SUSTAINABILITY LEADERSHIP OPPORTUNITY SCAN

AIA

October 2013

Prepared for the AIA by Mary Ann Lazarus, FAIA, LEED AP BD+C, AIA Resident Fellow

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A Message from Robert Ivy, FAIA

The AIA has equipped its members with valuable resources to advance sustainability within their practices and across the profession for the last 30 years.
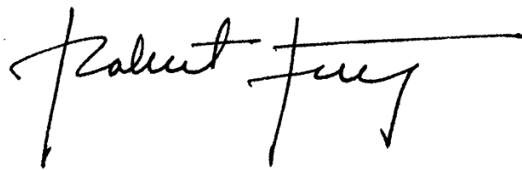
Our responsibility to strengthen the architectural profession's leadership and influence in sustainability has not abated and it continues to be vital to the future of our clients and our communities.

This summer, we commissioned the Sustainable Leadership Opportunity Scan to identify the unique areas where the AIA can most effectively serve our current and future members in addressing the most significant global issue of our time.

Researched and written by AIA Resident Fellow Mary Ann Lazarus, FAIA, this report summarizes current sustainability activities within the AIA and with partner and ancillary organizations. It also identifies a few specific priority areas for the AIA to focus its resources. Mary Ann worked closely with a 12-person advisory group of thought leaders to synthesize the research into recommended actions that will make the greatest impact within the focus areas of energy, materials, design and health, and resilience.

The scan is closely aligned with the AIA Repositioning Initiative and provides key opportunities for the AIA to enhance its value to current and future members while strengthening our influence and impact on the profession at large.

We encourage you to review the report, to consider how you can participate in its implementation, and to share any comments or questions that you may have.

Robert Ivy, FAIA
CEO, the American Institute of Architects

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Executive Summary

As sustainability has evolved from an emerging trend to a mainstream global movement, architects are uniquely positioned to play a leadership role in influencing and advancing the future through their work as creative design problem-solvers for the built environment.

Today's dynamic business climate and shifting regulatory environment combined with changes in climate, growing resource limitations, and rapid urbanization reinforce the fact that we are part of a fragile and changing world.

With its Repositioning initiative, the AIA seeks to strengthen its role in driving leadership opportunities for architects. This scan identifies four priority focus issues for the AIA to achieve this outcome – two issues that are CORE to architects and two EMERGING issues:

CORE issues are central to the architect's role in the design of the built environment. These include:

ENERGY
Drive building energy efficiency and use of renewable energy toward meeting the AIA 2030 goals.

MATERIALS
Make materials selections that are informed by full life cycle and health-related criteria.

EMERGING issues are where architects provide critical design leadership and enhance their value to their communities. These include:

DESIGN + HEALTH
Improve human health and wellness through the design of the built environment.

RESILIENCE
Design to adapt to changing conditions and to maintain or regain functionality and vitality in the face of disturbance.

"*Sustainability is a leadership imperative – my priority is to not let a fragile market erode our resolve toward a transformative practice.*"

– **Phil Harrison,** FAIA
CEO, Perkins + Will
1999 AIA Firm Award
Recipient

These recommendations were shaped through an extensive research process that looked at sustainability trends and priorities and an analysis of the current state of the industry. This included a series of interviews with more than 40 different AIA and non-AIA entities, web research, and surveys conducted with a broad array of individuals and organizations over a five-month period. A 12-person advisory group representing a wide range of AIA constituents and sustainability advocates helped guide and refine the recommendations. In September 2013 the AIA Board validated these recommendations and agreed to move forward with implementation, subject to the Board's operating plan and budget approvals.

The Sustainability Leadership Opportunity Scan provides a multi-year roadmap that is both aspirational and actionable in delivering the greatest value to all AIA members, the profession, and the world at large.

The scan includes the following sections that provide background and detailed recommendations around the four priority focus issues identified above:

INTRODUCTION
Sets the background for the scan.

PRIORITIES + TRENDS
Summary of current and emerging trends to identify the greatest leadership opportunities for architects.

CURRENT STATE OF SUSTAINABILITY
Analysis of the current state of sustainability activities at the AIA and across alliance organizations with identification of the AIA's strengths and opportunities.

RECOMMENDATIONS
Detailed description of the four priority issues, including multi-year action plans and implementation strategies.

ALIGNMENT WITH REPOSITIONING
Explanation of the direct relationship of the recommendations to the AIA's Repositioning initiative.

APPENDIX
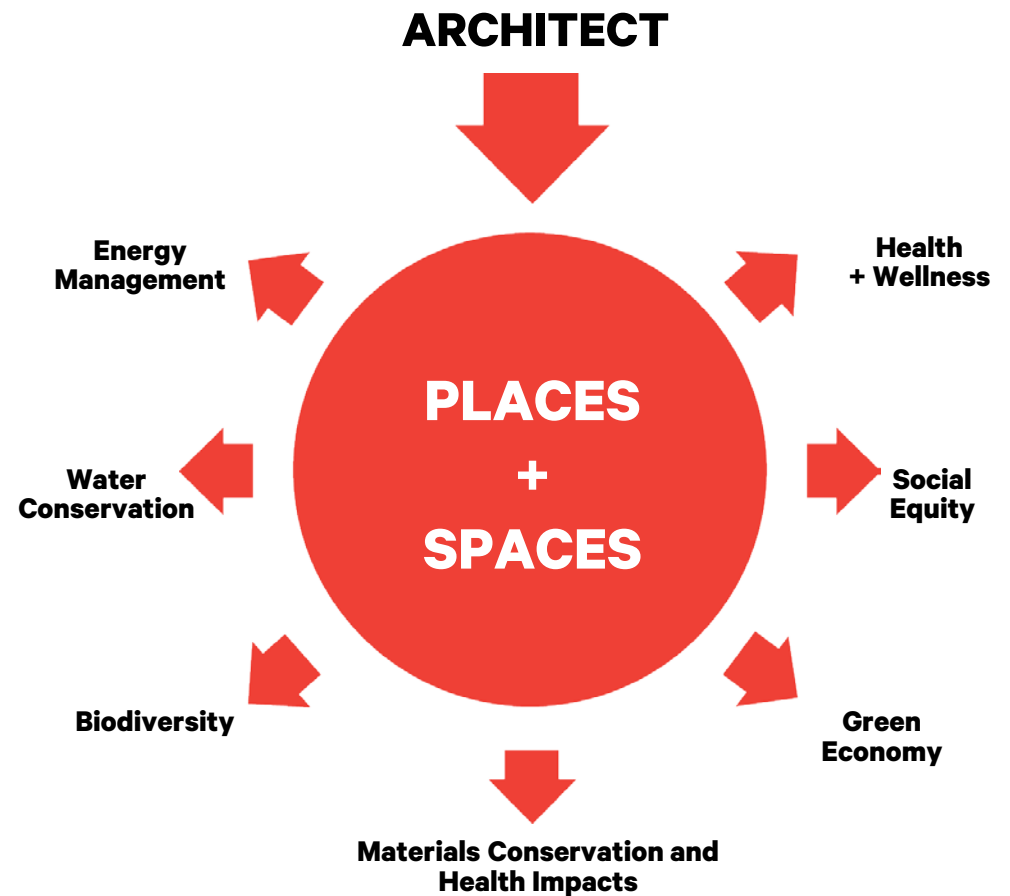Description of the scan process, participants, and additional background material.

Introduction

You can't pick up a magazine on an airplane or read a headline at the grocery store without being reminded that sustainability is one of the most significant issues of our time.

That was not always the case. The AIA and its members have played a formative role in the evolution of sustainable design to its current position of prominence.

Beginning with the formation of the AIA's Committee on the Environment in 1990 and under the early leadership of AIA President Susan Maxman, FAIA, the institute led the way in promoting sustainability for the design profession. The introduction of the Environmental Resource Guide in 1992 from AIA's Research Corporation provided in-depth knowledge still considered influential today, reinforcing AIA's early role as knowledge provider. And the AIA COTE Top Ten Award, launched in 1997, has become the ultimate measure for great sustainable design across the globe.

While influential initiatives, such as the AIA 2030 Commitment, have strengthened the AIA's value to members, the organization has not delivered consistent sustainable design knowledge, resources, and expertise that address the needs of all of its members and the broader design community.

ARCHITECT

Energy Management

Health + Wellness

PLACES + SPACES

Water Conservation

Social Equity

Biodiversity

Green Economy

Materials Conservation and Health Impacts

This scan uses a definition of sustainability that encompasses a broad set of outcomes, with a focus on the unique contributions by architects in the design of the built environment.

A New Normal

As sustainability has evolved from an emerging trend to a mainstream global movement, architects are uniquely positioned to play a leadership role in influencing and advancing the future through their work.

Today's dynamic business climate, shifting regulatory environment, new design processes, and growing interest in green building create unprecedented opportunities for architects. At the same time, changes in climate, resource limitations, and the rapid urbanization of our planet all reinforce the fact that we are part of a fragile, changing world.

The "new normal" demands that architects practice in a highly collaborative manner that takes full advantage of opportunities for sustainability leadership across the design and construction community. Architects have a unique, pivotal role to play as creative design problem-solvers for the built environment that includes the design of places and spaces that people occupy.

As the AIA moves forward with its Repositioning initiative, the institute seeks to strengthen its role in driving leadership opportunities for architects. This scan summarizes the priority recommendations to achieve this outcome.

Ultimately, the scan provides a roadmap for the AIA that is both aspirational and actionable in providing the greatest value to all of its members, the profession, and the world at large.

OWN AND PROPEL THE BELL

| Indifferent | Curious | Committed | Activist |
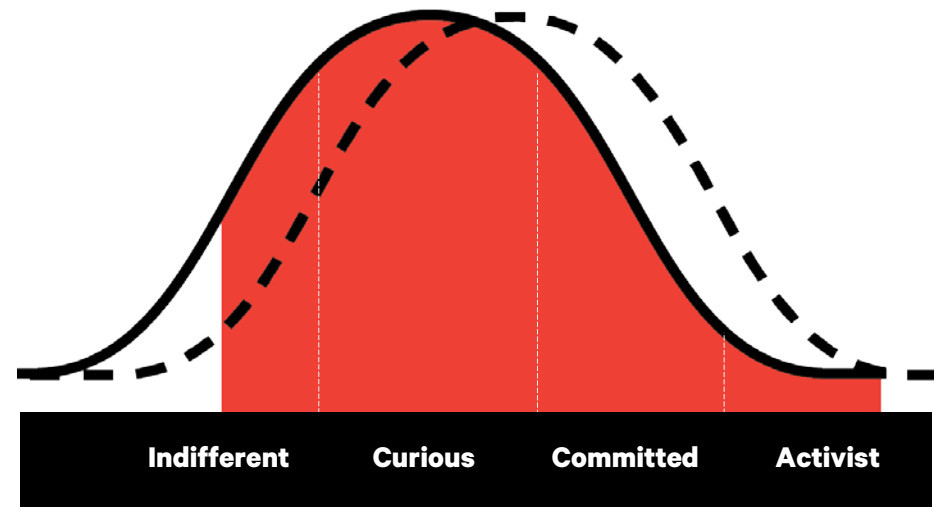
The AIA plays a unique role in promoting sustainability leadership for ALL architects, wherever they may sit within the "bell" of interest and understanding. Unlike mission-driven organizations, the AIA must address the needs of all of its members to advance the profession.

Priorities + Trends

To determine the best role for the AIA in strengthening sustainability leadership for architects, we reviewed the current state of sustainability priorities and emerging trends across a wide spectrum of organizations, firms, and institutions. This research included more than 40 interviews with AIA and non-AIA affiliates, as well as extensive web research and document review.

Research Goal: To better understand the future state of the profession and to identify the greatest opportunities for architectural leadership.

Seven principal sustainability trends and priorities emerged from the research, informing the scan's recommendations:
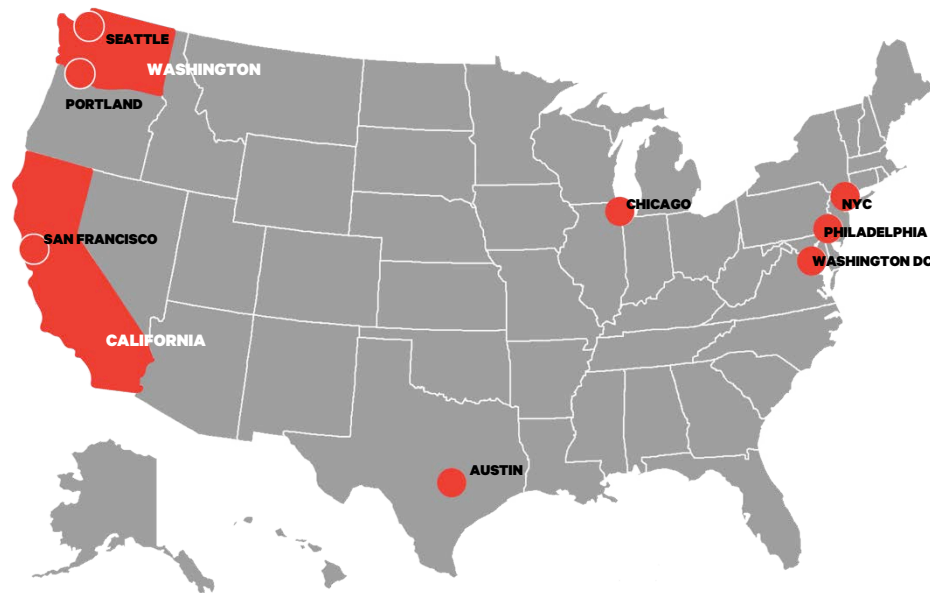
U.S. cities and states currently requiring actual energy use disclosures for commercial properties.

