I welcome all of you to the first AIA New Orleans Symposium: RISING for Climate and Equity. The AIA’s 2030 Commitment mission is to “transform the practice of architecture in a way that is holistic, firm-wide, project based, and data-driven. By prioritizing energy performance, participating firms can more easily work toward carbon neutral buildings, developments and major renovations by 2030.” The AIA New Orleans 2030 Committee’s primary focus will be to act as pioneers in delivering this message, educating the public, and most importantly seeking meaningful avenues to facilitate multi-disciplinary conversations and collaboration for successful results by 2030. Aligning ourselves with the goals of the City of New Orleans’ Climate Action Strategy, AIA National, and the AIA New Orleans 2030 Committee we will advocate for equitable design. The sectors of architecture, infrastructure, and construction must initiate action immediately and collectively in order to mitigate local disaster as a result of climate change.

Based upon AIA’s National 2030 Commitment, AIA New Orleans has taken on this challenge, incorporating this symposium into future programming while mentoring firms to achieve the 2030 goals. This will take all of us working together for the betterment of our profession, our local and global community.

TERRI ROCAN DREYER
President, AIA New Orleans, LSBID
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AIA New Orleans

2030 COMMITTEE
Climate change affects us all, but it does not affect us equally; it is both a world-wide dilemma and a localized problem, one that we can no longer avoid. Many plans have been set in place, both on a global and local scale, to fight climate change – however it is now our responsibility to turn planning into concrete action. As a global response, the Paris Agreement was established in the effort to combat global climate change, while nationally the AIA 2030 Challenge was born with parallel goals. Both of these responses, while existing on different scales, fight to accomplish a unified goal: to reduce our carbon footprint. The AIA 2030 Challenge, like the Paris Agreement, focuses on mitigating climate change and adaptation efforts by providing a structure for transparent reporting and monitoring and paving a distinct path to achieving collective climate goals. In this challenge, we urge you to join us in taking the bold and necessary actions to urgently shift our communities into a place of resiliency, adaptability, and lasting change. As a city defined by water, it is particularly difficult for us to ignore the truth of climate change. Our area’s relationship with the waterline is nothing short of complex: it serves as both a cultural identifier as well as a difficult reminder that we have work to do in the realm of resiliency and geographical adaptation. In the aftermath following Hurricane Katrina in 2005, many sectors of the population suffered far greater losses. It almost meant that living under the poverty line in many cases also meant living under the water line. This revealed that the particular urgencies normally associated with climate change, changing seasons, and rising sea levels, are critical to the future success of our city and region.

Throughout the century the establishment of urban built environments had and continues to have a direct impact on human health and global warming. From the transfer of Native American land ownership, to petro-chemical corporations that have polluted air, waterways, and soils; to the systemic redlining of lower income and minority-occupied neighborhoods, our community’s current landscape has been undoubtedly manipulated by global industrial demands concurrent with a rich history of both racial and socio-economic injustice. These factors, which are still very present today, makes New Orleans a particular locality that highlights collaboration, understanding and open-mindedness that is not only necessary but required to create a robust equal sustainable future.
THE AIA NEW ORLEANS 2030 COMMITTEE

Aligned with the goals of the City of New Orleans’ Climate Action Strategy 1 and AIA National, the AIA New Orleans 2030 Committee advocates for equitable design for resilience & climate. The sectors of architecture, infrastructure, and construction must initiate action immediately and collectively in order to mitigate local disaster as a result of climate change.

The AIA New Orleans 2030 committee aims to organize and contextualize resources to leverage the wealth of global knowledge in a framework of localized action and to facilitate multidisciplinary conversations and collaboration in our field and beyond.

