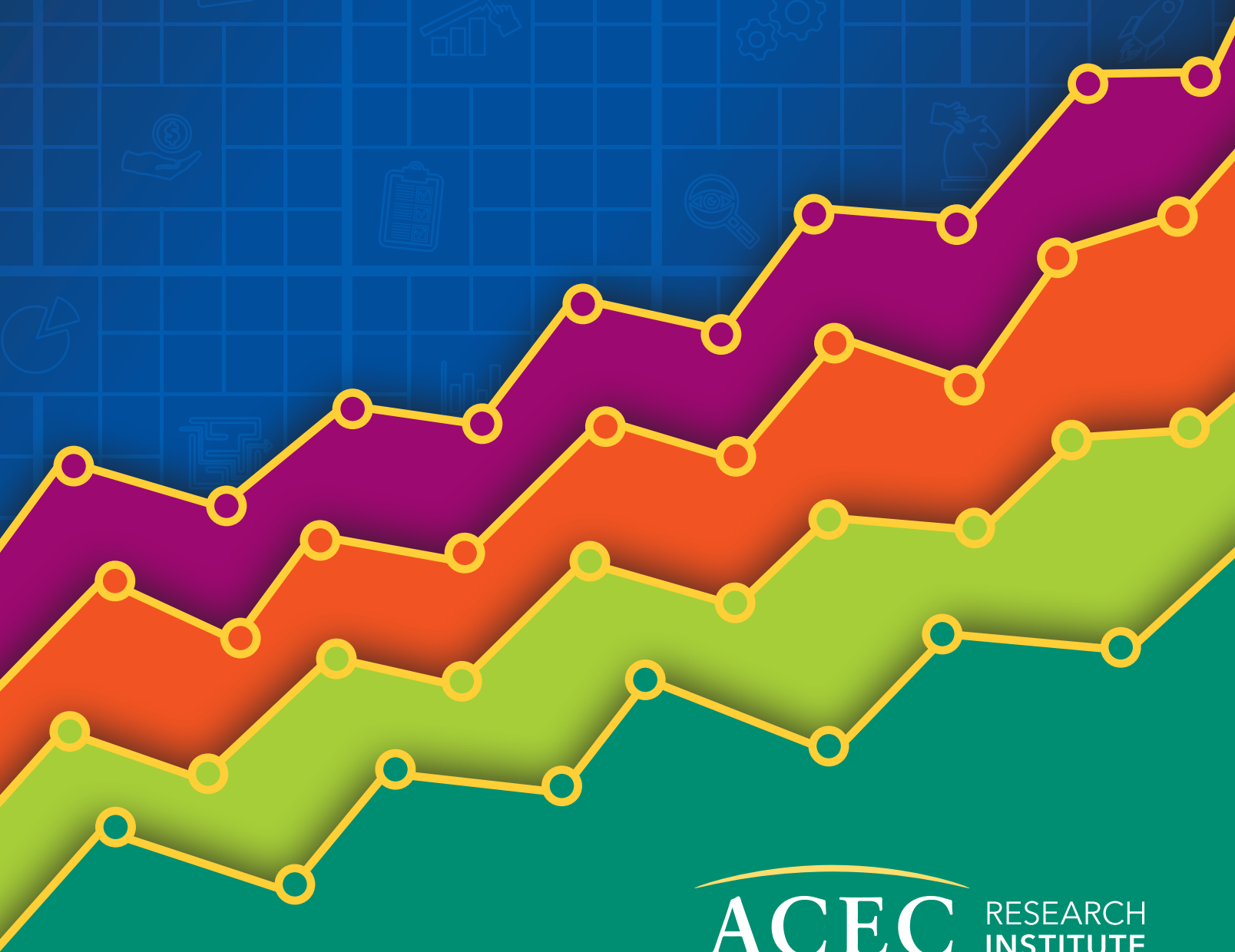
