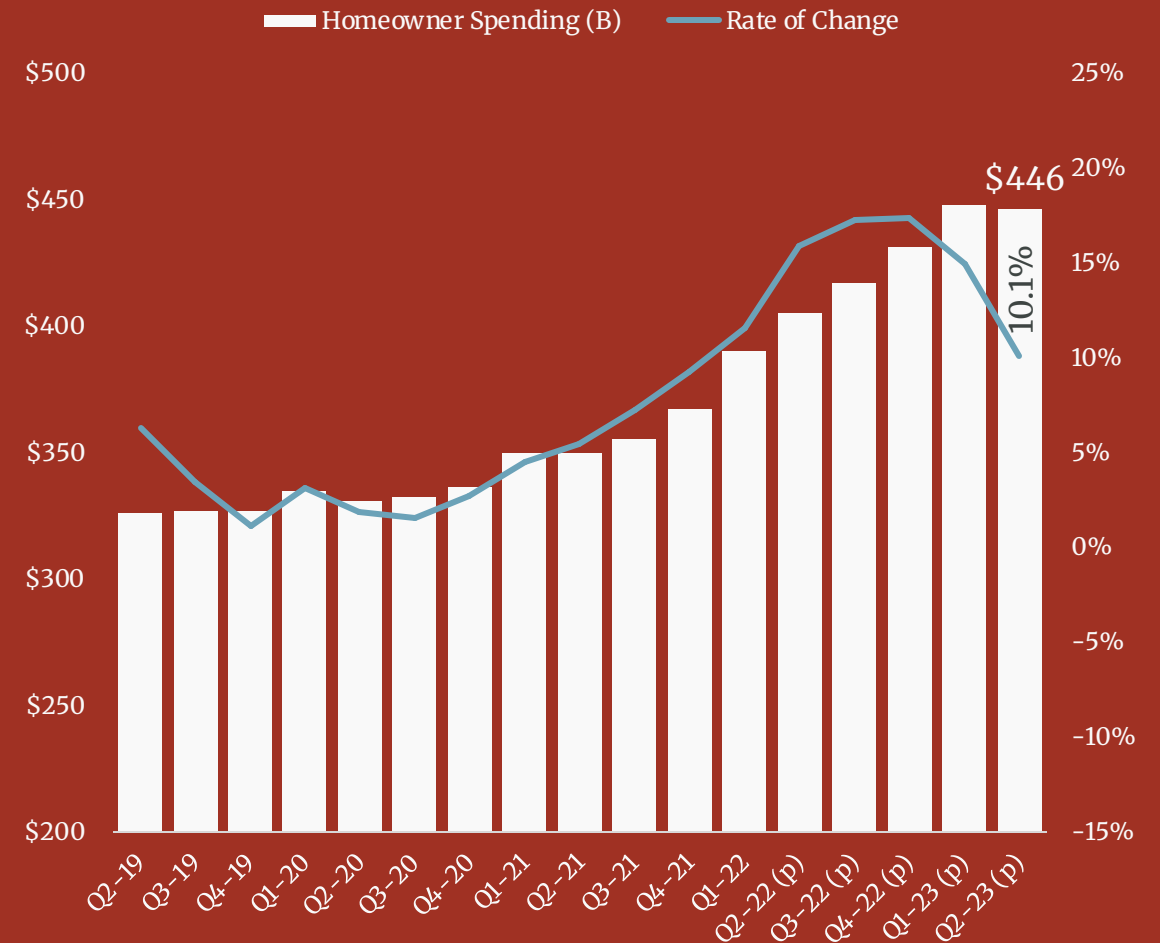
Remodeling Activity Forecast

Lower Home Remodeling Expected

Leading Indicator of Remodeling Activity (LIRA) forecasts residential remodeling activity which, historically, remains less volatile than home construction. Because home values remain high, the Joint Center for Housing Studies (JCHS) anticipates remodeling may perform better than new housing.

Contractor activity fell then recovered during the pandemic, and remodeling continued rising during 2021. JCHS expects activity to continue rising in 2022 with growth slowing entering 2023.

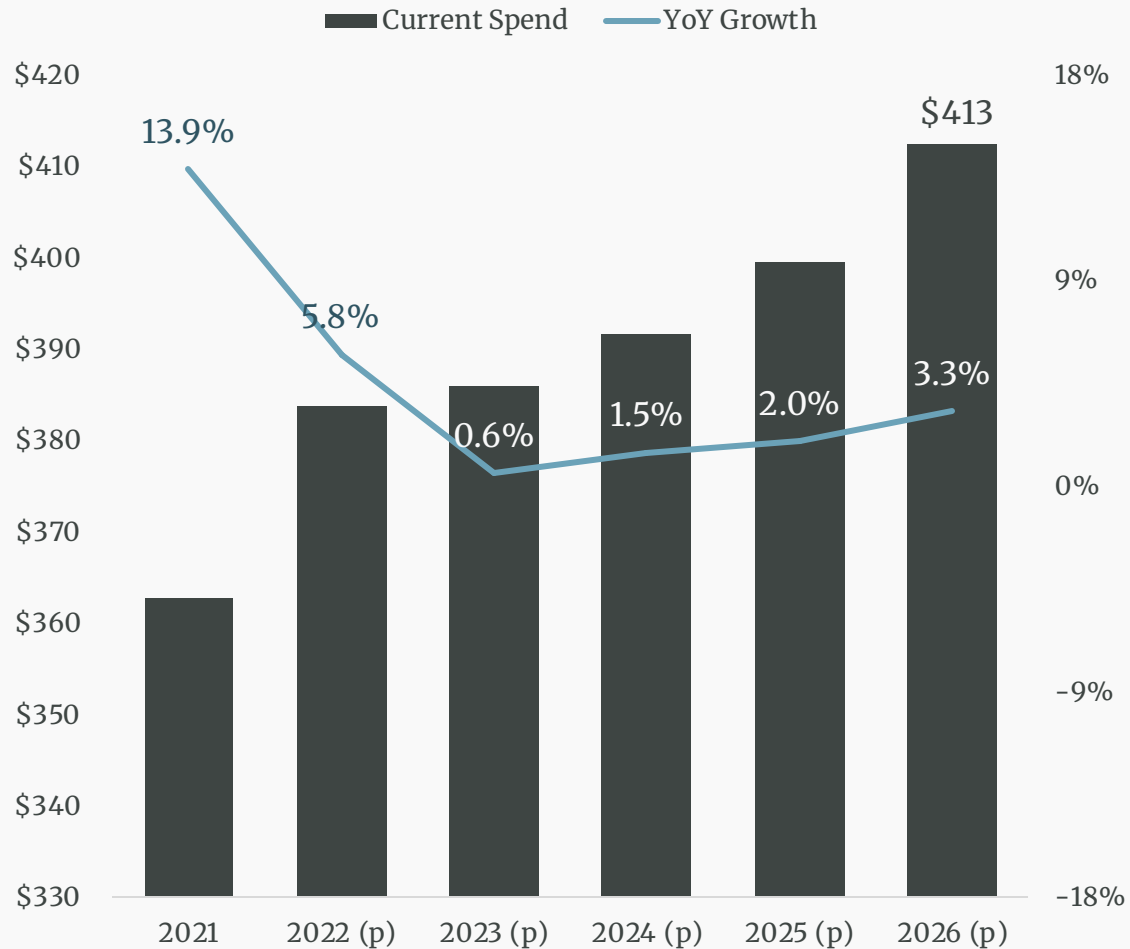
Leading Indicator of Remodeling Activity



Source: Harvard University, Joint Center for Housing Studies. (2022). *Leading Indicator of Remodeling Activity – Third Quarter 2022.*



Consumer Product Revenue Forecast



Home Improvement Research Institute. (2022). *Home Improvement Products Market Forecast Update*.

Revenue Forecast: Consumers

YoY Growth Recovers in 2023

The Home Improvement Research Institute (HIRI) predicts the total spend on home improvement products by consumers each year based on previous years' data.

After a dramatic decrease in year-over-year (YoY) growth, the forecast anticipates a smaller increases in consumer product spend.



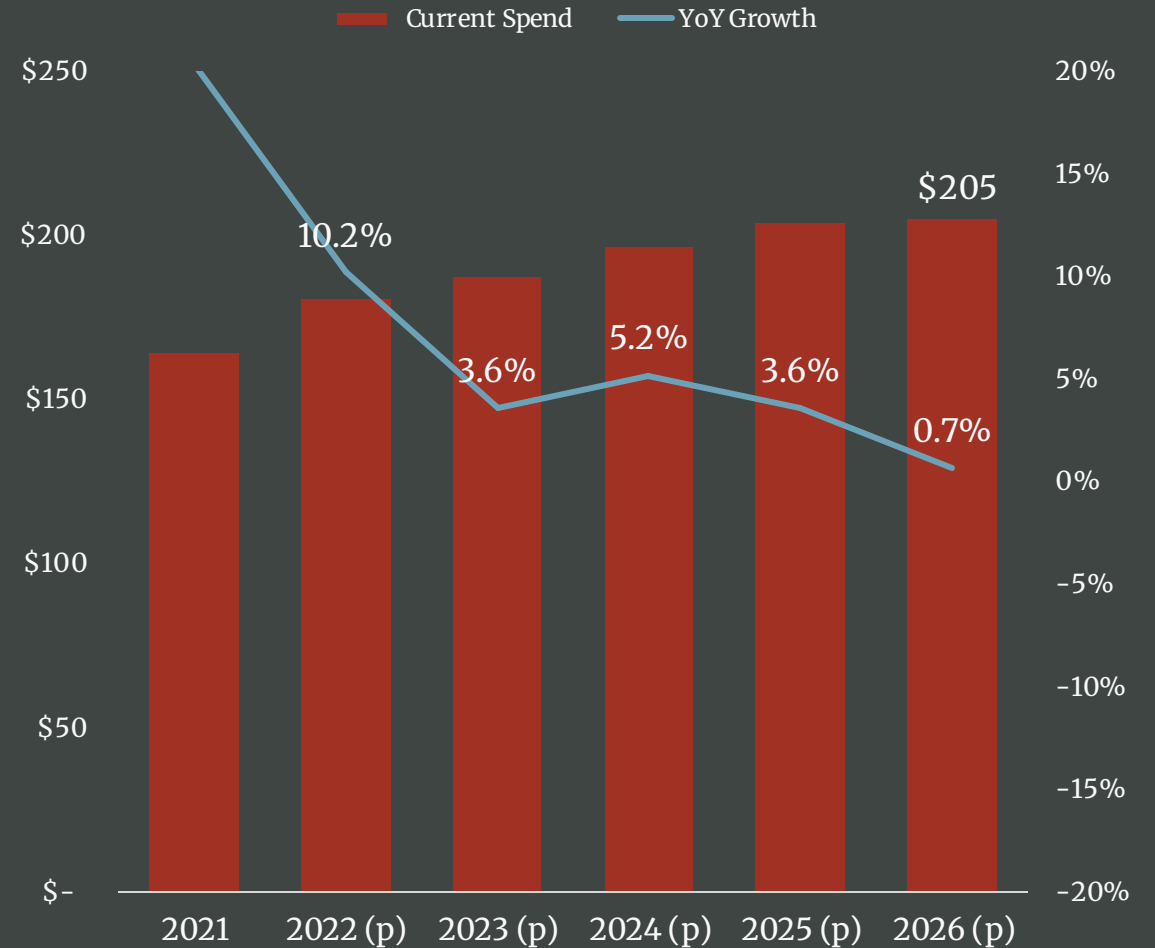
Revenue Forecast: Pros

YoY Growth Expected to Decline

HIRI predicts the total spend on home improvement products by contractors/remodeling professionals each year based on previous years' data.

After a marked increase in YoY growth in 2021, the forecast anticipates a dramatic drop off even as spend continues to rise.

Product Revenue Forecast: Contractors

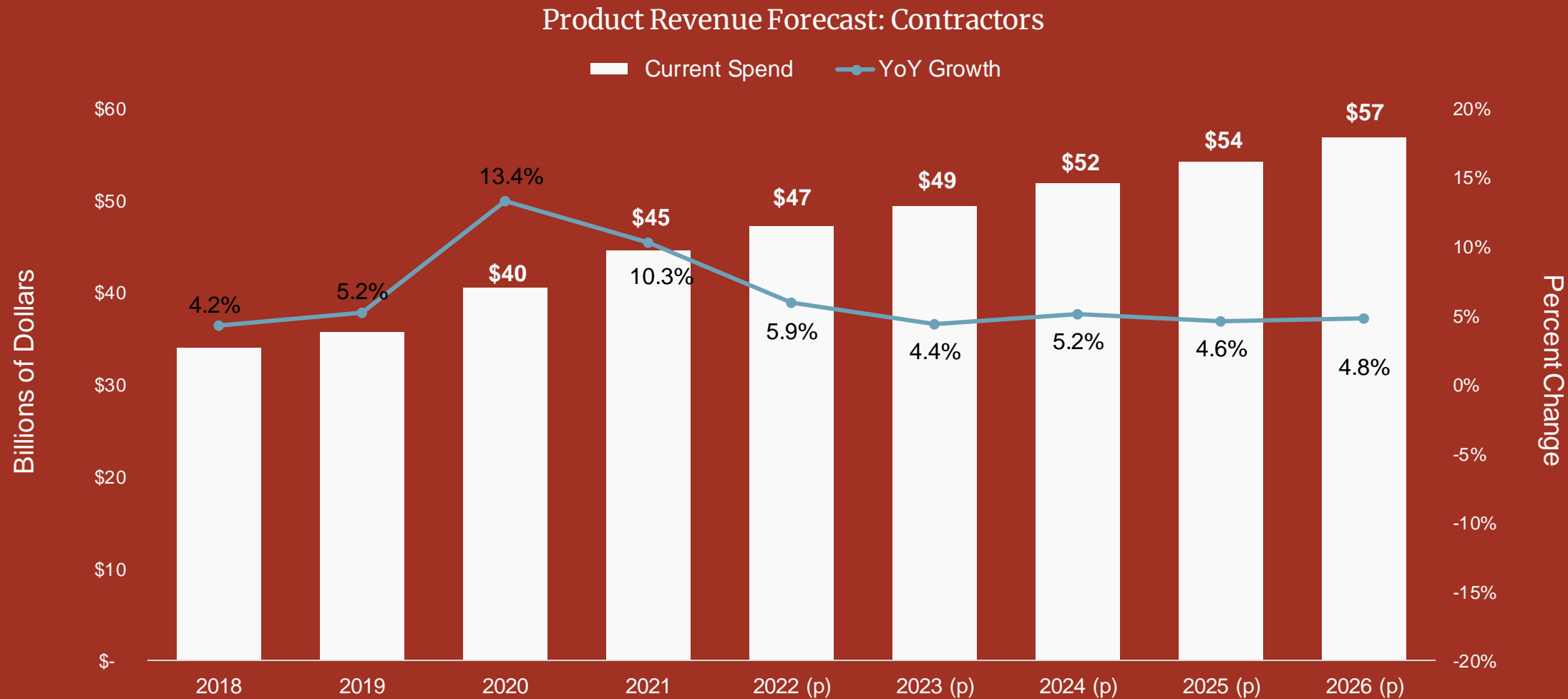


Home Improvement Research Institute. (2022). *Home Improvement Products Market Forecast Update*.

