



**Home Innovation**  
RESEARCH LABS

# Changing Preferences for Building Products in a Post-COVID Market

*Ed Hudson, Director, Marketing Research*  
*LSC Connections Meeting | June 9, 2021*

Finding Innovation a Home

# Summary: Top Trends Creating Opportunities in Building Materials Industry

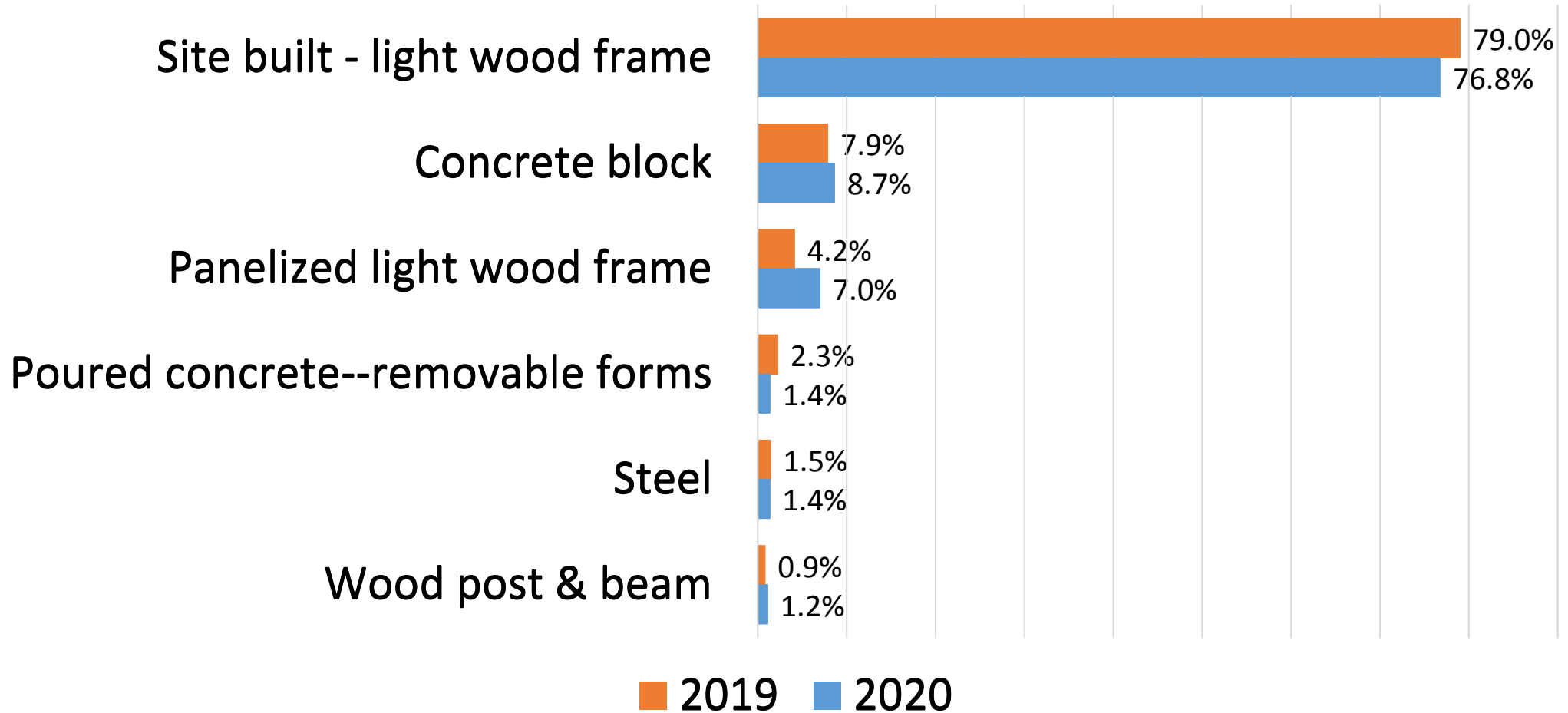
- Skilled labor shortage, increasing wages—COVID is forcing builders and contractors to take action
  - Average home construction time grew from 6 to 7+ months prior to pandemic—now longer
  - Offsite construction still nascent, but data points to widespread adoption as capacity is added
  - Market strongly favoring easy-to-install and pre-finished materials
- Materials supply is short with increasing prices; builders generally passing it on to buyers (but looking for alternatives)
- Declining availability of development land & housing affordability
  - Flight to “exurbs” continues; teardowns and infill lots make up higher share of starts
  - Home remodeling outlook continues to be upbeat, but project types are being driven more by availability of home equity
- More rigorous energy codes in past decade
  - Higher air tightness and insulation requirements being adopted and enforced
  - HVAC ducts now in building envelope, primarily in conditioned attics or floors between living levels

# Summary: Top Trends Creating Opportunities in Building Materials Industry

- Demographics
  - Millennial buyers now dominate homebuying market; average home size declining
  - Younger buying generations find engineered products more appealing than natural
- Technology improvements in plastics
  - More realistic, durable, wear-resistant plastics in flooring, decks, siding, windows, countertops
- Design trends favoring simpler styles (more euro and urban) and contemporary design—primarily interiors
  - Wood, stone, concrete, steel—with multiple textures on exterior
  - Wood finish growing more popular on floors, less popular on cabinets
- Pandemic accelerates certain trends, reverses others:
  - Blurring of transition between indoor and outdoor living—moving window walls, larger and more upgraded outdoor living space; decks and patios are getting roofs
  - DIY segment, after steady decline, invigorated by COVID-19. Pandemic awakens need for compartmentalization of homes, more “defined spaces”

# New SFD Home Wall Construction Method

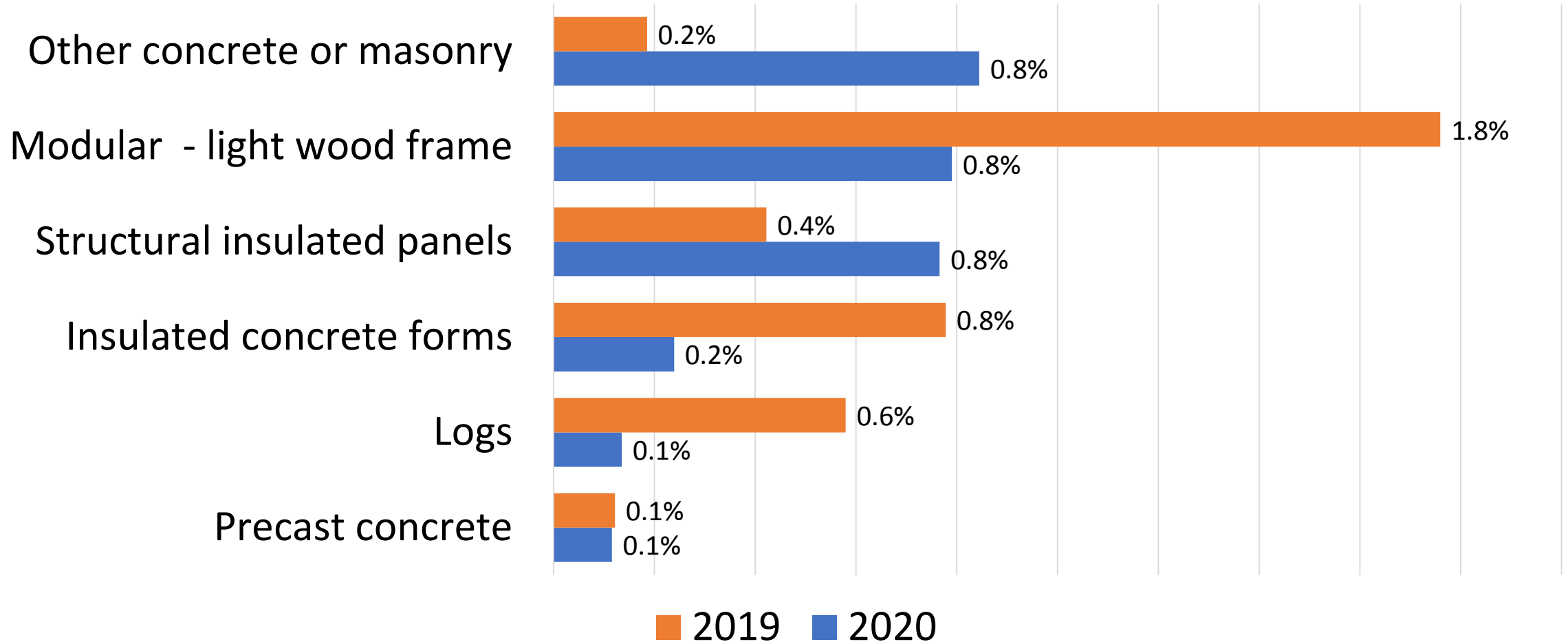
*(Percent of Installed SF, Top 5)*



Source: *Builder Practices Reports, Home Innovation Research Labs*

# New SFD Home Wall Construction Method

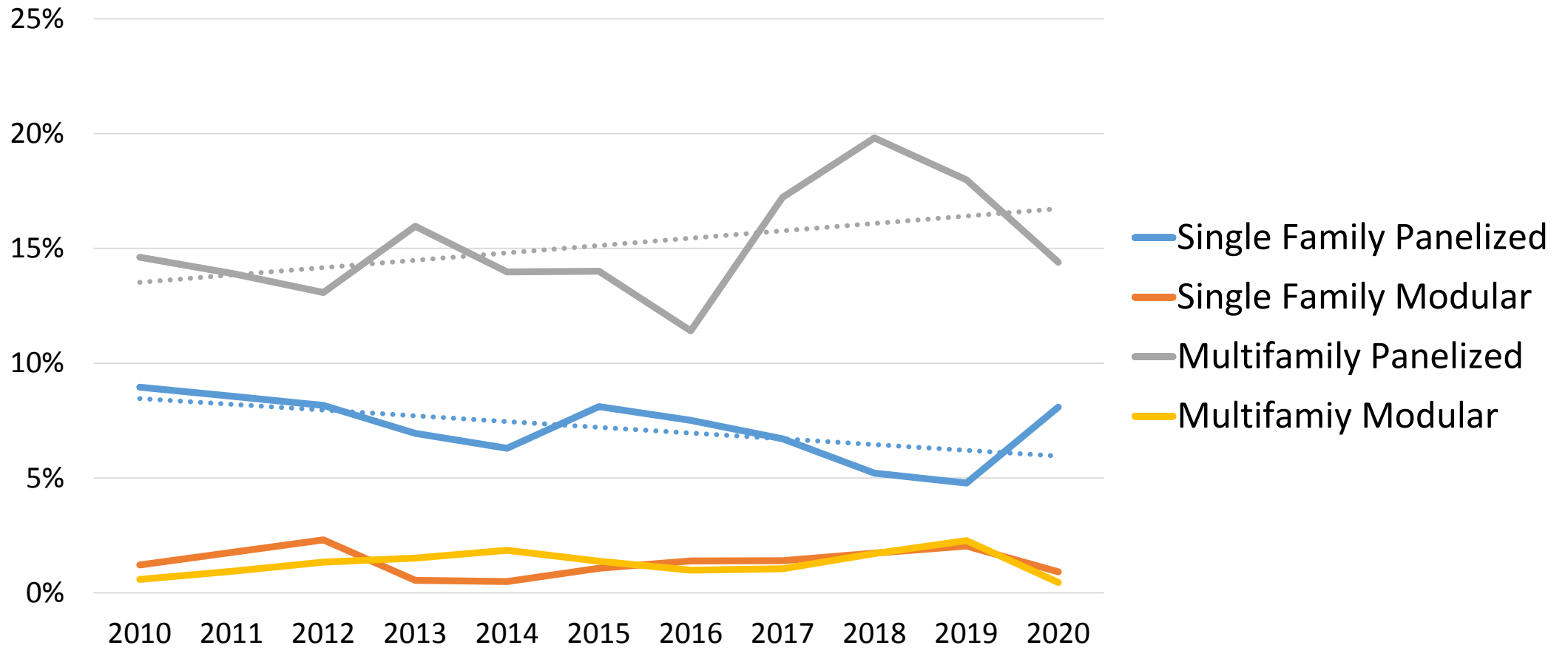
*(Percent of Installed SF, #6 through #11)*



Source: *Builder Practices Reports, Home Innovation Research Labs*

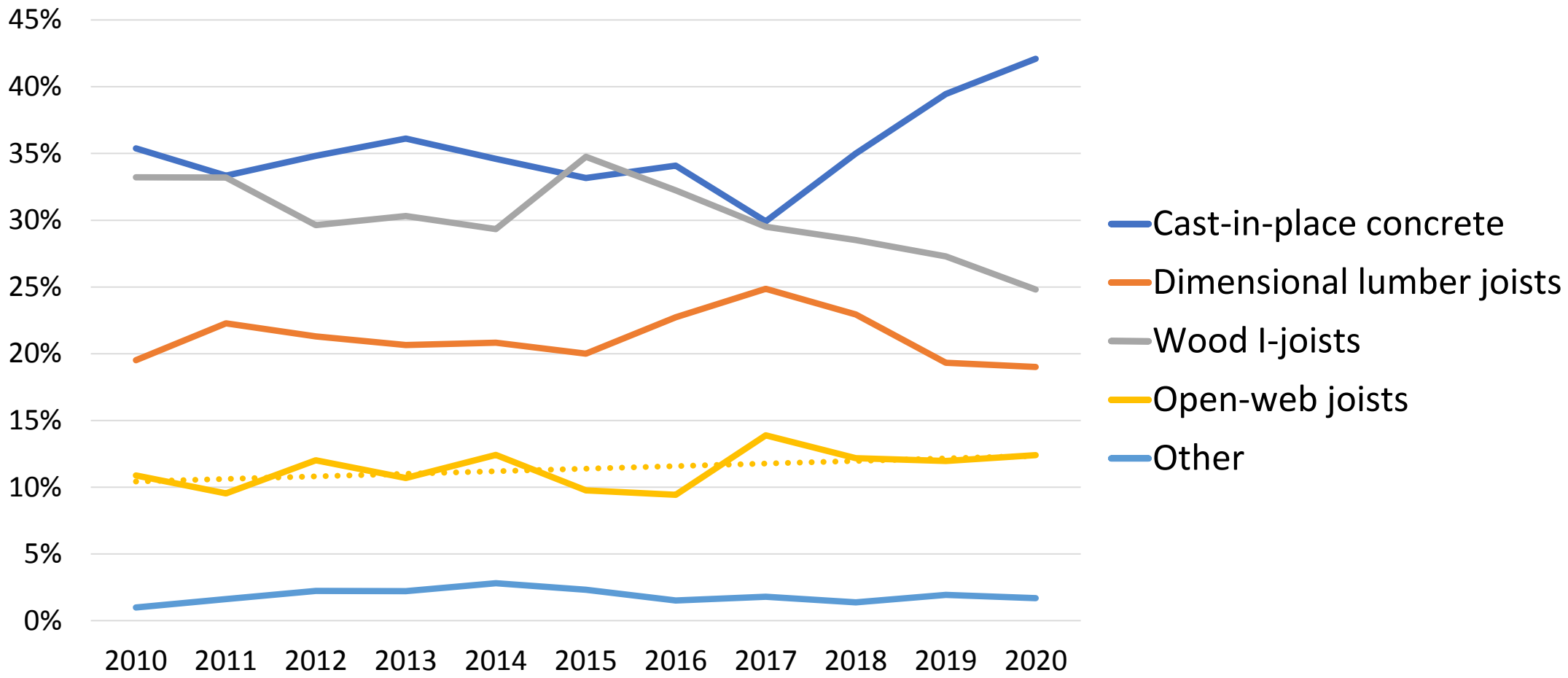
# Panelized Walls & Modular Shares in New Homes

