

HEALTHY & LOCAL MATERIALS

BUILDING CLEAN SUMMIT 2019



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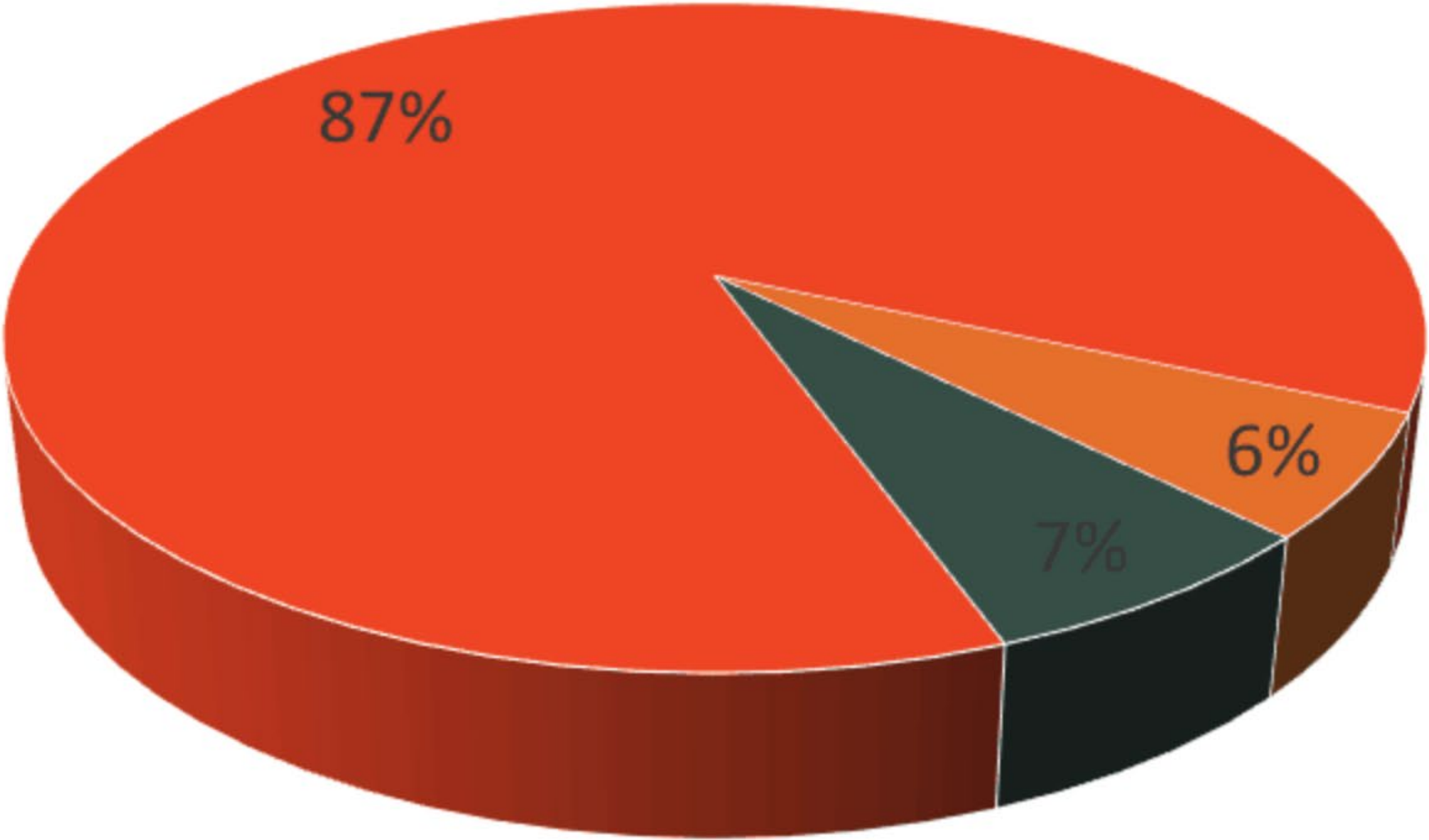
Why, How, What

Why are healthy, local materials important?

