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2016
The Architect's Journey to Specification

PUBLISHED DECEMBER 2016 BY
The American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006
aia.org

An **AIA** research initiative presented in collaboration with ConstructConnect

ISBN: 978-1-57165-008-5

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SURVEY ADMINISTRATION AND DATA TABULATION:
B2B International, White Plains, NY

DESIGN AND PRODUCTION:
Polygraph

Specification as a strategic exercise is making a comeback

Architects shape the vision that transforms the built environment. Their mission focuses on how buildings contribute to a better environment, human health, resilient communities and better life experiences. Nowhere is that mission better exemplified than in the choices architects make when they select products that make buildings into high-performance structures.

Architects care about specifications. More than two-thirds of architects think that specifying provides an opportunity for collaboration and discussion. Through the choices they make, the profession defines fundamental, strategic, and, most importantly, essential services for the process. Only those practiced in building design can understand how to organize and arrange all the parts to make the whole—and all the factors to take into account. Today, architects uniquely create buildings that improve the quality of life for those who occupy or use them.

Successful specifications call for both alacrity and discipline: those are the two most essential ingredients for crafting meaningful change in the built environment.

Decisions made during this process shape the opinions and thoughts of building owners and clients. They set a course of action for contractors and builders. They result in an experience for the occupant that is either positive or negative.

It's surprising, therefore, that the process through which architects and building design professionals decide to specify products remains somewhat opaque. Firm culture plays a big role, and that culture is usually defined by firm principals and owners. Each firm's own habits, tendencies and way of doing things produce consistent patterns that emerge to become best practices.

AIA and ConstructConnect – an AIA Innovation Partner and a leading construction market research company – collaborated to make this landmark report. Our two organizations share a common vision of the importance of architects in the construction ecosystem.

The report offers a window into how architects specify building products so that everyone benefits from working with architects.

The research in this report emphasizes importance of the relationship between architects and building product manufacturers in the continuing evolution of the built environment.

Understanding architects and why they specify certain products is the first and fundamental step. We believe this report helps us shed light on the journey to making specifications. The report's companion data dashboard can help you dig deeper into the data and apply that intelligence to your own business.

Learn more at aia.org/dashboard.

Robert A. Ivy
CEO/Executive Vice President
American Institute of Architects

Dave Conway
Chief Executive Officer
ConstructConnect

Recommendations based on key findings

Manufacturers have a unique opportunity to work with architects and become valued resources to them. The findings in this study provide repeated emphasis on architects' reliance of past products, trust in products that are familiar, and need for the product specification process to be as easy as possible while allowing them to maintain quality design and document work.

The findings reinforce the extreme importance that relationships have in the architecture, engineering, and contractor (AEC) industry. And the relationship between architects and product manufacturers are no exception. They want trusted partners that they can create long-term relationships with—ones who will provide additional knowledge and expertise that will help architects deliver the best service possible to their clients.

Overall recommendations to foster, strengthen, and maintain relationships with architects:

1. Improve websites. Websites are one of the most-used ways architects get product information. Architects want product websites that are clear, concise, up-to-date, and easy to navigate. They also want easy access (no sign-up to view product information) and detailed information accessible, including building information models and objects.

2. Focus on education. Architects are required to take continuing education courses in order to maintain their license. It is not surprising that they use those sessions to keep up on product trends. Manufacturers can capitalize on this by creating and offering educational programming, including seminars, webinars, and lunch-and-learn sessions that qualify for continuing education credits. An important caveat is that manufacturers need to ensure their education programming focuses solely on that education—and how their products fit into that. An architect views marketing and direct selling of products services, or specific brands, very poorly. If product manufactures try to sell within educational programming, they will undermine their relationships.

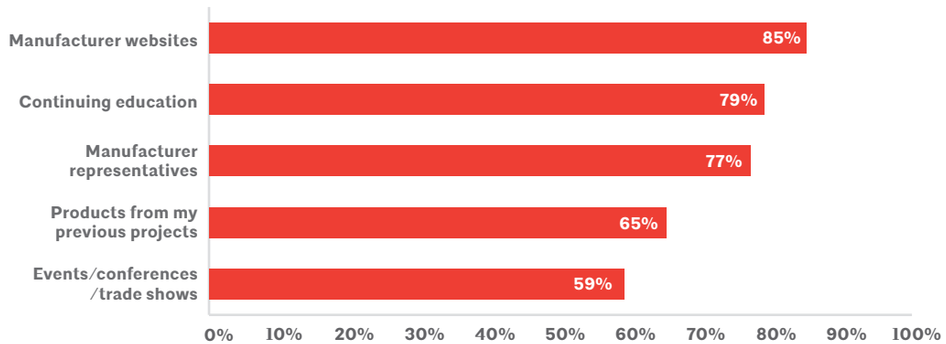
3. Be an expert. Architects don't want to talk to a sales or marketing person unless that person knows technical information about the product. Be sure your sales force includes people knowledgeable about how the product will be used—and has specifications available on that product.

4. Be proactive. Architects report that manufacturers are important influence agents in the products they select for specification. Architects have many demands from clients, and their time is extremely limited. Manufacturers should learn about what pressure points architects have. Proactivity will also allow manufacturers to expand their business with architecture clients. For example, architects report that product manufacturers are not very involved in the latter stages of the specification process, yet they could use assistance. This is an opportunity area.

5. Be transparent. The more open a partner is, the more loyalty and trust he/she will garner. This will translate to greater market share, as architects start to look at the manufacturer as an extension of their project teams.

Manufacturers and continuing education are the most used ways architects keep up on product trends

% of respondents



Targeted approaches along the stage of specification

The data also point to specific knowledge that partners can use to build market penetration throughout the specification journey.

STAGE 1	STAGE 2	STAGE 3
Design	**Specification**	**Review & Approval**
Profile **Key decision-makers:** Architects **Decision-making entities:** Principals/partners, clients, designers, and project managers **Building product manufacturer (BPM) involvement:** Moderate, serving primarily as information providers	**Profile** **Key decision-makers:** Architects **Decision-making entities:** Architects, project managers, designers/engineers, and building product manufacturers **BPM involvement**: High, serving as a resource, particularly providing spec information and being responsive to questions	**Profile** **Key decision-makers:** Architects **Decision-making entities:** Architects, project managers, clients, engineers, and contractors **BPM involvement**: Very low
Information needs **Primary:** Technical product descriptions; product specifications **Other needs:** Pricing information, design guides, BIM objects, media (e.g., photos, drawings), case studies, trend information	**Information needs** **Primary:** Technical product descriptions; product specifications **Other needs:** Warranty information	**Information needs** **Primary:** Technical product descriptions; product specifications **Other needs:** Warranty information and installation instructions
Tactics • Improve websites, particularly, ensure content is current. • Offer education programming, particularly ones that qualify for continuing education units required for licensure. • Provide more detailed and focused information. • Provide general guidance. • Be readily avilable for questions and ensure that resources can provide knowledge and consultative services, instead of being sales or marketing oriented.	**Tactics** • Review specs and provide detailed information. • Provide non-proprietary specs and information. • Be more consultative—providing guidance and advice, with a focus on knowledge exchange. • Emphasize and find ways to help specifiers save time in their processes. • Make websites easier to find details.	**Tactics** • Be more proactive with strategic and valuable information, particularly for smaller firms. • Become a trusted advisor, being responsive and available for questions and information requests. • Focus on information around specification changes.

Section 1

Overall building product specification drivers and trends

Section 2

Following the architect through the specification process

Section 1

Overall specification drivers and trends

Firm culture, specifier personas, and the approach to product specification

KEY FINDINGS

While there are variations in style, architecture firms are generally habitual in their workflow. They are also very committed to sustainability.

Most architecture firms have a fairly risk-averse culture in relation to product selection. Tendencies lean toward products used in previous work and those with a high degree of market penetration.

Architects and designers tend to know what building product manufacturers they will specify on projects.

Architecture firm profiles

Architecture firms vary in size, specialization, and culture. Identifying the way firms operate and behave is important in order to understand how they function, the kind of employees they retain, and the ways they work with service providers and other partners. The research investigated seven aspects of firm philosophy where practitioners rated their firms along a spectrum. **(FIGURE 1.0)** Neither end of the spectrum is better or worse than the other; the scale merely helps define the profile of different architecture firms.

On the whole, architecture firms are very habitual in their practices. They are also very committed to sustainability in building design. But there are variations by firm size and type. With regard to product specification, most firms are fairly risk-averse, with decisions tending to lean toward products that have worked well in the past. New products and materials tend to be avoided until there is a moderate level of use in the market. **(FIGURE 1.1)**

Conversely, architecture firms do tend to have a more dynamic culture that is open to new ideas, regardless of source. This orientation toward innovation reflects a profession that is open to change and willing to learn from others. The juxtaposition of these two inclinations toward risk aversion and

FIGURE 1.0 Aspects of architecture firm profiles
Source: B2B International

Experimental: "We prefer to experiment with new and different products/materials for our projects."	**APPROACH TO EXPERIMENTATION**	**Habitual:** "We prefer to specify products/ materials we have specified before."
Early adopter: "We are among the first firms to specify products/materials that are new to the market."	**APPROACH TO INNOVATION**	**Laggard:** "We are among the last firms to specify products/materials that are new to the market."
Environmental: "We have a strong focus on the environment and sustainability when it comes to specification."	**ENVIRONMENTAL FOCUS**	**Non-environmental:** "We tend not to focus on the environment and sustainability when it comes to specifications."
Outspoken: "We have a dynamic and outspoken culture."	**CULTURE OF INTERACTION**	**Studied:** "We have a quiet and studied culture."
Flexible: "We keep our options open, stay flexible, and focus on the big picture."	**PLANNING CULTURE**	**Structured:** "We focus on getting the job completed with structured early planning."
Risk taker: "We encourage all ideas even if some of them will fail."	**RISK CULTURE**	**Risk averse:** "We prefer to use ideas that we know will be successful."
Open ideation: "We believe the best ideas come from working with external sources."	IDEATION CULTURE	**Closed ideation:** "We believe the best ideas come from within the architecture studio."

innovation suggest that new ideas need to be supported by evidence and built on prior established concepts.

Architects are also leaders in sustainability. In fact, this commitment was the one area where firms were most oriented toward one end of the spectrum. This is consistent with architects' long-time leadership toward sustainable design. For example, the architects in the AIA's Committee on the Environment (COTE) established the COTE Top Ten Projects in 1997, well before the widespread adoption of green building in the marketplace.

Differences by firm size

The largest firms are slightly more conservative in their approaches, but also present a much more outspoken culture than smaller firms. Sole practitioners and very small firms (less than five employees) are much more nimble, with cultures of open ideation and flexibility, where all options remain on the table until the final decision point is required. They also tend to be the least attached to previously-used products and most open to risk.

The largest and smallest firms were the ones that tended to be more oriented toward early product adoption, likely because large firms could absorb the risk and small firms because of their more flexible operations.

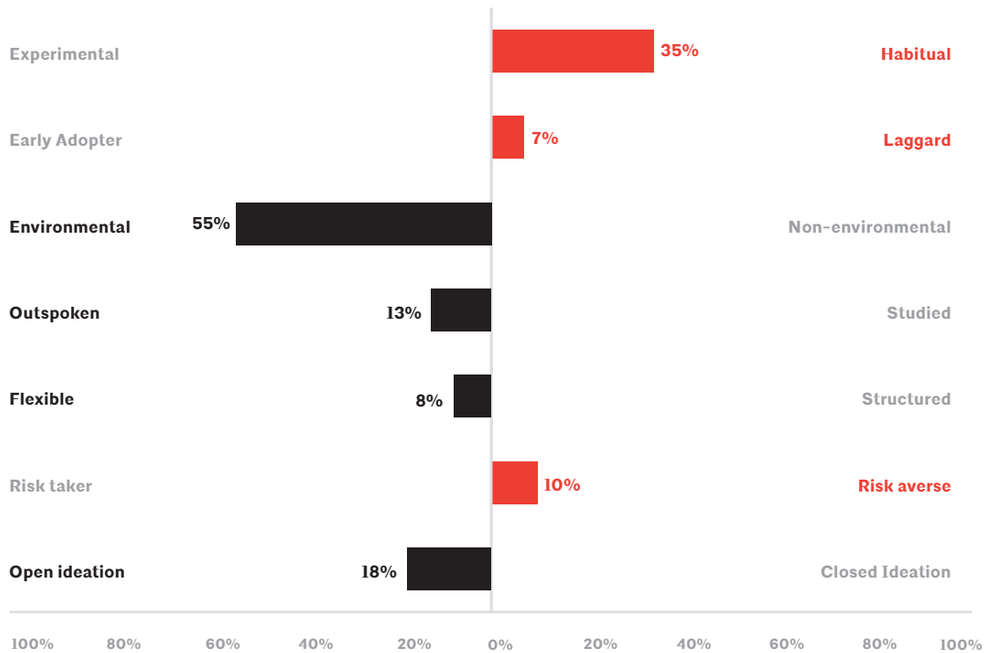
Mid-sized firms sit between the two extremes, though they tend to be the most conservative when it comes to adopting new products and focusing on using structured early planning in their approach toward project creation.

Single discipline versus multidisciplinary firms

One of the important trends at architecture firms over the last decade is the dramatic increase in the share of firms with a multidisciplinary specialization, meaning that they offer both architectural services as well as at least one additional design discipline (e.g., interior design, engineering). According to the AIA's **2016 Firm Survey Report**, nearly two-thirds of architecture firms were reported as single discipline in 2005, but by 2015, that share was down to just over half of all firms. At the same time, the share of firms reported as multidisciplinary increased from 29% in 2005 to 42% in 2015. As a result, the distinction between these types of firms is critical in understanding where the profession is trending, as well as the cultural shift that happens in firms with more than one discipline.

Multidisciplinary firms are very highly focused on sustainability and also tend toward a more dynamic and outspoken workplace culture. In contrast, single discipline firms are more likely to rely on products they have had positive experiences with and tend to be

FIGURE 1.1 Overall architecture firm profiles*
% of respondents



The score is the % difference between two options

*Note: Unless otherwise noted, all information shown in this report is from the American Institute of Architects.

more conservative in trying out new products. Like all architecture firms, they are disposed toward supporting sustainable design, though not at as dramatic levels as their multidisciplinary counterparts.

Architect personas

The data overall reveal three prevailing architect personas, where architects share major traits and attitudes. These personas—drawn from their firm's profile (Figure 1.1), key influence factors (Figure 2.1 on page 15), and product information used (Figure 3.3 on page 21)—help identify those practitioners that are most likely to be open to new products or technologies, and those best targeted for increasing market share of existing products/services. **(FIGURE 1.2)**

The Conservative

The first persona is labeled "the conservative." The largest share of architects, 41%, falls into this profile. This architectural professional heavily relies on past successes, and is looking for detailed product information. They are less likely to be a LEED accredited professional, a proxy for personal dedication to sustainable design practices. While the gender of conservatives is mixed, the group is more likely to be older and work for firms with a risk-adverse attitude.

