



General Market Trends

FMI Forecast Methodology

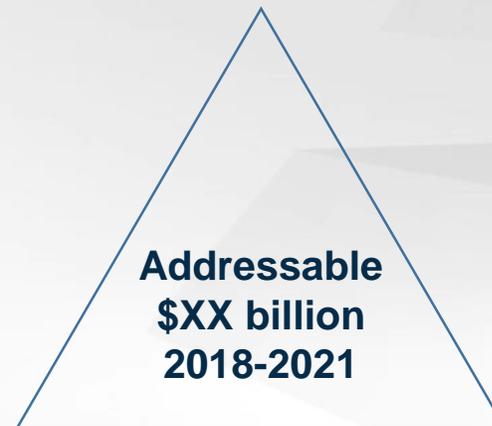
To derive a market forecast, FMI uses a triangulation method that utilizes multiple sources to develop and validate the market's size and direction. The following diagram represents the methodology used for developing construction put in place estimates.

Quantitative Market Model:

Utilizing multiple sources, both historical and forward looking, FMI generates a baseline forecast for construction put in place spending at a local level for each of the various segments examined in this study. For example, historical construction spending put in place is reported by the U.S. Census and is then forecast at a local level using local economic indicators, such as population growth, GDP, unemployment rate, etc.

Anticipated Project Examination:

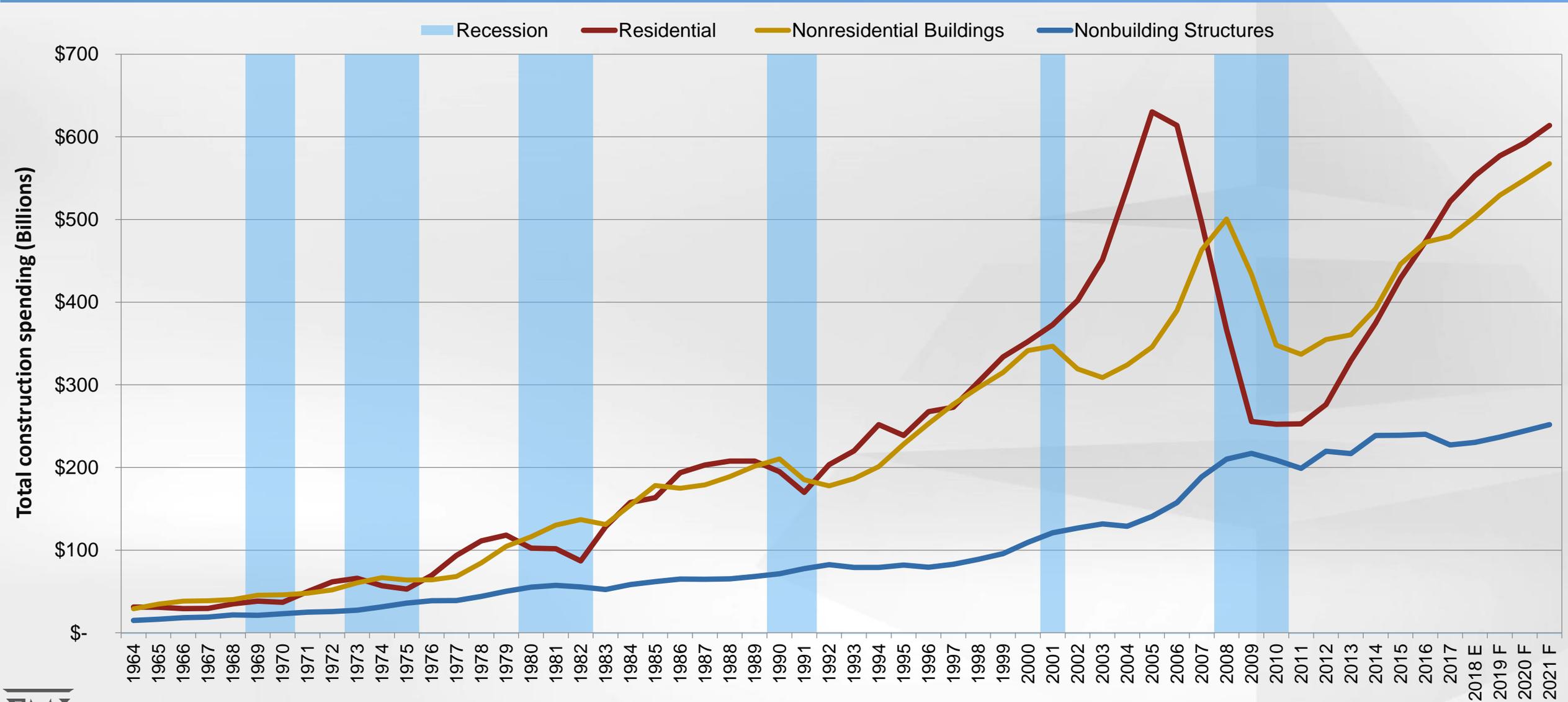
Utilizing FMI's proprietary project databases, CMD Reed, Industrial Info Resources, Dodge and other secondary sources, FMI adjusts the baseline, quantitative market model to reflect planned projects over the term of the forecast. Projects are vetted on likelihood of occurring based upon the known and anticipated market conditions.



