

Cutting-edge Research That Has an Impact

2022 ANNUAL REPORT

Each year, the NAIOP Research Foundation identifies and examines the latest trends and hot-button issues of importance to the commercial real estate industry. The Foundation delivered several reports, briefs and forecasts in 2021, as the industry endured a year of continued uncertainty and transition amidst the COVID-19 pandemic, subsequent variants of the virus stalled back-to-office plans, and supply chain choke points put increased pressure on already overheated e-commerce and distribution networks.

But there have been bright spots too. The Foundation’s Governors and Visionaries found new means to collaborate and connect throughout the year — both remotely and in person — sparking innovative ideas and approaches to the Foundation’s work.

To demonstrate how these new approaches can have far-reaching effects, a quick history lesson: In 2019, Lewis Agnew and Colleen Wevodau, members of the Visionaries program at that time, encouraged the Foundation to commission a white paper on forming and operating a private equity fund, as the real estate private equity fund industry had grown into a multi-billion-dollar global business. While there was some skepticism at first, Agnew and Wevodau ultimately succeeded in getting the project approved.

The white paper they championed had one of the highest download rates on the NAIOP website, and still sees strong traffic today. In light of that continued interest and positive feedback, NAIOP will soon launch a new,



interactive on-demand course on the topic. “Private Equity Fund Structure and Management” will be released through the NAIOP Center for Education in early 2022.

This is just one example of how the Governors and Visionaries work together, exchange ideas and collaborate to create insights and research that are meaningful and practical for NAIOP’s members and the industry at large.

Looking into 2022, the Foundation remains committed to exploring the trends and transformational shifts that impact where all of us live, work, shop and play.



“I’m enthusiastic about the young professionals coming into commercial real estate... This generation grew up in a technology-driven world, and they offer unique perspectives into the data and trends shaping commercial real estate.”

– F.E. “Skip” Kalb, 2022 Chair, NAIOP Research Foundation



The Latest in Innovative Research



Economic Impacts of Commercial Real Estate, 2022 U.S. Edition

Development and construction of new commercial real estate in the United States — office, industrial, warehouse and retail — generates significant economic growth at the state and national levels. This annual study, published by the NAIOP Research Foundation, measures the contribution to GDP, salaries and wages generated and jobs supported from the development and operations of commercial real estate.

In 2021, combined commercial, residential, institutional and infrastructure development and operations of existing commercial buildings generated the following economic benefits:

- Contributed \$4.8 trillion — 21% of U.S. GDP
- Supported 32.7 million American jobs (a measure of both new and existing jobs)
- Significant personal earnings and state revenues, adding inventory to attract new businesses and jobs



The Development Approvals Index: A New Tool to Evaluate Local Approvals Processes

Obtaining entitlements and permits, a vital step in the development process, can present substantial risks. Jurisdictions that have slow, inconsistent and unpredictable development approvals processes increase costs for projects and may divert development to neighboring communities. Since information about approvals processes in different jurisdictions is often limited, developers who are new to an area often lack critical information that would allow them to evaluate whether a new project would be viable.

The NAIOP Research Foundation commissioned the creation of an index that compares development approvals processes in different jurisdictions so that developers can make more informed investment decisions and local governments can benchmark their processes against neighboring jurisdictions.

naiop.org/developersindex

Looking Ahead

Recognize Sustainers Fund donors who supported the Foundation with an annual gift

JAN

Economic Impacts of Commercial Real Estate, 2022 U.S. Edition

Seeing Past the Pandemic: Industrial Demand and U.S. Seaports

Disruptions to global supply chains have underscored the importance of maritime ports and industrial real estate to the economy. The NAIOP Research Foundation has commissioned Avison Young to author a research brief on how trends in international trade are affecting regional demand for industrial real estate near U.S. ports.



FEB



An Overview of Emerging Construction Technologies

The NAIOP Research Foundation commissioned this report to explore emerging construction technologies and their implications for the construction and real estate development industries. The authors draw from interviews with researchers and industry practitioners to evaluate the current benefits and limitations of new technologies.

naiop.org/constructiontech



A Two-Dimensional Approach to Evaluating Commercial Real Estate Markets

This NAIOP Research Foundation report by Maria Sicola, Charles Warren, Ph.D., and Megan Weiner builds on the 2020 report on market tier and ranking systems by describing a two-dimensional approach to evaluating and comparing commercial real estate markets. The report examines 15 years of market data to test multiple two-dimensional models for evaluating the 50 largest industrial and office markets in the United States.

naiop.org/2DApproach

“It’s an exciting time to be in the commercial real estate industry, and to be part of an organization like NAIOP that is committed to keeping their fingers on the pulse of our business while keeping our membership informed and aware.”
 – Daniel Levison, CEO, CRE Holdings.