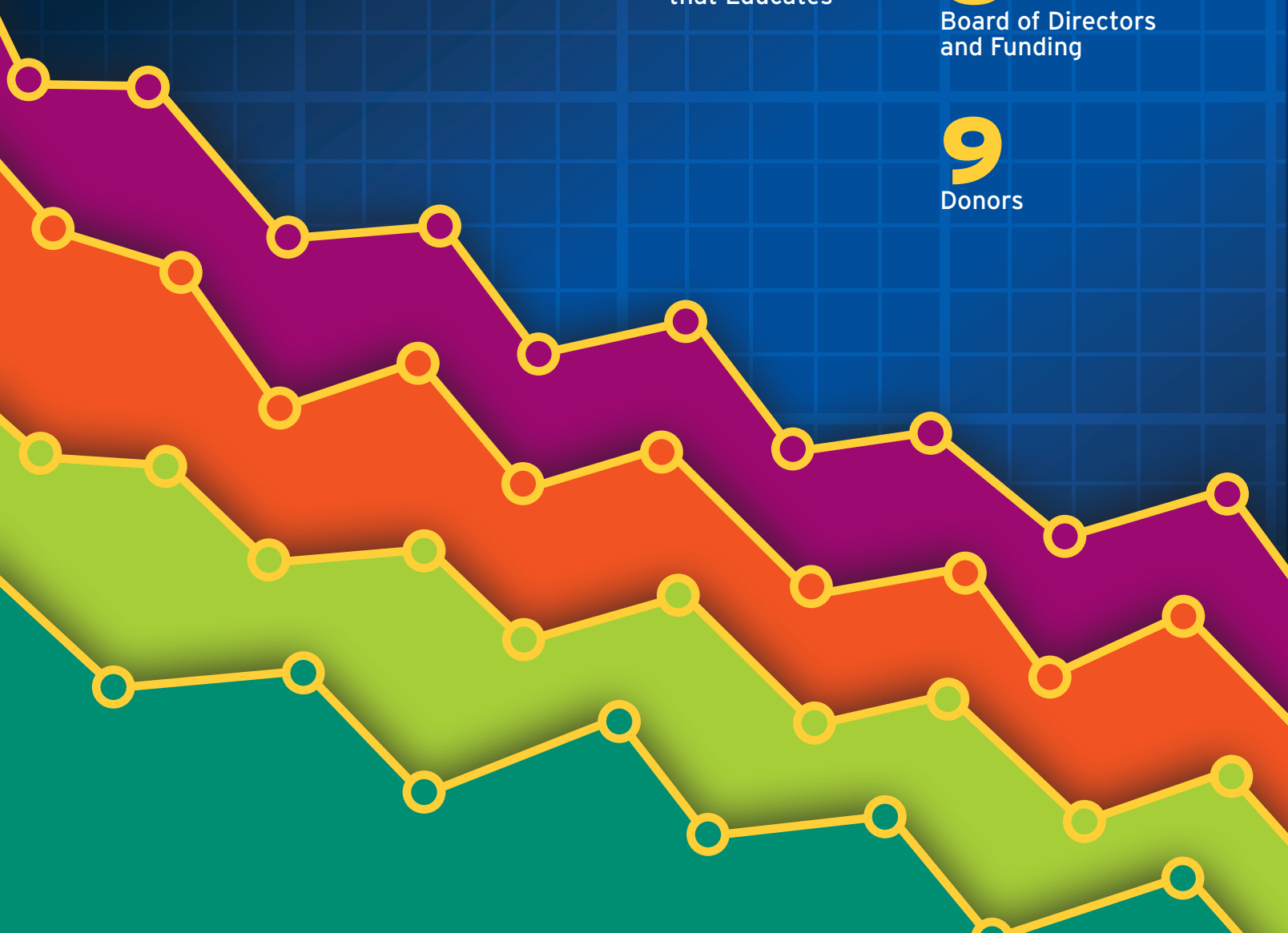
DELIVERING VALUE THROUGH RESEARCH