MEMBERS

Aran Donovan
Interim Executive Director

Lauren Oglesby
Coordinator of Content, Communication, and Programs

Terri Hogan Dreyer
President, AIA New Orleans, LSBID

Andrew Liles
AIA, LEED AP BD+C

Jessica Walker
AIA, NCARB, LEED AP BD+C

Julie Babin
AIA

Miko Futagoishi
NCIDQ, LEED GA, WELL AP

Olivia Szczerba
LEED Green Associate

Sam LeBlanc
AIA, WELL AP, LSBID

Samantha Johnson
Assoc. AIA, WELL AP, LSBID

Javier Marcano
AIA, WELL AP

Z Smith
FAIA, LEED Fellow, WELL AP, Fitwel & Living Building Ambassador

Kelsey Wotila
LEED AP BD+C

Waleed AlChamdi
AIA, CEM, BEMP, LEED AP BD+C, MFBA

AIA New Orleans
AIA New Orleans
NANO, LLC.
Tulane School of Architecture
Workshop WDXL
studioWTA
NANO, LLC.
NANO, LLC.
NANO, LLC.
EskewDumezRipple
EskewDumezRipple
EskewDumezRipple

1 City of New Orleans’ Climate Action Strategy.
## LOUISIANA 2030 Commitment Signatory Firms

11 firms with offices across the state of Louisiana are committed to designing for energy efficiency and carbon neutrality by 2030.

Data gathered from: [www.aia.org/2030-directory](http://www.aia.org/2030-directory)

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RISING: Symposium for Climate & Equity Program
November 4, 11, 18 & 24 2020

PRESENTED BY
WoodWorks™
WOOD PRODUCTS COUNCIL
Climate change affects us all, but it does not affect us equally; as both a world-wide dilemma and a localized problem, it’s one that we can no longer avoid. Architects have tremendous opportunity to influence climate change by taking immediate action. Framed around the AIA 2030 Commitment, this session will demystify the question of what architects can do to prevent climate change, jump start immediate action in firms of all sizes, and provide guidance to successfully integrating each step of the 2030 Commitment into your practice. Case studies and lessons learned nationally and locally provide success stories and “how-to’s” all surrounding the questions – How can my firm meet 2030 goals? What are the goals? What simple and effective choices can I make on each project? Where do I start?

**LEARNING OBJECTIVES**

1. After this session, participants will gain understanding of what the AIA 2030 Commitment is, and key components to target and achieve within their firms.
2. Participants will sign their firms up for the 2030 Commitment.
3. Participants will learn the tools necessary to report to the DDx as part of the reporting component of the 2030 Commitment.
4. Participants will develop and maintain a firm-wide Sustainability Action Plan.

**IMMEDIATE ACTION**

**Kelsey Wotila**  
LEED AP BD+C  
Eckerd DurrettRippe+

Kelsey Wotila applies research on embodied carbon and operational carbon across the portfolio at Eckerd DurrettRippe, where she focuses on ZEROCO2DE and Architecture 2030 project types. An emerging professional in carbon accounting, Kelsey has the skillset to convey complexity at an introductory level. Her work with Eckerd DurrettRippe results in simple guidelines for architects to understand impacts of their design decisions.

**Andrea Love**  
AIA, LEED Fellow  
Payette

Andrea is a Principal and the Director of Building Science at Payette, where she integrates building performance into all of their work and leads their internal research efforts. She was the Principal Investigator on the AIA Upstate Grant research grant, focused on thermal bridging and lead the development of Payette’s Glazing and Winter Comfort tool. She recently served on the AIA COTE Advisory Group, and currently serves on the board of the Boston Society of Architects and the AIA Boston Knowledge Committee.

**Angela Brooks**  
FAIA, ENV SP, LEED AP BD+C  
Brooks + Scarpa

Angela Brooks is a recognized leader in the field of environmental and social equity design and is responsible for firm development in the areas of housing and policy, leading the firm’s sustainable initiatives and overall design staff management. Mr. Brooks’ firm has received over fifty major design awards, including the National and State Architecture Firm Award from the American Institute of Architects in 2010 and the Smithsonian Cooper-Hewitt National Design Award in Architecture in 2014.

**Jason Hainline**  
AIA, LEED Fellow  
Dake Wells Architecture

Jason serves as the firm’s sustainability director, elevating the pursuit of performance with all projects within the firm and is focused on the elegant marriage of sustainability and design excellence. Jason’s experience includes federal facilities, public and private institutions, retail developments, low and high rise offices, laboratories, and educational buildings. Jason is a practiced facilitator and a former member of the USGBC’s LEED Faculty and often teaches high performance design-related lecture courses at the architecture program at Driehaus University.