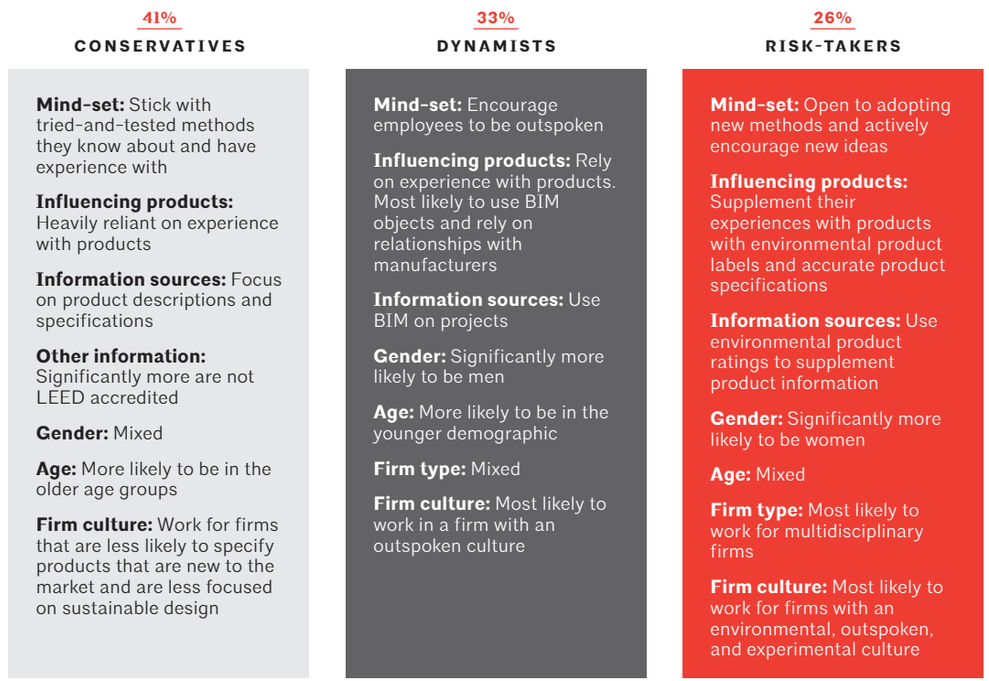
The Dynamist

The next largest share of architects can be defined as "dynamists," and represent 33% of all architects. They tend to be more outspoken, and while they also rely on past experience with products, they find relationships with manufacturers important. They are more likely to be influenced by access to building information modeling (BIM) objects for products they specify given that they often use BIM in their work. In terms of profiling, dynamists tend to be male, younger, and work in a firm with an outspoken culture (which more often occurs in larger firms). Dynamists are also less likely to be dissatisfied with product manufacturers.

The Risk Taker

The third persona, representing 26% of architects, are labeled "risk takers." These architects are most open to new products and methods of design, and they actively engage in new ideas, often independently researching information on products. They are more committed to sustainable design and actively look for products that are environmentally preferable. The risk taker is significantly more likely to be female and more likely to work in a multidisciplinary firm. They are often located in firms that align with these attitudes—committed to sustainable design, experimental, and dynamic.

FIGURE 1.2 Architect persona attributes
% of respondents



Personas in different firms

The distribution of the personas varies by firm demographics. Larger firms are more likely to have an even distribution of architects working for them—with 35% of conservatives, 32% of dynamists, and 33% of risk takers. Conversely, the smallest firms tend to be more conservative in bend, mimicking the overall profile of the profession.

Single discipline firms tend toward the average architect profile, while multidisciplinary firms have significantly more risk takers working for them—37% compared with the overall average of 26%.

Specifying familiar products and materials

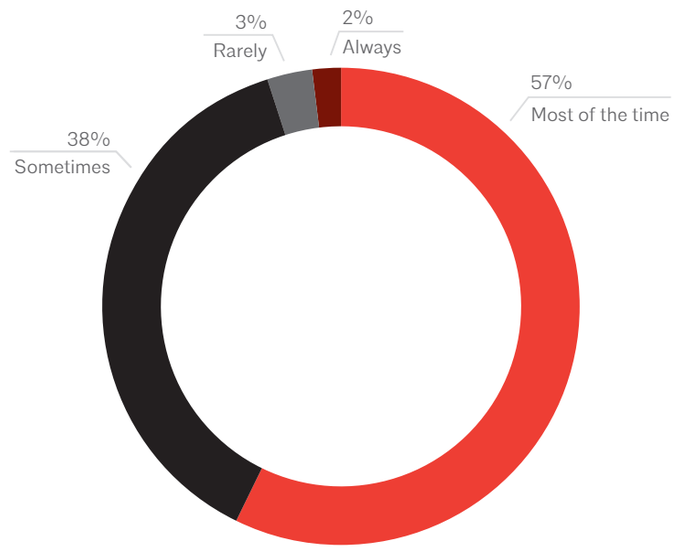
A majority of the time design professionals know what building product or material manufacturer they will specify on a project before they conduct research, meaning product manufacturers need to be effective in building relationships, increasing their brand awareness, and communicating effectively. Specifically, 59% of respondents report they always or most of the time know what they will specify ahead of time. A negligible amount of respondents rely exclusively on research to make decisions. **(FIGURE 1.3)**

Differences by age

Older respondents more often know what they will do before conducting research—72% of respondents over 55 reported they always or most of the time select the manufacturer of choice ahead of time. Conversely, only 37% of respondents under 35 and 44% of respondents aged 35 to 44 report the same. Since the results show that selection of a product brand deepens as design professionals and architects advance in their careers, younger professionals are an ideal target for product manufacturers and other service providers in order to expand market share in the near and long term.

FIGURE 1.3 Frequency at which design professionals select particular building product manufacturers without research

% of respondents



Reasons for predetermining selection of specific product manufacturers for projects

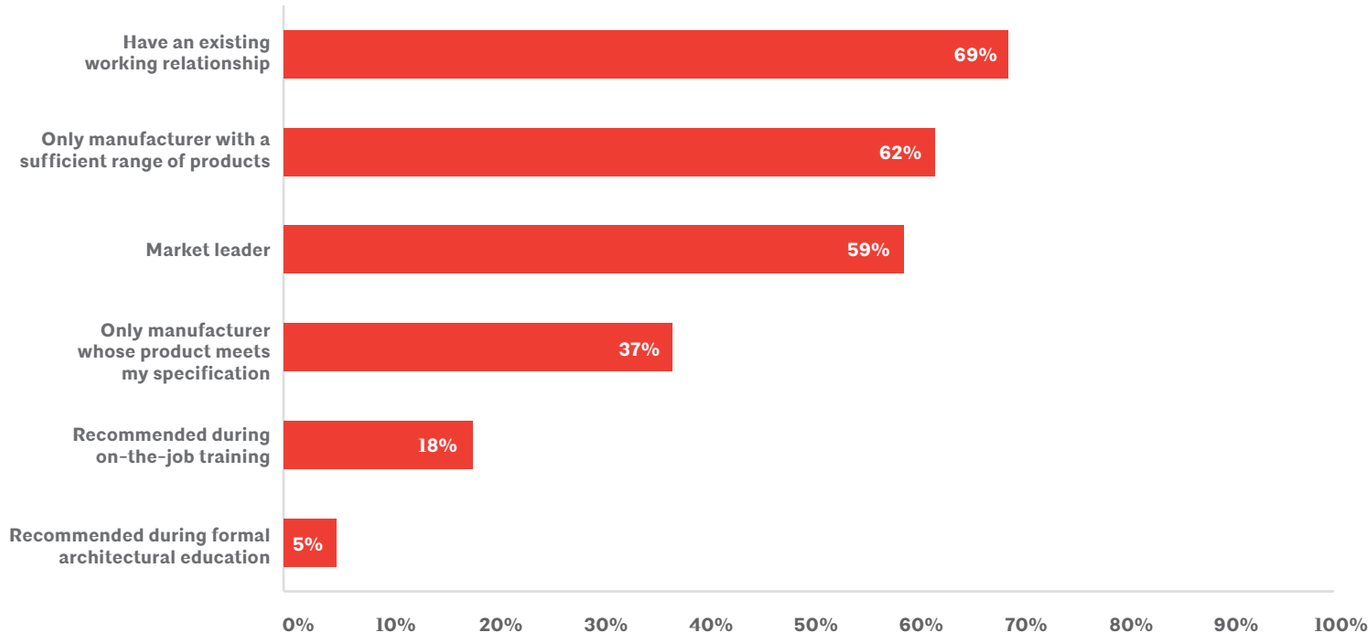
Respondents report that there are many reasons contributing to their predetermined decisions around the brands they prefer in specifications, but predominantly, they rely on manufacturers with which they have working relationships. **(FIGURE 1.4)**

In terms of demographic differences, respondents with the specifier job title rely much more on manufacturers they have relationships with (reporting that reason at 94%, versus 69% of architects and 67% of firm principals).

The psychographic persona (Figure 1.2) also makes a difference in how manufacturers get preferred status. While Conservatives and Dynamists act similarly, Risk Takers make pre-determination decisions far less often on existing relationships (reported by only 56%, compared to an average of 74% for the other two personas) and significantly more often for products uniquely meeting their specifications (reported by 49%, versus 33% for the other two personas). The Risk Taker is also unique in that the most often reason they pre-select a product without doing research is if that brand is the market leader.

FIGURE 1.4 Factors behind the decision about a manufacturer for product specification before conducting research

% of respondents



Influencing specification— factors and agents

KEY FINDINGS

Overall, architects are influenced by a multitude of factors, though past experience is prevalent.

Licensed architects are almost always involved in product specification and are, by far, the most influential people in the specification process.

Architects view their peers and building product manufacturers as the most influential agents in their efforts to learn about products and materials.

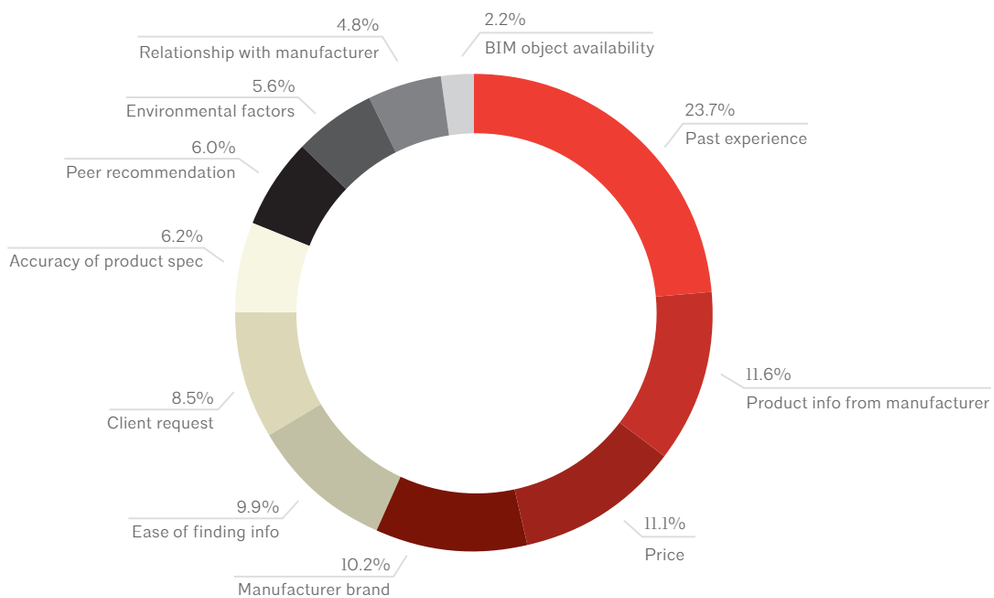
The research points to a profession that is highly based on past experience as well as first-hand knowledge and relationships with product manufacturers. This is evident by the factors and agents that influence respondent decisions during the specification process.

Factors influencing product selection and specification

Architects themselves have different ways of approaching specification and design decisions in general. Overall, when specifying building products, architects are influenced by a multitude of factors, though past experience is the prevailing one. Product manufacturer information, as well as brand reputation, also matter, as do price, ease of finding information, and influence from their clients. **(FIGURE 2.1)**

In regards to client influence, a representative survey of nonresidential building owners (AIA's 2016 **Client Insights Data That Drives Business Report**) revealed that most owners express their product preferences to their architects. However, the majority of owners then defer to their architect if the architect poses an alternate. This means that while architects are influenced by their owners, they are the ones that usually make the ultimate product selection decision.

FIGURE 2.1 Factors influencing product specification
Average share of relative influence



Design professional involvement and influence in specification decisions

Licensed architects are almost always involved in product specification, 86% of respondents report their involvement in these activities. Architects also have the most influence, with 40% of respondents reporting them has having the most influence. **(FIGURE 2.2)**

More than half the respondents also report designers and project managers involved in their projects. These practitioners also have some influence, though a project manager is more influential than a designer. While principals and partners are less often involved (reported by only 40% of firms), when they are involved, they have notably more influence than other design professionals.

Differences by firm size

Large firms: Larger firms are significantly more likely to have designers involved in their specification process, at 74%, while senior leaders (principals and partners) are much less likely to be involved (23%).

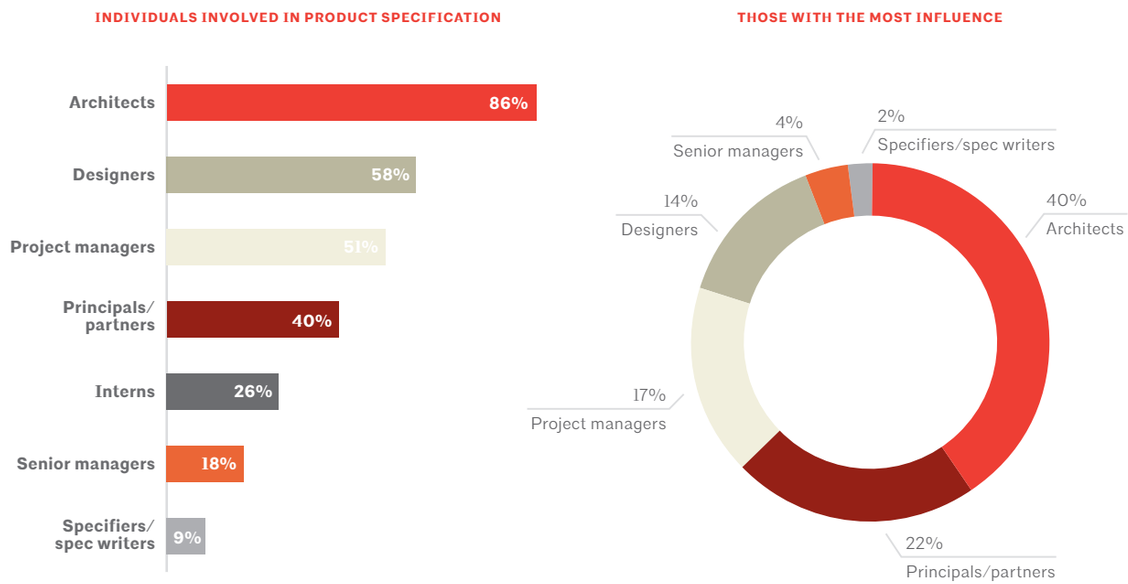
Small firms: The smallest firms are significantly more likely to have the principal or partner involved—at 57%, this is the second largest involved group. This is consistent with the setup of a small firm whose leader(s) are involved in most aspects of every one of their projects.