New Uses for Old Office Buildings

This report will examine the opportunities and risks associated with converting traditional office buildings to life science, medical office and multifamily uses. It will describe how the design and location of an office building affects its suitability for conversion and will include case studies of recent and ongoing conversion projects.



Economic Impacts of Commercial Real Estate, 2022 Canadian Edition

MAR

Wellness in the Industrial Workplace

This project will examine design features that can improve employee health and well-being in warehouses and distribution centers. It will expand on existing wellness standards for commercial buildings to develop a framework that is tailored to the needs and unique characteristics of logistics facilities.



Q1 Industrial Space Demand Forecast



How the Other Half Builds: Small-Scale Development in Tertiary Markets

While they may not be at the center of the action, tertiary markets are home to about half the U.S. population and represent a significant share of the commercial real estate market. This research brief by Shawn Moura, Ph.D., research director, NAIOP, provides owners, investors and developers with insights into the risks and opportunities associated with developing, owning and operating small buildings in tertiary markets.

naiop.org/smallscale

Industrial and Office Space Demand Forecasts

These forecasts provide an outlook on current and future conditions in the U.S. commercial real estate market. The reports help to define linkages between economic and specific sector activity and the demand for office and industrial real estate.

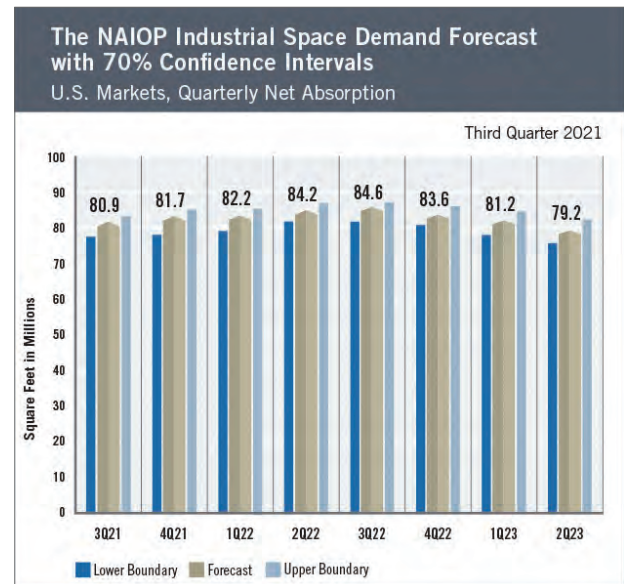
The most recent **Office Space Demand Forecast** (Q4 2021) states that although office net absorption remained negative throughout 2021, it is gradually climbing toward the positive side of the scale. Total net absorption in the third quarter of 2021 was -5.2 million square feet, back from a near record of -34.8 million square feet at the end of the first quarter of 2021. As the unemployment

rate declines, more workers return to the office and the economy continues to improve, the office space net absorption forecast has been revised upward from 1.8 million square feet to 8.3 million square feet in Q4 2021. (See chart at lower left.)

naiop.org/officedemand

The most recent **Industrial Space Demand Forecast** (Q3 2021) states that demand for industrial real estate continues to be strong as the long-term trend toward e-commerce (and away from in-store sales) continues with no end in sight. The report's authors forecast that total net absorption in the second half of 2021 will be 162.6 million square feet with a quarterly average of 81.3 million square feet. In 2022, the projected net absorption is 334.6 million square feet with a quarterly average of 83.6 million square feet. (See chart below.)

naiop.org/industrialdemand



APR

New Governors and Visionaries inducted

MAY

Governors, Trustees and Industry Trends Task Force meet at National Forums Symposium

JUN

Q2 Office Space Demand Forecast

New Places and New Spaces for E-commerce Distribution

This report will examine the convergence of retail and distribution uses and its implications for developers, investors and building owners. It will explore three related trends: the conversion of retail centers to last-mile distribution centers, the addition of distribution activities within operational retail outlets and the development of distribution-anchored mixed-use projects.



Meet Our Distinguished Fellows

The Research Foundation's Distinguished Fellows Program engages the nation's foremost commercial real estate, economic and public policy experts. Distinguished Fellows are active participants in NAIOP and contribute articles to NAIOP's Development magazine, present to the association's leadership via the Board of Directors or National Forums, participate on corporate committees, and provide advice, feedback and information regarding research being conducted in commercial real estate.

