

MATERIALS PLEDGE BY THE NUMBERS

The 2023 summary of
the AIA Materials Pledge



ABOUT THE AMERICAN INSTITUTE OF ARCHITECTS

Founded in 1857, AIA consistently works to create more valuable, healthy, secure, and sustainable buildings, neighborhoods, and communities. Through more than 200 international, state, and local chapters, AIA advocates for public policies that promote economic vitality and public wellbeing.

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 THIS REPORT

Materials Pledge By the Numbers: The 2023 Summary of the AIA Materials Pledge measures annual performance of the architecture and design community toward its goal of holistic materials section. It includes data from calendar year 2023 and suggestions for improving performance year to year.

The AIA Architecture & Design (A&D) Materials Pledge is the second AIA climate action pledge program, alongside the AIA 2030 Commitment. Originating in 2018, this program asks firms to address materials health across five impact categories: human health, social health and equity, ecosystem health, climate health, and circular economy. Together, the AIA 2030 Commitment and A&D Materials Pledge further the role of the architect in building a zero-carbon, resilient, healthy, and equitable built environment.

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This analysis highlights project-level information pulled on September 9, 2024 for projects included in RY2023 portfolio submissions.

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FOREWORD

By Lakisha Ann Woods, CAE EVP/CEO The American Institute of Architects

Building materials have an immense impact on the health of people, communities, and the planet. Architects and designers increasingly understand this and are utilizing materials to mitigate and adapt the built environment to a changing world.

This year, the AIA Architecture and Design (A&D) Materials Pledge introduced its foundational reporting framework to help measure and track the progress of holistic materials health and selection. The inaugural *Materials Pledge By the Numbers (RY23)* report marks the first-ever reporting cycle from a rapidly expanding community of almost 300 signatory firms committed to addressing the materials challenge. This reporting year, ninety-two signatory firms varying in size and geographic location reported the required firm-level metrics and over half also reported the optional project- and product-level metrics. This is just the start as the Materials Pledge reporting program continues to expand, through growing its signatory community and peer-to-peer network and thus increasing data availability and transparency across the industry. By developing education and resources, the Materials Pledge is here to support firms every step of the way—no matter where they are in their materials journey.

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INTRODUCTION

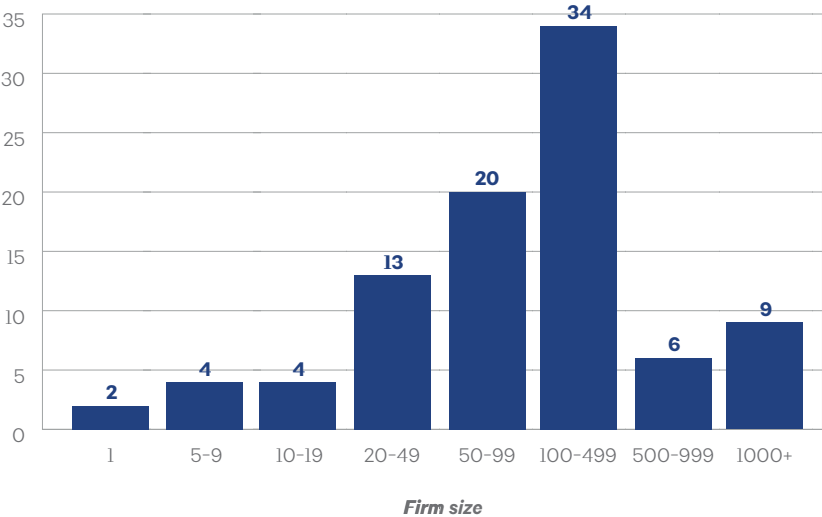
The transformation of materials selection includes many stakeholders, from manufacturers, the architecture, engineer, and construction (AEC) industry to government policy, research and academia. There is expanded interest in innovative engineering and [bio-based materials](#) that have a lower carbon emissions impact across an entire building’s lifecycle. Federal government programs like the [Federal Buy Clean Initiative](#) and EPA’s [Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing](#) are emerging alongside [government funding](#) to spur research and development into the reduction of the AEC industry’s emissions impact. Additionally, when thinking about material circularity, designers are quantifying the [value of reusing](#) and renovating existing products and buildings and [new research](#) is catalyzing the role of digital technologies to address waste reuse.

Firms have long known the impact and importance of materials on their project designs. However, a gap remains between understanding the issue and implementing solutions. This is, in part, because the complexity of materials selection surpasses the building industry alone—requiring transparency across the manufacturer supply chain. To advance this work, the [AIA Materials Pledge](#)—originating in 2018—convenes almost 300 signatory firms dedicated to transforming the industry towards holistic materials selection. The signatory

firms are committed to reducing the impact of materials across all five Materials Pledge categories: Human health, social health and equity, ecosystem health, climate health, and a circular economy. Achieving this goal requires collaboration among building owners, product manufacturers, architects and designers, and advocacy organizations, each focused on advancing one or more of the five impact categories. Their collaboration is essential to establishing a shared knowledge base and consistent terminology while emphasizing the need for enhanced data accessibility and tracking across all stakeholders.

