

Building a Better Future Using Carbon for Good

January 2024

Concrete is the most widely-used
manufactured substance on Earth

~100B

tons of material extracted from the earth each year
→ agriculture, forestry, mining, oil/gas

>30%

by mass for concrete
→ limestone, clay, sand, rock

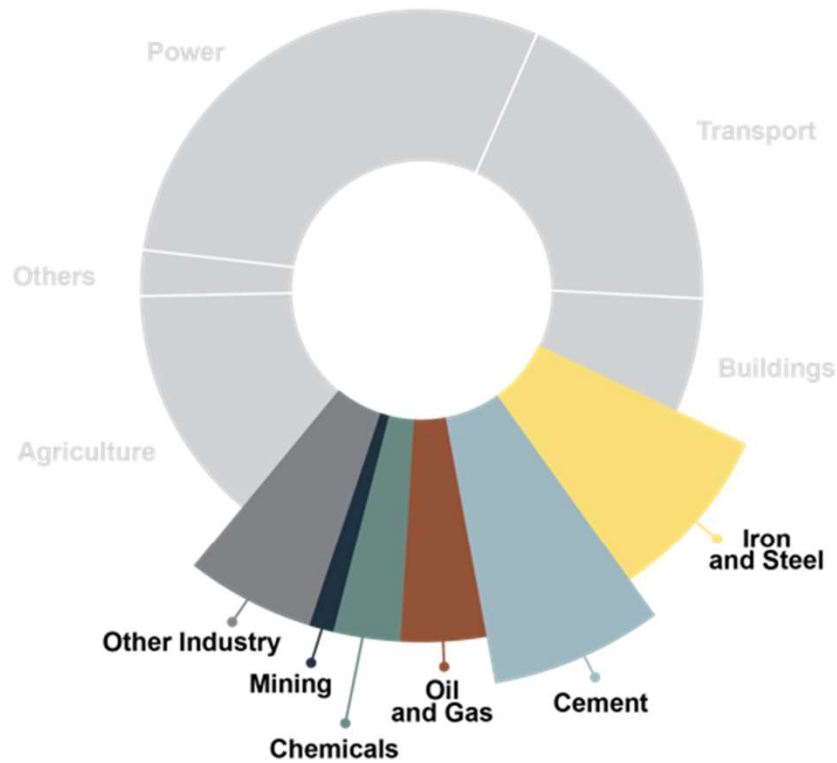
~\$1.2

trillion/year market

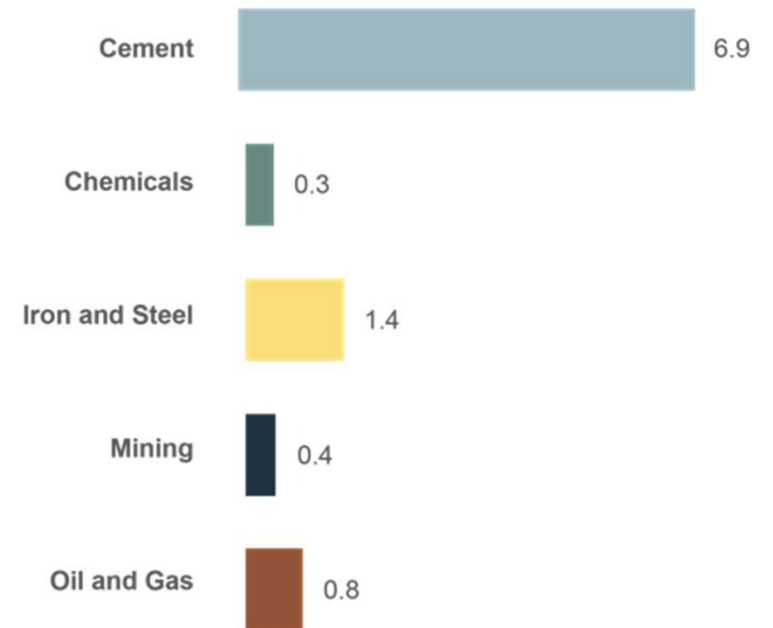
Source: Construction Physics, "So you want to use
less concrete?," Brian Potter 2022

