

Qualifications-Based Architectural Selection

A Comparison With
Fee-Based Methodology

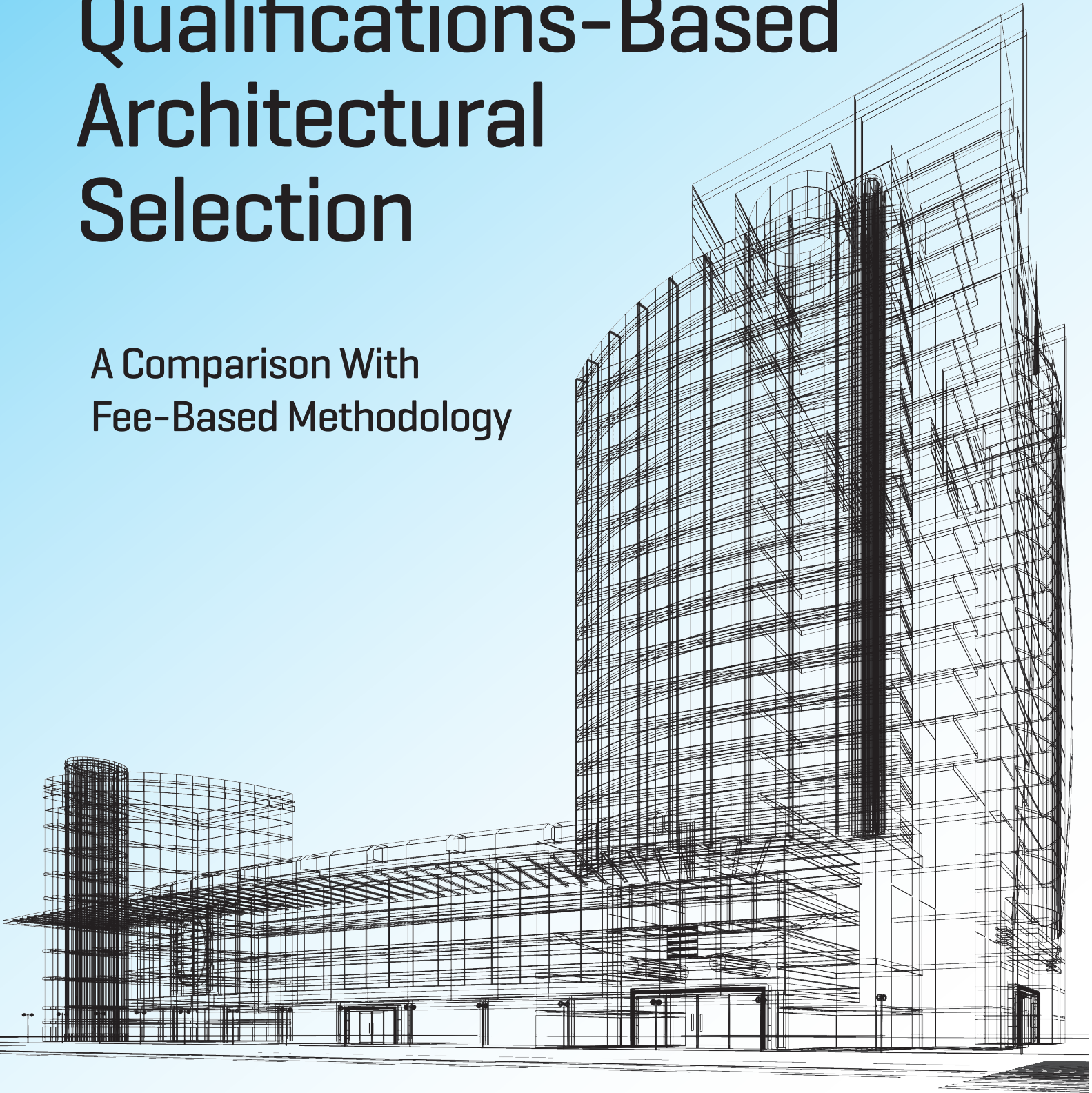


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Introduction

Owners have choices when it comes to how they comparatively evaluate, and ultimately select, design professionals for their architecture projects. Although professional fees are a valid factor in that consideration, architectural services are not a commodity. They are complex and require a high level of specialized skill. As such, the track record and qualifications of the firm and professionals that would be responsible for a project's design are much more meaningful metrics than merely the lowest fee.

Qualifications-Based Selection (QBS)

Acknowledging this as a matter of public interest, the US Congress adopted The Brooks Act [P.L. 92-582] in 1972. It requires the use of a Qualifications-Based Selection [QBS] process by federal agencies for the procurement of architectural and engineering services. The goal is to ensure that public clients work with the most qualified firms at a fair and reasonable cost. Today, QBS is being used by all federal agencies, 46 state governments and many local government entities throughout the US.

This Research Study

With the goal of encouraging further use by all owners of selection processes that fairly incorporate qualifications as the primary consideration factor, The American Institute of Architects [AIA] commissioned this study by Dodge Data & Analytics [Dodge], in which owners from both the public and private sectors were interviewed to:

- Establish the impact of qualifications-based selections on sixteen aspects of project performance by comparing their projects where the design team was selected primarily on its qualifications, to projects where they used fee as the main selection factor.
- Determine the degree to which they report a higher front-end cost involved in deploying a QBS process, and if they do, the degree to which they believe that cost is worth the downstream benefits and value of using a project team selected through this method.
- Identify their preferences and factors that most influence their decisions on team selection method.

