



STRUCTURAL
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SE 2050 Commitment Program Strategic Plan

March 11, 2026

Introduction

The SE 2050 Commitment Program (“SE 2050”) is a nationwide initiative to achieve net zero embodied carbon in structural systems by 2050. The SE 2050 Committee within the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE) administers and maintains SE 2050. Through education, industry engagement, and advocacy within and beyond the structural engineering profession, the SE 2050 provides a clear pathway for structural engineers to understand, measure, and reduce embodied carbon.

Modeled after the American Institute of Architects’ 2030 Commitment, SE 2050 engages firms as “Signatory Firms” who commit to a structured set of actions aimed at progressively reducing embodied carbon across their projects. To support these commitments, SE 2050 provides resources for Signatory Firms and the broader industry. SE 2050 is uniquely positioned to lead the structural engineering profession toward a sustainable, low carbon future.

Purpose of the Strategic Plan

This forward-looking document defines SE 2050’s long-term direction and outlines the strategy for achieving specific objectives over the next 5-10 years. It focuses on setting priorities and aligning the SE 2050 Committee toward common goals.

Serving as a foundational guide, this document advances SE 2050’s mission to empower structural engineers in designing net zero carbon structural systems by 2050. By articulating core priorities and values, it provides continuity through leadership transitions, helping future decision makers stay aligned with SE 2050’s vision.

This document will be reviewed and updated by the SE 2050 Committee Leadership Group at least every two years.

Background of SE 2050

SE 2050 was established in response to the SE 2050 Challenge issued in 2019 by the Carbon Leadership Forum (CLF) which states: *“All structural engineers shall understand, reduce and ultimately eliminate embodied carbon in their projects by 2050.”*

In December 2019, the SEI Board of Governors endorsed the vision of the SE 2050 Challenge by stating: *“We, the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE), support the vision and ambition of the SE 2050 Challenge. We, as a leading structural engineering organization in the United States, recognize the need for coordinated action across our profession to achieve the globally stated goal of net zero carbon by 2050.”*¹

¹ <https://carbonleadershipforum.org/se-2050-challenge/>

After endorsing the SE 2050 Challenge, SEI officially launched the SE 2050 Commitment Program in 2020. At the time, SE 2050 was administered and maintained by a subcommittee of the SEI Sustainability Committee. Within its first few years operating, SE 2050 gained support from engineering firms across the country and was increasingly recognized as a key industry initiative. At the start of 2024, the SE 2050 Committee became a standalone committee within the Technical Community of SEI.

Since its launch in November 2020, SE 2050 has seen years of remarkable growth. As of February 2026, SE 2050 has over 45 dedicated committee members and has gained the commitment of more than 170 engineering firms across North America. In 2021, SE 2050 launched the SE 2050 Database to which Signatory Firms submit embodied carbon data on their projects. As of February 2026, the SE 2050 Database now has more than 1,500 project entries.

Mission Statement

The mission of the SE 2050 Commitment is to support the SE 2050 Challenge by providing SE 2050 Signatory Firms and the broader industry with structural embodied carbon benchmarking and reduction targets, resources and education, advocacy, and community.

Vision Statement

To transform the structural engineering practice in the United States toward net zero embodied carbon by 2050.

Focus Initiative

In April 2024, the SE 2050 Committee became a Focus Initiative within SEI. SEI Focus Initiatives receive prioritized staff support, access to SEI resources, and promotion by the Board of Governors to accelerate their work. As a Focus Initiative, SE 2050 developed a Focus Initiative Committee Charter outlining the deliverables to be achieved during its three-year term. These deliverables represent the near-term actions to be completed by the SE 2050 Committee and are summarized in Table 1, organized by the topic of Operations, Community, Data, Education, and Advocacy.