LAWN & GARDEN EQUIPMENT AND SUPPLIES REVENUE FORECAST



Total spend on lawn & garden equipment and supplies by consumers and pros in a year



Home Improvement Research Institute. (2022). *Home Improvement Products Market Forecast Update*.



OBJECTIVES & METHODOLOGY



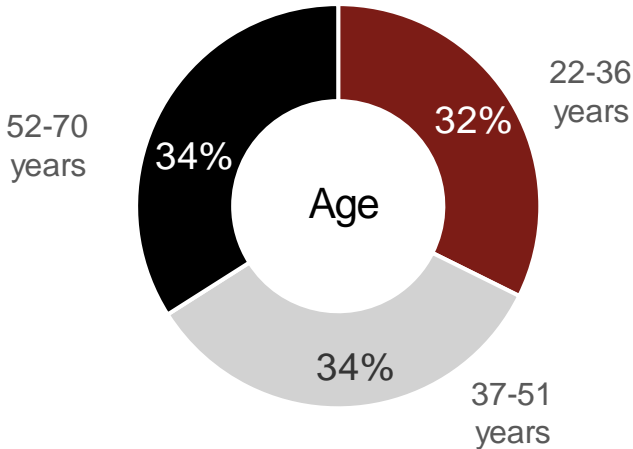
Gain broad insights of the consideration, usage and attitudes towards battery and gas powered OPE among homeowners and landscapers and illustrate how preference and perceptions have changed over time.

Project Methodology – Landscapers and Homeowners

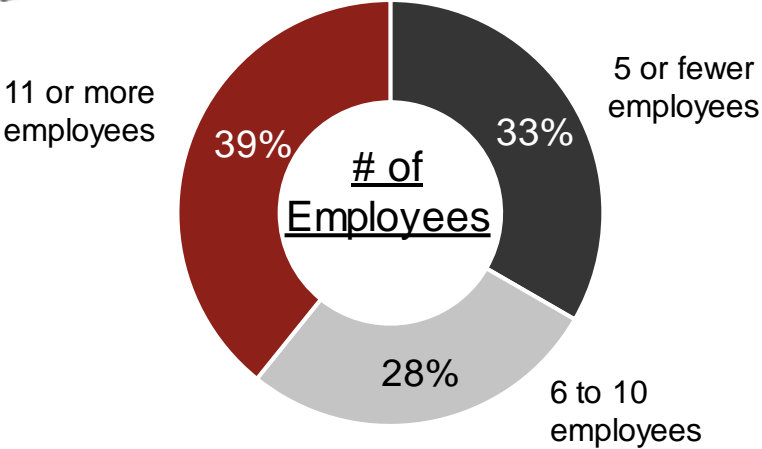
- Homeowners – Decision-makers who purchased OPE in the last 12 months (n=435) or plan to in the next 6 months (n=200).
- Landscapers – Decision-makers who have purchased OPE for their firm in the last 12 months.



Homeowners, N = 597



Landscapers, N = 102





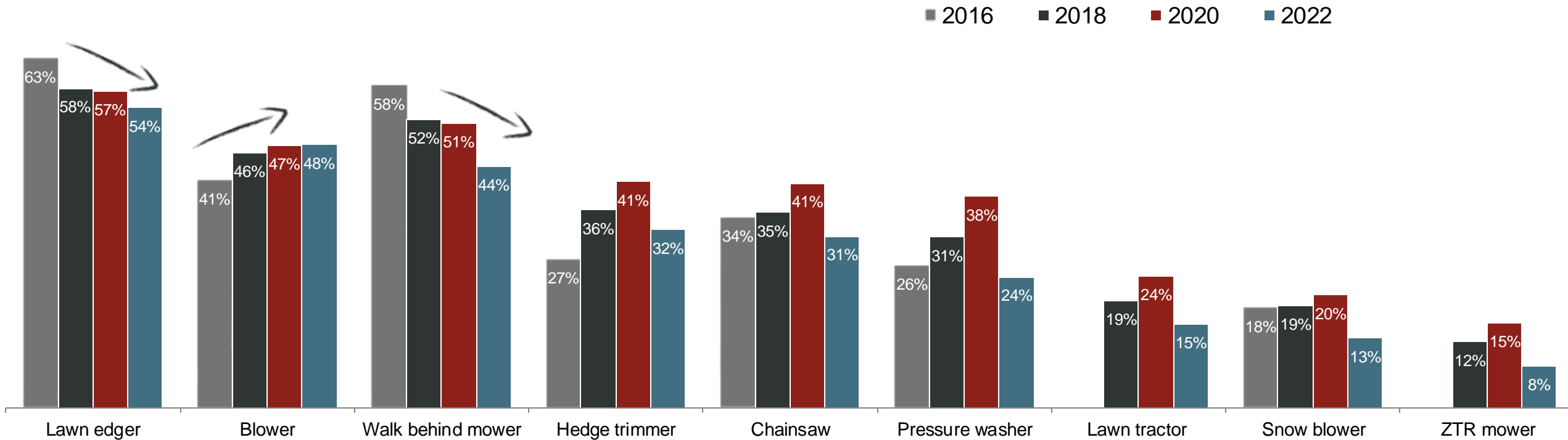
HOMEOWNERS



In-line with the cooling DIY market, homeowner purchases of OPE peaked in 2020/2021.

HOMEOWNERS: OPE PURCHASED IN LAST 12 MONTHS – BY YEAR

(Of those who purchased)



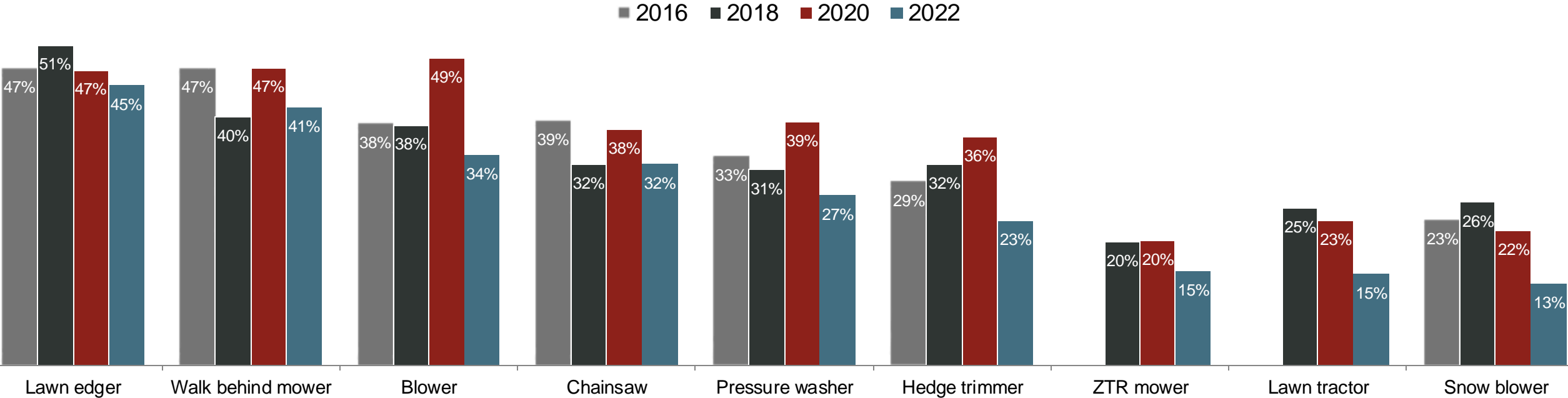
Q. (If purchased OPE) Which type of outdoor power equipment have you purchased in the last 12 months? (n=435)

Lawn tractor, ZTR mower, Rear engine riding mower, and Chipper, logger or splitter were not asked in 2016, due to a focus on smaller battery powered OPE. Robotic and Remote-controlled mowers added in 2022.

Like buyers, planners are also looking to purchase less in the coming year, again signaling the DIY boom peaked in 2020/2021.



HOMEOWNERS: OPE PLAN TO PURCHASE IN NEXT 6-12 MONTHS – BY YEAR (Of those who plan to purchase)



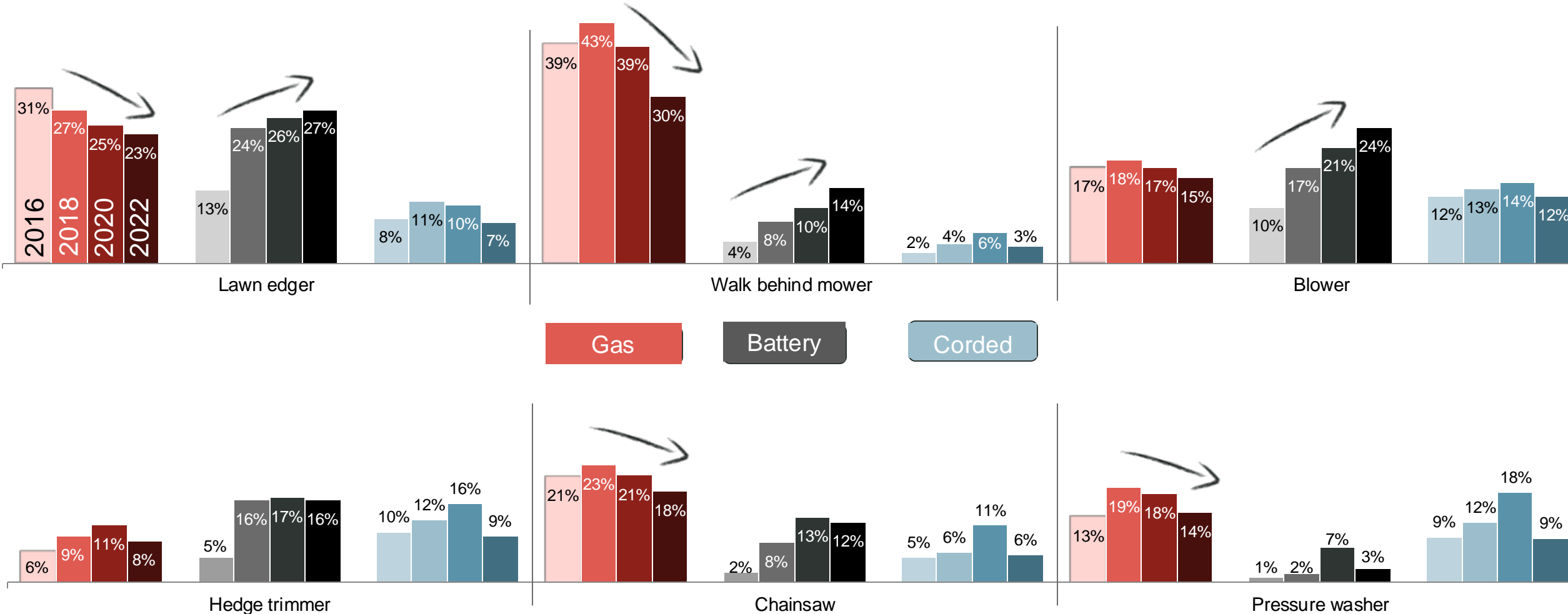
Q. (If plan on purchasing OPE) Which type of outdoor power equipment do you plan to purchase in the next 12 months? (n=200)

Lawn tractor, ZTR mower, Rear engine riding mower, and Chipper, logger or splitter were not asked in 2016, due to a focus on smaller battery powered OPE. Robotic and Remote controlled mowers added in 2022.

The long-term trend for Homeowners clearly shows declining gas purchase/intent and increasing battery purchases.



HOMEOWNERS: OPE PURCHASED IN LAST 12 MONTHS – BY TYPE



Gas Battery Corded

Q. (If purchased OPE) Which type of outdoor power equipment have you purchased in the last 12 months?

Includes top responses. Totals may exceed 100% due to multiple responses.

2018 and 2020 calculations have been amended from previous reports to be based on who purchased OPE.

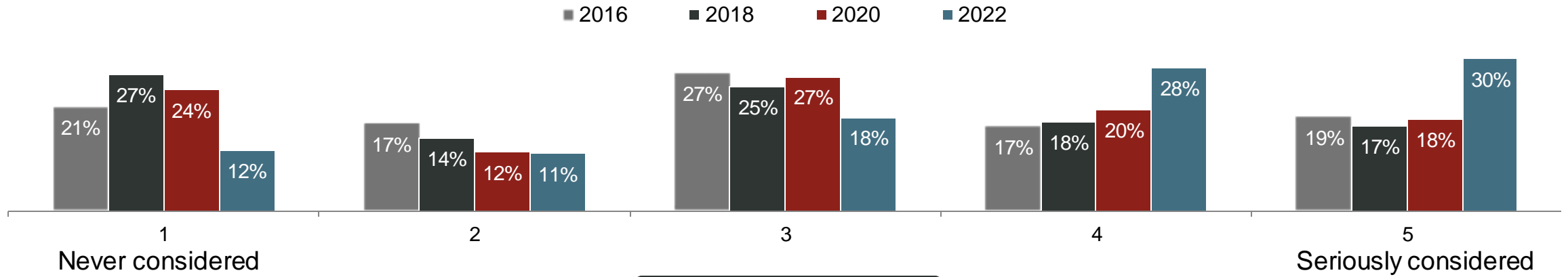


HOMEOWNERS – ATTITUDES TOWARDS BATTERY POWERED OPE

Consideration of battery-powered OPE has risen steadily over the years, while concern over run-time has declined and high price remains a hurdle.