ACEC RESEARCH INSTITUTE

2021–2022 Achievement Report

DELIVERING VALUE THROUGH RESEARCH



2021-2022 ACHIEVEMENT REPORT

DEAR FRIENDS AND COLLEAGUES,

During the past year, the ACEC Research Institute continued its mission to deliver new research, resources, tools, and education to the engineering industry. In 2021, the Institute completed industry research ranging from the **Engineering Industry Impact Series**, which profiles and analyzes performance in the engineering and design services industry, to the newly updated analysis of **Qualifications-Based Selection (QBS) in the Procurement of Engineering Services** resulting in the QBS Resource Portal to aid Member Organizations and firms in driving QBS efforts, which benefit clients, owners, and firms alike.

Before the Institute was created, we had to rely on other organizations for workforce estimates and broad economic impact data. **Today, the ACEC Research Institute is the definitive source for the size and scope of the engineering industry.** This shift elevates ACEC's vital role in advocating before policymakers and building inroads with media and thought leaders throughout the country.

Through the Institute's valuable work, we now know the engineering and design services sector directly employs more than **1.5 million Americans and supports an additional 3 million indirect jobs. Together, that makes up 3 percent of all U.S. jobs and drives nearly $400 billion in annual revenue.**

The Institute also has its finger on the pulse of the industry, understanding the sentiment of engineering firm leaders and how market sectors are trending, especially as the Infrastructure Investment and Jobs Act (IIJA) projects gear up.

The success of the Institute has been funded at all levels by partners dedicated to engineering today for a better tomorrow. As the Institute looks ahead, new partnerships will focus on future initiatives such as sustainability, resiliency, and technology — areas that keep us, as firm leaders, up at night.

The ACEC Research Institute Board remains committed to providing the resources necessary to drive the engineering industry forward. We appreciate our industry partners who have invested their time, energy, and financial resources to meet the increasingly global needs of engineering professionals, and we encourage you to join us on this journey.

Sincerely,

John L. Carrato
Chair, ACEC Research Institute
Chairman of the Board
Benesch

Daphne Byrant
Executive Director
ACEC Research Institute

MISSION AND VISION

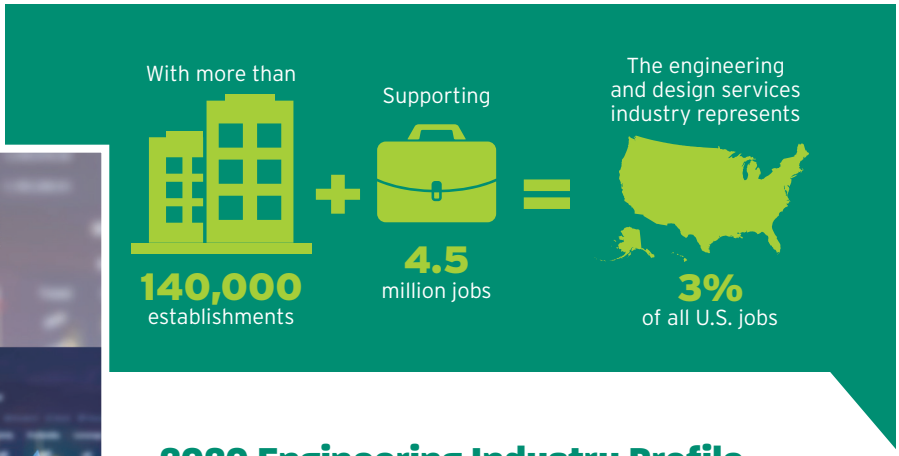
Founded in 2020, to deliver knowledge and business strategies that guide and elevate the engineering industry. The ACEC Research Institute is the leading source of knowledge and thought leadership for creating a more sustainable, safe, secure, and technically advanced built environment.

QUANTIFYING ENGINEERING'S IMPACT

Scan to go to the impact report.

