



SUSTAINABILITY CONSULTING  
**LOWERING  
EMBODIED CARBON**

LOWERING A BUILDING'S CARBON FOOTPRINT BEGINS LONG BEFORE CONSTRUCTION BEGINS. **HERE'S HOW TO DO IT.**

**GLUMAC** engineers for a sustainable future™  
A TETRA TECH COMPANY



## OUR SERVICES

### CARBON REDUCTION CONSULTING

- Building Material Life Cycle Assessment Modeling
- Building Energy Modeling and Analysis
- Refrigerant Assessments and HVAC Retrofits/Alternatives
- Building System and Material Evaluations
- LEED and Living Building Challenge Credit Achievement

Robust Access to Daylighting



## OUR APPROACH

**Glumac's deepest core value is sustainable design, and look to elements of nature to lower a building's carbon footprint and improve health and wellness for occupants.**

**As buildings use less energy, most of a building's lifetime carbon emissions may actually be associated with embodied carbon** – the emissions released during manufacturing and installation of a building's components. Considering both embodied and operational carbon during design can lead to elegant, passive and simple strategies that can lower both first cost, operating cost, and total lifetime carbon emissions associated with that building.

### We do this by addressing a building's major impact areas:

- Material embodied carbon from the manufacturing and transportation processes
- Building refrigerant use in mechanical and kitchen equipment cooling systems
- Operations emissions from mechanical, electrical and plumbing equipment

Glumac's services help our clients 'decarbonize' their buildings by deploying strategies such as electrification, low impact refrigerants, mass timber construction, and system simplification.