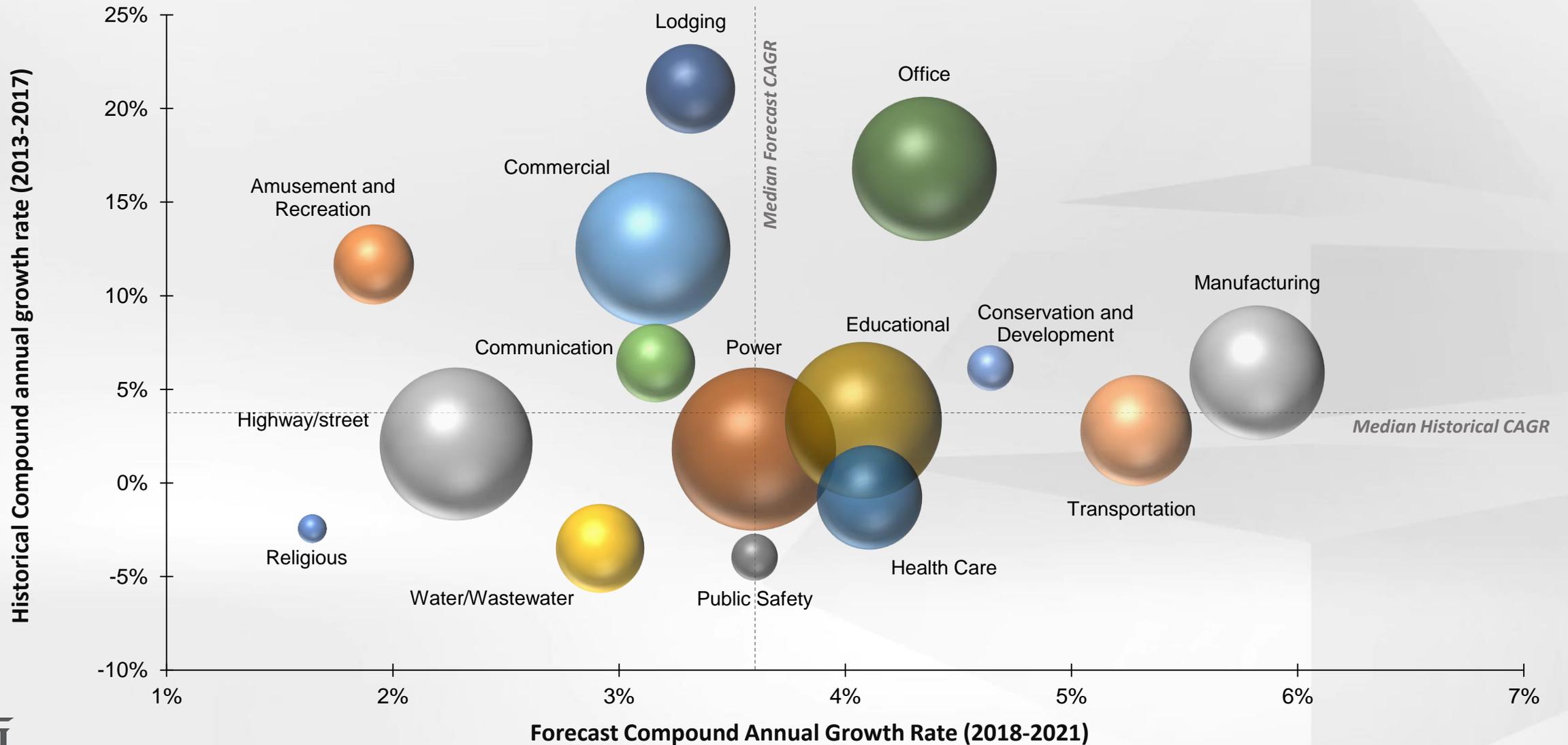
Market-Driven Validation:

FMI then validates and adjusts as necessary the market sizing and forecast based upon primary research conducted with actual market participants and senior FMI consultants. These industry members can speak directly to market conditions and direction based upon their intimate knowledge of the individual market and segment.