WHY HEALTHY AND LOCAL MATERIALS MATTER

ARCHITECTURAL & CONSTRUCTION INDUSTRY

Time Spent Outdoors (Avg American)

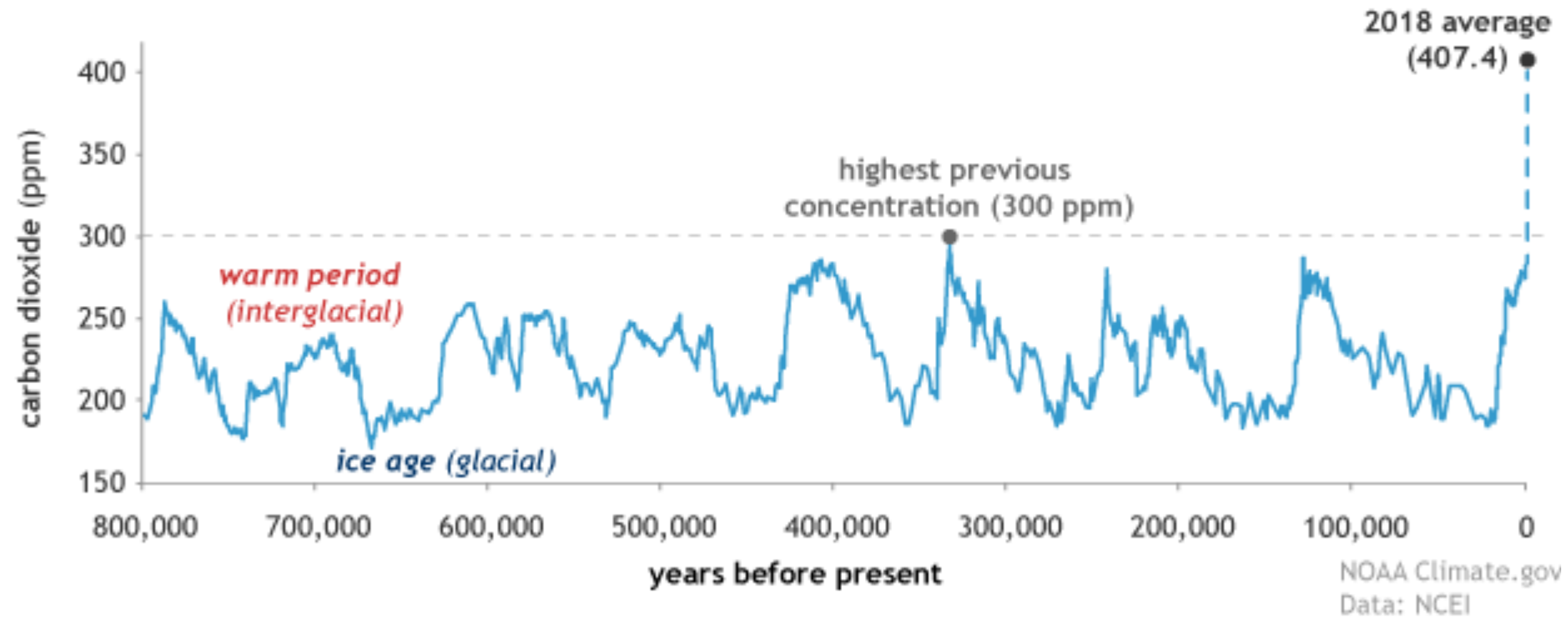


■ Inside Buildings ■ Inside Vehicles ■ Outside

WHY HEALTHY AND LOCAL MATERIALS MATTER

ARCHITECTURAL & CONSTRUCTION INDUSTRY

CO₂ during ice ages and warm periods for the past 800,000 years



Embodied Energy of a product = Carbon production

Why, **How**, What

How does the architectural and construction industry respond to provide local healthy materials?