*(Percent of light-frame construction)*



Source: *Builder Practices Reports, Home Innovation Research Labs*

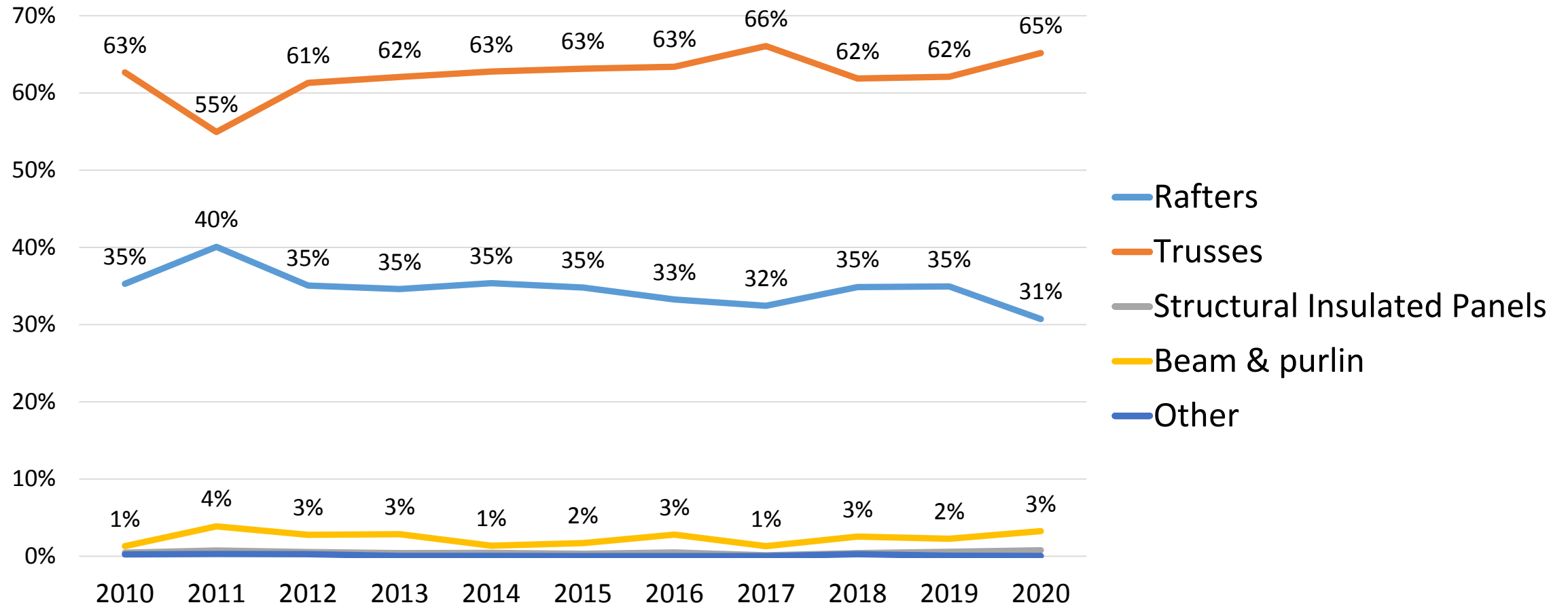
# Structural Floor Materials in New U.S. SFD Homes



Source: Builder Practices Reports, Home Innovation Research Labs

# Roof Structures in New SFD Homes

*(Truss/Rafter Shares Distributed)*



Source: *Builder Practices Reports, Home Innovation Research Labs*



# ***What Keeps Builders from More Fully Adopting Offsite Construction?*** (August 2019 Survey, Open-End Responses)

- "What we're doing now works fine"
- Unaware of options
- Need reliable local suppliers
- Costs more than site-built
- Workforce unwilling / unable to change
- Takes too much time and effort to change
- Offsite requires more pre-planning
- Local logistics issues or shipping
- Negative market perceptions
- Lack of ability for last-minute change

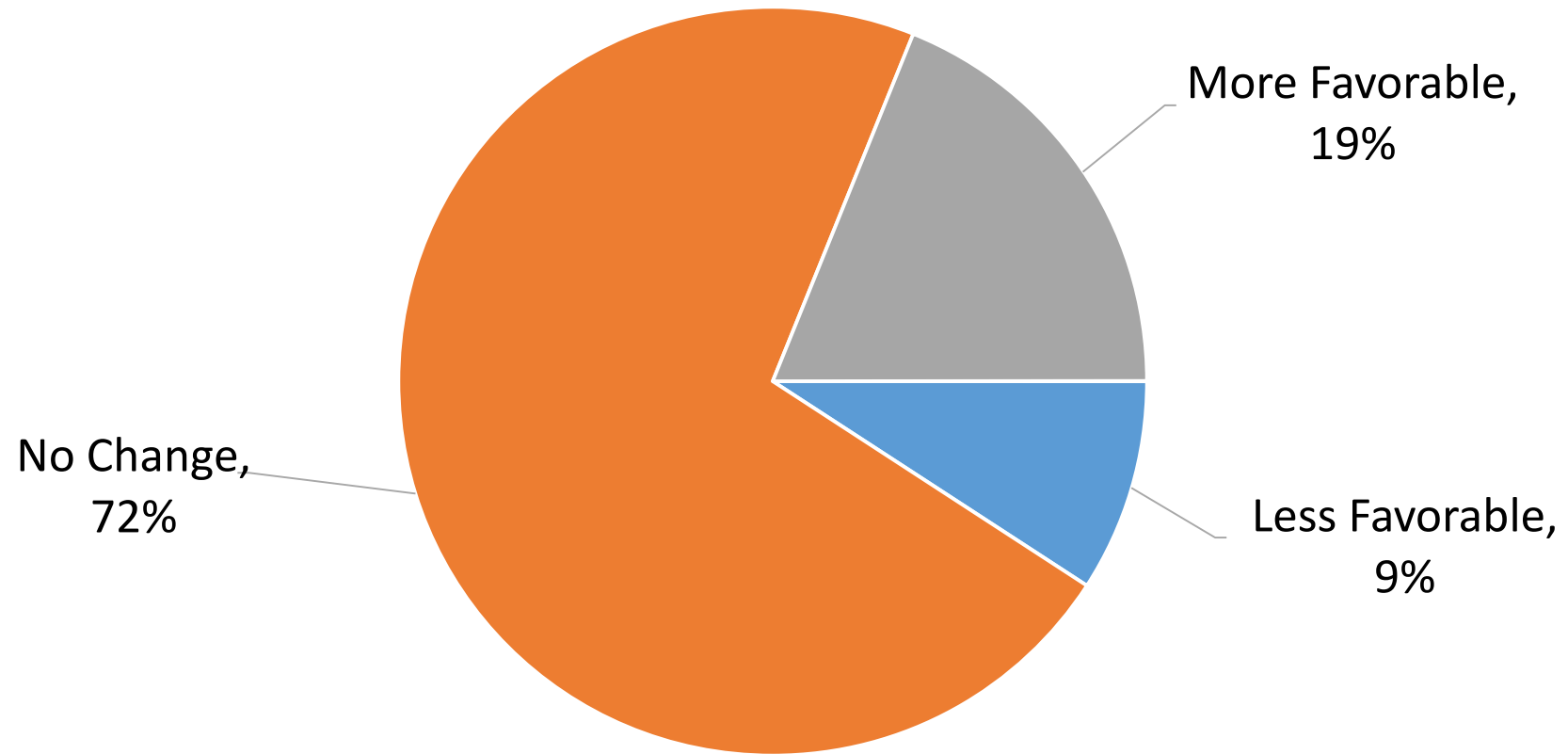


# Impact of COVID-19 on Intent to Use Offsite Technologies (Sept. 2020 Survey)

## Builders were asked:

*"Since COVID-19, how have your views changed towards adopting or continuing to use offsite building methods such as those mentioned above? Are they more favorable? Less favorable? Please explain why."*

# Impact of COVID-19 on Builder Views Towards Offsite Construction



Source: Home Innovation Research Labs

# Rationale Behind Builder Responses

## More Favorable

- Easier to maintain social distancing with fewer crews, smaller crews
- Reduce construction cycle time
- Consolidated purchases means fewer vendors to interact with
- Solves supply chain disruptions
- May solve materials cost volatility
- Building has become more complex since COVID-19—offsite offers simplification

## Less Favorable

- Things are very uncertain—adopting offsite could increase uncertainty
- Some feel offsite methods give them less control over the construction process
- Less flexibility to respond to issues in this crisis
- Jobsites less likely to be "shut down" than factories



# Builder Anticipation of Using Offsite Practice in 5 Years

(September 2020, n=265)

	<b>Did not use and don't plan to use</b>	<b>Plan to use it less often</b>	<b>Plan to use it about the same</b>	<b>Plan to use it more often</b>
Roof Trusses	7%	4%	66%	23%
Open-Wall Panels	51%	4%	28%	16%
Turnkey Framing	37%	7%	41%	16%
Pre-Cut Framing Package	50%	7%	28%	16%
Pre-assembled Floors	60%	4%	23%	13%
Modular	62%	4%	22%	11%
Closed Wall Panels	64%	4%	23%	10%
Precast Concrete	61%	6%	25%	8%
Manufactured Homes	79%	5%	13%	4%

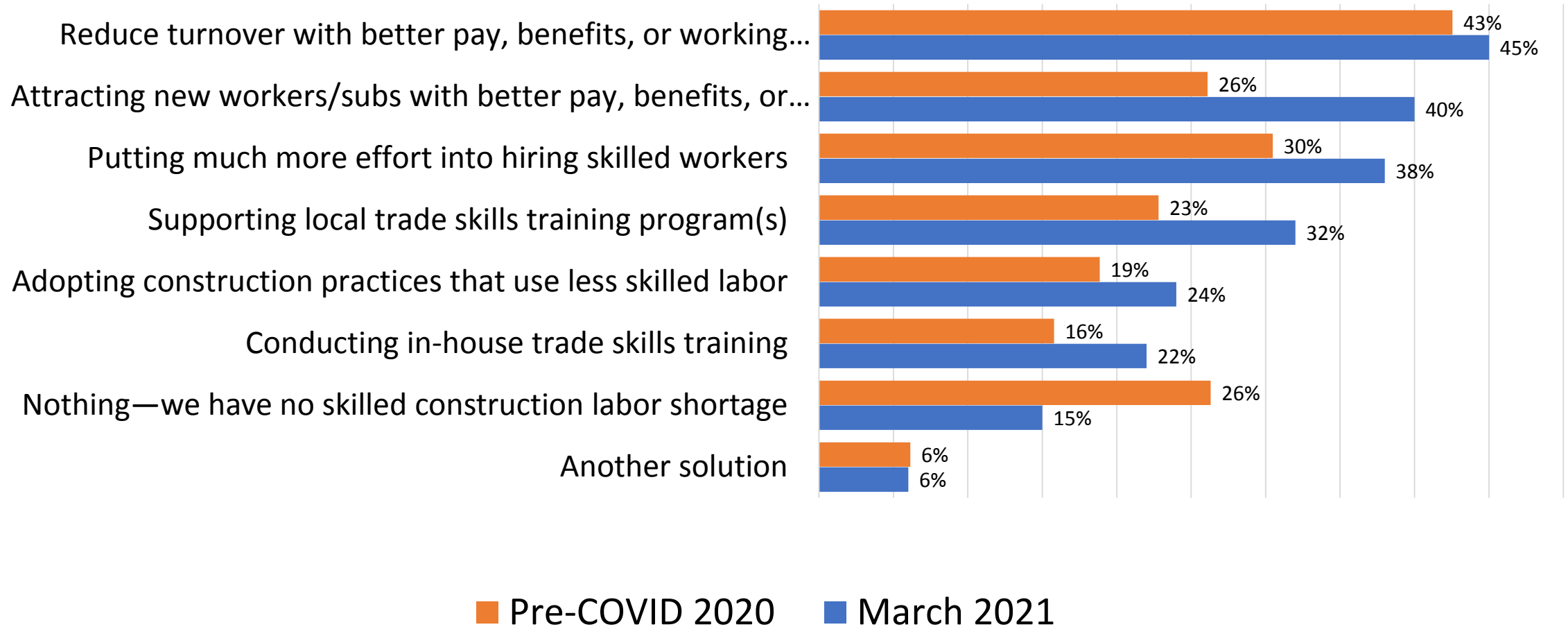
Source: Home Innovation Research Labs

## Builders Anticipating Using More Often in 5 Years

	August 2019	September 2020
Roof Trusses	15%	23%
Factory-Built Open Wall Panels	9%	16%
Turn-Key Framing	7%	16%
Pre-Cut Framing Package	12%	16%
Panelized, Pre-Assembled Floors	7%	13%
Modular	7%	11%
Factory-Built Closed Wall Panels	9%	10%
Precast Concrete	7%	8%
Manufactured (HUD-Code)	1%	4%