Differences by type of firm

Multidisciplinary firms: Similar to firm size, multidisciplinary firms overwhelmingly have architects and designers leading the product specification process—at 94% and 71% of respondents, respectively. In these firms, project managers are most often reported to be the most influential, at 38%. Architects are also influential at 31%, and the remaining 31% are pretty evenly distributed between the other professionals.

Single discipline firms: These firms, also more likely to be smaller, correspondingly have more involvement by principals and partners. Architects are overwhelmingly the most influential, reported by 57%, followed by project managers at 29%.

FIGURE 2.2 Individuals involved and influential in product specification
% of respondents



Influence agents in learning about products and materials

The sources that design professionals use to learn about products and materials help a design profession make decisions about the products they ultimately specify. These outside players are key influence agents into the specification process. Overall, there are two key influence agents—architects and building product manufacturers. **(FIGURE 2.3)**

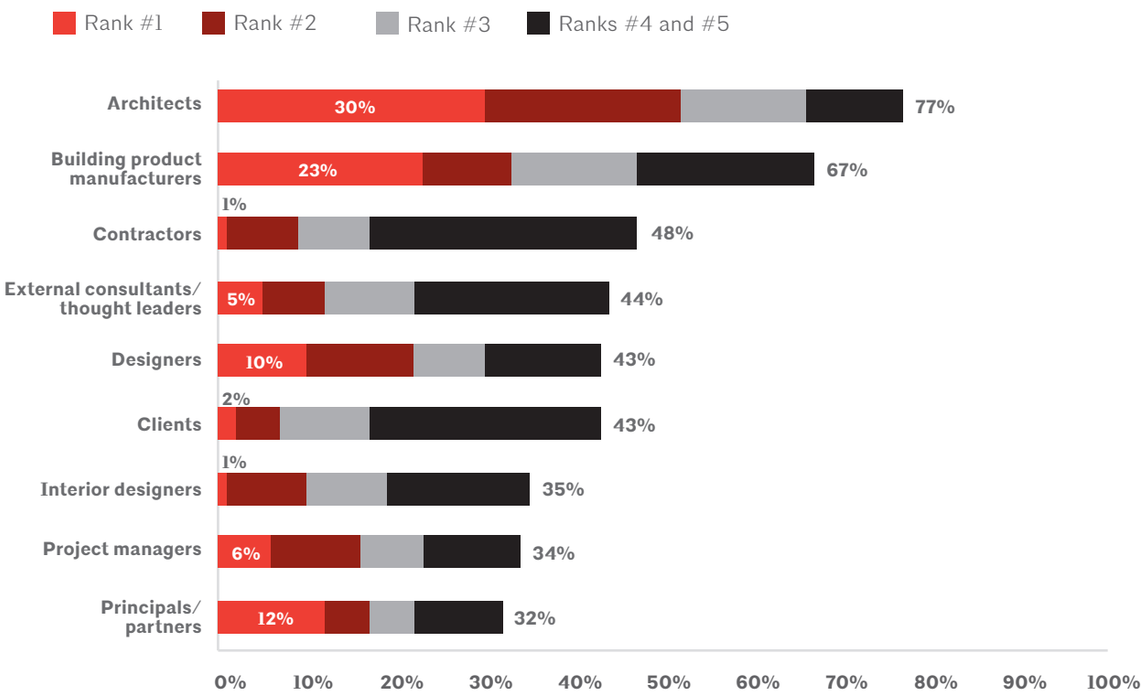
Architects serve as the primary influence agent gathering information on products and materials in order to create project plans and specifications, with 77% of respondents rating them as a top-five influencer. Architects are also the highest-ranked influencers, with 30% of respondents rating them as the number one influencer.

Product manufacturers also have notable impact on product and material knowledge. More than two thirds of respondents rate them as influential, and 23% also rank them as the most influential sources. Product manufacturers are rated as having the highest influence for older respondents, aged 55 to 64, and the least for the youngest demographic, with a steady increase as respondent age increases. This linear increase demonstrates that manufacturers' influence increases over time as architects and designers become more experienced.

Influence agents across different respondents

While architects are the top influencer across all demographic groups, there are some differences in the ranking for other influencers. In larger firms, designers are as influential as product manufacturers with about a third ranking both players in their top two. In smaller firms, firm principals and partners have more influence than in larger firms.

FIGURE 2.3 Influence agents in learning about products and materials
% of respondents



Decision support and information needs

KEY FINDINGS

Design professionals use a multitude of sources to keep on top of trends—but building product manufacturers top the list. An overwhelming number of respondents cited manufacturer websites and manufacturer sales representatives as their most-used sources.

Continuing education programming is rated high in two ways: First, as a source of information about products and materials; and second, as a reference source when writing specifications.

Respondents seek two sources of information most during all stages of the specification process: Technical product descriptions and product specification data.

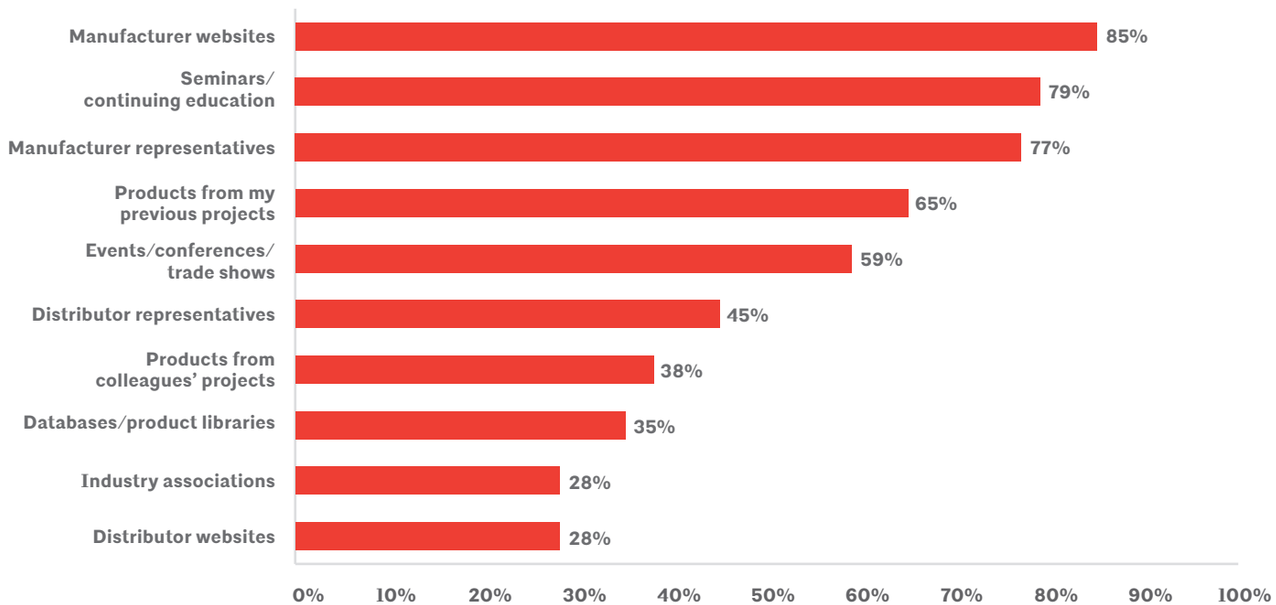
Sources of information about building products and materials

Design professionals use a variety of sources to keep on top of building product and material trends. Topping the list are product manufacturer websites, continuing education, and product manufacturers representatives. More than three fourths of respondents use all three of these information sources. **(FIGURE 3.1)**

Also highly used are previous product experience and information from events, conferences, and trade shows. Conversely, while distributors are used by some respondents, they are at lower levels, pointing to the profession preferring to get information from product manufacturers directly.

Hard-copy directories, magazines, and journals are no longer prevalent sources—used by 13% or fewer respondents. Additionally, social media and online forums have not taken hold as information providers, used by only 14%.

FIGURE 3.1 Information sources used generally to keep on top of product and material trends
% of respondents



Continuing education influence on building product manufacturer knowledge

The second highest used source of information, continuing education programs, including seminars and webinars, are also rated as highly useful in expanding knowledge of specific building product manufacturers. Overall, 65% of respondents rate continuing education programs as highly useful, with another 17% finding them somewhat useful. Conversely, only 7% found them not to be useful. **(FIGURE 3.2)**

Respondents across all job roles rate continuing education programs as highly useful as a method for increasing knowledge of product manufacturers and their brands, but higher shares of architects and project managers report their usefulness. Conversely, senior firm leaders and specifiers do not rate them as highly, though it is notable that even for these groups, high percentages report them as highly useful at 61% of firm leaders and 55% of specifiers.

Other key differences among respondent demographics:

- Small firm respondents rate usefulness at significantly lower rates than their larger counterparts, but even for them, a majority (55%) rate continuing education as highly useful.
- Men are significantly more inclined to report continuing education as highly useful, at 67%, compared with 54% of women.

Helping specifiers learn about new products and materials

There are a number of ways architects think building product manufacturers (BPMs) could help them learn about new products and materials. These were unprompted so the agreement around suggestions is notable.

The responses orient around three major themes:

1. Education and resources
2. Website improvements
3. Communications

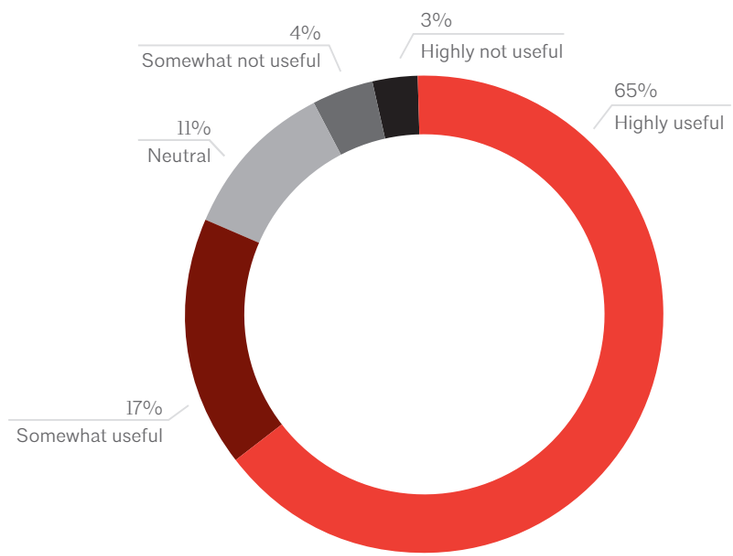
1. Education and resources

This is a central way architects and other specifiers want to gain product information, rather than sales pitches. Notable are the following comments:

- Almost three in ten (29%) want continuing education lunch & learns, seminars, or webinars—and preferably ones that offer continuing education credits toward licensure.
- Another 11% (mostly respondents over 45 years old) would like education offered in their own offices.
- 8% want specific case studies on how to apply new products.
- 7% want sustainable product certification information available (including environmental product declarations, health product declarations, etc.)

FIGURE 3.2 Usefulness of continuing education for learning about building product manufacturers

% of respondents



2. Website improvements

Overall, architects and specifiers find fault with BPM websites. Notably, they note the following:

- 17% complain that BPM websites are not easy to navigate and do not like to have to sign in to get information.
- 12% note that information online should be more up-to-date, concise, and detailed—challenges they find currently.

3. Communications

Many architects and specifiers are open to BPM communications. In fact, they want more proactive behavior, but only if it is focused on content.

- One in ten state they would like responsiveness to questions they pose after visiting a website.
- 14% want BPM respondents to be knowledgeable.
- 10% complain that pricing is not transparent and products are difficult to compare.

Product-related information needs by stage in the specification process

Across the board, respondent most often seek out technical product descriptions and product specification data. **(FIGURE 3.3)**

While more specific detail on information used at each stage in the specification process can be found in chapters six through eight, below are the most notable findings:

- At the design stage, pricing and design guides are particularly important.
- The specification and review and approval stages have relatively similar information needs—with warranty information and installation instructions noted by the third and fourth largest shares, respectively.

FIGURE 3.3 Top product-related information used throughout the specification process (by stage)

% of respondents

	DESIGN STAGE	SPECIFICATION STAGE	REVIEW & APPROVAL STAGE
Technical product descriptions	51%	68%	52%
Product specification data	45%	71%	53%
Warranty information	16%	50%	53%
Pricing information	46%	27%	28%
Installation instructions	16%	38%	41%
Design guides	42%	24%	13%
Environmental product ratings	24%	29%	23%

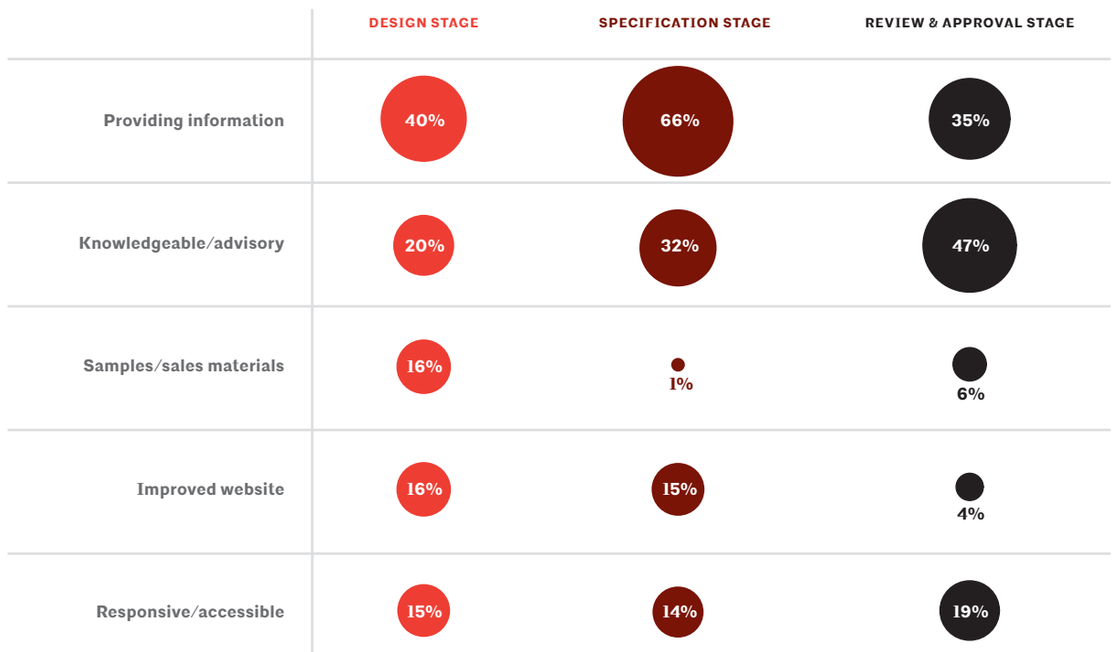
Needs from product manufacturer by stage in the specification process

Design professionals value different things as they move through the specification process. However, they consistently want information from product manufacturers, and they want them to be knowledgeable about their products—not just able to share sales or marketing information, but also technical details about the product including its function and performance. **(FIGURE 3.4)**

While more specific detail on ways product manufacturers can help design professions at each stage in the specification process can be found in chapters six through eight, below are some other notable differences between the stages:

- At the design stage, professionals are focused on things that can help them in the planning process. Therefore, they are most in need of improved web content and functionality as well as access to samples and other product materials.
- At the specification stage, the priority for a product manufacturer should be to provide spec information, preferably non-proprietary, as well as ensuring that design professionals have access to people with technical knowledge.
- At the review and approval stage, any expertise manufacturers can bring to help with spec modifications would be important and welcomed.