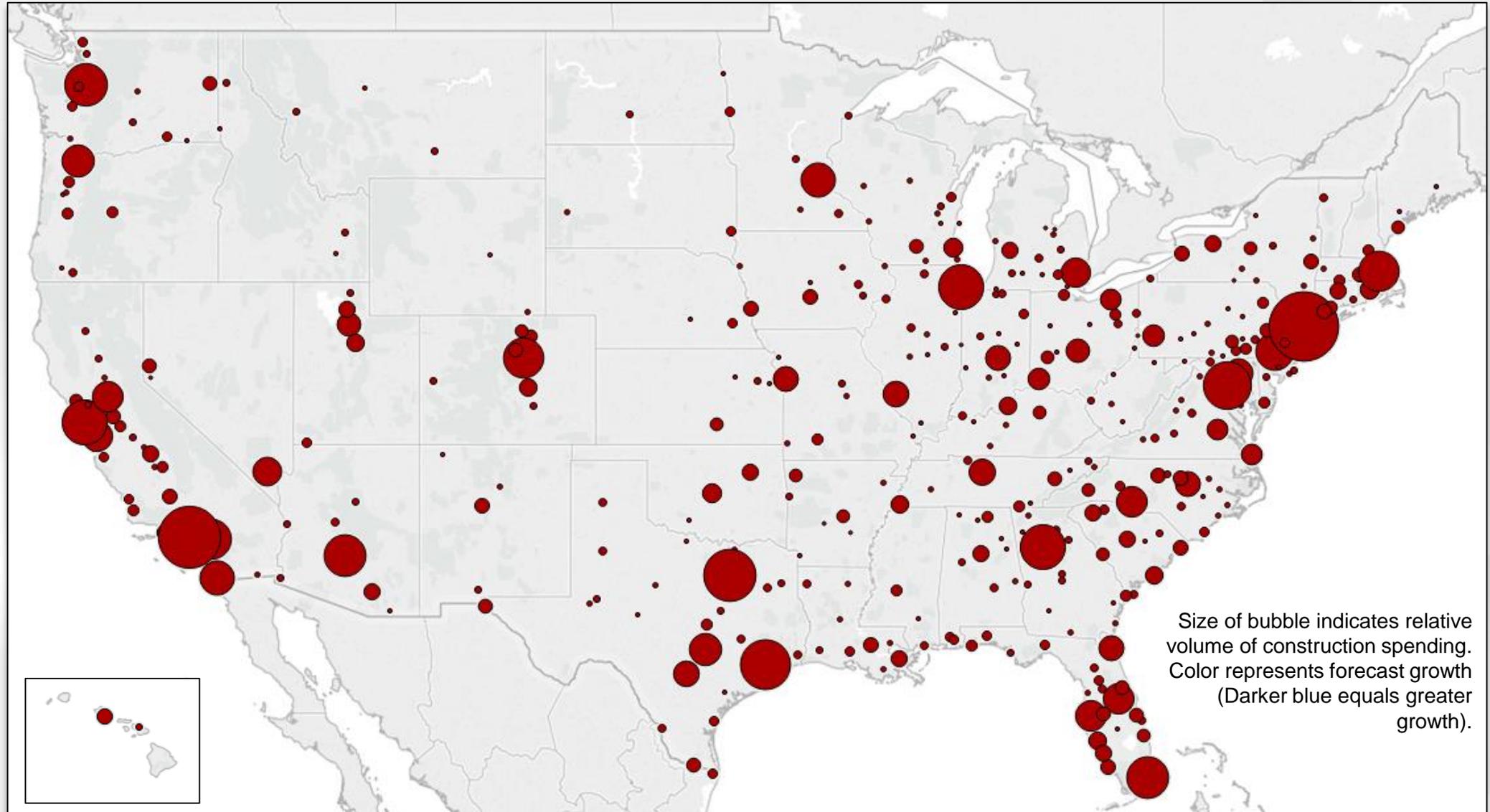
Total Construction Spending



Construction Spending by Segment



Construction Spending by Metro Area



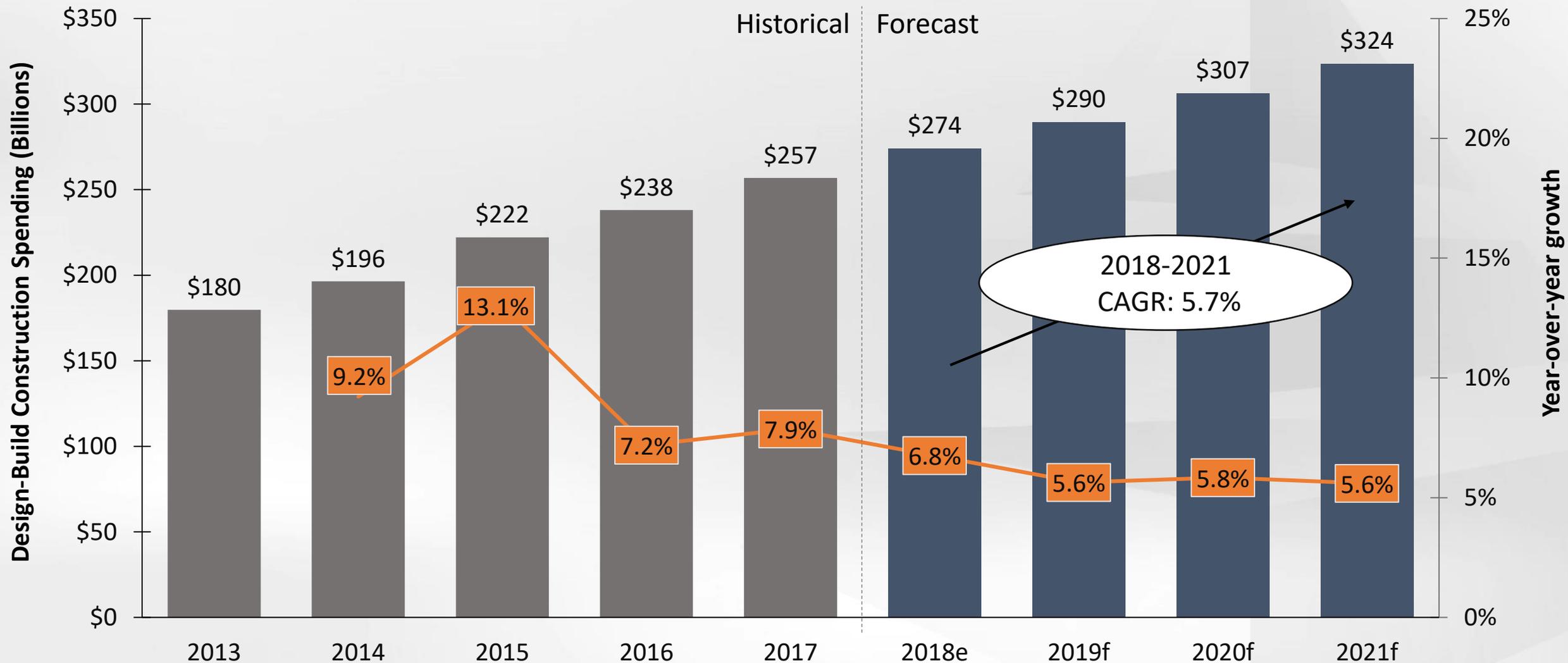


Design-Build Trends

Defining Design-Build

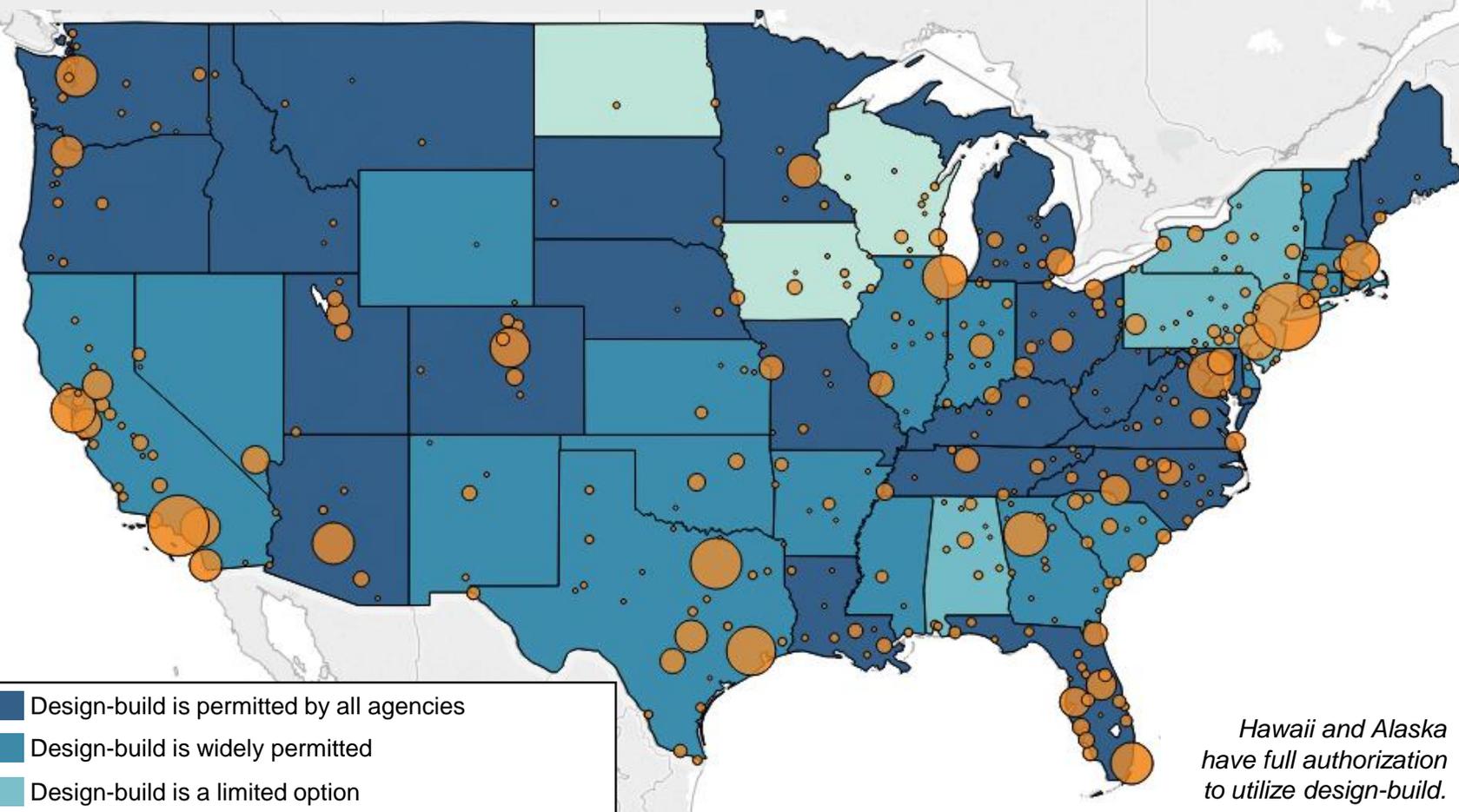
- For this research, design-build was defined as a method to deliver a project in which the design and construction services are contracted by a single entity.
- To account for all design-build spending, several variations of design-build were considered and assessed when developing the market-sizing model.