Living Wall in Office Space

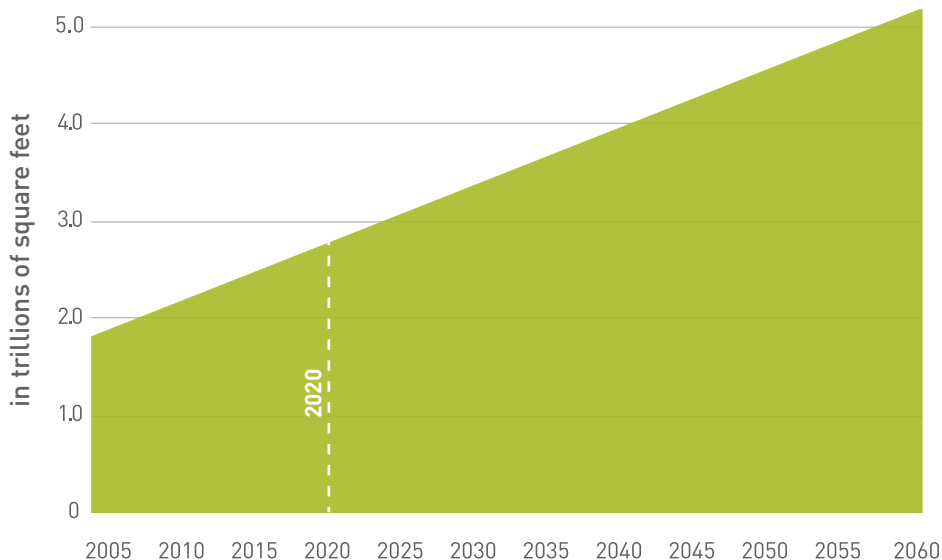


Use of Natural Materials



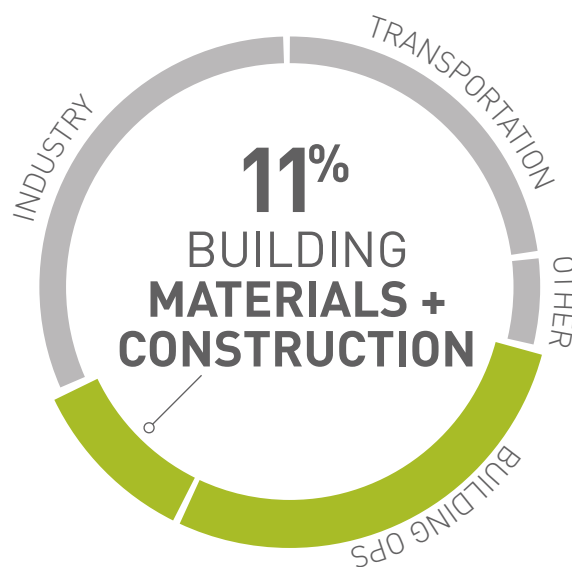
## NOW IS THE TIME TO ACT

### GLOBAL FLOOR AREA GROWTH - in trillions of square feet



## GLOBAL CO<sub>2</sub> EMISSIONS BY SECTOR

AREAS OF GLUMAC SERVICE





# SUSTAINABILITY CONSULTING GROUP

## Our Team

**Nicole Isle** | Chief Sustainability Strategist, LEED AP BD+C, BADT, WELL AP

With 15 years of experience, Nicole has led or provided senior level review for more than 100 sustainable building projects locally and internationally. Her portfolio includes single and multiple building projects and campus developments across a diverse range of building types. A systems thinker at heart and integrated design strategist, Nicole utilizes her training as a Biologist at the Design Table (BaDT) and leadership with the ILFI Biophilic Design Initiative to help clients seek new inspiration and solutions from natural models. In 2017, Nicole was awarded the Women in Sustainability Leadership award from Green Building & Design magazine.



**Ante Vulin** | Senior Sustainability Strategist, LEED AP BD+C, LEED AP ID+C

Ante has 12 years of experience as a sustainability consultant and energy analyst focused on helping new and existing buildings reach their full potential. He specializes in the intersection of building energy and indoor environmental quality, making sure that buildings can be both efficient and healthy for their occupants. He has worked on over 50 LEED projects, across rating system versions including New Construction, Operations and Maintenance, Core and Shell, Commercial Interiors and Healthcare.



**Alissa Feucht** | Sustainability Strategist, LEED AP BD+C, LFA, Fitwell Ambassador

Alissa brings more than 11 years of experience in aerospace design, mechanical design, LEED project review, energy analysis and commissioning. She is responsible for site investigations, energy savings calculations, explanations of energy conservation measures, and helping clients meet their sustainability or code-related goals. Alissa has co-authored papers on energy analysis in integrated design and passive design, in addition to presenting at ASHRAE, Living Future and ASES Solar. She is an active volunteer with the Seattle 2030 District.



**Drew Nitschke** | Sustainability Strategist, LEED AP BD+C

Drew manages green building certification for major corporations and building owners. He has comprehensive experience in mixed-use/residential, commercial, and institutional facilities with subject matter expertise in sustainable building design and LEED certification. He is a LEED Accredited Professional who focuses on providing healthy and sustainable solutions in the built environment, with a particular interest in reducing the carbon emissions associated with building materials through the use of Life Cycle Assessment.



**Alex Stellato** | Sustainability Strategist, LEED AP BD+C

Alex provides project assistance for sustainable buildings and certifications. His background includes transportation planning, traffic engineering, urban studies, water resource policy, and efficient building design and comes to Glumac with 2-years of higher education teaching experience. As a LEED and ENVISION Sustainability Professional, his focus is on long-term infrastructure development with a goal of providing healthy, safe, affordable, and equitable solutions for future generations.



## LET'S TALK

Have a question about lowering the embodied carbon of your next project? Talk to us.

CONTACT:

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Building materials like Cross Laminated Timber can lower the embodied carbon of a building | Image courtesy of Jeremy Bittermann

## SUSTAINABILITY CONSULTING AT GLUMAC WE UNDERSTAND CARBON REDUCTION IS CRUCIAL TO MEETING CLIMATE CHANGE GOALS

Glumac provides our clients consulting and modeling expertise to uncover the greenhouse gas impact of their buildings and make meaningful reductions during design.

Codes and community interests continue to shift the building industry toward higher levels of building performance and net zero energy goals (to produce as much energy as they consume). At the same time, operational emissions represent only a portion of the total reductions that science indicates are necessary to prevent the worst effects of climate change. This tremendous market shift is bringing about a real need to fully understand the carbon impacts of buildings.



**70+**  
LEED  
PLATINUM  
PROJECTS

**90+**  
LEED  
ACCREDITED  
PROFESSIONALS

PROJECTS  
THAT ARE NET ZERO  
**READY & OPERATING**  
**50+**

**20+**  
WELL  
CERTIFIED  
PROJECTS