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Associate Teaching Professor and Director of Undergraduate Studies in the Department of Urban Studies and Planning, UC San Diego

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Silver Family Research Fellow Senior Research Scientist, The MIT Center for Transportation & Logistics, Massachusetts Institute of Technology

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Fred E. Taylor Professor of Real Estate, Executive Director of Real Estate Programs, W.P. Carey School of Business, Arizona State University

Zhou Yang, Ph.D.

Associate Professor of Economics, Robert Morris University

Read more about this elite group at [naiop.org/distinguishedfellows](https://www.naiop.org/distinguishedfellows).

★ Denotes new Distinguished Fellow

JUL

Terms and Definitions update

Summer Research Foundation E-newsletter

AUG

Q3 Industrial Space Demand Forecast

The Future of Data Analytics in Commercial Real Estate Siting, Design and Valuation

This report will explore current and emerging applications for data analytics in the location, design and valuation of commercial real estate. It will identify ways that developers and investors can use data analytics to identify new opportunities, maximize building value and improve project outcomes.



SEP



Foundation Research in the News

Research by the Foundation has been cited in leading news publications:

Ramping Up Warehouse Safety

“In the long term, technology will play an even more vital role in the new era of industrial property safety. Automation could offer a major part of the answer, observe Steve Weikal and James Robert Scott of the Massachusetts Institute of Technology’s Real Estate Innovation Lab in an October 2020 NAIOP report.”
Commercial Property Executive | March 4, 2021

Logistics Getting on a Quicker, More Focused Track

“A report released in October, 2020 by the Research Foundation of [NAIOP] the Commercial Real Estate Development Association, addressed the demands of e-commerce. It found that e-commerce supply chains require more than three times the distribution space required by traditional retail supply chains centered on brick-and-mortar distribution.”
Business Xpansion Journal | April 25, 2021

Solving for the Property Industry’s Talent Shortage

“Before the pandemic began, commercial real estate was experiencing a labor shortage, recognized by NAIOP. As the labor market heats up and employers struggle to fill roles, the looming problem of the commercial real estate workforce is being brought to the forefront.”
Propmodo | June 9, 2021

NAIOP Report Explores Emerging Construction Tech

“A recent report commissioned by the NAIOP Research Foundation explores emerging construction technologies and their implications for the construction and real estate development industries.”
Construction Business | July 15, 2021

Why Industrial Space Demand Exceeds Expectations

“The latest NAIOP Industrial Demand Forecast notes that nearly 100 million square feet of new industrial space has been completed so far this year, and it’s still not enough to meet the demand.”
Commercial Property Executive | Aug. 19, 2021

Office Gaining Momentum For Big Return In 2022, NAIOP Predicts

“Workers will return to offices in great numbers in 2022 and 2023, provided the U.S. economy continues to improve, according to a new forecast by the NAIOP Research Foundation.”
Bisnow | Nov. 23, 2021





Ways to Support the NAIOP Research Foundation

There are a number of ways that your financial support can help to underwrite the important work of the Research Foundation, including special occasion giving, memorial gifts, planned gifts and annual donations.



Sustainers Fund

Income raised through the Sustainers Fund helps the Research Foundation continue to fulfill its mission by providing a sustainable and flexible source of unrestricted income to be allocated where it is needed most. Funds raised allow the Foundation to be more responsive to industry-related issues that arise throughout the year.



Honor a Loved One or Colleague

Individuals, groups and organizations may make memorial gifts in support of the Research Foundation's mission to remember someone who has passed away, honor a living person, or mark a significant life event. Notification of a gift received, along with the donor's name, is sent to the person or persons being honored or memorialized. Those being honored or memorialized are recognized in Foundation materials and online.



Planned Gifts

Planned gifts are designed to help you meet your financial and charitable goals while supporting the Research Foundation in the long term. By making a planned gift, you can make a lasting impact by expanding the Research Foundation's capacity to address the industry's most pressing issues through its cutting-edge research, education and outreach activities. You can provide significant support through a gift that costs nothing in your lifetime through a charitable bequest in your will.

The *Legacy Society* recognizes those individuals who have made estate plans to benefit the Research Foundation.

Thank you to our founding Legacy Society members, **Ron Rayevich** and **Joan Woodard**, for their commitment to the Foundation's future.

Please contact **Bennett Gray** at the Research Foundation for more information or to discuss giving options.

