AIA

Sustainability in the Architect's Journey to Specification 2020

In collaboration with: B2B International a gyro company · Deltek · constructconnect

PUBLISHED SEPTEMBER 2020 BY
The American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006
aia.org

ISBN: xxxx

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DESIGN AND PRODUCTION
The American Institute of Architects

Contents

Introduction

For decades, leading architects and architecture firms have embraced environmental stewardship as a crucial factor in their work. The profession has generally believed that we can't overlook the role of the built environment in the earth's ecological state, its impact on human health and well-being, and its resilience in the face of natural or human-made phenomena.

That perspective remains to this day. In fact, the passion with which many architects embrace the principles of sustainability has never been more intense. Most large firms, and many mid-sized and small firms, are leading the way for their clients. Although 80% of architects want to specify more sustainable materials, only one in three feels they are meeting that responsibility today. They're looking for knowledge and information that will help them design for sustainability and performance while communicating the value to clients. Surprisingly, it's not always about the cost.

Similarly, companies that manufacture building products and materials are increasingly focused on sustainability as a driver of innovation in their businesses. It is not just about the ingredients of the materials or their performance factors. Many manufacturers are addressing issues in their supply chains, manufacturing processes, and installation requirements. Those companies have publicly stated commitments to making better products. Yet they have grown frustrated by the perceived lack of commitment by architects or by architects' inability to get buy-in within their firms or from their clients. There is no clear connection between an architect's preference for specifying sustainable materials and manufacturers' intensive research and development.

This is the gap that must close if we want to move the construction industry's sustainability goals forward.

In 2016, AIA embarked on a research strategy to learn about a topic that affects everyone in the construction continuum: What are the habits, preferences, challenges, and needs of architects with respect to the selection and specification of building products and construction materials? This turned into a series of studies, the "Architect's Journey to Specification," that has examined the personas, habits, and considerations of the architects and building product manufacturer stakeholders involved in the product selection process. The 2016 research established a baseline understanding of AIA members' general habits, attitudes, and preferences surrounding the selection and specification of building products and materials. Phase two, conducted in 2018, analyzed the "relationship gap" between architects and building product manufacturer sales and marketing professionals. Phase three, conducted in 2019, benchmarked the profession's views on product selection and specification in comparison to the baseline research from 2016.

Phase four of this initiative uncovers the perspectives of architects on material selection and specification in their practice. This 55-page report takes you through our deep analysis of the architecture profession's views on sustainability in relation to specification:

- What are the practitioner's attitudes when looking at materials through the lens of sustainability?
- What barriers stand in the way?
- What standards are priorities for the architect?
- How do building and/or product certifications impact an architect's thinking about a product?
- What does an architect require to advocate for a product recommendation?
- Who is responsible for that advocacy effort?

There is much to be uncovered in this highly strategic area of architectural practice. We hope this report will help you find new pathways to changing the built environment so that our world can be a healthier, more resilient place to live and work.

Chapter 1
Key learnings & recommendations

Key learning—The sustainability opportunity

Sustainability presents a significant growth opportunity for architects

This report outlines what AIA, manufacturers, and industry partners can do to catalyze the specification of sustainable products. Manufacturers can proactively take advantage of this opportunity by focusing on when architects consider sustainability and understanding how they determine whether a product is sustainable. They can meet key sustainable information needs and optimize their targeting and engagement strategy with architects. Finally, they can address key barriers holding back the specification of sustainable products.

25%–50%

Architects consider around half of the materials they specify "sustainable." 25% say most are.

79%

Architects want to specify more sustainable materials than they do today (97% among millennials).

1 in 3

Architects feel they hold responsibility for sustainability in the built environment along with manufacturers. Yet, only 1 in 3 feel they are meeting their responsibility today. The same number feel manufacturers are.

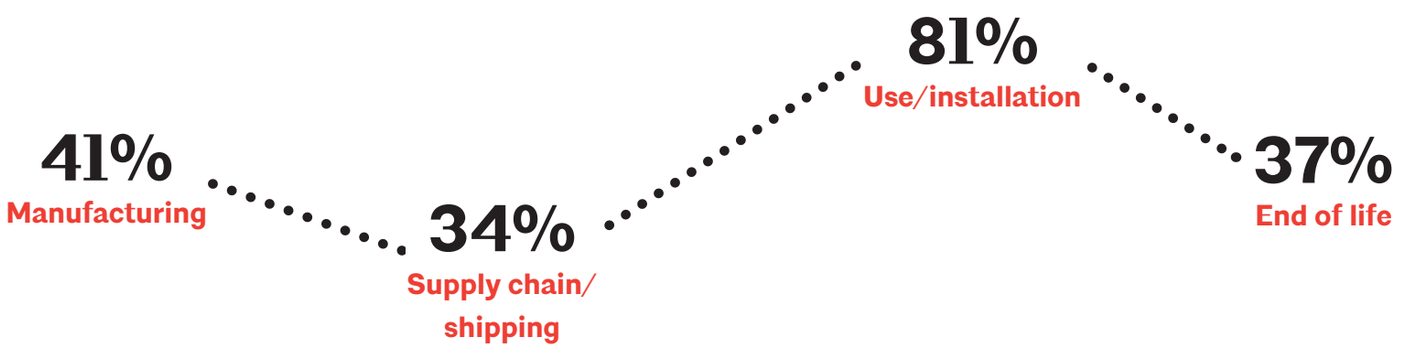
Key learning—Proactively differentiating with sustainability—message

Manufacturers can improve messaging by considering when architects think about sustainability & the product lifecycle

Sustainability information most resonates when it concerns the impact during installation and installed life (e.g., performance, longevity). Manufacturers seeking short/medium-term impact should focus communication on this aspect of sustainability. Product information on the website and rep support should emphasize this. Manufacturers seeking long-term differentiation on sustainability should educate and focus on sustainability across the full product life cycle (e.g., footprint, recyclability). CE is very effective and popular for this purpose.

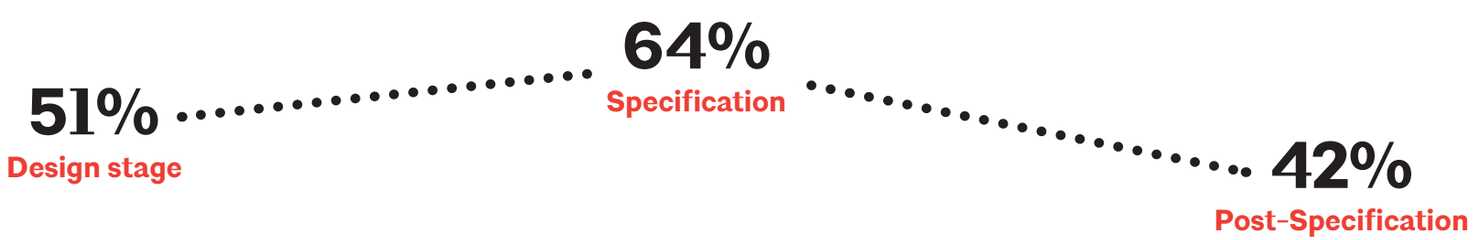
PRODUCT LIFE CYCLE

Architects most often consider sustainability in the context of a material's installation/ installed performance.



PROJECT CYCLE

Architects most often consider sustainability when selecting products during specification.



% often or almost always consider

Key learning—Proactively differentiating with sustainability—product

A trusted brand is not enough to demonstrate product sustainability

While 45% say a trusted manufacturer brand is an indication of sustainability, it is rarely sufficient. Since architects rely on sustainability information provided by manufacturers, it is important that this documentation is easy to access, has sufficient detail, and is available for all products. Additionally, architects are aware of many different certifications, the most used assessment of sustainability. Manufacturers should assess relevant certifications and ensure products are independently certified to those standards. AIA should consider guidelines on project/product sustainability. With the wide variety of sources, certifications, and standards used, a simpler way to determine the sustainability of products would help architects specify them.

There are two primary ways that architects determine if products are sustainable. Both stem from information provided by the manufacturer itself, usually via its website:

2 in 3

check product certifications. Architects are familiar with many different ones and frequently use them to assess sustainability credentials.

→ **95%**

of architects consider it important that these are independently/ third-party tested.

over 50%

check product disclose docs. HPDs and EPDs are reviewed by 58% of architects to determine the sustainability credentials of a product. It is vital that these are easy to access and contain the right level of detail to ensure specification.

Key learning—Proactively differentiating with sustainability—channel

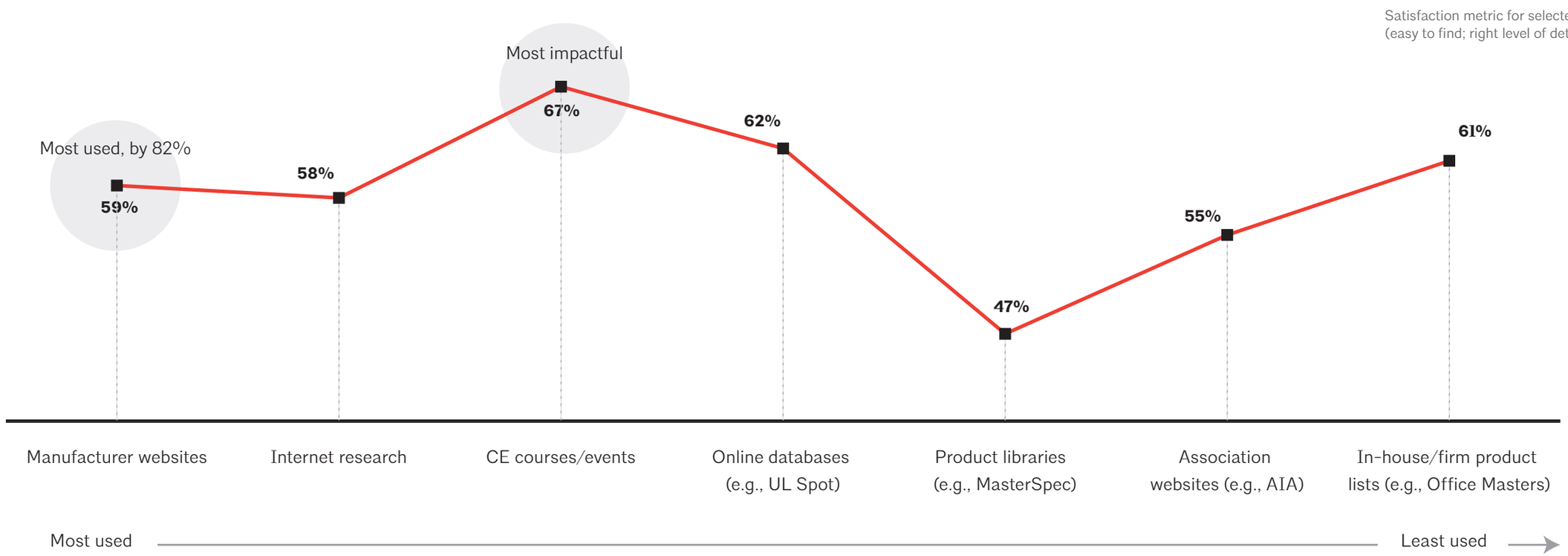
Websites have the highest frequency, while CE has the most impact

Manufacturers should optimize websites with easy-to-find, up-to-date, and credible sustainability information for its products. CE presents a preferred opportunity to engage with architects and introduce sustainable products. Ensure websites are easy to navigate and that CE instructors are engaging and knowledgeable.

Product libraries (including digital libraries in Masterspec) should incorporate sustainability information. Architects rarely use these sources to assess sustainability, even though such solutions are primarily used at the time architects most consider sustainability.

SATISFACTION WITH SUSTAINABILITY INFORMATION SOURCES

(% SOMEWHAT OR VERY SATISFIED WITH EACH ASPECT)



Other key sources include manufacturer reps (used by 63%), products from past projects (59%), A&D publications (55%).

Key learning—Why are sustainable materials not seeing an uptake?

Manufacturers should consider a range of factors when exploring why sustainable products may not have seen an uptake in the market

Manufacturers should assess whether they are meeting the information needs of architects in general. A website that makes it easy to find specific product information (include sustainability information) is important to ensure consideration. Knowledgeable and responsive reps are also key to ensuring products are considered. Finally, campaigns to spread awareness need to focus on the right channel and content for architects to become aware of new solutions. CE, digital, and direct engagement (through reps) is important. Targeting "Risk Takers" (see Appendix I on p. 42 for more information on respondent profiles) will likely yield higher return on efforts given this segment's interest in new sustainable solutions.

Many factors influence the specification of products. Some of the biggest drivers are not specific to sustainability. They concern meeting basic needs and the influence of other stakeholders (contractors/clients).

Basic needs from a manufacturer must be met. Many manufacturers are not meeting architect needs. This reduces spec rates of all products. AIA research has outlined the most important needs, which include:

- A website that is easy to navigate and has the specific product information architects need to specify a product.
- Reps that are responsive and knowledgeable about their product category.
- CE that is applicable, engaging, and facilitated by knowledgeable reps.

Sustainability is one of many drivers of specification. Past experience and product performance is often more impactful than sustainability when it comes to selecting products. Price can also be an equally important factor.

Architects tend to be late adopters. Architects lack time to find new products and often specify products they have relied on in the past. Seven in 10 would wait to specify a product until others have.

Almost one-third (32%) of architects fall into the "Risk Taker" segment. A minority is looking to specify new sustainable products.