Source: Adapted from Environmental Design and Construction, March 2013

1. Drive for Measured Performance

The global design and construction industry is transitioning from loose, aspirational sustainable goals to measured performance expectations and requirements. Optional rating systems (such as LEED) helped set the stage for this approach, but requirements are expanding to include actual performance and measured design outcomes. There are several catalysts for this shift:

ENERGY BENCHMARKING REGULATIONS

As of this report, eight U.S. cities require actual energy performance disclosure for public and private construction. Outside the U.S., energy performance disclosure is a standard requirement in parts of Europe and Australia.

PERFORMANCE-BASED CODES

The codification of performance measures is taking place across diverse markets and communities. California architects are under pressure to meet upcoming Title 24 requirements for net zero construction by 2020. Section 433 requires new and renovated federal government facilities to achieve net zero energy by 2030. And the adoption of the International Green Construction Code (IgCC) requires designs to meet predicted energy performance and to address the gap between predicted and actual performance.

2. Intersection of Design and Human Health

There is a rapidly growing understanding of the important role that the built environment plays on human health and wellness. This interest has been spurred, in part, by the growing concern of how to address the rising cost of healthcare, the aging baby boomer population, and climbing obesity rates. A focus on human health also addresses social equity problems that can be improved through planning and design solutions, including the creation of safe and walkable neighborhoods.

Research efforts are under way to provide better evidence-based support for design decisions to promote public health. Several allied organizations are committing significant resources to this issue, including the U.S. Green Building Council, American Planning Association, and American Society of Landscape Architects, along with new Public Health partners, and all are willing collaborators.

THE BUSINESS CASE AROUND HEALTH

According to the 2013 McGraw-Hill World Green Building Trends Report, 55% of firms rate greater health and well-being as the top social reason for building green (tied with encouraging sustainable business practices), up from only 29% in 2008.
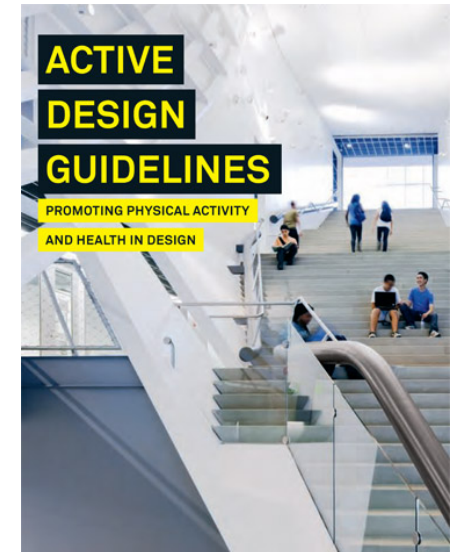
New York City's Active Design Guidelines provides architects and urban designers with a manual of strategies for creating healthier buildings, streets, and urban spaces.

3. Focus on Existing Buildings and Urban Areas

In developed countries, the greatest design need and opportunity lies in the renovation and upgrade of existing buildings. Fifty-seven percent of existing building stock in the U.S., or over 40 billion square feet, was constructed post World War II, including many outdated buildings with insufficient urban design, poorly performing envelopes and systems, and large floor plates. The demand for vibrant and livable neighborhoods is contributing to urban scale revitalization. With the economic downturn, renovation work now makes up 42% of small projects, according to the AIA 2012 Firm Survey.

Rapid urbanization is taking place across the globe, with the majority of the world's population now living in cities, many in informal settlements. Over the next decade, China plans to move 400 million people from the country to new cities, offering an opportunity to incorporate past lessons learned in urban design and to promote more sustainable and humane outcomes.

Deep energy retrofits to the building envelope and systems at the California Department of Motor Vehicles resulted in a predicted 12.5% energy savings over the 2005 Title 24 code baseline.   Architect: Lionakis © Chip Allen Photography

4. Demand for Materials Transparency

The building industry is moving from a focus on single attributes of building materials, such as recycled content or rapidly renewable resources, to requiring a comprehensive life-cycle analysis approach to material assessment. The goal is transparency – giving design professionals more complete information about a material's composition and full life-cycle contributions to incorporate into the decision-making process. The European Union's REACH material regulations and the recently adopted LEED version 4 incorporate this holistic approach to materials assessment, which will require a rapid learning curve for architects using these new rating systems. This focus on transparency is supported by new declaration

Health Product Declaration Standard
December 2012

hpd 1.0
hpdcollaborative.org

The Healthy Product Declaration Standard is a standard format that systematizes reporting language to enable transparent disclosure of information regarding building product content and associated health information.

standards, including the Environmental Product Declaration (EPD) and the Healthy Product Declaration (HPD). New databases that promote product transparency are aggregating data to facilitate selection. And some forward-thinking clients, including Google and Kaiser Permanente, are incorporating stringent materials standards into all of their facilities.
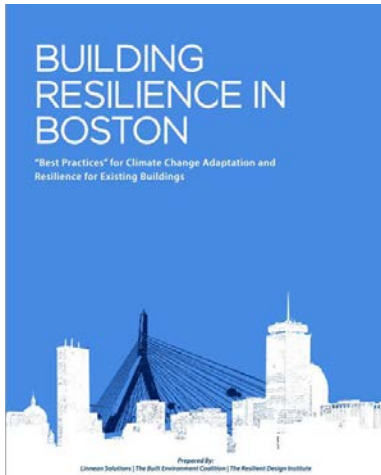
5. Importance of Water

The adage, "Water is the new oil," has hit home in the design and construction industry, where 12% of U.S. potable water consumption is attributable to buildings and at least 36 states face potable water shortages, according to the EPA. At the same time, many cities' aging infrastructures are challenged by stormwater demands, magnified by more frequent flooding and tidal surges. As a result, design for potable water conservation, a more resilient infrastructure, and onsite rainwater management is now a mainstream priority in many parts of the U.S. and world.

6. Need for Resilience in Design

Resilience refers to the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance. This focus promotes a transition from a reactive disaster assistance role – where design professionals help in the immediate and longer-term recovery of a region – to a proactive role where architects participate in planning and design for long-term resilience and adaptation to changing conditions. Communities in the path of Superstorm Sandy, as well as in the Midwest and Gulf regions, have been proactive in addressing this issue. Outside the U.S., architects in the UK and Australia are leaders in integrating resilient planning and design into their communities.

This effort is supported by new international organizations focused on city resilience, including the Global Initiative on Urban Resilience and the Clinton Global Initiative. And in August, the Rockefeller Foundation announced a $100 million grant program to support city-scale resilience programs.

BUILDING RESILIENCE IN BOSTON

"Best Practices" for Climate Change Adaptation and Resilience for Existing Buildings

Prepared By:
Linnean Solutions | The Built Environment Coalition | The Resilient Design Institute

Building Resilience report prepared for the Boston Society of Architects and the city of Boston.

7. Growing Green Building Demand

The demand for "green building" did not wane during the recent recession. Property values of green commercial buildings, for example, have continued to outpace the competition across all U.S. markets. According to McGraw-Hill's most recent sustainability survey, as the economy continues to recover, there is an expanding demand for green building throughout the globe. And according to the AIA Foresight Report, "sustainable design is becoming the expected standard."

LEVEL OF GREEN BUILDING ACTIVITY BY FIRMS AROUND THE WORLD

Legend:
- **Exploring (No Green Involvement)** (black)
- **1% to 15% Green Projects** (dark gray)
- **31% to 60% Green Projects** (light gray)
- **16% to 30% Green Projects** (pink)
- **More than 60% Green Projects** (red)
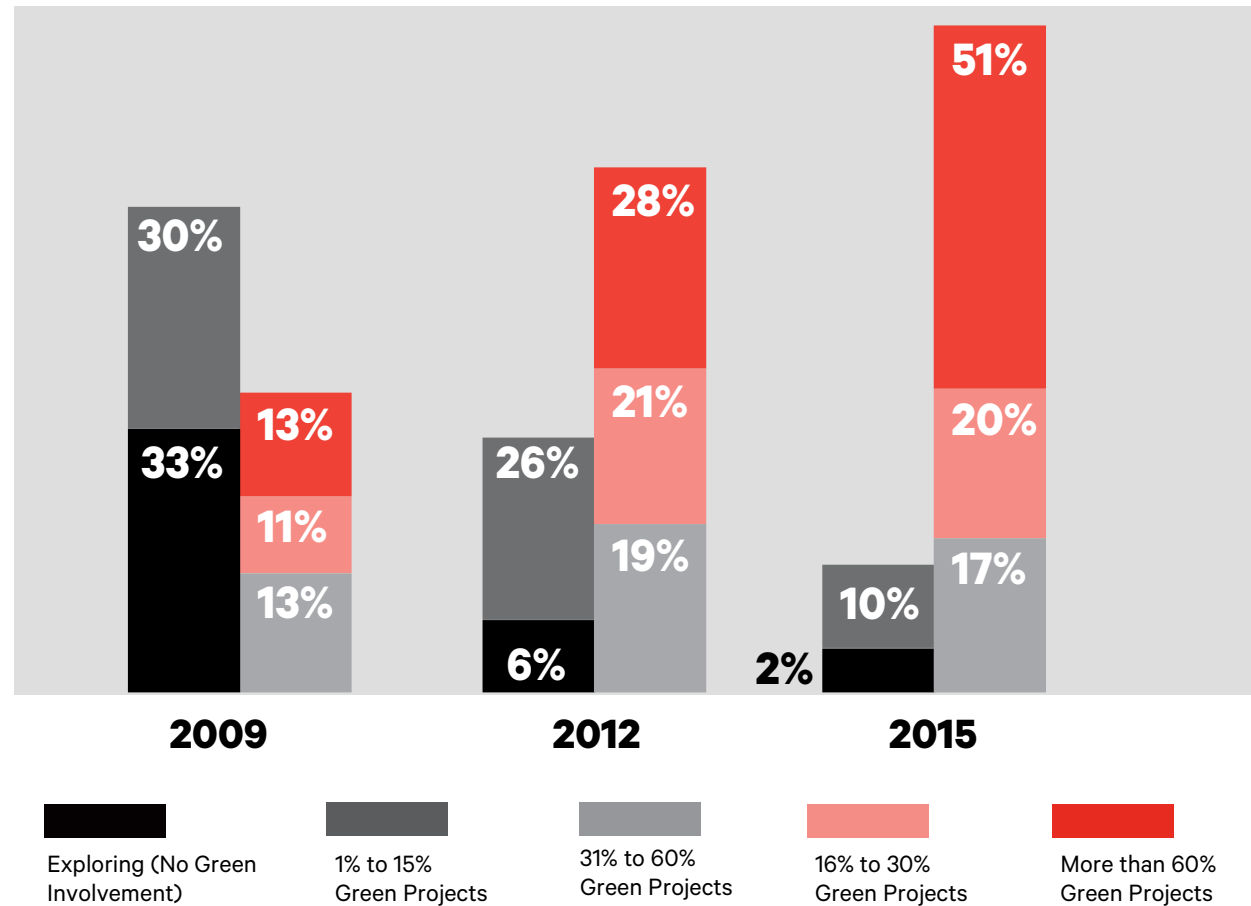
SOURCE: MCGRAW-HILL CONSTRUCTION, 2013

2009: 33%, 30%, 13%, 11%, 13%
2012: 6%, 26%, 19%, 21%, 28%
2015: 2%, 10%, 17%, 20%, 51%

AIA SOURCES

AIA Chicago
AIA Dallas
AIA Georgia
AIA Houston
AIA Member Survey 2012
AIA New York
AIA San Francisco
AIA Seattle
Boston Society of Architects
Design and Health Leadership Group
National Associates Committee
Sustainable Large Firm Roundtable
Young Architects Forum

NON-AIA SOURCES

American Society of Interior Designers
American Society of Landscape Architects
Architecture for Humanity
ASHRAE
Associated General Contractors of
    America
Associated Builders and Contractors
BNIM
Brooks + Scarpa Architects
Centerbrook Architects and Planners
International Living Future Institute
Kieran Timberlake
Lake Flato
Leers Weinzapfel Associates
Moore Ruble Yudell Architects & Planners
National Institute of Building Sciences
Perkins + Will
U.S. Army Corps of Engineers
U.S. Department of State
U.S. Department of Veterans Affairs
U.S. Environmental Protection Agency
U.S. General Services Administration
U.S. Green Building Council

Leadership Perspectives

To identify the issues offering the greatest opportunity and importance to architects, we asked a broad range of representatives from government organizations, client groups, AIA alliance partners, recent AIA Firm Award winners, AIA committees, and AIA members for their perspective on the most important sustainability priorities and trends to meet the current and future needs of their clients and communities.

The combined responses from these leadership groups identified four top priorities:

Performance Metrics

Design + Human Health

Climate Change + Resilience

Energy

A word cloud that summarizes the responses to the question of the most important priorities and trends impacting the built environment that design professionals need to address.

Current State of Sustainability

To make informed recommendations about the AIA's future sustainability priorities, the research process included a deep dive into the current state of activities at the AIA and examined how they compare with efforts across a broad sustainability spectrum.

A Summary of AIA Sustainability Activities

Commitment of AIA Member Firms

Sustainability-related messages on AIA member firm websites served as an indicator of the importance of sustainability as part of their overall firm story. A web analysis of members of the AIA Large Firm Roundtable, Small Firm Roundtable, and last decade of Firm Award winners revealed that the majority of firms promote their sustainable commitment and expertise, including over 80% of large firm and Firm Award winners. Many of these firms also have expanded their sustainable service offerings to gain new revenue sources.