Design-Build Spending for Nonresidential Construction



Design-Build Authorization and Construction Spending

Concentration of Construction Spending by Metro Area



Design-build is permitted by all agencies
 Design-build is widely permitted
 Design-build is a limited option
 Design-build is limited to one political subdivision, agency or project

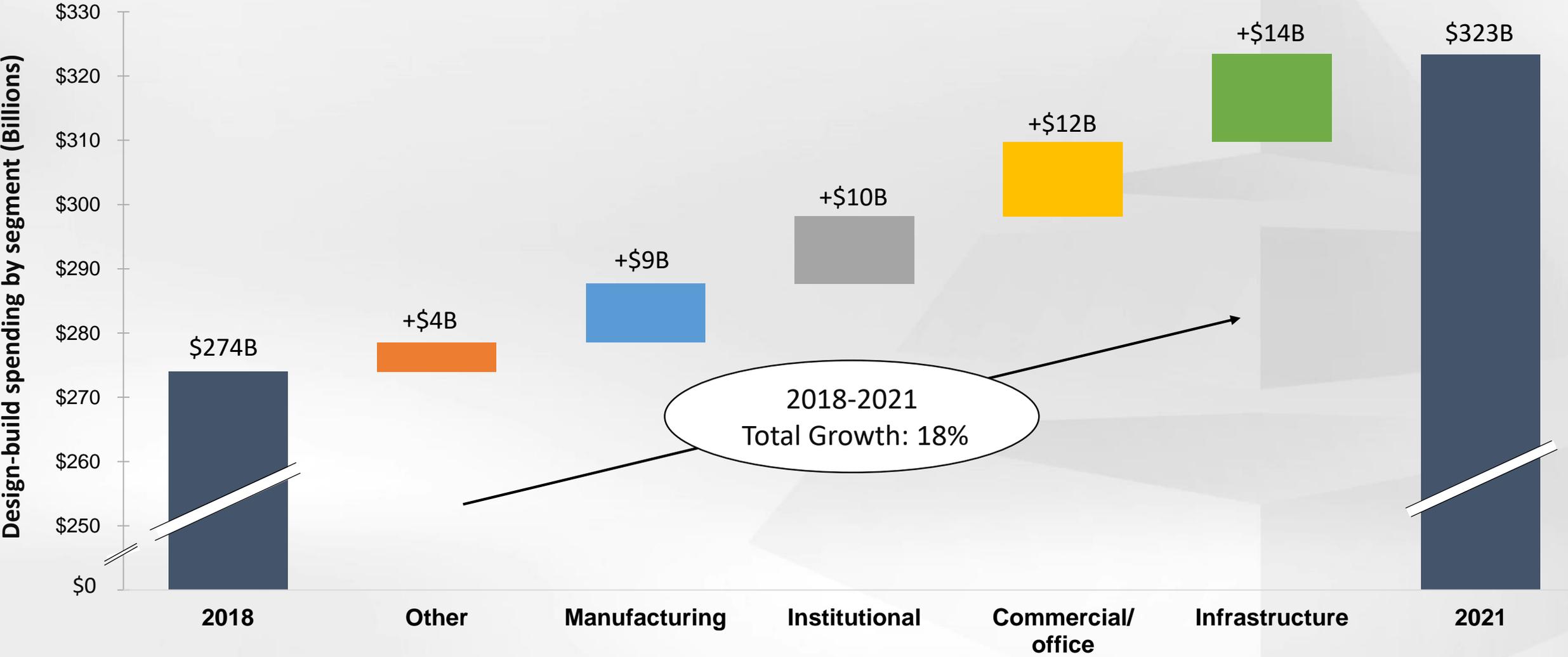
Hawaii and Alaska have full authorization to utilize design-build.

Design-Build Spending by Region

| Region | 2018e | 2021f | CAGR (18-21) |
|-------------------|--------------|--------------|--------------|
| South | \$101 | \$118 | 6.0% |
| West | \$67 | \$82 | 6.2% |
| Midwest | \$62 | \$72 | 5.1% |
| Northeast | \$44 | \$51 | 4.9% |
| U.S. Total | \$274 | \$323 | 5.7% |

- Forty-three states have full or widely permitted authorization to utilize design-build for public agency projects
- Three states indicated limited use of design-build for construction project delivery.