SUSTAINABILITY CERTIFICATION SYSTEMS

ARCHITECTURAL & CONSTRUCTION INDUSTRY



LIVING BUILDING CHALLENGESM



HEALTHY MATERIALS

ARCHITECTURAL & CONSTRUCTION INDUSTRY



SALVAGED/REUSED, RECYCLED CONTENT, REGIONAL SOURCING,
RED LIST FREE, ROHS COMPLIANT, HPDS, EPDS (LIFE CYCLE), DECLARE,
CRADLE TO CRADLE,
FSC WOOD, GREENGUARD, GREEN SEAL,
VOC LIMITS - SEE LEED

LOCAL MATERIALS CERTIFICATION REQUIREMENTS

ARCHITECTURAL & CONSTRUCTION INDUSTRY



LEED

Manufactured
& Extracted
Regionally

V4 shift towards
transparency

Optional for points

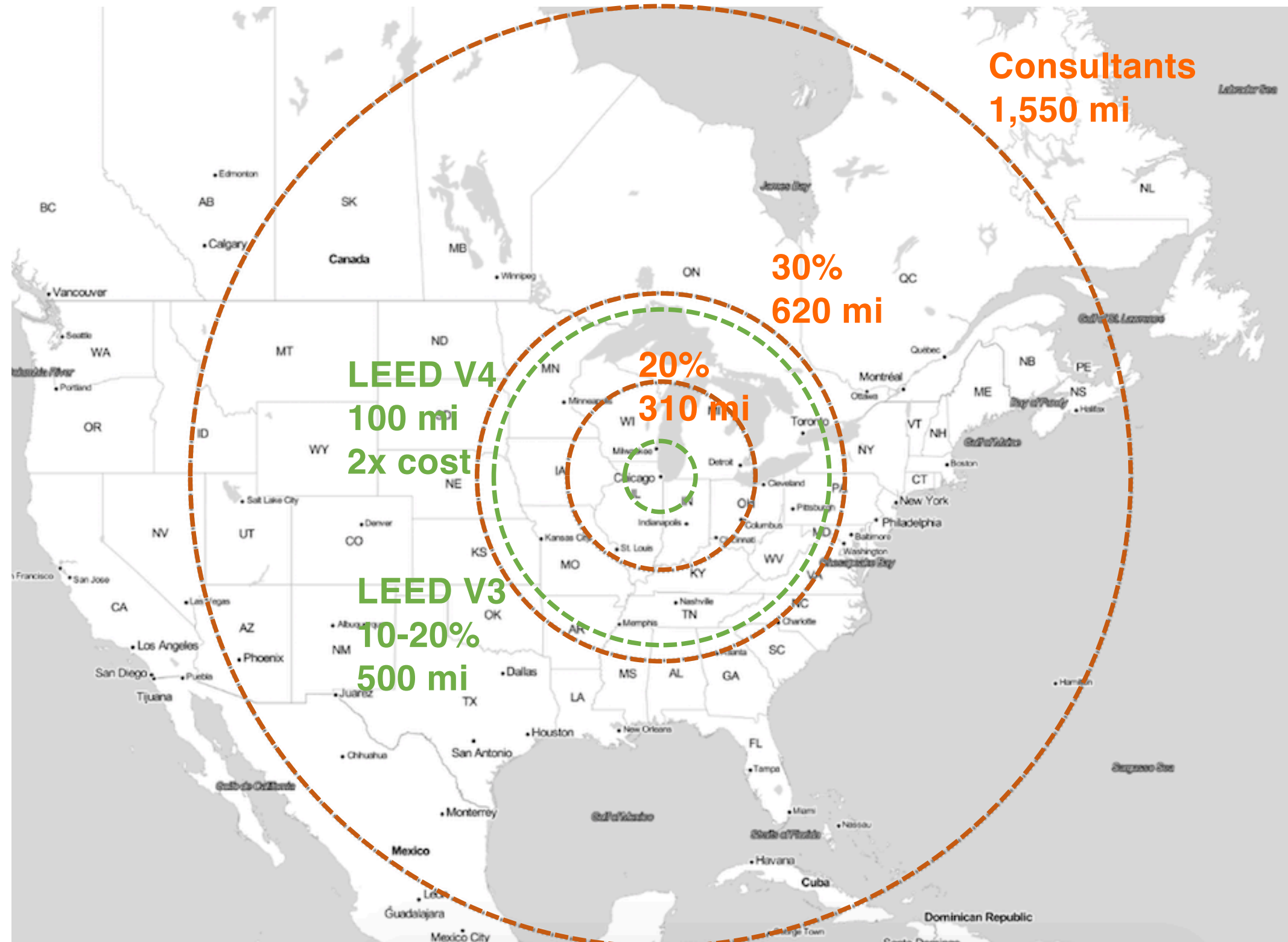


LBC

Manufactured
Regionally

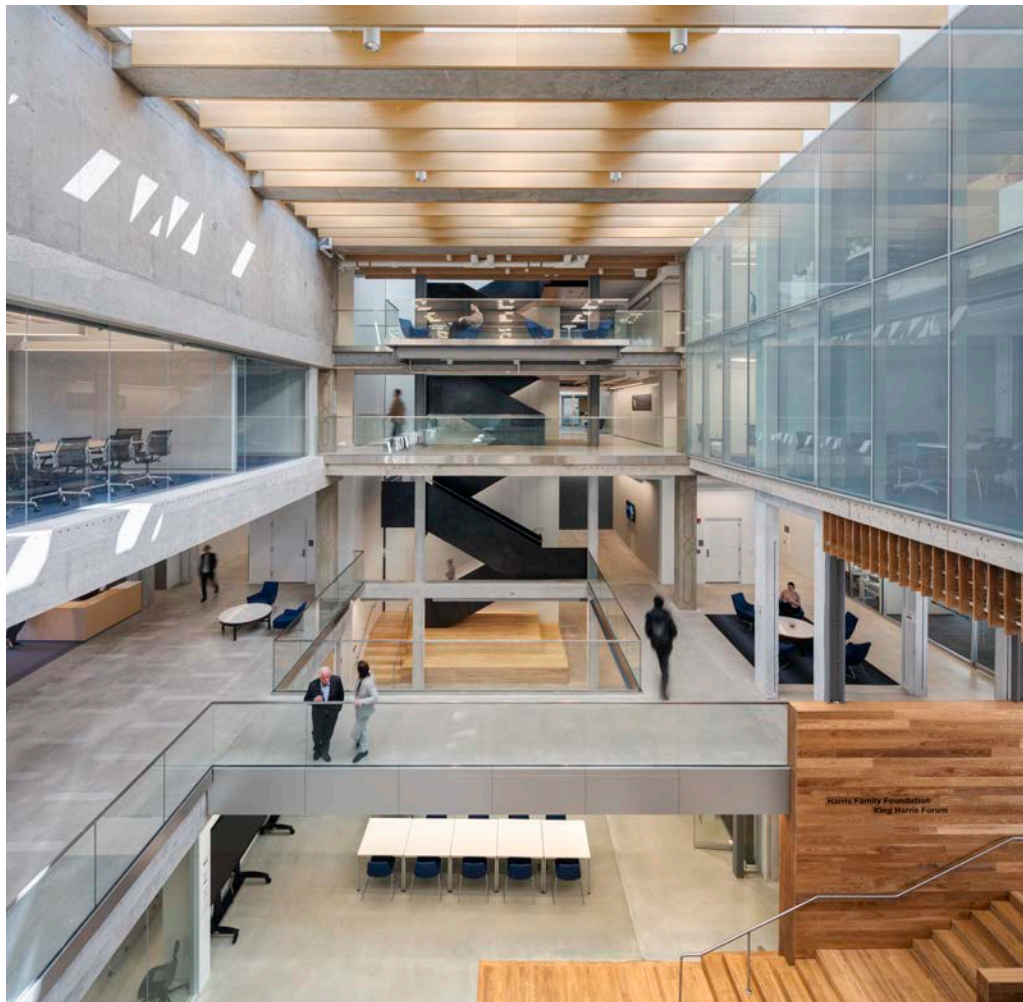
Required

LIVING
BUILDING
CHALLENGESM



Why, How, **What**

What we did to achieve this?