FIRM SUSTAINABILITY MARKETING

■ Promoting sustainable expertise   ■ Offering sustainable services

LFRT	SFRT	FIRM AWARD
85% 62%	69% 14%	80% 73%

LFRT
AIA Large Firm Roundtable

SFRT
AIA Small Firm Roundtable

Firm Award
AIA Firm Award Recipients
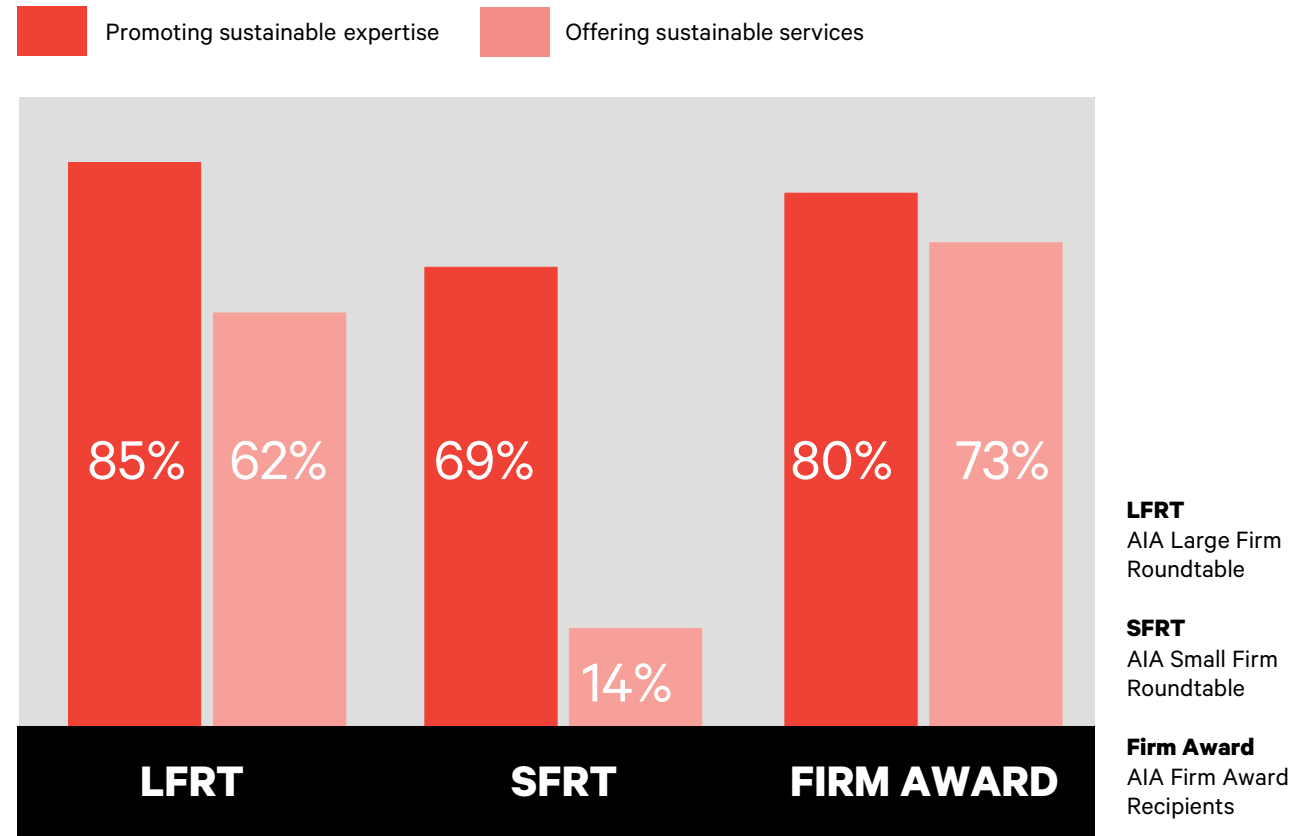
2013 AIA MEMBERSHIP BY KNOWLEDGE COMMUNITY

■ Primary Sustainability Focus
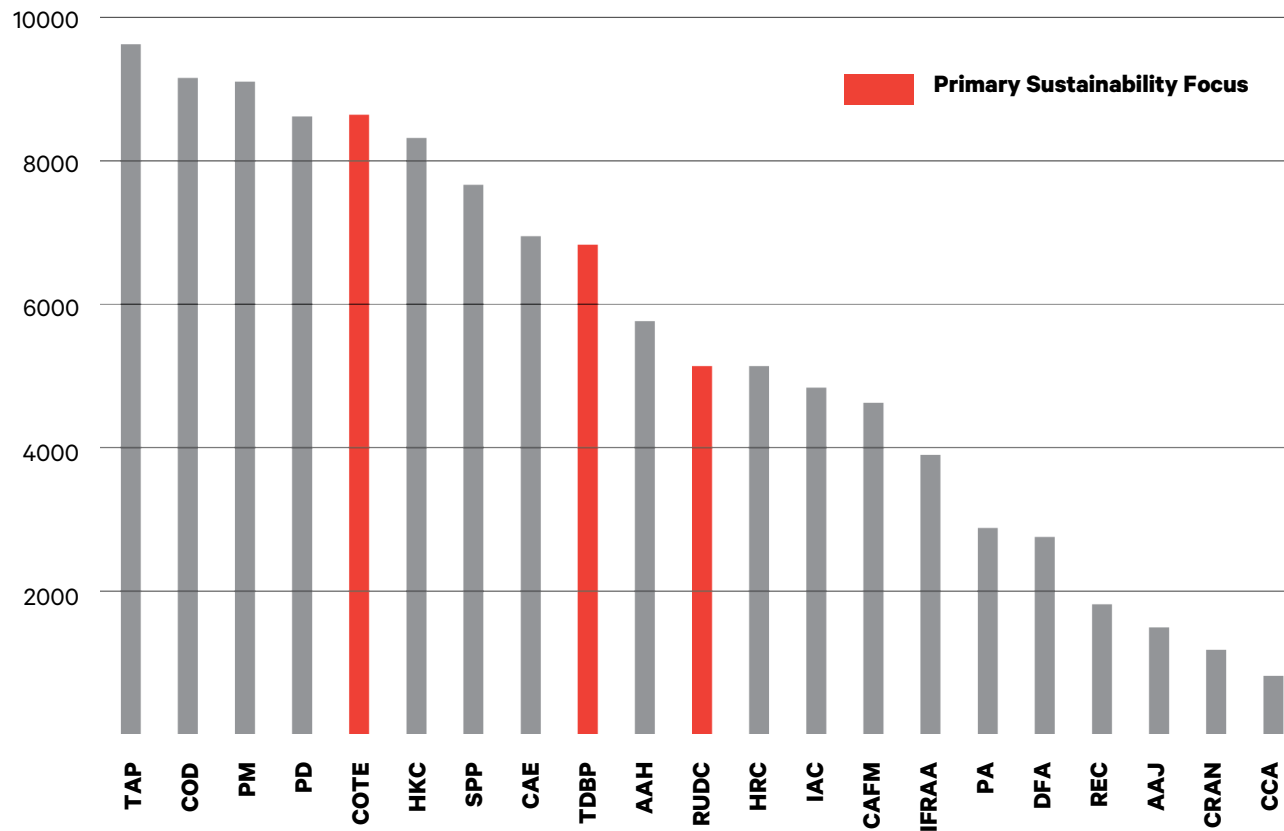
COTE Committee on the Environment

TDBP Technical Design for Building Performance

RUDC Regional and Urban Design Committee

* See appendix for complete list of Knowledge Community acronyms

Engagement of AIA Knowledge Communities

While sustainability issues apply to all Knowledge Communities, those communities that are directly aligned with sustainability topics are popular with AIA members, ranking in the top third of all Knowledge Communities. At the same time, only 30% of existing Knowledge Communities included sustainable activities as part of their current focus.

Founded in 1990, the AIA Committee on the Environment (COTE) is the fifth-most-popular Knowledge Community, with 8,641 members and 65 state or local COTE chapters.

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Sustainable Education

AIA members demonstrate a strong interest in sustainable education, as indicated by their enrollment in course offerings that include sustainable design criteria:

> In 2012, sustainable design courses made up 57% of the total CEUs offered, with an actual enrollment of 41%.

> At recent AIA conventions, sustainable topics made up over a third of total offerings and were well attended.

> In the virtual AIA program, the courses on sustainable topics are most popular with members.

The AIA's ability to track and understand member interest in sustainable education offerings has been hampered by the 2012 decision to no longer require sustainable design credits. But recent AIA Board actions have determined that sustainability tracking will be reinstituted in 2014, along with a major push for high-quality sustainable offerings.

AIA CONVENTION SUSTAINABLE EDUCATION

	2011	2012	2013
% Sustainable Design Offerings / Total	32%	32%	37%
% Sustainable Design Awarded / Total	44%	39%	

% Sustainable Design Offerings / Total

% Sustainable Design Awarded / Total
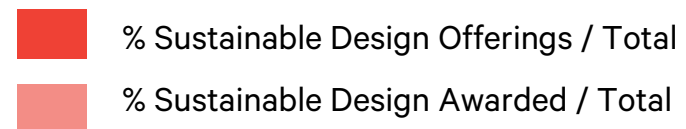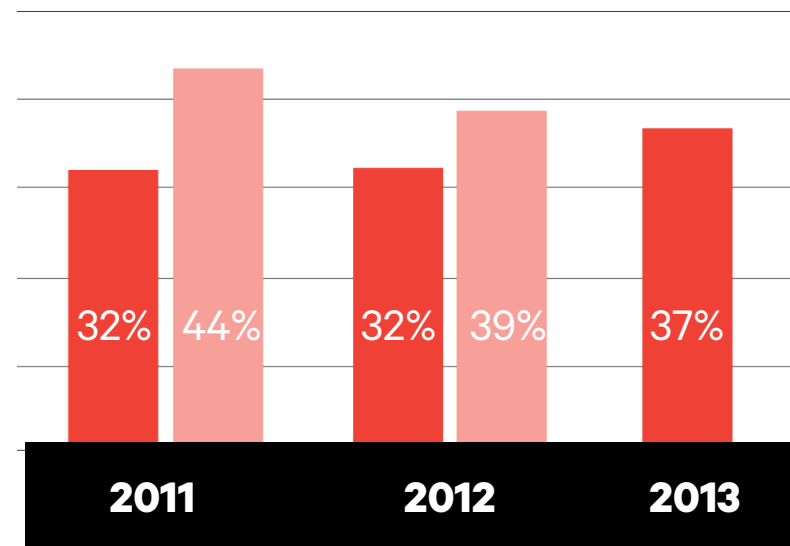
AIA CACE SURVEY: ROLES IN IMPLEMENTING SUSTAINABILITY BY DIFFERENT COMPONENT LEVELS

Position statements / advocacy

Content / research

Educational programs

Exhibits

Awards

Communication

Tools

Partnerships

0%   20%   40%   60%   80%   100%

■ Local component   ■ State component / regional council   ■ National component
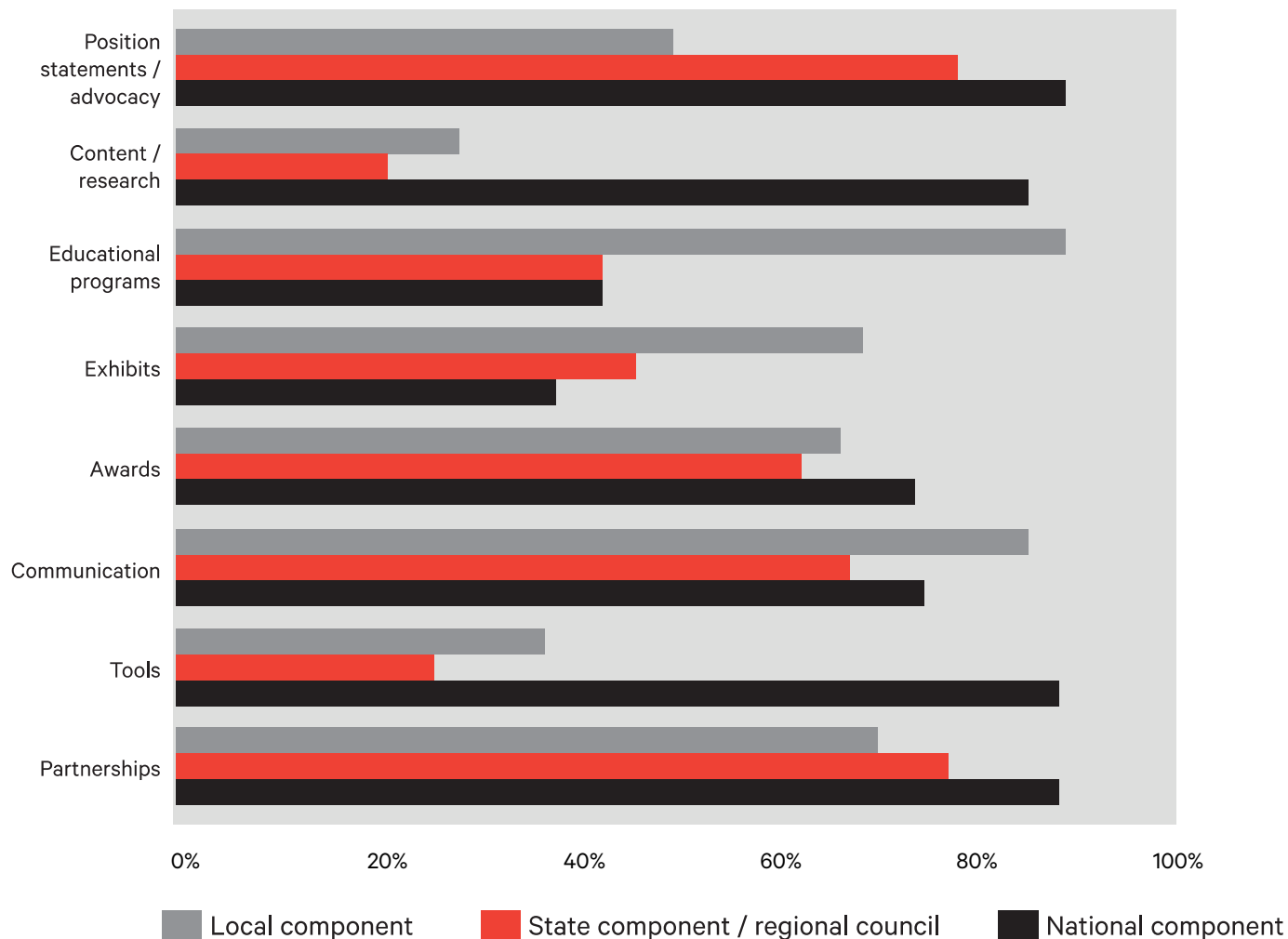
AIA CACE Executives on Priorities and Roles

From an August 2013 survey to the AIA Council of Architectural Component Executives (CACE), the accompanying chart illustrates the preferred allocation of responsibilities for different AIA programs. Conclusions include:

> All levels of the AIA play a role in Advocacy, Awards, Communications, and Partnerships.