Details on the survey sample and research methodology are provided in the Methodology section of this report [page 19].

Benefits of a Qualifications-Based Selection Process

To establish the benefits of a qualifications-based selection process, owners (both public and private) who reported having experience in both qualifications-based selections and primarily fee-based selections for design teams were asked to compare their experiences on both sets of projects.

The questions focused on how owners' level of satisfaction with 16 different aspects of project performance, behavior and outcomes differed between teams selected under the two procurement models. These metrics were divided into three major categories:

1

Effectiveness at Dealing With Challenging Conditions or Situations

- Starting work without a fully defined scope
- Dealing effectively with your most complex projects
- Designing at or under budget
- Working well under an accelerated schedule
- Effectively handling a challenging site or other unusually restrictive conditions

2

Frequency of Issues Related to Construction Documents

- Amount of errors and omissions in their construction documents
- Amount of constructability issues in the documents
- Amount of change orders generated from issues in the documents
- Amount of RFIs generated about the documents
- Amount of rework generated due to design issues

3

Overall Project Process and Outcomes

- Positive contribution to the overall project team chemistry
- Ability to meet the budget
- Ability to meet the schedule
- Ability to maintain expected project quality level
- Ability to avoid scope creep
- Ability to achieve project sustainability goals

1 Effectiveness at Dealing With Challenging Conditions or Situations

Every architectural project is unique, and each one comes with special conditions and situations that can present challenges to the design team. This section of the study focuses on owners' level of satisfaction with their

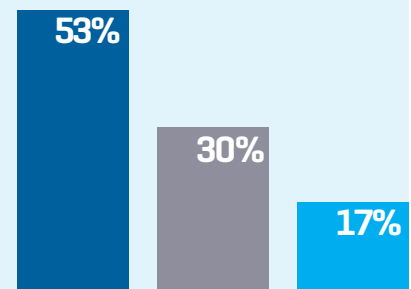
teams that are selected based primarily on their qualifications, based on how effectively they deal with these challenges, compared with those that are selected based mostly on fee.

■ Qualifications ■ Neutral ■ Fee

Starting work without a fully defined scope

This is often a challenge for a firm chosen for its low fee since they had to commit to that fee without adequate understanding of the full level of effort that would be required.

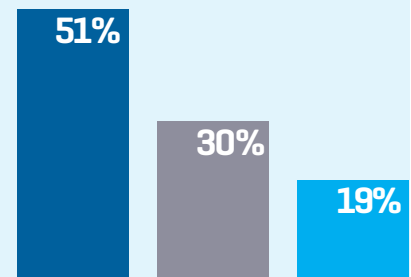
In these situations, the findings clearly show that most owners (53%) are more satisfied with the performance of their qualifications-based teams. Only 17% favor their fee-based teams, while about one third (30%) are neutral on this topic [i.e., report no difference or are not sure].



Dealing effectively with your most complex projects

Project complexity is increasing throughout the industry, and this trend can be expected to continue. A firm's qualifications and experience are essential to effectively addressing this challenge.

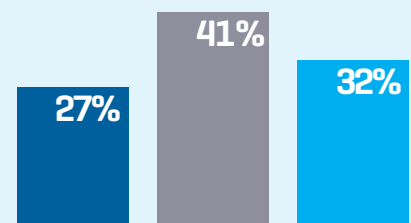
While again, nearly one third (30%) of owners are neutral on this topic, the majority (51%) report being more satisfied with the ability of their qualifications-based teams to handle their most complex projects, and just 19% prefer their fee-based teams.



Designing at or under budget

Budget compliance is a high priority for owners and a persistent challenge for design teams. A firm's demonstrated track record for designing-to-budget without sacrificing quality or scope is a critical factor for project success and cannot be determined just by evaluating their fee.

Owners are nearly evenly split on the effectiveness of their qualifications (27%) and their fee-based design teams (32%) with regard to satisfactorily designing-to-budget. A relatively large proportion (41%) say they are equally proficient.

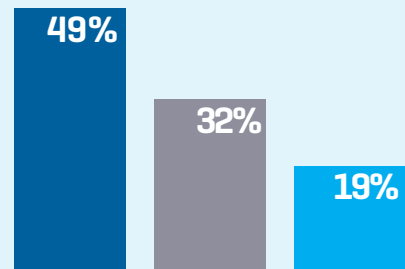


■ Qualifications ■ Neutral ■ Fee

Working well under an accelerated schedule

Design is an iterative process that requires a certain amount of time to effectively develop a well-reasoned solution that meets the client’s needs. Unlike construction it can’t be easily accelerated just by adding more resources. Designing a project well on an accelerated schedule requires sophistication, experience and highly refined process management skills, attributes that can’t be assumed from a lowest-bid firm.

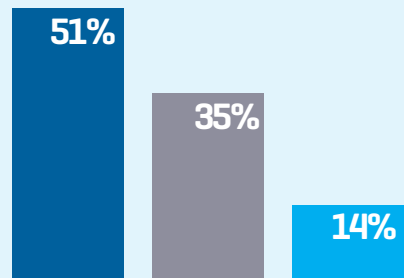
The findings support that perspective, with 49% of owners reporting greater satisfaction with how their qualifications-based firms deal with accelerated schedules than fee-based ones [19%].