Key learning—Addressing barriers to sustainability

Cost-conscious clients are seen as a barrier to sustainable solutions

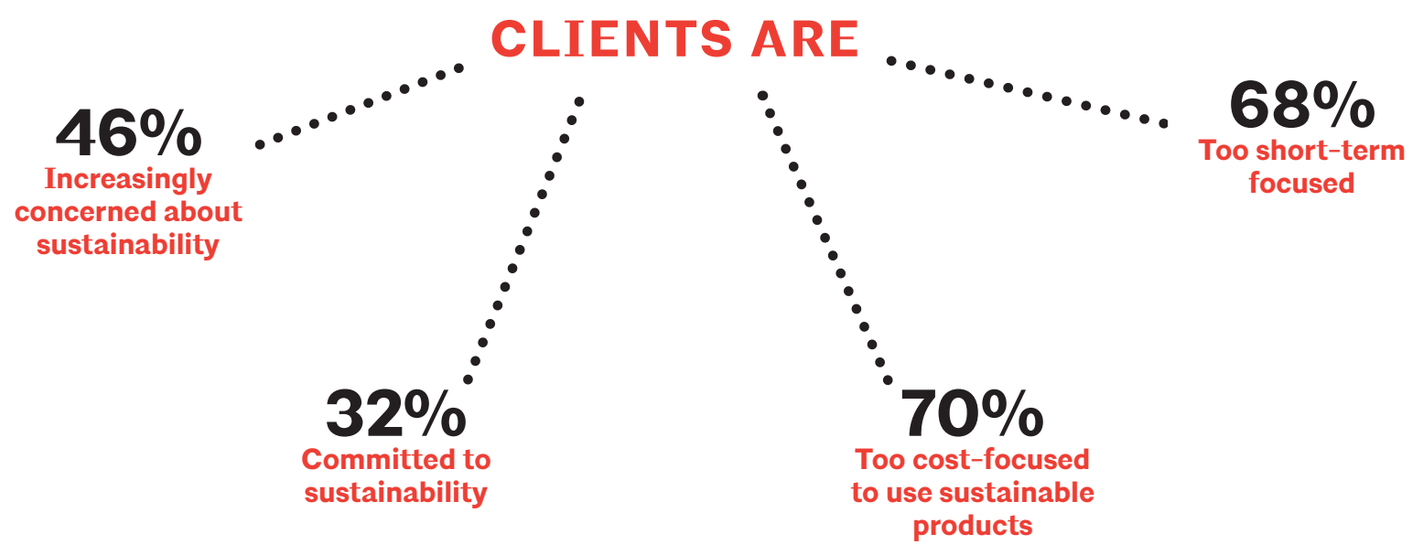
Manufacturers should address concerns about the cost of sustainable products. Where product lines are priced comparably with similar products, this should be made explicit by reps and sources. In cases where a premium is required for a more sustainable product, manufacturers should focus first on ROI, if a long-term value-for-money argument can be made. Second, raising awareness of the positive impact of sustainable solutions with a range of client groups could increase demand for such products and in turn increase volume. AIA should consider partnerships and initiatives with different stakeholders in the construction industry (and possibly other associations) to increase understanding and demand for sustainable products.

59%

of architects say sustainable products are too expensive; **cost is the primary barrier.**

↓

Clients, whether short-term-focused developers, budget-minded public schools, or homeowners, are seen by architects as a common reason why more expensive sustainable solutions are ruled out due to cost.



Key learning—Addressing barriers to sustainability

Lack of buy-in & value-engineering can hinder sustainable specifications

Value-engineering from other parts of the project team may put sustainable solutions at risk. Internally, younger architects show more interest in sustainable solutions but may find it difficult to "find a voice" and drive sustainable product selection within the firm. AIA should offer training, education, and advocacy to amplify those voices within their firms and equip them with the skills to better influence product selection.

59%

of architects feel they feel they **lack support from the project team** (e.g., colleagues, contractors, GCs).

Lack of internal buy-in

80%

of millennials are more likely to want to specify more sustainable materials and consider fewer materials they specify today "sustainable".

External cost-pressure

20%*

of architects believe contractors propose product substitutions with the client's best interests in mind. **Value-engineering** may be a reason behind lower adoption of sustainable materials.

* The architect's journey to specification 2019

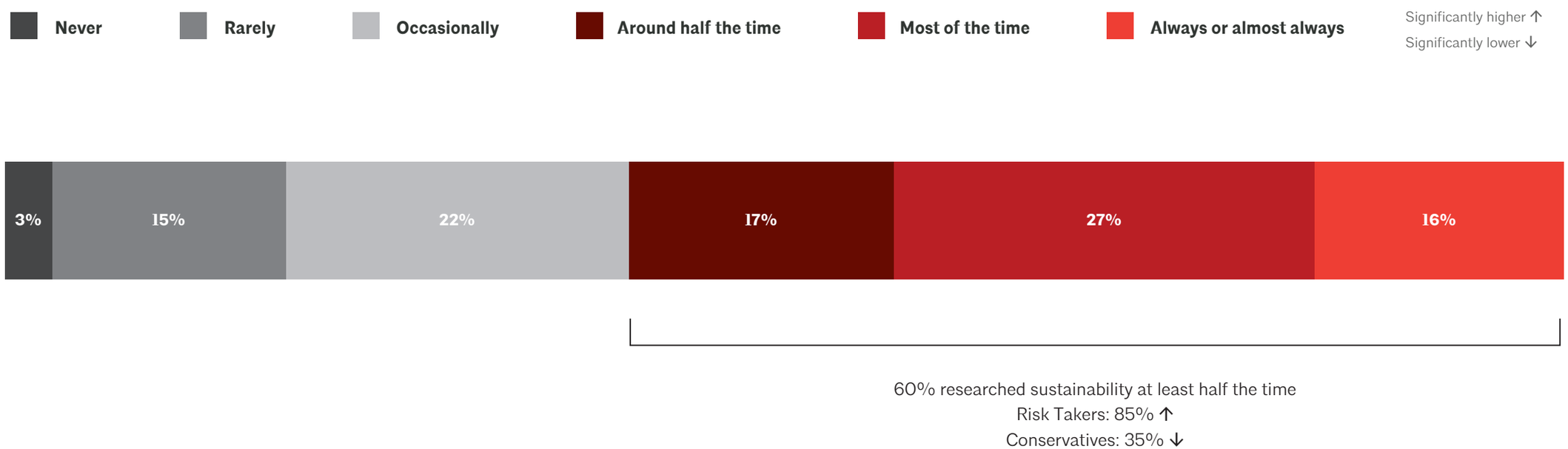
Chapter 2
Sustainability & specification

Researching sustainability during product selection

Sustainability is an important consideration for architects

- Architects strive to consider sustainability during product specification. Six in 10 research sustainability at least half the time when selecting products/materials.
- Almost all Risk Takers (85%) frequently research sustainability during specification, versus around one-third (35%) of Conservatives.

FREQUENCY OF RESEARCHING SUSTAINABILITY WHEN SELECTING PRODUCTS/MATERIALS
(IN PAST TWO YEARS)



Base: 330
All respondents

Q5. Thinking about the projects you worked on over the past two years, how often did you review/look up information about sustainability when selecting products/materials?

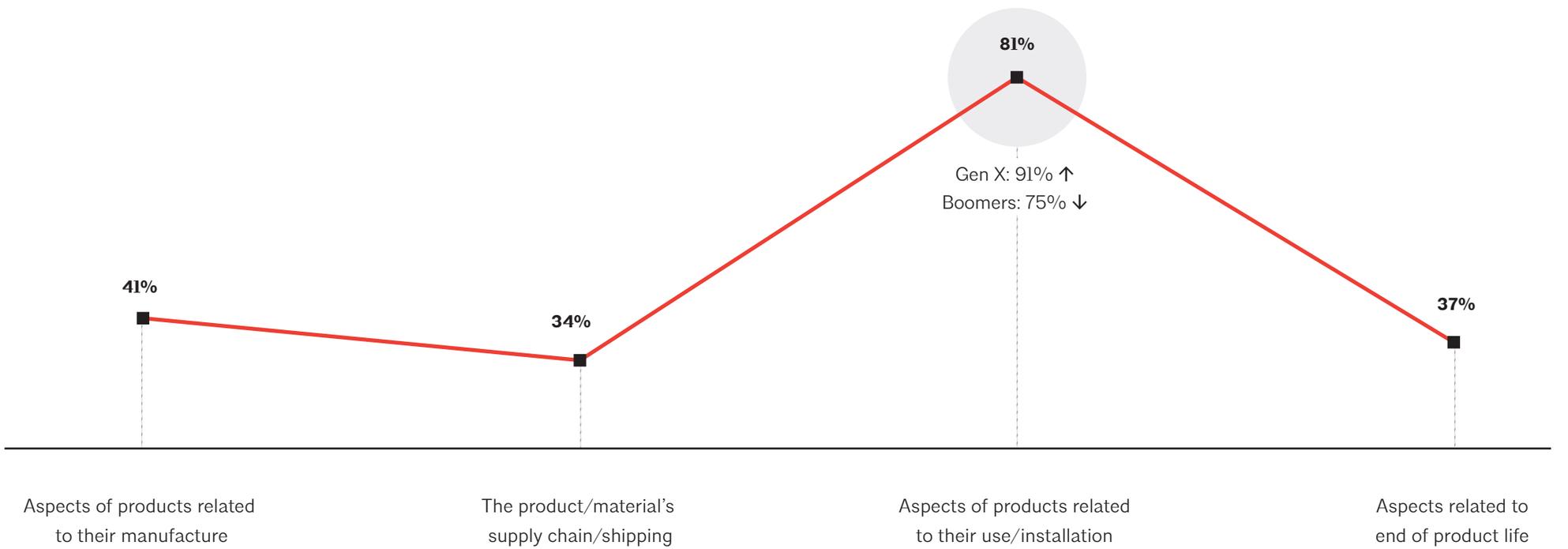
Considering different aspects of product sustainability

Architects focus on sustainability during use & installation

- Sustainability is most top of mind to architects during the use/installation of a product. Architects likely focus on installation as it reflects directly on them. Communications regarding the sustainability of products should highlight the advantages during product installation. There is also scope to educate architects on the wider product cycle's impact on sustainability.

CONSIDERATION OF DIFFERENT ASPECTS OF PRODUCT/MATERIAL SUSTAINABILITY

(% OFTEN OR ALMOST ALWAYS)



Base: 330
All respondents

Q6. In general, how frequently do you consider each of the following for building products/materials you work with or specify?

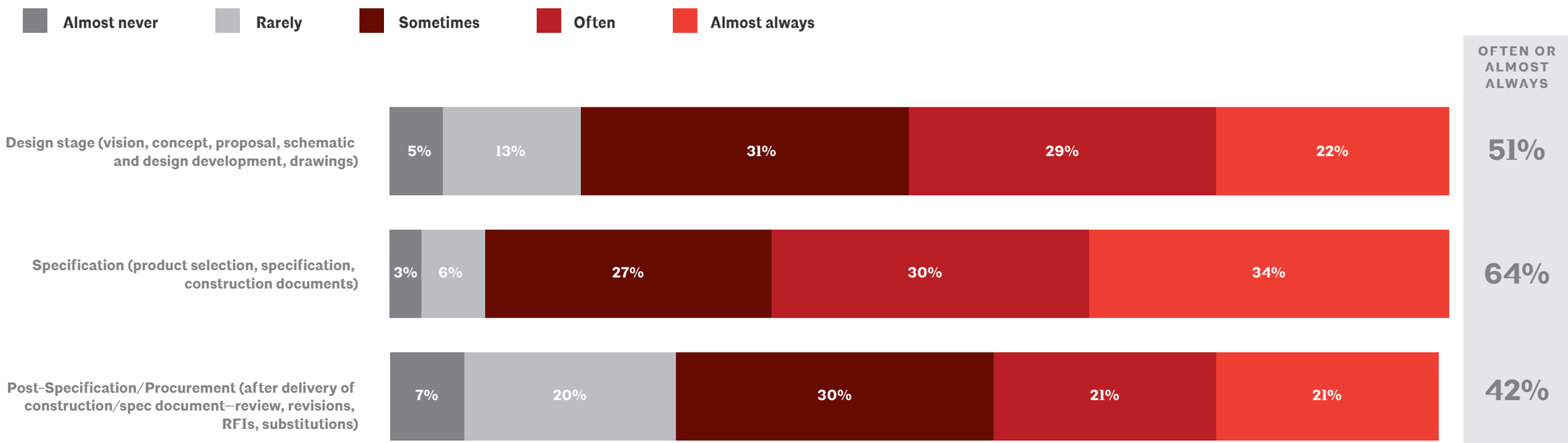
Considering sustainability at different project stages

Sustainability is most often considered at the specification stage

- Architects consider sustainability throughout the project. However, sustainability is most often top of mind during specification, indicating that architects see sustainability as connected to product selection. A significant opportunity here is for specification software providers and manufacturers providing spec documents to make sustainability information more readily available.

CONSIDERATION OF PRODUCT/MATERIAL SUSTAINABILITY BY PROJECT STAGE

Significantly higher ↑
Significantly lower ↓



Base: 330
All respondents

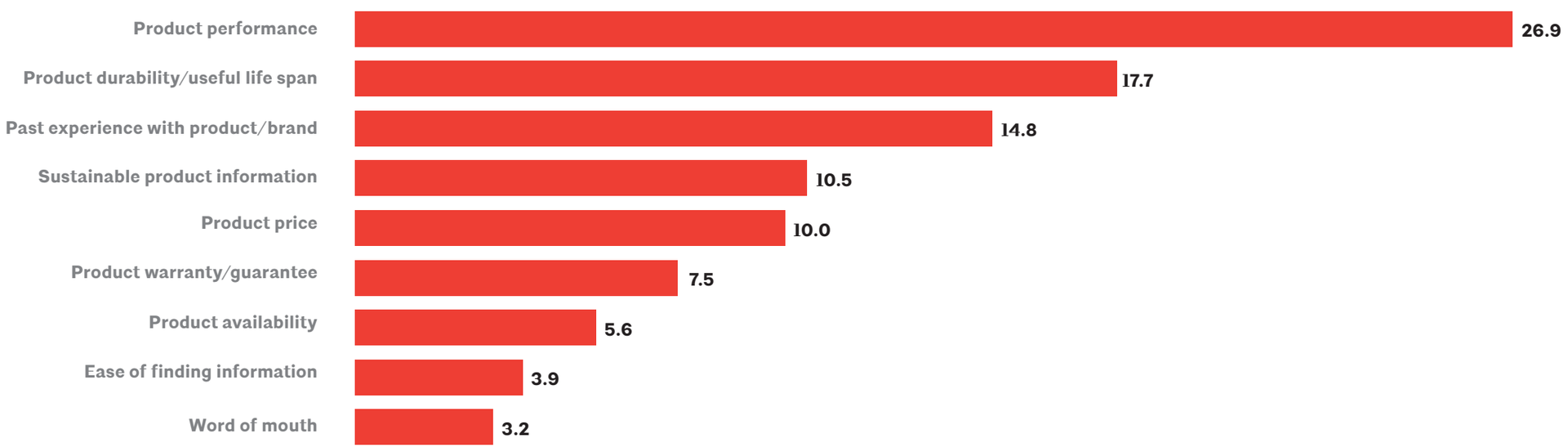
Q7. In general, how frequently do you consider product/material sustainability at each of the following project stages?

Relative importance of factors in specification decisions

Sustainability expressed as useful life span is impactful on specifications

- Sustainability, product performance, and product lifespan are all top factors driving product selection. Past AIA research has shown that past experience and price often drive specifications when time or budget constraints influence a product decision.
- Not having sustainability information about products readily available and easily accessible could be costing manufacturers specifications.