> Development of Content, Research, and Tools is the primary role of AIA National.

> All levels of the AIA are responsible for Education and Exhibits, but small (<250) and medium (250-999) components see a role for AIA National for content and assistance.

Sustainability Within Other Professional Associations

It's useful to compare the AIA's sustainable programs with those in other professional associations as a gauge of priority issues and to learn how others are serving their members. The scan process included one-on-one interviews with leaders in a dozen alliance organizations, supported by in-depth web research. The research analyzed those findings in two ways – comparing the percentage of initiatives at AIA National vs. other national associations by program type, and the percentage of programs by sustainable topic.

SUSTAINABILITY PROGRAMS BY TOPIC

■ OTHER PROFESSIONAL ASSOCIATIONS   ■ AIA NATIONAL

SEE PAGE 19 FOR LIST OF PROFESSIONAL ASSOCIATIONS
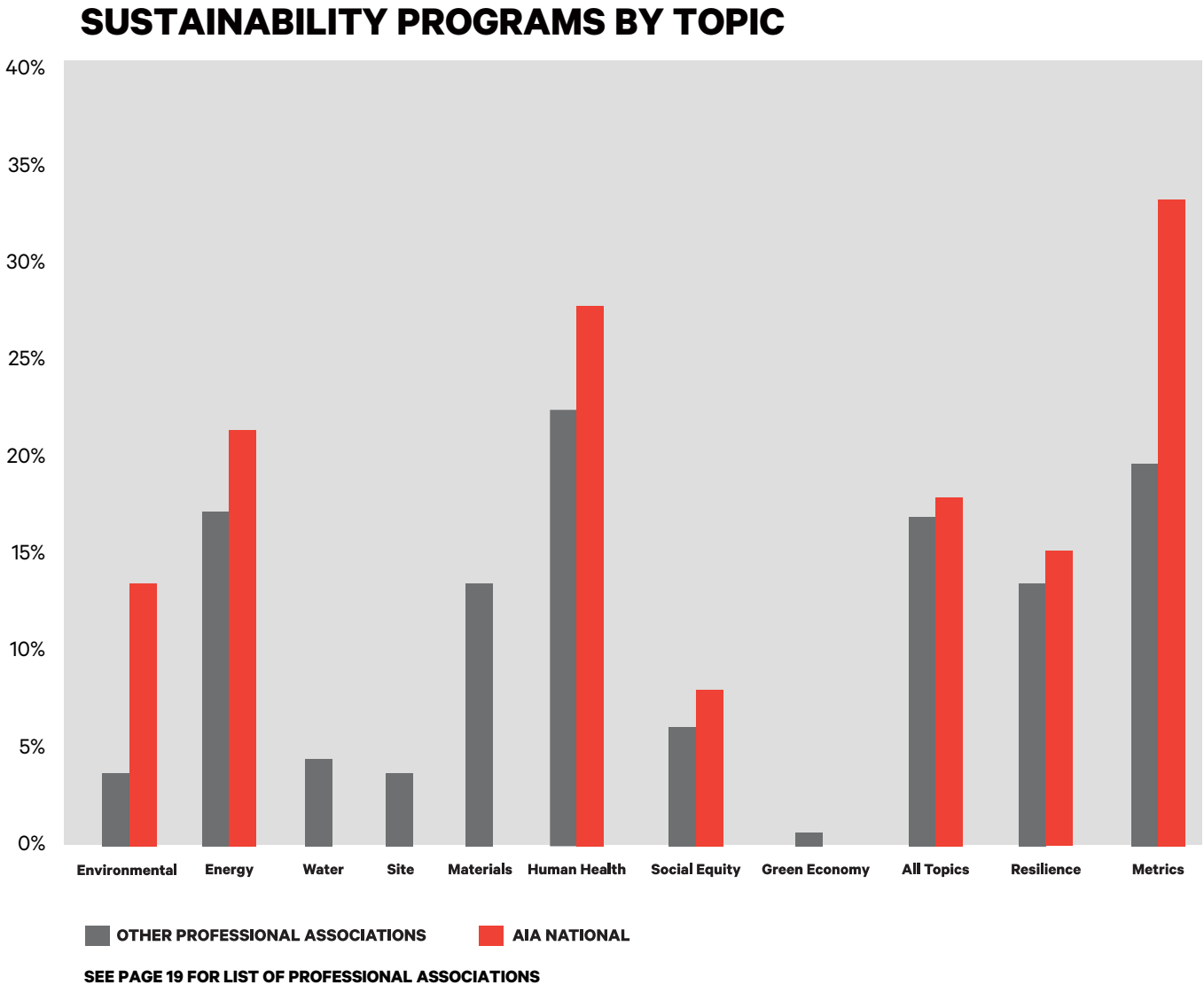
Key Discoveries

> While all associations provide similar program types, AIA National offers fewer programs on Education, Tools + Resources, and Research.

> The number of AIA grant programs is far ahead of other organizations, while the remaining programs are comparable.

> Although there is a common focus on many sustainable topics, the AIA's initiatives on measured performance through the AIA 2030 Commitment serve as a differentiator.

> AIA National does not currently address several topics that other associations do, including water, site, materials, and green economy.

SUSTAINABILITY PROGRAMS BY TYPE

Legend: OTHER PROFESSIONAL ASSOCIATIONS   AIA NATIONAL
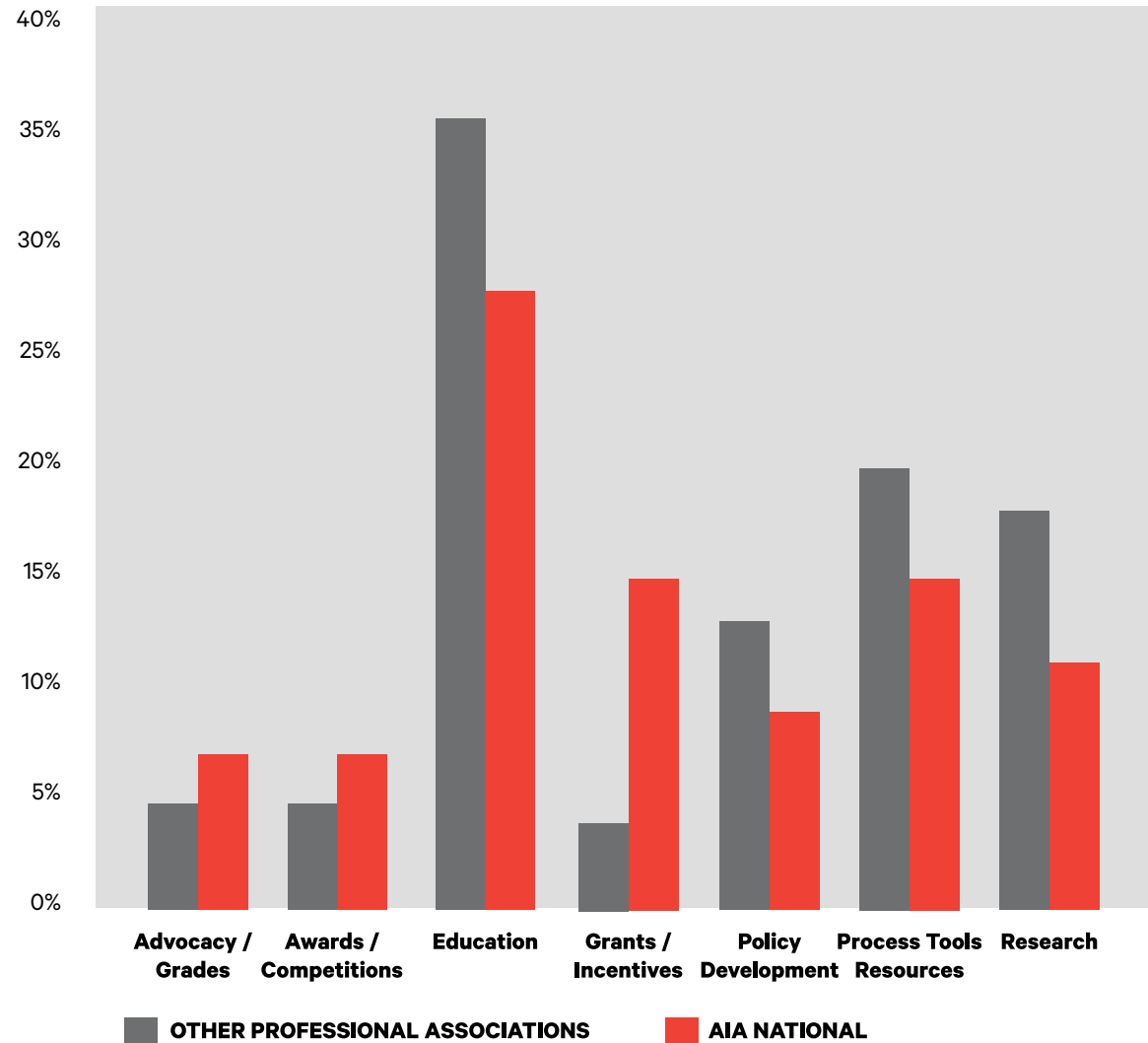
SEE PAGE 19 FOR LIST OF PROFESSIONAL ASSOCIATIONS

OTHER PROFESSIONAL ASSOCIATIONS

American Academy of Pediatrics
American Council of Engineering
   Companies
American Planning Association
American Public Health Association
American Society of Interior Designers
American Society of Landscape Architects
Architecture for Humanity
ASHRAE
Associated Builders and Contractors
Associated General Contractors of
   America
Association of Collegiate Schools of
Architecture
Association of State and Territorial
   Health Officials
Australian Institute of Landscape
Architects
Congress for New Urbanism
International Code Council
International Interior Design Association
International Living Future Institute
Landscape Architecture Foundation
National Architectural Accrediting Board
National Association of Counties
National Association of County and City
   Health Officials
National Council of Architectural
   Registration Boards
National Association of
   Environmental Design
National League of Cities
National Recreation and Parks Association
National Society of Professional Engineers
Royal Institute of British Architects
Urban Institute
Urban Land Institute
U.S. Green Building Council
World Green Building Council

Learning from Alliance Organizations: Different Program Approaches

Alliance organizations address some of the same member services differently from AIA, suggesting ideas on potential future strategies:

RESEARCH

Landscape Architecture Foundation: Through private funding, the LAF has an environmentally focused research program that provides tools and resources and a rigorous case study methodology that has produced hundreds of searchable case studies, publications, and educational materials.

American Planning Association: The APA has three areas of research led by dedicated research directors: Hazards, Green Communities, and Public Health. Funding is primarily through federal contracts, including FEMA, NOAA, and CDC.

ASHRAE: The ASHRAE organization spends $5.5 million per year on applied research raised through chapters ($3M) and other sources. Projects are submitted by any interested party and then carefully vetted through several rounds of committees. All must be practice-based, and many are driven by the development of ASHRAE standards.

EDUCATION

ASHRAE: Offers Fellow positions that are trained and funded to deliver high-quality lectures on priority sustainability and other subjects and are available to chapters and other venues.

American Planning Association: Staff develops and delivers webinars and live presentations to communicate research findings.

U.S. Green Building Council: Produces in-house material on LEED-related topics only and relies on a broad range of providers. It has qualified LEED educators, many of whom are AIA members, who provide sustainable education on specific topics.

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INTEGRATING A SUSTAINABLE MISSION INTO A MEMBER ORGANIZATION

ASHRAE: Rebranded itself to focus on performance and is assuming a convener role in working with other national professional associations.

American Society of Landscape Architecture: Self-described as "Green since 1899," sustainability is at the core of all ASLA initiatives. The ASLA provides a single-source resource page on its website which links to a broad range of practice-based resources on 13 specific sustainable topics.

Royal Institute of British Architects (RIBA): Though not an overarching theme, RIBA has created a "Sustainability Hub" with tools, resources, and case studies targeting the needs of architects.

The Royal Institute of British Architects' sustainability hub serves as a "one stop shop" for all sustainability-related resources.

AIA Strengths and Opportunities

To maximize its long-term impact on promoting sustainability in the built environment, the AIA must leverage its many strengths while seeking to address any gaps.

AIA NETWORK

The extensive network of AIA components, Knowledge Communities, National resources, and other channels offers a superb opportunity to reach a broad community of design professionals, partners, students, clients, and communities. Fully engaged, these resources have the potential to serve as an extremely powerful and influential implementation network.

AIA IMPACT ON PROFESSIONAL PRACTICE AND CONTRACTS

Considered THE voice for the architectural profession on practice issues, the AIA plays an important role in bringing change to architectural education, licensing, and accreditation organizations. AIA contracts are used in the majority of contract negotiations, either by direct or indirect use, and are a prime revenue generator for the institute.

AIA ALLIANCE RELATIONSHIPS

The AIA maintains long-standing alliances with professional organizations that look to the institute as a potential co-leader on focused sustainable collaboration opportunities. This includes new groups that are interested in expanding their relationship with the AIA, including Architecture for Humanity and Architecture 2030.