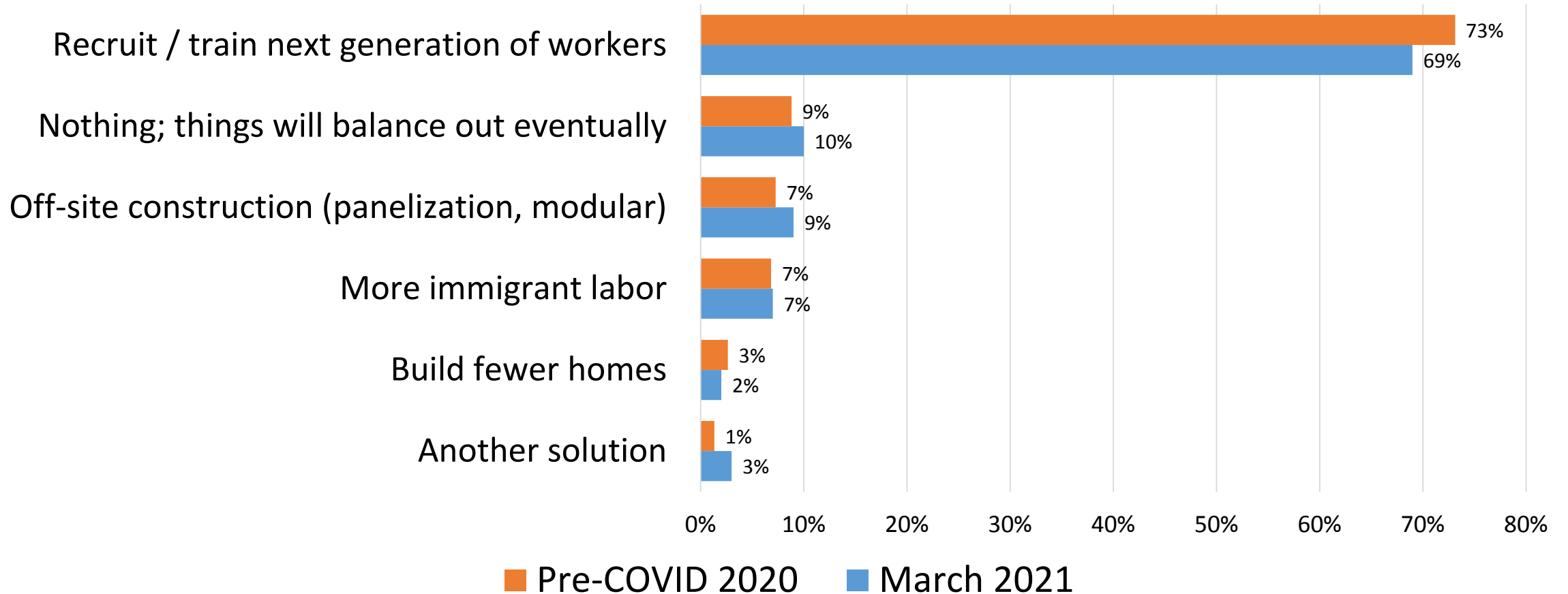
Source: Home Innovation Research Labs

# "What has your company done to lessen the impact of the skilled construction labor shortage on your operations?"



Source: Home Innovation Research Labs

# "What do you think is the best long-term solution to reduce the impact of skilled construction labor shortages?"



Source: Home Innovation Research Labs



# DIY Share of Remodeling Grew During Pandemic

	2019	2020	% Point Growth
Outdoor Structures (planters, benches, pergolas, arbors)	33%	54%	20.6%
Interior Doors	37%	52%	14.0%
Closet & Garage Storage Systems	58%	72%	14.0%
Bathroom Accessories	43%	54%	11.0%
Exterior Doors	35%	45%	10.4%
Appliances	49%	58%	9.2%
Plumbing Fixtures	35%	43%	7.6%
Faucets	44%	51%	6.6%
Interior Finishes and Paint	62%	68%	6.0%
Siding	28%	34%	5.8%
Flooring	34%	39%	5.7%
Outdoor Structures (porches, decks, and patios)	37%	42%	5.6%
Deck Porch Railings	39%	44%	5.4%
Wall, Floor or Roof Sheathing	29%	34%	4.7%
Floor, Wall, or Roof Structures	31%	36%	4.6%

Source: Consumer Practices Reports, Home Innovation Research Labs

# DIY Share of Remodeling Grew During Pandemic

	2019	2020	% Point Growth
Storm Doors	24%	29%	4.3%
Cabinets	32%	36%	4.3%
Insulation	37%	42%	4.3%
Fences & Landscape Walls	40%	43%	3.6%
Patio Doors	32%	35%	2.9%
Fireplaces & Stoves	42%	44%	2.5%
Generators	23%	25%	1.8%
Plumbing Piping	29%	31%	1.6%
Soffit Fascia Trim	24%	25%	1.0%
Garage Doors	19%	20%	0.9%
Water Heaters	27%	28%	0.7%
Windows	16%	16%	0.4%
Roofing	12%	11%	-0.5%
Roofing Underlayment	12%	11%	-0.5%
Countertops	25%	25%	-0.7%

Source: Consumer Practices Reports, Home Innovation Research Labs

# Percentage Point Change 2020 vs. 2018

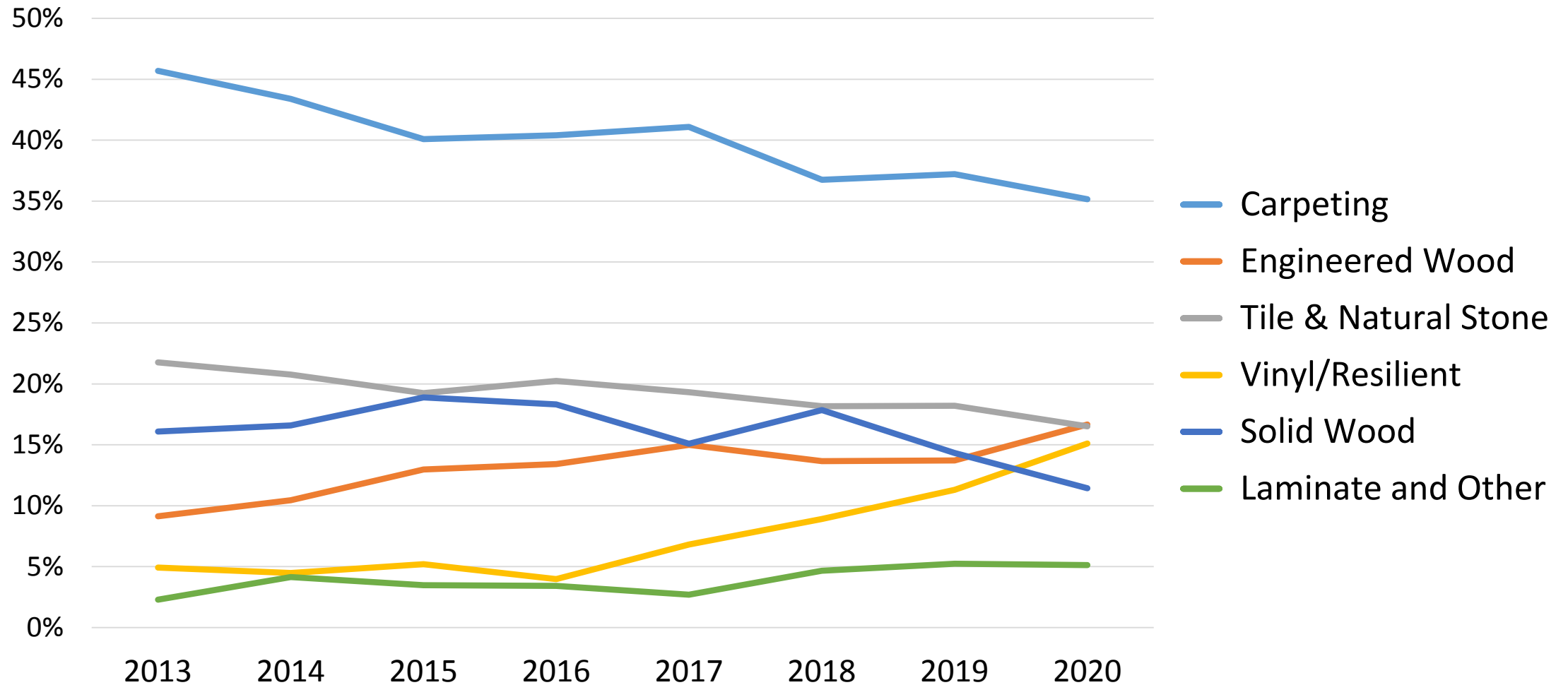
## Remodeling Materials Place of Purchase

	Appliances	Flooring	Decking	Roofing	Countertops	Average Gain in 5 Categories
Lowe's	2.4%	5.0%	3.9%	3.8%	2.6%	3.6%
Another type of supplier	2.3%	5.8%	3.0%	0.4%	3.7%	3.1%
Menards	1.2%	2.8%	3.3%	0.8%	1.3%	1.9%
Home Depot	1.0%	4.8%	2.1%	-1.3%	2.1%	1.8%
Other home improvement store	1.8%	2.2%	0.6%	0.3%	3.3%	1.6%
Online retailer not listed above	0.6%	0.0%	-0.1%	-0.1%	0.2%	0.1%
Discount store	-0.7%	-0.4%	-0.6%	0.0%	0.1%	-0.3%
Not sure / contractor supplied it	0.2%	-5.5%	-0.5%	1.0%	0.1%	-1.0%
Lumber yard	-0.7%	-2.0%	-1.5%	0.2%	-0.9%	-1.0%
Hardware store	-6.6%	-2.9%	-4.2%	-1.8%	-1.8%	-3.5%
Specialty store or distributor	-3.9%	-11.1%	-6.8%	-3.2%	-12.2%	-7.4%