**Terri Dreyer**  
Assoc, AIA, LEED BD+C  
NANO, LLC

With degrees in both Architecture and Interior Design, over 30 years of experience within the profession, and utilizing her experience and leadership, Terri is the design and management force behind NANO’s projects. In addition to being the Founding Partner of NANO LLC, Terri currently serves as the AIA New Orleans Chapter President. Terri’s comprehensive design experience incorporates project of many magnitudes, successfully designing and managing many historic renovation projects valued at a total of over $25 million.
BRIEF

Climate change affects us all, but it does not affect us equally; as both a world-wide dilemma and a localized problem, it’s one that we can no longer avoid. Architects have tremendous opportunity to influence climate change by taking immediate action. Energy use of buildings is a critical factor we can influence with the right tools and collaboration. A collaborative panel will discuss case studies answering – What tools do I need? What goals am I aiming to reach? How can I talk with my design team about these goals? Are our buildings meeting those targets? How can I design for Net Zero?

LEARNING OBJECTIVES

1. After this session, attendees will understand Energy Design.
2. Participants will learn simple rules of thumb for efficient design strategies based on project type and size.
3. Participants will be able to establish internal firm standards for sustainability.
4. Participants will be introduced to simple tools to help iterative, integrated design for efficient buildings.

TOOLS & COLLABORATION

LIZ SHEPHERD
LEED GA
Lifecity

Liz is the CEO of LifeCity and created the company to help build a more equitable and sustainable economy in New Orleans. Liz is now bringing these tools to communities all over the country. In 2017, LifeCity won the SBAs state-wide Sustainable Business Champion Award and Liz was also recognized as one of the Top 50 Business Women of the year in 2018 in New Orleans (CityBusiness). Trained as both a facilitator and LEED Green associate, Liz and her company help businesses maximize both social and environmental impact while growing profits.

LOREY FLICK
PE, HBP, LEED AP BD+C
Synergy Engineering

Lorey has several years of experience in the design of mechanical systems, energy analysis for new and existing buildings, sustainability consulting, LEED documentation, and commissioning. She has led nearly 100 LEED projects, educating teams on the relevant criteria and offering insight to the industry’s best practices and evolving technology. Her project experience involves design projects spanning numerous industry sectors from $2M – $500M.

JACKIE DADAKIS
Green Coast Enterprises

Jackie is the Managing Director of GCE Services, the division of Green Coast Enterprises that provides strategic consulting services to property owners, municipalities, and utilities seeking to be more energy efficient. Before joining Green Coast, Jackie worked for Clean Energy Solutions, Inc. as a senior consultant and also worked for Rebuilding Together, a national non-profit with affiliates over 200 communities in the US; providing free home repair to low-income homeowners. As an American VISTA, she launched Rebuilding Together’s response to Hurricane Katrina on the Gulf Coast.

WALEED ALOHAMDI
AIA, CEM, BEMP, LEED AP BD+C
Eskew+Dunlop, Ripples+Ripple

Waleed joins Eskew+Dunlop+Ripples as the firm’s Sustainability Director, bringing key experience from his time in the energy modeling sector at Kyprianou Consulting. His interests in architecture lie in the technical realm as well as the cultural. To this end, he challenges our design teams to marry the development of high performance, energy efficient buildings, with considerations of vernacular architecture and the art of different cultures.

LIZ MCCORMICK
AIA, LEED AP, Certified Passive House Consultant
UNC at Charlotte, Integrated Design Research Lab

Liz’s research strives to enhance architectural innovation and construction technologies in the Carolinas. She is an architect, educator and researcher whose work explores climatically sensitive and contextually appropriate building enclosure designs that both connect the occupant to the outdoors and reduce the dependence on mechanical conditioning. She is currently an Assistant Professor of Architecture and Building Technology at the University of North Carolina at Charlotte. These are also part of the Integrated Design Research Lab.