AIA ADVOCACY AND CODES

The AIA Federal Advocacy and Codes initiatives have earned respect from partner organizations and on Capitol Hill. The institute is considered THE voice for the architectural and building profession on related issues. For many years, the AIA has been actively engaged in promoting energy-related legislation as a result of the AIA Board 2030 position.

BOARD POSITION STATEMENTS

The AIA Board sustainability public policy statements on rating systems, codes, and the AIA 2030 Commitment all have a major ripple effect on AIA activities and priorities.

"The AIA has an important advocacy role to play with schools of architecture. To advance an environmental ethic, 21st century practices need architects who are both committed to research and educated in research methodologies."

– Stephen Kieran, FAIA
Kieran Timberlake
2008 AIA Firm Award
Recipient

AIA MEDIA EXPOSURE

The AIA COTE Top Ten Green Awards regularly garner mainstream media interest in publications such as *Fast Company*, *Wired*, and *Gizmodo*. In 2013, the awards reached a readership of 52 million individuals. This attention generates public interest in the intersection of art and science, and is a strong motivator for the AIA.

CONTINUING EDUCATION

The primary source for all architectural licensing requirements, AIA CEUs serve an important role in keeping the profession up to date with current and emerging topics. Architects with LEED accreditation also benefit from receiving credit and documentation support from the AIA to help maintain the credential.

CENTER FOR COMMUNITIES BY DESIGN

Through its Design Assistance programs, the Center for Communities by Design provides direct engagement with communities and diverse professionals to address local design challenges in an open community process. Participating communities maintain enormous respect for the process, architects, and contributions of the AIA.

A community meeting during the Sustainable Design Assistance Team (SDAT) workshop in Wenatchee, Washington, in 2012. Part of the public process included a participatory art installation called "Imagine/Imagino" with several hundred people participating.

Recommendations

Four Priority Issues

The AIA's challenge is to define the best use of its limited resources by focusing on a few issues that will deliver the greatest benefit to architects (its current and future members) as well as to clients and communities. In recognition of this challenge, **we recommend four issues of priority focus for the AIA: two CORE issues and two EMERGING issues.**

CORE issues are central to the architect's role in the design of the built environment.

These are issues that architects touch every day in their work. Given the scale of their collective work, architects have an opportunity to positively impact the "triple bottom line" outcomes of economy, social equity, and environment.

Goal: that architects are able to apply a deep understanding of these issues in their work.

We have identified two CORE focus issues, with clear outcomes:

ENERGY
Drive building energy efficiency and use of renewable energy toward meeting the AIA 2030 goals.

MATERIALS
Make material selections that are informed by full life cycle and health-related criteria and lead to healthy and sustainable environments.

EMERGING issues are rapidly escalating at the community scale, where architects can provide a wide range of design solutions that will contribute to a better environment for current and future generations.

By becoming engaged and recognized as a leader in these areas, architects enhance their value to their communities and clients.

Goal: that architects expand their role and understanding of these issues, gaining a leadership position.

We have identified two EMERGING focus issues, with clear direction:

DESIGN & HEALTH
Improve human health and wellness through the design of the built environment.

RESILIENCE
Design to adapt to changing conditions and to maintain or regain functionality and vitality in the face of disturbance.

Recommendations for Core Focus Area

Each issue is at a different place in its evolution. The following pages summarize the recommended priority actions for each over a three-year period to maximize their impact. The recommendations were developed based on an analysis of the current state at the AIA and identification of where efforts would have the greatest benefit to Repositioning. This involved regular reviews with AIA National and the scan's advisory group.

Energy

As we approach the AIA Board's 2030 goal of net zero energy in buildings, it's time to build on the AIA's energy platform, align its efforts, and "supercharge" the institute to rapidly scale up the profession's impact and opportunities.

AIA BACKGROUND

The AIA's focus on energy began with the 1973 formation of the AIA Energy Committee, which created effective tools for lobbying Capitol Hill in the 1970s and led to the formation of the U.S. Department of Energy. The AIA Research Corporation is credited with creating federal funding support for energy use in buildings. AIA's early adoption of the 2030 Challenge in 2005 contributed to the development of the AIA 2030 Commitment in 2009 to help firms evaluate energy performance and track improvements. To provide a deep understanding of energy-efficient design, AIA Seattle developed the AIA+2030 professional series, shared throughout the AIA network. Advocacy efforts have focused on energy-related legislation in support of architectural services and energy efficiency. The AIA played a major role in the development of the International Green Construction Code (IgCC) and its energy performance requirements. In the past two years, the AIA has produced several guides that address key energy topics for architects: energy modeling, the International Green Construction Code, and deep energy retrofits.

COLLABORATION PARTNERS

Current alliances include ASHRAE, the National Institute of Building Sciences (NIBS), New Buildings Institute (NBI), U.S. Department of Energy and Energy Labs, Architecture 2030, and the Rocky Mountain Institute (RMI). Building on these relationships, the AIA should explore new collaboration opportunities with leaders in life-cycle costing, energy modeling, post occupancy services, and deep energy retrofits.

OUTCOME GOALS

> **PROMOTE** adoption of the AIA 2030 Commitment and reporting.

> **FACILITATE** integration of energy benchmarking, energy modeling, passive design, deep energy retrofits, post occupancy services, and measurement and verification.

> **REPOSITION** from energy efficiency to energy resource management and understanding of full life cycle of environmental impacts.

Energy Priority Actions By Year

2014	2015	2016
Initiate Energy Curriculum Framework	Rollout Comprehensive Energy Curriculum Framework	Expand Energy Education on Critical Topics
Develop AIA 2030 Database; Increase Reporting	Rollout AIA 2030 Database; Expand Signatories	Improve AIA 2030 Database Functionality; Expand Signatories
Publish Energy Modeling Resource	Publish Energy Resource/Tools	Publish Energy Resource/Tools
Maintain Strong Advocacy + Codes Role	Maintain Strong Advocacy + Codes Role	Maintain Strong Advocacy + Codes Role

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Materials

The AIA should take the opportunity now to build on the legacy of its early materials initatives and demonstrate new relevance in an area that is increasingly important to clients, regulators, and design professionals.

AIA BACKGROUND

Materials content became a focus in 1991 when the AIA Board passed resolutions calling on all AIA members to change practices toward immediate cessation of ozone-depleting refrigerants. The introduction of the Environmental Resource Guide (ERG) in 1992 began the sharing of detailed information on a wide range of building materials, including embodied energy data. The ERG is still considered one of the AIA's most important contributions to the evolution of sustainable design. In 2007, the AIA hosted a Building Products Manufacturer's Summit that promoted the use of green material safety data sheets (MSDS). Education on the sustainable attributes of materials has been addressed in recent years through various AIA-approved programs. At the component level, the Chicago and Dallas regions hosted materials roundtables and dialogues in 2013 about emerging materials issues, with more events planned in other locations in 2014. Additionally, AIA members are central players in the creation of the new Healthy Product Declaration standard.

COLLABORATION PARTNERS

The AIA collaborates with several allied organizations, including the American Society of Interior Designers (ASID), International Interior Design Association (IIDA), Construction Specifiers Institute (CSI), Association of General Contractors (AGC), National Institute of Building Sciences (NIBS), U.S. Green Building Council, and U.S. Environmental Protection Agency. Institutions engaged in environmental materials research are potential partners as well as knowledge leaders such as the Healthy Building Network and BuildingGreen. Businesses committed to environmentally responsible materials selection should also be engaged in these initiatives.

OUTCOME GOALS

> **PROMOTE** architects' role in market transformation through materials resource management.

> **FACILITATE** architects' material selection based on health impacts, material sourcing, use and re-use characteristics, and after-use impacts.

> **REPOSITION** architects' promotion of life cycle that extends beyond costs to resource management and health impacts.

Materials Priority Actions By Year

2014	2015	2016
	Implement Introduction to Materials Program	Rollout Materials Curriculum Framework
Form Advisory Group; Refine Materials Agenda	Develop Convention Materials Policy	Initiate Convention Materials Policy
Publish Introductory Guide to Materials		Publish Priority Tool/Resource for Small Firms
Host Materials Roundtables; Local Policy Discussions/Selected Components	Develop Materials Resources for Small Firms with Components	Implement Materials Resources for Small Firms with Components

Recommendations for Emerging Focus Area

Design & Health

The AIA has an important role to play in driving leadership for architects as part of the larger dialogue at the intersection of design and human health. Timely action is important to take full advantage of these opportunities.

AIA BACKGROUND.

Initially led by Public Director Dr. Jonas Salk and more recently by Public Director Dr. Richard Jackson, Hon. AIA, the AIA has been directly engaged in the intersection of design and human health for many years. In 2012, the AIA convened the America's Design for Health Initiative for two gatherings of cross-disciplinary leaders. The AIA's Clinton Global Initiative Commitment to Action, Decade of Design also launched in 2012 with a core focus on developing the linkages between design and human health. Three related Association of Collegiate Schools of Architecture (ACSA) research grants were awarded to universities and in February 2013, the AIA announced a 10-year partnership with the Massachusetts Institute of Technology (MIT) to pursue research on this topic. In 2013, the AIA Board created the Design and Health Leadership Group, which is now leading the institute's collaborative approach. Regionally, the AIA New York component has been a leader through its contributions to the NYC Active Design Guidelines and development of the FITCITY exhibit and conference, now in its eighth year. This initiative expanded to a FITNATION exhibit, which covers design and health case studies from across the U.S. The AIA National recently funded this exhibit for distribution to five components of fewer than 500 members in 2014.

COLLABORATION PARTNERS

Alliance partners already engaged with the AIA on this issue include the American Planning Association (APA), U.S. Green Building Council (USGBC), Congress for the New Urbanism (CNU), and MIT. Potential new partners include the American Public Health Association (APHA), Urban Land Institute (ULI), and American Society of Landscape Architects (ASLA). The Pew Foundation is partnering with the AIA in Health Impact Assessment programs. Grant opportunities are being identified with potential sponsors such as the Robert Wood Johnson Foundation. The development of a partnership strategy is a top priority for 2013-2014.

OUTCOME GOALS

> **PROMOTE** architects' contributions to public health, wellness, wellbeing, and productivity.

> **FACILITATE** architects' role at the scale of the building, neighborhood, community, and region.

> **REPOSITION** from healthcare design to applying design & health knowledge to design of all scale and types.

Design & Health Priority Actions By Year

2014	2015	2016
Hold Design & Health Track at Convention	Rollout Design & Health Curriculum Framework	Expand Design & Health Curriculum – Critical Skillsets
Host Health Summit; Share Results		
Expand BRIK Content; Develop Research Agenda and Role	Expand BRIK Content; Implement Research Agenda	Expand BRIK Content; Enhance Research Agenda
Rollout Component Toolkit	Publish Guide for Local/Regional Use	Expand Design & Health Resources Based on Research
Develop Communications and Partnership Plan	Implement Communications and Partnership Plan	Improve Communications and Partnerships

Resilience

The increased occurrence of natural and man-made disturbances has elevated the need to create more resilient communities into a global priority. Architects have a significant role to play in all phases of response – preparedness, mitigation, response, and recovery. It's time for the AIA to transition to promoting a proactive resilient design role for architects or risk being left out of the discussion.

AIA BACKGROUND

Beginning with Charlie Harper, FAIA, in 1972 in Texas, AIA members have played a role in damage assessment following major disaster events. More than 2,500 architects have completed Emergency Assessment training and more than 20 states have created active AIA disaster assistance networks. AIA National appointed a designated Resilience and Disaster Assistance manager and a Disaster Assistance Committee that leads these training efforts and works across states to promote Good Samaritan legislation. The AIA Board was directly involved in recovery work in Haiti following the January 2011 earthquake.

In 2012, the institute formed a relationship with Architecture for Humanity to expand its role in recovery and resilient design that has led to several collaborations and a design competition. At the component level, AIA New York and Boston Society of Architects have recently completed Resilience reports in their communities.

COLLABORATION PARTNERS

To transition to a resilience agenda, the AIA should expand its partnership with Architecture for Humanity and work closely with other organizations focused on resilience, including USGBC, ULI, NIBS, APA, ASLA, ASHRAE, CNU, and the Resilient Design Institute. Understanding the current strengths and interests of these organizations as well as the AIA's potential role as a key partner should be a top priority.

OUTCOME GOALS

> **PROMOTE** architects' role beyond disaster recovery to proactive, resilient design.

> **FACILITATE** architects' contribution to planning & design of resilient buildings and communities.

> **REPOSITION** to codes that address both resilience and adaptability standards.

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Resilience Priority Actions By Year

2014	2015	2016
Conduct Disaster Assistance and Resilience Trainings	Implement Introduction to Resilience	Implement Comprehensive Resilience Curriculum Framework
Host Resilience Event		
Distribute Academic Research Grants with ACSA	Identify AIA Research Agenda and Role	Share ACSA Research; Implement AIA Research Role
Implement Component Resilience Grant Program	Publish Resilience Guide	Publish Community-Based Resilience Resource
Develop Communications and Partnership Strategy	Implement Communications and Partnership Strategy	Improve Communications and Partnership Strategy

Implementing Priority Issues

Following are recommended implementation strategies for achieving significant long-term impact within the four priority issues:

"We need to talk about sustainability in broad terms, at the city scale – thinking beyond the property line. When we think about sustainability, we need to think holistically about making cities better."

— **Angela Brooks,** FAIA
Brooks + Scarpa,
Pugh + Scarpa
2010 AIA Firm Award Recipient

Expanded Dimensions

By broadening their focus beyond new building construction, architects gain additional opportunities to apply their skills in providing holistic problem-solving, design, and technical solutions.