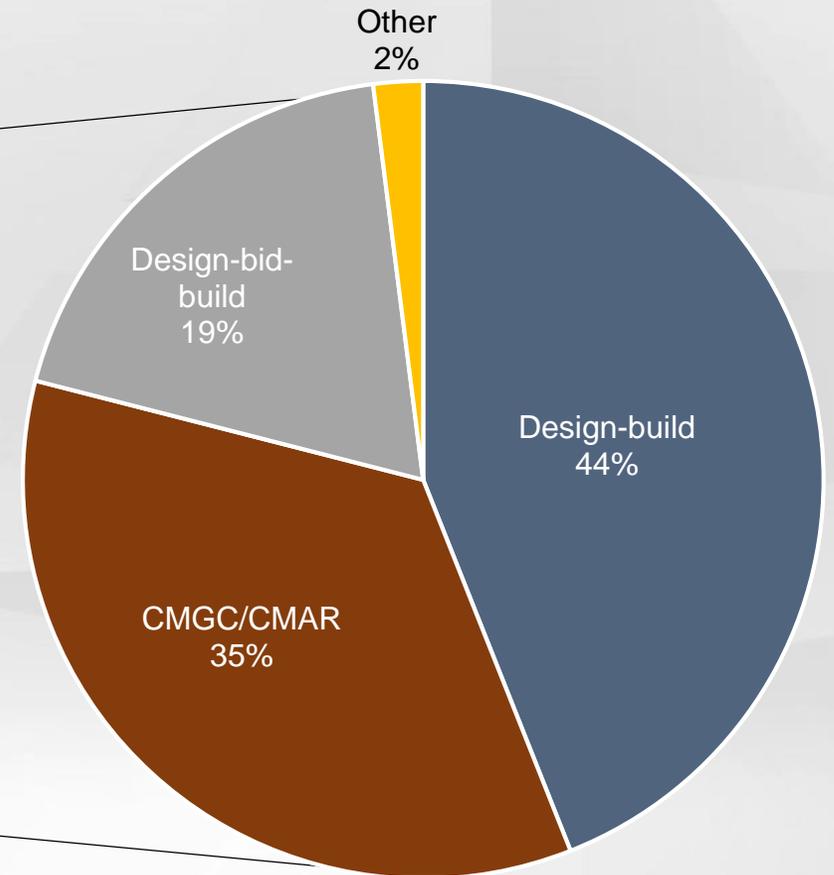
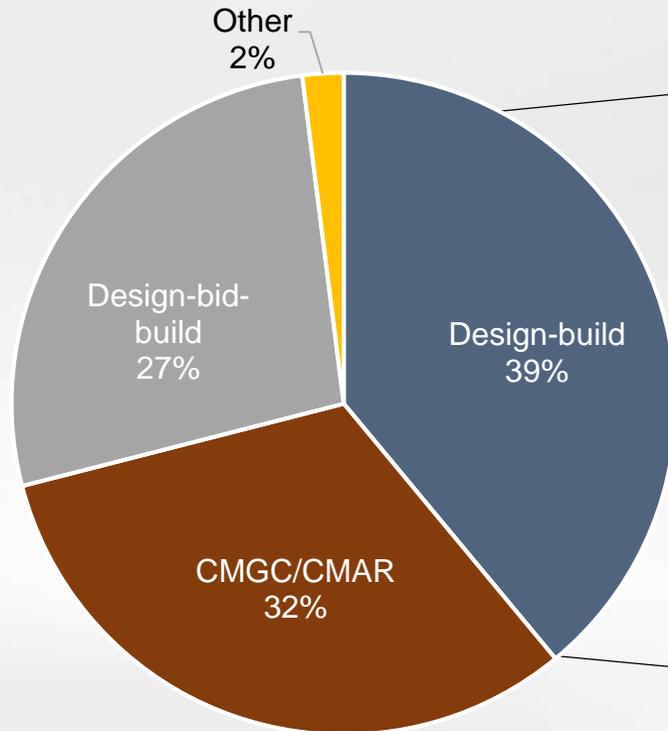
Design-Build Spending by Segment



Growth in Design-Build Utilization

2018-2021 CPiP: \$2,729B

2013-2017 CPiP: \$2,779B





Design-build is no longer an alternative method. It is a main part of how we delivery our program.”