11 NOV 2020  3PM-5PM CT

2030 Committee Bulletin  AIA New Orleans
Climate change affects us all, but it does not affect us equally; as both a world-wide dilemma and a localized problem, it’s one that we can no longer avoid. Curated around the topics of “Erosion” and “Deposition” as living metaphors of how the alluvial rivers meander, this session will delve into how people, ecologies and the vernacular have been “eroded” or removed from the region to “deposit” or insert foreign industries, machinery and levees, that now shape much of the built environment around us – What lessons can we learn from this juxtaposition? Can architecture serve as the mediator between the vernacular and the foreign? And what can professionals do in the midst of it all?

LEARNING OBJECTIVES

1. After this session, participants will gain understanding on the geological, ecological, and anthropological origins of the Mississippi River Delta, the land and its people.
2. Participants will be introduced to the legacy of extraction in the area, how people, land and culture has been removed to make way for new petrochemical dominance.
3. Participants will understand how segregation and discrimination have shaped urbanism and policy through practices such as gerrymandering and red-lining, pushing people of disadvantaged communities into the most vulnerable parts of the city.
4. Participants will learn how the work of architects, industry, and city planners meet at the intersection of climate and equity/local/people/peoples justice.
BRIEF

This session connects architects to policy, community leaders, and examples of holistically integrated design. As a unified front, we can each be a catalyst for change in our approach to sustainability, climate, and equity. The issues we face are interconnected, so too must be the solutions. Community-led efforts can provide resources to propel sustainability initiatives, all aligned with the New Orleans Sustainability Plan. A collaborative panel will discuss these concerns falling within the categories – Modernize our Energy Use, Improve Transportation Choices, Reduce Waste, and Create a Culture of Awareness and Action. They will discuss questions raised throughout the symposium – What efforts are already in place in my community? Who in my community can I unite with? How can my firm and projects align against climate change and inequities in my region? How can I facilitate discussion to propel toward solutions, rather than business as usual?

LEARNING OBJECTIVES

1. After this session, attendees will understand the global scale of climate change in the architecture industry and know how to implement the AIA 2030 Commitment locally.
2. Participants will understand compounding impacts on the local community of architecture from pre-design to construction.
3. Participants will be able to reference New Orleans sustainability initiatives when working with the entire project team on a united front against Climate Change and local barriers to equitable design.
4. Participants will be introduced to local initiatives and community experts to expand their resources toward taking immediate action on climate and equity.

AMANDA SESSER
PhD in Environmental & Social Sustainability
Amanda Sesser is a scientist and social-ecological sustainability entrepreneur. She is the director of 3zustainability, which helps organizations, communities, and governments to better understand, manage and adapt to social and ecological changes. Amanda specializes in involving stakeholders, decision makers and scientists in processes to assess climate change challenges, as well as scientific translation and climate change communication. Amanda is the host of Climate Hats Off, a climate-adaptation podcast.

DRU LAMB
Professional Interior Designer
Dru Lamb is a licensed Interior Designer with a Bachelor of Interior Design from LSU in 2003. She worked with distinguished architects such as Peter必修两个门课程. Lamb spent a decade as the New Orleans Territory Manager for Herman Miller. Dru was appointed by the Governor to sit on the Louisiana State Board of Interior Designers in 2022 and has been Treasurer on that board for the last three years. She sat on the board of the Interior Designers’ Council of Louisiana for eight years, serving as president several times. She has been on the board of the USGBC Louisiana Chapter for four years and is currently the Chair.

CAMILLE POLLAN
Program Manager at the City of New Orleans’ Office of Resilience and Sustainability
Camille Pollan is the Program Manager at the City of New Orleans’ Office of Resilience and Sustainability, where she implements the City’s Climate Action Strategy, which aims to reduce greenhouse gas emissions by 50% by 2030. She coordinates with other City departments, local property owners and businesses, non-profits and advocacy groups to promote energy efficiency, renewable energy, green building, and other sustainability policies and programs. The Louisiana Chapter of the USGBC Building Council named her 2018 Community Champion. She currently serves as vice chair of the USGBC Louisiana chapter, and is a member of the Southeast Sustainability Directors Network Steering Committee.

