



Member PROSPECTUS



An ACI Center of Excellence
for Carbon Neutral Concrete

NEU envisions a concrete industry where all stakeholders have access to technologies and the knowledge needed to effectively and safely produce and place carbon neutral concrete and concrete products in the built environment.



NEU MISSION

Collaborate globally to drive research, education, awareness, and adoption of the use of carbon-neutral materials and technologies in the built environment.

STRUCTURE



American Concrete Institute—Center administration, oversight, and standards developer, certification program management, technical document developer and publisher, developer, and provider of professional development education.

Visit the NEU website: www.neuconcrete.org.



CENTER MEMBERS

Organizations across the value chain who will financially and philosophically support and collaborate on executing the core functions and meeting the Center's objectives. For example:

- Cement producers
- Ready mixed concrete producers
- Manufacturers of concrete products
- Standards development organizations (SDOs)
- Technical societies/institutes
- Universities/research centers
- Training Centers/trade schools
- Construction companies and developers
- Architects/consulting engineers
- Environmentally focused non-governmental organizations (NGOs)
- Federal and state agencies involved in standards-setting and adoption, construction, environmental protection, or workforce development



BUSINESS MODEL

NEU is incorporated as a U.S. (Michigan)-based, 501 (c)3 non-profit, professional organization and is managed by ACI. NEU has a Board of Directors (BOD), a Strategic Direction Committee (SDC), and several Steering Committees (SC).

The initial staffing of the Center includes an Executive Director who will be supported by a Technical Director and administrative staff. NEU is located at ACI headquarters in the U.S. and draws from ACI's technical and administrative support services. Funding for the Center will be provided by ACI and Sustaining, Supporting, and Affiliate members.



POTENTIAL CORE FUNCTIONS

The NEU BOD and SDC will conduct a strategic planning exercise to establish a five-year action plan. At the heart of the strategic plan will be efforts to transform the culture of the concrete design and construction industry from a fragmented, reactive industry to a proactive, unified group actively engaged in developing and employing existing and new technologies to reduce the carbon footprint of concrete construction.

To achieve this, NEU will establish transparent policies for identifying the specific activities within the boundaries of the strategic plan, and processes for contracting with third parties and establishing calls for proposals, where appropriate. Year 1 of the Center activities will include a critical assessment of the current state of concrete research and identify technologies that have the potential to significantly impact the carbon footprint of concrete. Those technologies will be prioritized for implementation and existing technologies that can positively impact global greenhouse gas emissions. The Center will also begin building implementation actions from existing industry "roadmaps" to affect changes needed in specific sectors of the built environment. Another significant undertaking will be to start working with partners worldwide to develop a comprehensive plan for immediately reducing the carbon footprint of concrete toward making the concrete industry carbon neutral by 2050. Within these general thrusts, several Core Functions are listed:

Technology Acceleration

Historically, construction is an industry that is slow to adopt new technologies because new technology is typically viewed as a risk. Also, given the industry's fragmentation, new technologies often have difficulty finding an opportunity

or a niche to demonstrate their value. Through its technical committees and entities such as the Strategic Development Council, ACI provides opportunities to showcase technologies or develop supporting technical information, but for accelerated adoption of technology, these existing approaches are not adequate.

NEU is envisioned as the gateway for new technologies to enter the industry and can direct necessary resources to accelerate the adoption of those technologies. Currently, no such entity serves the concrete construction industry, and the lack of such an entity is a major hurdle to innovation.

► Coordination with ACI committees

The technical and educational committees of ACI are recognized worldwide as a resource for unbiased consensus information on topics related to concrete. NEU will be recognized as an entity that supports the resources developed by these committees, including dissemination.

NEU will support ACI committees by responding to research needs identified by their experts and providing stakeholder feedback on new documents, codes, and specifications that are required.

► Technology Transfer and Professional Development

Designers, contractors, and owners are not necessarily familiar with new technologies. Technology transfer is at the core of successful deployment. Technology transfer needs include short courses (virtual and in-person), webinars, software tools, and other technical documentation. ACI is a recognized leader in this area, with an established network within industry and higher education institutions worldwide.

ACI has robust professional education outreach capabilities through its Professional Development Department and its Educational Activities Committees. NEU will be able to capitalize on this capability. ACI currently holds several seminars on various topics related to concrete design and construction throughout the year using its network of chapters and its headquarters in Farmington Hills. With the resources of NEU, these activities will be expanded upon significantly.