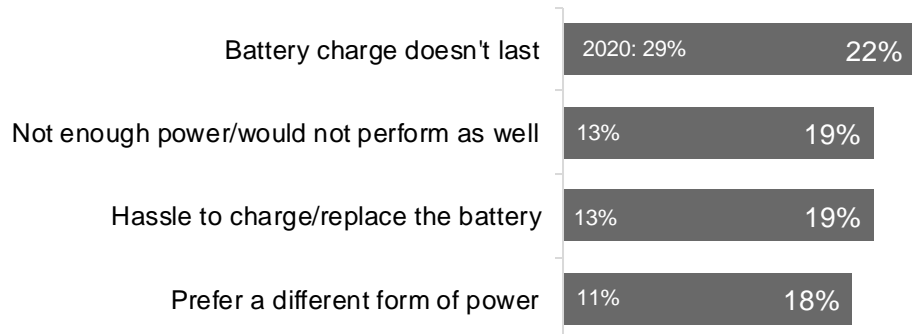


HOMEOWNERS: NON-BATTERY PURCHASERS: CONSIDERATION OF BATTERY OPE

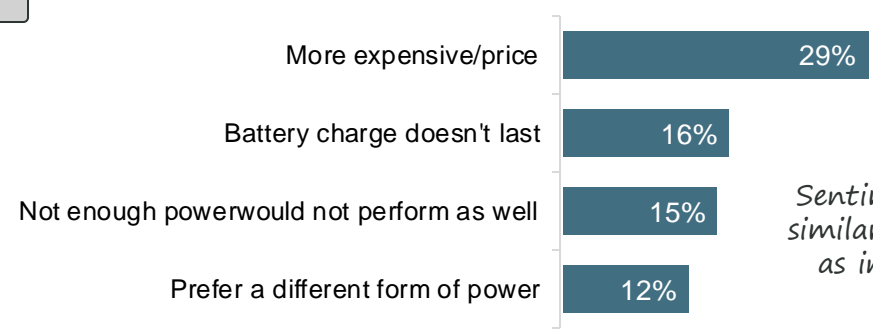


2022 Mean – 3.53
2020 Mean – 2.97
2018 Mean – 2.83
2016 Mean – 2.95

Why Not?



Why Didn't You Buy?



Sentiment was similar in 2022 as in 2020.

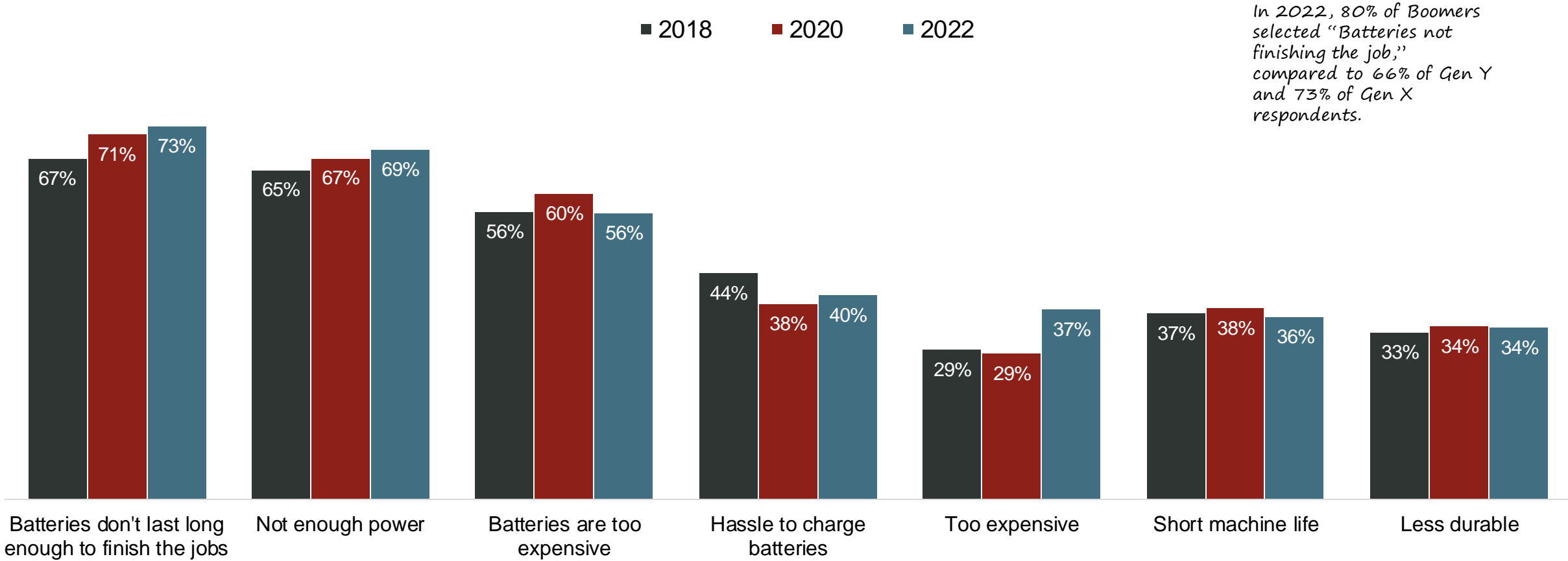
Q. How much did you consider battery powered equipment?
 Q. Why was battery powered outdoor power equipment not much of a consideration? Open end
 Q. You considered battery powered, so why did you NOT purchase battery powered? Open end

Includes top responses.
 Totals may exceed 100% due to multiple responses.

Run-time, power, and cost remain top concerns year after year. The older the Homeowner, the greater the concern about run-time – 80% of Boomers vs 66% of Gen Y.



HOMEOWNERS: BATTERY POWERED OPE CONCERNS (Aided)

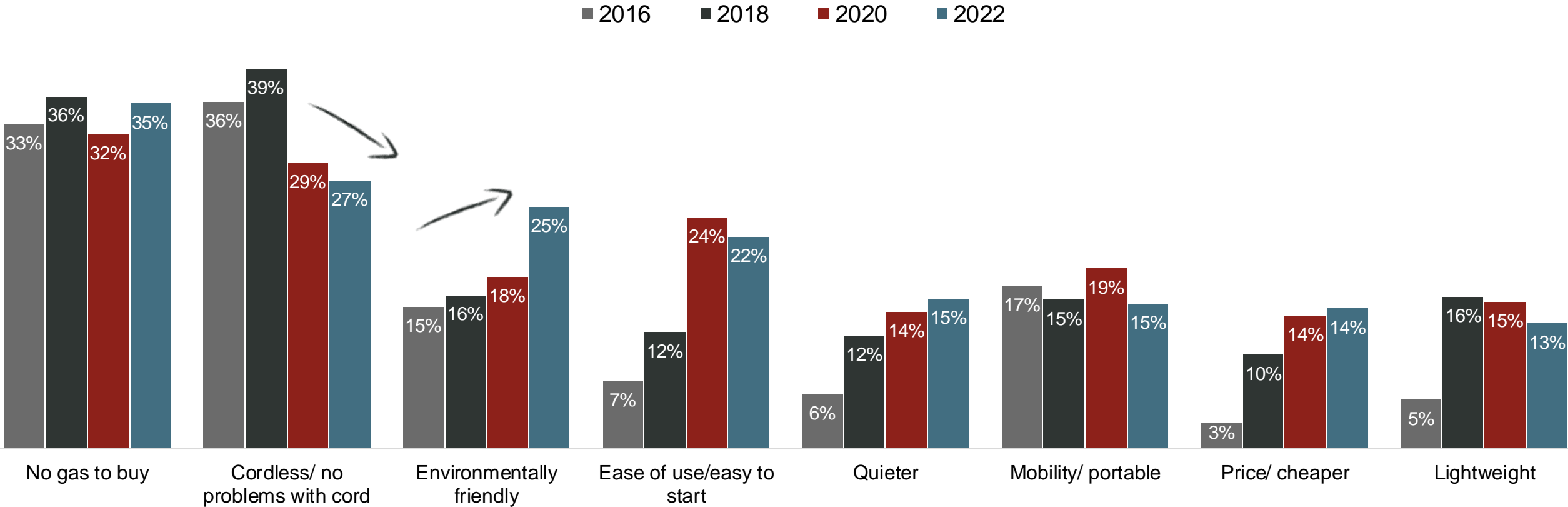


In 2022, 80% of Boomers selected "Batteries not finishing the job," compared to 66% of Gen Y and 73% of Gen X respondents.

No gas expense remains high. Environmentally Friendly and Quieter have increased substantially. Overall, Boomers listed more benefits of Battery than Gen Y.



HOMEOWNERS: BATTERY POWERED OPE BENEFITS (Unaided)



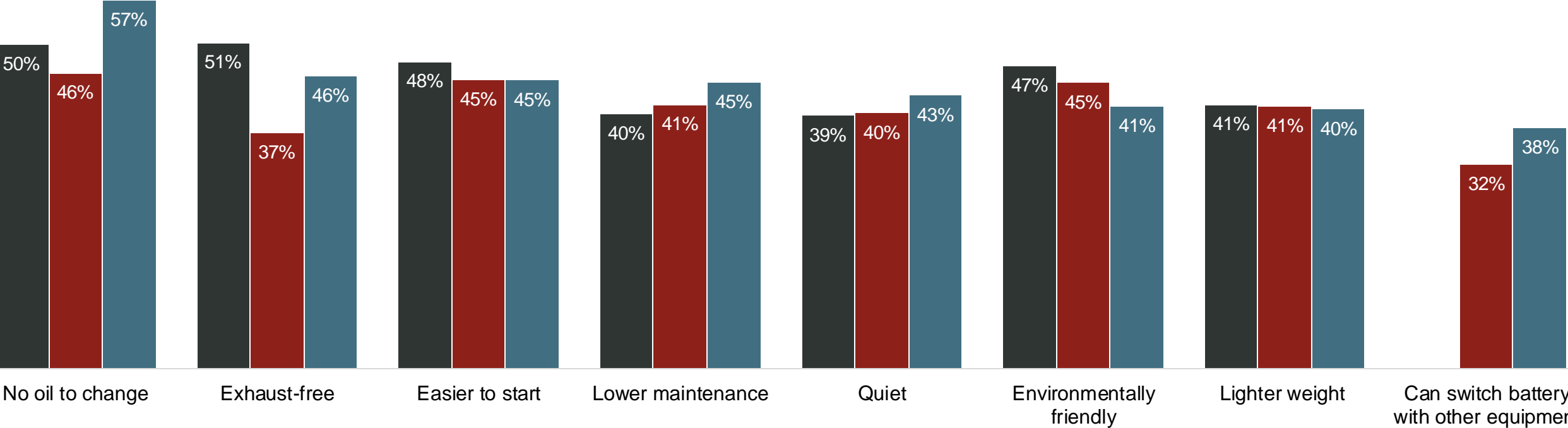
There are many perceived benefits of Battery. Gen X and Boomers see "no oil" as a bigger benefit than Gen Y. Men are more likely to view "Quiet" as a benefit.



HOMEOWNERS: BATTERY POWERED OPE BENEFITS (Aided)

■ 2018 ■ 2020 ■ 2022

In 2022, Gen Xers and Boomers selected "No oil to change" more than Gen Y. More men chose "Quiet" while more women mentioned "Less messy."



*New for 2020

Perceptions of Battery have improved but are far from being strong views.

