

# Parametric Open Data for Life Cycle Assessment (POD | LCA)

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#### **Problem Statement**

- Carbon-storing construction materials have the potential to reduce greenhouse gas emissions on a global scale.
- However, environmental data and assessment methods for novel carbon-storing materials is currently limited.
  - Design teams are reluctant to adopt these materials in their building designs, due to uncertainty and risk.
  - Manufacturers of carbonstoring materials are struggling to gain traction at scale.
- ► In order to support industry adoption of these materials, we need data and tools to quickly and accurately assess the environmental impacts of novel carbon-storing materials during research, development, and design.

#### University of Washington Project Team:

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www.carbonleadershipforum.org/podlca-project/

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## **Project Goal**

To develop a rigorous and parametric Life Cycle Assessment (LCA) framework, aligned data, and process-integrated tools in order to quickly and accurately assess the environmental impact of novel carbon-storing materials and **innovative building systems** during the rapid prototyping and design process.

### **Project Timeline and Workstreams**

2022		2023				2024		
Year 1			Year 2				Year 3	
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9

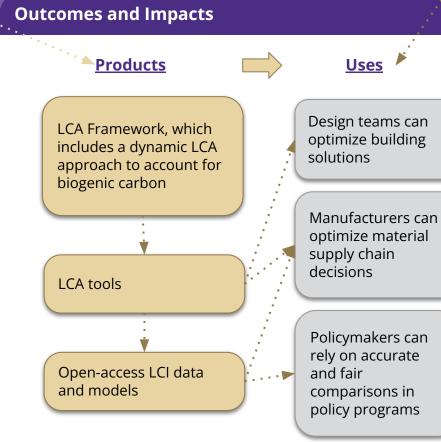
#### **Develop LCA Methods Framework**



#### **HESTIA Teams**

The UW Team will collaborate with the following HESTIA Teams to test the LCA Framework analyze their novel products and building designs.

Aspen Products	SkyNano	CU Boulder
Group	OSU	REL Alaska
Biomason	UT Knoxville	PNNL
U Buffalo	U Penn	Texas A&M
Purdue	Clemson U	BamCore
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#### Impacts (best-case scenario)

Reduced life cycle GHG emissions of building materials

Increased carbon storage of building materials

Improved land management practices

Expanded market for carbon-storing materials

Policy incentives for use of carbon- storing materials