Ninety-two signatory firms varying in size and geographic location reported the required firm-level metrics and over half also reported the optional project- and product-level metrics.

NUMBER OF REPORTING SIGNATORIES BY FIRM SIZE



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FIRM-LEVEL REPORTING

Firm culture is one of the key levers in prioritizing holistic materials selection across projects. A key tenet of this program—and of the AIA 2030 Commitment—is that a firm cannot improve what isn't being tracked and reported. While this often is applied to predicted project design data, it also relates to the metrics and methods of how a firm continues to transform its operations and culture to meet its goals. The Materials Pledge's firm-level reporting questions are the first step toward understanding what firms are currently doing and which areas of knowledge and methods of education are needed to move the industry forward. Developed to align with the five steps to implement change—outlined in the [A&D Materials Pledge Starter Guide](#)—this year's reporting shows that many firms are taking their first steps.



53%
of reporting firms have materials libraries that are collecting sustainable criteria and an additional 34% are enforcing sustainable criteria for inclusion.



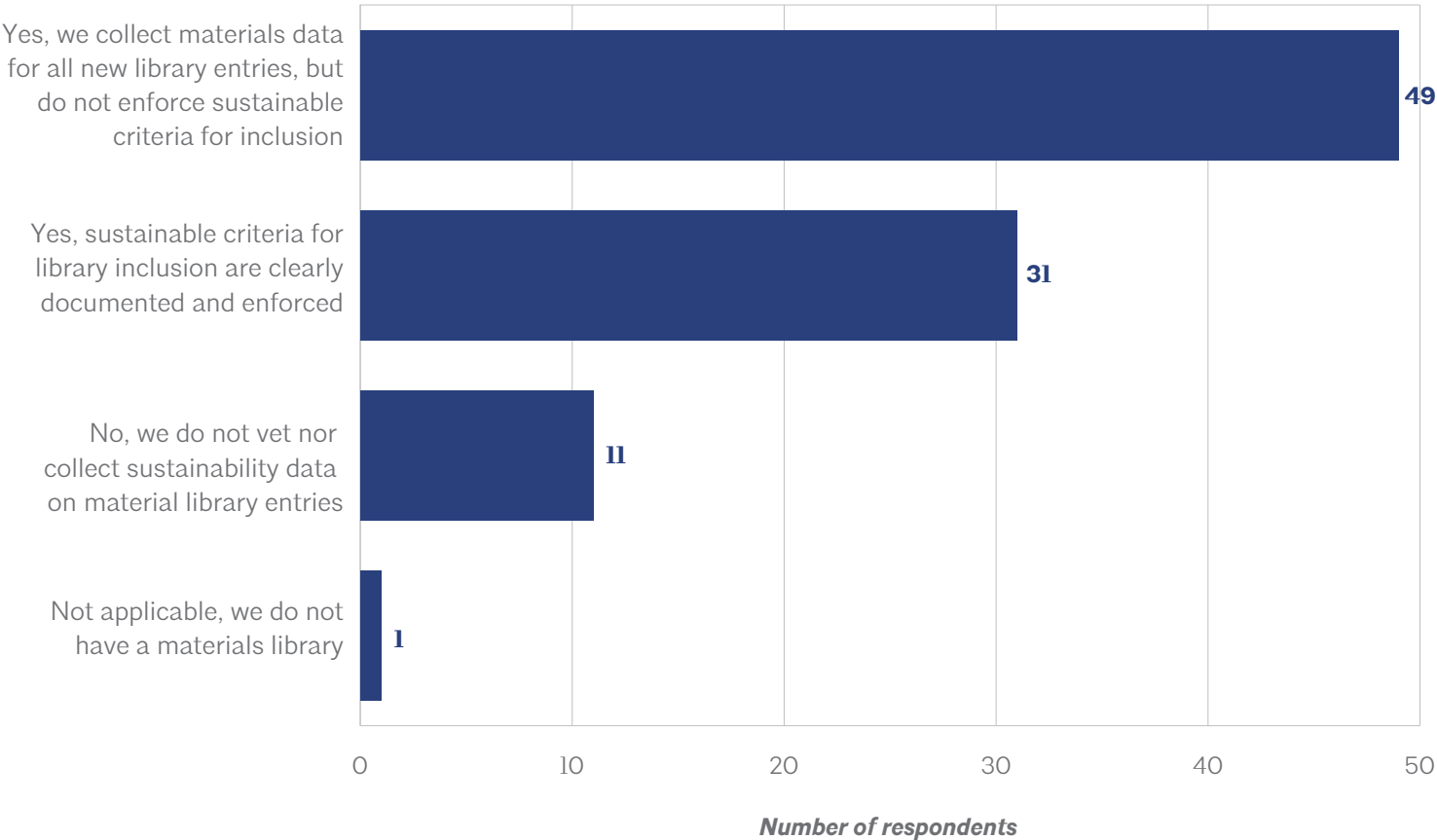
61%
of reporting firms have a Sustainability Action Plan that includes materials, while 97% have a Sustainability Action Plan in general.



