

Disruption

Our responsibility



North Texas Climate Symposium

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Living Future Accredited, LEED AP

dis·rup·tion

/dis 'rəpSH(ə)n/

Noun

1.1. disturbance or problems which interrupt an event, activity, or process.

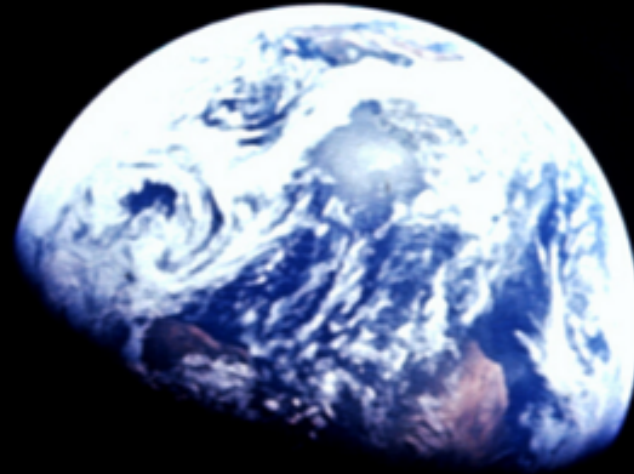
"the schedule was planned to minimize disruption"

Similar: disturbance, disordering, disarrangement, disarranging, interference, upset, upsetting, unsettling, confusion, confusing, disorderliness, disorganization, turmoil, disarray, interruption, suspension, discontinuation, stoppage, obstruction, impeding, hampering, spoiling, ruining, wrecking, undermining, holding up, delaying, delay, retardation

2.2. radical change to an existing industry or market due to technological innovation.

"no industry is immune to digital disruption"