Effectively handling a challenging site or other unusually restrictive conditions

While design firms have no control over the project site, they must deal effectively with any challenges or unusual conditions it presents. A firm’s experience with other challenging sites can prove invaluable to an owner facing these types of issues and is not guaranteed from a low-fee selection.

Indeed, as the findings show, only [14%] of owners say their fee-based professionals deal more effectively with challenging sites, whereas the majority [51%] favor their qualifications-based teams.



2 Frequency of Issues Related to Construction Documents

The design team’s construction documents are the critical deliverable that all downstream work hinges upon. How well a firm develops its design solution to optimize constructability and the quality of its documentation are critical metrics that are not reflected just in the proposed fee. And

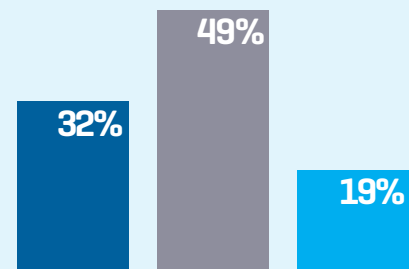
too often, documentation quality suffers as a firm selected for low fee tries to complete the project within tight constraints. This section of the study evaluates differences that owners perceive in these important performance aspects between firms selected by the two methods.

■ Qualifications ■ Neutral ■ Fee

Amount of errors and omissions in their construction documents

Contractors consistently identify errors and omissions in construction documents as one of the leading causes of cost and schedule problems on projects.

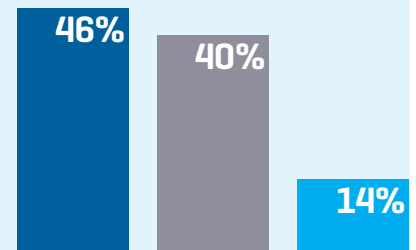
The findings reveal that while nearly half of owners [49%] don’t perceive a meaningful difference between qualifications and fee-based teams, about one third [32%] do see fewer errors and omissions from their qualifications-based teams, and only 19% believe fee-based teams perform better.



Amount of constructability issues in the documents

The ability of a design team to produce and document a project so that it is optimally constructible has a major impact on labor productivity, cost and schedule. This requires seasoned design professionals who truly understand the construction process. Owners are well served by taking the time to understand the relevant qualifications of the individuals responsible for design and documentation.

Reflecting this perspective, over three times as many [46%] owners report greater satisfaction with constructability from their qualifications-based teams as those citing fee-based ones [14%].



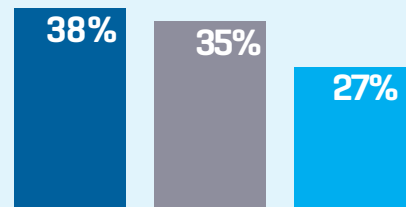
BENEFITS OF A QUALIFICATIONS-BASED SELECTION PROCESS

■ Qualifications ■ Neutral ■ Fee

Amount of change orders generated from issues in the documents

Deficiencies in documents that create opportunities for misinterpretation can generate costly change orders during construction. Firms who have a track record of high-quality documentation and relatively low rates of change orders directly related to them on their past projects are more likely to provide satisfactory performance to an owner in this regard.

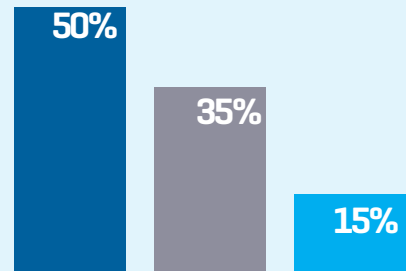
Although less dramatic than the findings on constructability, more owners still favor their qualifications-based teams [38%] over those who report higher satisfaction with fee-based teams [27%].



Amount of RFIs generated about the documents

Although Requests for information (RFIs) are generated for a variety of reasons during a project, they can be an indicator of the clarity and completeness of a design team's documents.

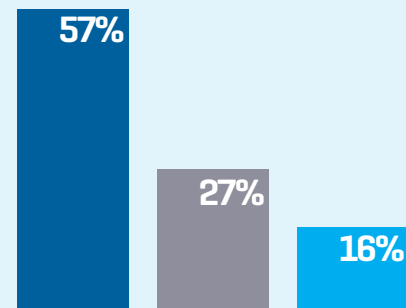
Echoing the strong findings related to constructability, well over three times as many owners [50%] cite better performance from their qualifications-based teams related to RFIs than those saying they prefer their fee-based ones [15%].



Amount of rework that is generated due to design issues

Rework is a toxic factor to construction productivity, endangering both cost and schedule compliance. Rework that can be directly correlated to issues with design documentation is doubly bad because it could have been avoided by better quality documents.

The owners speak very loudly again in favor of qualifications-based teams for avoiding this problem, with 57% stating their greater level of satisfaction, and only 16% coming down on the side of fee-based teams.