Self-reported firm leadership knowledge varies by impact categories, with the strongest knowledge being human health and climate health and the weakest being social health and equity and circularity. These trends are likely reflected across sustainability teams and project architect staff as well.

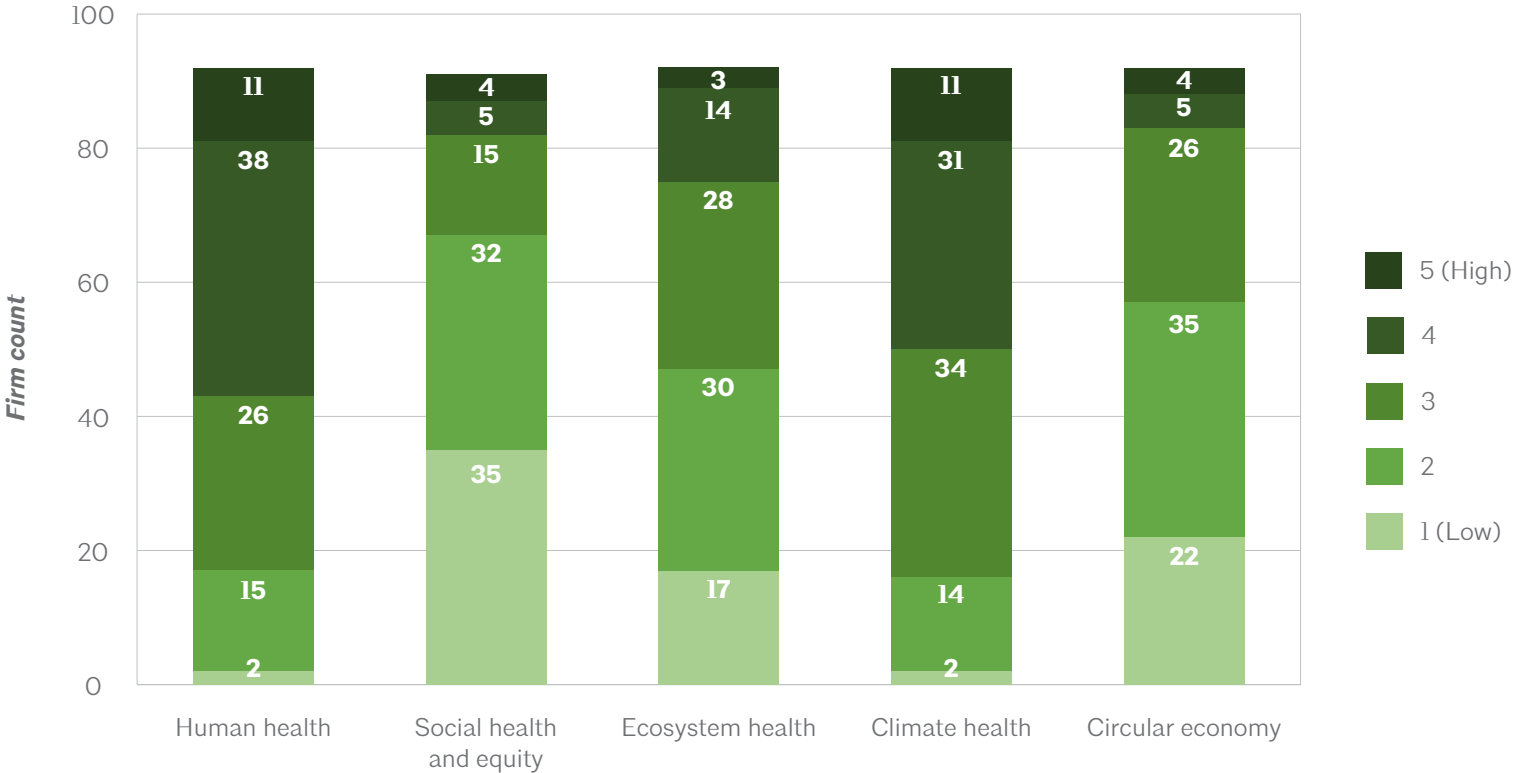
Photo credit: (top left): Getty Images; (bottom left) Getty Images; (right) Takashi Miyazaki on Unsplash