Concrete's key ingredient, cement, is the hardest-to-abate major source of CO₂

Share of Global CO₂ Emissions by Industry, % in 2017



kG of CO₂ per \$



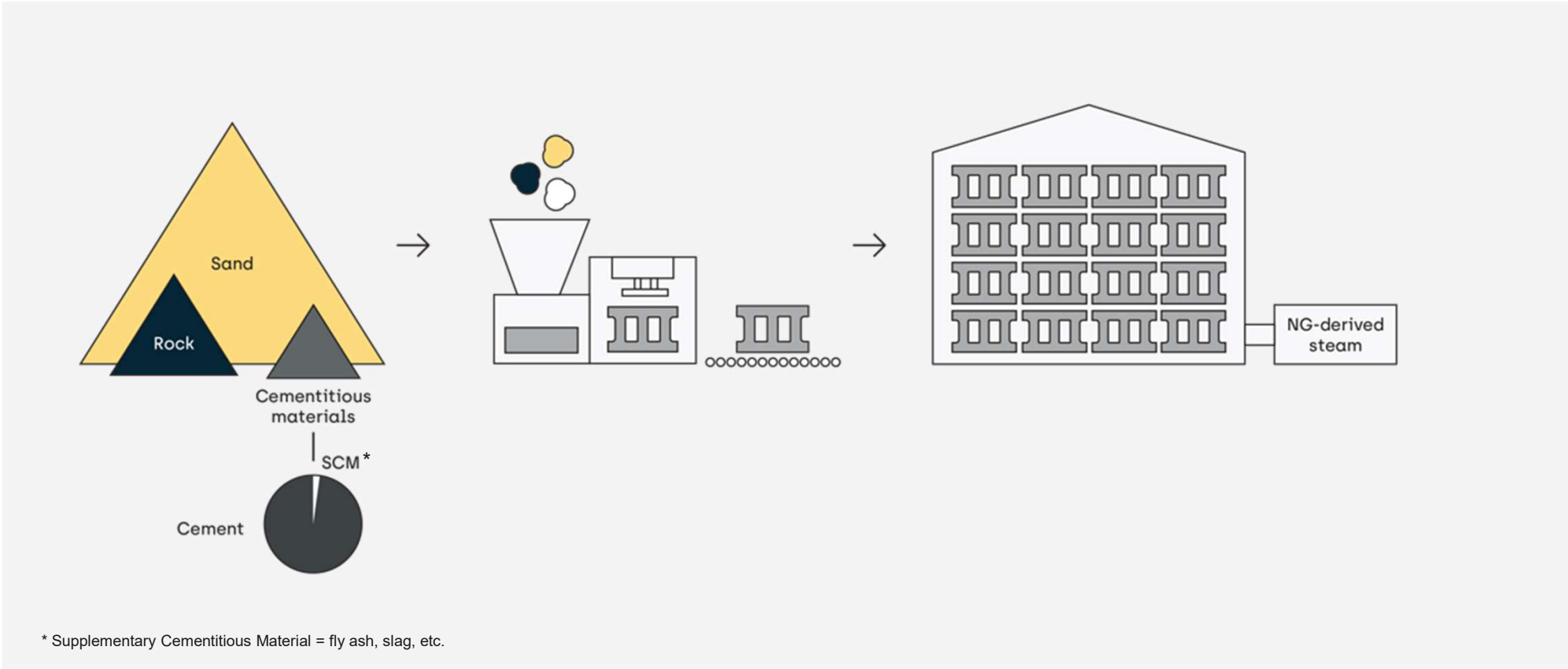
Source: McKinsey

CarbonBuilt reduces the embodied carbon of concrete products by 70 to 100+% with no compromise to price, performance, or plant operations.