ACI also has an established online presence in the professional education sector. Through ACI University, ACI provides online educational opportunities to several thousand individuals across the globe every year. These opportunities include live webinars as well as on-demand recordings and courses available 24 hours a day. Beginning in 2021, access to ACI University continuing education courses will be available free to ACI members, greatly increasing the reach of this online program.

NEU will be able to capitalize on ACI's live and on-demand educational abilities using ACI staff expertise and will benefit from the already established network of professionals that look to ACI for the latest knowledge on construction industry issues.

► Technology Assessment and Validation

An important and early-to-be-launched function of the Center will be to serve as the industry's resource for the evaluation of new technologies. The construction industry is risk-averse, and one failure can quickly negate 1000 successes. Also, some individuals will take advantage of the desire to decarbonize and provide "green-washing" solutions that have no technical merit. It is important that as new technologies come forward, they are vetted and assessed for their efficacy. Although ACI cannot take on this responsibility and maintain its independent voice, NEU can and should take on this responsibility. It is envisioned that ACI would convene technical assessment teams drawing from their membership. In turn, these teams would evaluate new technologies and recommend any necessary testing protocols or research that should be conducted to verify claims. Quite often, this task will simply require a critical review of existing publications or data. Sometimes additional testing or research will be necessary. The role of the technical assessment teams will be significant; they will not pick winners or losers but instead will ensure the required information is made available to allow the industry to make educated and informed decisions when selecting a new technology.



RESEARCH

Even though much R&D has been conducted on technologies that support a reduced carbon footprint for the cement and concrete industry, more needs to be done to ensure that efforts for the effective and efficient deployment of these decarbonization technologies are focused. Working with the NEU members and other stakeholders, it is important to develop a single, comprehensive roadmap for zero carbon by 2050. This roadmap will likely follow most existing decarbonization roadmaps. One important derivative of such a roadmap is to identify the technologies that are most likely to succeed, allow the cement and concrete industry to reach net-zero by 2050, and invest in research on those technologies as required. In the current fragmented world of cement and concrete research, significant resources are being channeled into ideas and technologies that simply will never be implemented. High-risk, high-reward research has

its place, but this Center should keep its focus on technologies that experts can support as being realistic, applicable, cost-effective, and technologically effective. It has been said that bringing the cement and concrete industry to carbon neutrality by 2050 is akin to the U.S. mission to travel to the moon in the last century. It will take a well-focused, informed, technologically advanced organization to develop the necessary technologies. NEU will assume that responsibility and work directly with other major entities worldwide to achieve the desired outcome.



ADVOCACY AND TECHNICAL SUPPORT

ACI has long recognized that advocacy for the adoption of its resources is a major component for the success of its mission. These efforts ensure the resources developed by ACI are incorporated into model codes and jurisdictions' requirements around the world. Resources developed by NEU will be included in these advocacy efforts and are likely to benefit from the direct reference in ACI documents that are already adopted by local jurisdictions.



INTERNATIONAL AND STUDENT OUTREACH

ACI will leverage the relationships it has built with its network of international partners and international ACI Chapters to meet the global needs of the Center. This international network currently consists of 55 Partners and 99 Chapters operating in 53 countries worldwide, providing the Center of Excellence with a solid base to begin disseminating the knowledge and increasing the acceptance of low-carbon concrete products and methodologies for construction worldwide.

Empowering and motivating the next generation of engineers and technologists to be actively involved and support the decarbonization efforts is imperative. To this end, ACI will engage with its contingent of student members, including over 15,000 individual student members and an additional contingent of students who are members of ACI's 250+ Student Chapters.



MEMBERSHIP LEVELS

Membership fees are used to support the operation and core functions of the Center at three membership levels with Member benefits at each level:

▶ **Sustaining Member Options (\$500,000 per year)**

- Seat on the Board
- Allocation of hours from the Center for special projects
- Seat on the SDC
- Discount on request for development of acceptance criteria for product/system validation
- Access to Center documents

▶ **Supporting Member (\$100,000 per year)**

- Seat on the SDC
- Discount on request for development of acceptance criteria for product/system validation
- Access to Center documents

▶ **Affiliate Member (\$10,000 per year)**

- Opportunity for election to an at-large seat on the SDC
- Discount on request for development of acceptance criteria for product/system validation
- Access to Center documents

The Board can vote to approve a Specifying Agency for membership at no cost at any membership level. Level of discounts, hours for Special Projects, and additional Member benefits will be determined by the Board.



CONTACT

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