FIGURE 3.4 **Factors behind the decision about a manufacturer for product specification before conducting research**
% of respondents



Satisfaction with decision support

KEY FINDINGS

Overall, design professionals are modestly satisfied with their sources of information, with notable need for improvement in pricing information.

Architects are generally satisfied with manufacturers as sources of information. Trusted brands and manufacturers being available to answer questions get the best ratings. But there are areas for improvement, especially in the provision of digital content and information sources, such as BIM.

Satisfaction with information quality

Across all stages of specification, technical product descriptions and product specification data are highly used (see Figure 3.3 on page 21), making their satisfaction rating particularly crucial. Overall, design professionals are modestly satisfied with these sources of information, with 47% and 46% rating technical product descriptions and product specification data, respectively, in the top two boxes of satisfaction. **(FIGURE 4.1)**

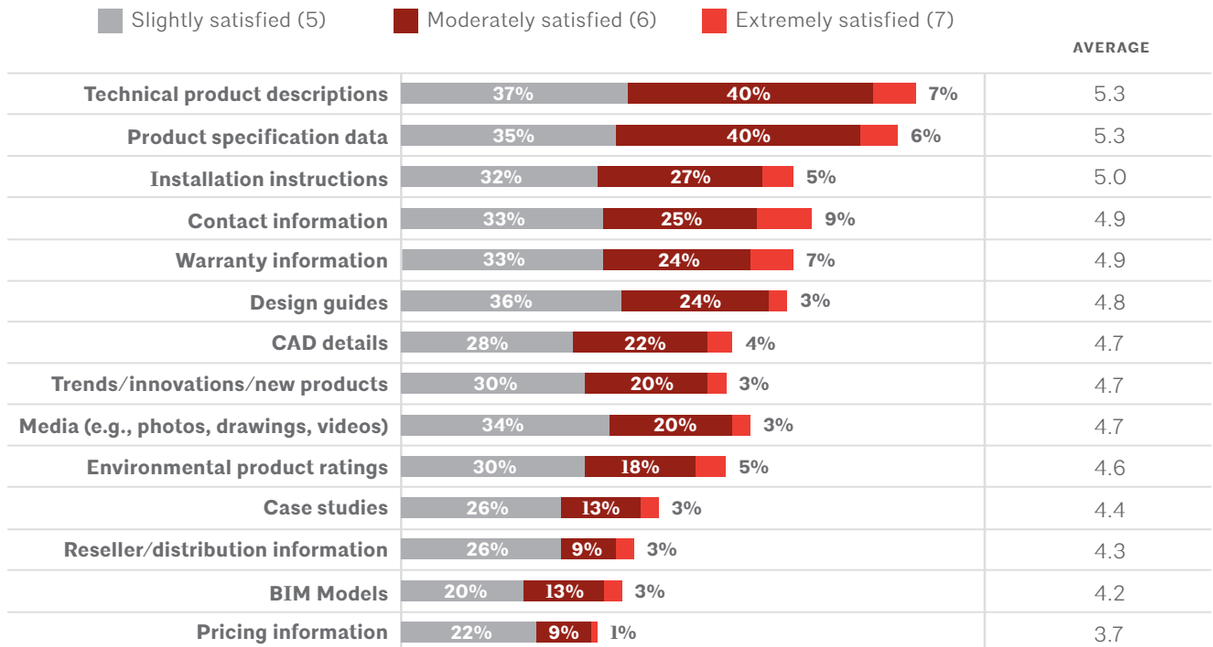
Across almost all information sources, architects are only slightly satisfied, with their average satisfaction hovering around 4, the neutral point. Notable areas of improvement are information on trends and new product innovations and environmental product ratings.

The only area with an overall dissatisfaction rating is pricing information. This dissatisfaction reinforces the desire design professionals have for more transparent, accurate, and accessible pricing information. These are notable areas for product manufacturers and other service providers to focus and improve.

Differences by specification stage

Design stage: At the design stage, pricing information and design guides are highly used. Given the dissatisfaction with pricing and the middling performance of design guides (only 27% rated them in the top two levels of satisfaction), these are key focus areas.

FIGURE 4.1 Satisfaction with quality of information
Average share of relative influence



Specification and design & review stages: Warranty and installation instructions are highly used and important in both these stages. Only about a third of respondents rate high satisfaction with these resources, so there is clearly room—and a need—to improve these important resources.

Satisfaction with building product manufacturer services

While satisfaction with specific product manufacturers and their services vary, overall satisfaction can shed light on the current operating environment. Some notable findings elaborate on a few of the key takeaways of the respondent satisfaction ratings. **(FIGURE 4.2)**

Higher areas of satisfaction

Affirming the importance and nature of the relationship between a specifier and the manufacturer, key attributes, such as being a trusted brand and readily answering questions, have positive satisfaction ratings. However, there is room for improvement with only 37% and 35%, respectively, rating these in the top two satisfaction categories yielding an overall average of 5, which signifies a relatively modest level of satisfaction.

The most important and widely used information needs—technical product information and specification data—are also reported at modestly positive satisfaction ratings. However, only about a third rate high satisfaction for both performance areas. Still, the alignment between the areas of highest satisfaction and those of highest importance points to manufacturers focusing on design professionals' critical areas.

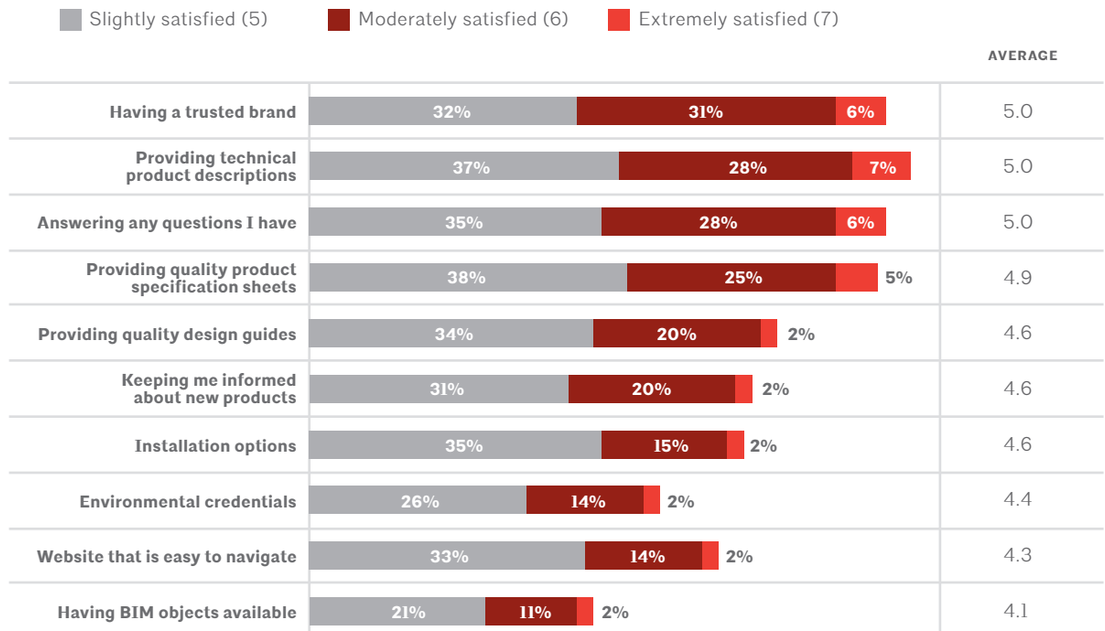
Areas for notable improvement

AIA's **2016 Firm Survey Report** revealed that BIM use is now standard in the largest firms where over 75% of design professionals work. As such, the need for BIM objects, while perhaps not as urgent as other resources, is high. Satisfaction with those services is neutral, making it an obvious area needing attention.

Other areas of improvement include:

- Easily navigated websites
- Environmental credentials/expertise
- Installation options
- Proactive new product information
- Providing quality design guides

FIGURE 4.2 Individuals involved and influential in product specification
% of respondents



Section 2

Following the architect through the specification process

The process of building product specification during the design phase of a project can be split into three stages:

1. Design stage: Includes development of a project's vision, concept, proposal, and artwork/drawings
2. Specification stage: Development and delivery of the spec
3. Review and approval stage: Includes spec review, negotiation, revision, and sign-off

The way that a design professional engages with partners, particularly building product manufacturers, differs by stage. The next three chapters provide the detailed data findings by these three stages in the specification process.

Stage 1—Design

KEY FINDINGS

Architects are the key decision maker and most influential at this stage in the specification process, though clients and firm leaders are also engaged at this stage.

While technical product descriptions and product specifications are the primary information sources required at this stage, a range of other needs exist—notably, pricing information and design guides.

Building product manufacturers have only a moderate level of involvement at this stage.

Design professional involvement and influence in specification decisions at the design stage

Not only are architects nearly always involved in the design stage of the specification process **(FIGURE 5.1)**, they are also overwhelming noted as the most influential professional. **(FIGURE 5.2)**

For the most part, the other entities have alignment between their involvement and their influence ranking. Clients and firm leaders are the second and third mostly highly involved in this stage, respectively, so while the ultimate decisions are that of the architect, they need to make decisions that strengthen their own external (with clients) and internal (with firm principals and partners) relationships. In fact, AIA's **2016 Firm Survey Report** reveals that 72% of a firm's clients are repeat ones. Product manufacturers should make note of these factors motivating architect during this design stage.

There is opportunity for building product manufacturers. Almost four in ten rate them as even involved in the process at this stage, and their influence is even lower with only 13% rating them as a top-three influence agent. Manufacturers are more involved for those working in small firms.

While architects are involved and influential regardless of firm size, there are some variations by size of a respondent's firm. Project managers, designers, interior designers, and interns are involved at significantly lower rates than at their mid-sized and large firm counterparts.

FIGURE 5.1 Individuals involved and influential in the DESIGN stage of product specification
% of respondents

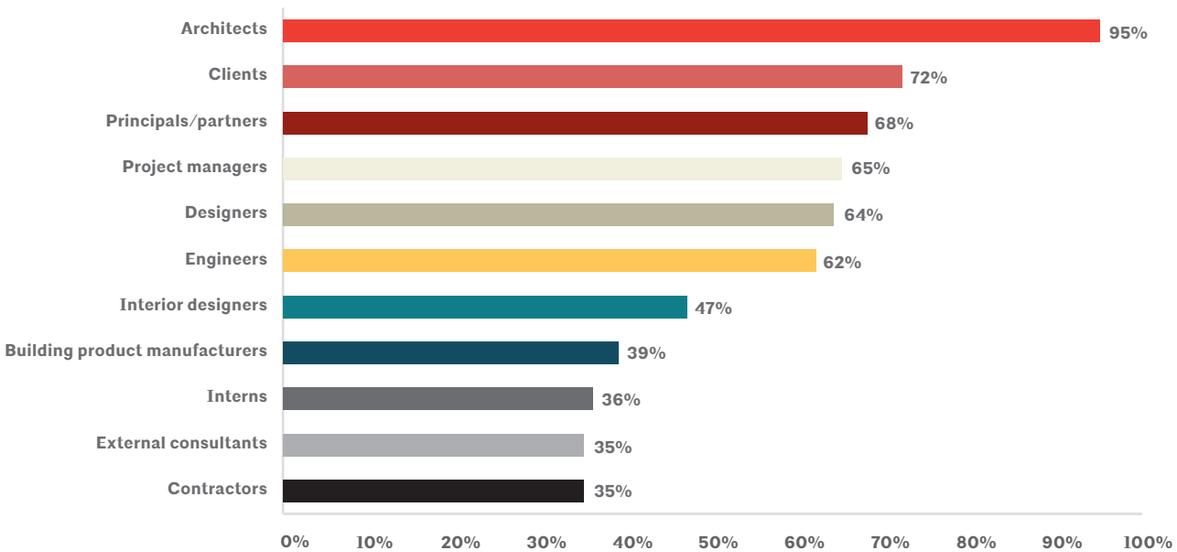
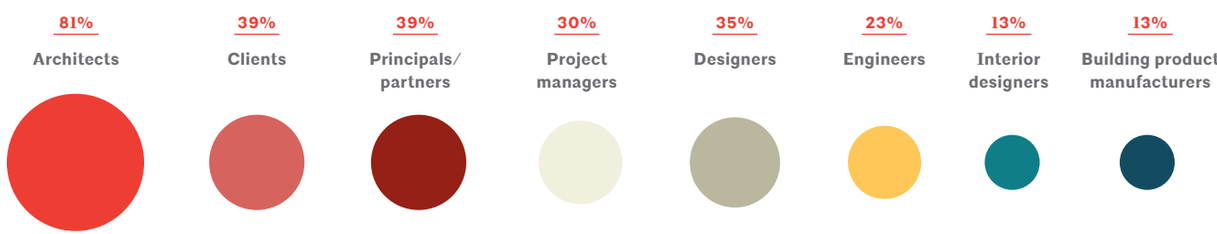