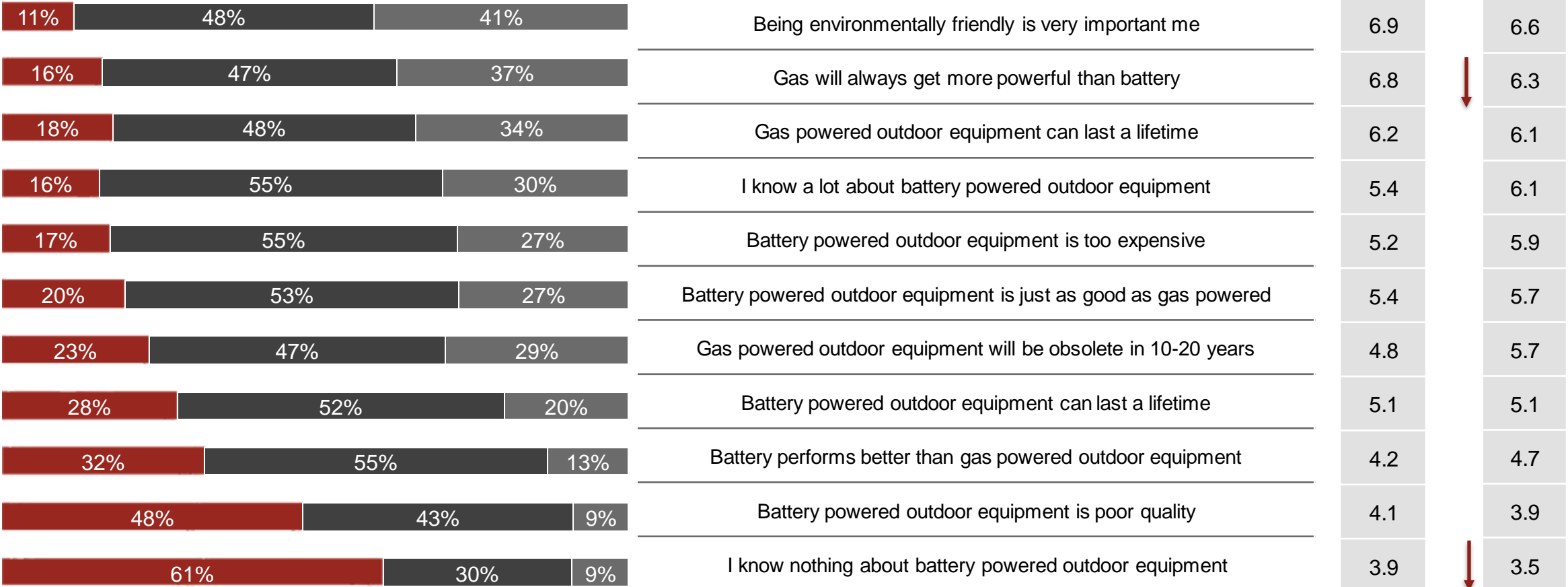


HOMEOWNERS: OPE ATTITUDES

■ Bottom 3 ■ Middle ■ Top 3

Mean Ratings

2016 2022



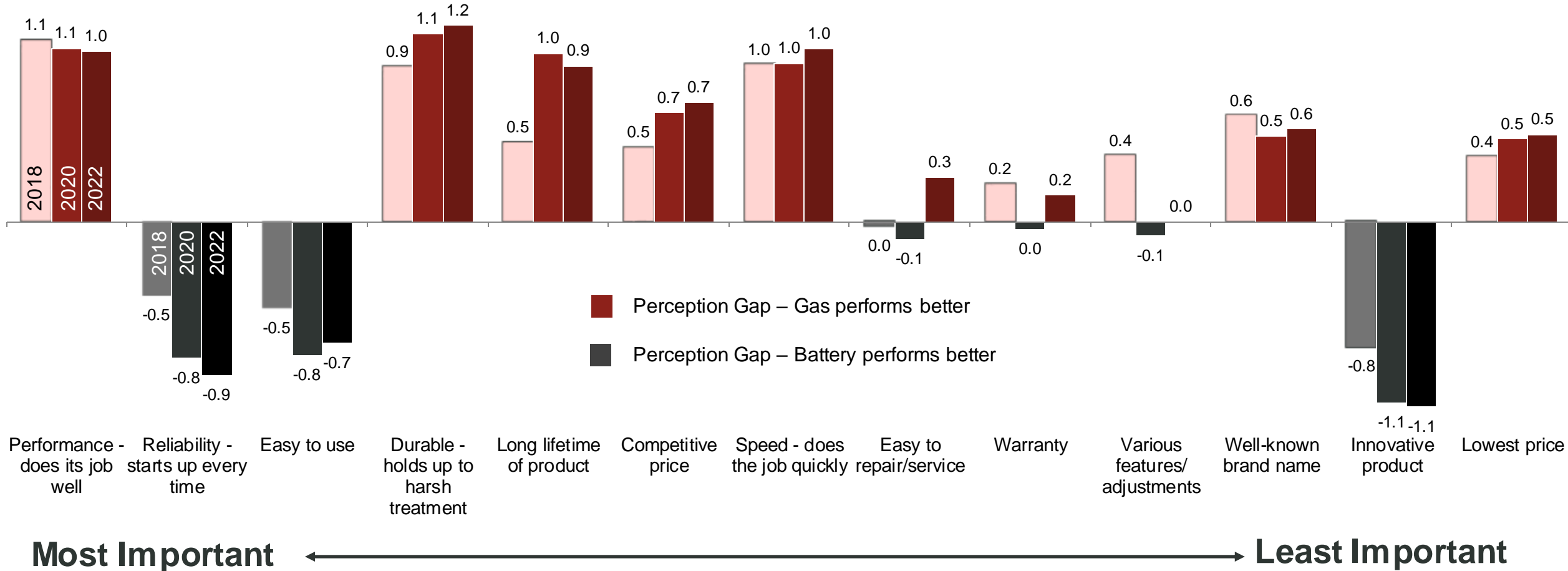
Q. How much do you agree or disagree with each of the following statements?

1 10
 Completely Disagree Completely Agree

Battery is perceived better than Gas in 2 of the top three selection factors. However, Gas wins on performance, durability, and price. Homeowners with yards ½ acre or larger rate all attributes even higher for Gas.



HOMEOWNERS: GAS AND BATTERY PERFORMANCE RATINGS COMPARISON

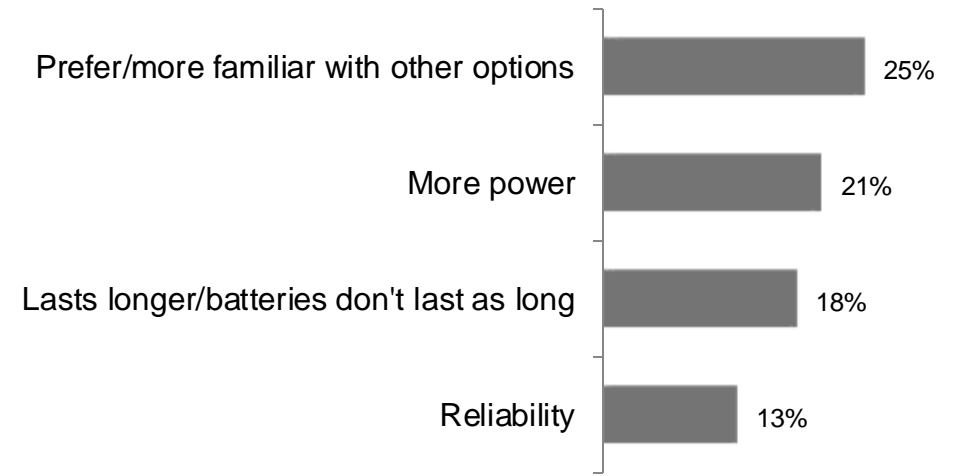
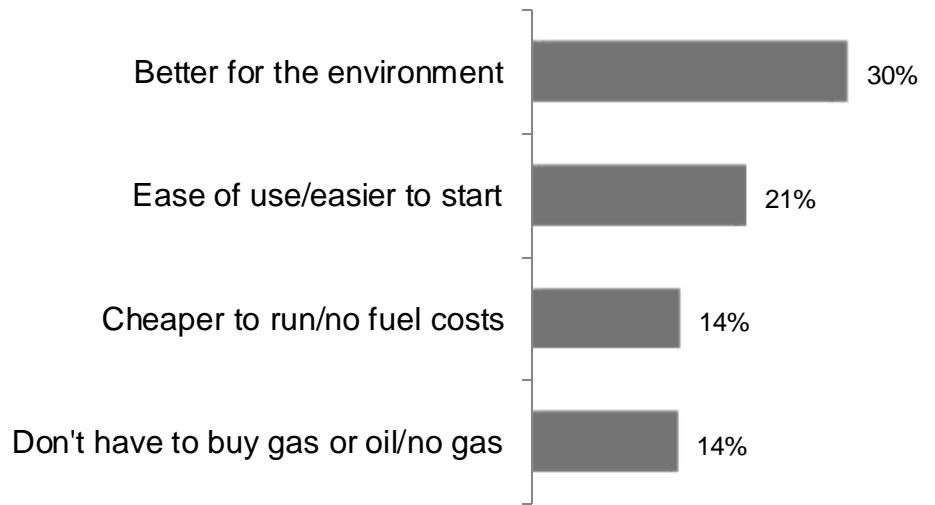
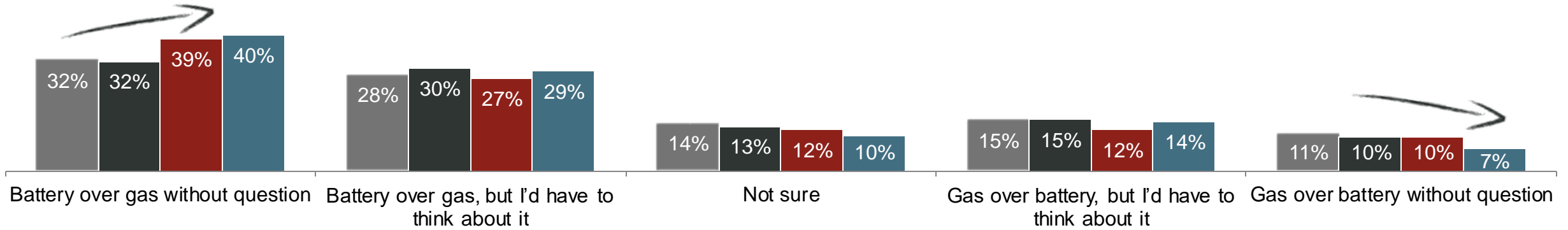


Q. How important were each of the following when you made your recent outdoor power equipment purchase or when deciding which outdoor power equipment product to purchase?
 Q. With 1 being “Extremely poorly” and 10 being “Extremely well,” how well do you think gas powered outdoor equipment performs on each of the following?
 Q. With 1 being “Extremely poorly” and 10 being “Extremely well,” how well do you think battery powered outdoor equipment performs on each of the following?

Nearly 50% of Homeowners with less than 1/2 acre selected “Battery without question” vs nearly 30% of Homeowners 1/2 acre or more selecting Gas. Battery may never win with all.



HOMEOWNERS: BATTERY OR GAS PREFERENCE – ALL THINGS EQUAL



Q. If battery powered outdoor equipment and gas powered equipment had the exact same brand, specs, price, and performance, which would you prefer?
 Q. With all things equal, brand, spec, price, performance...you selected battery over gas. Why?
 Q. With all things equal, brand, spec, price, performance...you selected gas over battery. Why?

Includes top responses.
 Totals may exceed 100% due to multiple responses.

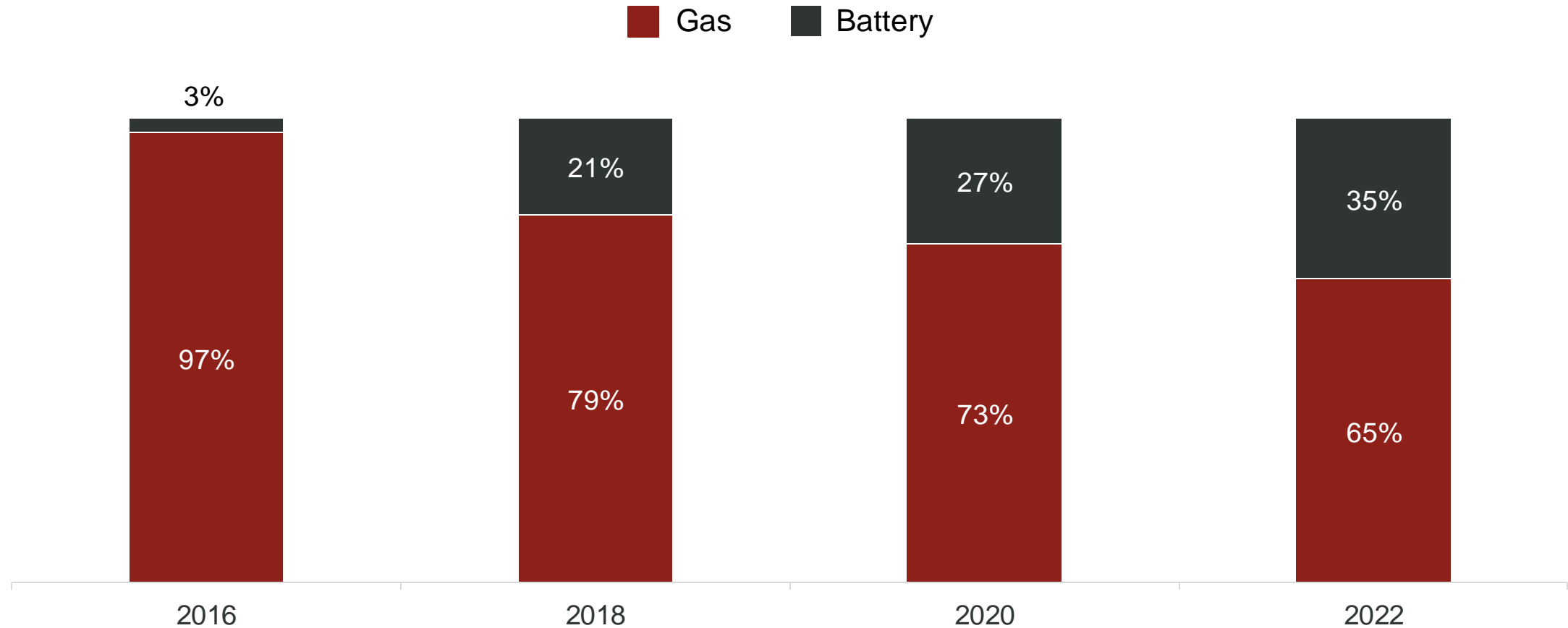


LANDSCAPERS

**The smaller the firm (<\$750k), the larger the share of Gas – 71% Gas, 29% Battery.
Larger the firm (>\$750k), larger share of Battery – 59% Gas, 41% Battery.**



LANDSCAPERS: SHARE OF GAS VS BATTERY POWERED PURCHASES IN PAST YEAR

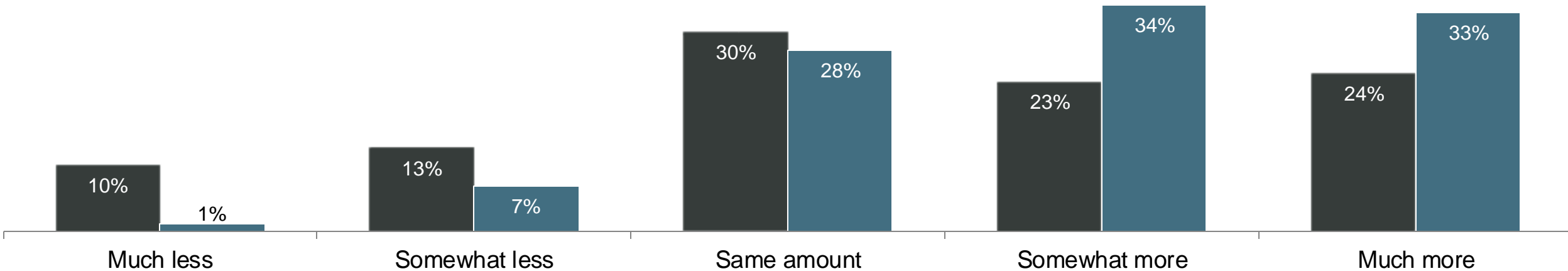




Even among Landscapers, the long term trend is towards Battery. The larger the firm, the more battery they are buying.