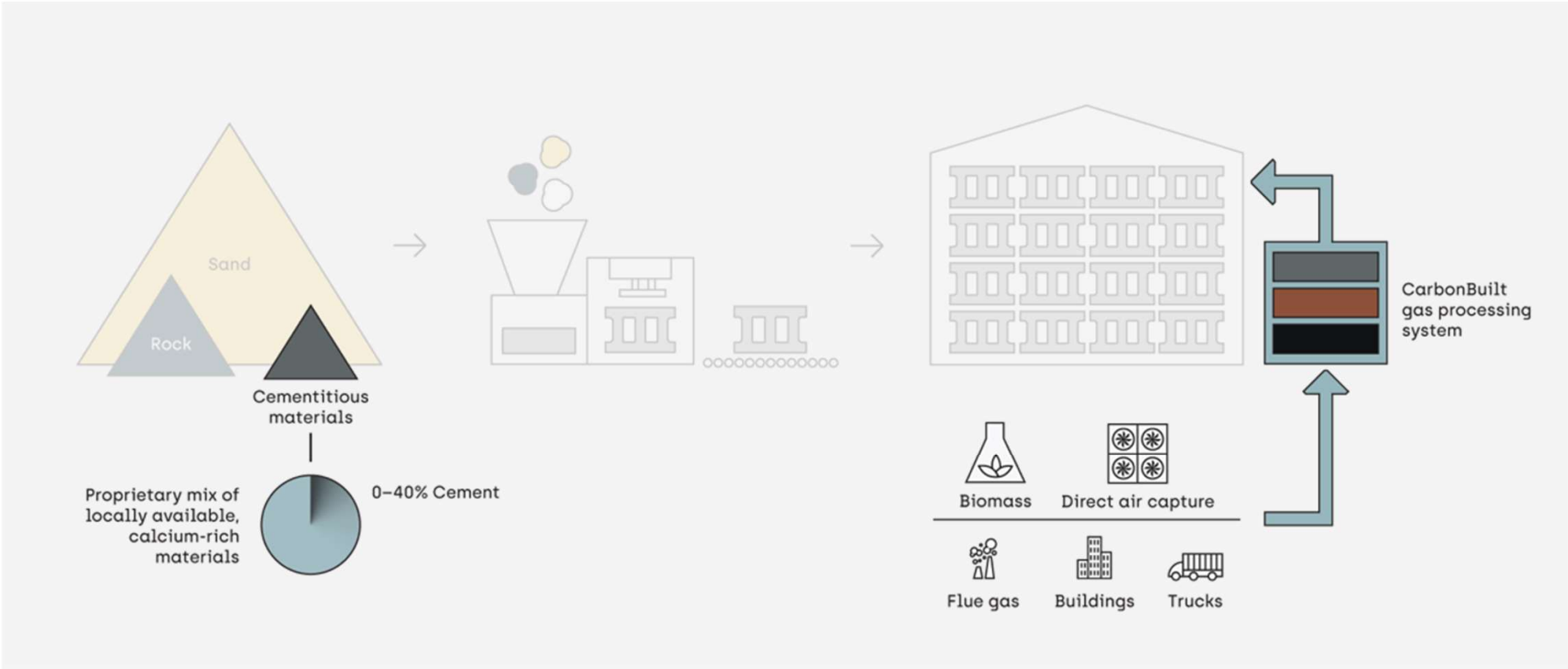
Today.



Today's concrete products are made with carbon-intensive Portland cement



CarbonBuilt replaces cement with low carbon, low cost, highly scalable materials and CO₂



The impact

- ✓ 60-100% reduction in cement
 - ✓ ~2% carbon uptake*
 - ✓ 10-30% reduction in cost of raw materials + utilities
- 70-100% reduction in carbon footprint*

CarbonBuilt
gas processing
system

Proprietary mix
locally available
calcium-rich
material

* Mass of product derived from utilized carbon dioxide

Flue gas Buildings Trucks

Rigorous third-party testing confirms compliance with existing industry standards



ASTM C90

- Compressive strength
- Water absorption
- Dimensional accuracy
- Weight and density can be adjusted to match desired levels



Code Compliance

- Code compliance report with acceptance criteria



Performance Verification

- Stress-strain relationship
- Modulus of rupture & failure mode
- Modulus of elasticity (TMS 402)
- Shrinkage and creep
- Flexural bond strength (ASTM E518)