CHARLES BUTCILFE
Chief Resilience Officer of Governor’s Office: Coastal Activities
THE SIGNIFICANCE OF CARBON
Carbon emissions are the invisible building blocks of the architectural industry. As architects, we consider ourselves optimists, designing environments for the future, one we can envision to be better than today. The spaces and buildings we inhabit influence our day to day lives, our cities, and impacts far beyond what we can see, touch, or experience. Those impacts include environmental—specifically climate change contributions.

OPERATIONAL VS. EMBODIED CARBON
Buildings are responsible for 40% of annual global CO₂ emissions. Carbon associated with buildings can be broken into two types:

OPERATIONAL CARBON
This is the carbon emissions related to building operations.

EMBODIED CARBON
Carbon associated with building materials and construction. Both operational and embodied carbon need to be reduced to remediate climate change impacts associated with architecture.

THE 2030 COMMITMENT
The AIA 2030 Commitment provides a framework within which architects can target operational carbon through prioritizing energy performance, “more easily work toward carbon neutral buildings,” and recently encourages tracking, measuring, and managing embodied carbon. The Architecture 2030 Challenge is as follows:

For buildings constructed in 2020, operational carbon emissions should be reduced by 80% from the national average and the reduction targets get increasingly aggressive—90% by 2025, and carbon neutral by 2030. The ZEROCode standard compliments Architecture2030 goals in energy reduction, with efficient building design as the first step in the standard. Second is to supply the energy needed through zero emissions infrastructure, in the form of on-site or off-site renewables. As shown in this case study, on-site renewables are feasible today for energy-efficient buildings.

The Challenge sets out similar targets for embodied carbon, tiering from a 40% reduction today, 45% in 2025, and 65% by 2030. This project is exemplary of the fact that the 2030 Commitment can be met locally and affordably—both for operational carbon (Net-Zero Design) and embodied carbon emissions (Life Cycle Analysis).

Adapted from Architecture2030.

“Global warming is, after all, a human invention. And the flip side of our real-time guilt is that we remain in command. No matter how out-of-control the climate system seems ... we are all its authors. And still writing.”
- David Wallace Wells
A client curiosity about battery power for buildings when talking about natural disaster sparked conversation about energy use in this multi-family housing project. Once ability to island in the event of power loss became clear to design teams, steps were taken to design for a low energy use building. From there, an all-electric design was proposed, and had the ability to be fully powered by on-site solar panels. Curiosity led to a net-zero design, built on a budget.

The study of SBP illustrates an affordable, simple construction method with low embodied carbon impacts available in the industry for implementation and execution now. Operationally, SBP achieves net zero and resilient battery islanding capability in the event of power outages, all for ~$164 a square foot.

Funding programs and partnerships helped to make on-site solar power accessible. Better than code energy requirements by EnergySTAR certification set the project up to be highly energy-efficient, further facilitating implementation of net zero. Operational energy emissions were drastically reduced, then eliminated through clean power generation on site. The non-profit organization acting as developer of this affordable housing project specializes in helping communities recover after disasters. Since power outages commonly accompany such disasters, this client was interested in adding battery backup to the project. Proposed efficiency upgrades lower peak demand and extend battery life during outages. Adding in on site solar PV generation (178kW) to the battery installation (125kW capacity) allowed the developer to access tax incentives for this combined system. The battery system’s capacity is equal to 15 hours of average consumption. A local utility company donated SIM to the project budget to cover efficiency upgrades solar, and battery systems and will study how these facilities can act as ‘grid citizens.’ SBP sets an example of meeting ZEROCode standards through on site power generation, and does it at a low cost.

Trees grow from absorbing CO2 and some of that CO2 (~50%) stays in lumber products. Even leaving forest and soil carbon storage - called sequestration - out of the equation, wood has a lower CO2 footprint than other common structural elements like concrete or steel. Because of its light weight, wood construction also offers carbon savings benefits through foundation (and therefore concrete) reduction. This project demonstrates 2030 Commitment targets for opera-tional and embodied carbon and can be met now, affordably.