REPORTED SUSTAINABLE MATERIALS LIBRARY ENTRY CRITERIA



Create or refresh your firm’s materials library and policies. Nearly three-quarters of architects have access to their firm’s policies, guidance, or library for materials and product specifications. But many libraries fall short of the five pledge statements. Pledge signatories are striving towards this goal.
-Materials Pledge Starter Guide

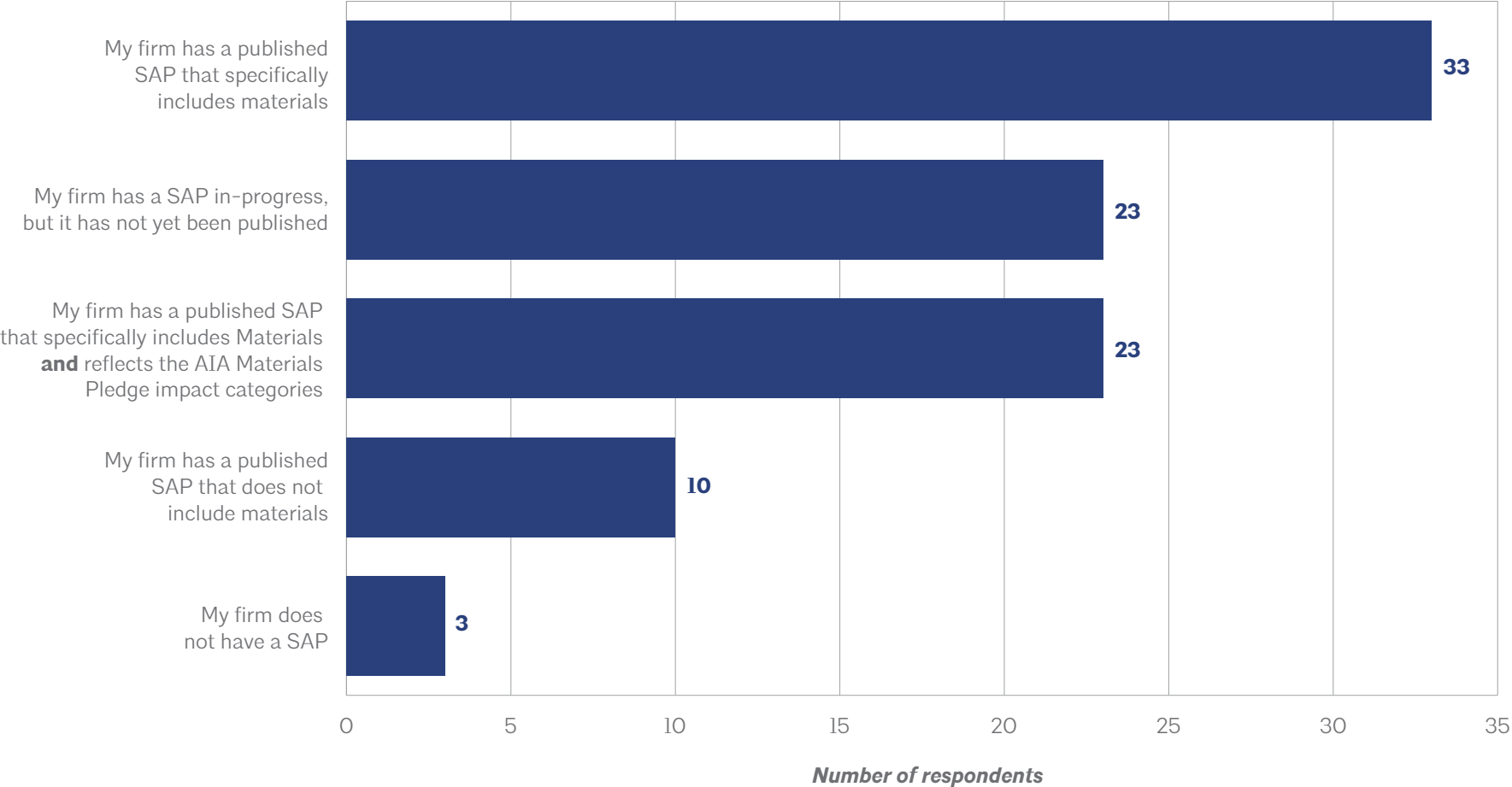
FIRM LEADERSHIP KNOWLEDGE RANKING BY MATERIALS PLEDGE IMPACT CATEGORIES



Build literacy and train employees about materials at your firm. Embrace company-wide education. Consider offering or subsidizing education to grow knowledge across all five impact categories, and throughout all roles within your firm. These trends provide insight into which topics require knowledge growth over time.
-Materials Pledge Starter Guide