The ACEC Research Institute's research program continues its impressive growth to educate ACEC members and the engineering and design services industry. In 2021, the Institute established a first-of-its-kind study to profile and analyze engineering and design services performance. The Engineering Industry Impact Series provides insight for our member firms to leverage as a planning and educational resource. Reports in the series assist advocacy, communications, and other outreach efforts.

The overarching goals of the Engineering Industry Impact Series are to establish a clear definition of the industry to track performance; identify the overall size, scope, and growth of the sector; measure its economic contribution; and build a statistical model to forecast financial performance.



2020 Engineering Industry Profile

This landmark study benchmarks the size and scope of the engineering and design services sector on employment and economic activity in America. With more than 140,000 establishments, supporting 4.5 million jobs, the engineering and design services industry represents 3 percent of all U.S. jobs.

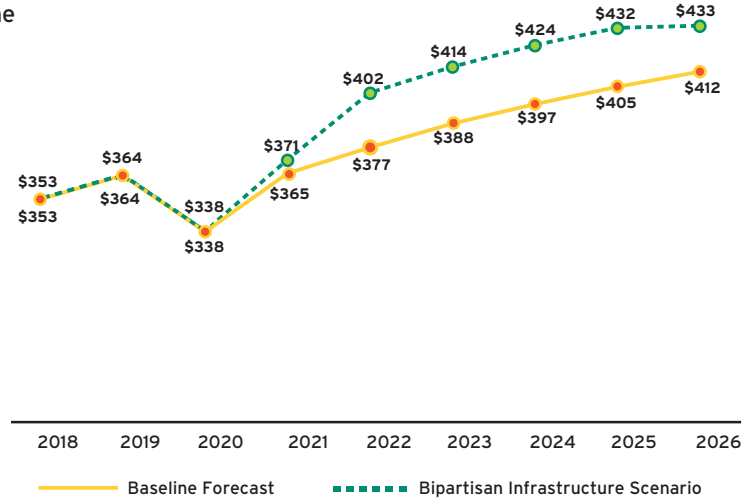
2020 Engineering Industry Economic Contribution

The second release of the three-part series provides detailed numbers behind the sector's wide-ranging impact on jobs and the economy. The report demonstrates the significant contribution these sectors make to total GDP ($600 billion), tax revenue ($122 billion), and direct economic impact ($229 billion). An interactive digital Economic Impact Map was created to provide detailed state-by-state economic data from the report. This tool has been viewed by thousands of visitors and utilized by ACEC state Member Organizations to deliver compelling data to their statehouses.

2021-2025 Engineering Industry Forecast

This report features a five year forecast of what lies ahead for the engineering and design services industry. The outlook and modeling assets can be used to forecast engineering and design services performance and evaluate scenarios surrounding policy, geopolitical, and other future conditions. **The 2021 Economic Assessment of the Engineering and Design Services Industry** provides an update to the earlier report and was used to model the impact of a possible infrastructure bill before the passage of the Infrastructure Investment and Jobs Act (IIJA).

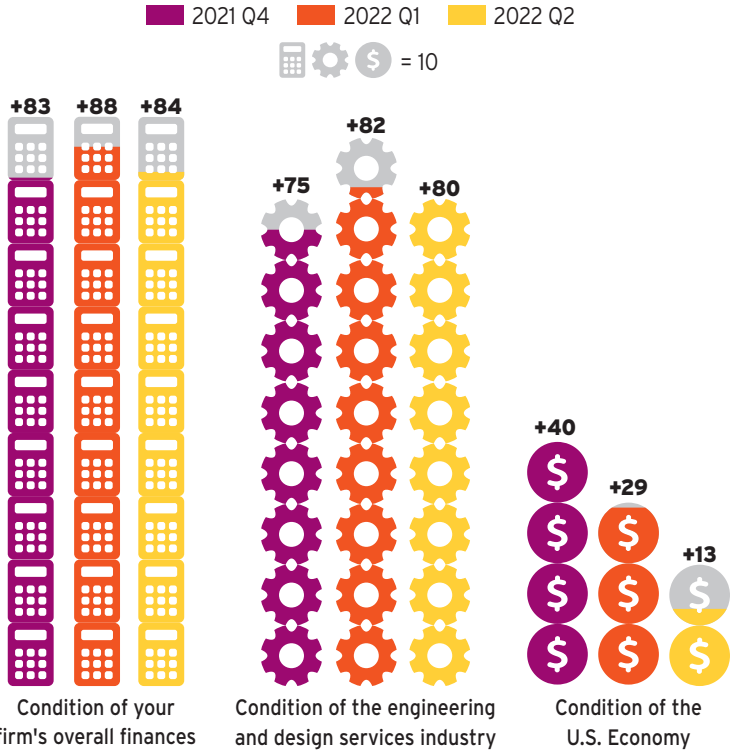
Baseline Forecast Compared to Impact of Bipartisan Infrastructure Bill