3 Overall Project Process and Outcomes

Owners want successful projects. This part of the study evaluates the differences they perceive in a number of overall project outcomes between design teams selected primarily for their qualifications versus those retained based on fees. The findings show

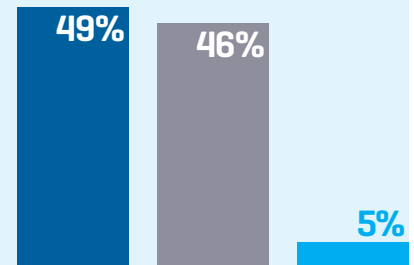
that, in most cases, it is well worth the effort for owners to invest the time to evaluate these aspects of competing firms' past projects, and consider them as critical skill sets and qualifications.

■ Qualifications ■ Neutral ■ Fee

Positive contribution to overall project team chemistry

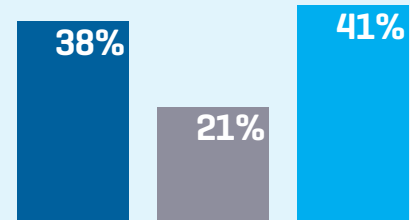
How a design team participates productively with all the other members of the full project team can have a major impact on the success of a project. A firm selected because of its low fee may not have sufficient resources to invest in actively collaborating with other project team members.

Owners resoundingly support this perspective, with 10 times as many [49%] citing higher satisfaction from their qualifications-based teams, versus only 5% for fee-based [the lowest rating of any metric studied].



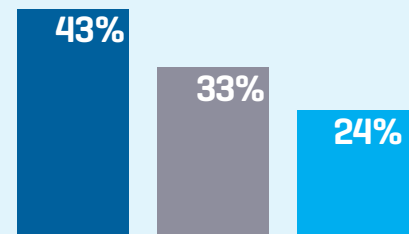
Ability to meet the budget

This performance measurement generated the lowest percentage of neutral responses [21%] in the study, indicating that most owners hold a strong opinion about it. But interestingly, the jury is essentially split with 38% favoring their qualifications-based firms and a similar number [41%] citing higher satisfaction with firms selected on a fee basis.



Ability to meet the schedule

Schedule compliance was more clear cut with only about a quarter [24%] favoring fee-based teams, and almost twice that many [43%] citing a preference for their qualifications-based ones.

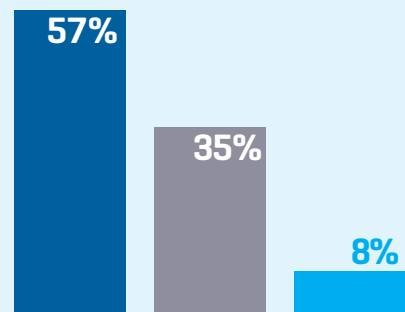


BENEFITS OF A QUALIFICATIONS-BASED SELECTION PROCESS

■ Qualifications ■ Neutral ■ Fee

Ability to maintain expected project quality level

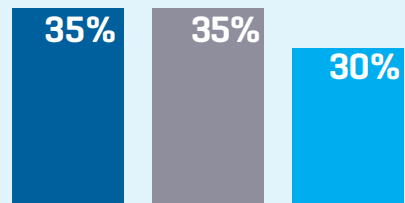
Here again, the differences are very strong. Well over half [57%] say that they are more satisfied with how their qualifications-based teams successfully achieve their quality goals. This stands in stark contrast to the 8% who report better results from their fee-based teams.



Ability to avoid scope creep

Scope creep (the pressure to add scope to the project without increasing budget or extending schedule) is a notoriously common problem, especially on complex projects.

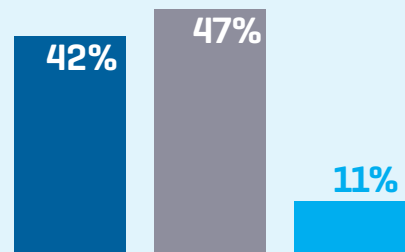
Owners slightly favor qualifications-based teams [35%] over fee-based ones [30%], but an equivalent portion [35%] are on the fence. Clearly this is an issue meriting more study, as it is likely influenced by many more factors than just team formation practices.



Ability to achieve project sustainability goals

This is another example of where a qualifications-based approach to design team formation can yield positive impacts.

While about half [47%] of owners are neutral, nearly four times as many [42%] report greater satisfaction with the ability of qualifications-based teams to achieve their sustainability goals than the 11% who report better performance from fee-based ones.



Data Summary

Below is a summary of the findings, color-coded to indicate the relative intensity of preference for selection method.

■ 50% or more
 ■ 40% to 49%
 ■ 25% to 39%
 □ Less than 20%

Effectiveness at dealing with challenging conditions or situations

	Qualifications	Neutral	Fee
Starting work without a fully defined scope	53%	30%	17%
Dealing effectively with complex projects	51%	30%	19%
Designing at or under budget	27%	41%	32%
Working well under an accelerated schedule	49%	32%	19%
Effectively handling a challenging site/restrictive conditions	51%	35%	14%
CATEGORY AVERAGES	46%	34%	20%

Frequency of issues related to construction documents

	Qualifications	Neutral	Fee
Fewer errors in documents	32%	49%	19%
Fewer constructability issues	46%	40%	14%
Fewer change orders from documents	38%	35%	27%
Fewer RFIs from documents	50%	35%	15%
Less rework from design issues	57%	27%	16%
CATEGORY AVERAGES	45%	37%	18%