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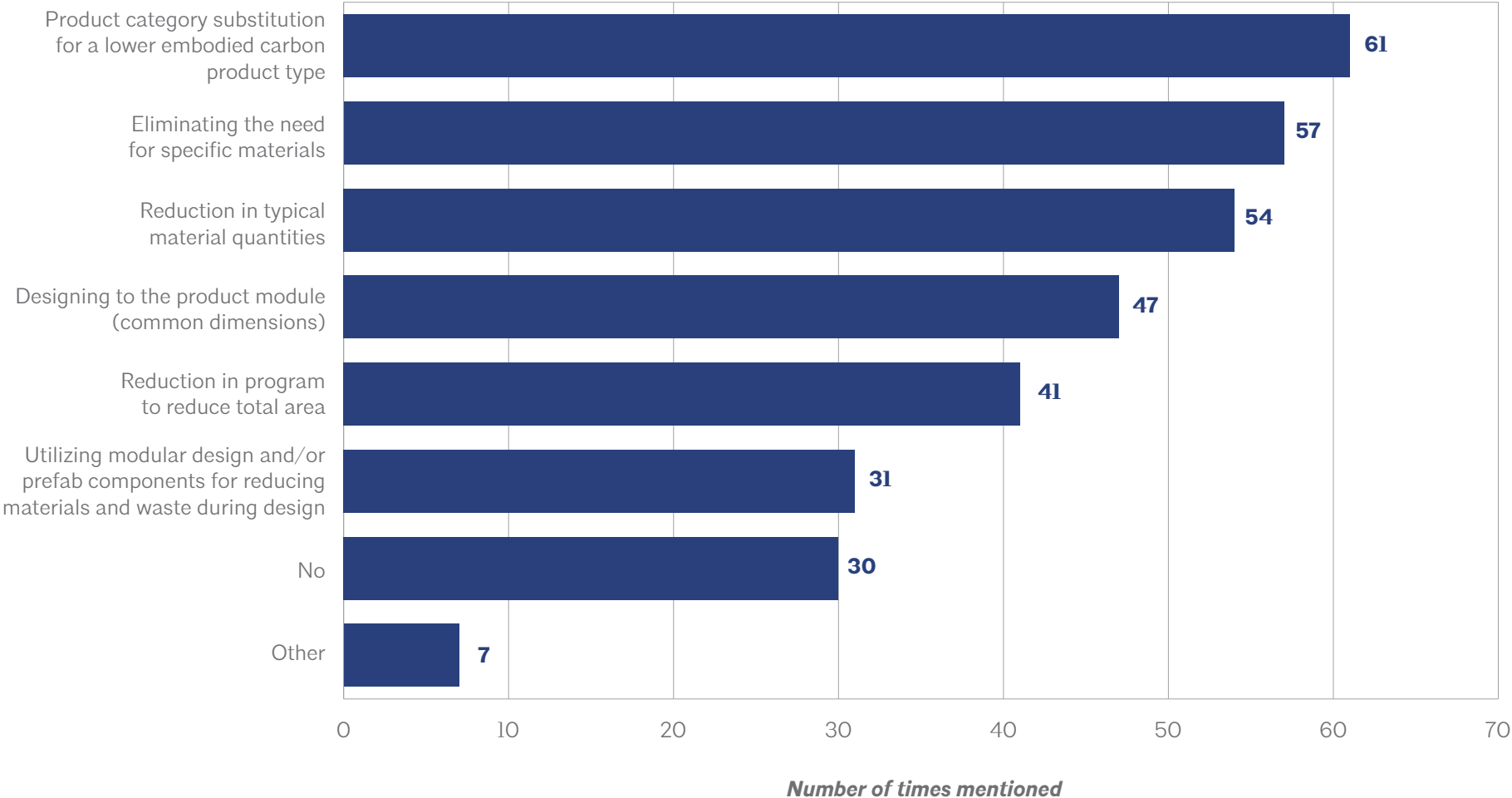
FIRMS AND SUSTAINABILITY ACTION PLANS (SAP)



At its core, a SAP is a statement of a company’s approach to sustainable design. It provides a firm with an opportunity to translate sustainability values and aspirations into a comprehensive approach for transforming a company’s practice and portfolio.
– Creating a Sustainability Action Plan that works!

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DESIGN STRATEGIES IMPLEMENTED TO REDUCE MATERIALS USAGE



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PROJECT- & PRODUCT-LEVEL REPORTING

This year, project- and product-level reporting was optional, however most firms reported at least one project and one product type. Fifty-nine firms reported 136 projects that aggregated to a little over 500k gross square feet. 69% of these projects were whole-building projects and 65% were new construction projects. Additionally, 'Education—College/University (campus-level)' was the most reported use type (18% of projects). Within these reported projects, the most common design strategy was 'Product category substitution for a lower embodied carbon product type' (45%), followed closely by 'Eliminating the need for specific materials' (42%), and then 'Reduction in typical materials quantities' (40%). Reducing material usage also relates to the topics of salvage and reuse of materials (44% of projects included this) and diversion of construction waste from landfill (79% of projects included a waste diversion target).