Engineering Business Sentiment

These quarterly reports detail the sentiment of more than 600 engineering firm owners and executives surveyed for their outlook on their firms' finances, their optimism for the engineering and design services industry, and their thoughts on the condition of the U.S. economy. Additionally, each quarterly report includes several hot-button issues, such as open positions, salary increases, and inflation.

Current Economic Sentiment



RESEARCH THAT EDUCATES

Scan to go to the QBS site.

The ACEC Research Institute provides the engineering industry with cutting-edge research, trend data, and economic analysis to help firm owners make decisions and delivers thought leadership that advances the understanding of engineering's essential value to society.

In March 2022, the Institute released the results of its highly anticipated updated analysis of Qualifications-Based Selection (QBS). The report comes at a key time as federal and state agencies embark on a new effort to allocate billions of dollars in new investment in the nation's critical infrastructure.

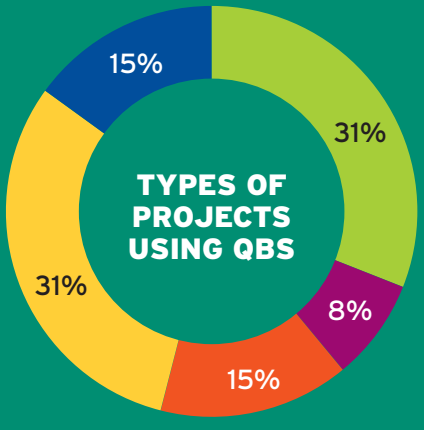
The new, updated *Analysis of QBS in the Procurement of Engineering Services* finds that QBS provides direct benefits in the design and construction phases of various public and private sector projects. From direct cost and schedule benefits to indirect benefits of reduced management issues and increased innovation, QBS demonstrates a clear advantage when applied across a host of project types, sizes, and geographic regions.

In addition to the report, the ACEC Research Institute created a QBS Resource Portal to aid ACEC state Member Organizations, firms, and agencies in driving QBS efforts, which will benefit clients, owners, and firms alike. The newly created QBS portal houses toolkits, primers, media kits, case studies, and more.

DRIVING SAVINGS, INNOVATION, & EFFICIENCY

THE QBS PROCESS

Qualifications-Based Selection is a simple and competitive process that matches the right engineering and design professional to your project, based on expertise and experience rather than cost alone.



30%
Reduction in schedule growth for QBS projects.

50%
Cost growth of QBS projects was half the national average.

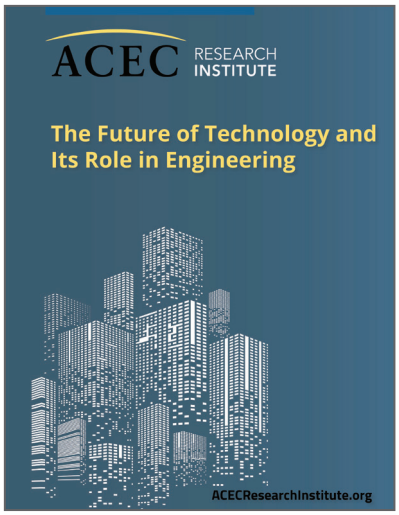
48%
QBS projects met all construction milestones with no adjustment in schedule.