RELATIVE IMPORTANCE OF FACTORS TO SPECIFICATION/SELECTION



Base: 308
All respondents specifying building products

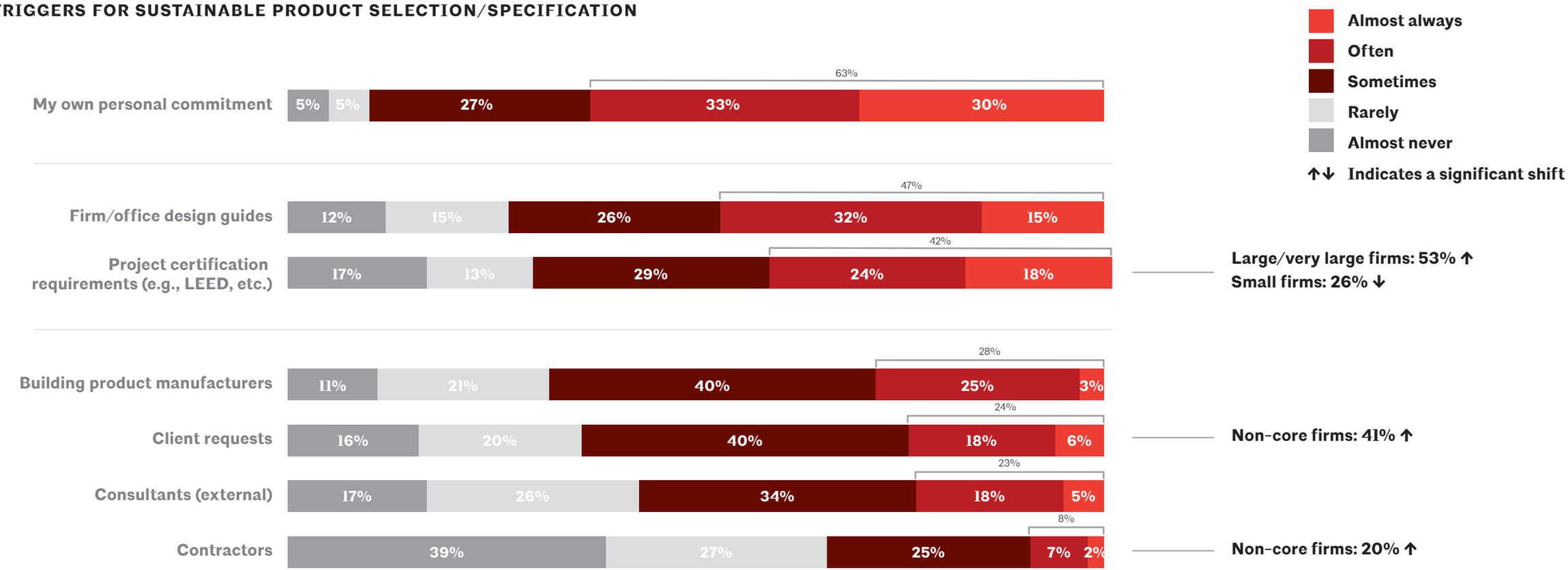
Q4b. How important was each factor below in your decision about which specific product/manufacturer to specify? Please assign a total of 100 points across the following factors to indicate how important they were in your decision.

Triggers for sustainable product selection/specification

Sustainable product selection is often driven by personal commitment

- Architects see themselves as the key drivers of sustainable product specification. External influencers are rarely seen as key drivers of sustainability. Requirements can also drive sustainability, either at the firm level or due to certifications.
- Only about 1 in 4 architects see manufacturers as frequent influencers in driving sustainability.

TRIGGERS FOR SUSTAINABLE PRODUCT SELECTION/SPECIFICATION



Base: 330
All respondents

Q8. In general, how frequently are you prompted to select or specify sustainable products and materials by each of the following?

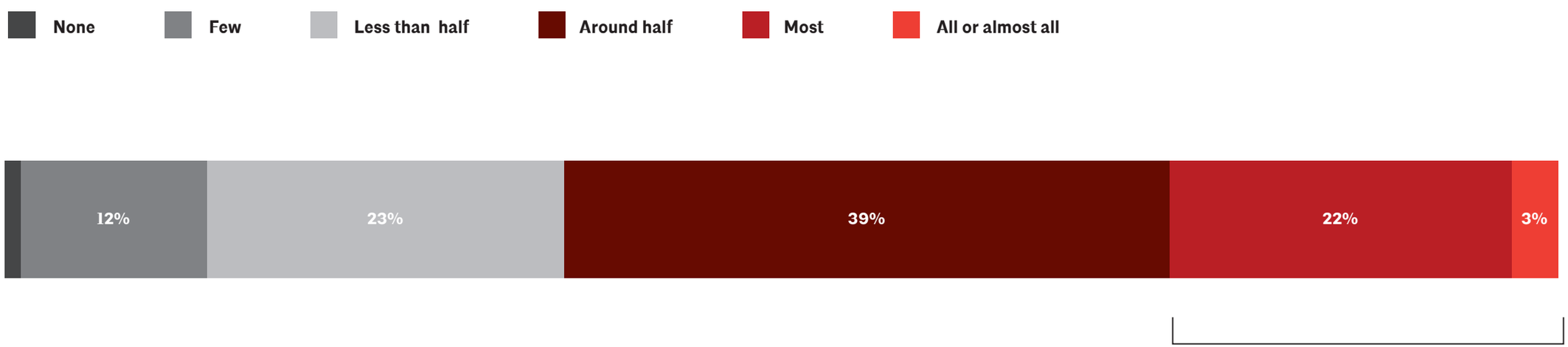
Chapter 3
Attitudes & barriers to sustainable specification

Specification of sustainable products/materials

Architects consider around half the products they specify sustainable

Despite high aspirations, only a quarter of architects specify sustainable products frequently.
This indicates there may be barriers or challenges to specification of such solutions.

SHARE OF SPECIFIED PRODUCTS/MATERIALS CONSIDERED "SUSTAINABLE"
(ON AN AVERAGE PROJECT)



By generation:
Millennials 14%
Gen X 20%
Boomers 26%

Base: 330
All respondents

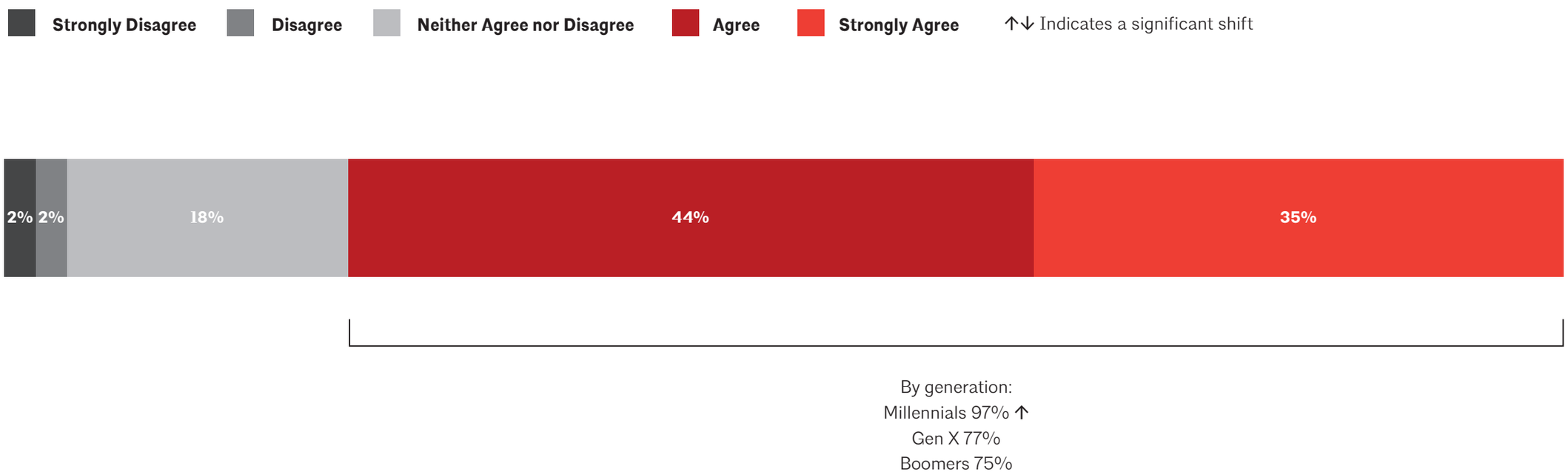
Q19. Approximately how many of the materials/products you select/specify on your average project would you consider "sustainable"?

Specification of sustainable products/materials

4 in 5 architects want to specify more sustainable products

- Architects want to specify more sustainable products and materials than they do today.
- Millennials are especially eager to increase the number of sustainable products they specify/select in the future.

AGREEMENT WITH… "I WOULD LIKE TO SPECIFY/SELECT MORE SUSTAINABLE BUILDING PRODUCTS/MATERIALS THAN I DO TODAY"



Base: 330
All respondents

Q20. To what extent do you agree or disagree with the following statement?

Barriers to sustainable product selection/specification

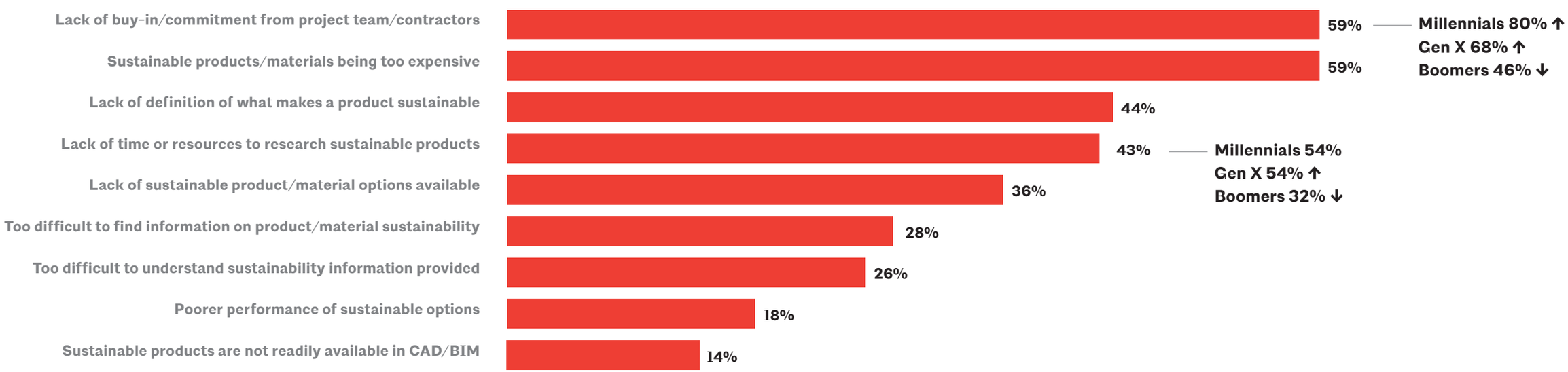
Lack of buy-in from contractors & prohibitive pricing are top barriers

- Two major types of barriers limit specification of sustainable products: project barriers (cost, contractors) and information barriers (definition, lack of time). Project barriers will require buy-in from non-architects (clients, contractors) to address. Manufacturers can alleviate information-barriers by providing accessible and clear information about sustainable products (i.e., certifications, disclosures).

TOP BARRIERS TO SPECIFYING MORE SUSTAINABLE PRODUCTS/MATERIALS

(% RATING 4-AGREE OR 5-STRONGLY AGREE)

Significantly higher ↑
Significantly lower ↓



Base: 316
All respondents wishing to specify more sustainable products (Q20)

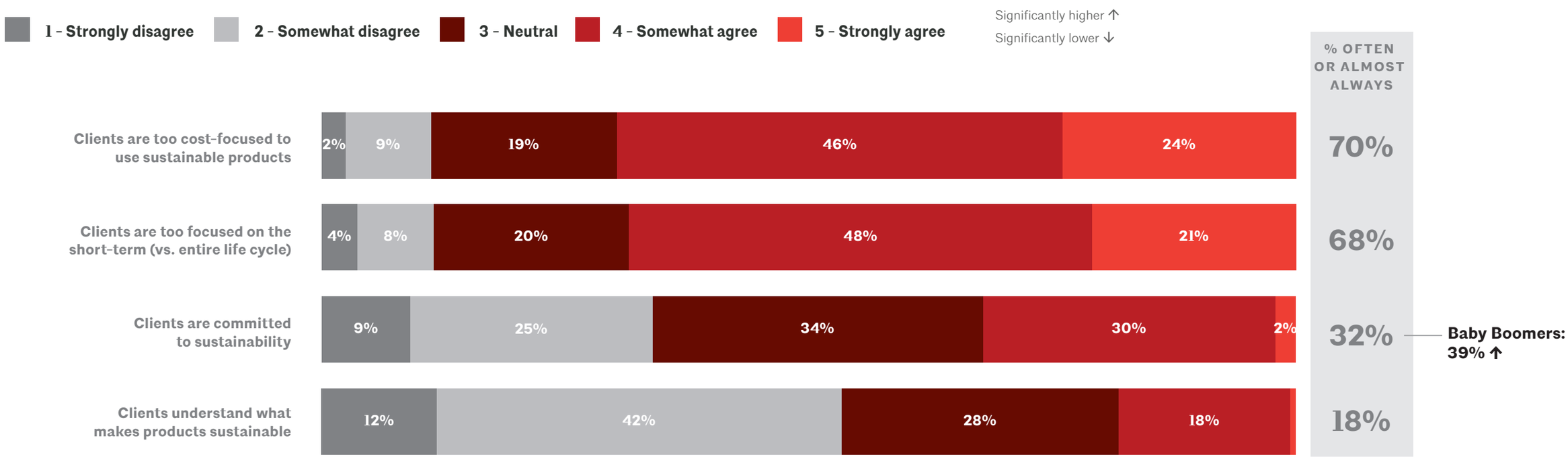
Q21. How much do you agree or disagree that each of the following factors are holding you back from selecting/specifying sustainable building products/materials?

Client attitudes toward sustainability

Lack of client buy-in likely drives the perceived cost barrier

- Around 7 in 10 architects agree that clients are too cost-focused and too shortsighted to prioritize sustainability. Perhaps demonstrating the ROI of using sustainable products could drive client buy-in.
- Lack of client understanding about what makes products sustainable may be a bigger issue or barrier than lack of commitment.