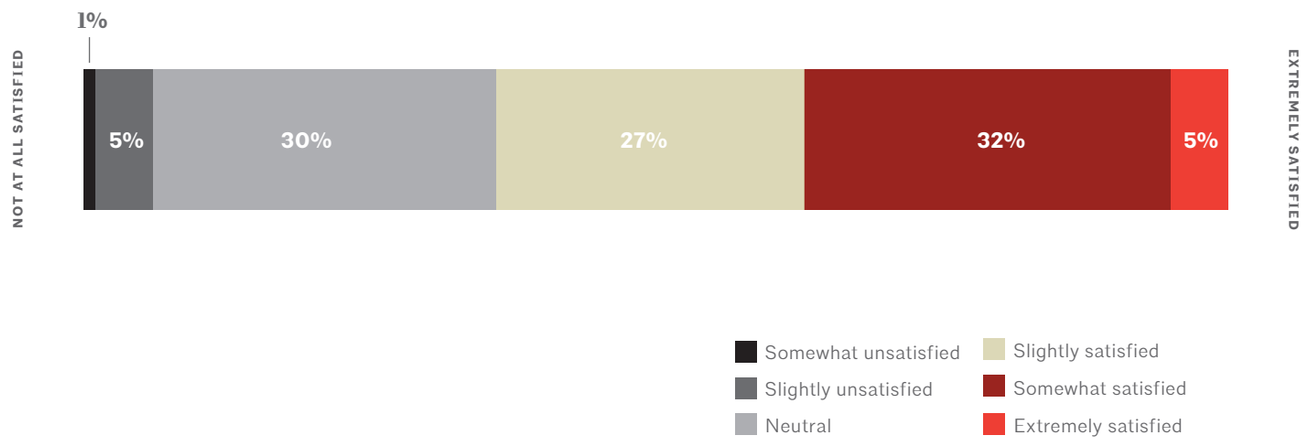
FIGURE 5.2 Individuals with the most influence in the DESIGN stage of product specification
% of respondents rating individual as a top three influencer



Satisfaction with product manufacturers at the design stage

Building product manufacturers are at a middling level of satisfaction, with only a little over a third (37%) of design professionals rating their satisfaction highly. The overall average satisfaction rating of a 5 indicates slight satisfaction. **(FIGURE 5.3)**

FIGURE 5.3 Satisfaction with building product manufacturers at meeting needs during DESIGN stage
% of respondents



Assistance from building product manufacturers at the design stage

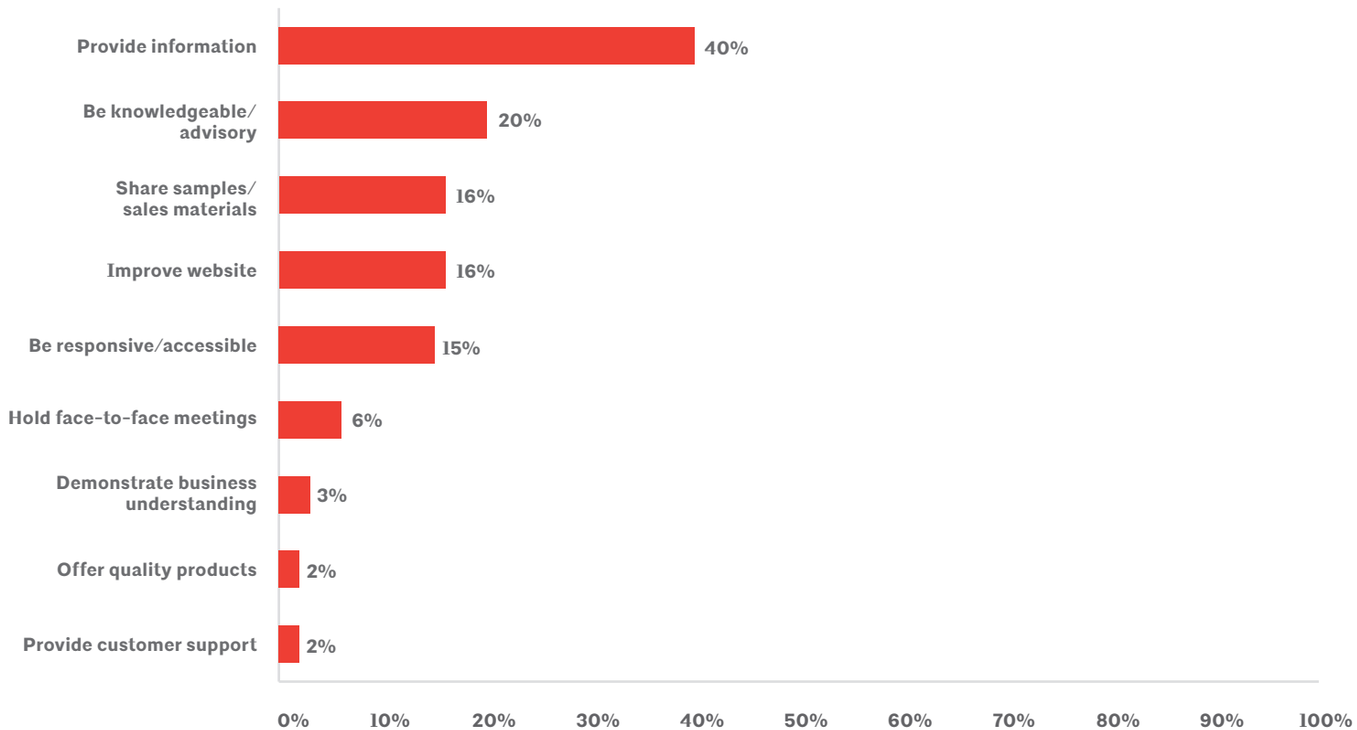
Design professionals would like product manufacturers to provide a number of services to them. **(FIGURE 5.4)** These approaches, offered unprompted by design professionals, point to tangible actions manufacturers can take to improve market penetration.

- Generally, professionals are looking for manufacturers to take on more of an advisory and consultative role, with a focus on knowledge transfer.
- Samples and product sales materials are also areas where respondents would like more from manufacturers.
- Design professionals also find websites critical at this stage and report that they need to be improved.

"I want to see complete details, installation instructions, sizes, colors, weights, and comparisons with other products."

– PROJECT MANAGER

FIGURE 5.4 Things product manufacturers can do to help during the DESIGN stage
% of respondents



Information at the design stage

Sources of information

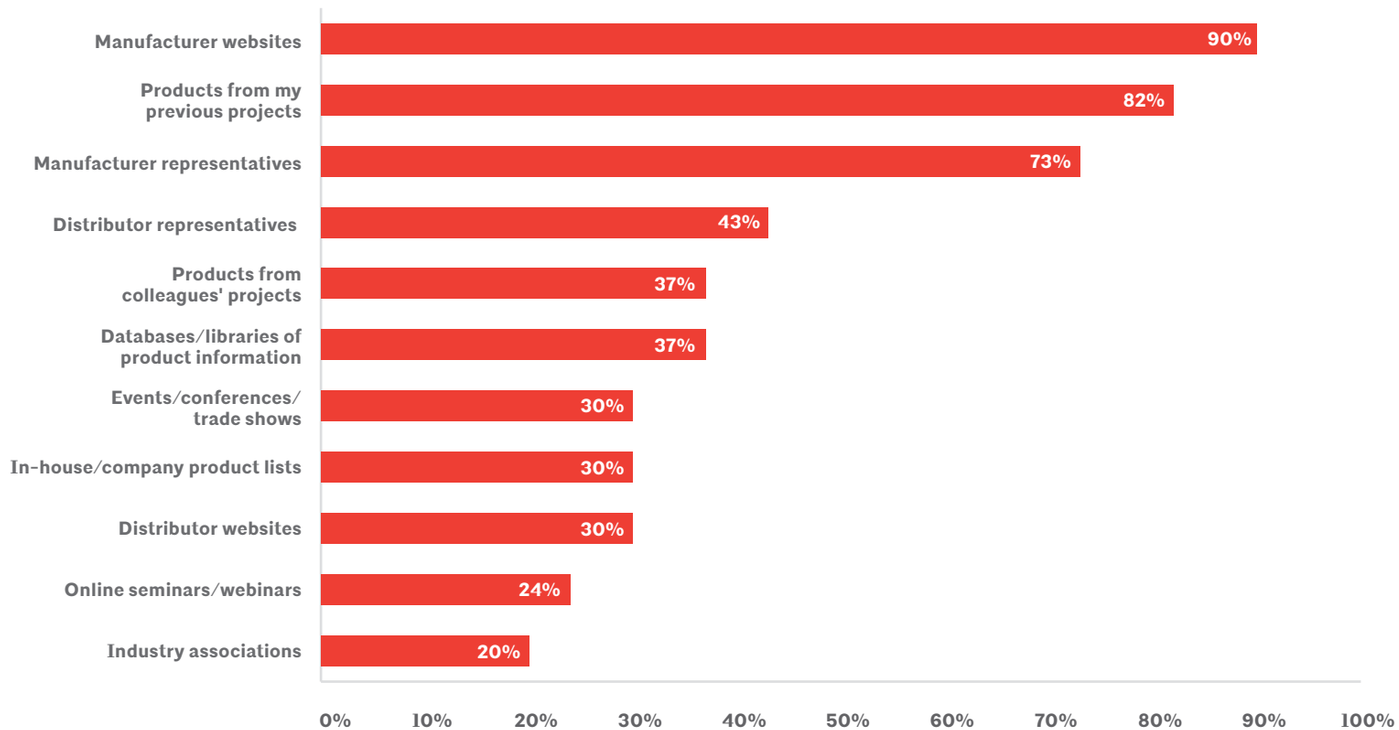
Manufacturers are one of the most important sources of information for design professionals at this stage of the specification process. **(FIGURE 5.5)** Nine in ten use their websites, and nearly three quarters use their representatives. These are critical areas for manufacturers to focus on to improve relationships, as well as influence, with specifiers.

Other important sources are products from previous projects, at 82%. All the other sources are reported by fewer than half of design professionals.

There are some differences by firm demographics:

- **Small firms:** Fewer professionals at small firms use manufacturer and distributor representatives—reported by 47% and 21%, respectively.
- **Multidisciplinary firms:** Half of these professionals use products from colleagues' projects, significantly higher than the overall average of 37%.
- **Younger professionals:** Half of the professionals under 55 also use products from colleagues' projects.

FIGURE 5.5 Sources of information used at the DESIGN stage
% of respondents



Types of information needed

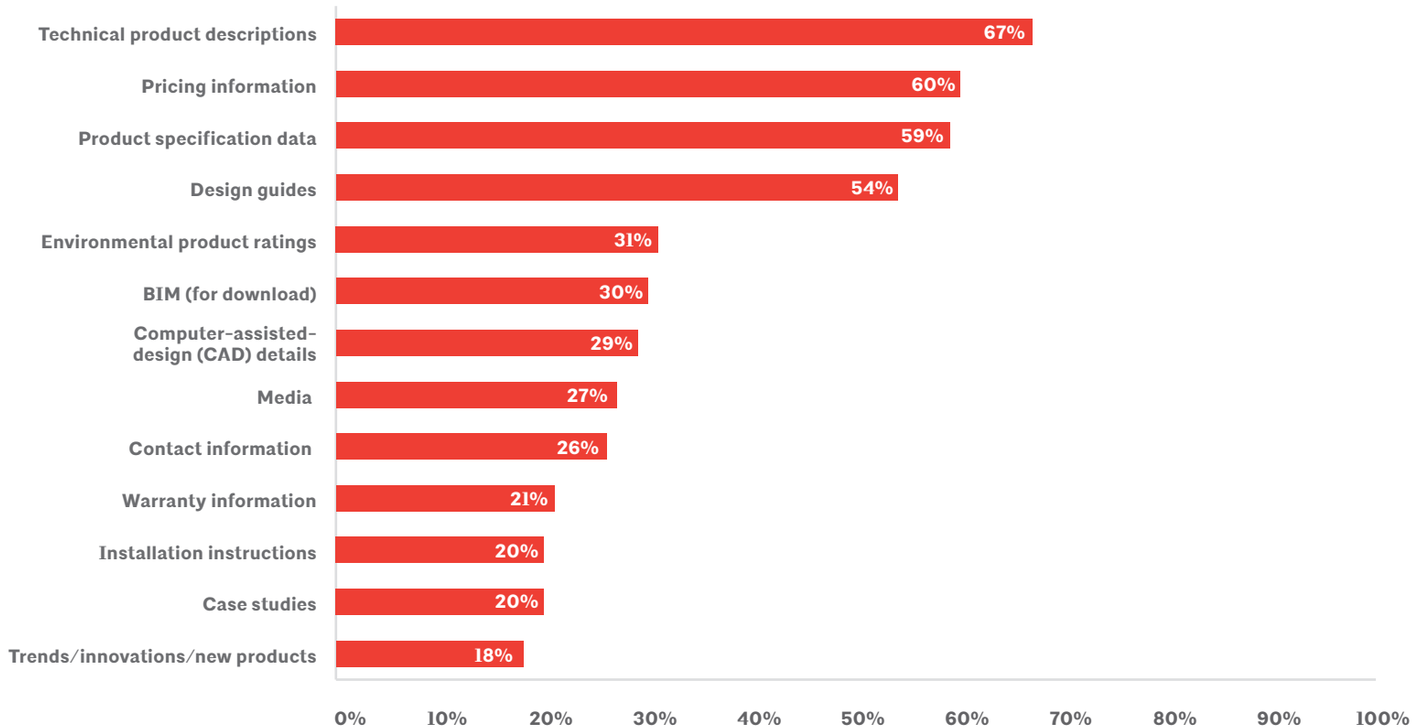
From the aforementioned sources (Figure 5.5), more than half of design professionals require technical product descriptions, pricing information, product specification data, and design guides. **(FIGURE 5.6)**

For younger professionals under 35, there are a number of sources they seek at statistically higher levels than their older counterparts:

- **Case studies:** Reported by 44%, compared to overall average of 20%
- **Building information models**: Reported by 42%, compared to overall average of 30%
- **Trend information:** Reported by 38%, compared to overall average of 18%

FIGURE 5.6 Types of information used at the DESIGN stage

% of respondents



Stage 2—Specification

KEY FINDINGS

Architects are the key decision-makers at this stage—and the most influential. But product manufacturers, project managers, and engineers are frequently involved.

Warranty information is a new information need, third behind technical product descriptions and product specification information.

Building product manufacturers are considered to be highly engaged with architects at this stage, serving as resources and experts.

Design professional involvement and influence in specification decisions at the specification stage

Like in the design stage of the specification process, architects are the most highly involved **(FIGURE 6.1)** and influential. **(FIGURE 6.2)** Otherwise, the influencers are completely different from those at the earlier stage. They mostly align in their involvement and their level of influence. Project managers are the second most involved and most influential. Engineers and building product manufacturers are the next two highly used and influential agents, with more than half of the respondents reporting their involvement, and a quarter noting their influence.

This is the area of the largest opportunity for product manufacturers given that this is already an area in which design professionals expect their involvement. Professionals at smaller firms rely on them even more heavily, with 64% including them in the process. It is also the area where they have the most influence, so this is a core area for focused activities.

For larger firms, engineers and designers are involved more often—reported by 72% and 60%, respectively, of these professionals at large firms (over 100 employees).