LANDSCAPERS: BATTERY POWERED OPE PURCHASED IN PAST YEAR

■ 2018 ■ 2022



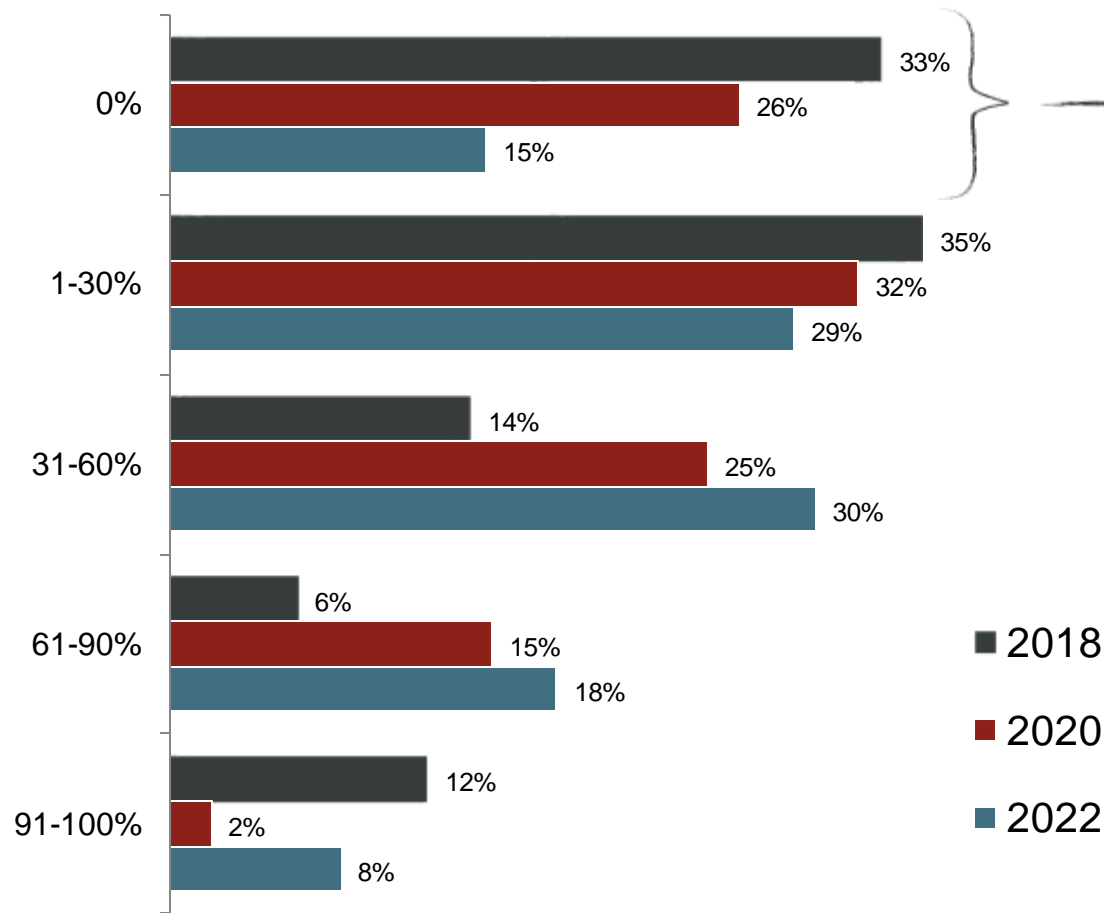
Q. (If purchase battery at Q10) Is your company buying more or less BATTERY powered equipment in the last year compared to 2 or 3 years ago?

Includes top responses.
Totals may exceed 100% due to multiple responses.
Question not asked in 2016.

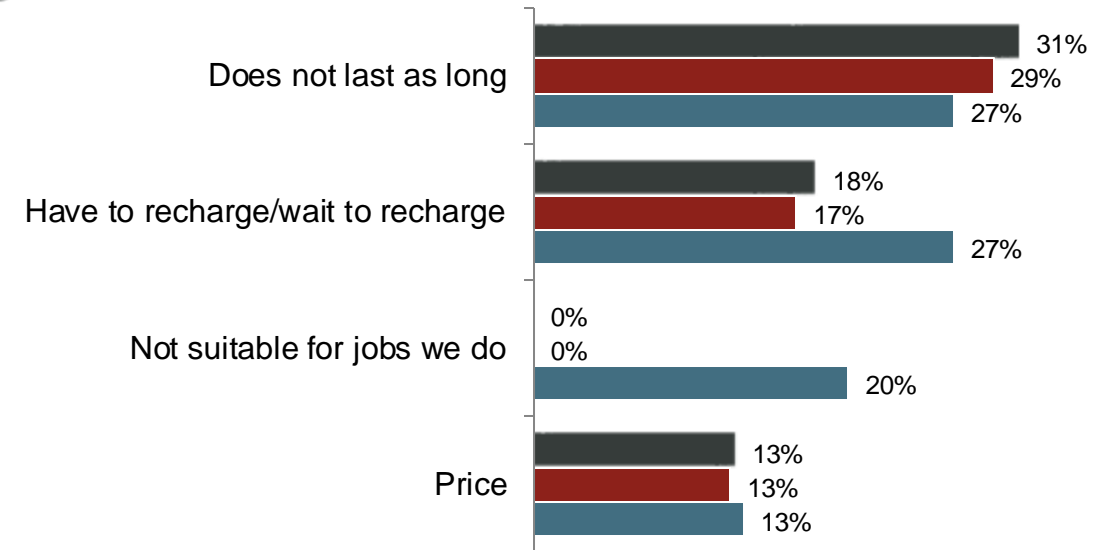
Fleets are consistently shifting to more Battery OPE among Landscapers. The average in 2022 is 40%, up from 28% in 2018.



LANDSCAPERS: PERCENT OF ALL OPE THAT IS BATTERY POWERED



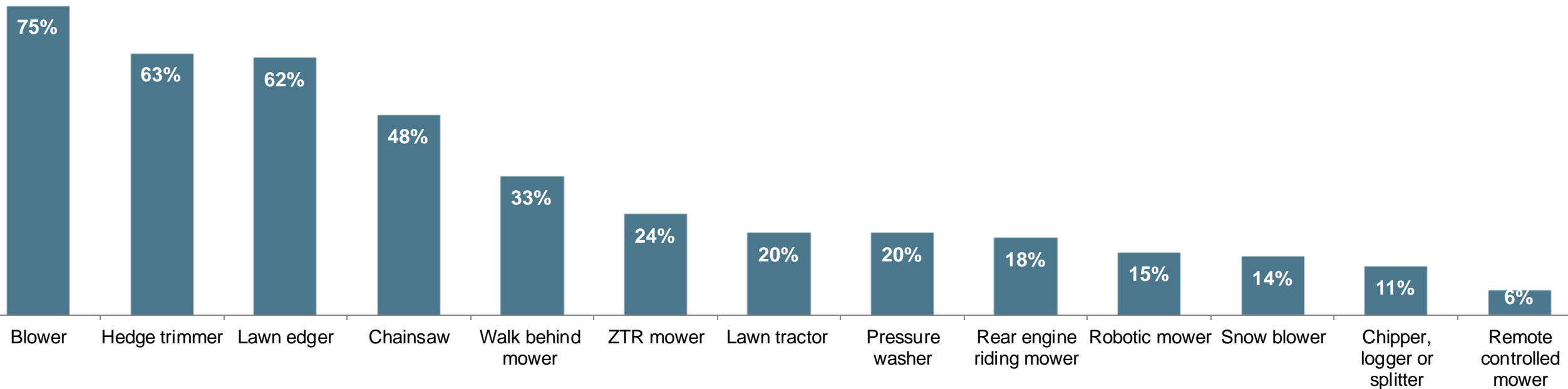
Unaided reasons for not having any battery OPE



Handheld equipment leads the charge for battery powered OPE among Landscapers. However, 1/3 have at least one Battery walk behind, and 1 out of 4 have a Battery ZTR, most of which are larger firms. Battery ZTRs are new, which signals early adoption and belief in the technology.



LANDSCAPERS: TYPE OF BATTERY POWERED EQUIPMENT OWNED



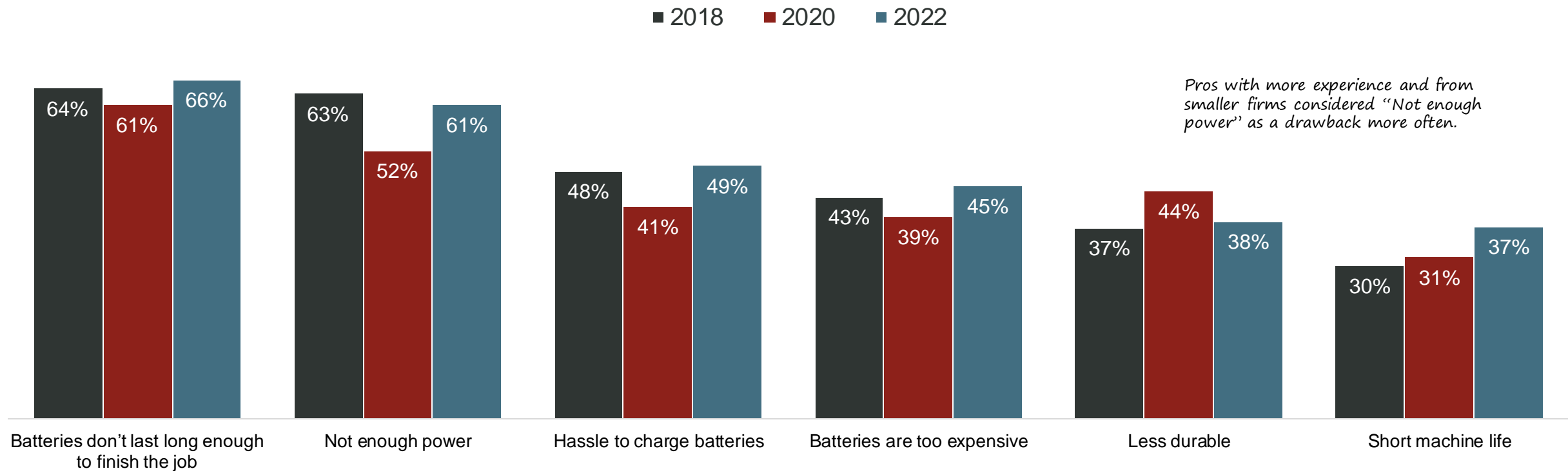


LANDSCAPERS – ATTITUDES TOWARDS BATTERY POWERED OPE

Run time and Power remain critical perception challenges for Landscapers. This is a big reason why mowers do not have the penetration of handhelds. Smaller firms, more experienced Landscapers are more concerned with Power.



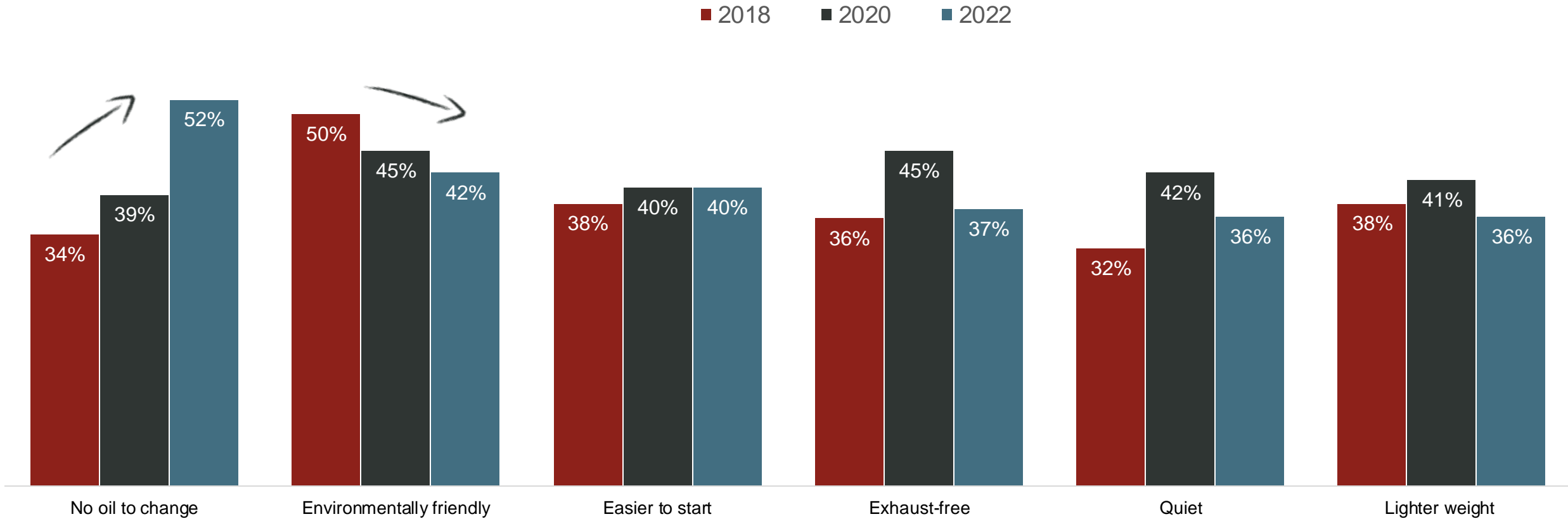
LANDSCAPERS: DRAWBACKS OF BATTERY POWERED OPE (Aided)



“No oil to change” jumped to become the top-mentioned benefit, perhaps due to ease and cost. While environment has dropped, it is more important to larger firms.



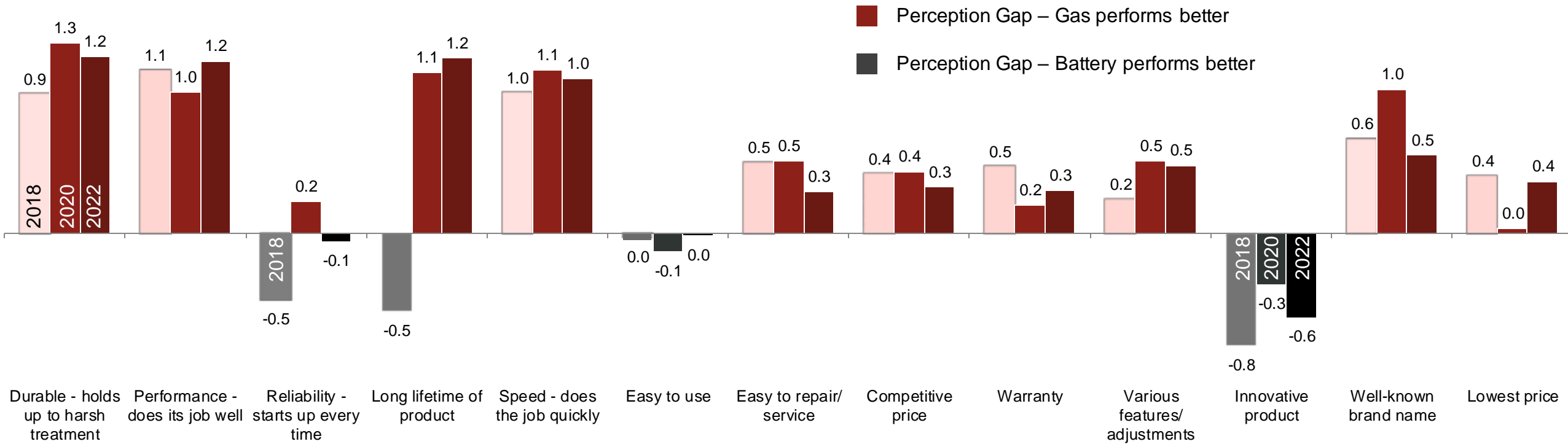
LANDSCAPERS: BENEFITS OF BATTERY POWERED OPE (Aided)



Overall, belief that Gas is superior to Battery remains consistent among Landscapers. Meaning change will continue to be slower than Homeowners.