Sustainers Fund – 2021 Donors

We are grateful to the donors who generously contributed to the Sustainers Fund in 2021. With their help, we exceeded our goal for the year.

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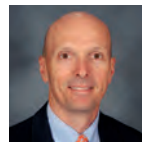
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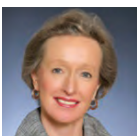
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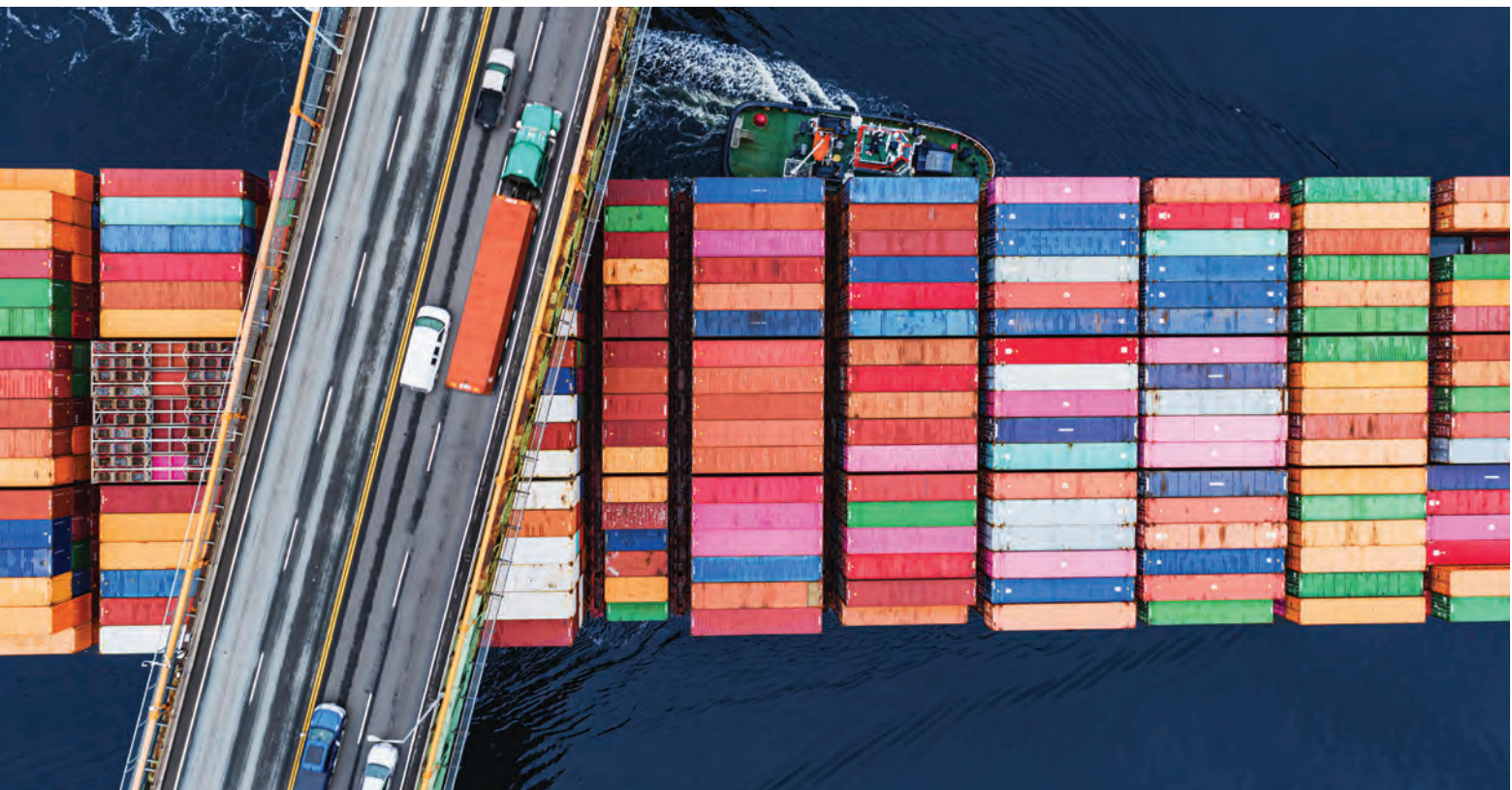
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The NAIOP Research Foundation welcomed its 80th Governor in 2021, a significant milestone for the program which initially aimed to bring together 40 Governors total. We celebrate the continuing growth of this dedicated and accomplished group of senior industry professionals who are united in their desire to provide the profession with the tools to thrive now and in the future.



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