FIGURE 6.1 Individuals involved and influential in the SPECIFICATION stage of product specification
Average share of relative influence

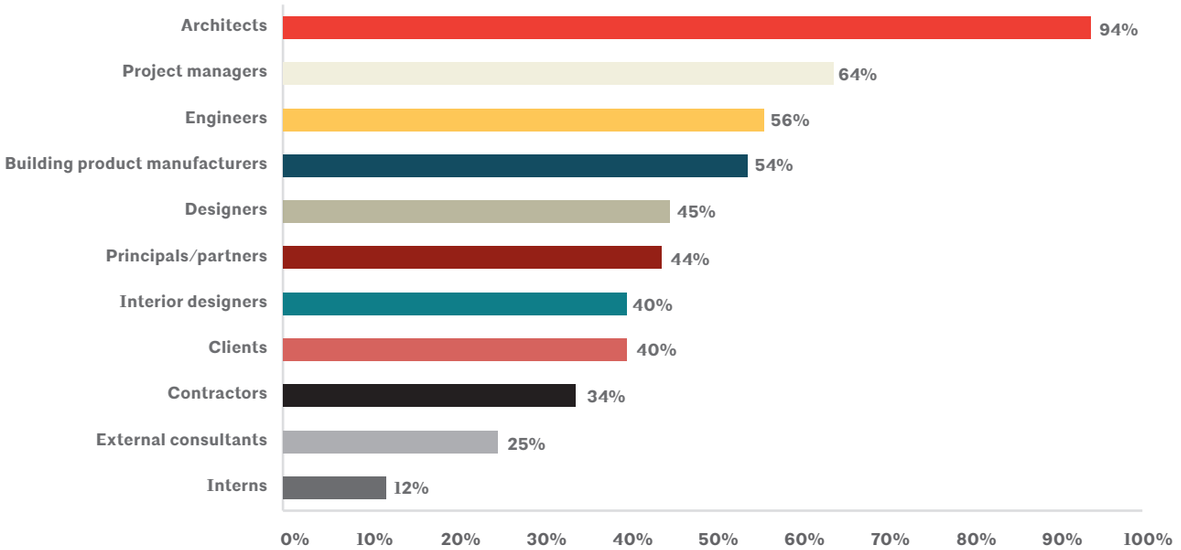
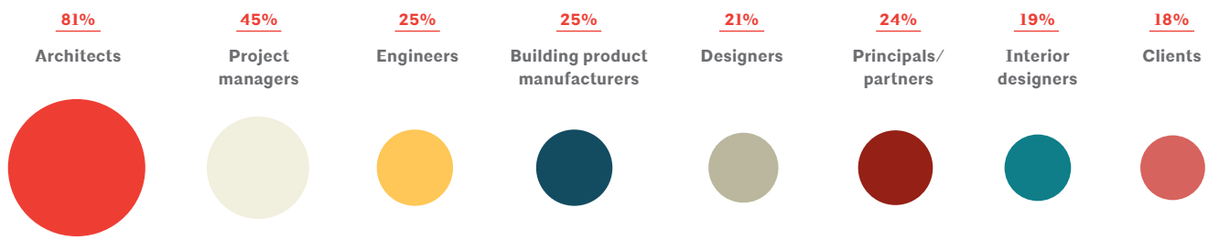


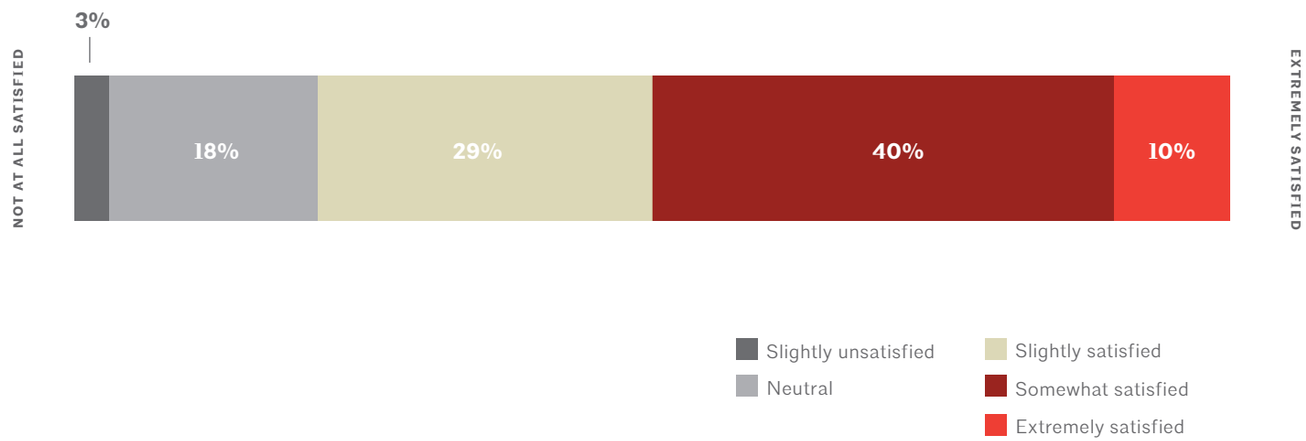
FIGURE 6.2 Individuals with the most influence in the SPECIFICATION stage of product specification
% of respondents rating individual as a top three influencer



Satisfaction with product manufacturers at the specification stage

Performance in this area is above average, notably stronger than at the earlier design stage—with half respondents reporting at least moderate satisfaction, including 10% that are extremely satisfied. **(FIGURE 6.3)** This is a notably positive response given that this is the area where manufacturers have the most involvement and influence.

FIGURE 6.3 Satisfaction with building product manufacturers at meeting needs during SPECIFICATION stage
% of respondents



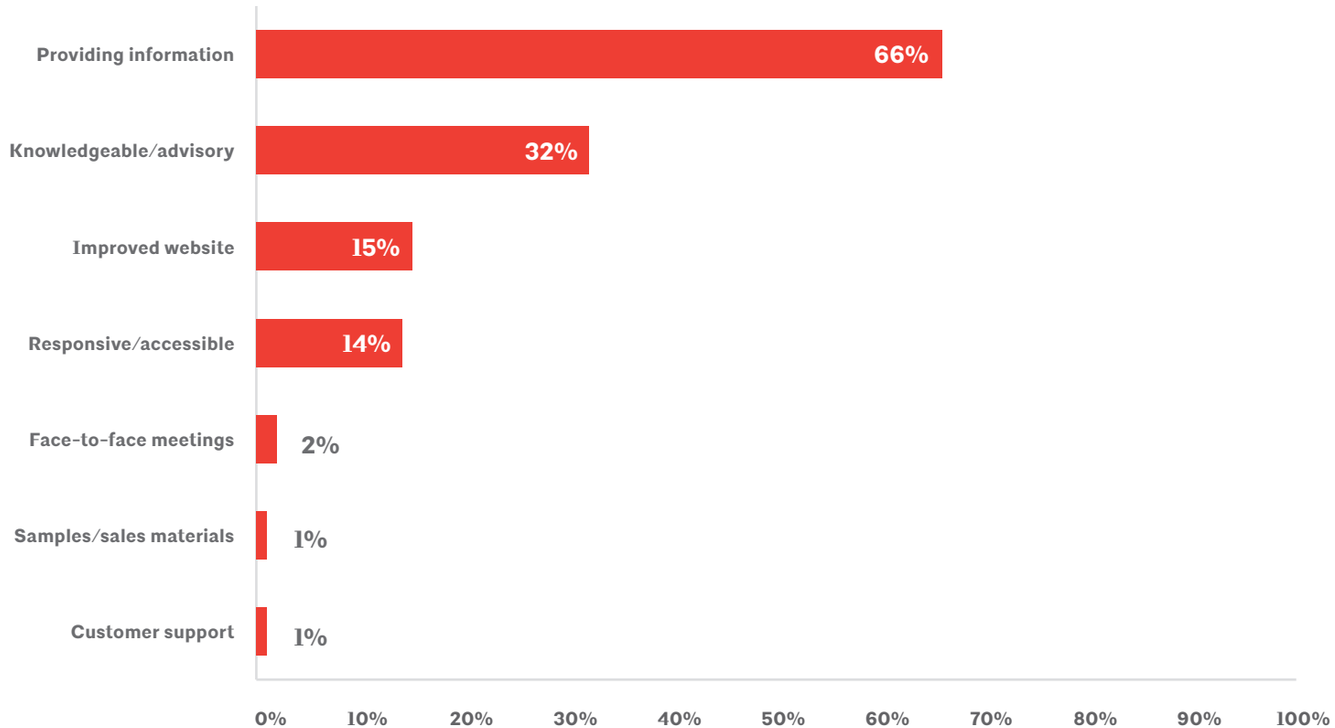
Role of building product manufacturers

Predominantly, design professionals view product manufactures as information providers and advisors—95% report their role is to provide information on specific products and materials, and 85% look to them to provide advice and offer specification suggestions.

Assistance from product manufacturers at the specification stage

Design professionals would like product manufacturers to provide a number of services to them. **(FIGURE 6.4)** Again, these approaches, offered unprompted by design professionals, point to tangible actions manufacturers can take to improve market penetration.

FIGURE 6.4 Things product manufacturers can do to help during the SPECIFICATION stage
% of respondents



- Generally, professionals want easily comparable specs that fit MasterSpec or that can easily be compared to others.
- The other frequently noted need specifiers have is to get consultative advice from manufacturers, where they offer advice and help review specs.
- They are also very adamant that they want non-proprietary specifications, and this would be an area to improve trust and satisfaction.
- Just as they did at the design stage, design professionals also find websites critical at this stage and report that they need to be improved.

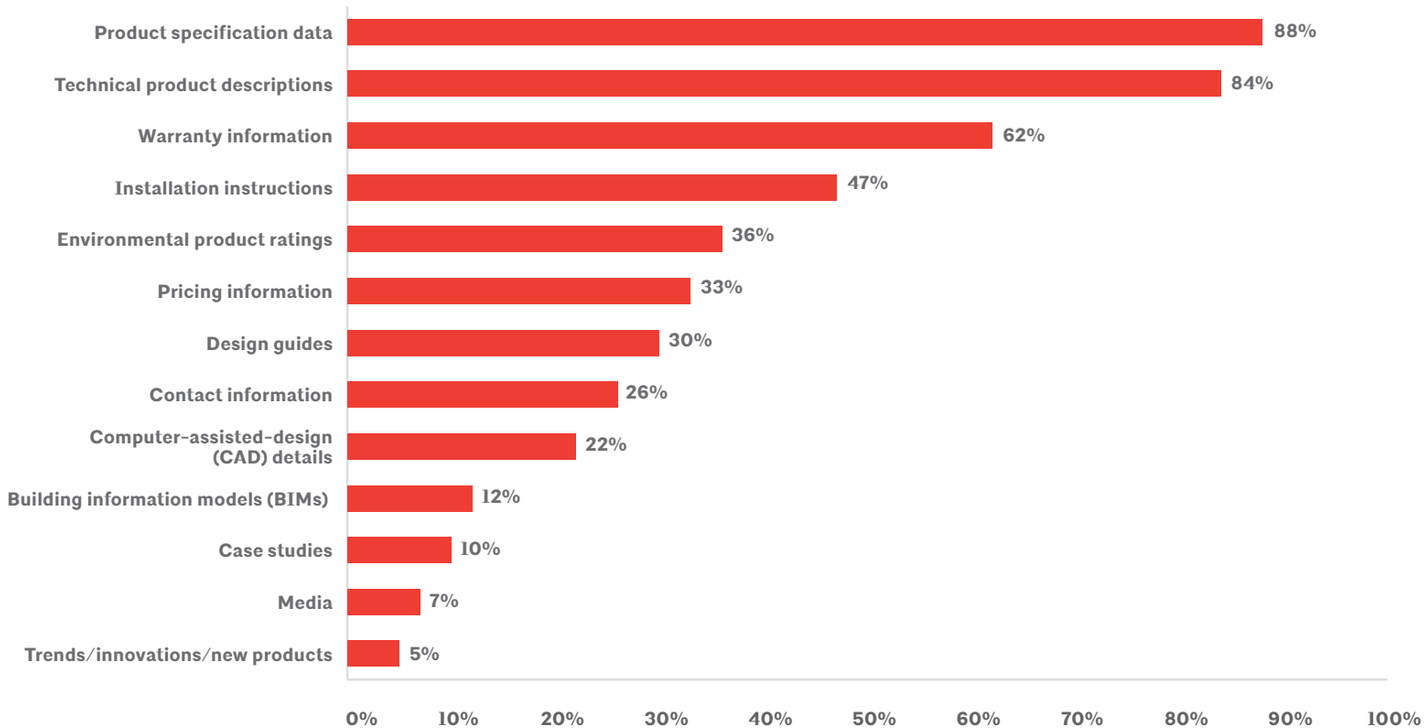
"If you do not have technical data on your website or make me sign in, I will leave the site and go to a competitor and use their performance criteria in my spec."

— SPECIFIER

Information at the specification stage

Similar to other stages in the specification process, product specification data and technical product descriptions are used by more than eight in ten respondents. **(FIGURE 6.5)** However, this stage is when warranty information becomes highly important, reported by 62%.

FIGURE 6.5 Types of information sought at the SPECIFICATION stage
% of respodents

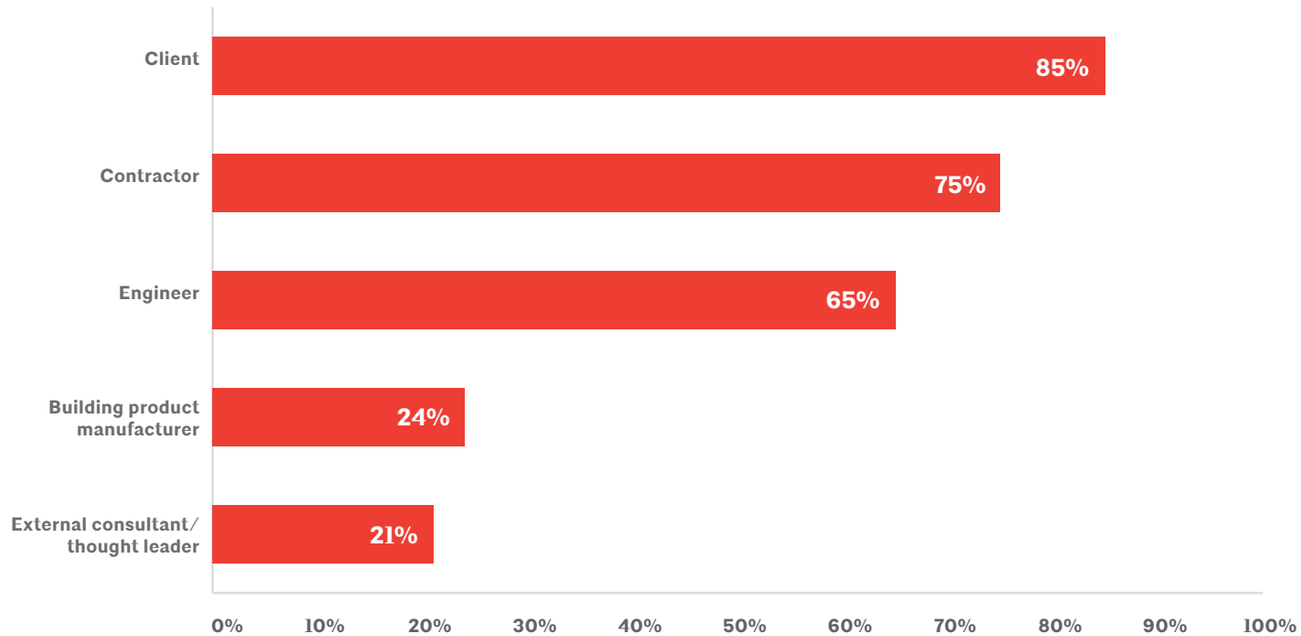


Sharing product specification documents

Design professionals involve many parties in the specification creation stage. **(FIGURE 6.6)** They share those documents with the client, contractor, and engineer, with 45% showing it to their client first. This is also a reason why information transfer and BIM objects have become needs in recent years, as industry professionals look to share their documents in a secure, efficient manner.