BENEFITS OF A QUALIFICATIONS-BASED SELECTION PROCESS

■ 50% or more
 ■ 40% to 49%
 ■ 25% to 39%
 Less than 20%

Overall project process and outcomes

	Qualifications	Neutral	Fee
Contributing to team chemistry	49%	46%	5%
Budget compliance	38%	21%	41%
Schedule compliance	43%	33%	24%
Quality compliance	57%	35%	8%
Avoiding scope creep	35%	35%	30%
Achieving sustainability goals	42%	47%	11%
CATEGORY AVERAGES	44%	36%	20%

Average all categories

Qualifications	Neutral	Fee
45%	35%	20%

Cost and Value of Using a Qualifications-Based Selection Process

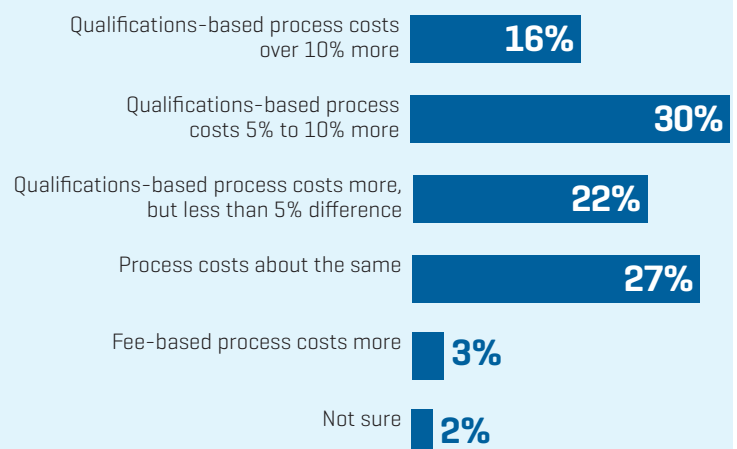
In this section of the study, owners experienced with both methods of selecting architectural firms were asked to compare the cost (including financial expense, time and resources) required to conduct a qualifications-based architectural selection

process for their organization to a fee-based method. As a follow-up, those who reported a higher cost to conduct a qualifications-based selection were asked if they believe that cost is worth the benefits. And lastly, they were asked about their preference.

Cost comparison between architectural selection methods

Over two thirds [68%] of owners perceive that there is a cost premium to conduct a qualifications-based architectural selection process compared with a fee-based process.

- The majority of that group report that the incremental cost is only 5% to 10% more than a fee-based process.
- Only 16% believe that the cost premium exceeds 10%.

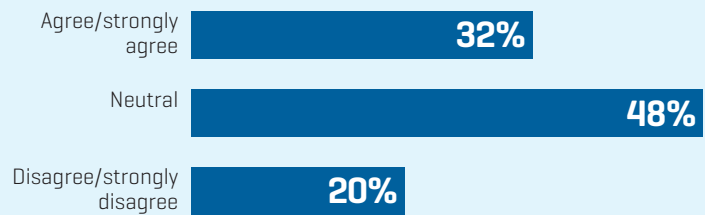


Value of the incremental cost of qualifications-based selection

Among the owners who report experiencing a cost premium to conduct a qualifications-based selection, only 20% feel that the benefits to their organization do not outweigh the additional cost.

Importantly, among the owners who report using qualifications-based selections more frequently than fee-based, 55% agree or strongly agree (compared with 32% of all the owners). So the findings suggests that expanded usage of qualifications-based selection generates greater levels of value.

“The benefits my organization gets from selecting architects using a qualifications-based selection process outweigh the additional cost of using this approach.”

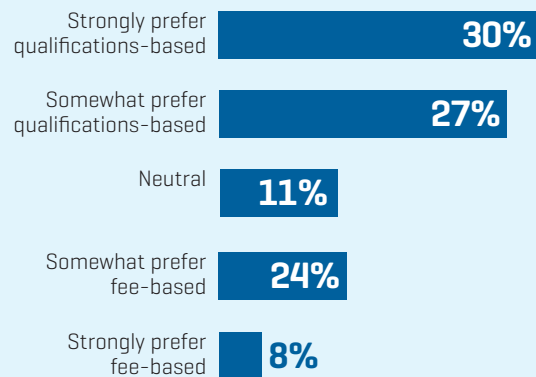


Preferred selection method

As a final question, the owners having experience with both fee-based and qualifications-based architectural selections were asked which they prefer, and to what degree.

- Only 11% were neutral, so most of the owners have a preference.
- The majority (57%) report that they either somewhat or strongly prefer qualifications-based selections more than a fee-based process.
- Only 8% strongly prefer the fee-based approach.

Among owners who conduct more qualifications-based selections than fee-based ones, 54% strongly prefer them and another 15% somewhat prefer them, totaling 69%. Therefore, more use generates greater preference.