Source: Consumer Practices Reports, Home Innovation Research Labs

# New Single Family Detached (SFD) Home Flooring Market

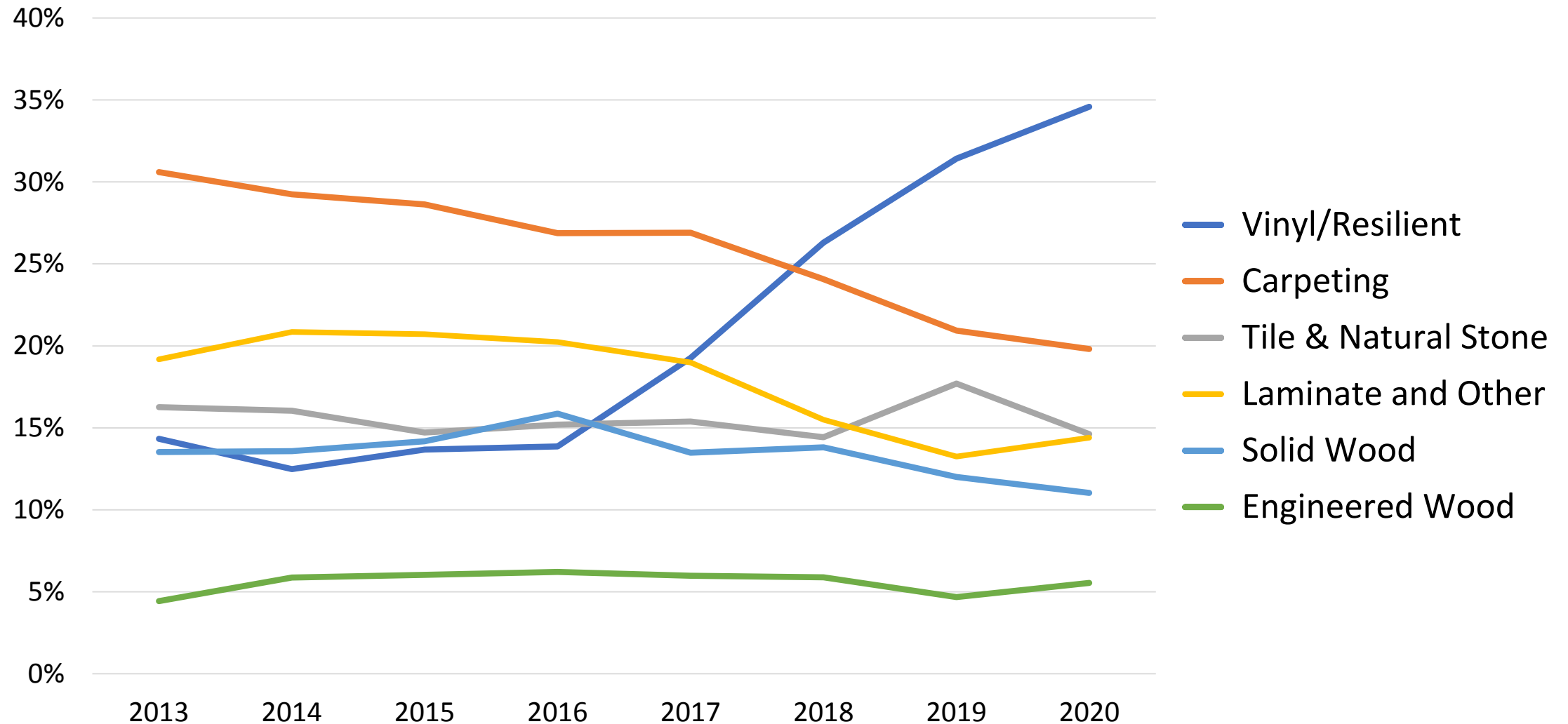
## *Resilient & Engineered Wood Up*



Source: Builder Practices Reports, Home Innovation Research Labs

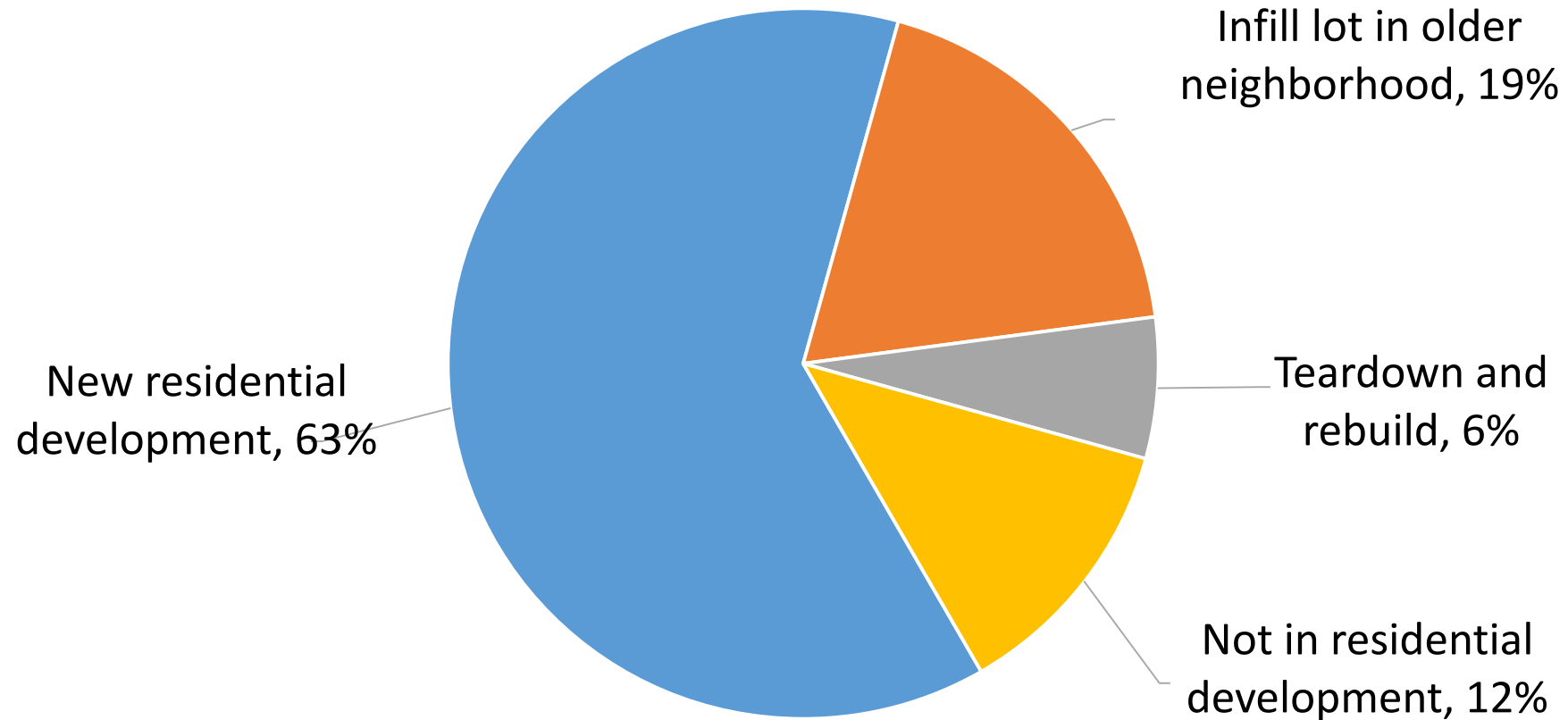
# Home Replacement Flooring Market

*Technology Advances + DIY Rebound Supports Resilient Growth*



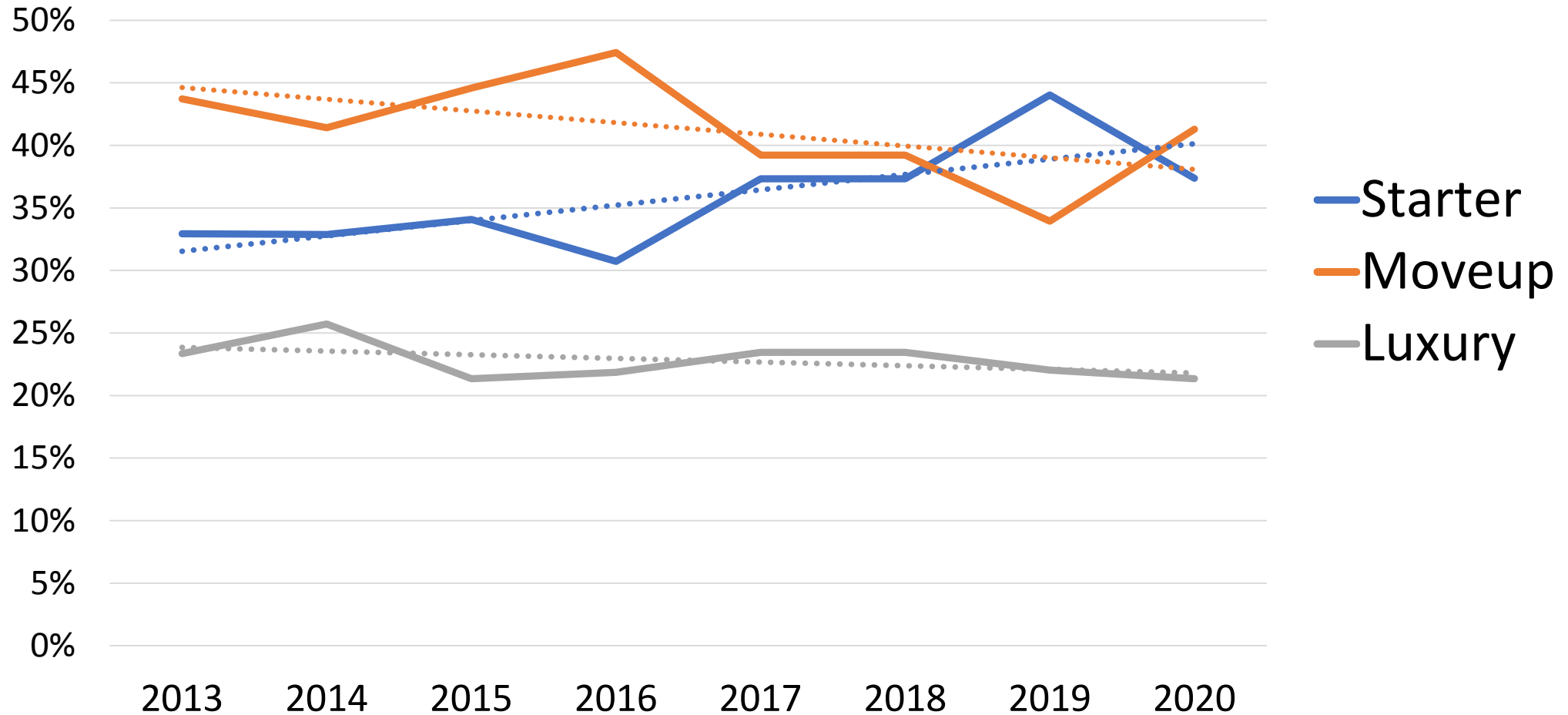
Source: Consumer Practices Reports, Home Innovation Research Labs

# Residential Development Type for New SFD Homes, 2020



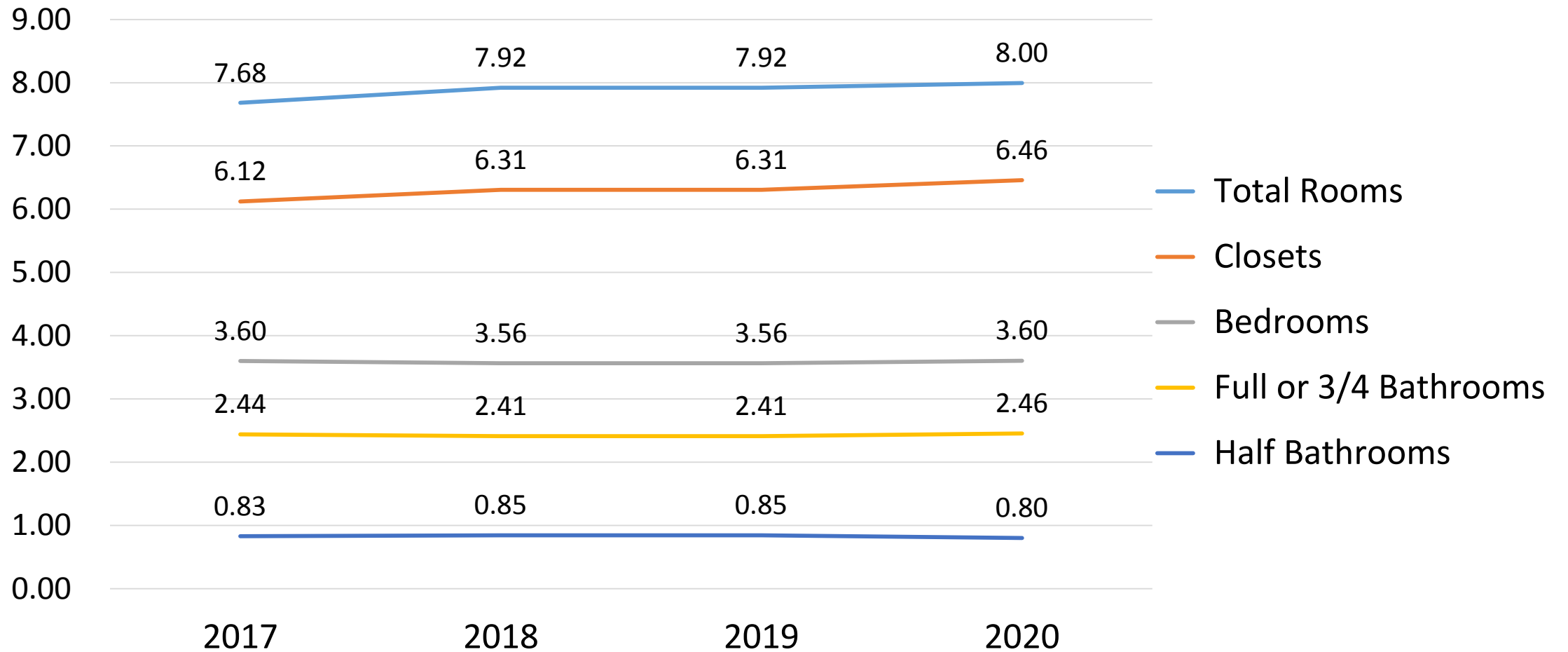
Source: *Builder Practices Reports, Home Innovation Research Labs*