LANDSCAPERS: GAS AND BATTERY PERFORMANCE RATINGS COMPARISON



Most Important ←

→ Least Important



Q. How important are each of the following when deciding which outdoor power equipment product to purchase?

Q. With 1 being "Extremely poorly" and 10 being "Extremely well," how well do you think gas powered outdoor equipment performs on each of the following?

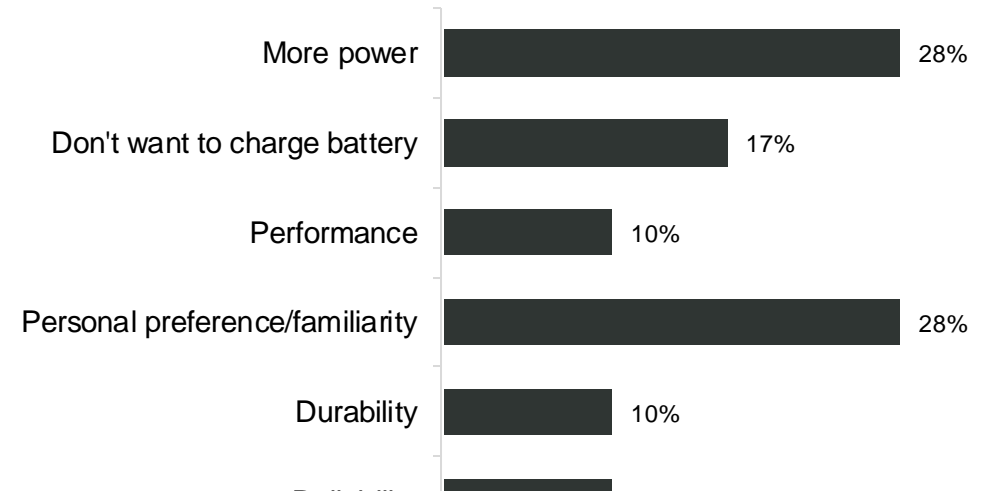
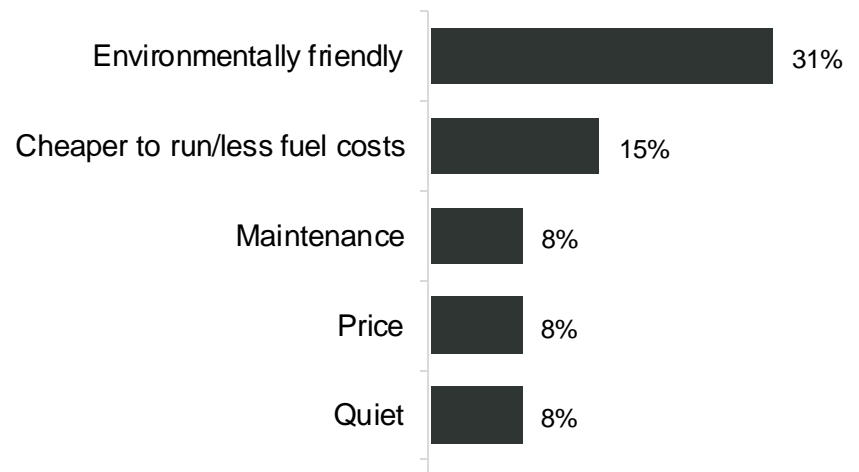
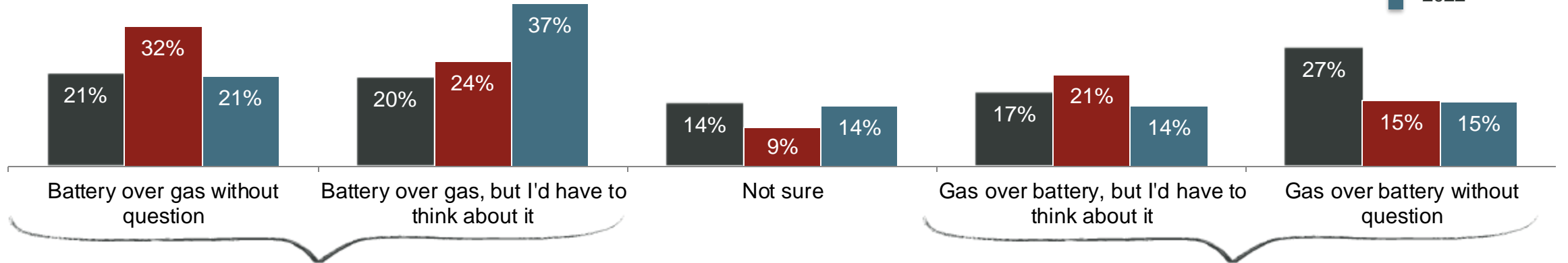
Q. With 1 being "Extremely poorly" and 10 being "Extremely well," how well do you think battery powered outdoor equipment performs on each of the following?

About the same percentage of Pros chose Battery over Gas as in 2020, though more would “have to think about it.”



LANDSCAPERS: BATTERY OR GAS PREFERENCE – ALL THINGS EQUAL

2018
2020
2022



Dig into our report on which brands Pros prefer, and why, across 32 different building product categories when you download *The Farnsworth Contractor Brand Ratings Report*. [\[DOWNLOAD\]](#)

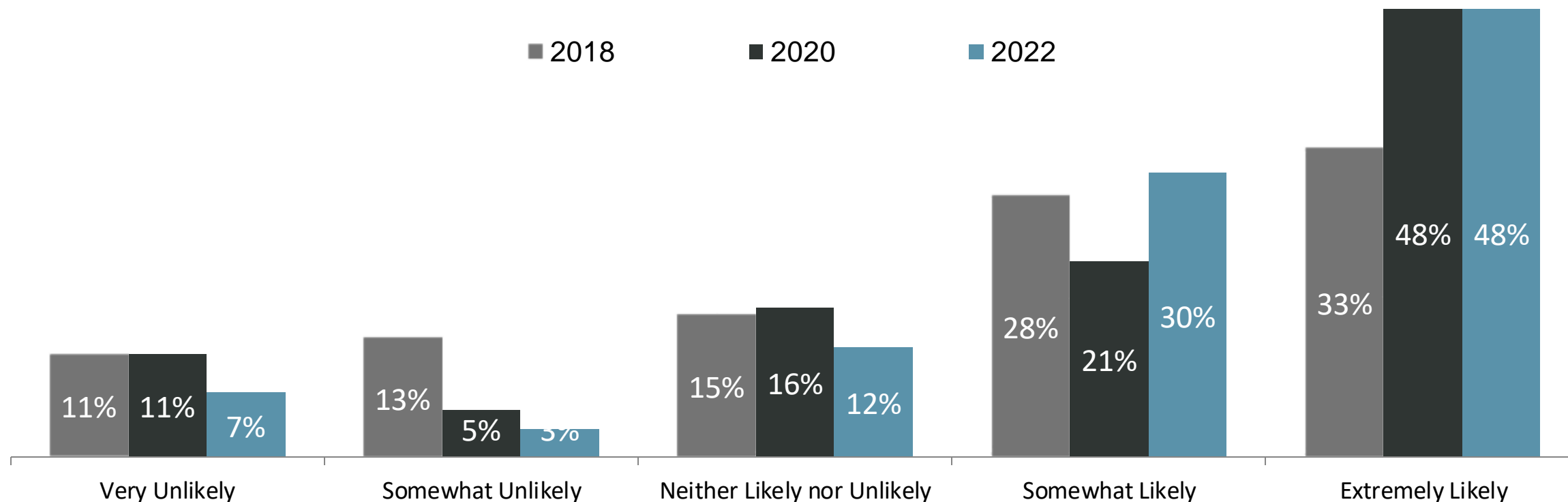
Q. With all things equal, brand, spec, price, performance...you selected gas over battery. Why? Open end

Question not asked in 2016.

78% of Pros' companies are likely to purchase battery-powered outdoor power equipment in the next 5 years.



LANDSCAPERS: LIKELIHOOD TO PURCHASE BATTERY POWERED OPE IN 5 YEARS



Q. How likely is your company to purchase battery powered outdoor power equipment in the next 5 years?

Includes top responses.
Totals may exceed 100% due to multiple responses.
Question not asked in 2016.



REMOTE-CONTROLLED AND ROBOTIC MOWERS

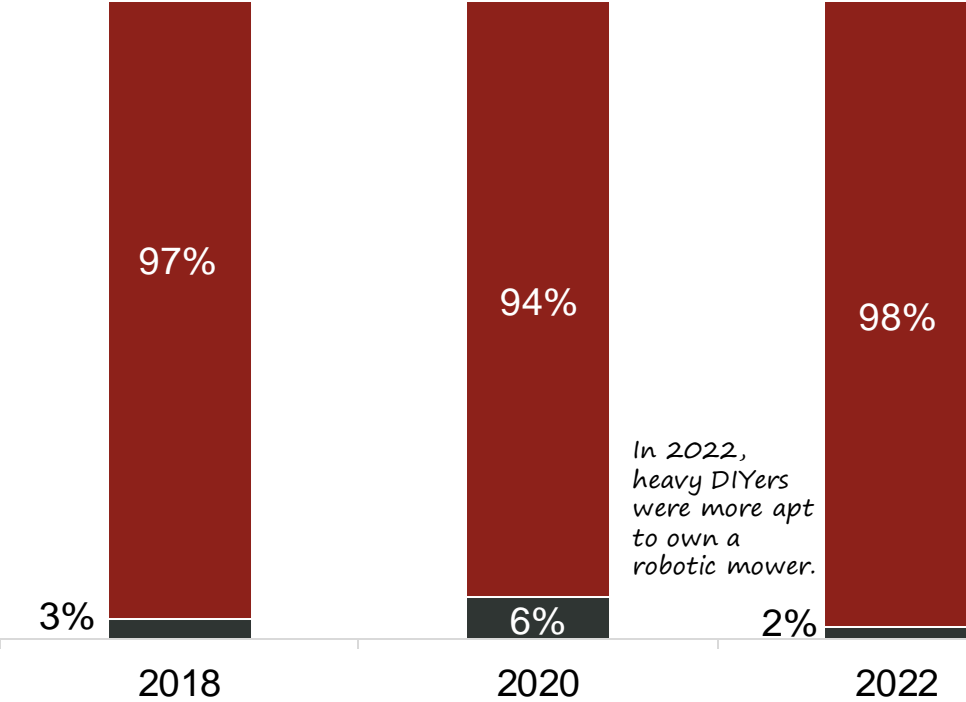
Heavy DIYers are much more likely to own. 22% of larger landscapers (>\$750K) own vs 2% of smaller firm (<\$750K)



ROBOTIC MOWER OWNERSHIP

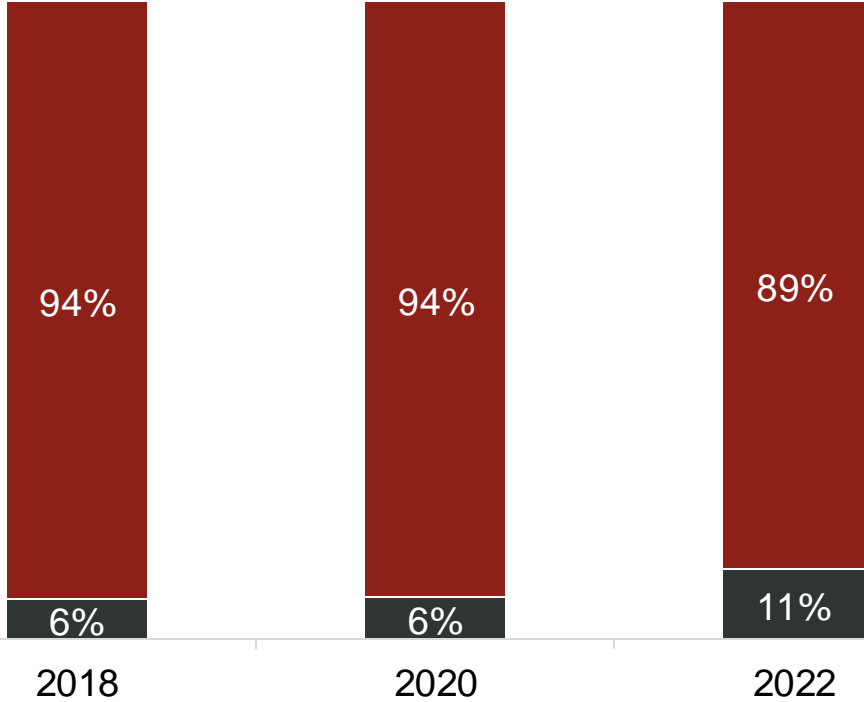
■ No, do not own a robotic mower ■ Yes, own a robotic mower

HOMEOWNERS:



In 2022, heavy DIYers were more apt to own a robotic mower.

LANDSCAPERS:



22% of pros from companies with revenue \$750K+ said their companies own robotic mowers in 2022.

More and more are gaining exposure to Robotic Mowers. Younger Homeowners and those with larger yards as well as larger Landscapers are more likely to have exposure.