DESIGN

PERFORMANCE
Design to meet measured performance outcomes such as energy and water use. This approach embraces the full use of building information modeling and an integrated design process.

LIFE CYCLE COSTS
Promote a full life-cycle understanding of the true costs of a building – from construction through occupancy, ongoing maintenance, and renovation or deconstruction.

WATER
Incorporate the impact of limited access to potable water, optimized rainwater systems, and treatment and reuse of wastewater in the design decision-making process. Understand the links to water for each priority issue.

BUILDING ENVELOPE
Promote a deep understanding of the technical issues that contribute to a successful building envelope where passive load-reducing strategies, occupant health, and short-term survivability are affected.

SCALE

EXISTING BUILDINGS

Address the predominant need for the renovation and upgrade of existing building performance in urban and suburban areas.

DISTRICT SCALE

Use holistic design and planning skills to address solutions that extend beyond the building to the district and urban scale.

REGIONAL AND GLOBAL DIFFERENCES

Promote a deep understanding of regional climate, economic, cultural, and habitat characteristics that contribute to solutions that are well suited to their place. Promote the importance of addressing social equity through design.

BUSINESS

OPPORTUNITIES FOR THE PROFESSION

Pursue expanded opportunities for architectural services and leadership.

OPPORTUNITIES FOR THE AIA

Consider how these priorities can bring new monetary value to the AIA and enhance its reputation.

Seattle's Capitol Hill EcoDistrict is a showcase initiative to provide triple-bottom-line sustainability at the neighborhood scale.
Image: courtesy GGLO

New Skill Sets

The architecture profession has always embraced a wide range of interests and backgrounds. Truly incorporating these expanded dimensions into the profession, however, will require new skill sets from those traditionally gained in architectural education and practice, including energy modeling, energy audits, and statistical analysis. The AIA can help architects:

DEVELOP education, tools, and resources with best-in-class leaders from an architectural perspective to inform the profession.

INFLUENCE architectural education to incorporate these aspects of design into the student experience.

PROMOTE co-leadership opportunities with allied organizations, where architects work closely with others to gain experience and build relationships.

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Delivery Mechanisms

The AIA needs to leverage its numerous delivery mechanisms – the ways it engages with members, the architectural profession, and the general public – to most effectively implement the four focus areas.

> Education

> Practice-Based Research

> Component + Knowledge
   Community Engagement

> Tools + Resources

> Policy + Advocacy

> Awards + Incentives

> Communications + Partnerships

A Comprehensive Approach

As the Repositioning research showed, there is currently a lack of synergy across various AIA groups. These recommendations offer an approach to aligning the entire AIA organization around a few strategic issues. They affect all facets of the AIA – from the smallest components to "Big Sibs," all Knowledge Communities, Board Committees and task groups, and the AIA National staff. Everyone has a role to play based on their strengths and interests. The four priority areas offer a framework for the work of many, so that the whole is greater than the sum of its parts.

This approach is reinforced by the CACE survey findings, which stress the importance of shared responsibilities across multiple levels of the organization. Feedback from Knowledge Community leaders reinforces the important role they would like to play in driving these four priorities. And departmental leaders at AIA National are enthusiastic about the opportunities to cross departmental lines and gain more traction around these issues.

To take advantage of this momentum, the AIA must work together to create a consistent message to all levels of the organization, along with tools to encourage and enable components, Knowledge Communities, and other groups to pull in a unified, highly visible direction.

AIA+2030 SERIES
Developed and piloted by AIA Seattle, this is a 10-part technical training focused on energy efficiency that has been shared with other components as a framework for their local adaptation and implementation. Currently, 33 series have been completed, with 1,300 design professionals benefiting from this in-depth education. This collaborative approach to providing high-quality education serves as a model for future efforts.

Partnership Strategy

During this era of highly collaborative, multi-disciplinary teams, it's essential for the AIA to seek collaborative opportunities with complementary partners to achieve significant results in each focus area. In emerging issues, it's important to combine the architect's unique design perspective as a leader in the dialogue with a trans-disciplinary team of new partners. In creating education, tools, and resources, the approach should be to adapt existing best practice resources, working with industry leaders so they address the architect's needs at all scales of projects. In some cases, the AIA should lead initiatives; in others, AIA should serve as an important co-leader with other organizations. In certain cases, the AIA will be most effective serving as part of a larger team. The institute can build on its long-standing alliances and stature to expand its impact while identifying new relationships that will address the additional skill sets and areas of research. Specific suggestions for potential partners are included in each focus issue.

Components   AIA National   AIA Board   Knowledge Communities   Alliance Partners
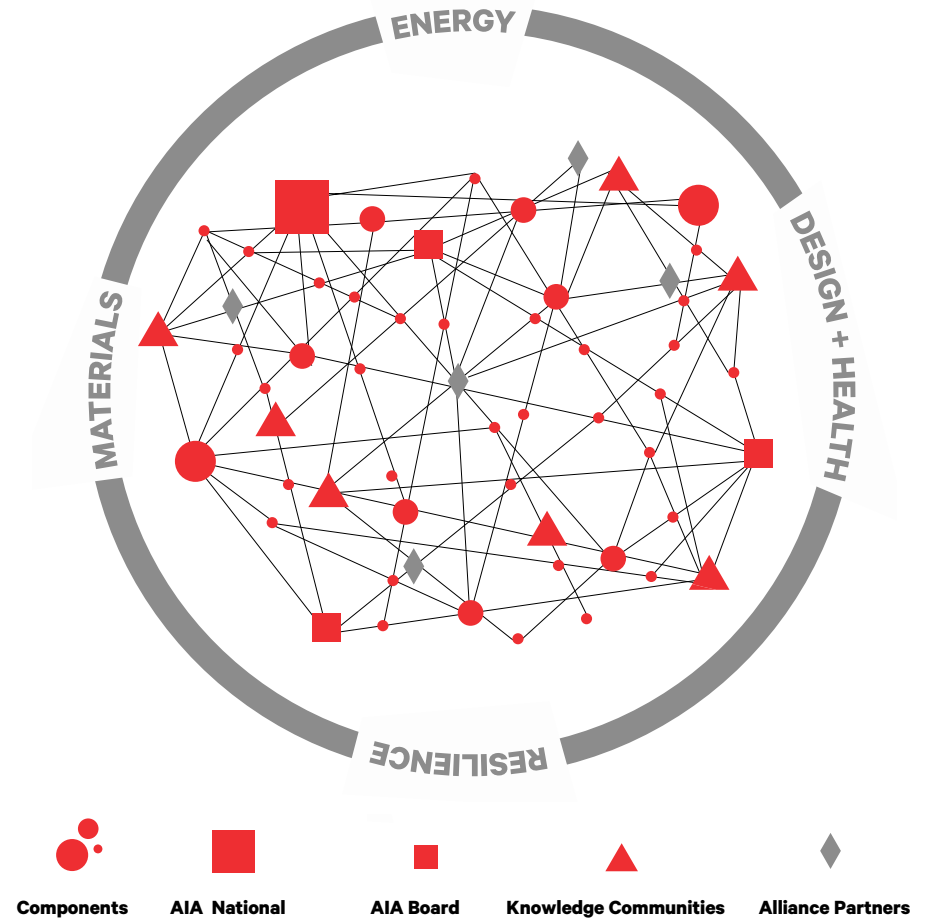
A focus on the four priority issues offer an opportunity for strategic alignment and synergy across all components of the AIA and in collaboration with new and existing alliance partners.

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Measurement Matters

The development of specific metrics in each of the four priority areas is another important implementation strategy. Based on the positive AIA 2030 Commitment metric experience, these will be essential to clearly define the outcome goals and track progress. Key metrics can be identified in current or future initiatives, and measurable targets can be set and revisited bi-annually. These can be applied across all the different delivery mechanisms such as tracking continuing education by topic, Knowledge Community and component activities, awards and grants metrics, resource downloads, and the AIA 2030 database entries.

The AIA 2030 Commitment is a prime example of the value of instituting clear metrics. For those firms that are signatories, the Energy Use Intensity measure has taken on an important role in driving changes in their design process and helps each firm – as well as the AIA as a whole – track progress.

AIA 2030 COMMITMENT
PERCENT ENERGY USE REDUCTION

60% Reduction from National Average Target

35%	35%	37%
2010	**2011**	**2012**
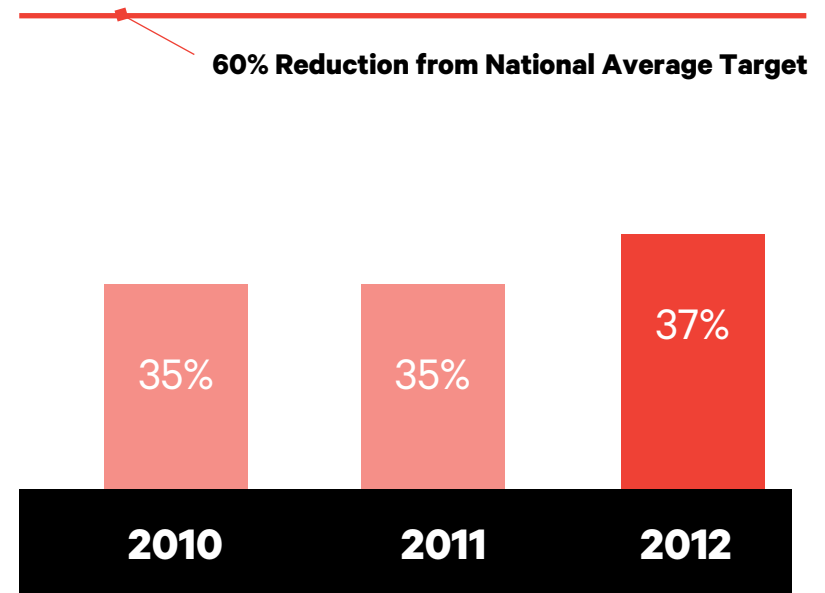
Average predicted energy use intensity (pEUI) reduction from U.S. national average for all AIA 2030 Commitment reporting firms over the past 3 years.

Alignment with Repositioning

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By maintaining focus on the four priority issues, the AIA can realize many of its Repositioning goals:

ENHANCE ARCHITECT'S LEADERSHIP ROLE AND IMPACT

An integrated design process with the architect in the leadership role brings a new level of focus, connectivity, and vitality across the entire team and with the client. Architects who actively participate in planning and design on public health and resilience generate new respect from community and business leaders while making valuable connections.

ELEVATE ARCHITECT'S VISIBILITY

Architectural designs that integrate performance-based strategies are winning design awards and garnering mainstream media attention.

ENGAGE MEMBERS, NON-MEMBERS, AND EMERGING PROFESSIONALS

The four priority issues resonate with the values of many architects, especially younger professionals, who are concerned with the issues of urbanization, social equity, and climate change, and seek greater relevance from the AIA.

EXPAND OPPORTUNITIES FOR ARCHITECTS

New service offerings – with expanded revenue opportunities – include deep energy retrofits, sustainable consulting, design analysis, performance evaluations, building systems research and planning, and policy-related work. Architects also will have expanded opportunities to assume leadership roles in their communities by serving on planning commissions or in government, and to influence the next generation of design professionals as educators.

DELIVER VALUE TO CLIENTS

Building owners and operators benefit from long-term operating savings, improved occupant productivity, and increased attraction and retention of tenants. Buildings will meet new codes and regulations or be positioned ahead of the market for future requirements and changing conditions.

"A highly integrated approach to planning and design excites and energizes people throughout the office. It provides a greater awareness of sustainability as a key entry point to a more creative and responsible design process."

— **Buzz Yudell,** FAIA
Moore Ruble Yudell
2006 AIA Firm Award
Recipient

PROVIDE VALUE TO OCCUPANTS

Occupants will experience a more human-centered built environment that promotes health and wellness and is able to adapt to change, with reduced immediate and long-term disruption.

IMPROVE PUBLIC UNDERSTANDING OF ARCHITECT'S CONTRIBUTION

By communicating the connection between energy use, public health, resilience, and the built environment, the public gains an increased appreciation of the value of the architect.

STRENGTHEN THE AIA'S LEADERSHIP ROLE AND VALUE

By providing a clear, bold path forward, the AIA will elevate its role as sustainability leader. In addition, opportunities for monetization can be generated through the creation of high-quality AIA programs, tools, and resources.

Conclusion

This report articulates many convincing reasons why architects can and should take advantage of timely, important leadership opportunities. As part of its current Repositioning initiative, the entire AIA network is poised to play an important role in ushering in a new generation of architectural influence. Beyond strengthening the role and impact of architects, the recommended actions reinforce the fundamental reason why many chose the architectural profession in the first place: to create inspiring designs that will make a difference for generations to come.

" I believe that collectively the architect community membership of Architecture for Humanity and the AIA membership touch 90% of the architectural profession."

— **Eric Cesal**
Architecture for Humanity

" Sustainability is about making beautiful buildings that will be better for clients, reflective of place, healthier for occupants, and more loved over time."

— **Jennifer Yoos,** FAIA
VJAA
2012 AIA Firm Award Recipient

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Appendix

Sustainability Scan Process

The scan process began in March 2013 with the goal of delivering a final draft to the AIA Board at its September meeting. A diverse Advisory Group guided the scan process to ensure that different perspectives were being met and to optimize the impact of the resulting recommendations.

Design and Health Leadership Group Coordination

Since the Board-appointed Design and Health Leadership Group (DHLG) was well under way at the time of the scan's initiation, we determined that the two initiatives needed to be closely aligned to ensure that these efforts are fully coordinated. Bill Roschen, chair of the DHLG, agreed to serve on the scan Advisory Group.