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GLOSSARY
ENERGY

ENERGY MODEL
Created in various types of programs to predict the energy use of a building, using inputs such as building envelope details, glazing type, mechanical and HVAC equipment, etc. Energy Models can report both electricity use and other fuel-source use in buildings.

ENERGY USE INTENSITY
(EUI)
The measure of energy efficiency of a building. Units in kBtu/sf. EUI can be reported as site or source. For purposes of the DDx, and most building reporting, modelling, or energy analysis, site EUI is reported.

LIGHTING POWER DENSITY
(LPD)
Reported in W/sf. How much lighting energy is used to provide light in a space.

RENEWABLE ENERGY CERTIFICATES (RECs)
Certification demonstrating a certain amount of energy has been purchased, or infrastructure for renewable energy (such as wind turbines or photovoltaics) funded to provide that amount of energy. The purchase of RECs is a way to achieve a “zero carbon” operations building. While RECs do not ensure that your building electricity is actually supplied by a carbon-neutral grid, by purchasing clean energy or funding its infrastructure, you ensure that the amount of energy your building uses is created in a carbon-neutral grid.

These can only be used to offset building energy provided by electricity.

CARBON OFFSETS
Similar to RECs, these are credits that can be purchased to offset the embodied carbon of your building, or energy supplied by natural gas (example, for heating) in your building. If you offset your carbon for a flight, you are buying carbon offsets. These are often funding cleaner agricultural practices, since soil stores carbon, or forest management/reforestation projects.

NET ZERO
Refers to emissions due to energy use of a building being balanced by clean energy production. Net Zero Energy is an efficient building that produces as much energy as it requires for operations on site, commonly done through use of photovoltaic (PV) arrays.

NET ZERO CARBON
Same concept as net zero, but focuses on emissions as the reporting measure rather than energy use. Net Zero Carbon then can include off-site energy production, through a form of Renewable Energy Certificates (RECs). In sum, while the building still requires energy (or carbon emissions as a result of the electric grid), it’s use is met with renewable, non-emitting sources.

A common interchange within these terms is “zero net” for “net zero.”

PUT IT TO PRACTICE:
Use ZERO TOOL to estimate your buildings EUI, compare it against similar building types, and set an EUI efficiency target. Measure or estimate your embodied carbon on all projects. See resources for tools available for embodied carbon measurement.
Through the natural carbon cycle, a substance that absorbs as much carbon as it emits is carbon neutral. Companies use this term to declare themselves, or their products ‘carbon neutral,’ often through the purchase of RECs or Carbon Offsets. See next page for definitions. In that sense, carbon neutral can refer to embodied carbon and/or operational carbon. Think of it as a simple math problem. If your embodied or operational carbon is 1 CO$_2$, so long as you add -1 CO$_2$, it is carbon neutral. See NET ZERO and NET ZERO CARBON on the energy page for more on operational carbon neutrality.

Mass that absorbs carbon and therefore stops - or dramatically slows - its release into the atmosphere. Naturally occuring, the oceans, forests, and soils are our largest carbon sinks.

Scientific term for carbon storage - in carbon sinks.

Refers to gases that are not carbon dioxide, but have warming effects. Those gases’ emissions are converted to equivalents in CO$_2$e, keeping the reporting unit consistent. Methane is a common example of this.

“These terms do not share the exact same meaning. Even though the term “carbon” is commonly associated with climate change, it is technically not elemental carbon that contributes to climate change, but carbon dioxide gas along with many other substances such as nitrous oxide and methane. Nevertheless, “carbon” is often used as an abbreviation to refer to global warming potential.”

might better be called upfront carbon. It is the emissions associated with the extraction, production, transport, manufacture, and construction of a given material.

Emissions associated with the use of a building. It is correlated with energy use, grid power source, and fossil fuel emissions.