# Shares of New SFD Homes Built by Price-Point



Source: *Builder Practices Reports, Home Innovation Research Labs*

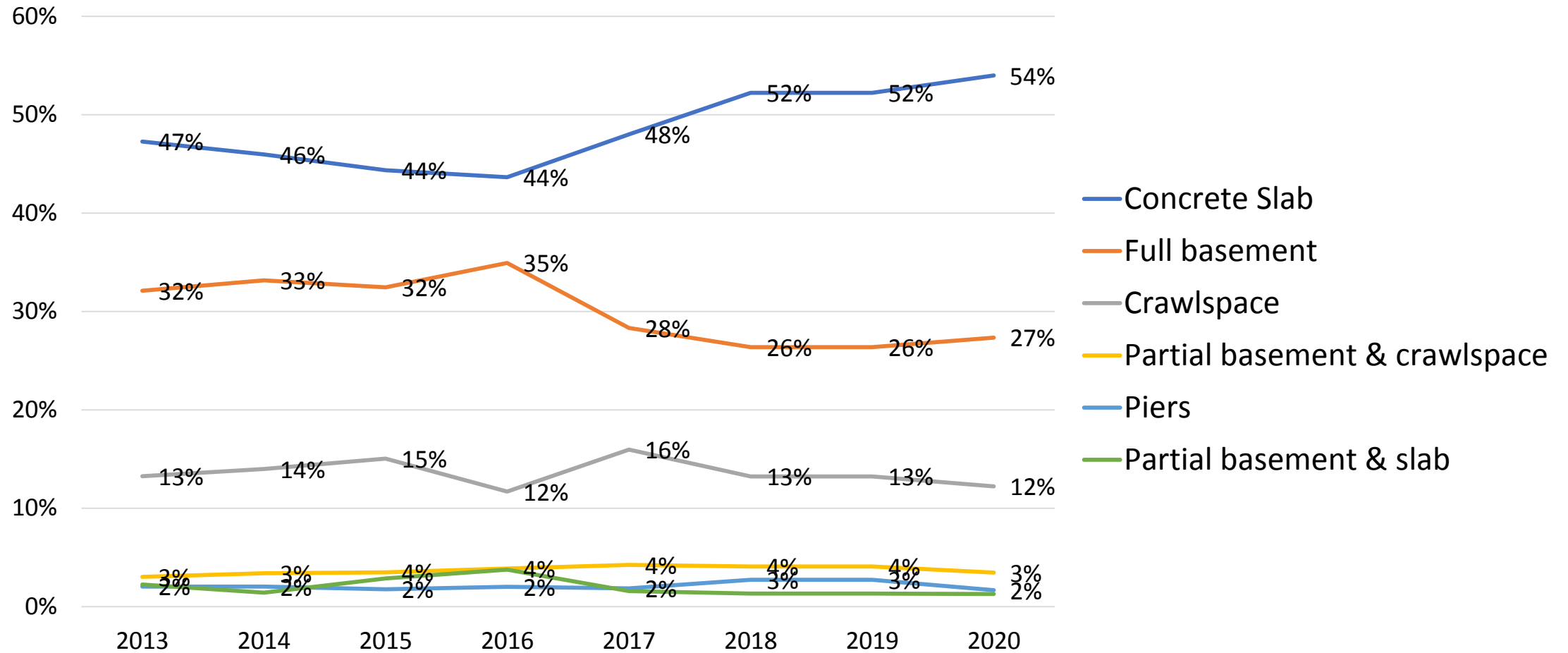
# Average Rooms per New SFD Homes



Source: *Builder Practices Reports, Home Innovation Research Labs*

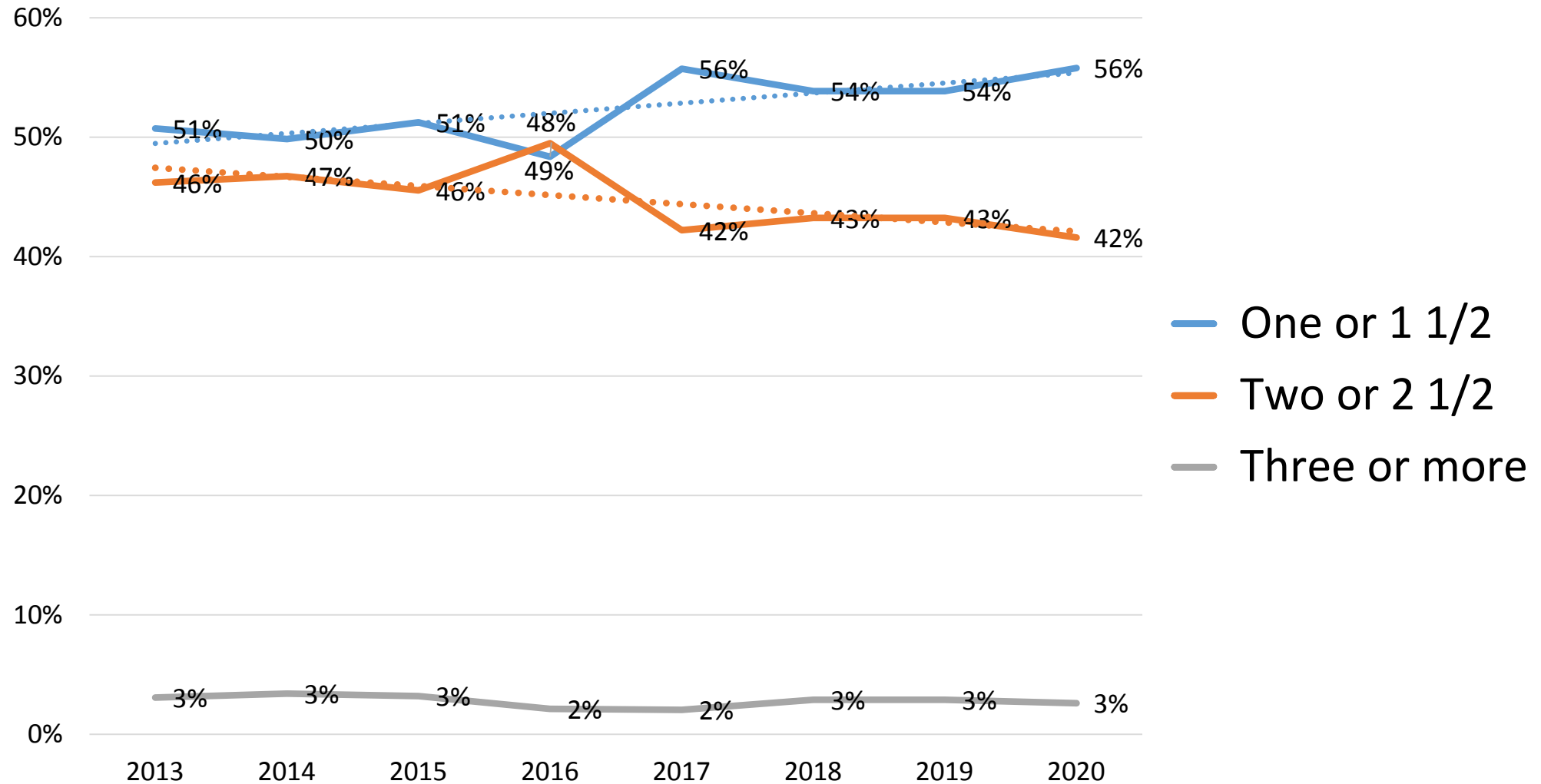


# Foundation Types in New SFD Homes



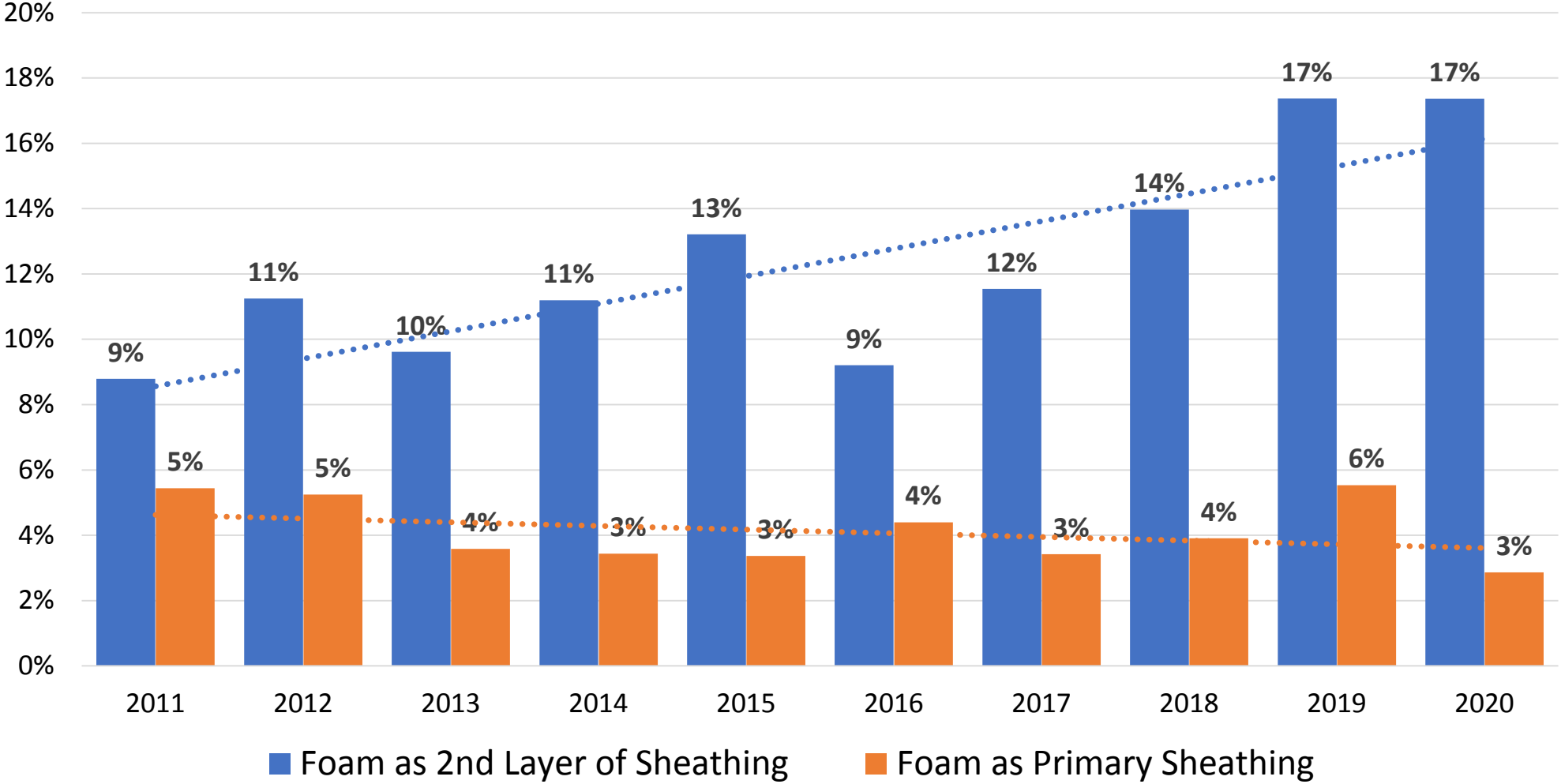
Source: *Builder Practices Reports, Home Innovation Research Labs*

# Number of Stories in New SFD Homes



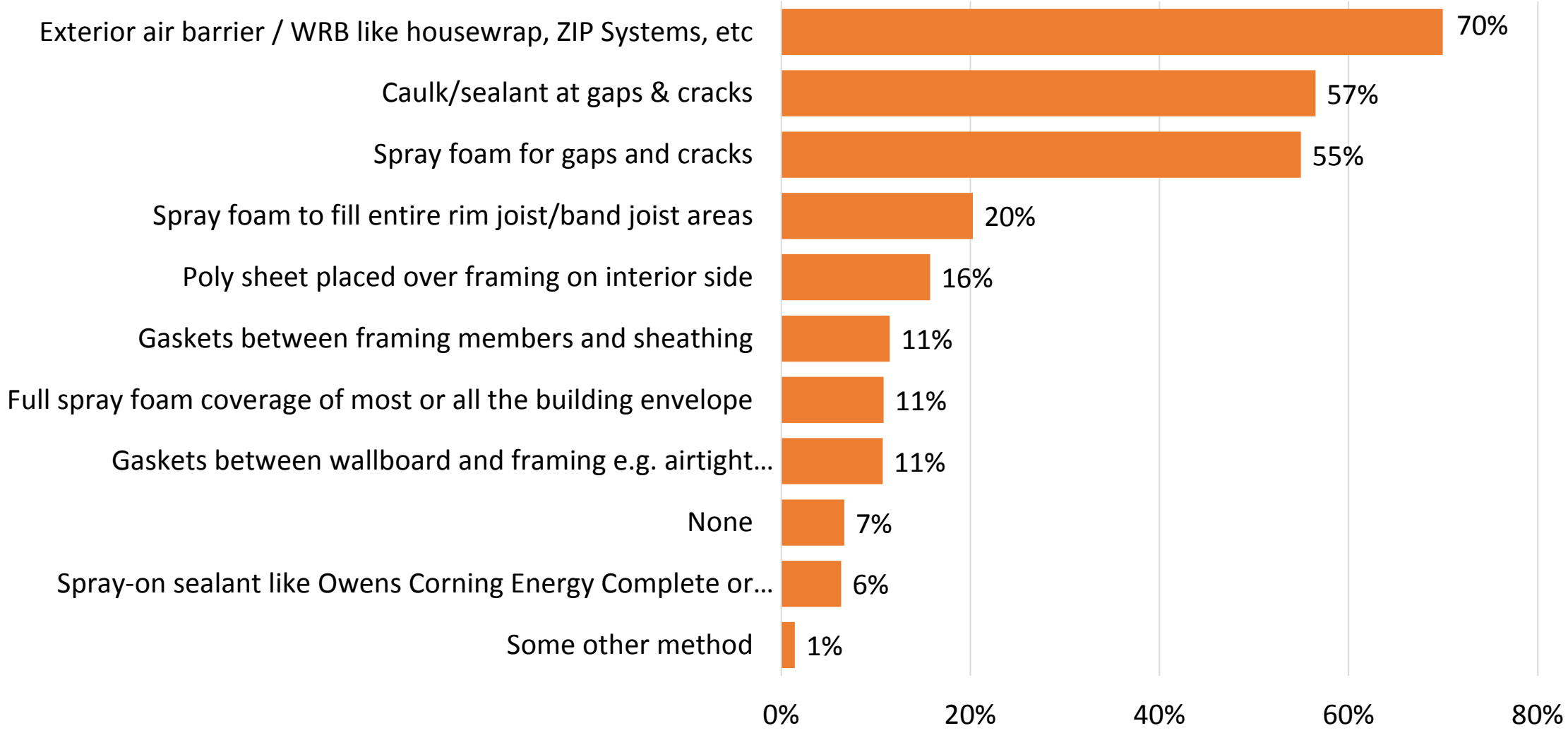
Source: *Builder Practices Reports, Home Innovation Research Labs*

# Foam Exterior Wall Sheathing in New SFD Homes



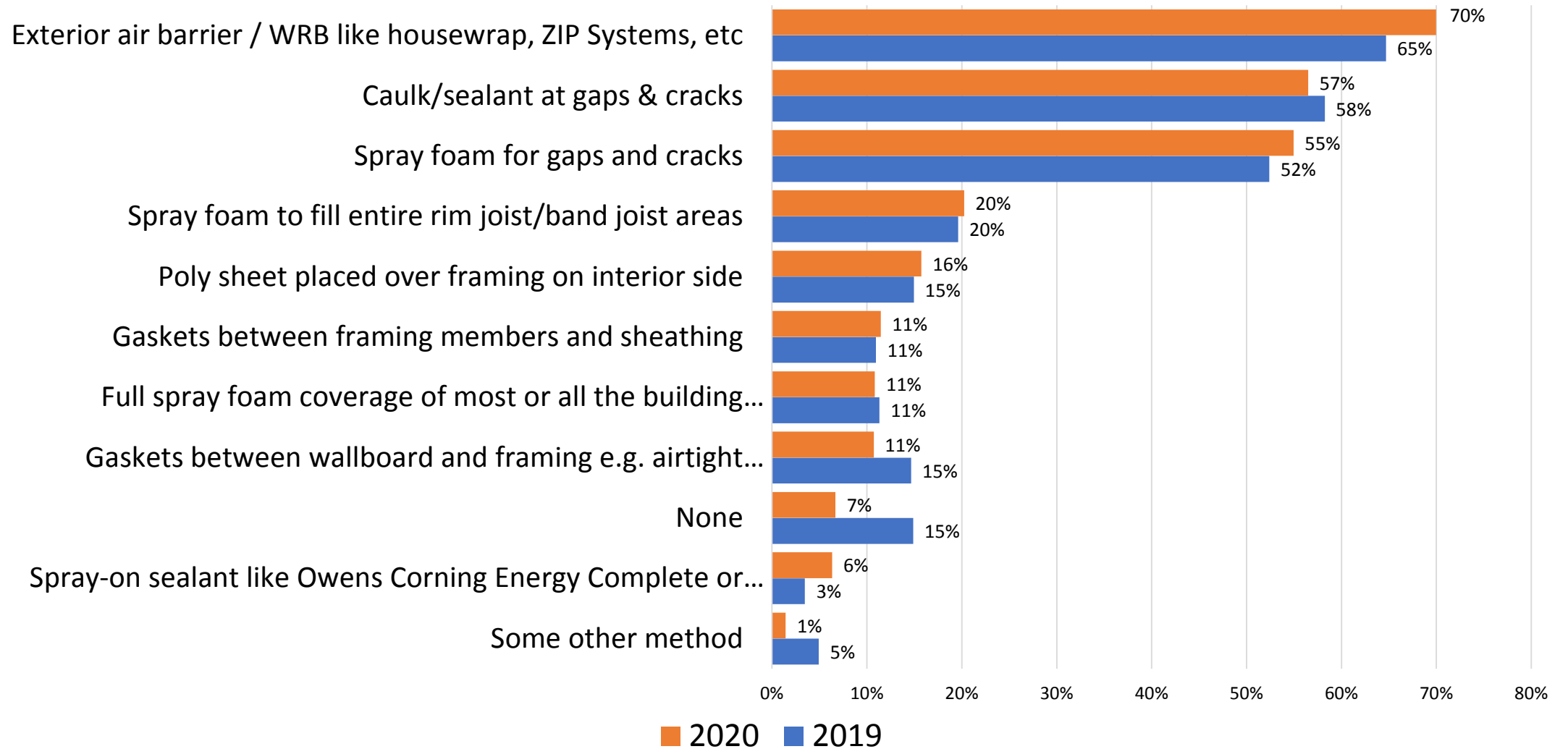
Source: Builder Practices Reports, Home Innovation Research Labs