Table 1. Focus Initiative Charter Deliverables

		OPERATIONS	COMMUNITY	DATA	EDUCATION	ADVOCACY
FOCUS INITIATIVE CHARTER DELIVERABLES						
YEAR 1 (APR 2024 – MAR 2025)	Develop a strategic plan	X				
	Transition to SEI leading communications	X	X			
	Transition from beta database to new database			X		
	Launch a signatory recognition program		X			
	Publish initial data analysis of submitted projects			X		
	Publish annual report			X		
	Develop a case study library				X	
	Make ECOM tool updates				X	
YEAR 2 (APR 2025 – MAR 2026)	Give a minimum of 5 presentations		X			X
	Publish data analysis of submitted projects			X		
	Publish annual report			X		
	Develop and formalize outreach, partnerships and policy stances					X
	Make ECOM tool updates				X	
YEAR 3 (APR 2026 – MAR 2027)	Give a minimum of 10 presentations		X			X
	Publish data analysis of submitted projects			X		
	Publish annual report			X		
	Further develop and formalize outreach, partnerships and policy stances					X
	Make ECOM tool updates				X	
YEARS 1 -3 (APR 2024 – MAR 2027)	Give a minimum of 15 presentations		X			X
	Ensure that SE 2050 is actively running, growing, meeting its charter, and safeguarding the privacy of its signatories	X				
	Review, maintain, and update existing resources on the SE 2050 website				X	
	Maintain and update slide decks and outreach resources		X			

Short-Term Actions

The Focus Initiative charter deliverables outline actions to be taken over the course of three years. These actions are supplemented by additional actions to be implemented by 2030 to align with the vision of SE 2050. These short-term actions are organized under the same categories of Operations, Community, Data, and Advocacy.

Operations	
<p>Objective: Establish a sustainable operational and governance structure that positions SE 2050 to operate, adapt, and deliver impact through at least 2050.</p>	
<p>Current Actions:</p> <ul style="list-style-type: none"> • Develop a strategic plan* • Maintain committee roster • Hold committee meetings, leadership meetings, and coordination meetings between leadership and SEI • Encourage donations and supporting SEI fundraising opportunities • Publish annual report* • Ensure that SE 2050 is actively running growing, meeting its charter, and safeguarding the privacy of its signatories* • Develop an operations manual 	<p>Planned Actions:</p> <ul style="list-style-type: none"> • Financial Strategy: Develop a diversified funding strategy to ensure SE 2050's long-term financial sustainability, drawing on a mix of grants, philanthropic support, donations, sponsorships, and earned revenue from products and events. • Committee Alignment: Develop a clear understanding of roles for committees within ASCE and SEI focused on embodied carbon, including the ASCE Infrastructure 2050 Committee and the SEI Sustainability Committee.

Community	
<p>Objective: Establish a sense of community and value to Signatory Firm participation</p>	
<p>Current Actions:</p> <ul style="list-style-type: none"> • Maintain website* • Send newsletter • Hold Signatory Calls • Organize presence at Structures Congress and other SEI events • Organize Signatory Summit • Track new firm sign-ups • Manage new firms and users in the SE 2050 Database • Track Signatory Firm compliance with Program Requirements • Continuously refine Program Requirements • Communicate any updates to the program to Signatory Firms 	<p>Planned Actions:</p> <ul style="list-style-type: none"> ○ Launch an Ambassador Program: Deploy trained presenters to use the approved SE 2050 introductory slide deck to spread the word about SE 2050 to local groups of structural engineers through local SEI chapters, NCSEA member organizations, universities, organizations for architects and owners, and other groups that reach practicing (or soon to be) structural engineers. • Ramp Up Program Requirements: Progressively increase Program Requirements to drive deeper embodied carbon reductions, while maintaining the

*indicates Focus Initiative Charter deliverable

Community	
<ul style="list-style-type: none"> • Maintain outreach resources* • Administer Signatory Firm Recognition program* • Present on SE 2050* • Hold Firm Executive calls 	<p>program's reputation to continue providing value to Signatory Firms.</p>