ADVISORY GROUP MEMBERS

Bill Leddy, FAIA
COTE Advisory
Group Chair

Betsy del Monte, FAIA
Texas Society for
Architects

**Colin Rohlfing,
Assoc. AIA**
AIA Chicago

**Melissa Gallagher-
Rogers**
USGBC

Lisa Richmond
Exec Dir. AIA Seattle

Bill Roschen, FAIA
Chair, Design and Health
Leadership Group

Carl Elefante, FAIA
AIA Board

Vivian Loftness, FAIA
Past COTE Chair

Rico Quirindogo, AIA
AIA Seattle President
AIA Board
Communications
Committee

Jeffrey Fewerda, AIA
Small Firm Round Table

Bill Wilson II, FAIA
Emeritus Board

Suzanna Wight Kelley, AIA
AIA National

The scan encompassed four major phases:

research → analyze → recommend → communicate

APR   MAY   JUN   JUL   AUG   SEPT   OCT   NOV   DEC

REPORT TO BOARD
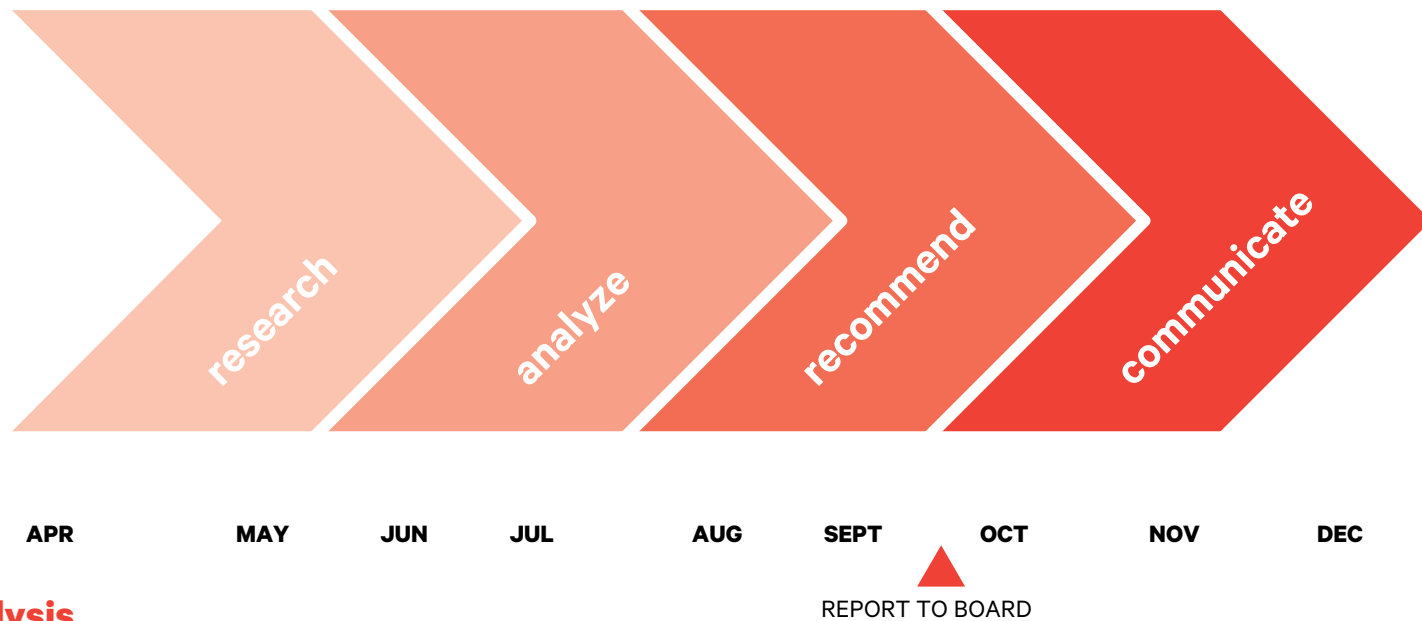
Research and Analysis

The research phase focused on three key questions:

1. What sustainable priorities and needs will drive leadership for current and future members?

2. What programs and activities are currently under way at and with the AIA?

3. How does the AIA fit into the big picture? What are others doing that could benefit members? Where are teaming opportunities?

The research effort included extensive web research combined with more than 30 individual interviews with key players inside and outside of the AIA. A Google spreadsheet was used to summarize findings on current sustainable activities on a broad range of topics – energy, materials, water, biodiversity, human health/wellness, social equity, green economy, performance measurement, and resilience. This document can continue to play a valuable role in identifying best-in-class resources and potential partners for future initiatives.

The following charts summarize the number of initiatives under way by topic area, both within the AIA and in other organizations.

NON-AIA SUSTAINABILITY INITIATIVES BY TOPIC AND PROGRAM TYPE as of June 2013

| % of TOTAL | 4% | 19% | 5% | 4% | 15% | 25% | 7% | 1% | 19% | | | 15% | 22% |

ALL ORGANIZATIONS

BY TOPIC and PROGRAM

PROGRAM	TOPIC									TOTAL	%		Resilience	Performance Metrics
	General Environ-mental	Energy	Water	BioDiversity & Site	Materials & Natural Resources	Human Health/ Wellness	Social Equity	Green Economy	ALL Topics					
Advocacy + Codes	1	8	4	1	2	3	1		7	27	6%		7	8
Awards + Competitions		2			2	2		1	2	9	2%		0	0
Education	6	29	12	3	16	24	4	2	13	109	23%		25	22
Grants + Incentives	1	1	1		1	10	1			15	3%		2	3
Policy Development	3	14	2		6	15	8	3	11	62	13%		15	11
Process Tools + Resources	7	32	7	2	22	40	11	2	19	142	30%		26	44
Research	2	23	3	1	17	31	11	2	12	102	22%		17	33
TOTAL PROGRAMS	20	109	29	7	66	125	36	10	64	466			92	121
% of TOTAL	4%	23%	6%	2%	14%	27%	8%	2%	14%				20%	26%

1 to 4	5 to 9	10 to 20	20-30	over 30

AIA SUSTAINABILITY INITIATIVES BY TOPIC AND PROGRAM TYPE as of June 2013

AIA NATIONAL ONLY

TOPIC										TOTAL	%		Resilience	Performance Metrics
PROGRAM	General Environmental	Energy	Water	BioDiversity & Site	Materials & Natural Resources	Human Health/ Wellness	Social Equity	Green Economy	ALL				Resilience	Performance Metrics
Action Plan						2				2	4%			
Advocacy + Codes		3							1	4	7%			
Awards + Competitions	1					1	1		1	4	7%		3	
Education	3	7				1	1		3	15	28%		2	8
Grants + Incentives						6	1		1	8	15%		1	2
Policy Development	1	1				2			1	5	9%		1	1
Process Tools + Resources	3	2				1	1		1	8	15%		2	4
Research						4	1		1	6	11%			5
Workshop									2	2	4%			
TOTAL PROGRAMS	8	13	0	0	0	17	5	0	11	54			9	20
% of TOTAL	15%	24%	0%	0%	0%	31%	9%	0%	20%				17%	37%

ALL AIA

TOPIC										TOTAL	%		Resilience	Performance Metrics
PROGRAM	General Environmental	Energy	Water	BioDiversity & Site	Materials & Natural Resources	Human Health/ Wellness	Social Equity	Green Economy	ALL				Resilience	Performance Metrics
Action Plan						2			1	3	2%		1	2
Advocacy + Codes		6							6	12	10%			2
Awards + Competitions	3	1				3	1		6	14	11%		4	4
Education	4	14	1		1	8	2		14	44	35%		5	19
Grants + Incentives	1					9	1		1	12	10%		1	3
Policy Development	3	1				3			1	8	6%		1	3
Process Tools + Resources	3	4	1			3	1		2	14	11%		3	8
Research	1				1	8	1		5	16	13%			4
Workshop									2	2	2%			
TOTAL PROGRAMS	15	27	2	0	2	34	6	0	35	126			14	43
% of TOTAL	12%	21%	2%	0%	2%	27%	5%	0%	28%				11%	34%

1 to 4	5 to 9	10 to 20	20-30	over 30

Priorities and Trends

In addition to the web research on current and emerging trends, Mary Ann interviewed leaders from the past decade of AIA Firm Award recipients and leaders from numerous allied organizations to understand their perspective on leadership opportunities and priorities for architects. These priorities are summarized in the word cloud on page 12 of the report.

STRENGTHS AND CHALLENGES

Based on the interview process and research into past initiatives, the current strengths, opportunities, and challenges were identified to help guide the prioritization of future efforts. These are summarized on page 21 of the report.

Recommendations and Action Plans

ADVISORY WORKSHOP

The recommendation phase of the scan's process began with a workshop in Denver attended by most Advisory Group members. Participants received lengthy advance material summarizing the research phase findings to prepare for this important work session. After a very open brainstorm session and discussion, the group identified the four preliminary priority issues in the Core and Emerging areas that are central to the scan's recommendations.

The Sustainability Scan Advisory Group at the June 2013 workshop.

Top photo top to bottom: Carl Elefante, FAIA; Melissa Gallagher-Rogers, Suzanna Wight Kelley, AIA; Rico Quirindogo, AIA
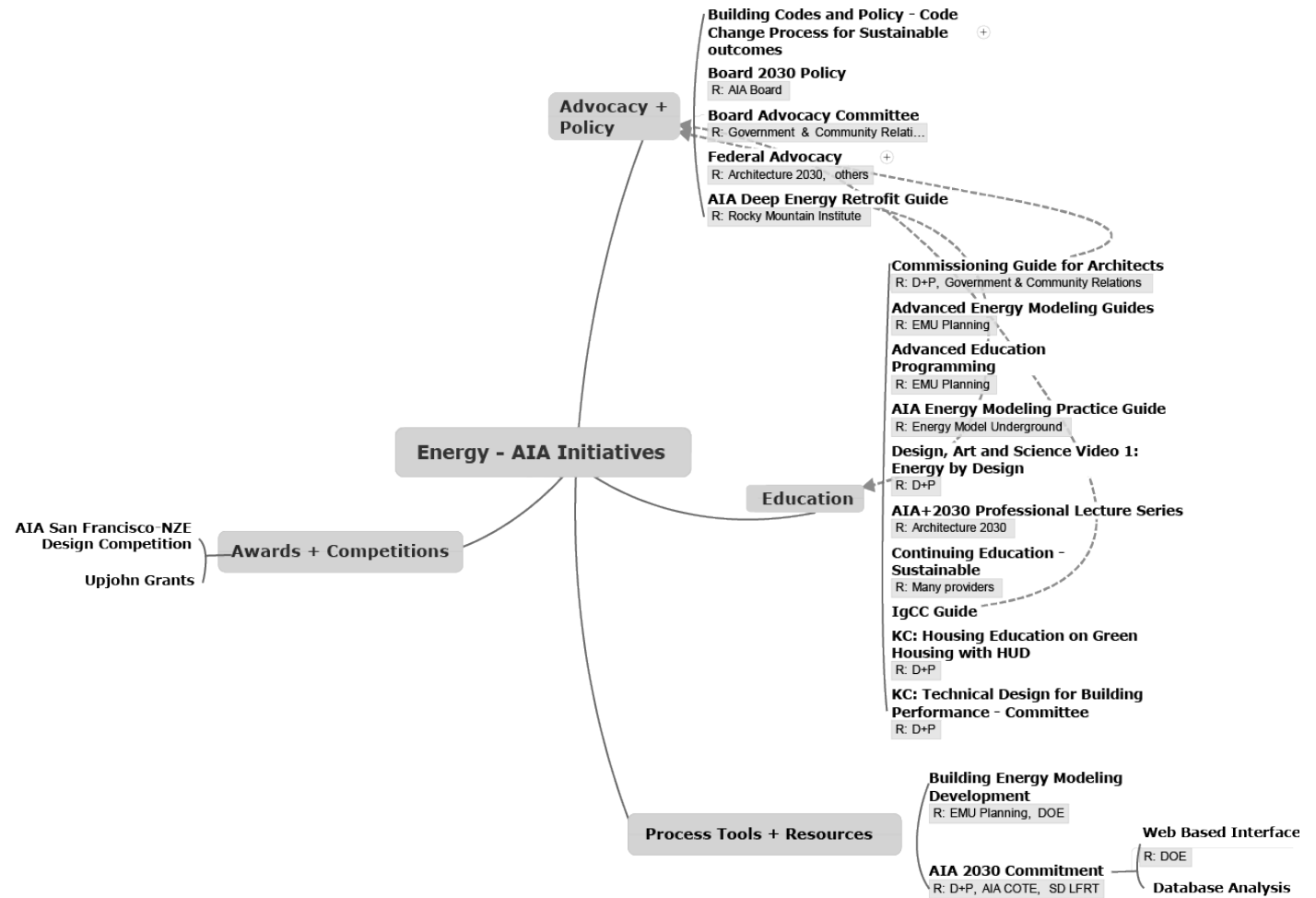
Bottom photo left to right: Rico Quirindogo, AIA; Julie Hiromoto, AIA; Bill Wilson, FAIA; Betsy del Monte, FAIA; Carl Elefante, FAIA

RECOMMENDATION REFINEMENT

Following the workshop, we pursued two priorities toward the goal of developing an effective set of prioritized recommendations for the AIA:

> Broad communications and input from key constituents

> Refinement and development of strategic action plans in each area

Several rounds of meetings and reviews took place during the summer with the AIA National staff to help identify the greatest opportunities and begin the process of aligning with the 2014 budget planning process. During this process, we examined the existing condition of the priority issues to look for opportunities to better align and streamline efforts.