CLIENT ATTITUDES TOWARD SUSTAINABILITY



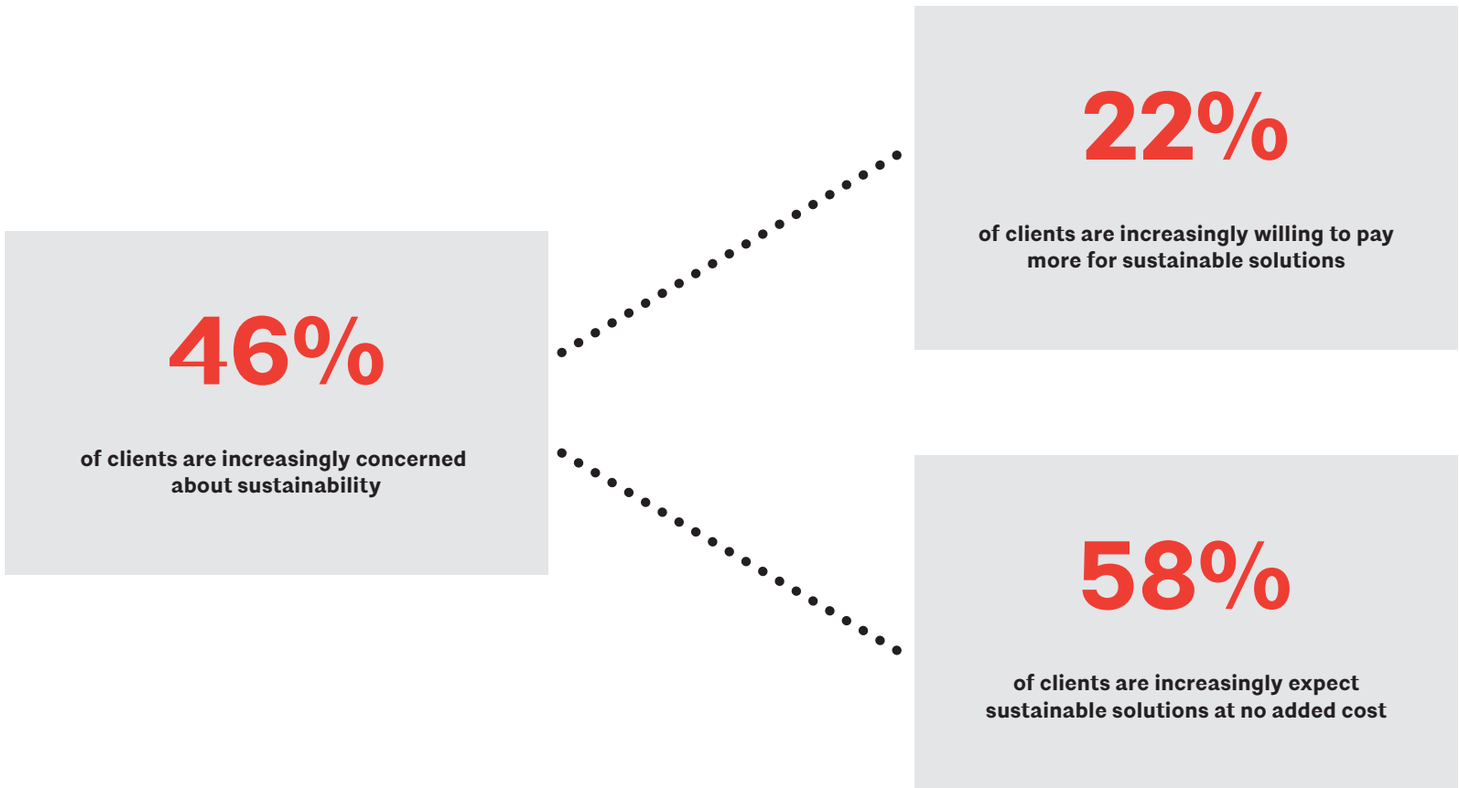
Base: 330
All respondents

Q22. How much do you agree or disagree with the following statements about your clients?

Client attitudes toward sustainability today vs. 3 years ago

Clients are not keen to match enthusiasm for sustainability with funding

- Architects feel that clients expect sustainable solutions at no extra cost rather than being willing to pay extra for them. Increasing client concern with sustainability may not be a high priority. However, lack of understanding of what makes products sustainable is likely a factor along with other financial barriers.



Base: 330
All respondents

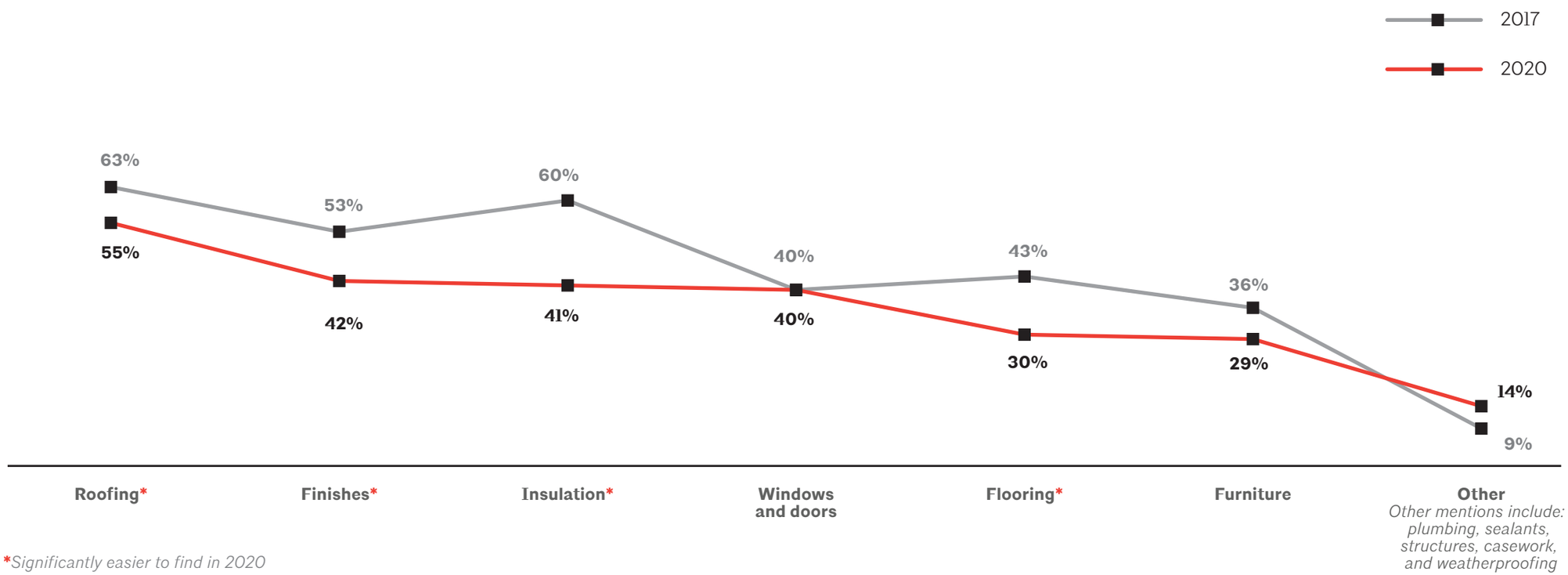
Q23. Comparing today with 3 years ago, how do you feel about the following statements?

Challenges in finding new, sustainable products/materials

Finding sustainable products is getting easier, but challenges remain

- Manufacturers of roofing, finishes, insulation, and flooring have made strides with sustainable solutions since 2017.
- Architects recognize that manufacturers are introducing new, sustainable products as challenges related to finding sustainable products have diminished. This indicates that barriers to uptake of sustainable products may be reducing, a promising trend for manufacturers.

CHALLENGES IN FINDING NEW, SUSTAINABLE PRODUCTS/MATERIALS



**Significantly easier to find in 2020*

Base: 330 (2020), 260 (2017) All respondents

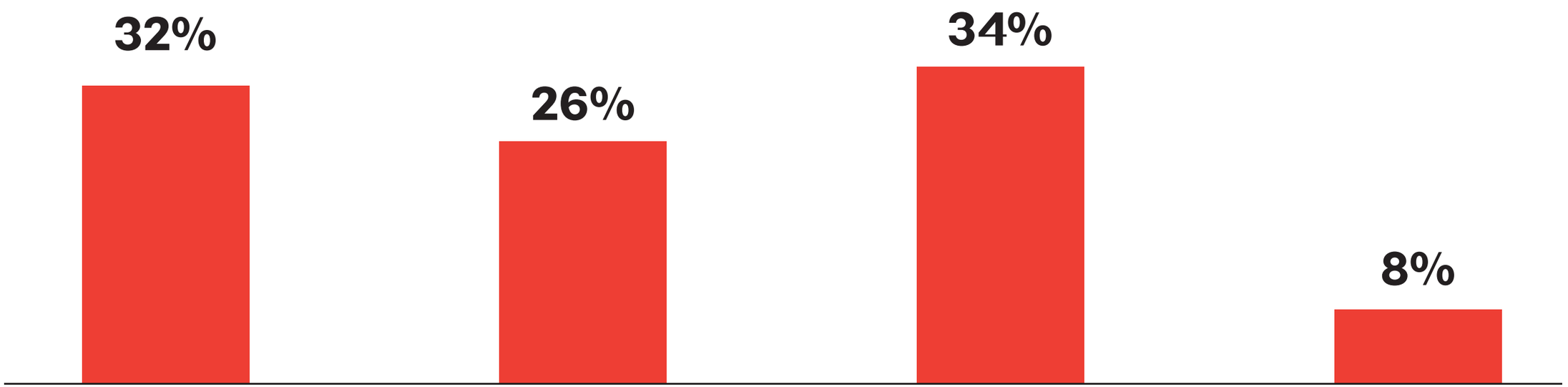
Q25. For which of the following product categories are you challenged to find new, innovative, or green/eco-friendly materials to help you meet your sustainability goals?

Educating clients about sustainability issues

Architects are more apt to defer to clients on sustainability decisions

- Just over half of architects proactively build sustainability into all projects or advise their clients to do so.

ROLE IN EDUCATING CLIENTS ABOUT SUSTAINABILITY ISSUES



Base: 330
All respondents

Q9 Which of the following best describes your role in educating clients about sustainability issues? Select one.

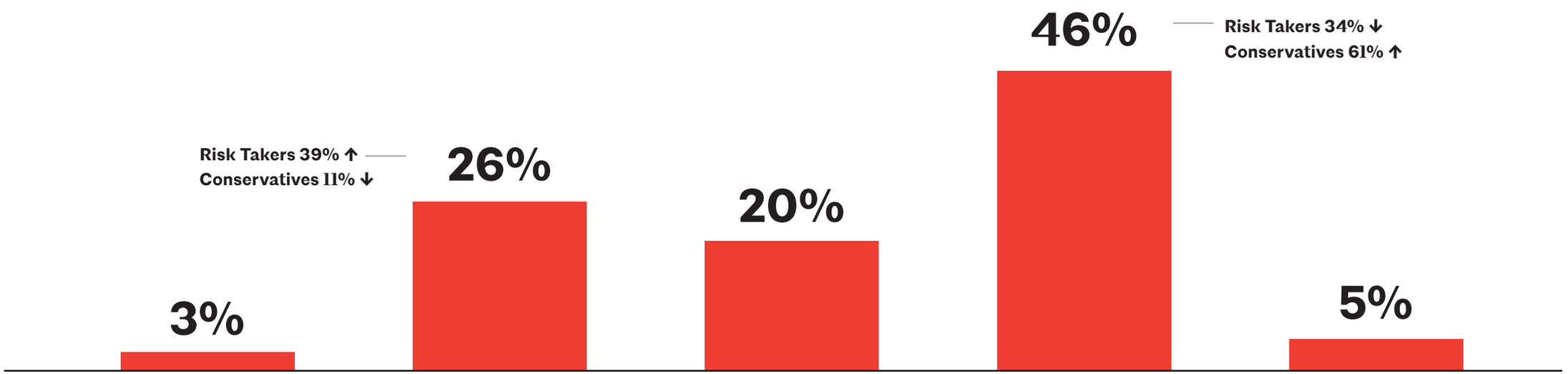
Approach to selecting new sustainable products/materials

Most favor a wait-and-see approach to specifying new solutions

- Architects tend to specify brands they have had success with before. Half of architects need to see validated product performance before selecting new products. Case studies, word-of-mouth from colleagues and industry peers, and in-depth information based on real-life applications are key for catalyzing widespread selection/specification of new sustainable solutions.

↑↓ Indicates a significant shift

*****Rodgers' Diffusion of Innovation Model*



Base: 330
All respondents

Q24 Which of the following statements best describes your approach to selecting new, sustainable products/materials?

Chapter 4
Sustainability information & sources

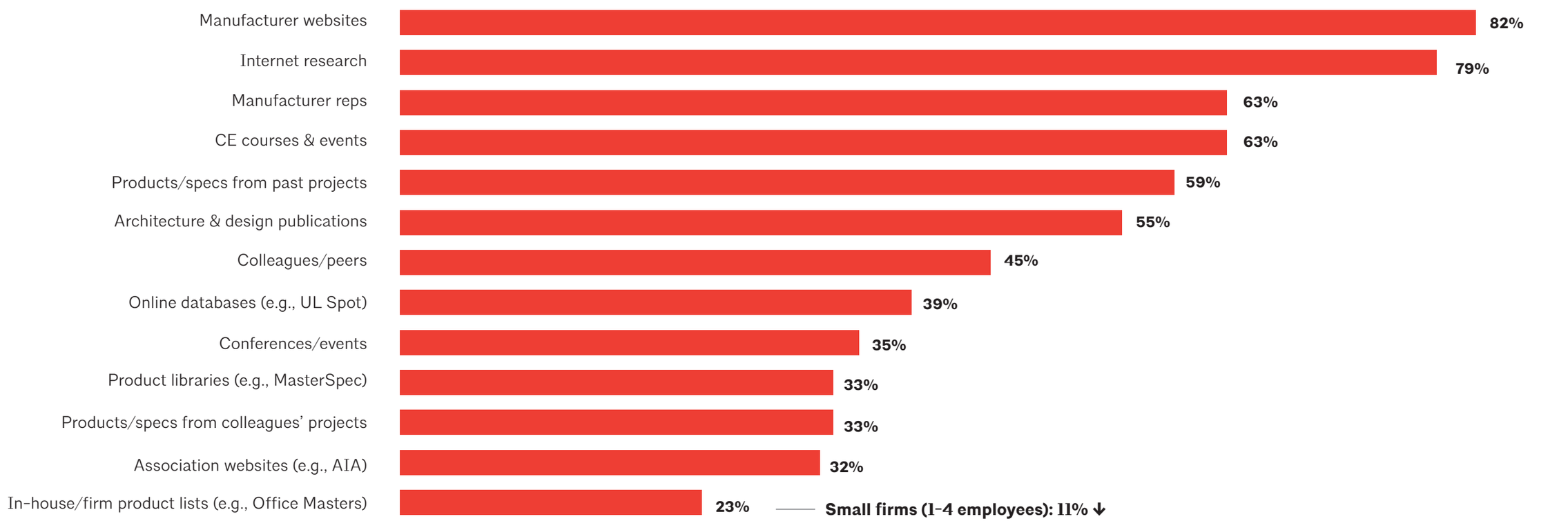
Usage of sustainability information sources

Digital manufacturer sources, reps, & CE engagements are key

- Architects use the same sources to find sustainability information as general product information, as it is tied to product selection.
- Manufacturers can engage with the architects through websites, reps, SEO, and sponsored CE. These touchpoints are widely used and offer opportunities for manufacturers to communicate the advantages of sustainability.
- Few architects look for sustainability information from non-manufacturer listings (e.g., online databases, product libraries, firm lists).