Though nearly a quarter of respondents show their specs to product manufacturers, it is often after they have shown it to other parties first. This finding suggests that they are looking at manufacturers more in a verification role at this point, rather than as a driver to document preparation.

FIGURE 6.6 Parties that receive specification documents
% of respondents

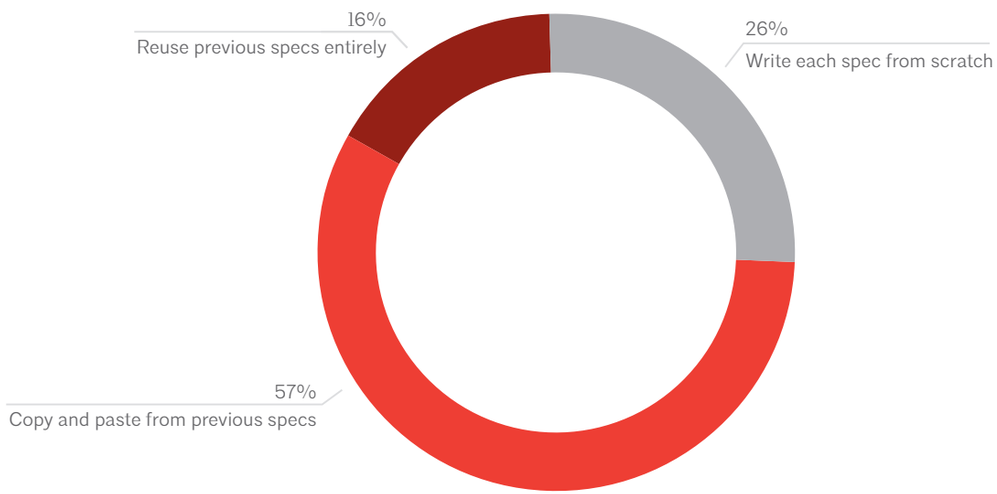


Drafting product specifications

Ways specifications are drafted

Overall, design professionals rely on previous specs—reported by nearly four quarters of respondents. This suggests that design professionals are pressured by project schedule, and for some, a risk aversion. **(FIGURE 6.7)** Notably, older respondents (over 65) are significantly more likely to create new specifications—reported by 49% of these professionals compared with 22% of younger respondents. This is likely due to the experience and security these professionals would have built throughout their careers.

FIGURE 6.7 Approach to drafting product specifications
% of respondents

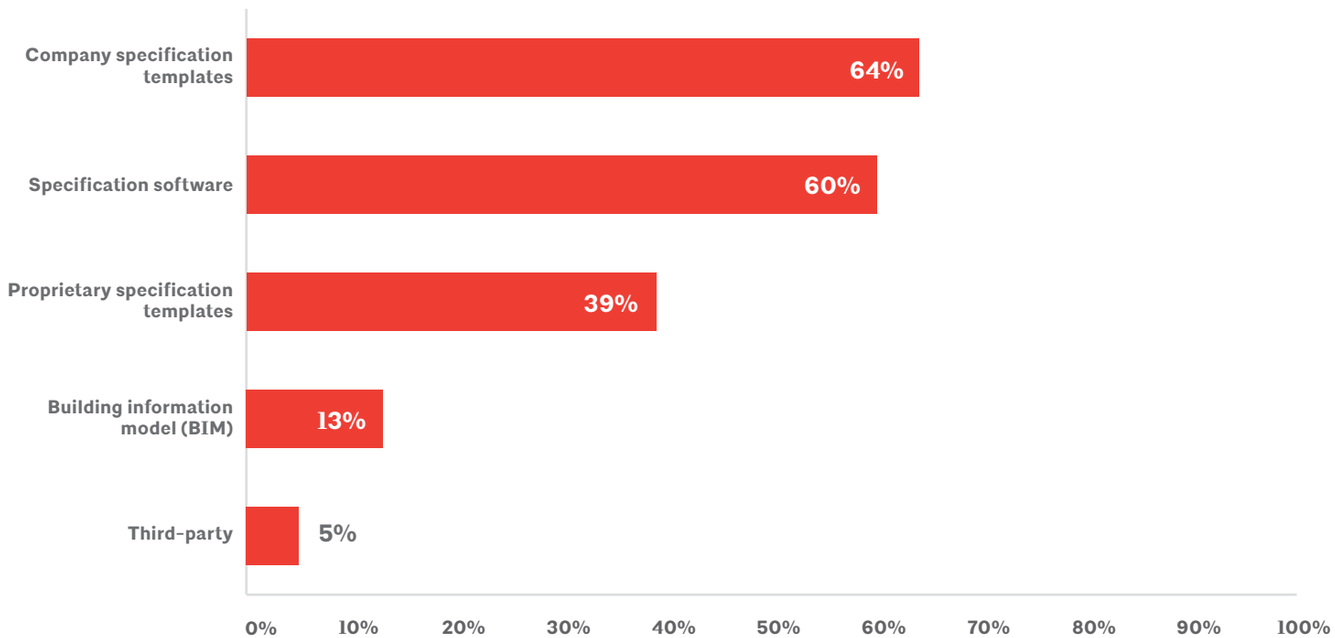


Resources used when drafting specifications

Tools dominate the resources used when drafting specs, with 64% of the respondents reporting the use of specification templates and 60% citing the use of specification software. **(FIGURE 6.8)** Significantly fewer (39%) will use proprietary templates. There are some differences by respondent demographics:

- Firms with a more outspoken culture (see firm attributes in Figure 1.0 on page 9) are significantly more likely to use BIM when writing specs.
- Multidisciplinary firms are significantly more likely to use specification software and BIM.

FIGURE 6.8 Resources used when drafting specifications
% of respondents



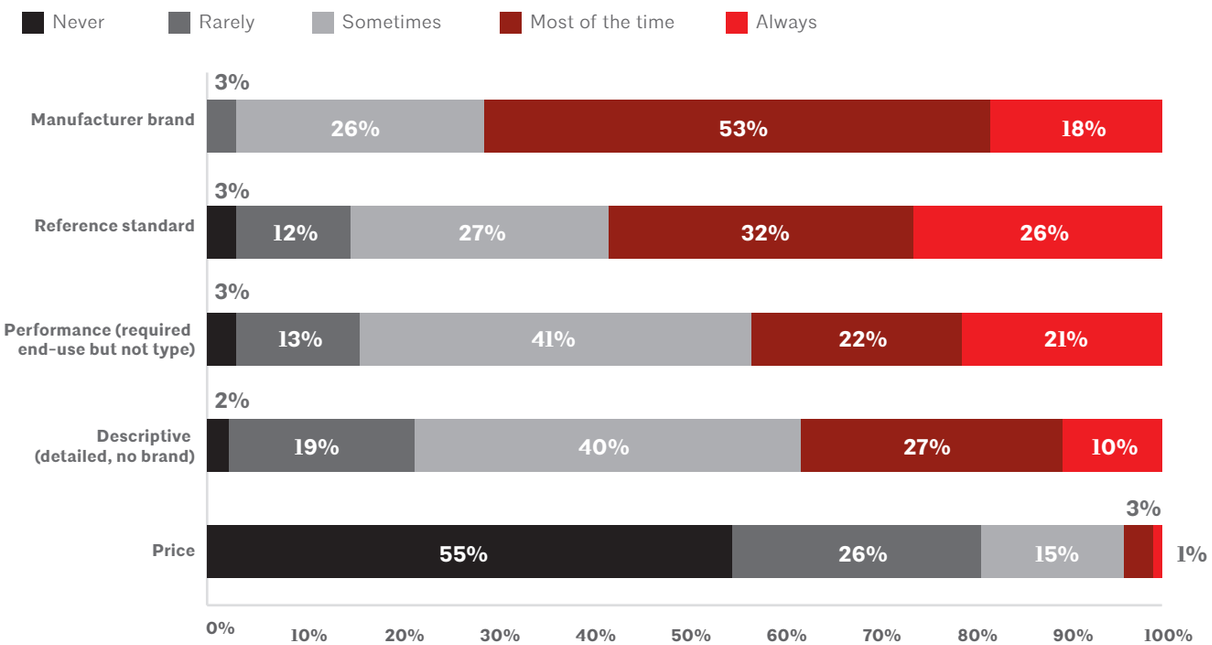
Open versus closed specifications

While most specifiers use closed specification from time to time, the share of projects where they do so is low, at a median of 15% of projects. This is higher for respondents at small firms (at 19% of projects) and notably lower for those in larger firms (at 10% of projects).

While open specifications are clearly most prevalent, specific brands are still included in those documents. **(FIGURE 6.9)** In fact, seven in ten do it most or all of the time. More than half of respondents also include reference standards in their documents most or all of the time.

Age can be a factor in how often a manufacturer brand is called out in a spec. Significantly more older respondents (55 and older) choose a specific brand and fewer younger professionals (under 35) do so—reported by 79% and 41%, respecti

FIGURE 6.9 **Frequency at which the attribute is included in open specs**
% of respondents



Stage 3—Review & approval

KEY FINDINGS

Architects are the key decision-makers at this stage—and the most influential. But project managers and engineers are frequently involved, as are clients, who were more hands off at the specification stage.

Warranty information and installation instructions are key information needs at this stage, along with technical product descriptions and product specification information.

Building product manufacturers have negligible involvement at this stage.

Design professional involvement and influence in specification decisions at the specification stage

Like earlier stages, the architect is the leading professional in the review and approval stage of the specification process—both in involvement **(FIGURE 7.1)** and influence. **(FIGURE 7.2)** The other two most influential professions—project managers and engineers—are the same as in the specification stage (see Figure 6.1 on page 34). Clients re-emerge as an important part of the process, with almost half rating them as involved and a third reporting them as influential.

Some differences by firm type:

- Half of respondents from multidisciplinary firms are likely to have interior designers involved at this stage.
- Six in ten respondents from single disciplinary firms are likely to have firm leaders involved.

FIGURE 7.1 Individuals involved and influential in the REVIEW & APPROVAL stage of product specification
Average share of relative influence

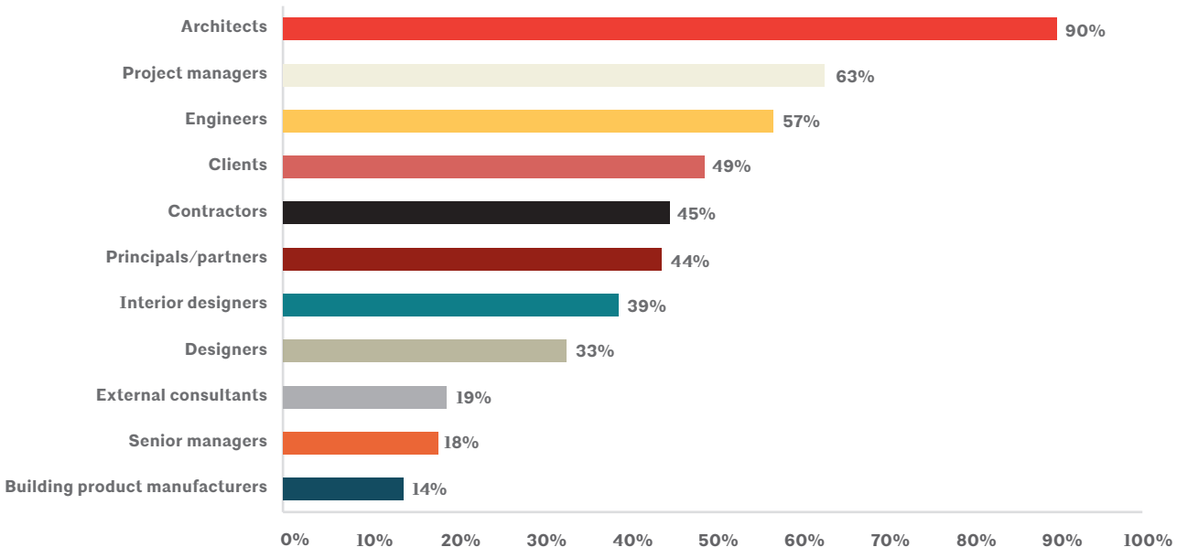
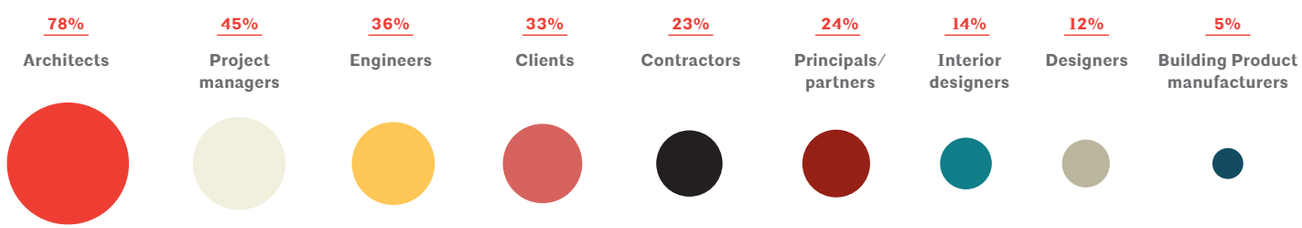


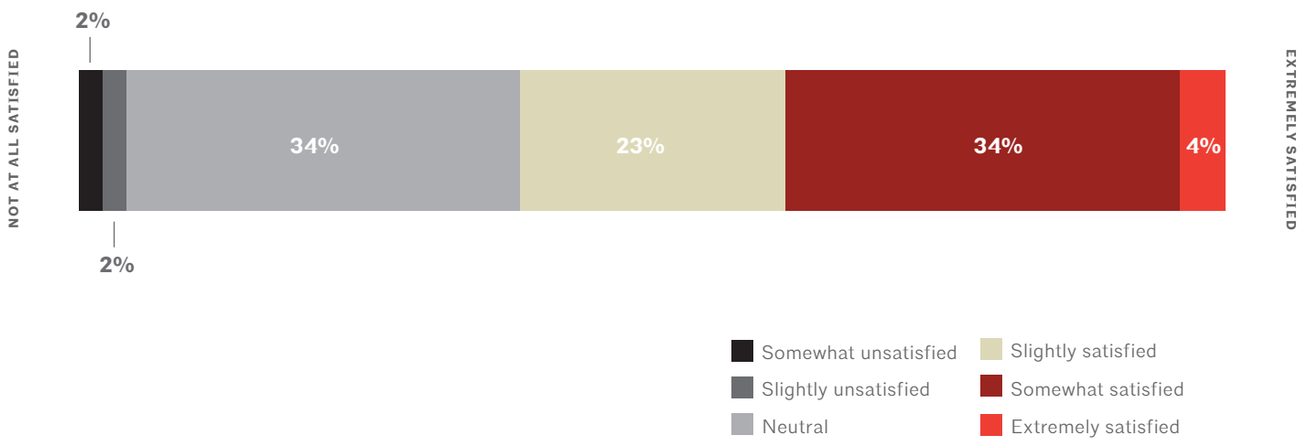
FIGURE 7.2 Individuals with the most influence in the SPECIFICATION stage of product specification
% of respondents rating individual as a top three influencer