- Public owner

Top Factors Influencing Design-Build Delivery

Project Schedule

Project Complexity

Project Size

Outside Experience

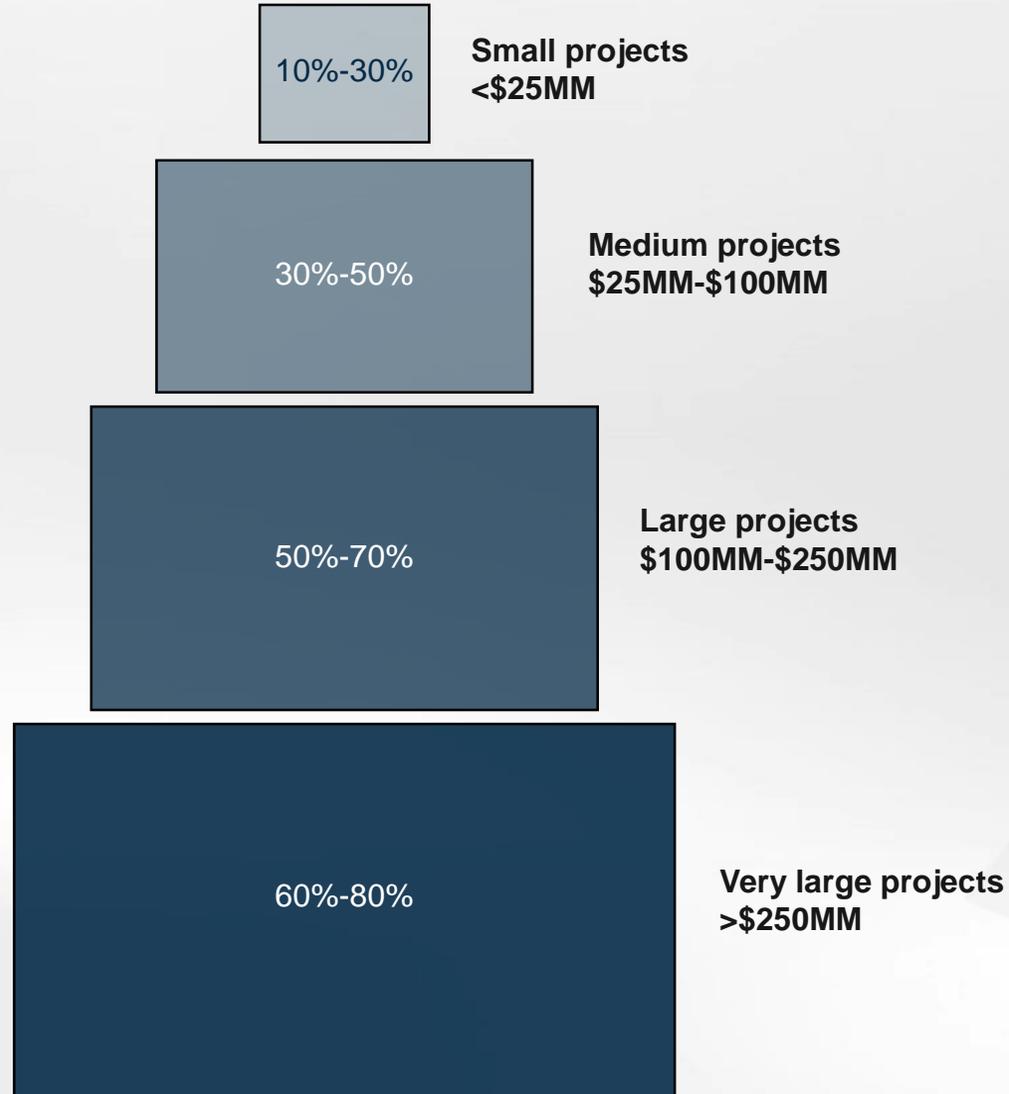
Staff Experience

“Acceleration is one of the more governing factors for selecting design-build. We want to get the work out on the street fast and create jobs.”

“Projects going design-build tend to be more complex and schedule driven.”

“As project size increases so does our likelihood to utilize design-build. Also, we feel there is a higher quality of project participants when we utilize design-build.”

Design-Build Utilization by Project Size

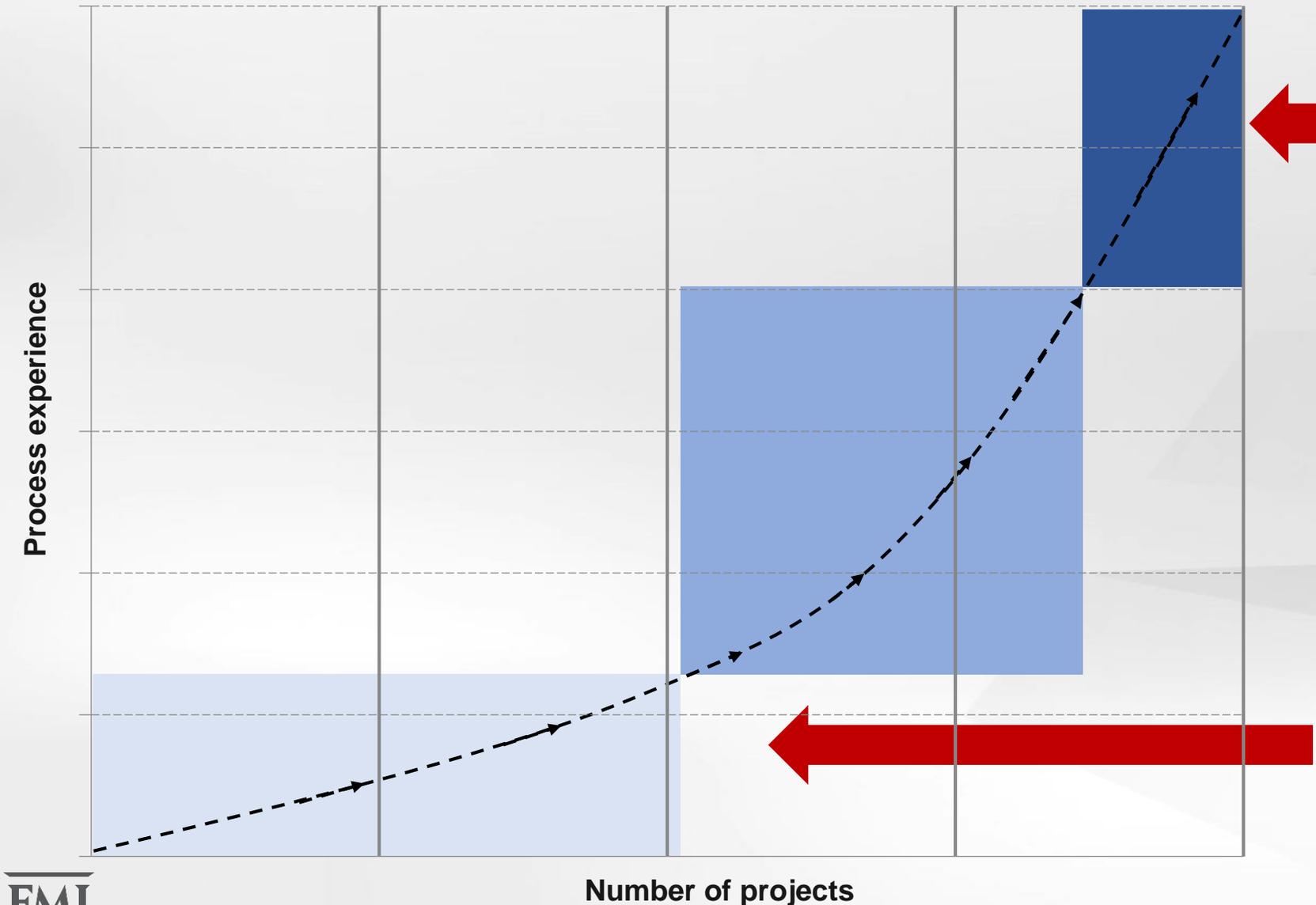


“Historically, design-build has been used on large projects. Recently, we have seen a growing use of design-build on smaller projects.”