SOURCES USED FOR INFORMATION ON PRODUCT/MATERIAL SUSTAINABILITY

↑↓ **Indicates a significant shift**



Base: 330
All respondents

Q10. Which sources do you use when you are specifically looking for information about product/material sustainability?

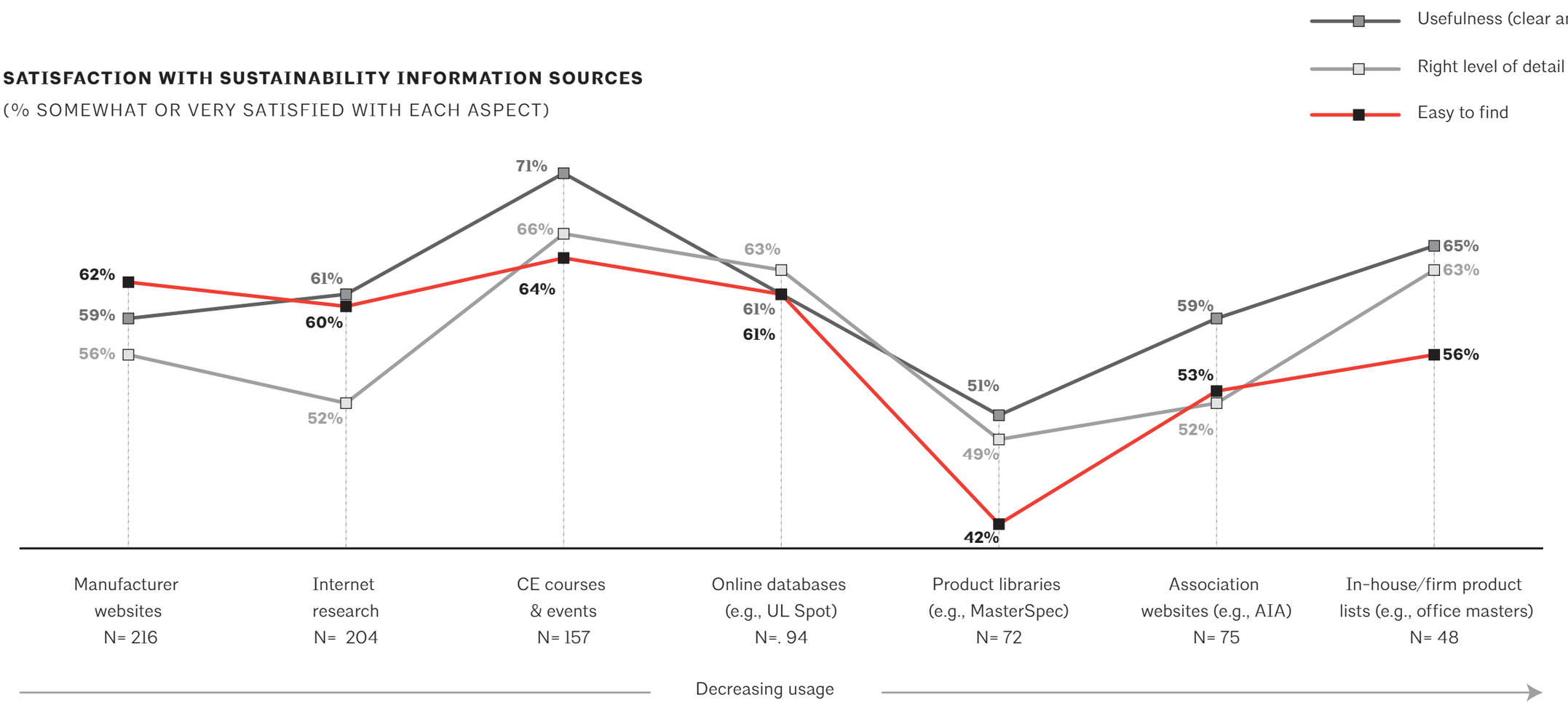
Usefulness of sustainability information sources

CE is seen as very useful, while product libraries are difficult to use

- Architects rate continuing education courses and events as very useful. Sponsoring CE courses that focus on sustainable products should impact architects. They view manufacturer websites and online research as easy to access but only moderately useful and lacking in necessary detail. Product libraries (including digital ones in MasterSpec) are not seen as useful for sustainability.

SATISFACTION WITH SUSTAINABILITY INFORMATION SOURCES

(% SOMEWHAT OR VERY SATISFIED WITH EACH ASPECT)



Base: Varies by source
All respondents

Q11. How satisfied are you with each of the following sources of sustainability information?
(1-Not at all satisfied, 2-Somewhat dissatisfied, 3-Neutral, 4-Somewhat satisfied, 5-Very satisfied)

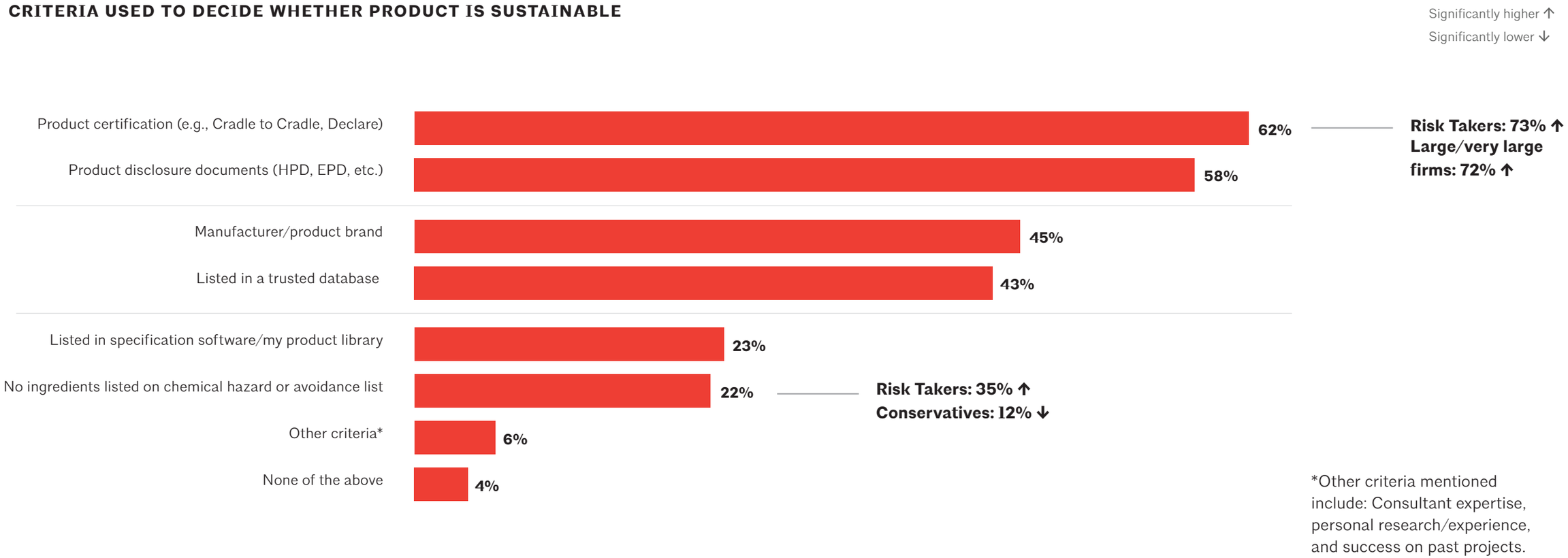
Chapter 5
Certifications & standards

Criteria used to assess product/material sustainability

Certifications & disclosures are main criteria used to judge sustainability

- Manufacturers should ensure that sustainable products have accessible information regarding certifications and disclosure documents as these are the key criteria used to evaluate product sustainability. Architects review certifications and product disclosures.
- Being a trusted brand or listed in a trusted database alone will not guarantee a product is perceived as sustainable.

CRITERIA USED TO DECIDE WHETHER PRODUCT IS SUSTAINABLE



*Other criteria mentioned include: Consultant expertise, personal research/experience, and success on past projects.

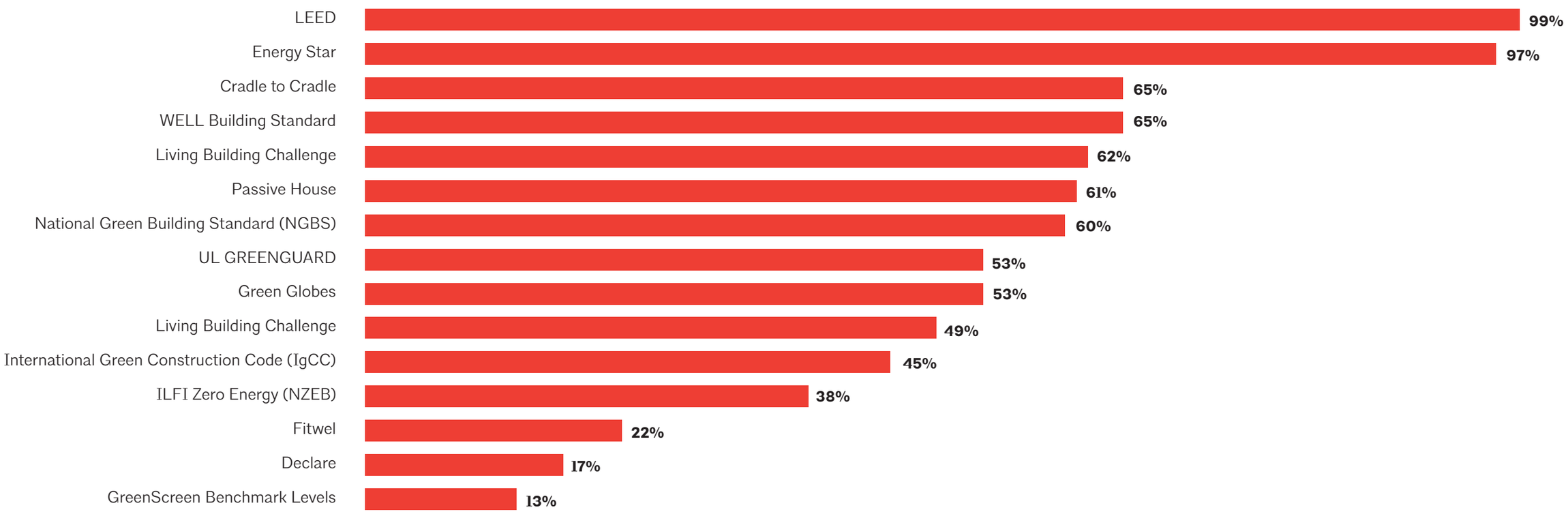
Base: 330
All respondents

Q18. How do you generally decide whether a certain product/material is "sustainable"?

Certification/standards awareness

Architects are aware of a wide range of different certifications

- Awareness of many different certifications is high among architects. Manufacturers should ensure they understand and meet requirements for a broad range of certifications; LEED is the most prominent.
- Larger firms are more likely to be aware of WELL Building Standard, Living Building Challenge, Green Globes, Fitwel and Declare.
- Millennials are more aware of Declare and Passive House.

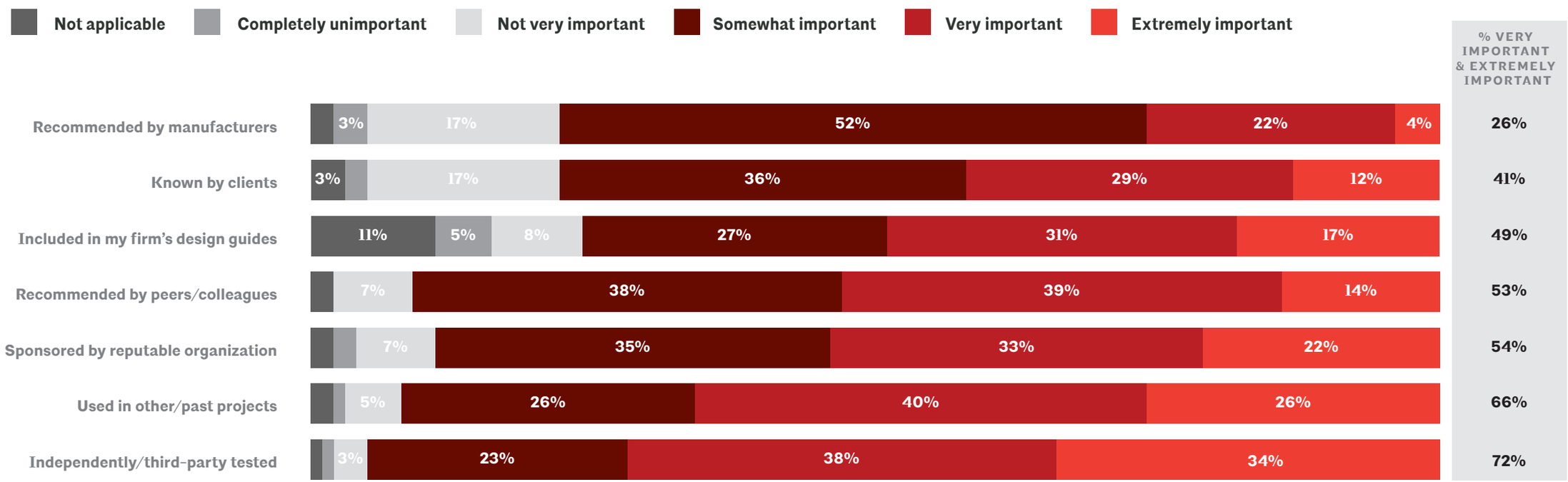


Base: 330
All respondents

Importance of certification factors in specifications

Independent testing is crucial to driving specifications

- Almost all architects consider third-party testing important to deciding whether to include a certification in a project/specification.
- Awareness of certifications among clients (e.g., developers/homeowners) is less of a driver than the architect's own commitment.
- Whether a manufacturer recommends a certification or not is not very important, perhaps because this rarely takes place.



Base: 288
All respondents using certification /standard

Q14. How important are each of the following factors when you are considering whether to include a specific certification or standard in your specifications?