Satisfaction with product manufacturers at the review & approval stage

Similar to their rating in the earlier design stage (see Figure 5.3, on page 29), satisfaction with product manufacturers is only slightly positive at this stage, with only 38% rating it in the top two box of satisfaction. **(FIGURE 7.3)**

FIGURE 7.3 Satisfaction with building product manufacturers at meeting needs during REVIEW & APPROVAL stage
% of respondents



Assistance from product manufacturers at the review & approval stage

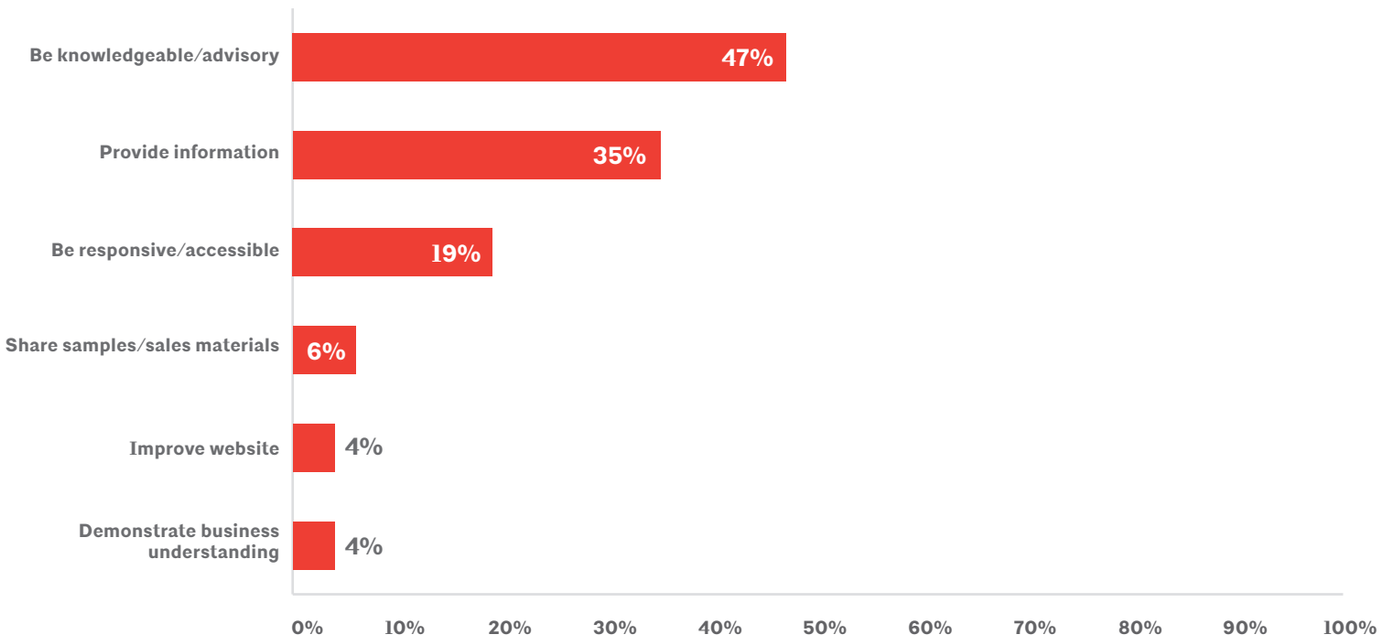
Like the prior stages, design professionals would like manufacturers to provide an advisory and consultative function, transferring knowledge and providing information to them. **(FIGURE 7.4)** These approaches, offered unprompted by design professionals, point to tangible actions manufacturers can take to improve market penetration.

- Generally, professionals want manufacturers to review their specs and identify any issues.
- They also want detailed product information and general project advice.
- They want a partner who will be responsive and accessible likely because their schedule is limited by the time they are finishing the specification process.

"Send in complete packages of information. We need detailed technical information, complete drawings, catalog cuts, and qualification information."

—ARCHITECT

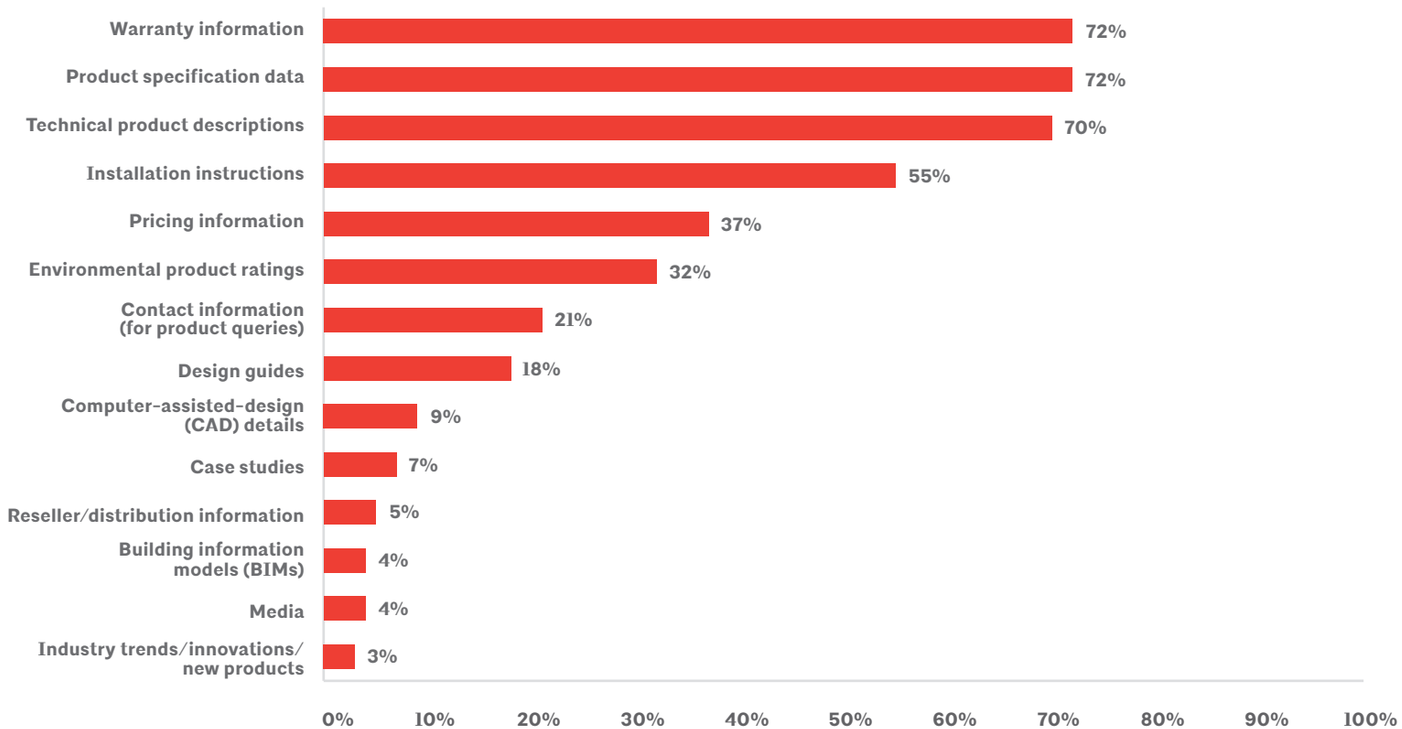
FIGURE 7.4 Things product manufacturers can do to help during the REVIEW & APPROVAL stage
% of respondents



Information at the review & approval stage

Types of information sought at this stage expand those noted in the specification stage (see Figure 6.5 on page 37), where warranty information becomes critical, rated as the top need. **(FIGURE 7.5)** Again, product specification data and technical product descriptions are highly used. In this stage, installation instructions are important, with more than half reporting it as important information.

FIGURE 7.5 Types of information sought at the REVIEW & APPROVAL stage
% of respondents

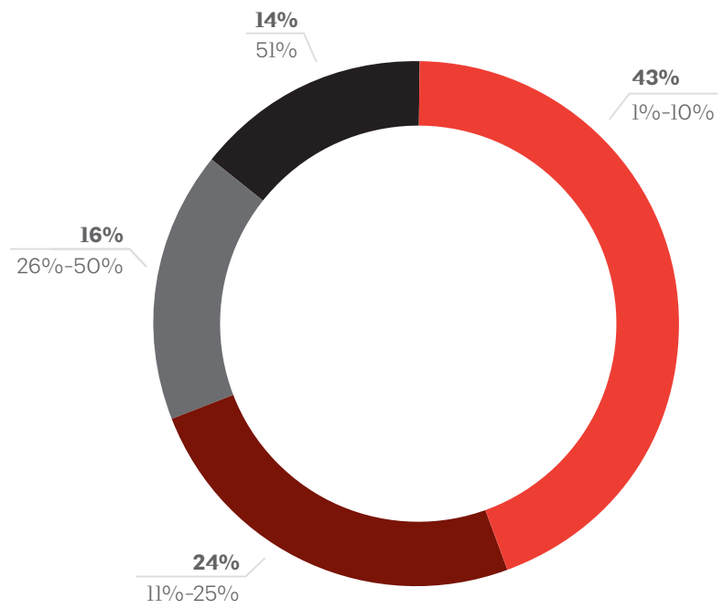


Changes to specifications during construction

Changes in design are a common practice in the design and construction field. According to AIA's **2016 Firm Survey Report**, firms report that an average of 40% of their projects have change orders or construction change directives. In this survey, almost all report that their projects indeed have changes to their specifications, though at slightly lower rates than this industry average—with a reported median at 15%. For this group of respondents, the changes are more modest, though 30% do report changes on 26% to 100% of projects. **(FIGURE 7.6)**

The import of these findings means that manufacturers can have influence in specifications even after the specifications are drafted.

FIGURE 7.6 Percentage of projects where specifications are changed during the construction phase of a project
% of respondents



Methodology

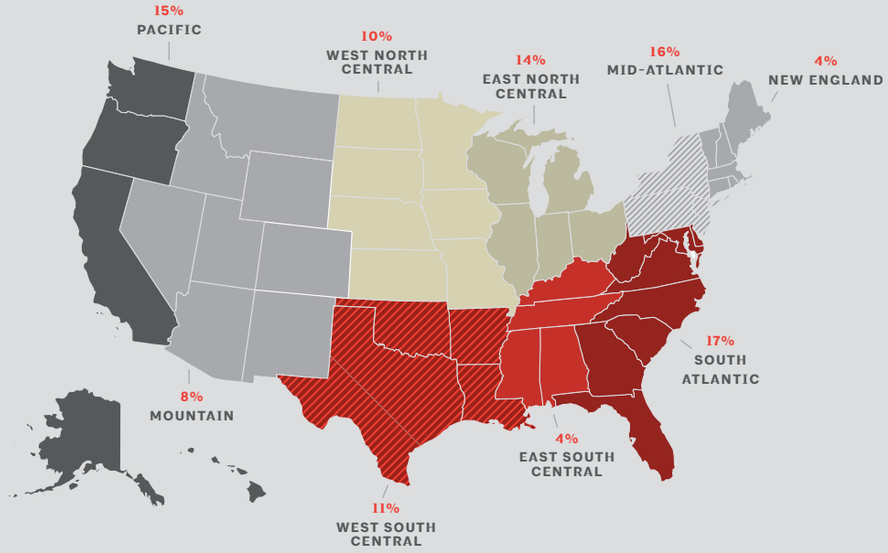
This report is an initiative of the AIA, drawn from a study AIA developed in collaboration with B2B International (B2B), an independent research company. Survey questionnaire development was done in partnership between AIA and B2B. B2B managed survey programming, data collection and tabulation, and raw data analysis.

The research contained in this report was conducted in April 2016 using an online survey methodology, drawing from a representative sampling of AIA's membership, which comprises approximately half of all registered architects in the US. The survey yielded 330 completed responses, 90% of which were from licensed architects. All respondents were involved in researching and specifying products and materials, a prerequisite to taking the survey.

The sample was fairly representative of the industry (as compared with AIA's **2016 Firm Survey Report**, a quantitative census of the architecture profession). Some differences included a larger share of multidisciplinary firms (42% nationally), lower share of single discipline architecture firms (51% nationally), and a slight overrepresentation of small firm practitioners (25% nationally).

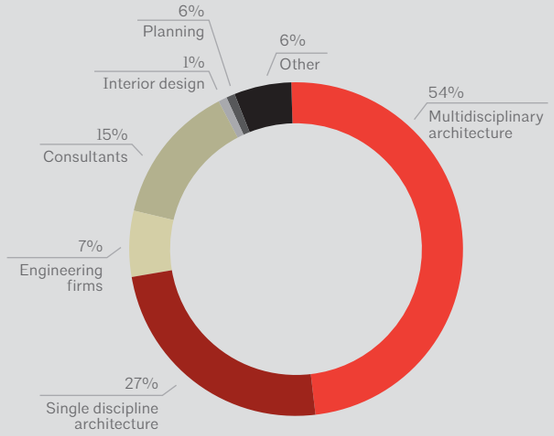
The gender split was 25% women and 71% men; and the majority of respondents were architects, at 59%, with firm principals/partners (16%), project managers (12%), and specifiers (7%) making up the majority of the respondents' job roles.

Geographic distribution of respondents



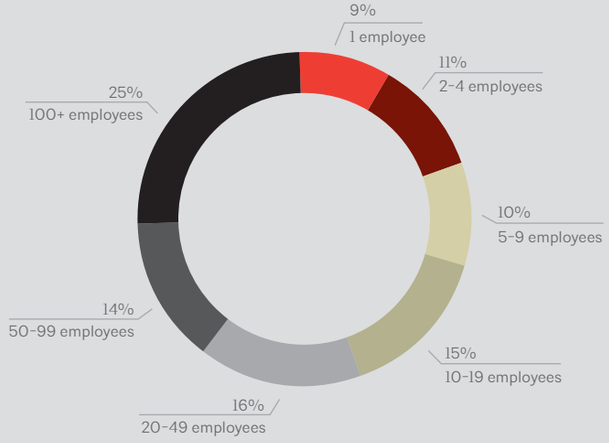
Survey respondents by firm type

% of respondents



Survey respondents by firm size

% of respondents



PUBLISHED DECEMBER 2016 BY
The American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006
aia.org

ISBN: 978-1-57165-008-5