Usage Trends for Qualifications-Based Selection

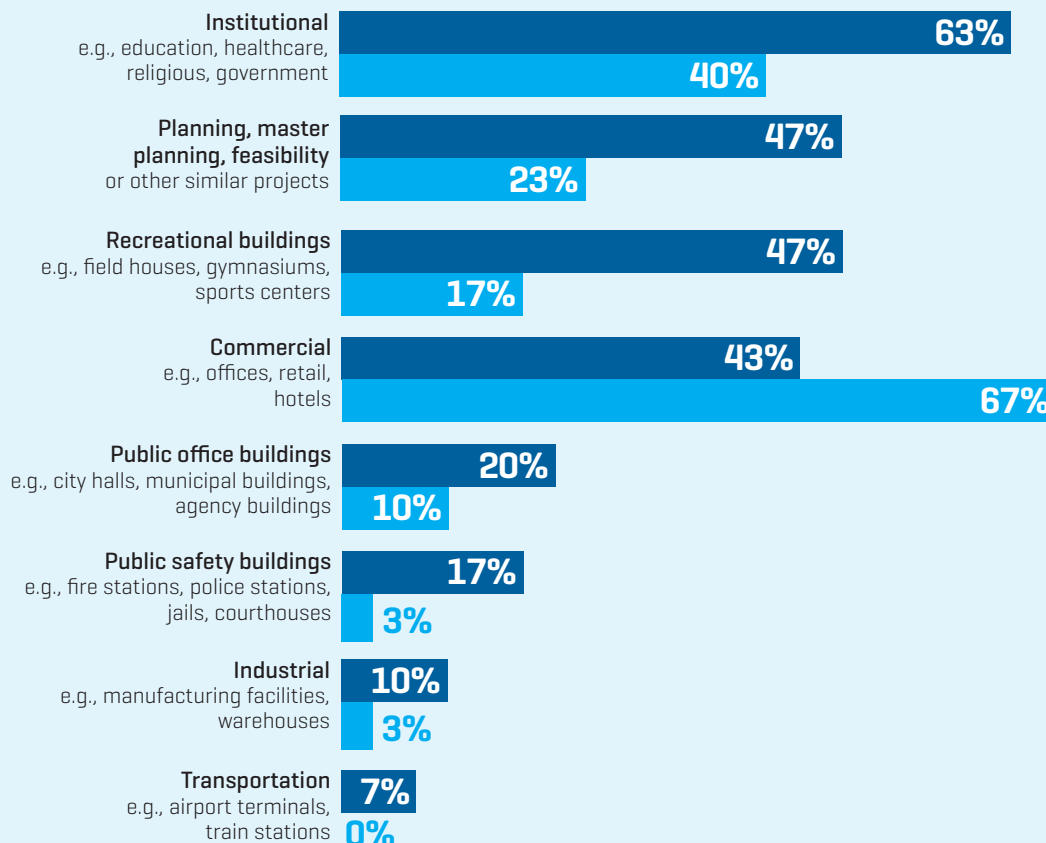
In this section of the study, owners were asked about the types of projects where they tend to use qualifications-based selection

processes and fee-based ones, and what factors drive their decisions either way.

■ Qualifications-based ■ Fee-based

Frequency of selection process usage by project type

When asked about which process was applied most often to specific project types, a qualifications-based process is reported to be used most frequently on institutional projects, planning studies and recreational buildings, whereas a fee-based approach is very frequently applied to commercial projects, and significantly less often to all other types studied.