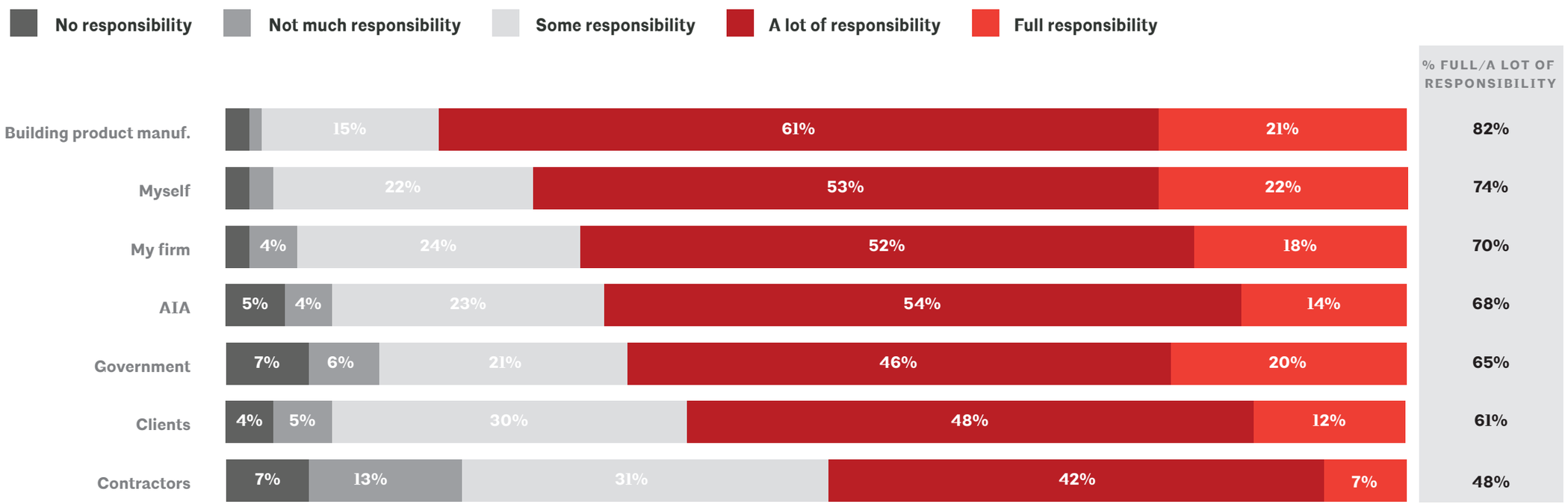
Chapter 6
Advocacy & responsibility

Responsibility for promoting sustainability

Architects share responsibility for promoting sustainability with BPMs

- Millennials are more likely to feel the responsibility is on building product manufacturers (97%).
- Two-thirds of architects feel AIA has high responsibility (fully or a lot) for promoting sustainability—significantly higher among very large firms (79%).

LEVEL OF RESPONSIBILITY FOR PROMOTING SUSTAINABILITY



Base: 330
All respondents

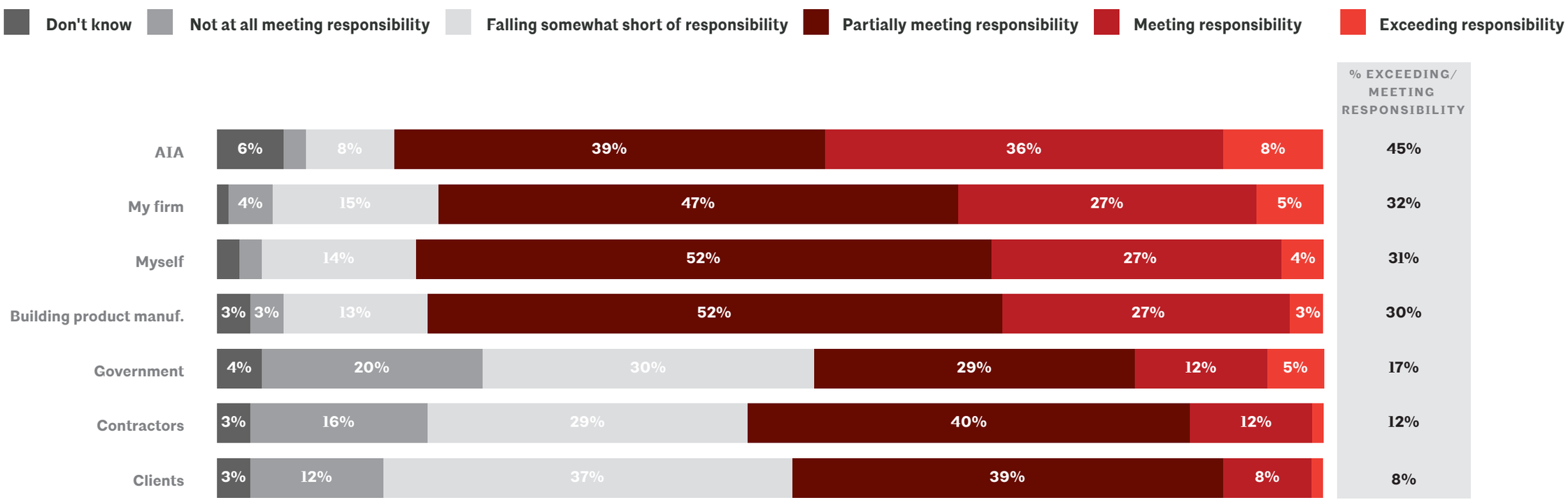
Q26. How much responsibility do you think each of the following parties has for championing sustainability in the built environment?

Fulfillment of responsibility for promoting sustainability

All parties could do more to meet their responsibility, according to architects

- Just 3 in 10 see themselves and their firms as meeting or exceeding their responsibilities in championing sustainability; baby boomers are twice as likely as millennials to feel they are doing so sufficiently (34% versus 17%).
- Those mostly working on larger projects are more likely to say contractors are fulfilling their part in promoting sustainability (26%).

FULFILLMENT OF RESPONSIBILITY FOR PROMOTING SUSTAINABILITY



Base: 330
All respondents

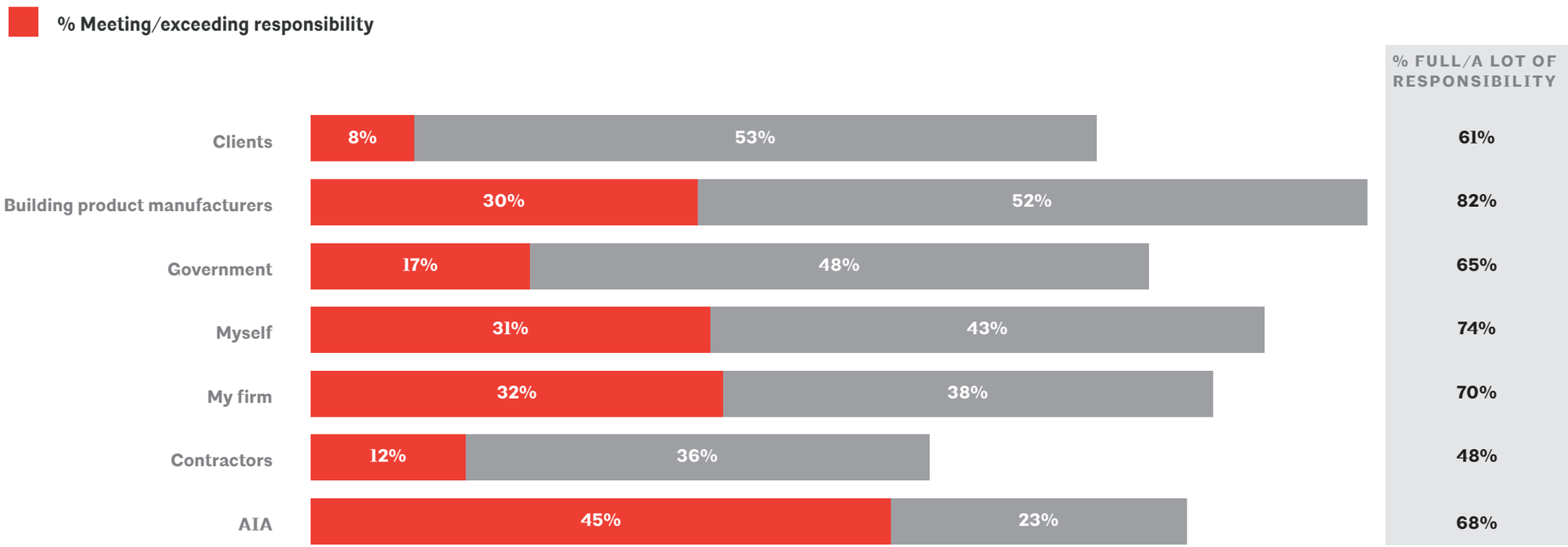
Q27. And how well do you feel each of the following parties is currently fulfilling its responsibility for championing sustainability in the built environment?

Fulfillment of responsibility for promoting sustainability

Architects acknowledge they could do more to promote sustainability

- AIA's efforts to push the sustainability agenda is recognized by architects. Most of those who consider this AIA's responsibility believe the institute is meeting or exceeding it.
- Many architects feel they fall short in their responsibility to specify sustainable products.
- Manufacturers are also falling short of their responsibility, according to architects.

LEVEL VS. FULFILLMENT OF RESPONSIBILITY FOR PROMOTING SUSTAINABILITY



Base: 330
All respondents

Q26. How much responsibility do you think each of the following parties has for championing sustainability in the built environment? Q27. And how well do you feel each of the following parties is currently fulfilling its responsibility for championing sustainability in the built environment?

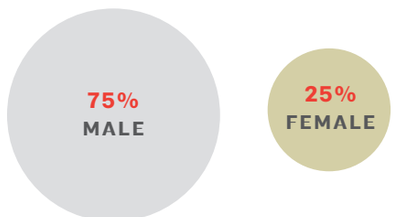
Appendix I
Profiling respondents

Respondent profile (1/2)

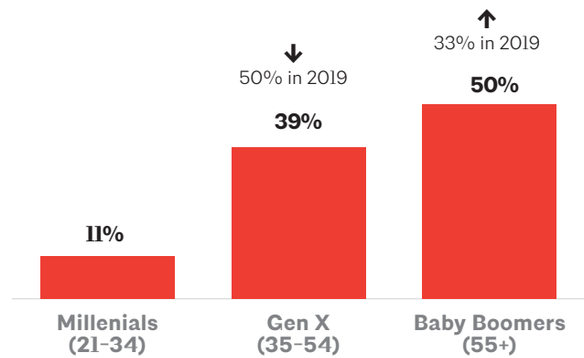
330

Qualified architects who are responsible for specifying products and/or materials surveyed online

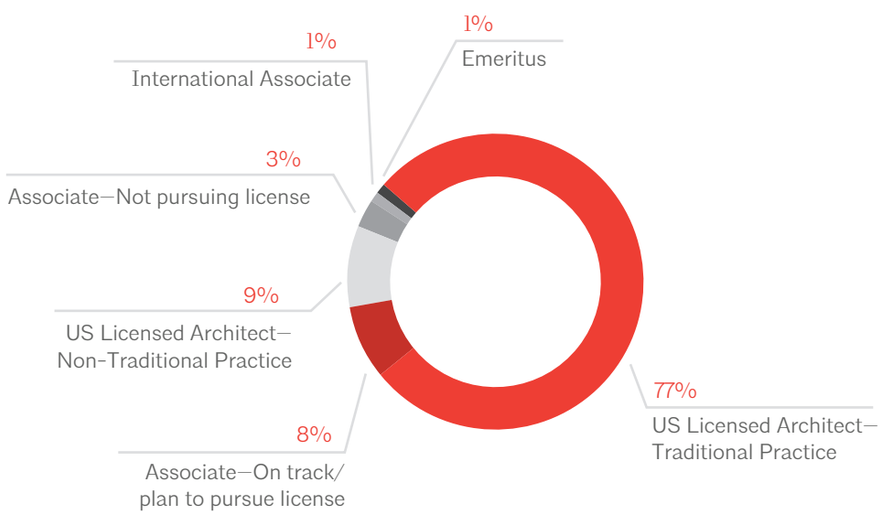
Gender



Age

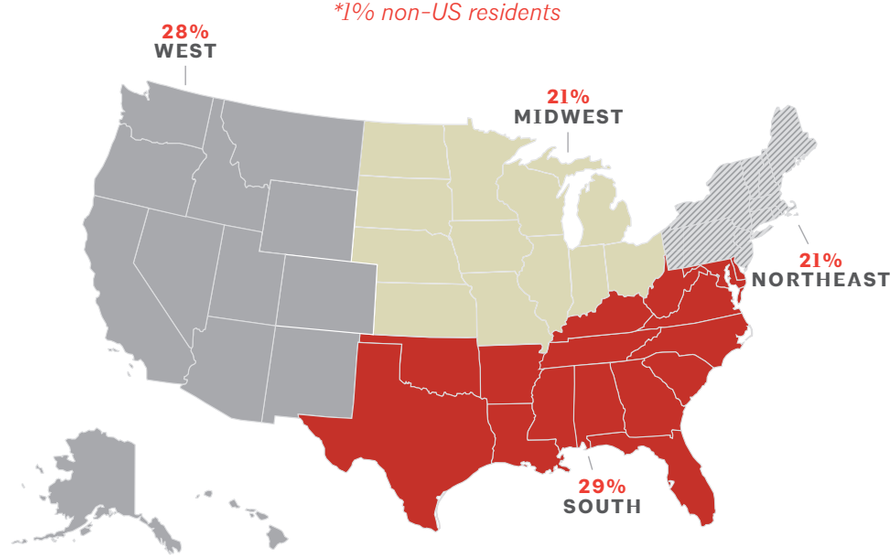


AIA member type



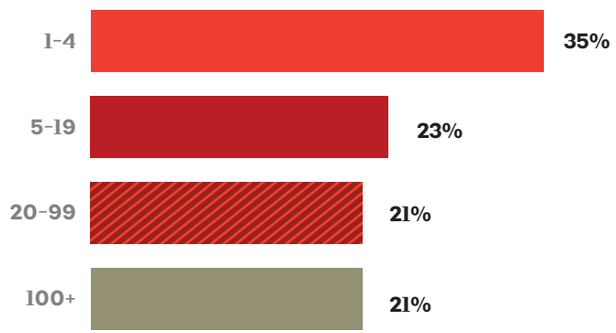
Region

**1% non-US residents*

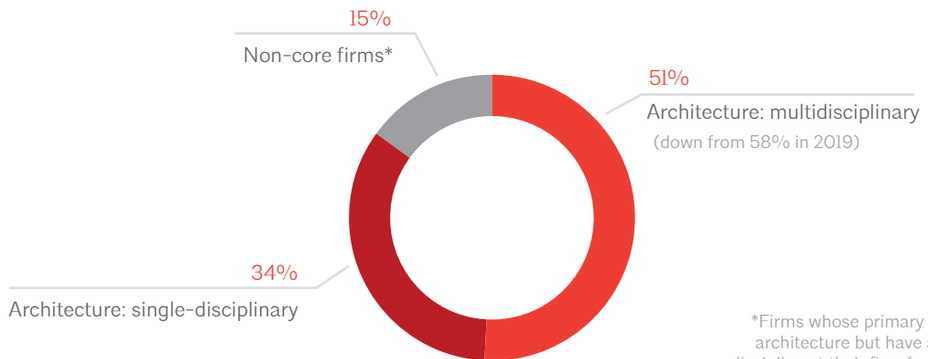


Respondent profile (2/2)