Data	
<p>Objective: Provide actionable data insights based on extensive, high-quality data</p>	
<p>Current Actions:</p> <ul style="list-style-type: none"> • Debug import spreadsheets and identify necessary database maintenance • Annually analyze and publish data analysis* • Support transition from beta database to new database* • Develop and maintain database user guide • Develop framework to include structural material quantity reporting requirements in new database • Inform improved data visualizations within the SE 2050 Database to better serve Signatory Firms • Evaluate SE 2050 Database alignment with the ECHO Project • Provide lessons learned and insights to parallel data collection efforts by other organizations 	<p>Planned Actions:</p> <ul style="list-style-type: none"> • Establish Targets: Based on rigorous data analysis of data supplied to the SE 2050 Database, publish guidance on structural embodied carbon targets • Ramp Up Reporting: Increase the number of projects and quality of data the Signatory Firms are required to report to the SE 2050 Database • Expand Database Capabilities: Incorporate new features to the SE 2050 Database based on Signatory Firm feedback, including potential interoperability with other reporting platforms

Education	
<p>Objective: Provide resources that support reductions towards net zero embodied carbon</p>	
<p>Current Actions:</p> <ul style="list-style-type: none"> • Develop resources according to what the Signatory Firms and industry express as needs and publicize through website • Coordinate with SEI Sustainability Committee on development of resources • Maintain resources on website • Develop a case study library* • Maintain a publicly available structural embodied carbon calculator* 	<p>Planned Actions:</p> <ul style="list-style-type: none"> • Encourage and Recognize Exceptionally Low-Carbon Projects: Encourage firms to implement SE 2050 principles in projects that showcase successful reductions in embodied carbon and publicize achievements • Contribute to Industry-Wide Net Zero Roadmap: Participate in industry groups establishing net zero roadmaps for the structural engineering profession

*indicates Focus Initiative Charter deliverable

Advocacy	
<p>Objective: Promote the important role of structural engineers in achieving wider buildings industry net zero goals</p>	
<p>Current Actions:</p> <ul style="list-style-type: none"> • Engage with local structural engineering organizations (e.g., local SEI chapters, local NCSEA chapters) • Develop and formalize outreach, partnerships and policy stances* • Co-lead Policy Working Group with NCSEA • Hold periodic Partnerships Group calls • Participate in parallel industry initiatives, including ECHO Project, MEP 2040, Infrastructure 2050, AIA 2030, and Architecture 2030 	<p>Planned Actions:</p> <ul style="list-style-type: none"> • Develop ASCE Policy Statement: Develop a policy statement that demonstrates the role of civil and structural engineers in achieving carbon reductions • Develop Advocacy Approach: Establish a clear process for SE 2050 to determine which policies to endorse or otherwise how to support policy initiatives

*indicates Focus Initiative Charter deliverable

Long-term Vision (2030-2040)

1. **(Operations) Become an Operational Unit:** Elevate the SE 2050 Commitment Program to an operational unit within SEI
2. **(Operations) Develop Long-Term Financial Plan:** Building upon the outlined approach to revenue generation, develop a long-term financial plan for the program that is regularly updated with annual revenue evaluated against targets
3. **(Operations) Continuous Improvement Framework:** Build a feedback loop for continuous updates to best practices, data tracking, and tools, ensuring that SE 2050 evolves with advances in technology and industry needs
4. **(Community) Achieve Industry-Wide Adoption:** Make SE 2050 principles the standard practice across the structural engineering industry, with widespread adoption of embodied carbon reduction strategies
5. **(Data) Impact Assessment:** Assess quantitative and qualitative benefits of SE 2050 to Signatory Firms and to broader industry
6. **(Data) Net Zero Embodied Carbon Projects:** Ensure that a significant portion of participating firms achieve net zero embodied carbon in their structural systems by 2030
7. **(Education) Define Net Zero:** Support efforts to develop an aligned definition of net zero embodied carbon by participating in collaborative working groups
8. **(Education) Innovative Materials and Methods:** Support innovation in low carbon and sustainable building materials, promoting new methods and providing resources for early adoption