# Shares of U.S. New Homes with Air Sealing Strategies, 2020

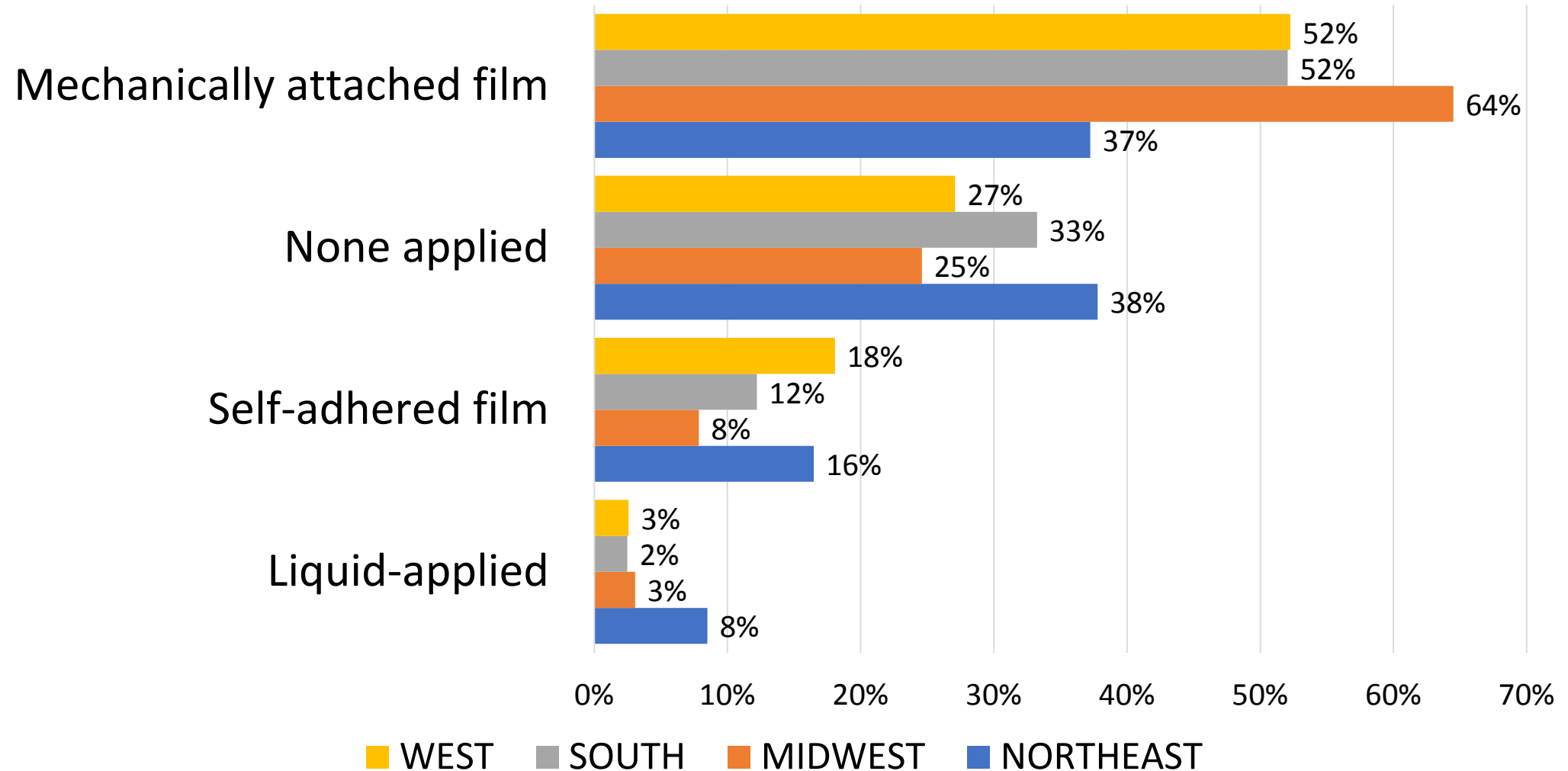


Source: *Builder Practices Reports, Home Innovation Research Labs*

# Comparison of Air Sealing Strategies in New Homes 2019 vs. 2020



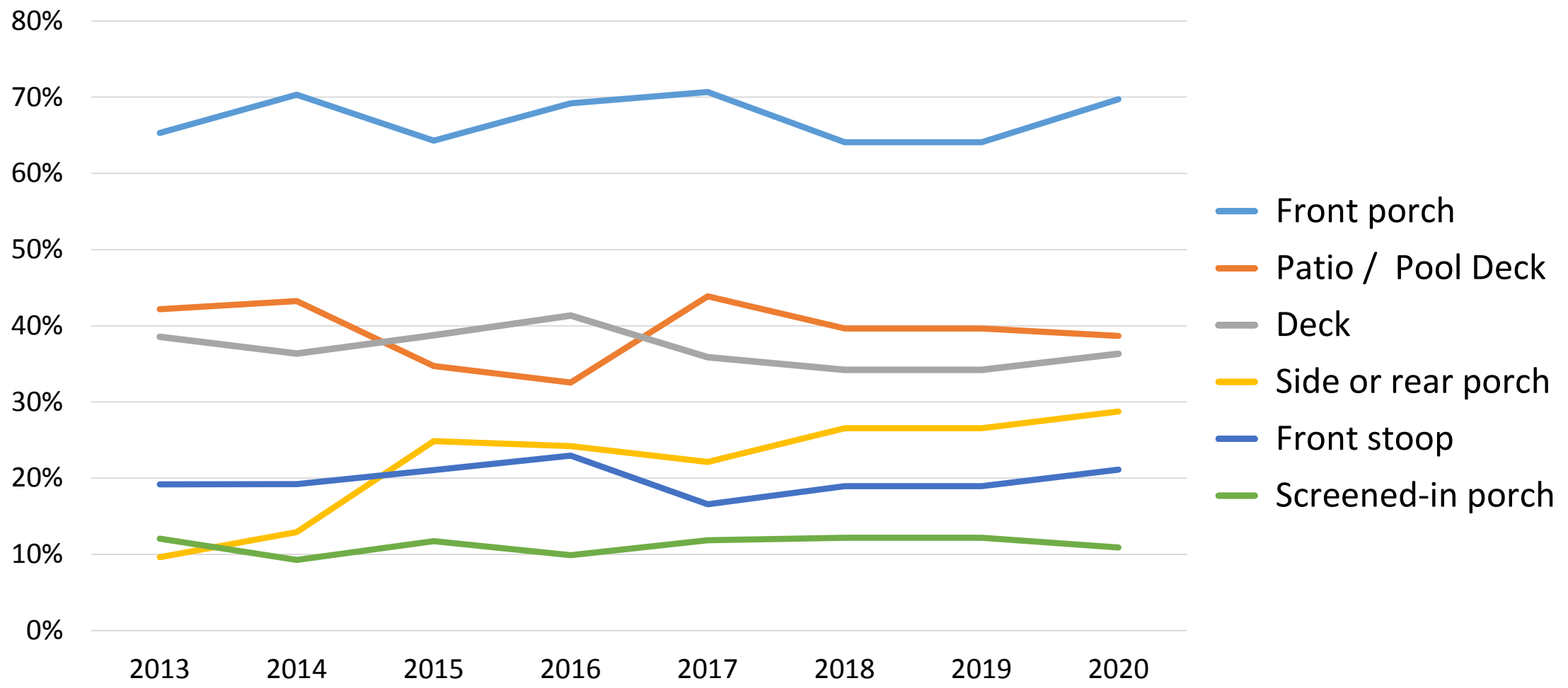
# Housewrap Type by Census Region in New Homes, 2020