Number of employees

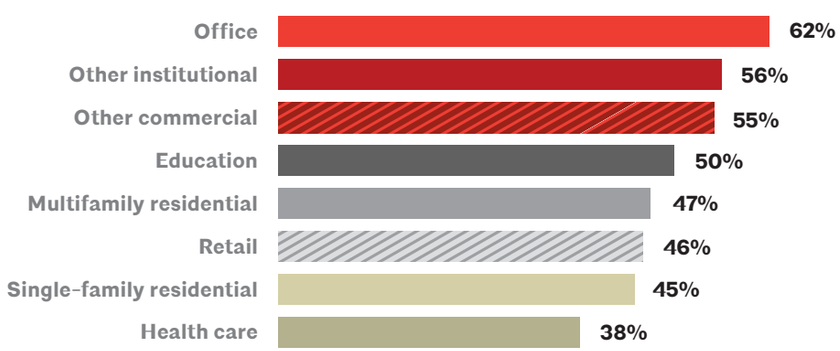


Firm type

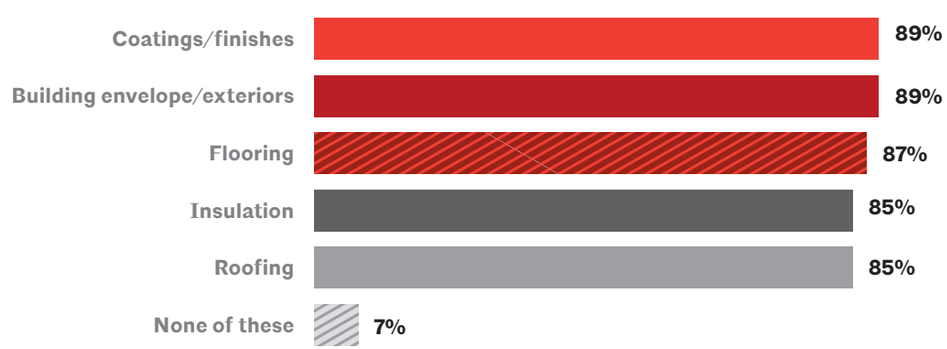


*Firms whose primary business is not architecture but have an architecture discipline at their firm (e.g., engineering, interior design and planning)

Project type involvement



Specified building materials in past year



Overview of the Psychographic Personas

38%

CONSERVATIVES

37%, 2019; 41%, 2016

Who they are
More likely to be older males; half are baby boomers.

Firm culture
Tend to work for more risk-averse firms that will use tried and tested products.

How they specify
Tend to specify products and brands they have specified in the past. Hesitant to change; they value built-up trust with the manufacturer.

29%

DYNAMISTS

34%, 2019; 33%, 2016

Who they are
Tend to be younger, tech-minded architects.

Firm culture
Experimental and open-minded. Willing to try different products.

How they specify
Will use BIM/CAD models when designing and specifying. Like to engage manufacturers digitally, and prefer initiating contact with a manufacturer to being contacted.

32%

RISK TAKERS

29%, 2019; 26%, 2016

Who they are
More likely to be female architects. Often only focus on a few projects in a given year.

Firm culture
Open to trying different products to find the most environmentally friendly option.

How they specify
More likely to conduct research before identifying the right manufacturer. Highly concerned with compliance.

Appendix II
Analysis by persona & product line

Considering different aspects of product sustainability

Risk Takers are more likely to consider sustainability

- Unsurprisingly, Risk Takers are significantly more likely to consider all aspects of product/material sustainability, while Conservatives are significantly less likely to. The gap is most prominent for product manufacturing and end of product life.

CONSIDERATION OF DIFFERENT ASPECTS OF PRODUCT/MATERIAL SUSTAINABILITY

(OFTEN/ALMOST ALWAYS)

		ARCHITECT PERSONA		
	Overall	Conservative	Dynamist	Risk Taker
BASE	330	126	97	107
Aspects of products related to their manufacture	41%	25%	40%	62%
The product/material's supply chain/shipping	34%	24%	32%	49%
Aspects of products related to their use/installation	81%	72%	84%	90%
Aspects related to end of product life	37%	21%	34%	60%

Sig. higher
Sig. lower

Base: Varies
All respondents

Q6. In general, how frequently do you consider each of the following for building products/materials you work with or specify? (2017 Q10. Please rate the frequency that you consider the following aspects of products in your product specification process on a scale of 1 to 5, where 1 means "very infrequently" and 5 means "very frequently.")

Considering sustainability at different project stages

Risk Takers usually consider sustainability during design & specification

- Risk Takers are significantly more likely to consider sustainability at each stage of a project, while Conservatives are less so.

CONSIDERATION OF SUSTAINABILITY BY PROJECT STAGE

(OFTEN/ALMOST ALWAYS)

		ARCHITECT PERSONA		
	Overall	Conservative	Dynamist	Risk Taker
BASE	330	126	97	107
Design stage	51%	30%	46%	79%
Specification	64%	44%	59%	91%
Post-Specification/procurement	42%	25%	40%	64%

Sig. higher
Sig. lower

Base: Varies
All respondents

Q7. In general, how frequently do you consider product/material sustainability at each of the following project stages?

Relative importance of factors in specification decisions

Risk Takers consider sustainability highly important for specification

- Risk Takers will take the time to research product sustainability, while Conservatives often specify products they have used in the past.

RELATIVE IMPORTANCE OF FACTORS TO SPECIFICATION/SELECTION

ASSIGN A TOTAL OF 100 POINTS ACROSS THE FOLLOWING FACTORS

		ARCHITECT PERSONA		
	Overall	Conservative	Dynamist	Risk Taker
BASE	308	118	88	102
Product performance	26.9	26.7	25.4	28.3
Product durability/useful life span	17.7	17.3	17.8	18.1
Past experience with product/brand	14.8	20.2	13.7	9.4
Sustainable product information	10.5	5.5	7.8	18.5
Product price	10.0	8.7	12.3	9.6
Product warranty/guarantee	7.5	7.9	6.9	7.5
Product availability	5.6	6.3	7.1	3.7
Ease of finding information	3.9	3.6	5.3	2.9
Word of mouth	3.2	3.9	3.8	1.9

Sig. higher
Sig. lower

Base: 308
All respondents specifying building products

Q4b. How important was each factor below in your decision about which specific product/manufacturer to specify? Please assign a total of 100 points across the following factors to indicate how important they were in your decision.

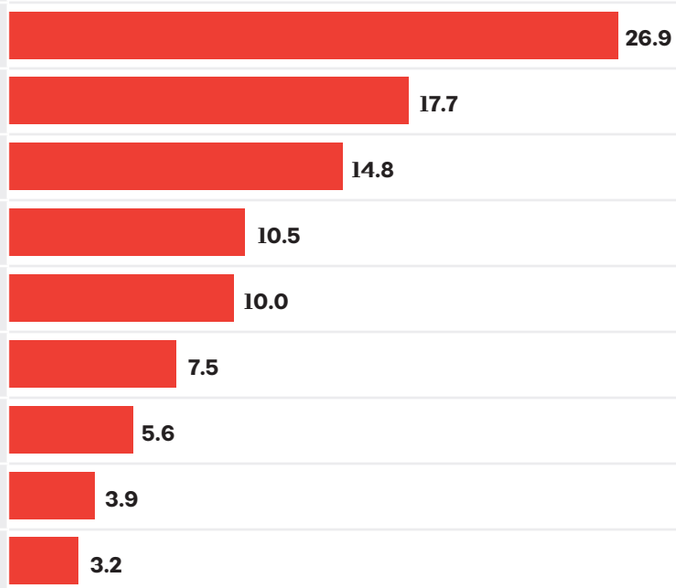
Relative importance of factors by product category

Useful life span is particularly important for critical materials like roofing

- While drivers are relatively consistent across major product categories, the importance of longevity and resilience in roofing also has a sustainability aspect to it. The useful life span could be a differentiator to roofing manufacturers.

RELATIVE IMPORTANCE OF FACTORS TO SPECIFICATION/SELECTION

ASSIGN A TOTAL OF 100 POINTS ACROSS THE FOLLOWING FACTORS



	Overall	SPECIFIED BUILDING PRODUCT				
		Flooring	Bldg. envelopes /exteriors	Coatings / Finishes	Insulation	Roofing
BASE	308	69	64	61	59	55
Product performance	26.9	24.1	26.7	24.3	33.5	26.1
Product durability/useful lifespan	17.7	18.7	16.4	17.2	14.2	22.2
Past experience with product/brand	14.8	13.9	14.7	15.4	16.3	13.5
Sustainable product information	10.5	12.0	9.8	10.2	11.5	8.4
Product price	10.0	11.4	11.0	12.0	8.2	7.1
Product warranty/guarantee	7.5	5.7	7.7	7.1	5.1	12.4
Product availability	5.6	5.9	6.4	6.0	4.3	5.5
Ease of finding information	3.9	4.8	3.6	3.7	4.9	2.1
Word of mouth	3.2	3.4	3.6	4.1	1.9	2.7

Sig. higher
Sig. lower

Base: 308
All respondents specifying building products

Q4b. How important was each factor below in your decision about which specific product/manufacturer to specify? Please assign a total of 100 points across the following factors to indicate how important they were in your decision.

Triggers for sustainable product selection/specification

Conservatives are as driven by policy and code as commitment

TRIGGERS FOR SUSTAINABLE PRODUCT SELECTION/SPECIFICATION

(OFTEN/ALMOST ALWAYS)

		ARCHITECT PERSONA		
	Overall	Conservative	Dynamist	Risk Taker
BASE	330	126	97	107
My own personal commitment	63%	37%	67%	90%
Firm/office design guides	47%	33%	42%	67%
Project certification requirements	42%	32%	40%	54%
Building product manufacturers	28%	25%	19%	39%
Client requests	24%	18%	19%	36%
Consultants (external)	23%	17%	18%	36%
Contractors	8%	7%	6%	12%

Sig. higher
Sig. lower

Base: Varies
All respondents

Q8. In general, how frequently are you prompted to select or specify sustainable products and materials by each of the following?

Appendix III
Analysis of certifications & red lists

Certification/standards awareness

Universal awareness for LEED & Energy Star

- Larger firms are more likely to be aware of WELL Building Standard, Living Building Challenge, Green Globes, Fitwel, and Declare.
- Awareness of WELL Building Standard and Green Globes is lower among those working mostly on single-family residential projects.

		FIRM SIZE				AGE		
	Overall	**Small (1-4)**	**Medium (5-19)**	**Large (20-99)**	**Very large (100+)**	**Millennials (<35)**	**Gen X (35-54)**	**Baby Boomers (55+)**
BASE	**330**	**114**	**75**	**68**	**70**	**35**	**129**	**163**
LEED	99%	99%	99%	100%	100%	100%	99%	99%
Energy Star	97%	96%	96%	99%	100%	94%	99%	96%
Cradle to Cradle	65%	58%	61%	75%	70%	77%	74%	55%
WELL Building Standard	65%	49%	59%	84%	80%	83%	71%	57%
Living Building Challenge	62%	54%	52%	82%	64%	74%	71%	51%
Passive House	61%	66%	59%	65%	53%	83%	71%	49%
National Green Building Standard (NGBS)	60%	65%	64%	51%	56%	51%	56%	65%
UL GREENGUARD	53%	46%	57%	57%	56%	66%	60%	45%
Green Globes	53%	41%	51%	57%	67%	43%	56%	52%
Living Building Challenge	49%	57%	29%	64%	50%	100%	64%	37%
International Green Construction Code (IgCC)	45%	52%	40%	34%	53%	37%	46%	47%
ILFI Zero Energy (NZEB)	38%	37%	36%	40%	40%	29%	43%	36%
Environmental Product Declarations (EPD)*	38%	29%	36%	46%	47%	54%	41%	32%
Health Product Declarations (HPD)*	28%	18%	24%	35%	40%	40%	32%	22%
Fitwel	22%	12%	17%	29%	36%	26%	26%	18%
Declare	17%	12%	9%	31%	20%	37%	22%	9%
GreenScreen Benchmark Levels	13%	10%	12%	16%	19%	14%	12%	15%
Product Category Rules*	5%	2%	5%	6%	7%	3%	5%	5%

Sig. higher
Sig. lower

Base: 330
All respondents

Q12. Which of the following certifications or standards have you heard of? * Information types, not certifications.

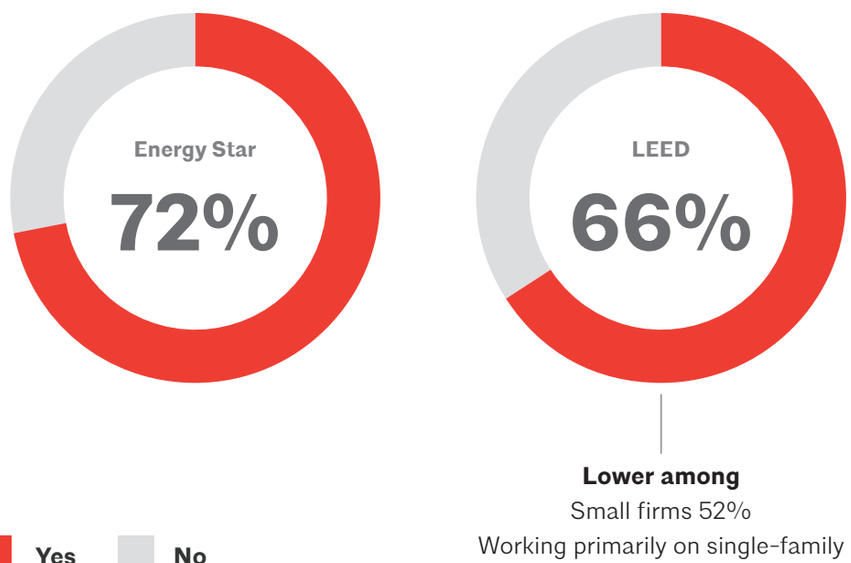
Usage of certifications & standards

Architects widely use Energy Star and LEED

- Energy Star and LEED are the top certifications by far used by most architects over the past two years. Manufacturers should ensure their products meet the requirements for these certifications. Architects who review product certifications are more likely to have used product certifications, particularly LEED (74%) and Living Building Challenge (27%).