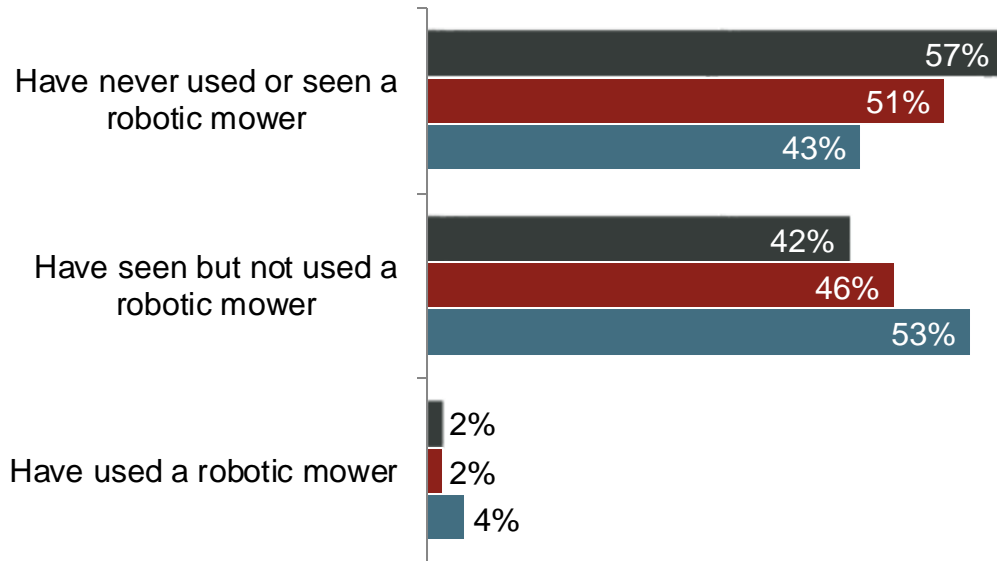


ROBOTIC MOWER USAGE OR DEMONSTRATION

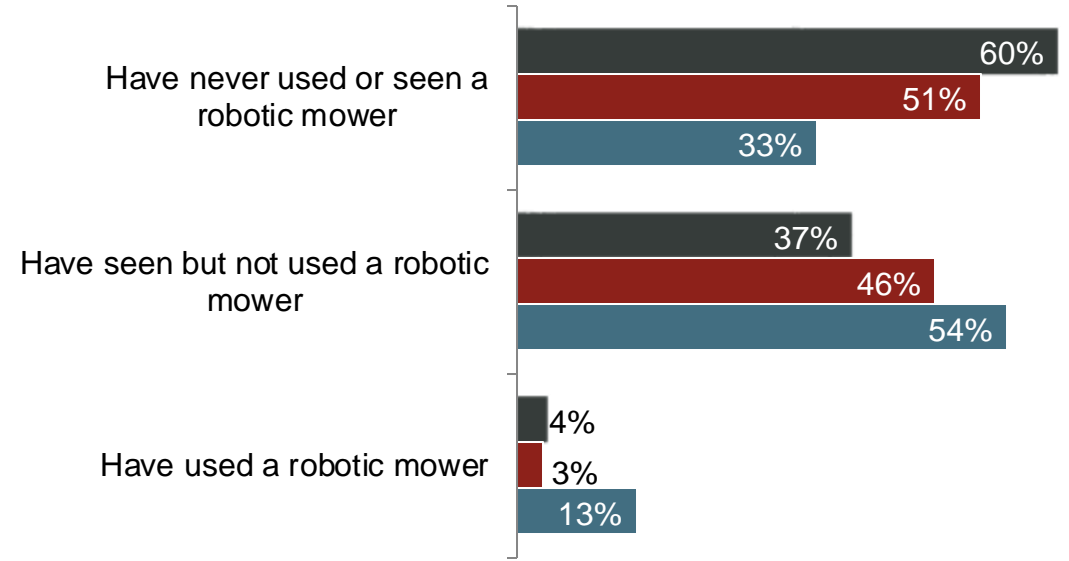
(Of those who don't own one)

2018 2020 2022

HOMEOWNERS:



LANDSCAPERS:



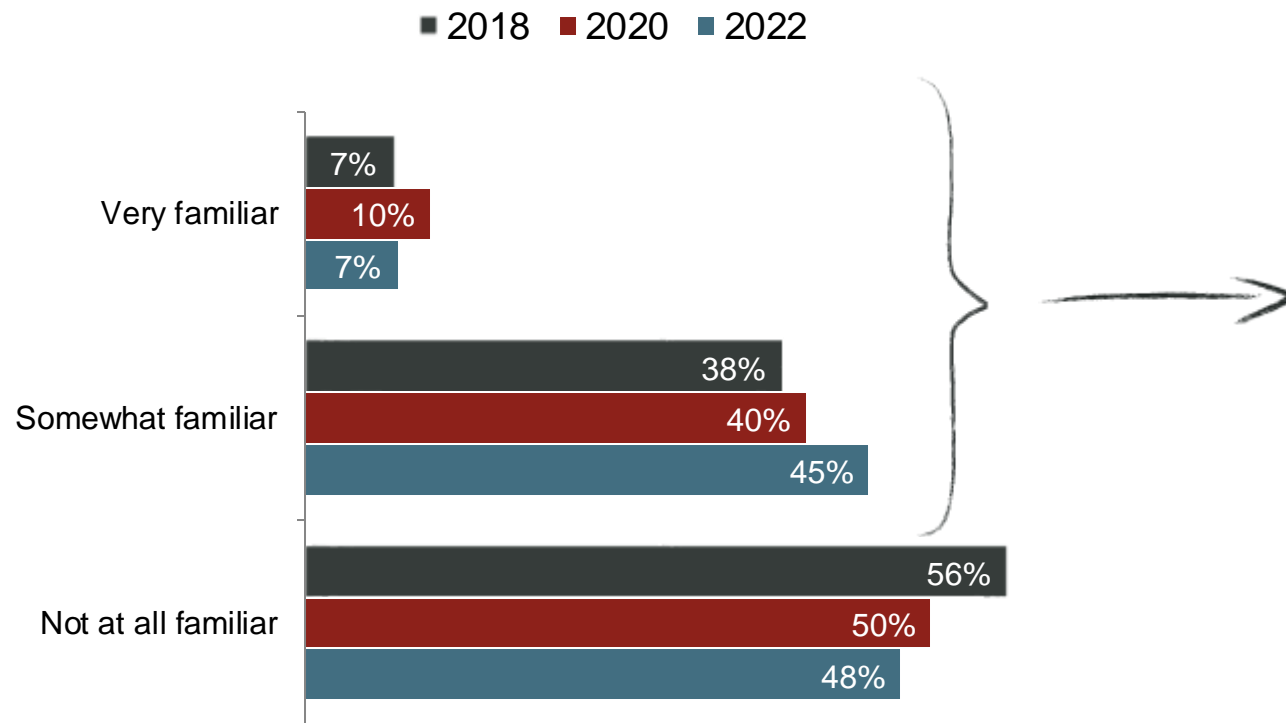
Q. Have you ever used or seen a robotic mower?

In 2022, asked of all respondents and ownership of mower response added. Question not asked in 2016.

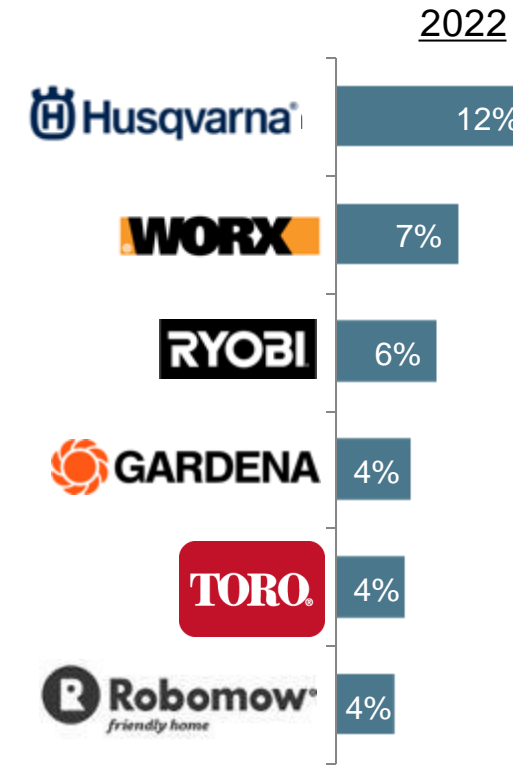


Familiarity with Robotic Mowers is slowly increasing, but brand familiarity is not strong.

HOMEOWNERS: ROBOTIC MOWER FAMILIARITY



Brands of robotic mowers aware of (Unaided)



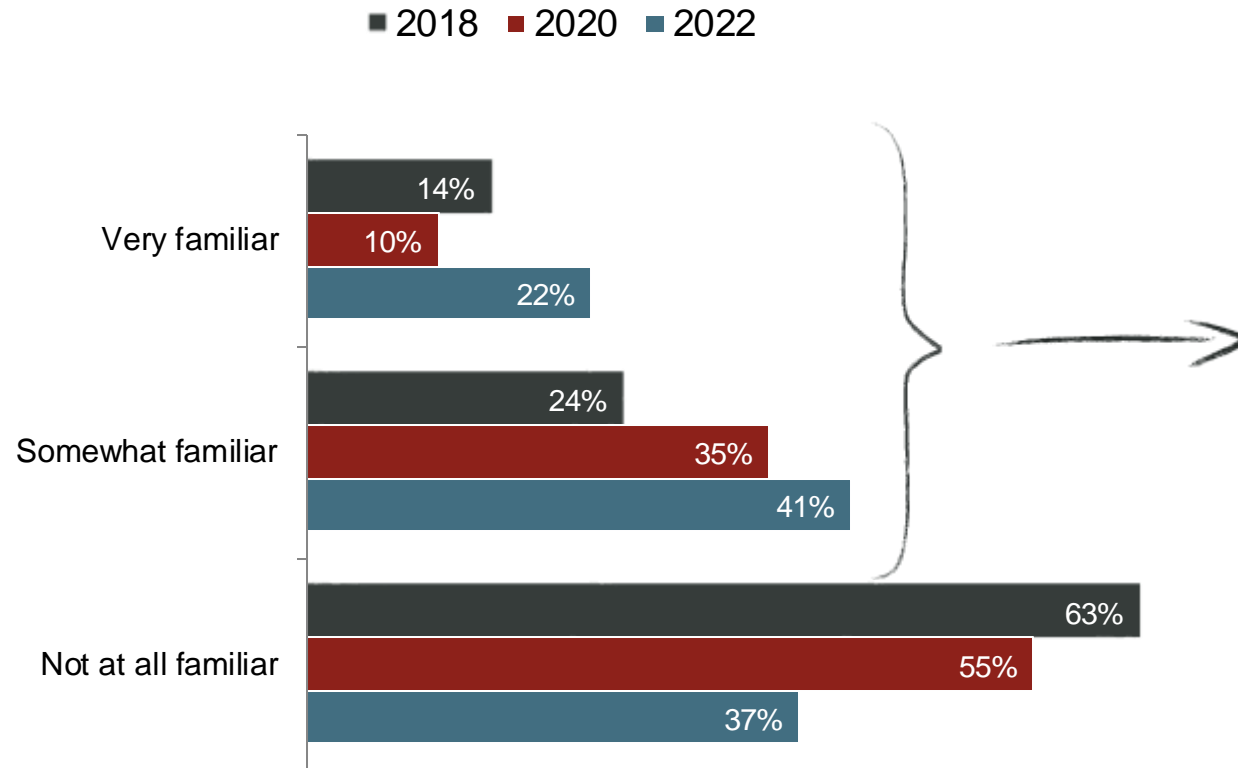
Q. How familiar are you with robotic mowers?
Q. (If "familiar") What brands of robotic mowers are you aware of? Open end

*Question not asked in 2016.

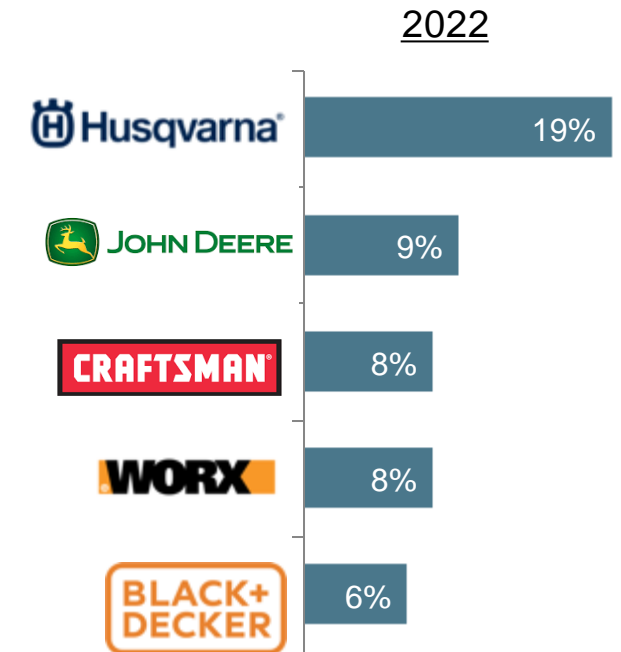
Landscaper awareness of Robotics are increase more than Homeowners, particularly with larger firms.



LANDSCAPERS: ROBOTIC MOWER FAMILIARITY



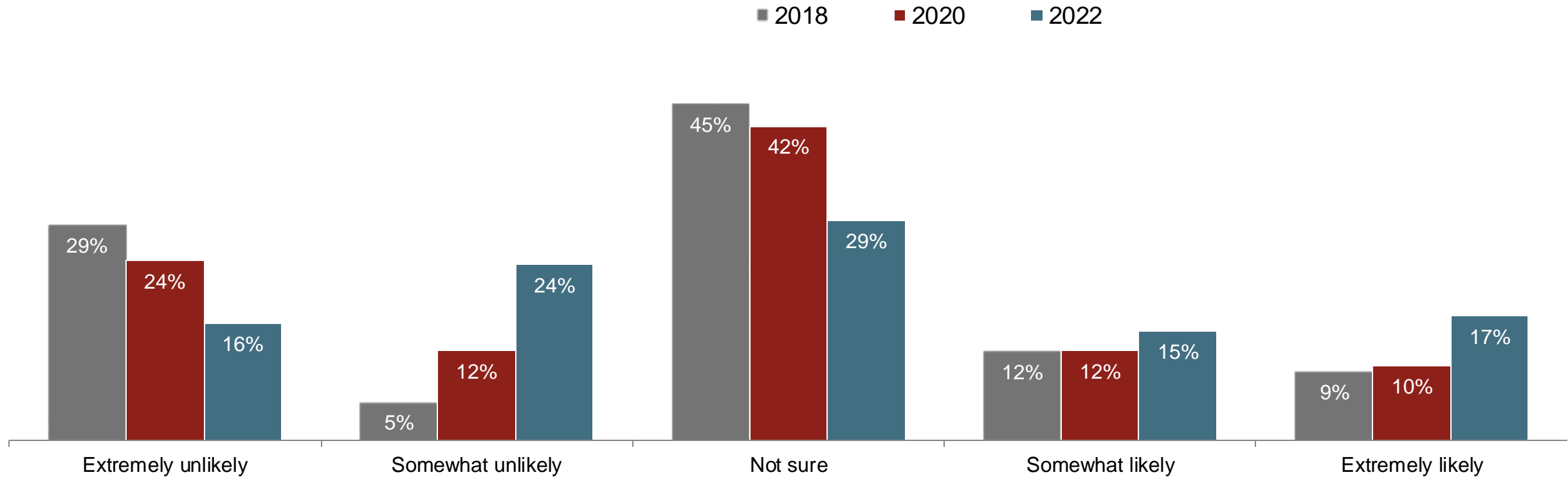
Brands of robotic mowers aware of (Unaided)



Landscapers are slightly more likely to purchase a robotic mower in the next few years. There are fewer who are “Not sure.”