Twenty-one of the twenty-two listed product types were reported at least once, with carpeting (43), resilient flooring (31), and acoustical ceilings (29) coming in as the most reported product types. Metal wall panels were not included for any reported projects. Across the product types, human health was the most reported impact category for 13 product types followed by climate health for 7 product types. This trend is parallel to the self-reported knowledge of Materials Pledge signatories and their firm leadership: Climate and human health continue to take the lead in both available data and knowledge.

Photos credit: © Chad Davies



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While project- and product-level reporting will remain optional for the next reporting cycle, it's important to remember that the most beneficial reporting comes from a comprehensive breadth of projects—not just your firm's best projects and products. The majority of reported projects (79%) were in pursuit of a building certification. To move beyond primarily reporting projects pursuing certification, teams need selection and tracking mechanisms that can be integrated into design. This year, several firms reported having developed their own tracking methods, while others reported utilizing certification methods, like LEED, for all projects. In order to meet this need industry-wide, several external tools are currently in development to harmonize the way firms collect data.

The industry is learning together and by establishing goals and tracking metrics, signatories are taking a critical first step. The Materials Pledge is committed to providing a community and framework where any firm can begin or continue their materials journey, whether they're just getting started or already taking extensive steps to address specific impact areas. As firms continue to participate in materials metrics reporting, they will fully understand the scope of impact that their materials selection has on the built environment.

OPTIMIZATION PATHWAYS

The questions in each product category allowed for information on transparency and optimization to be shared. Disclosure of information or transparency is a key first step to setting and meeting materials selection goals, while optimization information provides a pathway to select preferable materials and products. Below are the reported optimization pathways for the three most reported product types:

Carpeting

Human health (100%), a circular economy (88%), and climate health (88%) were the most reported impact categories. Within each of these three categories, the following optimization pathways were reported:

- **77% of projects** listed Declare Label and HPDs (to 100 ppm) as their utilized material ingredient reports.
- **95% of products** were reported as compliant with LBC Red List Free.
- **55% of products** were optimized through Cradle to Cradle (C2C) Silver, Gold, or Platinum.
- **95% of projects** reported a product or manufacturer program with Extended Producer Responsibility (EPR or take-back) programs.
- **45% of products** in the climate health category have corporate commitments relating to climate health.

Resilient flooring

Human health (97%), climate health (87%), and a circular economy (58%) were the most reported impact categories. Within each of these three categories, the following optimization pathways were reported:

- **52% of projects** reported Cradle to Cradle (C2C) product certification and Declare Label as the most utilized material ingredient reports.
- **77% of products** were reported as compliant with LBC Red List Free.
- **56% of projects** reported a product or manufacturer program with Extended Producer Responsibility (EPR or take-back) programs.
- **22% of projects** included products whose manufacturers have publicly committed to SBTi for optimization under climate health.