Advocacy + Policy

Building Codes and Policy - Code Change Process for Sustainable outcomes +

Board 2030 Policy
R: AIA Board

Board Advocacy Committee
R: Government & Community Relati…

Federal Advocacy +
R: Architecture 2030, others

AIA Deep Energy Retrofit Guide
R: Rocky Mountain Institute

Commissioning Guide for Architects
R: D+P, Government & Community Relations

Advanced Energy Modeling Guides
R: EMU Planning

Advanced Education Programming
R: EMU Planning

AIA Energy Modeling Practice Guide
R: Energy Model Underground

Design, Art and Science Video 1: Energy by Design
R: D+P

AIA+2030 Professional Lecture Series
R: Architecture 2030

Continuing Education - Sustainable
R: Many providers

IgCC Guide

KC: Housing Education on Green Housing with HUD
R: D+P

KC: Technical Design for Building Performance - Committee
R: D+P

Energy - AIA Initiatives

Education

Awards + Competitions

AIA San Francisco-NZE Design Competition

Upjohn Grants

Process Tools + Resources

Building Energy Modeling Development
R: EMU Planning, DOE

Web Based Interface
R: DOE

AIA 2030 Commitment
R: D+P, AIA COTE, SD LFRT

Database Analysis

A mind map of energy-related initiatives at the AIA as of June 2013. This demonstrates the wide range of initiatives already under way that can be catalyzed into more effective outcomes.

CACE SURVEY

A very informative survey and town hall discussion with CACE helped to inform the action plan recommendations as well. The purpose of the survey was to understand the current interest level and priorities for implementing the four priority issues in the sustainability scan throughout all components. Overall, the findings showed a very positive response to the need to address these issues. It also provided great insight into the roles and responsibilities that component leaders see for different programs. In addition to the chart on page 16, here are further survey findings:
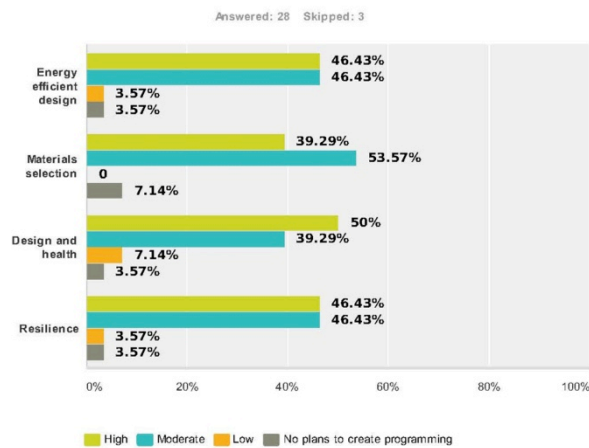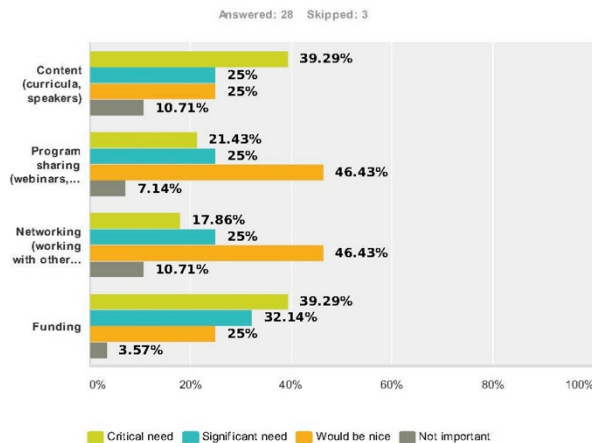
Q1 My members' INTEREST in the priority areas is
Answered: 31   Skipped: 0

Energy efficient design
- High: 73.33%
- Moderate: 23.33%
- Low: 3.33%
- No interest: 0

Materials selection
- High: 50%
- Moderate: 46.67%
- Low: 3.33%
- No interest: 0

Design and health
- High: 45.16%
- Moderate: 38.71%
- Low: 12.90%
- No interest: 3.23%

Resilience
- High: 36.67%
- Moderate: 56.67%
- Low: 6.67%
- No interest: 0

Legend: High | Moderate | Low | No interest
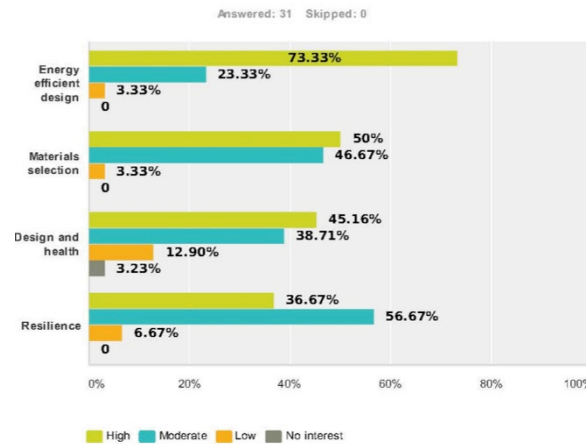
Q2 My members' KNOWLEDGE of design principles associated with these issues is
Answered: 30   Skipped: 1

Energy efficient design
- Highly knowledgeable: 50%
- Moderately knowledgeable: 50%
- Some knowledge: 0
- Not knowledgeable: 0

Materials selection
- Highly knowledgeable: 30%
- Moderately knowledgeable: 63.33%
- Some knowledge: 6.67%
- Not knowledgeable: 0

Design and health
- Highly knowledgeable: 16.67%
- Moderately knowledgeable: 53.33%
- Some knowledge: 23.33%
- Not knowledgeable: 6.67%

Resilience
- Highly knowledgeable: 10%
- Moderately knowledgeable: 53.33%
- Some knowledge: 23.33%
- Not knowledgeable: 13.33%

Legend: Highly knowledgeable | Moderately knowledgeable | Some knowledge | Not knowledgeable

Q3 My component's PROGRAMMING in the priority areas to date has been
Answered: 30   Skipped: 1

Energy efficient design
- Numerous high level programs (301+ level): 36.67%
- Moderate number and level of programs (201 level): 50%
- Introductory programming (101 level): 10%
- No programming to date: 3.33%

Materials selection
- Numerous high level programs (301+ level): 13.33%
- Moderate number and level of programs (201 level): 66.67%
- Introductory programming (101 level): 13.33%
- No programming to date: 6.67%

Design and health
- Numerous high level programs (301+ level): 10%
- Moderate number and level of programs (201 level): 50%
- Introductory programming (101 level): 20%
- No programming to date: 20%

Resilience
- Numerous high level programs (301+ level): 3.33%
- Moderate number and level of programs (201 level): 43.33%
- Introductory programming (101 level): 16.67%
- No programming to date: 36.67%

Legend:
- Numerous high level programs (301+ level)
- Moderate number and level of programs (201 level)
- Introductory programming (101 level)
- No programming to date

Q4 My component's INTEREST in programming or leadership around these issues over the next year can be characterized as
Answered: 28 Skipped: 3

Q5 My component's ABILITY to create programming or lead around these priority areas could be best supported through
Answered: 28 Skipped: 3

Q6 I see the different levels of our AIA having these roles to play in addressing the priority areas (check all that apply)
Answered: 28 Skipped: 3
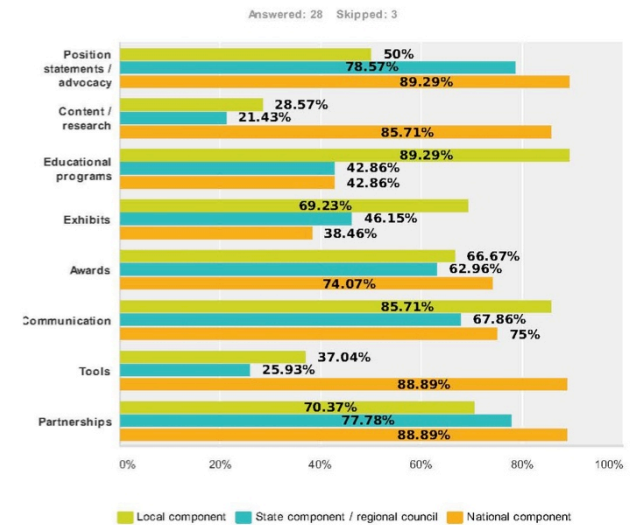
KNOWLEDGE COMMUNITY ENGAGEMENT

Since the Knowledge Communities (KC) play a fundamental role in member engagement around knowledge development and communication, direct engagement with these leaders is critical to any implementation effort. To engage these groups early in the sustainability scan process, the preliminary recommendations were presented to the KC leaders at the Knowledge Leader Assembly in Atlanta. Next, individual meetings with 13 of the KC advisory groups enabled them to explore how the scan's recommendations could align with their priorities. This was well received by many with initial ideas of how this might be pursued informing the preliminary action planning. Additional efforts to align and build from these initial discussions is an important next step.

AIA BOARD REPORT AND VALIDATION

The final recommendations were presented at the September 2013 AIA Board meeting and received strong validation. The Board agreed that the scan's key issues would be used to prioritize allocation of resources and focus efforts across the AIA over a multi-year period. The Board also requested an annual update with key metrics to demonstrate progress.

Priorities and Trends Key References

The following is a very abbreviated list of best-in-class resources on the recent priorities and trends affecting the design of the built environment.

PERFORMANCE METRICS

www.buildingrating.org: A collaboration between the Institute for Market Transformation and the Natural Resources Defense Fund, this is the leading online hub for global rating and disclosure policies. They provide a single source on building energy performance rating and disclosure practices worldwide.

The AIA Guide to the International Green Construction Code: A link to the AIA's 76-page pdf overview of the 2012 International Green Construction Code (IgCC) geared to design professionals.

INTERSECTION OF DESIGN AND HUMAN HEALTH

www.cdc.gov/healthyplaces The Center for Disease Control's Designing and Building Healthy Places web portal. The site links to numerous articles and resources on the connections between human health conditions and the built environment and gives an update on CDC's Built Environment and Health Initiative.

www.asla.org/healthbenefitsofnature.aspx: ASLA's new Health Benefits of Nature website that links to hundreds of free research studies, news articles, and case studies, organized by adult and children health topics.

FOCUS ON EXISTING BUILDINGS AND URBAN AREAS

www.rmi.org/buildings: A longtime advocate for energy efficiency and renewable energy systems, Rocky Mountain Institute provides training, research, and tools to promote deep energy retrofits and advocacy.

www.uli.org/research/planning-design/rapid-urbanization: The Urban Land Institute's web resource on urban development for the 21st century focused on better meeting the needs of cities "grappling with myriad challenges resulting from rapid urbanization, population and demographic shifts, new economic drivers, and increasing environmental concerns."

DEMAND FOR MATERIALS TRANSPARENCY

www.buildinggreen.com: BuildingGreen's suite of resources including Environmental Building News, product information, case studies and discussion groups document the many trends in the sustainable materials evolution.

www.healthybuilding.net: The Healthy Building Network is the defacto leader on materials and health that is committed to "transforming the market for building materials to advance the best environmental, health and social practices."

IMPORTANCE OF WATER

www.pacinst.org: The Pacific Institute produces science-based research, tools and resources with a goal to advance a sustainable environment, healthy economy and social equity with a primary focus on sustainable water management.

www.epa.gov/watersense: The U.S. Environmental Protection Agency's partnership program to provide strategies and systems to use less water in residential and commercial facilities and services.

NEED FOR RESILIENCE IN DESIGN

www.resilientamerica.org: Resilient Communities for America is a new collaborative effort focused on championing local elected officials to create more prepared communities that can recover from extreme weather, energy and economic challenges.

www.resilientdesign.org: The Resilient Design Institute (RDI) advances practical solutions that can be employed by communities, businesses, and individuals to adapt and thrive amid the accelerating social, ecological, and climatological change being experienced today.

GROWING GREEN BUILDING DEMAND

McGraw-Hill World Green BuildingTrends, 2012: This 68-page pdf is the most recent annual report from McGraw-Hill that summarizes findings from a global study of green building trends and shows strong growth of green buildings across developed and developing countries.

Knowledge Community Acronyms

AAH   Academy of Architecture for Health

AAJ   Academy of Architecture for Justice

CAE   Committee on Architecture for Education

CAFM   Corporate Architects and Facility Management

CCA   Construction Contract Administration

CRAN   Custom Residential Architect Network

COD   Committee on Design

COTE   Committee on the Environment

DFA   Design for Aging

HRC   Historic Resources Committee

HKC   Housing Knowledge Community

IAKC   Interior Architecture Knowledge Committee

IFRAA   Interfaith Forum on Religion, Art, & Architecture

PA   Public Architects Committee

PD   Project Delivery

PMKC   Practice Management Knowledge Community

REKC   Retail and Entertainment Knowledge Community

RUDC   Regional and Urban Design Committee

SPP   Small Project Practitioners

TAP   Technology in Architectural Practice

TDBP   Technical Design for Building Performance

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AIA Board
Mickey Jacob, FAIA, 2013 AIA President
Helene Dreiling, FAIA, 2014 AIA President
Elizabeth Chu Richter, FAIA, 2015 AIA President
Board Advocacy Committee
Board Communications Committee
Board Community Committee
Board Knowledge Committee

AIA State and Local Components
AIA Chicago: Zurich Esposito
AIA Dallas: Kirk Teske, AIA; Lisa Lamkin, AIA
AIA Georgia: Marci Reed
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AIA Knowledge Communities and Committees
Academy of Architecture for Health
Academy of Architecture for Justice
Committee on Architecture
    for Education
Committee on Design
Committee on the Environment
Disaster Assistance Task Force
Historic Resources Committee
Interior Architecture Committee
National Associates Committee
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Practice Management
Project Delivery
Regional and Urban Design
Retail and Entertainment
Sustainable Design Large Firm Roundtable

Small Firm Roundtable
Small Project Practitioners
Technical Design for Building Performance
Technology in Architectural Practice
Young Architects Forum: Jon Pendorff, AIA

AIA Firm Award Recipients
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Brooks+Scarpa: Angela Brooks, FAIA
Centerbrook Architects + Planners:
　Mark Simon, FAIA
Kieran Timberlake: Stephen Kieran, FAIA
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American Society of Interior Designers: Troy
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