“When we have a multimillion-dollar project we look towards design-build. Generally, we believe that we get a better value for the investment with design-build.”

“The trend is for larger and more complex projects to be design-build. We will continue to see bigger projects going design-build.”

Design-Build Education Process



Consistent use of design-build

- Alignment on critical success factors.
- Strong understanding of what risks can be transferred and which can be internally managed.
- Internal champion of the design-build process.

First time user of design-build

- Require guidance and education on the benefits and values associated with the process.
- Illustrating the appropriate level of risk to be transferred and managed is important for these owners to understand.

Key Team Member Characteristics

1

Personnel

Importance of key individuals and the availability of these individuals.

2

Project Experience

Proven past experience delivering design-build projects and understanding of the process.

3

Owner Understanding

Understanding and alignment with the local community and project stakeholders.

4

Prior Partnership

High level of comfort with and complimentary skillsets.

Importance of Team Chemistry

Project Approach

- A company's decision-making process, operational priorities and attitudes towards dispute resolution.

Management Alignment

- How the individuals representing a company are able to come to decisions in a compatible manner.

Communication style

- The frequency of communication and involvement of all stakeholders.

Corporate Culture

- Entrepreneurial vs. conservative – operational vs. innovative.



Progressive design-build is particularly interesting to us. We see this as a continued trend moving forward.”

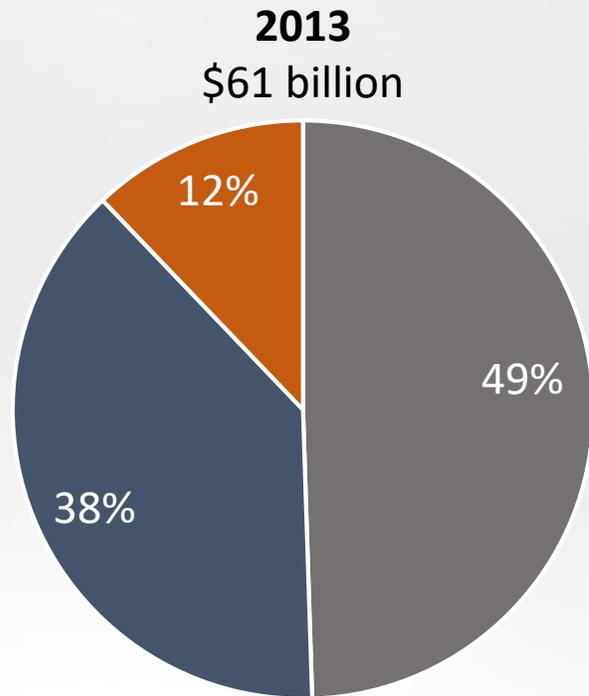
-Public Owner

Common Roadblocks of Design-Build Utilization

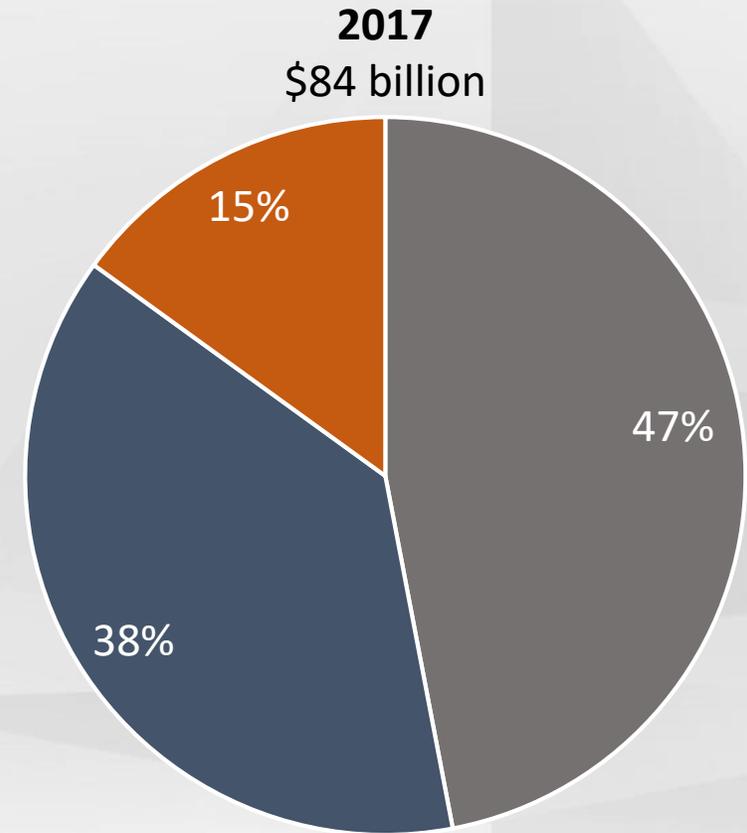


- *Education/understanding*
- *Alignment of procurement*
- *Consistency across regions*

ENR Top-100 Domestic Design-Build Firm Revenue



38% increase



Growth 2013-2017

Top-10 firm revenue
33%

Firms 11-50 revenue
37%

Firms 51-100 revenue
66%

Questions?

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