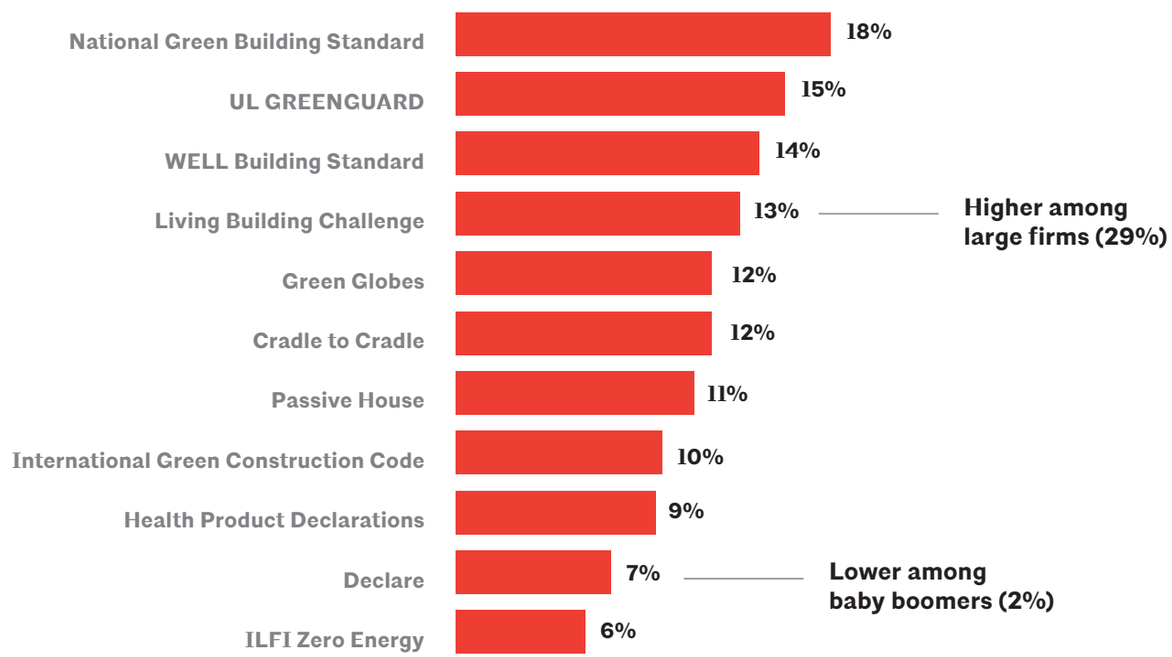
TOP CERTIFICATION/STANDARDS USED:

Top two most used



Lower among
Small firms 52%
Working primarily on single-family residential 45%

All others



Other mentions below 5%: Fitwel (4%), GreenScreen Benchmark Levels (2%), Product Category Rules (1%), Living Building Challenge (1%)

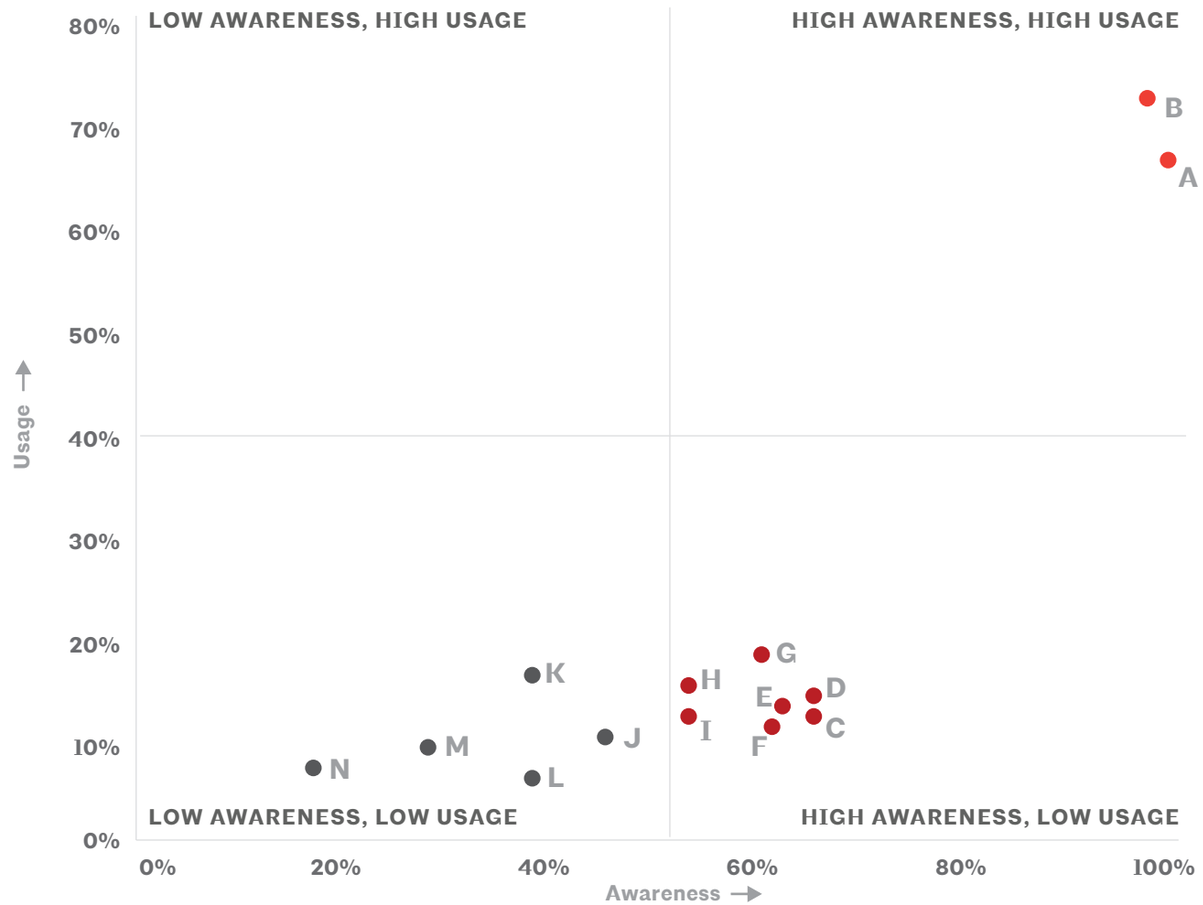
Base: 330
All respondents

Q13. Which of the following certifications or standards have you used when making product specifications/selections on projects over the past two years?

Awareness vs. usage of certifications & standards

Several certifications have built strong awareness with architects

- Manufacturers should pay attention to the wide range of certifications that are well-known by architects. The lower usage may in part be due to certain certifications applying to the project rather than the product, and they may not be relevant to all projects.
- While EPDs/HPDs are widely referred to as information sources, they are rarely called out in specifications, thus the low usage.



Certification/Standards (Sorted by awareness)

A	LEED
B	Energy Star
C	Cradle to Cradle
D	WELL Building Standard
E	Living Building Challenge
F	Passive House
G	National Green Building Standard
H	UL GREENGUARD
I	Green Globes
J	International Green Construction Code
K	Environmental Product Declarations
L	ILFI Zero Energy
M	Health Product Declarations
N	Declare

Brands below 5% overall usage not shown

Base: 330
All respondents

Q12. Which of the following certifications or standards have you heard of? Q13. Which of the following certifications or standards have you used when making product specifications/selections on projects over the past two years?

Conversion rates for certifications & standards

Energy Star & LEED have very high conversion rates from awareness to use

- While Declare has a lower overall penetration versus most other certifications, it has the third-best conversion rate after Energy Star and LEED. Other certifications/ standards that convert well include Environmental Product Declarations and Health Product Declarations.

	AWARE	USE	CONVERSION RATE
Energy Star	97%	72%	**74%**
LEED	99%	66%	**67%**
Declare	17%	7%	**43%**
Environmental Product Declarations	38%	16%	**42%**
Health Product Declarations	28%	9%	**34%**
National Green Building Standard	60%	18%	**29%**
UL GREENGUARD	53%	15%	**29%**
Green Globes	53%	12%	**24%**
WELL Building Standard	65%	14%	**22%**
Living Building Challenge	62%	13%	**22%**
Intl. Green Construction Code	45%	10%	**21%**
Cradle to Cradle	65%	12%	**19%**
Passive House	61%	11%	**18%**
ILFI Zero Energy (NZEB)	38%	6%	**16%**

Base: 330
All respondents

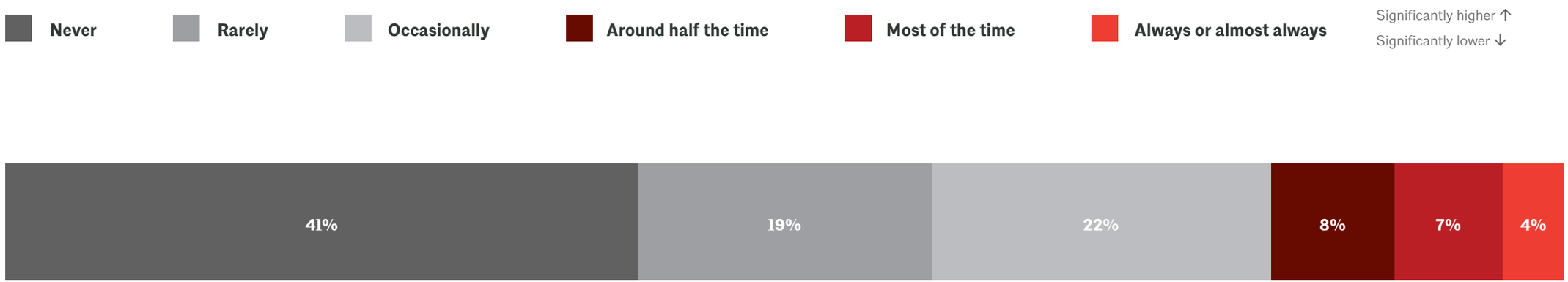
Q12. Which of the following certifications or standards have you heard of? Q13. Which of the following certifications or standards have you used when making product specifications/selections on projects over the past two years?

Red list usage

Use of red lists is increasing but is not a frequent task for architects

- Only 1 in 10 architects frequently review avoidance lists. This is likely because it rarely falls on the individual architect to scrutinize materials. Red lists still play an important role within firms and when setting up firm masters/approved materials.

FREQUENCY OF USING CHEMICAL HAZARD OR AVOIDANCE LISTS IN PAST TWO YEARS



59% have used red lists in the past 2 years, up 35% in 2017

Risk Takers 76% ↑
Small Firms 50%
Single-Family Res. Firms 52%
Conservatives 44% ↓

Base: 330
All respondents

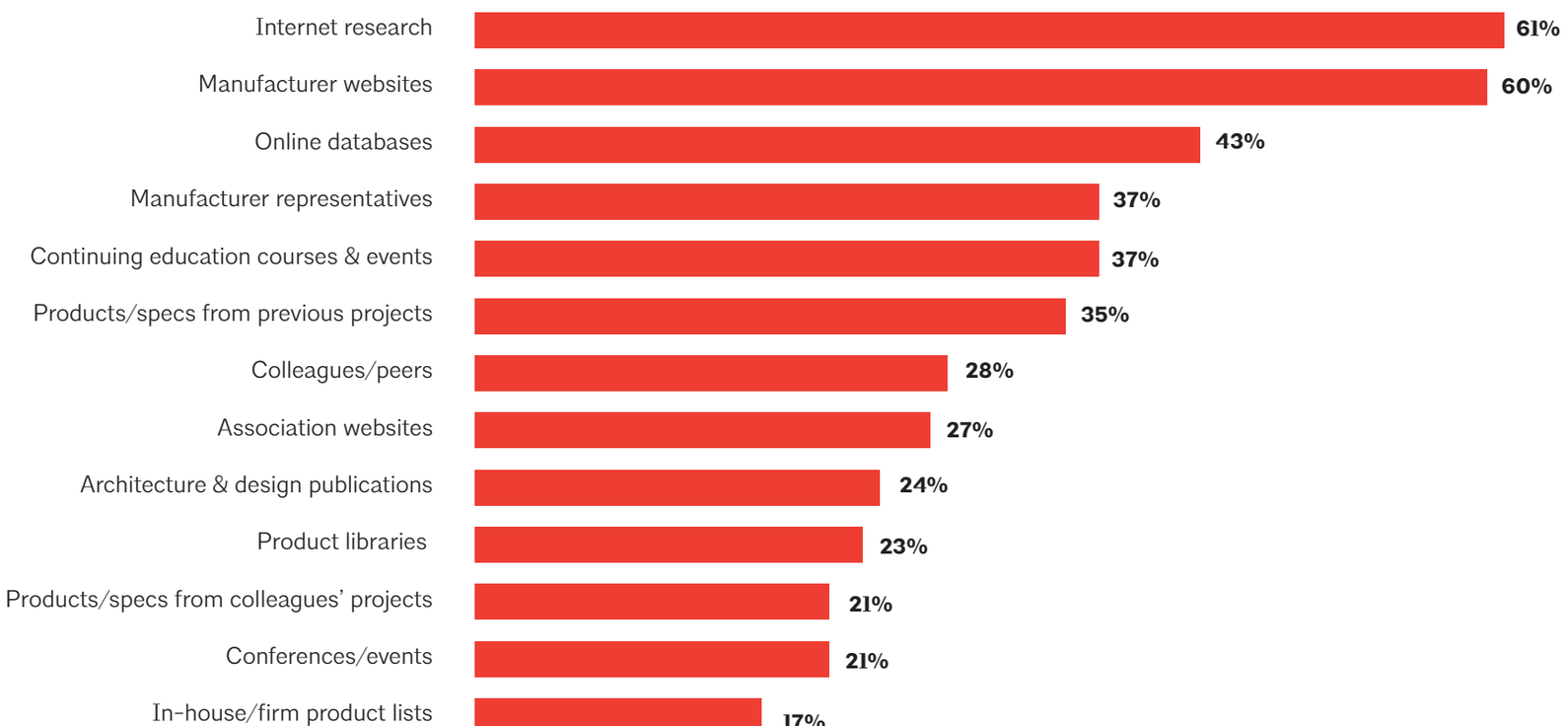
Q16. Over the past two years, how frequently have you used chemical hazard or avoidance lists (i.e., "red lists") when making product/material specifications?

Red list sources of information

Red list research is mainly done using digital sources

- Architects perform internet research, often through manufacturer websites or online databases, to evaluate if a product is on avoidance lists.

SOURCES USED TO LEARN ABOUT CHEMICAL HAZARD OR AVOIDANCE LISTS



Source type

- **Digital 89%** - Millennials 95%
- **In-person 68%**
- **Past projects 49%** - Millennials 59%
- **Print 38%** - Boomers 47% ↑

Base: 196
All respondents using red lists in past two years

Q17. Where do you learn about or look for information on chemical hazard or avoidance lists?

PUBLISHED 2019 BY
The American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006
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