Source: *Builder Practices Reports, Home Innovation Research Labs*

# Shares of New SFD Homes with Outdoor Features

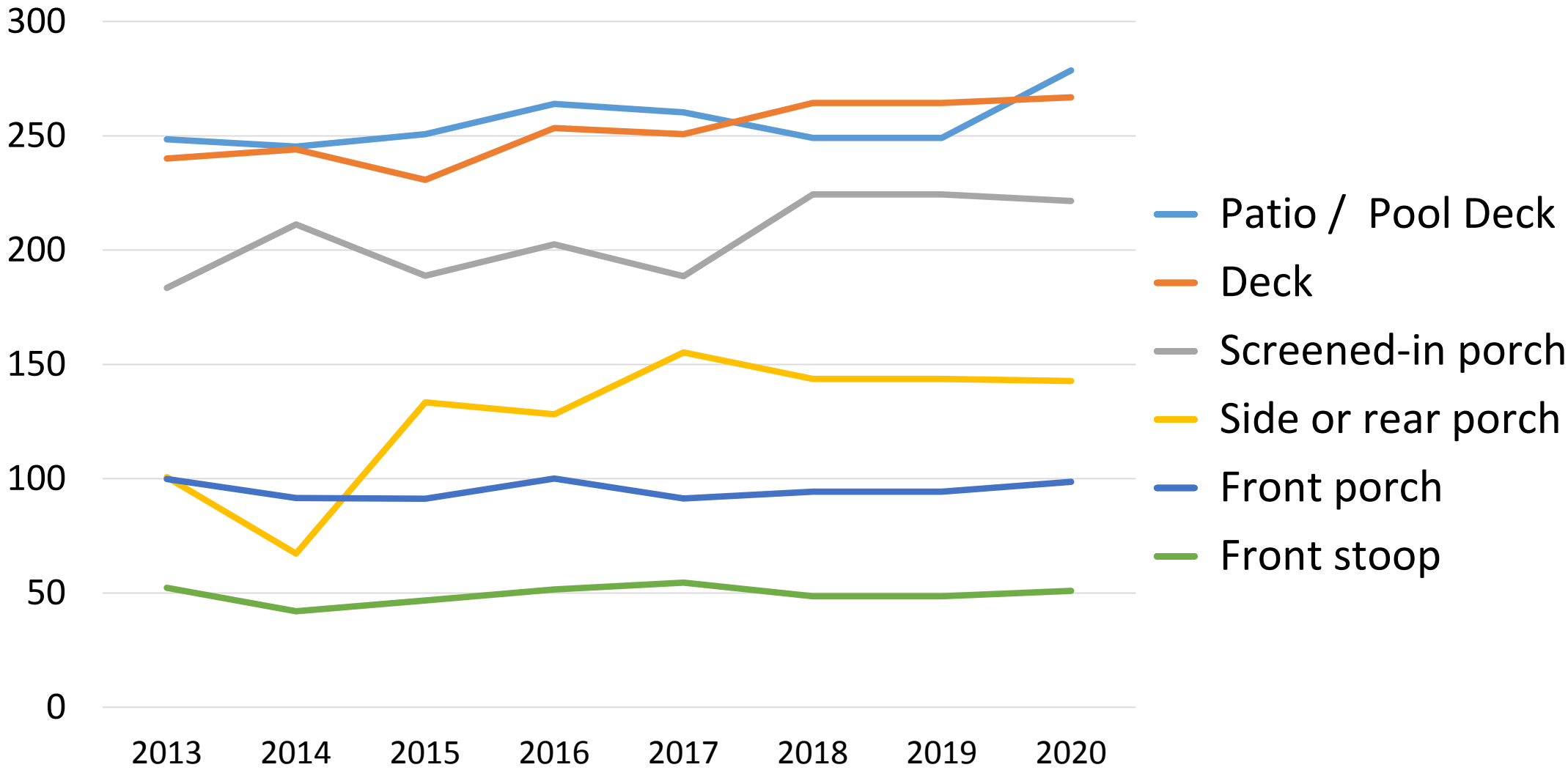
## *Side & Rear Porch Triples*



Source: *Builder Practices Reports, Home Innovation Research Labs*

# Average Size of Outdoor Structures in New SFD Homes

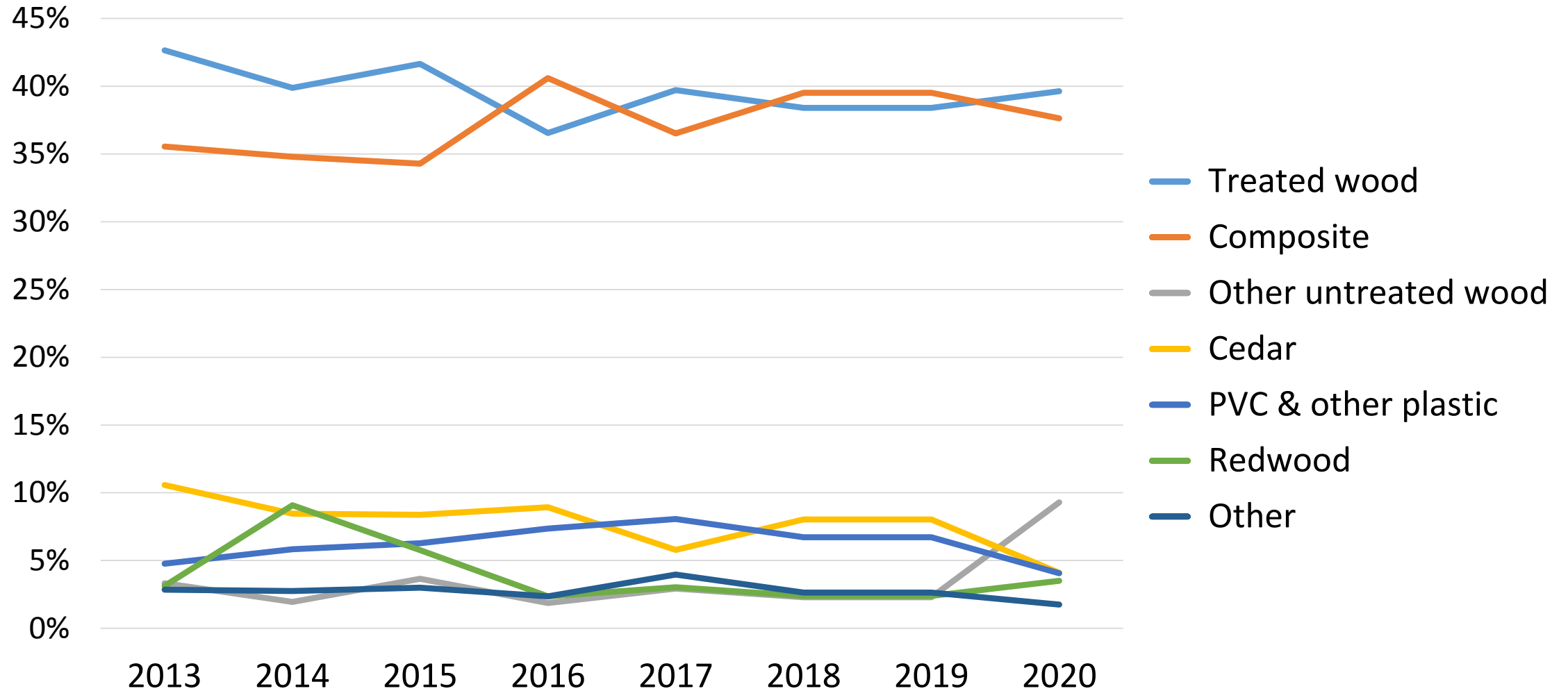
*(square feet of floor area)*



Source: *Builder Practices Reports, Home Innovation Research Labs*

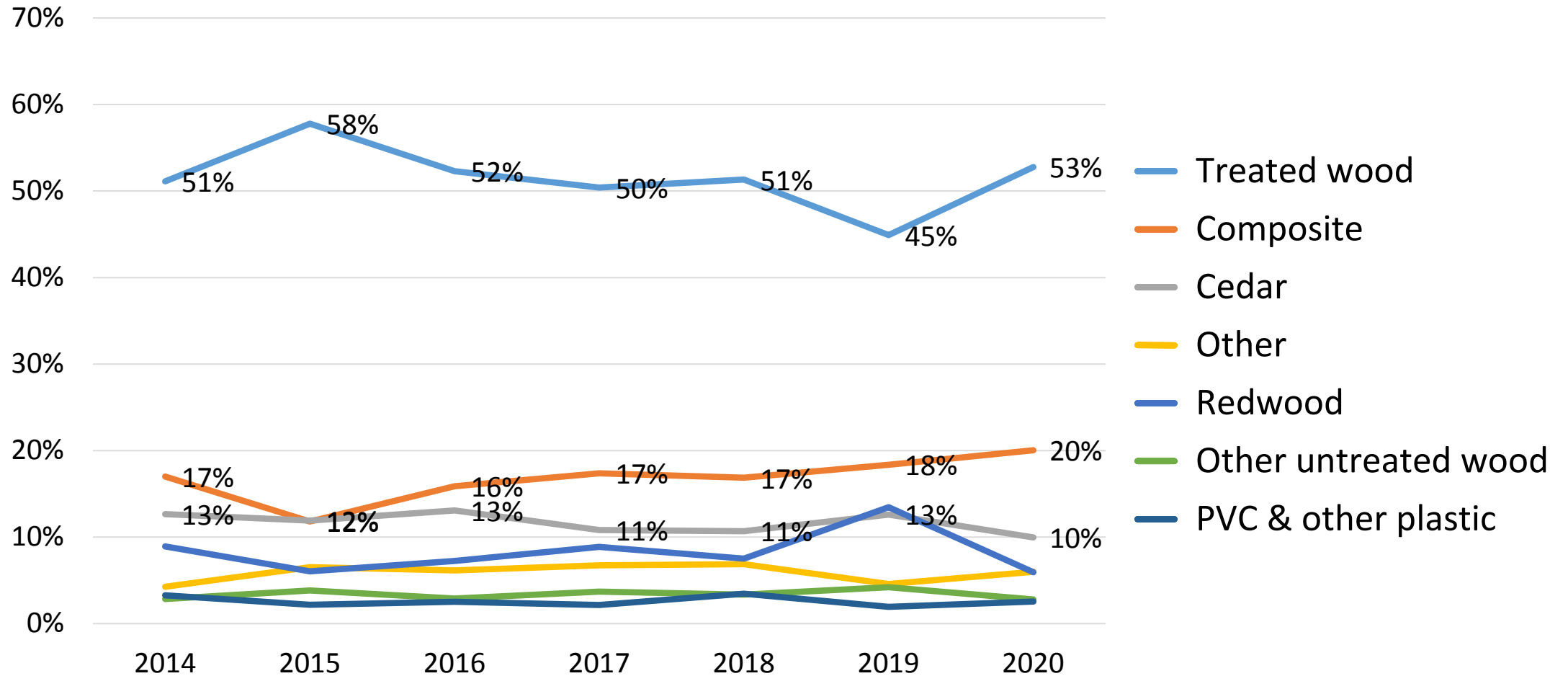


# Share of Deck Surfacing in New SFD Homes



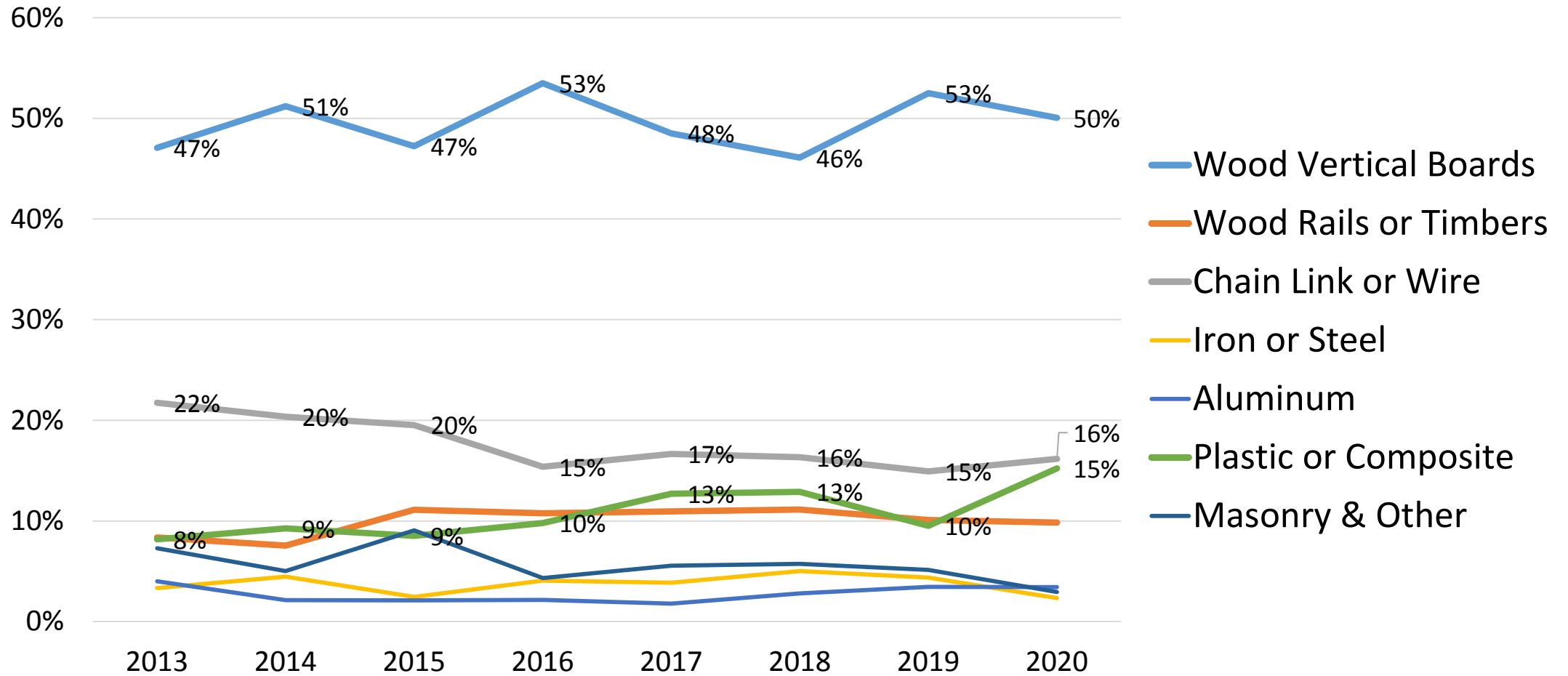
Source: *Builder Practices Reports, Home Innovation Research Labs*

# Deck & Raised Porch Surfacing in Home Remodeling



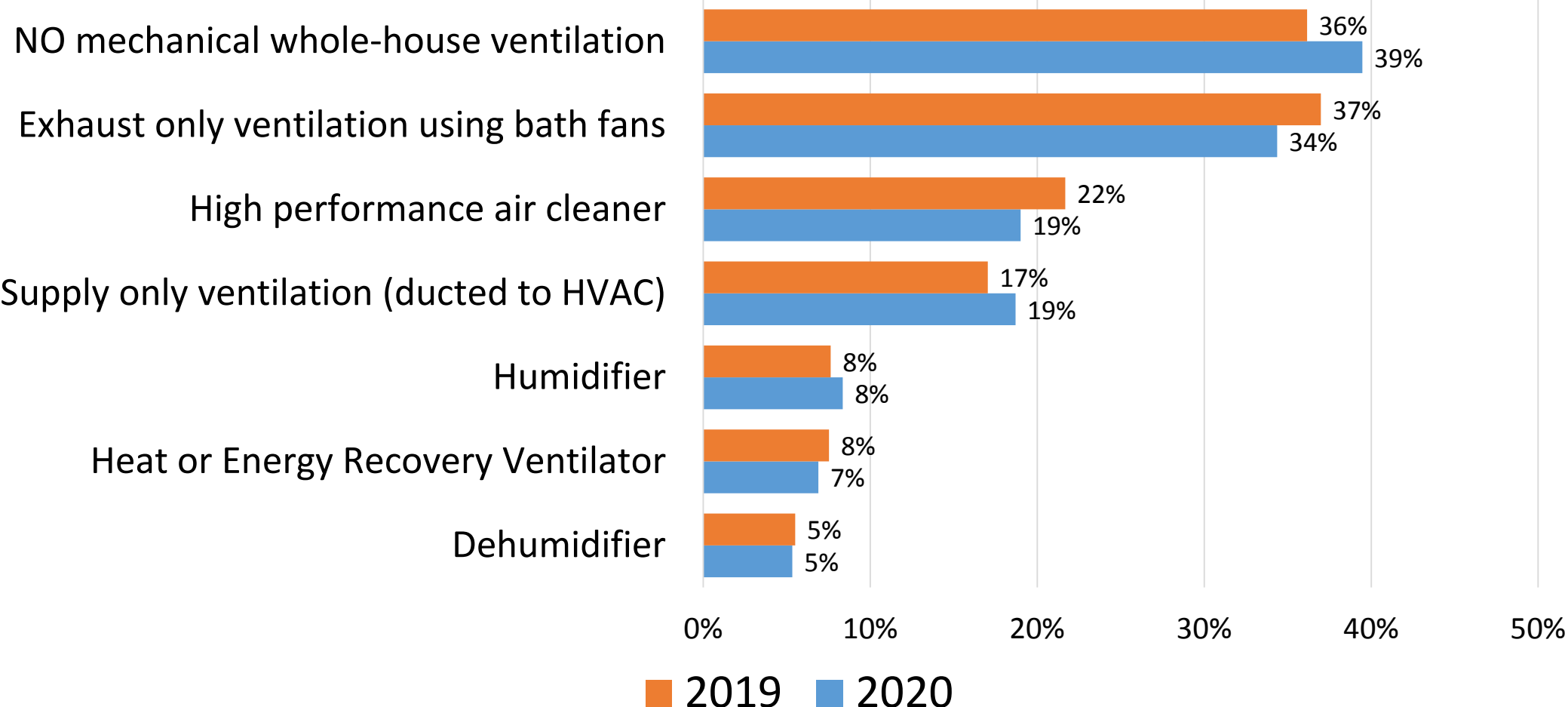
Source: Consumer Practices Reports, Home Innovation Research Labs