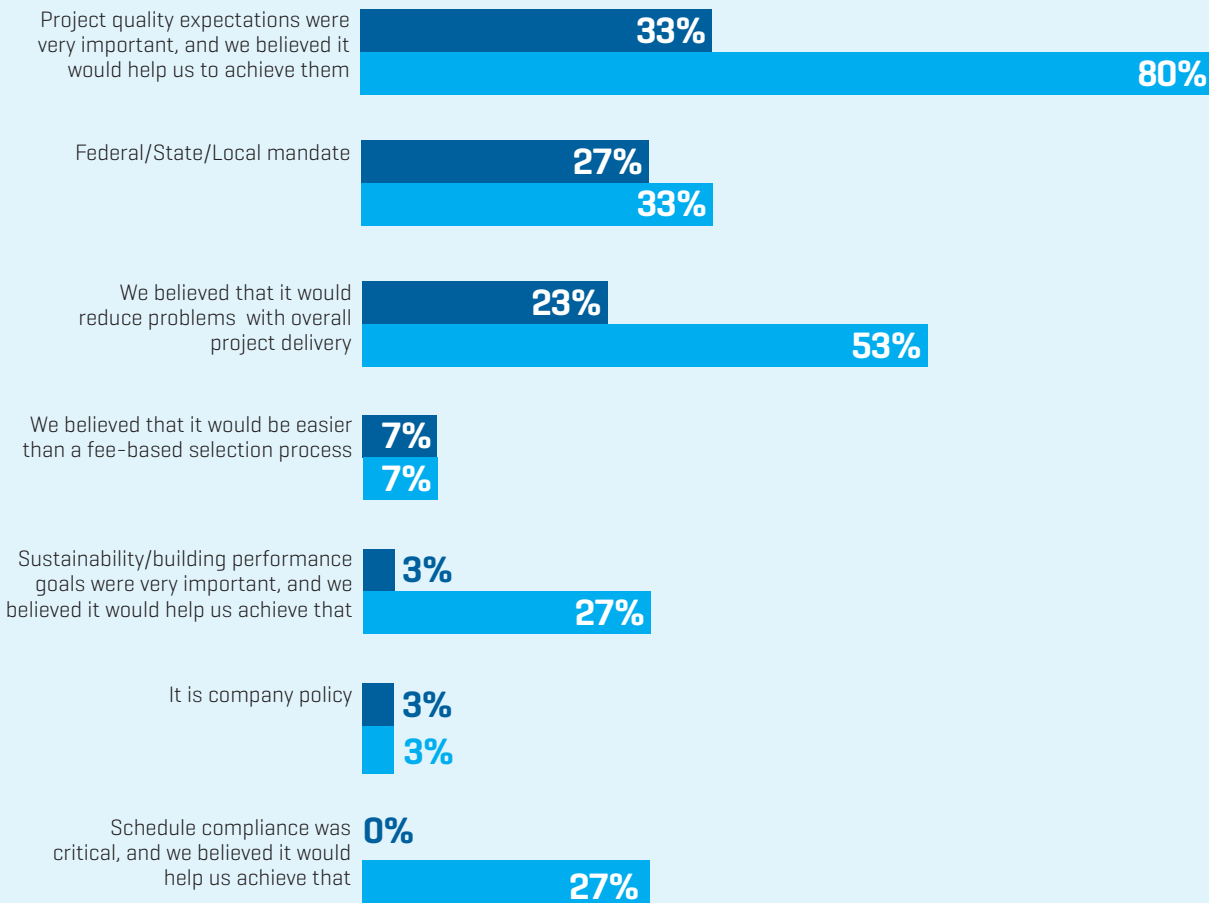
■ Top Factor ■ Factor

Frequent reasons for using selection processes

Owners identified the factors that most influence their decision to use either approach. The charts show the percentages of owners who identified each factor as being an influencer, and also the percentage among each of those groups who named it as their top influencer.

Decision factors for using qualifications-based selection

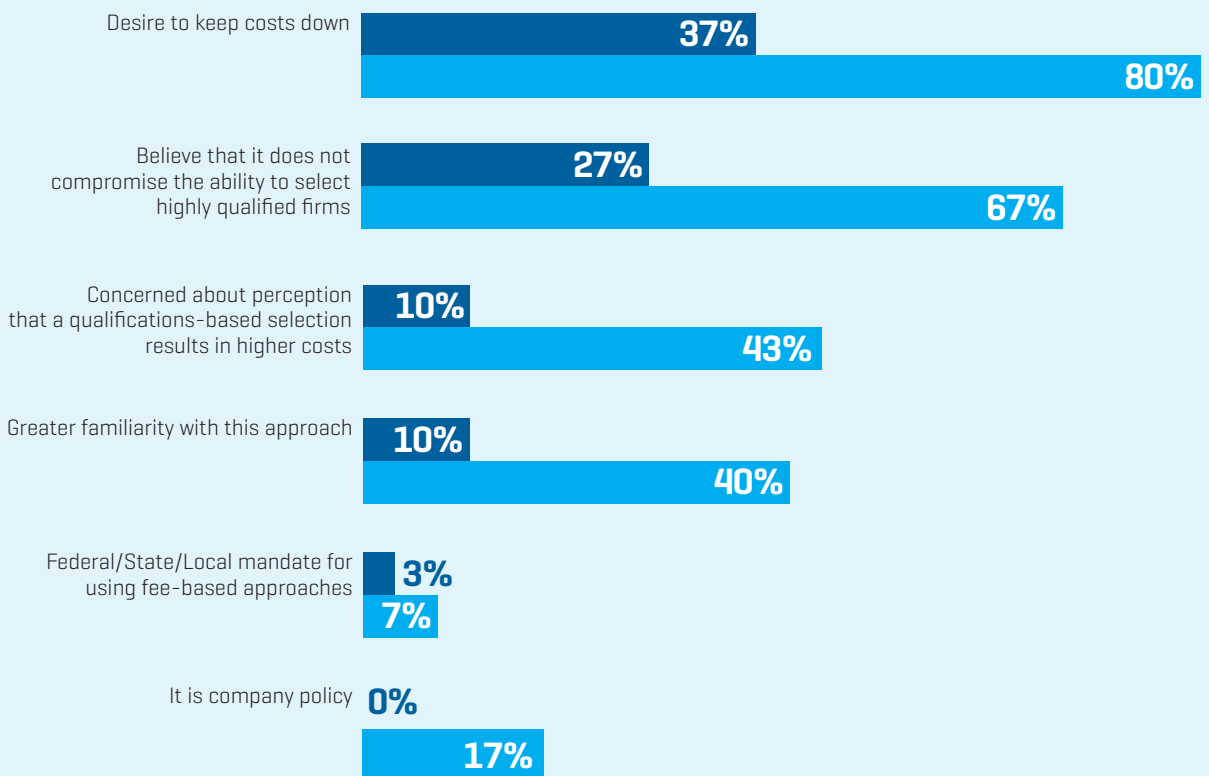
Shown ranked by top factor



Usage Trends [cont.]

■ Top Factor ■ Factor

Decision factors for using fee-based selection
Shown ranked by top factor



Conclusions

Purposes of this study were to:

- Compare owners' satisfaction with both the design and construction process and with final project outcomes between their projects where the design team was selected based primarily on its qualifications, and those projects where that team was selected primarily because of its fees.
- Determine the drivers for electing either procurement method, and preferences.