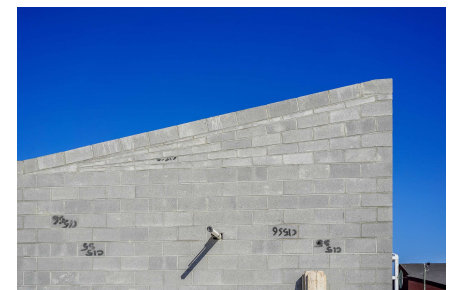
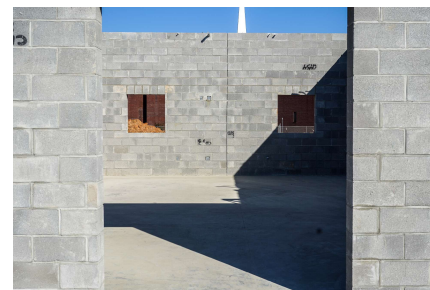
CO₂ Utilization Verification

ISO 14034

Plant 1 Case Study: Blair Block

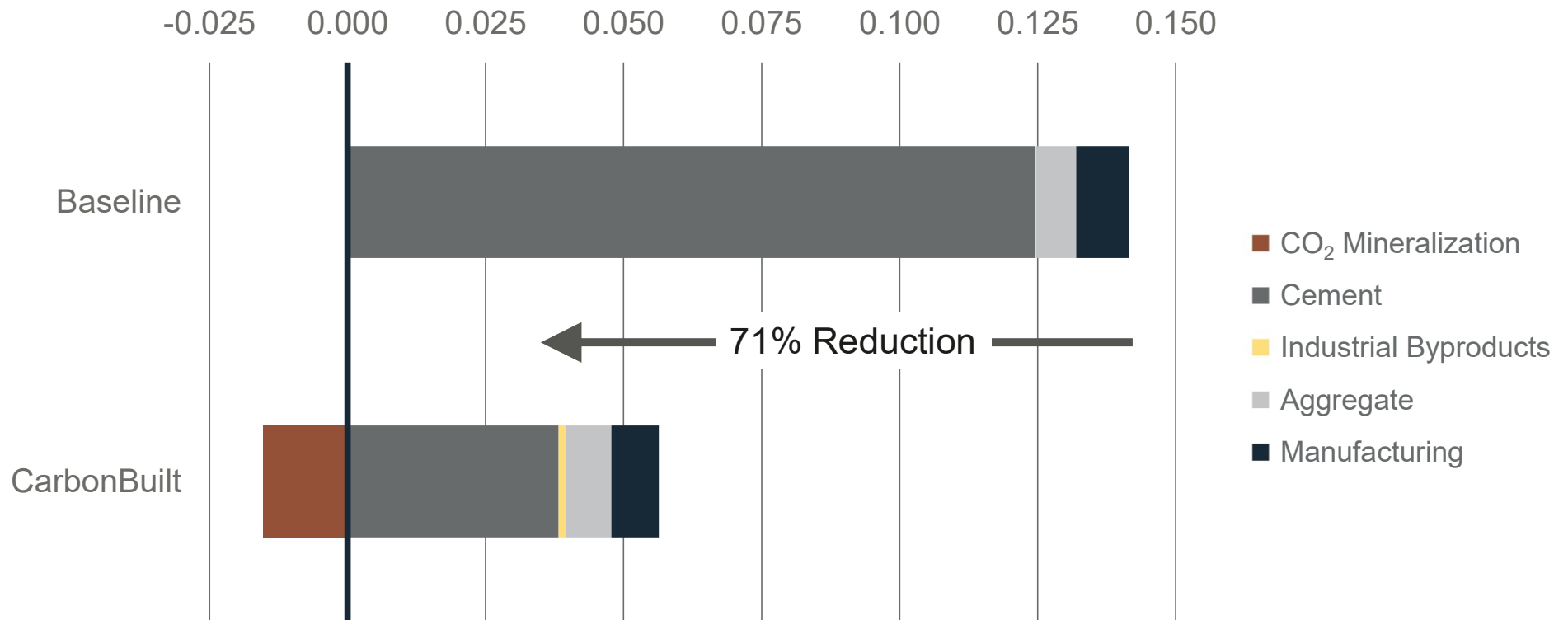


Project #1 – Montgomery's New Fire Station



Blair Block: Embodied Carbon Impact

Embodied Carbon (kg CO2 / kg concrete)



Blair Block: Economic Impact

Revenue Increase	13%
COGS Decrease	36%
Gross Margin Increase	46%
Net Margin Increase	>350%