# Fence Materials Usage in Home Remodeling



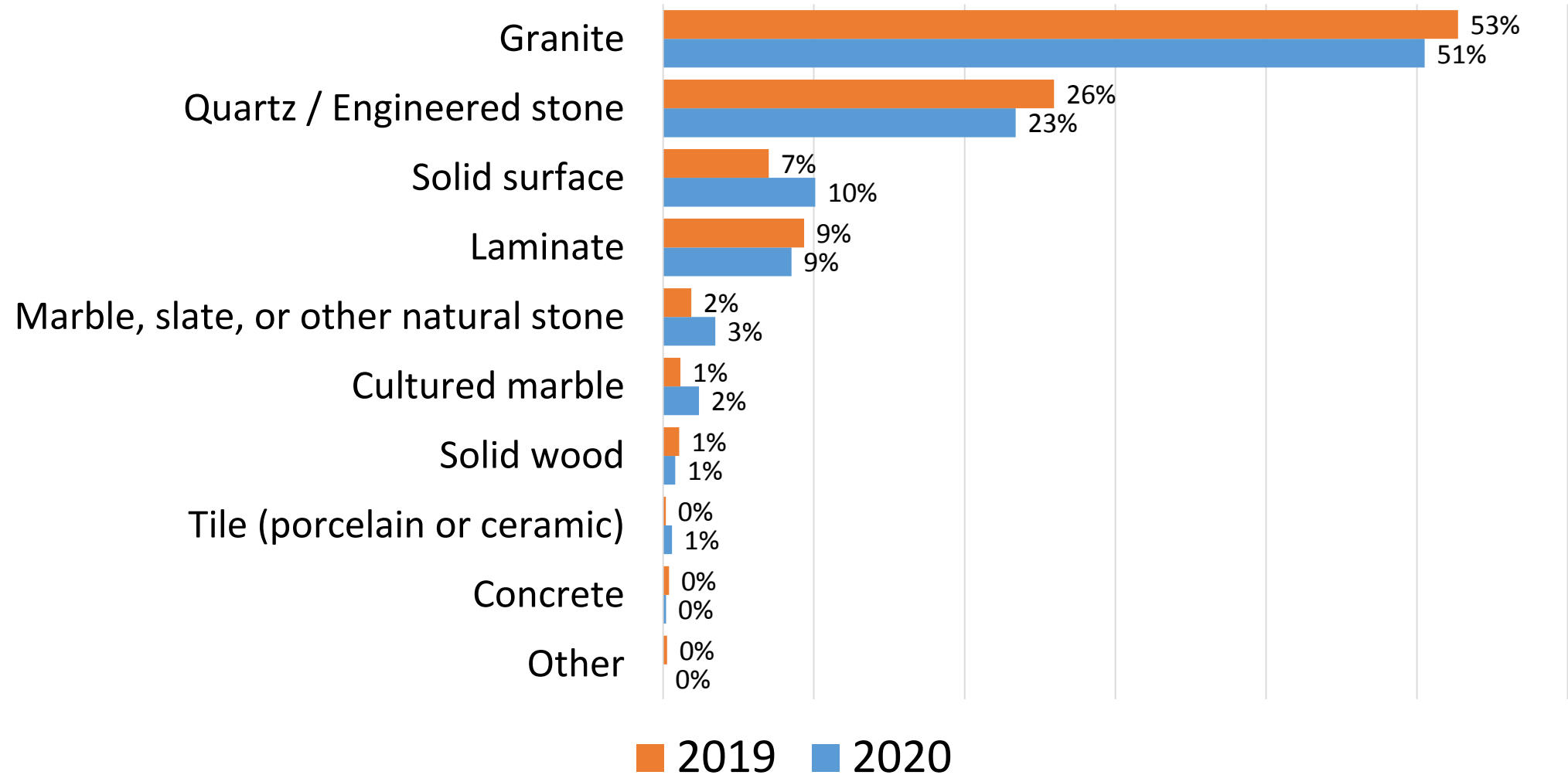
Source: Consumer Practices Reports, Home Innovation Research Labs

# Air Quality Features of New SFD Homes



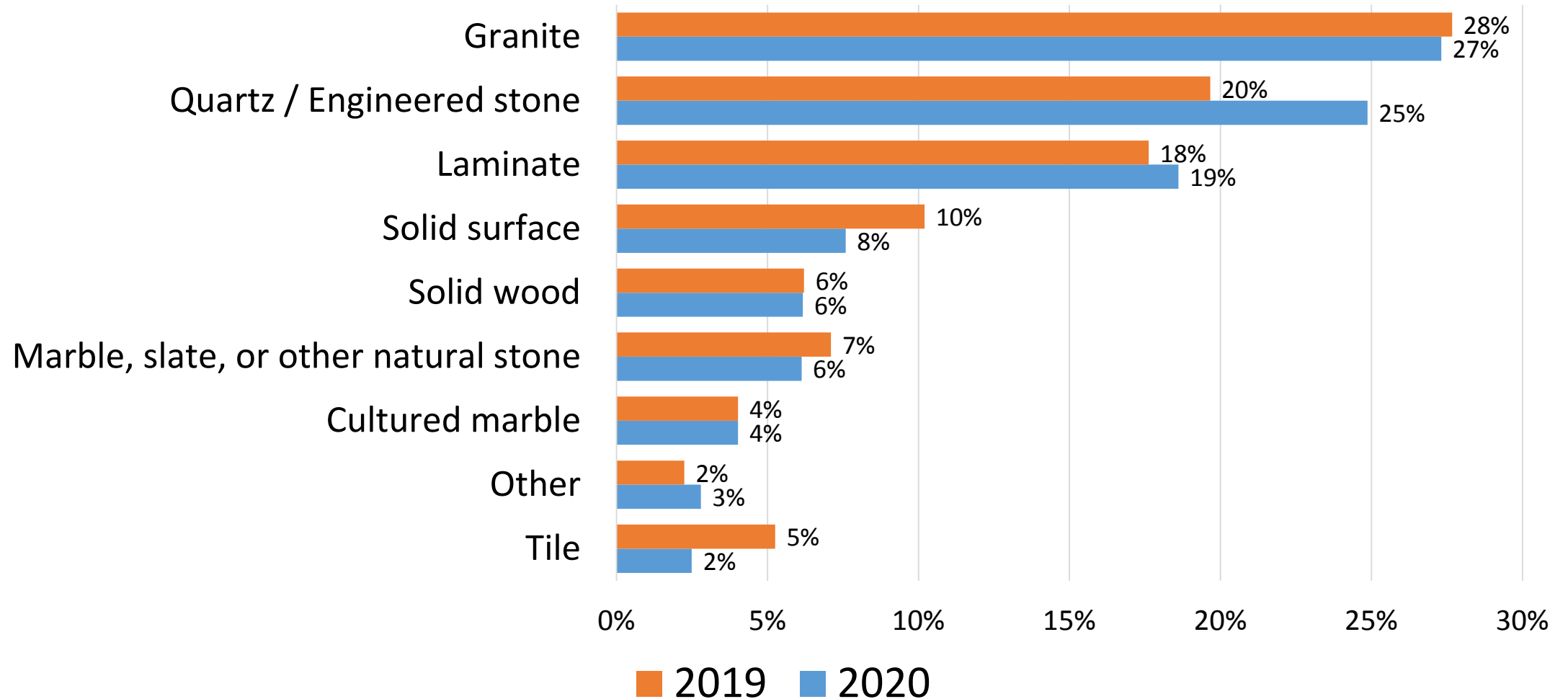
Source: *Builder Practices Reports, Home Innovation Research Labs*

# New SFD Home Shares of Kitchen Countertops



Source: *Builder Practices Reports, Home Innovation Research Labs*

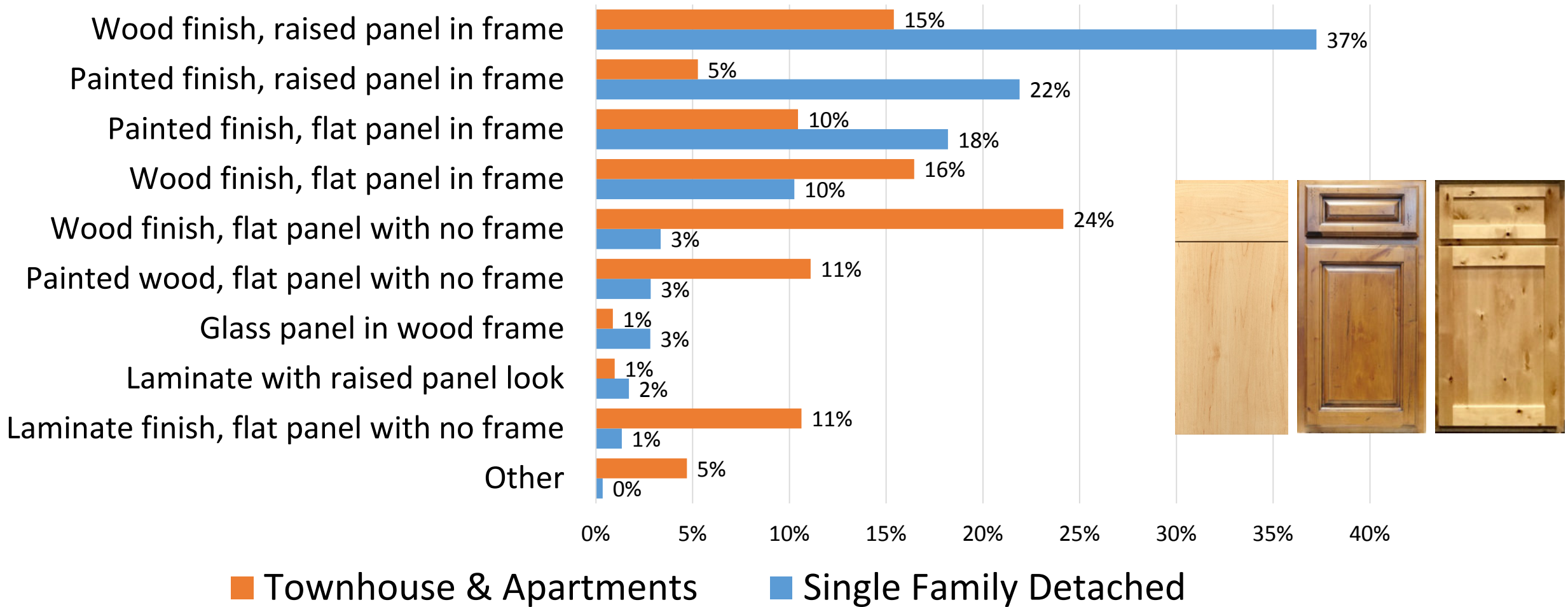
# Shares of Kitchen Countertops in Home Remodeling



Source: Consumer Practices Reports, Home Innovation Research Labs

# Kitchen Cabinet Door Style & Finish

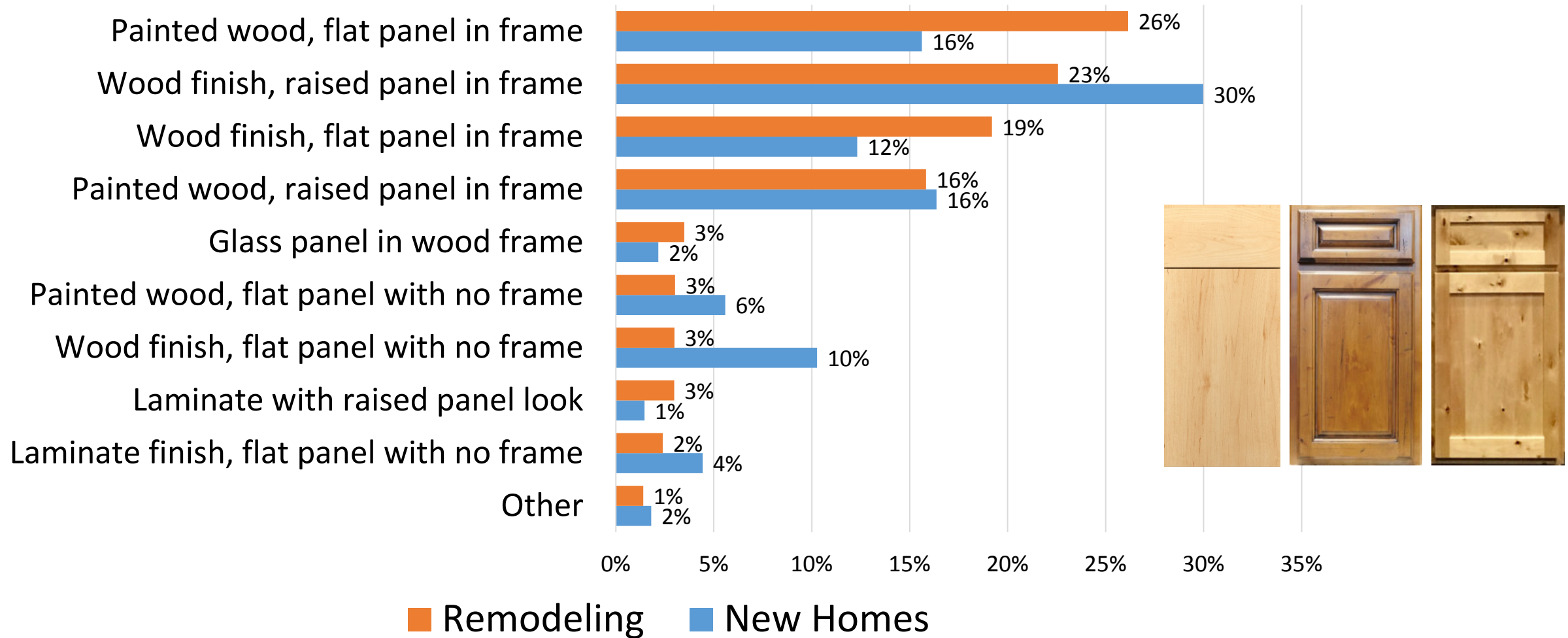
*Single vs. Multifamily, 2020*



Source: *Builder Practices Reports, Home Innovation Research Labs*

# Kitchen Cabinet Door Style & Finish

*Home Remodeling vs. New Homes, 2020*



Source: *Builder Practices Reports, Home Innovation Research Labs*



# Conclusions

- Building materials market is resilient, but buyers are looking for substitutes
  - Change has systemic, and sometimes unpredictable impacts
- Markets will continue to favor easy-to-install, pre-fabricated, and pre-finished materials as skilled labor shortage continues
- Widespread adoption of offsite construction adoption will follow the addition of new capacity—
  - Open wall and floor panels will be first, closed wall panels systems will follow
  - Modular will likely become more popular in some lower density, mid- and lower-tier markets
  - I'm betting on local solutions to fill gap in offsite supply—operators will need capital investment, software, production equipment, and a labor supply to grow
- Energy efficiency will continue to drive better performing homes
- Millennial buyers will continue to favor engineered materials and modern designs



# Home Innovation

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**THANK YOU!**

**Michael Luzier, President & CEO**

**301.249.4000 | [mluzier@homeinnovation.com](mailto:mluzier@homeinnovation.com)**

**Ed Hudson, Director, Marketing Research**

**301.430.6194 | [ehudson@homeinnovation.com](mailto:ehudson@homeinnovation.com)**