Shifting Perspective



**WHY “EARTHRISE” IS
THE MOST INFLUENTIAL
PHOTO EVER TAKEN**

**AND WHY IT MATTERS JUST AS MUCH NOW
AS IT DID IN 1968**

One Strange Rock



Will Smith



Chris
Hadfield



Nicole Stott



Leland D.
Melvin

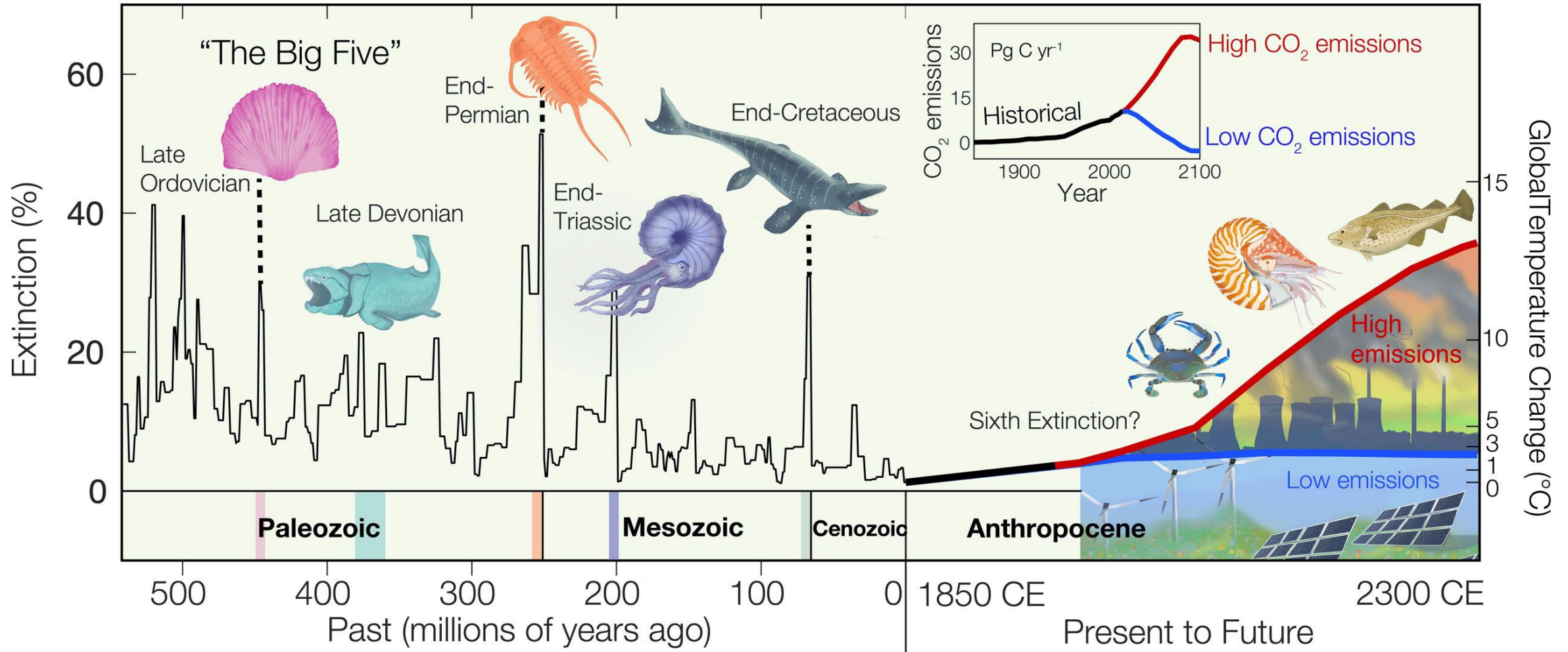


Jerry M.
Linenger

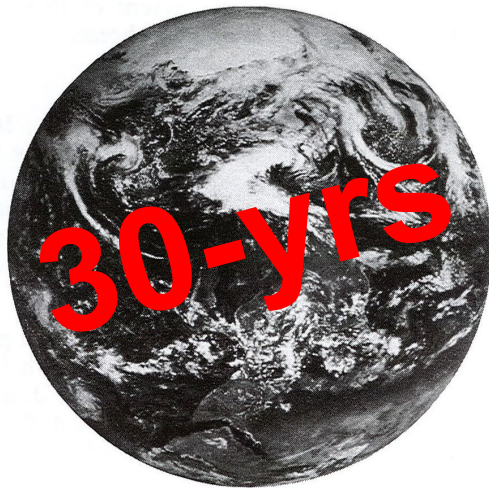


Mae C.
Jemison

Anthropocene Extinction

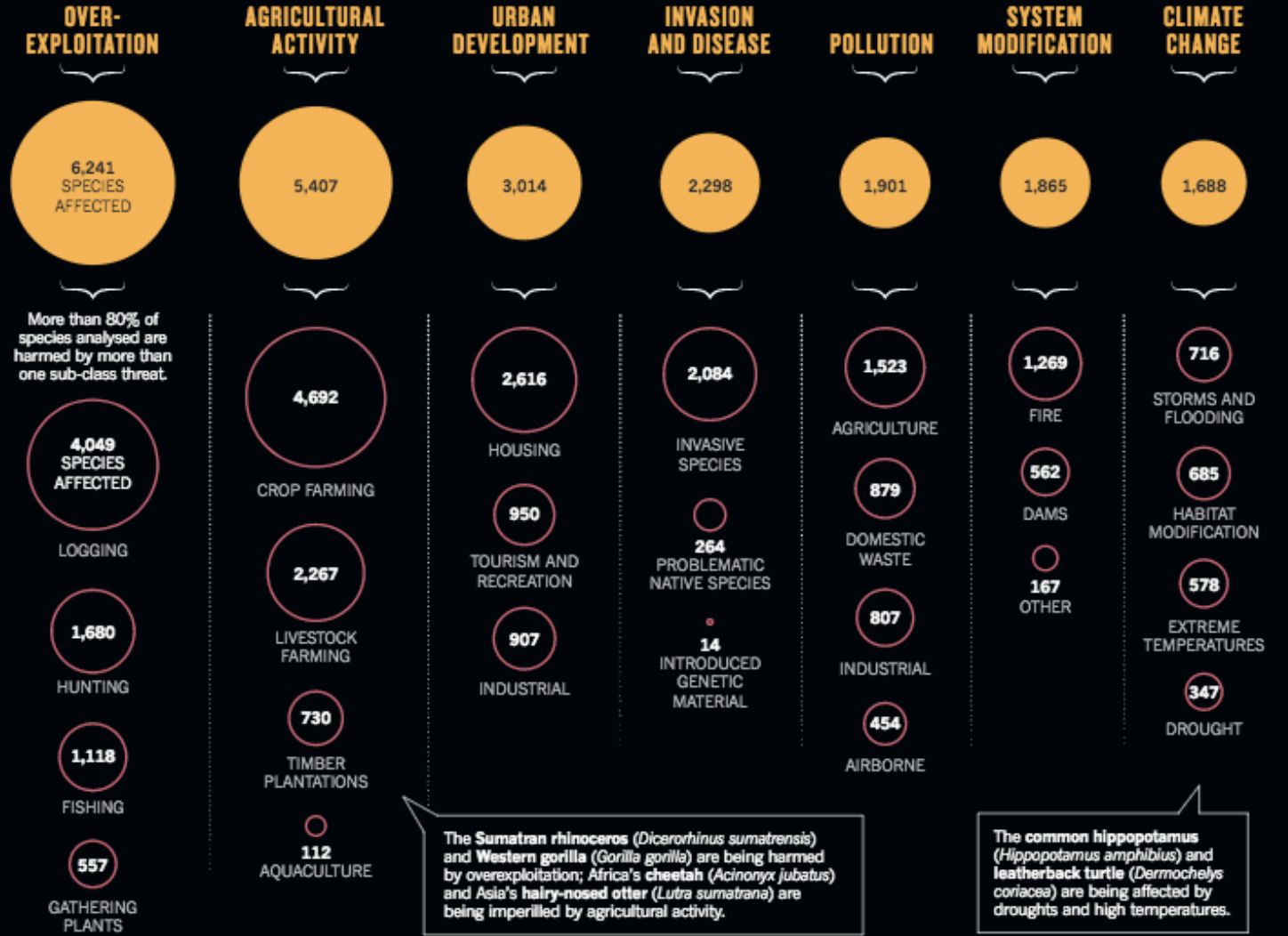


WORLD SCIENTISTS' WARNING TO HUMANITY



BIG KILLERS

Overexploitation and agriculture are the most prevalent threats facing the 8,688 threatened or near-threatened species from comprehensively assessed species groups on the IUCN Red List.



Tragedy of the Commons

Conflict for resources between individual interests and the common good (society).

- James Hardin, 1968



Use of the commons is below the carrying capacity of the land. All users benefit.



If one or more users increase the use of the commons beyond its carrying capacity, the commons becomes degraded. The cost of the degradation is incurred by all users.