89%
QBS projects received "very high" or "high" satisfaction rating from owners.

81%
QBS projects experienced moderate to significant innovation.

The Future of Technology and Its Role in Engineering

The ACEC Research Institute conducted this study to better understand the technological landscape of America's engineering and design services industry, how various tools were being used, and the value those tools provide firms across the industry.



Technology Tools Providing Value

Find engineering collaboration tools valuable.

Find 3D modeling and BIM (Building Information Modeling) automation tools valuable.

Find insight tools valuable.

2021 Transportation Funding Study

This study was undertaken to examine successful and unsuccessful legislative and ballot efforts focused on increasing funding for transportation. The goal was to help ACEC state Member Organizations and transportation stakeholders understand how to build successful coalitions for different revenue measures. The "lessons learned" for this study can be applied to future state efforts and may also prove useful in working with federal legislators in the future.

KEY FINDINGS

- Cultivate strong political champions
- Plan early and be in it for the longhaul
- Gather trustworthy data to support your case
- Keep your coalition together
- Be flexible on the source of revenue to be raised

The Future of Engineering Roundtable Series

The ACEC Research Institute developed a series of virtual roundtable discussions with leading experts to explore intelligent solutions to tackle major financial obstacles, seek more proactive approaches to predicting an uncertain future, and pursue strategies to remove barriers to creating that future. Presenters included economists, futurists, legal counsel, human resource specialists, industry leaders, and other subject matter experts.

The ACEC Research Institute conducted 10 roundtable sessions that were available live and on demand afterward. More than 1,100 engineering professionals have viewed these sessions across the country and around the world.

Conducted
10
Roundtable Sessions

More than
1,100
Session Viewers

SCHOLARSHIPS

The ACEC Research Institute is committed to advancing our profession through educational scholarships for students pursuing engineering degrees. Under the auspices of the ACEC Fellows Committee, the Institute added three new scholarship opportunities for qualified students interested in becoming engineers: The J.A. Watts, Inc. Diversity in Engineering Scholarship; the Lee Rice LRE Water Scholarship; and the Joseph Egan Scholarship. To date, the ACEC Research Institute has awarded 99 scholarships totaling $541,000.

2022 Scholarship Winners:

- **Gia Ha | Virginia Tech**
  $10,000 Scholar of the Year
- **Anna LeClair | Northeastern University**
  $7,500 Lee Rice LRE Water Scholarship
- **Xavier Vera | Fresno State**
  $5,000 J.A. Watts, Inc. Diversity in Engineering Scholarship
- **Rebecca Rasmussen | Brigham Young University**
  $5,000 a/e ProNet Scholarship
- **Qasim Akhlaq | The Cooper Union for the Advancement of Science and Art**
  $5,000 ACEC Life/Health Trust Scholarship
- **Kiara Diloreto | University of Dayton**
  $5,000 Joseph Egan Scholarship
- **Grace Zalubsa | University of Michigan**
  $3,000 College of Fellows Scholarship
- **Taylor Dahota | University of Nebraska – Lincoln**
  $2,500 Coalition of American Structural Engineers (CASE) Scholarship
- **Gracie Warren | Boise State University**
  $2,500 Small Firm Coalition Scholarship

Thank you to the ACEC College of Fellows Scholarship Committee members for their continued administration of the Scholarship Program.

- Bob Barnett, Barnett Jones Wilson, LLC
- Cathy Ritter, Constellation Design Group, Inc.
- Jane Rozga, GHD
- Donald Sipher, ATL Engineering
- Doris Willmer, Willmer Engineering, Inc.