Differences in owner satisfaction

While in general, about one third of the owners interviewed for this study report that they are equally satisfied with the performance of teams selected by either method [qualifications or fee], in almost all cases (15 out of 16 specific performance aspects studied), a higher percentage of owners state that they experience a greater level of satisfaction from the design teams that were selected because of their qualifications than express that about their fee-based teams. This is particularly true with nine of the 16:

- Starting work without a fully defined scope
- Dealing effectively with your most complex projects
- Working well under an accelerated schedule
- Effectively handling a challenging site or other unusually restrictive conditions
- Fewer constructability issues in the construction documents
- Fewer RFIs generated about the construction documents
- Less rework generated due to design issues
- Positive contribution to the overall project team chemistry
- Ability to maintain expected project quality level

Internal cost impact and value

68% of the owners who have used both design team selection processes report that a qualifications-based method is costlier than a fee-based process, but most of them identify the incremental cost to range between 5% to 10% more than a fee-based approach. And only 20% say the extra cost is not worth the incremental benefits. This is important to quantify because 43% of owners who have used a fee-based approach report that one of the main reasons they do so is a concern about the cost of a qualifications-based method.

CONCLUSIONS

Conclusions [cont.]

Usage

A qualifications-based process is used most frequently on institutional projects, planning studies and recreational buildings. A fee-based approach is seen most frequently on commercial projects, and significantly less often on to all other types studied.

Drivers

A qualifications-based process for selecting a design team is associated with a high degree of owner satisfaction in project and process outcomes. Owners believe it will help reduce problems with overall project delivery and help them better achieve desired project quality outcomes. Public owners also cite a mandate to do so as a primary driver.

A fee-based method for selecting a design team is generally viewed as a value-based approach because it is somewhat less expensive to conduct, and therefore contributes to controlling project soft costs. Owners using this method tend to be very cost driven, and do not believe that this method impacts their ability to find a highly qualified design team.

Preference

When owners who have had experience using both methods were asked directly about which they prefer, 57% cited a qualifications-based process versus only 32% doing so for the fee-based approach. And 69% of the owners who report conducting more qualifications-based selections than fee-based ones say they prefer the former, demonstrating that more frequent use generates a higher level of preference.

Methodology

The primary purpose of the study is to determine the degree to which public and private sector owners perceive that the use of a qualifications-based selection process for design services is impacting project

outcomes compared with fee-based selection. The study also examines owners' usage trends and preferences related to these approaches. The research methodology is set forth below.

Research process and sample

Dodge Data & Analytics conducted telephone interviews with a total of 60 owners who were screened to ensure familiarity with architectural selection processes and related project outcomes.

The sample is intentionally diverse:

- 21 of the owners represent public entities (e.g., city/municipal, state, military) and 39 represent private organizations (e.g., developers, owner-occupiers).
- Owner sizes (by annual construction volume): 20% are large (>\$50M), 41% are medium (\$5M to \$50M) and 39% are small (\$5M or less).
- Locations were geographically dispersed across the US.
- Project type experience was diverse, including:
 - COMMERCIAL (e.g., offices, retail, hotels)
 - INSTITUTIONAL (e.g., education, healthcare, religious, government)
 - INDUSTRIAL (e.g., manufacturing facilities, warehouses)
 - PUBLIC SAFETY BUILDINGS (e.g., fire stations, police stations, jails, courthouses)
 - PUBLIC OFFICE BUILDINGS (e.g., city halls, municipal buildings, agency buildings)
 - TRANSPORTATION BUILDINGS (e.g., airport terminals, train stations)
 - RECREATIONAL BUILDINGS (e.g., field houses, gymnasiums, sports centers)
 - PLANNING, MASTER PLANNING, FEASIBILITY (or other similar projects)
 - OTHER PUBLIC BUILDINGS

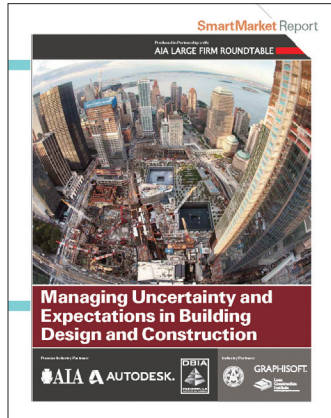
Regarding their selection process experience during the last five years:

- 37 reported having experience using both types of selections and were asked a specific set of questions to compare project outcomes between the two processes.
- 17 have only conducted qualifications-based selections and were just asked about that process.
- 6 have only conducted fee-based selections and were just asked about that process.

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AIA provides members with tools and resources to assist them in their careers and business as well as engaging civic and government leaders and the public to find solutions to pressing issues facing our communities, institutions, nation, and world. Members adhere to a code of ethics and conduct to ensure the highest professional standards.

About Dodge Data & Analytics

Dodge Data & Analytics is North America's leading provider of analytics and software-based workflow integration solutions for the construction industry. Building product manufacturers, architects, engineers, contractors and service providers leverage Dodge to identify and pursue unseen growth opportunities and execute on those opportunities for enhanced business performance. Whether it's on a local, regional or national level, we make the hidden obvious, empowering our clients to better understand their markets, uncover key relationships, size growth opportunities and pursue those opportunities with success. Our construction project information is the most comprehensive and verified in the industry. We are leveraging our 100-year-old legacy of continuous innovation to help the industry meet the building challenges of the future. To learn more visit www.construction.com