KELLER CENTER – HARRIS SCHOOL

EXAMPLE OF MATERIAL HEALTH & LOCAL MATERIALS



LIVING BUILDING CHALLENGESM
PETAL CERTIFICATION



LEED PLATINUM

MATERIALS	10. RED LIST
	11. EMBODIED CARBON FOOTPRINT
	12. RESPONSIBLE INDUSTRY
	13. LIVING ECONOMY BUILDING
EQUITY	14. NET POSITIVE WASTE
	15. HUMAN SCALE + HUMANE PLACES
	16. UNIVERSAL ACCESS TO NATURE + PLACE
	17. EQUITABLE INVESTMENT
BEAUTY	18. JUST ORGANIZATIONS
	19. BEAUTY + SPIRIT
	20. INSPIRATION + EDUCATION

LEED 2009 for New Construction and Major Renovations		Project Checklist		Keller Center - July 19, 2017	
22	1	3	Sustainable Sites	Possible Points: 26	
Y	?	N	Prereq 1	Construction Activity Pollution Prevention	1
1			Credit 1	Site Selection	5
5			Credit 2	Development Density and Community Connectivity	1
1			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
1		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1		1	Credit 6.2	Stormwater Design—Quality Control	1
1		1	Credit 7.1	Heat Island Effect—Non-roof	1
1		1	Credit 7.2	Heat Island Effect—Roof	1
1		1	Credit 8	Light Pollution Reduction	1
8			Water Efficiency	Possible Points: 10	
Y			Prereq 1	Water Use Reduction—20% Reduction	2 to 4
2			Credit 1	Water Efficient Landscaping	2
2			Credit 2	Innovative Wastewater Technologies	2
4			Credit 3	Water Use Reduction	2 to 4
30	2	2	Energy and Atmosphere	Possible Points: 35	
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	1 to 19
Y			Prereq 2	Minimum Energy Performance	1 to 7
Y			Prereq 3	Fundamental Refrigerant Management	2
19			Credit 1	Optimize Energy Performance	2
6			Credit 2	On-Site Renewable Energy	2
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
1		2	Credit 5	Measurement and Verification	3
2			Credit 6	Green Power	2
9	2		Materials and Resources	Possible Points: 14	
Y			Prereq 1	Storage and Collection of Recyclables	1 to 3
2			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1
2		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
1			Credit 3	Materials Reuse	1 to 2
11	3		Materials and Resources, Continued	Possible Points: 15	
Y			Prereq 1	Recycled Content	1 to 2
2			Prereq 2	Regional Materials	1 to 2
1			Credit 5	Rapidly Renewable Materials	1
1			Credit 6	Certified Wood	1
1			Credit 7		1
Y			Prereq 1	Minimum Indoor Air Quality Performance	1
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	1
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1
6			Innovation and Design Process	Possible Points: 6	
1			Credit 1.1	Sustainability in Education	1
1			Credit 1.2	Exemplary Performance - SSc4.1 Public Transportation Access	1
1			Credit 1.3	Exemplary Performance - SSc6.1 Stormwater Design - Quantity Contr	1
1			Credit 1.4	Water Use Reduction beyond 45%	1
1			Credit 1.5	Red List Fee - LBC Petal	1
1			Credit 2	LEED Accredited Professional	1
4			Regional Priority Credits	Possible Points: 4	
1			Credit 1.1	Alternative transportation - Low emitting & fuel	1
1			Credit 1.2	Alternative transportation - public transportation	1
1			Credit 1.3	Stormwater Design - Quantity Control	1
1			Credit 1.4	Heat Island Effect - Roof	1
90	3	10	Total	Possible Points: 110	

KELLER CENTER

SALVAGED + NEW ELEMENTS



SALVAGED LIGHT FIXTURE

Declare.

Vessel™
Humanscale

Final Assembly: Fresno, CA, USA
Life Expectancy: 10 Years
End of Life Options: Take Back Program (ANew North America), Salvageable/Reusable in its Entirety, Recyclable (99.55%), Landfill (0.45%)

Declare Products	
Min. # Declare Products:	23
# Installed	36
# Declare Advocay Sent	70