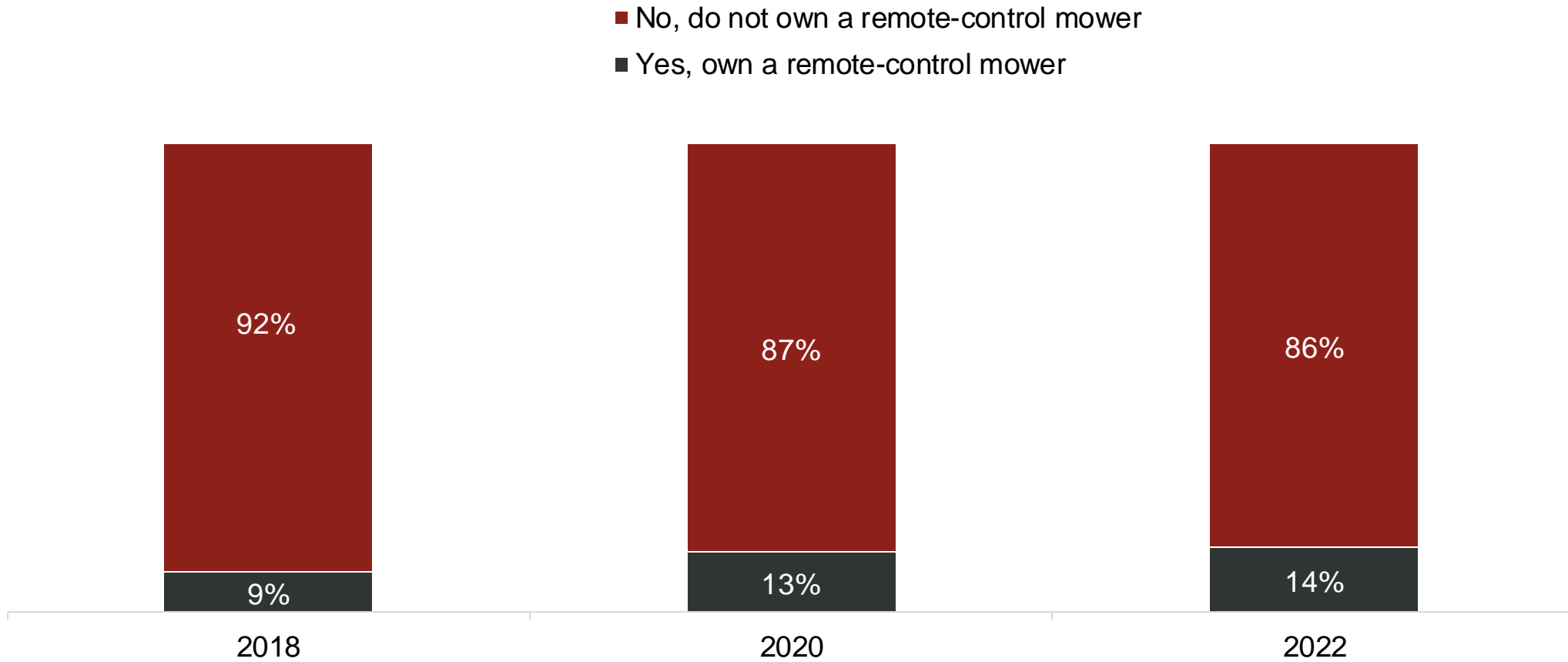
LANDSCAPERS: LIKELIHOOD TO PURCHASE A ROBOTIC MOWER IN 2-3 YEARS



Slow growth of Remote Controlled ownership. 22% of larger Landscapers own vs 7% of smaller firms.



LANDSCAPERS: REMOTE-CONTROLLED MOWER OWNERSHIP

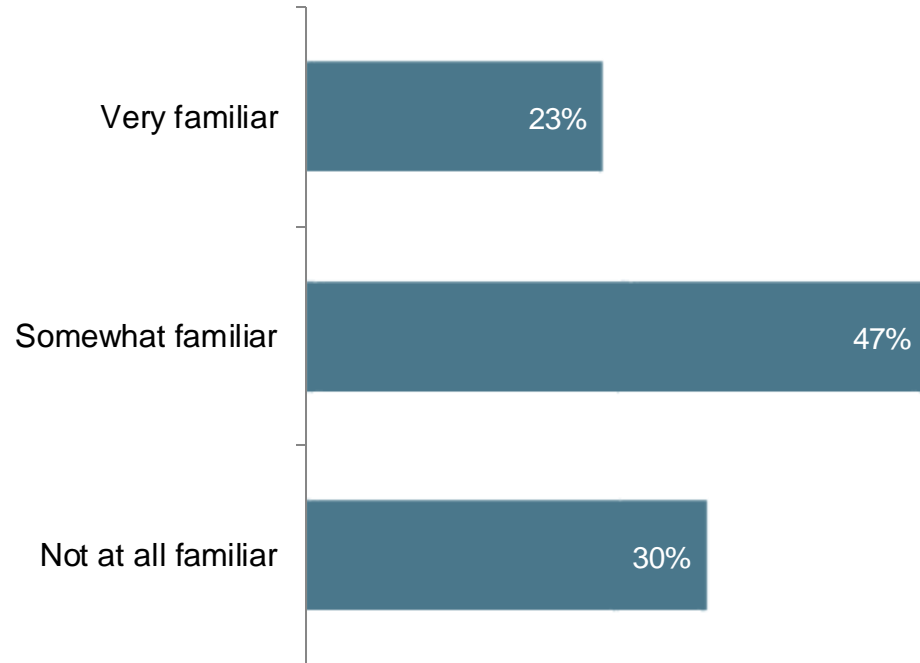


Of those that don't own, almost a third of Landscapers are not at all familiar with a remote-controlled mower, more of whom are smaller firms.



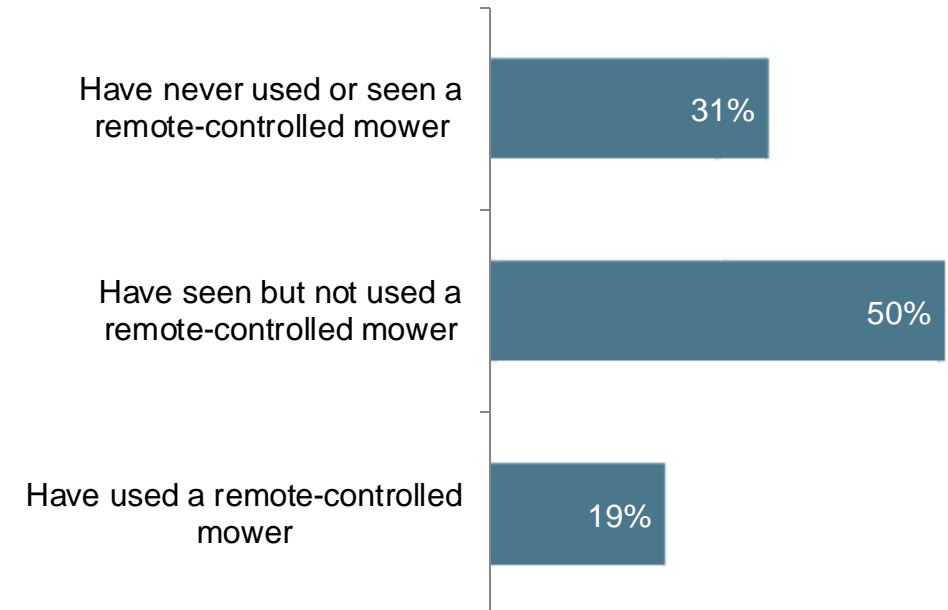
LANDSCAPERS:

REMOTE-CONTROL MOWER FAMILIARITY



REMOTE-CONTROL MOWER USAGE/DEMONSTRATION

Of those whose company doesn't own one



Q. How familiar are you with remote-controlled mowers?
Q. Have you ever used or seen a remote-control mower? Of those whose company does not own one



SO, WHAT

Declining housing starts and slowed home sales = fewer OPE customers for 2023. Think “upgrade” for current owners when marketing, and have a strong pricing, merchandising strategy. We are back to competing for share.

Homeowners continue to adopt battery at higher rates than Pros, but both are increasing share of battery.

Challenges to address:

- Perceived lack of durability
- Short run time
- Questionable power
- Expensive

Benefits to leverage (lots of them):

- Ease
- Quiet
- No fuel, oil, cost
- Environment

Know your audience!! Target those segments most likely to buy – younger, small yard homeowners. Larger, younger landscapers. Know what matters to them and what doesn't.

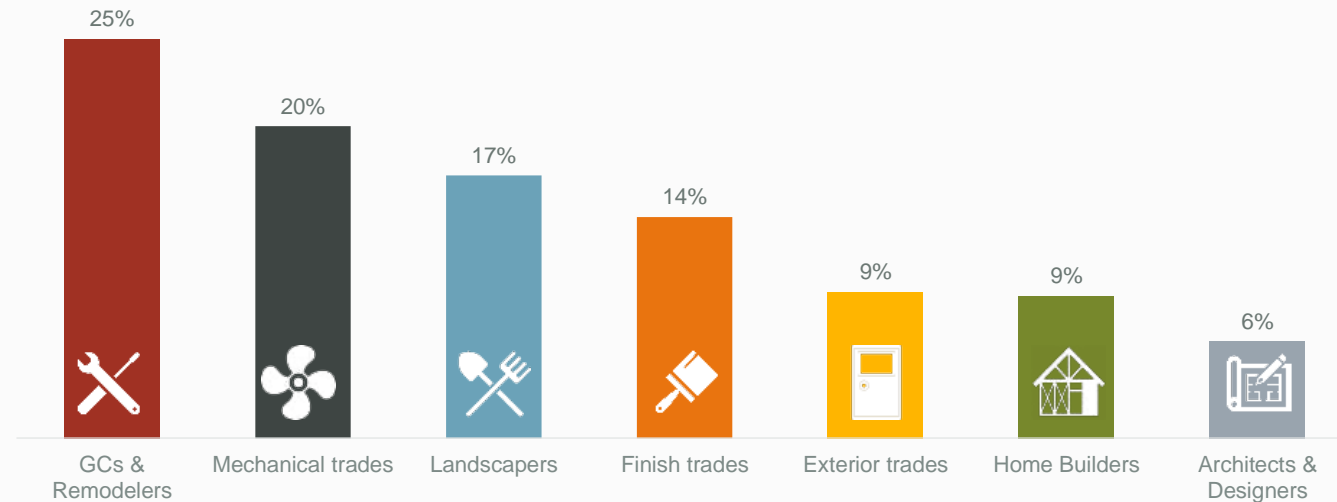
2022 FARNSWORTH CONTRACTOR BRAND RATINGS



Meet the Contractors



Of these contractors, 35% work in firms making \$749 thousand or less annually. Another 38% work in firms making \$750 thousand to \$1.9 million. The last 20% work in firms with revenue \$2 million or above. All data is weighted to represent the US contractor population.



Dig into our report on which brands Pros prefer, and why, across 32 different building product categories when you download *The Farnsworth Contractor Brand Ratings Report*. [**\[DOWNLOAD\]**](#)

Top 10 Gas, Handheld OPE Brands



	AWARENESS	USE	PREFERENCE	BRAND VALUES	RATING
STIHL	83%	59%	33%	27%	5.1
DEWALT	83%	55%	12%	15%	4.1
CRAFTSMAN	71%	65%	12%	12%	4.0
BLACK+DECKER	75%	49%	11%	8%	3.6
Makita	78%	44%	7%	8%	3.4
Husqvarna	67%	40%	9%	6%	3.0
ECHO	54%	44%	6%	7%	2.8
RYOBI	57%	39%	3%	8%	2.7
Troy-Bilt	57%	41%	4%	3%	2.6
Cub Cadet	56%	37%	2%	5%	2.5

Dig into our report on which brands Pros prefer, and why, across 32 different building product categories when you download *The Farnsworth Contractor Brand Ratings Report*. [\[DOWNLOAD\]](#)

Top 10 Battery-powered, Handheld OPE Brands



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	AWARENESS	USE	PREFERENCE	BRAND VALUES	RATING
DEWALT	85%	70%	26%	22%	5.1
CRAFTSMAN	90%	65%	14%	14%	4.6
Milwaukee Tool	82%	54%	13%	9%	4.0
Husqvarna	62%	46%	10%	11%	3.2
Kobalt	74%	44%	2%	6%	3.1
STIHL	60%	39%	12%	10%	3.0
RYOBI	64%	34%	4%	4%	2.7
ECHO	58%	32%	7%	8%	2.6
Makita	66%	32%	1%	4%	2.6
Toro	64%	30%	1%	3%	2.4

Dig into our report on which brands Pros prefer, and why, across 32 different building product categories when you download *The Farnsworth Contractor Brand Ratings Report*. [\[DOWNLOAD\]](#)



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Usage & Attitude of Gas vs Battery OPE Among Homeowners and Landscapers

Trends over time

September 2022

Prepared for



Powering good.



Industry Focused, Custom Research to provide Insights that Improve Strategy

For over 30 years, we have dedicated our business to understanding Consumers and Professionals in specific industries.

BUILDING

HOME IMPROVEMENT

LAWN & RANCH

Our industry knowledge paired with research expertise uniquely equips us to deliver solutions that get you insightful answers to your specific needs.





Industry focused, custom research, improved market strategy

Customer Behavior & Attitudes

- Profile customer for effective targeting
- Quantify product usage to define market opportunity
- Prioritize selection criteria to know what you must deliver
- Learn where they shop, when and why for marketing and sales opportunities throughout the path to purchase

Product Development

- Explore product uses and needs to establish viable concepts
- Validate concepts to increased success and adoption at launch
- Define price & feature combinations to win at point of sale
- Determine preferred messaging and packaging to attract buyers

Brand Health & Performance

- Monitor brand performance to measure marketing success
- Capture brand perceptions to define market position
- Understand brand equity to improve category growth success
- Define brand usage to determine share opportunity

Market Sizing & Structure

- Define total product sales volume to determine market potential
- Define brand share to determine acquisition opportunity
- Define product distribution structure to inform channel strategy
- Define share by customer type to develop marketing and sales strategy



Tried and True: Your Experts



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