Acoustical ceilings

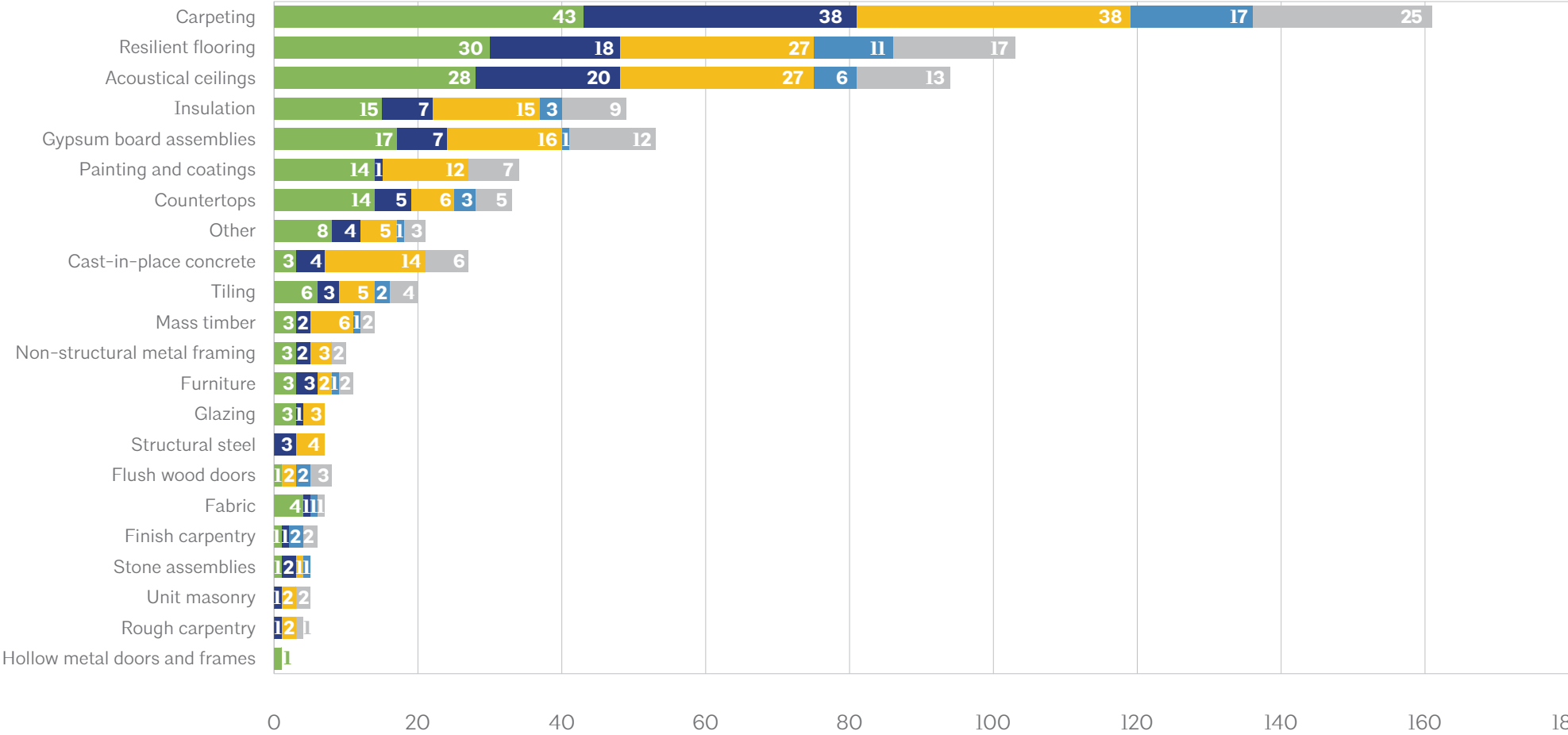
Human health (97%), climate health (93%), and a circular economy (69%) were the most reported impact categories. Within each of these three categories, the following optimization pathways were reported:

- **96% of projects** selected materials with VOC emissions certificates showing product emissions testing that complies with the CDPH Standard v1.2-2017 (or most recent).
- **80% of projects** reported a product or manufacturer program with Extended Producer Responsibility (EPR or take-back) programs.
- **30% of projects** reported products whose embodied carbon impact is in the first, second, or third quartile (lower impact quartiles), per the EC3 tool.

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REPORTED PRODUCT DATA BY MATERIALS PLEDGE IMPACT CATEGORIES

■ Human health
 ■ Circular economy
 ■ Climate health
 ■ Social health and equity
 ■ Ecosystem health



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CONCLUSION

The Materials Pledge remains a key contributor to the materials movement, establishing a foundational community network and reporting framework for its signatories. Insights from this inaugural reporting cycle represent a critical milestone for the movement and should act as a catalyst for further action. The AEC industry has developed a strong knowledge base for advancing sustainable practices, and through continued collaboration, the industry can expedite learning and implementation across all areas of practice.

NEXT STEPS

The Materials Pledge community must continue to advance data tracking and transform firm cultures as a means to reach the program's goal of holistic materials selection. To that end, future program updates include:

- The upcoming Materials Pledge reporting cycle (February 1–May 31, 2025) will more closely align with the AIA 2030 Commitment reporting cycle (January–March, 2025).
- Minimal updates to reporting questions and structure for clarity based on initial feedback.

- The AIA Materials Pledge Working Group will develop basic materials tracking resources for the upcoming cycle of reporting.
- There will continue to be the collection and sharing of resources within the signatory community to further knowledge and implementation across the five impact categories.
- Signatory firms are strongly encouraged to develop materials goals within their firmwide Sustainability Action Plans. Or, if they don't have an SAP, they are encouraged to plan one out.

The AIA Materials Pledge embodies a core principle: You can't improve what you aren't tracking. As a collective, architects and designers are ready to make progress towards a zero-carbon, resilient, equitable, and healthy built environment for everyone. Leading the way are Materials Pledge signatory firms.

Is your firm ready to take the pledge? [Sign the Materials Pledge now >](#)

Questions? Email us at materials@aia.org!