SALVAGED ASH WOOD
CHICAGO, IL

SALVAGED CHALKBOARDS
PITTSBURG, PA



RECLAIMED ASH WOOD

SOCIAL IMPACT



OPTION - 1

RECLAIMED LUMBER FROM LOCAL
AREA DEMOLISHED HOMES



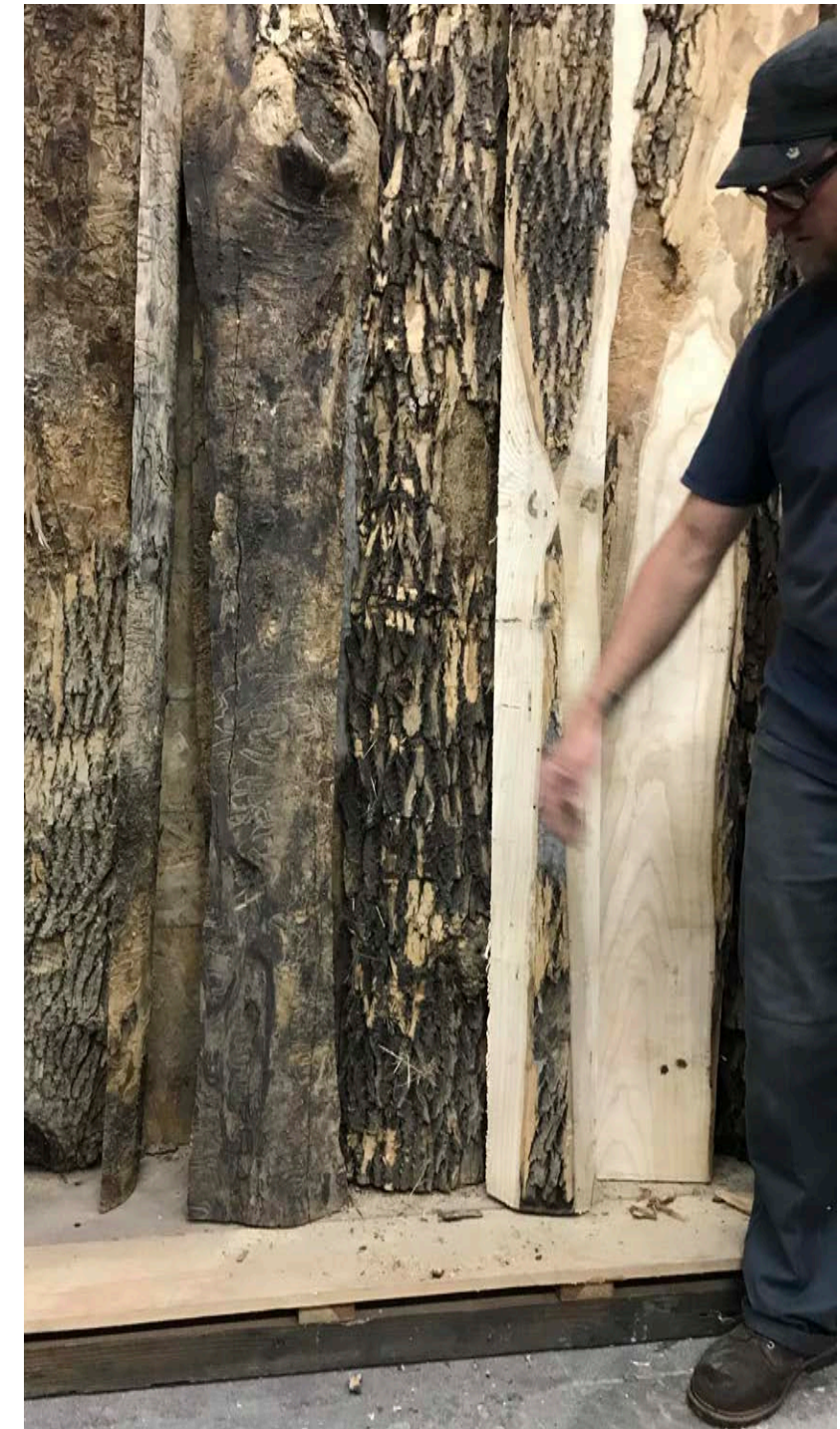
OPTION - 2

RECLAIMED ASH FROM DOWNED
CHICAGO PARK DISTRICT TREES



RECLAIMED ASH WOOD

SOCIAL IMPACT



RECLAIMED ASH WOOD

SOCIAL IMPACT



Theaster Gates
Dorchester Industries