Both embodied and operational carbon are reported as GWP and are be commonly measured through Life Cycle Analysis (LCA).
LIFE-CYCLE ANALYSIS

GLOBAL WARMING POTENTIAL (GWP)
The impact on global warming of a given substance, measured in lbs CO₂ or kg CO₂. Different timelines for their measurement are used. GWP100 uses a 100-year timeline, GWP20, 20 years. GWP100 is the most common used and reported. These exist as different gases have a different lifespan; methane, for example, only lives in the atmosphere for about 20 years, so, to represent its GWP in a timescale of 100 years, makes it seem less potent, and therefore less impactful, than it is. Methane has a GWP100 of 20, while GWP20 is 84.

GREENHOUSE GAS EMISSIONS (GHC)
Gas or chemical that stays in the atmosphere for a certain amount of time, “insulating” the earth, and trapping heat within the atmosphere, therefore contributing to the warming, or “greenhouse effect,” of the earth.

LIFE CYCLE ANALYSIS (LCA)
measures impacts of a product, building, or material over its usable life. Various environmental impact categories are included, but for most architectural study LCA are focused on measuring GWP of a whole building. LCAs are broken up into modules and stages along the lifespan of a product or building. More details on stages for LCA found on the next page.

ENVIRONMENTAL PRODUCT DECLARATION (EPD)
Use LCA methodology to report impacts of a product or material. EPDs measure and report across 6 environmental impact categories, one of which being GWP. You can think of a whole-building LCA being made up of multiple EPDs for all its components. EPDs can be industry-wide, product specific, manufacturer, or even plant-specific. When comparing EPDs, it’s important to look at the declared unit, LCA stages included, and reference life to ensure the EPDs are comparable.

Right now, the industry seems to be focused on the ‘high impact’ components of structural materials, wall assemblies, and glazing. Some industry leaders on interiors are supplying this information for their products, and LCA/EPD is one of the fastest growing reports.

PUT IT TO PRACTICE: Ask your manufacturer and product reps for products with EPDs, and ask them to start producing EPDs! Specify products with EPDs!

LCAs are used in a variety of ways to inform design decisions. A LCA for a product, or an environmental product declaration (EPD), can help guide architects to pick the best product among competitors on the market. Right now, most LCA measure and focus on building envelope and structure. It’s important to be mindful of interior material choices from occupant health to (carbon) environmental impacts.

“How is LCA used in the building industry?”
- Help building owners make informed choices regarding sustainability and/or resilience.
- Evaluate design options by providing insight into materials choices and their environmental impacts
- Achieve green building certification (e.g. in LEED v4 or Living Building Challenge)
- Assist in assessing the environmental benefits of new products and/or policy
- State that a system or product is environmentally preferable to another (to make a comparative assertion)
- Compare to benchmarks to evaluate a building’s performance

The results of an LCA can illuminate which parts of a building have particularly high environmental impacts. This type of hot-spot analysis can help the design team achieve a more environmentally conscious design.”

Production (A1-A3):
Accounts for raw materials extraction, transportation, and manufacturing of the material. Production phase impacts can be minimized by using reclaimed, recycled, and local products.

Construction (A4-A5):
Includes impacts of transportation to site, construction, and installation on site. Construction impacts can be reduced by sourcing locally and having efficient construction practices, such as panelized, prefabricated structural systems.

Use (B1-B8):
Starts on day one of building operations, and lasts throughout the lifespan of the building. This includes use, maintenance, repair, replacement, refurbishment, operational energy, and operational water. Reductions come from a variety of strategies.

End Of Life (C1-C4):
If a building can’t be repurposed, end of life accounts for deconstruction, demolition (where necessary), transportation to waste processing or disposal, or transportation to repurposing. Reduce impacts by designing for deconstruction, though this needs analysis for on-site costs.

Benefits and Loads Beyond the Building Life Cycle (D1-D4):
Generally considered outside of an LCA boundary, this includes exported energy, material recovery, recycling, and reuse. Reduce impacts or reap the full benefits by using recyclable materials and ensuring reuse of building components by keeping them in tact.
WORKS CITED


With respect for our Pale Blue Dot, the only home we’ve ever known...