"I RECEIVED A SUBSTANTIAL ACEC SCHOLARSHIP AT THE 1978 ACEC ANNUAL CONVENTION IN SAN FRANCISCO. THIS SCHOLARSHIP ENABLED ME TO GRADUATE WITHOUT ANY STUDENT DEBT AND PURCHASE A CAR AFTER GRADUATION WITHOUT CAR PAYMENTS. I WOULD LIKE TO EXPRESS MY APPRECIATION TO ACEC BY CONTRIBUTING TO THE INSTITUTE'S SCHOLARSHIP FUND. THE OPPORTUNITY FOR A YOUNG PERSON TO VISIT ANOTHER PART OF THE COUNTRY AND MEET SUCCESSFUL ENGINEERS ALONG WITH GOVERNMENT AND BUSINESS LEADERS IS VERY VALUABLE."

— JOSEPH EGAN

nABLE

National Advisory Board for Leadership in Engineering

The nABLE advisory board of the ACEC Research Institute identifies the most significant forward-looking issues in the engineering profession. The council brings together thought leaders in areas that shape or influence government, business, academia, and society to discuss the most pressing issues impacting or being impacted by people in the built environment. The objective is to continually look ahead to develop and advance a strategic direction that will position ACEC and the engineering profession as valued advisors to be sought after on a broad range of issues that shape the world.

nABLE Members

- **Chair: Manish D. Kothari**
  President & CEO, Sheladia Associates
- **Co-Vice Chair: Doug McKeown**
  Chair, Board of Directors
  Woodard & Curran
- **Co-Vice Chair: Karl Reid**
  Senior Vice Provost &
  Chief Inclusion Officer
  Northeastern University
- **Dr. Rafael Bras**
  Professor & Former
  Provost, Georgia Tech
- **Kevin Edwards**
  Chief Diversity & Inclusion Officer
  Bechtel Corporation
- **Rebekah Eggers**
  America's Technical Innovation
  Leader, EE&U, IBM
- **Roger Millar**
  Secretary of Transportation
  Washington State
- **Dr. Yvette Pearson**
  Vice President of Diversity,
  Equity, and Inclusion
  The University of Texas at Dallas
- **Barry Schoch**
  Senior Vice President
  Transportation, KCI

nABLE members met in February 2022 for their inaugural session to identify future research and thought leadership initiatives for the ACEC Research Institute.

nABLE group with ACEC Research Institute Chair, John L. Carrato.

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Melvin Williams
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Development Manager
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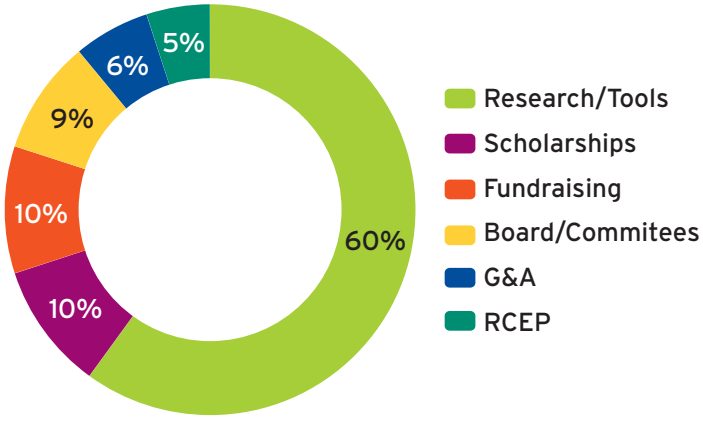
*Board term ended March 2022
**Board term ended May 2022

Funding

The ACEC Research Institute Board of Directors remains committed to investing in the engineering industry. This past year, the Institute provided funding for groundbreaking research initiatives, economic analysis, thought leadership, and scholarship grants, while maintaining a low cost of operation.

ACEC Research Institute is a 501(c)(3) nonprofit organization, and donations are tax deductible to the extent allowable by law.

Funding Allocations



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The accomplishments covered in this report would not have been possible without the contributions of our donors.
The ACEC Research Institute appreciates everyone who has contributed to the Institute's success.
Every effort has been made for this listing to be inclusive of all donors and we apologize for any omissions.

ACEC RESEARCH INSTITUTE

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