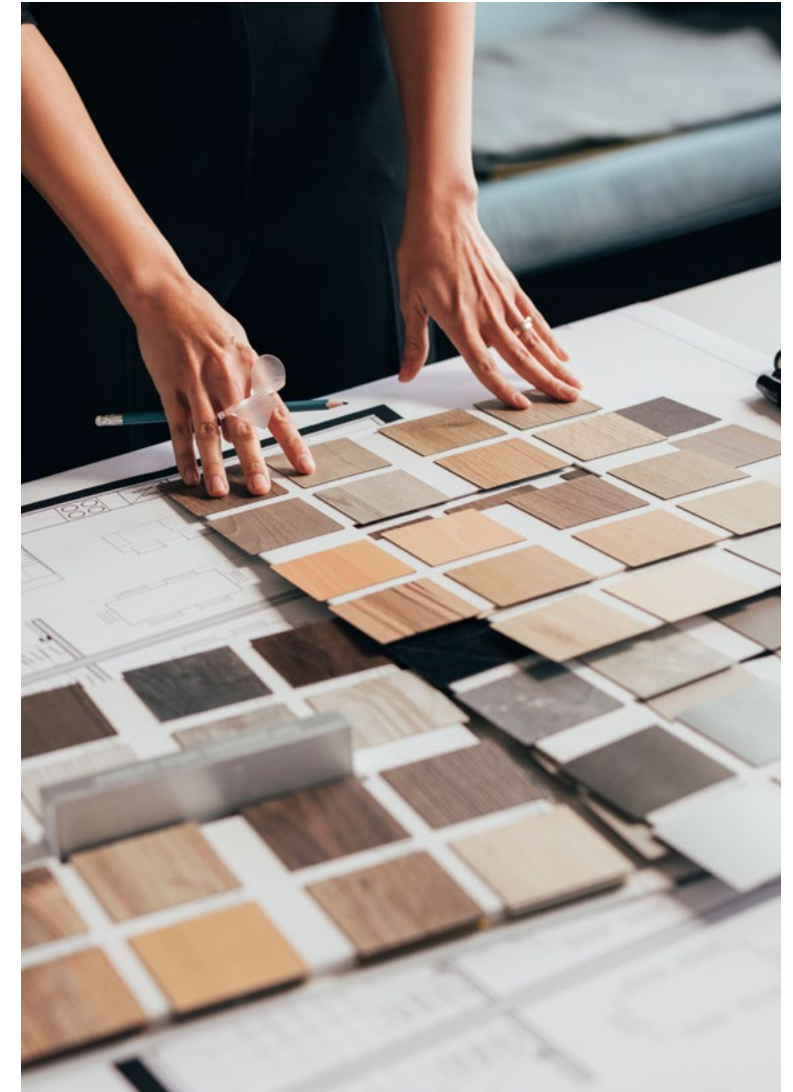


Photo credit: Getty Images

REPORTING SIGNATORIES

Ankrom Moisan

Arcadis

archimania

Architectural Design Group

Arkin Tilt Architects

Arrowstreet

isgenuity.com

Ayers Saint Gross

Bassetti Architects

Bergmeyer

BKSK Architects

Board & Vellum

Bohlin Cywinski Jackson

Bora Architecture & Interiors

Boulder Associates

BRIBURN

BWBR

Carleton Hart Architecture

Centerbrook Architects and Planners

COOKFOX Architects, DPC

Curtis+Ginsberg Architects

David Baker

Design Republic Architecture

DiMella Shaffer

DLR Group

EHDD

EskewDumezRipple

EUA

EwingCole

Fennick McCredie Architecture

Flad Architects

FXCollaborative Architects

Goody Clancy

HGA

HKS, Inc.

HLW

HMC Architects

HMFH Architects

Hoefler Welker

HOK

IA Interior Architects

Integrated Eco Strategy

Integrus Architecture

JLG Architects

Kaplan Thompson Architects

KieranTimberlake

Kirksey

Kohn Pedersen Fox

Lake|Flato Architects

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Little Diversified Architectural Consulting

Long Green Specs

LPA

LS3P

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Maier Design Group, LLC

MDS Architects

MHTN Architects

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Mithun

Moseley Architects

MSR Design

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HED

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Neumann Monson Architects

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Opsis

Orcutt Winslow

Page

PCA

Perkins Eastman

Perkins&Will

Placework

Quattrocchi Kwok Architects

Quinn Evans

RATIO

Re:Vision Architecture

Revel Architecture and Design

RMW Architecture and Interiors

Sasaki Associates, Inc.

SCB

Schenkel Shultz

SmithGroup

STUDIOS Architecture

TPG Architecture

Trivers

VMDO

Wight & Company

WRNS Studio

ZGF Architects

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ACKNOWLEDGEMENTS

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For more information and resources,
visit aia.org/materialspledge.

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PROJECT IMAGE CREDITS

Cover

PAE Living Building

Architect: ZGF Architects

Photo credit: Lara Swimmer

This project received a 2024 COTE® Top Ten Award.

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MASS MoCA Building 6

Architect: Bruner/Cott Architects

Photo credit: © Michael Moran

This project received a 2024 COTE® Top Ten Award.

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DPR Sacramento Zero Net Energy Office

Architect: SmithGroup

Photo credit: © Chad Davies

This project received a 2023 COTE® Top Ten Award.



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