Unless environmental costs are accounted for and addressed in land use practices, eventually the land will be unable to support the activity.

Tragedy of the Commons Examples



Air Pollution



Deforestation



Fishing



Traffic Jams



Littering



Poaching

Call to Action- Urgent, Sustained, Systemic

Equitable climate action for human wellbeing

- Carbon-positive
- Whole-systems thinking
- Leave no one behind
- Physical and mental health
- Ecological stewardship
- Reconsider “ownership” and “the commons”

**FIGHT FOR
CLIMATE JUSTICE**

<https://www.aia.org/resources/6077668-framework-for-design-excellence>

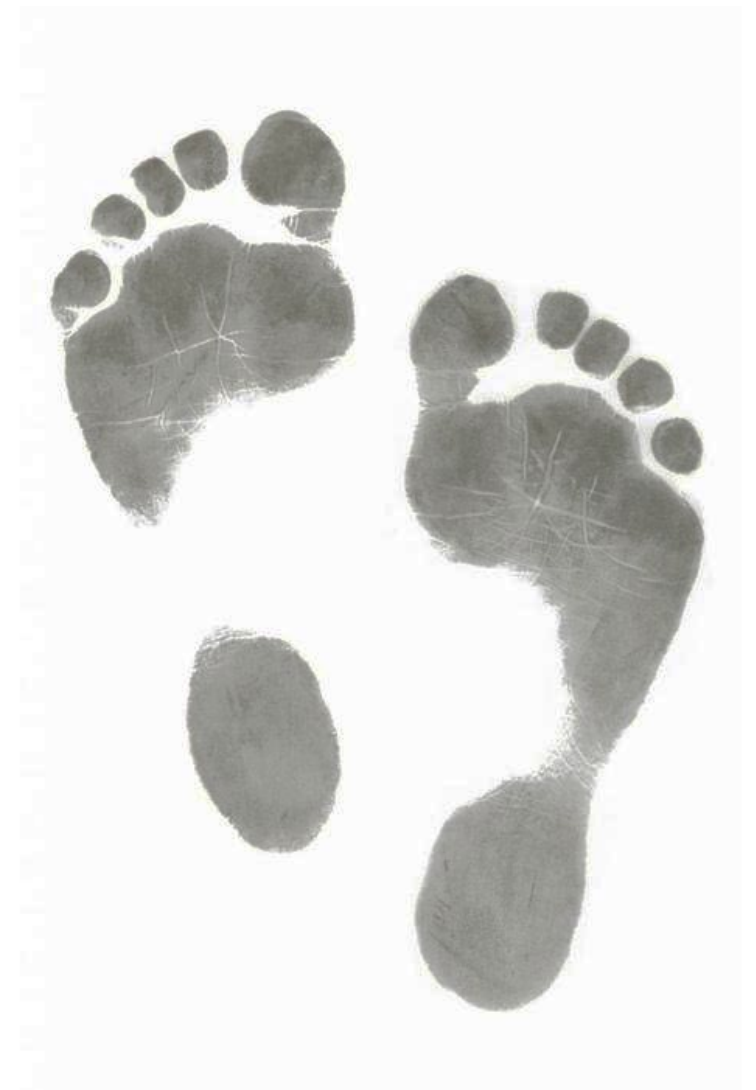


Credit: Stefan Müller
Greta Thunberg & Luisa Neubauer- Fridays for Future



Your personal footprint

- Low carbon lifestyle- diet, electric vehicle, human-powered movement (walking/ cycling)
- Resource efficiency- water, energy
- Waste management- limit single-use disposables
- Local lifestyle- plant a garden, grow pollinators for species biodiversity, support local businesses
- Volunteering your personal time or making financial donations



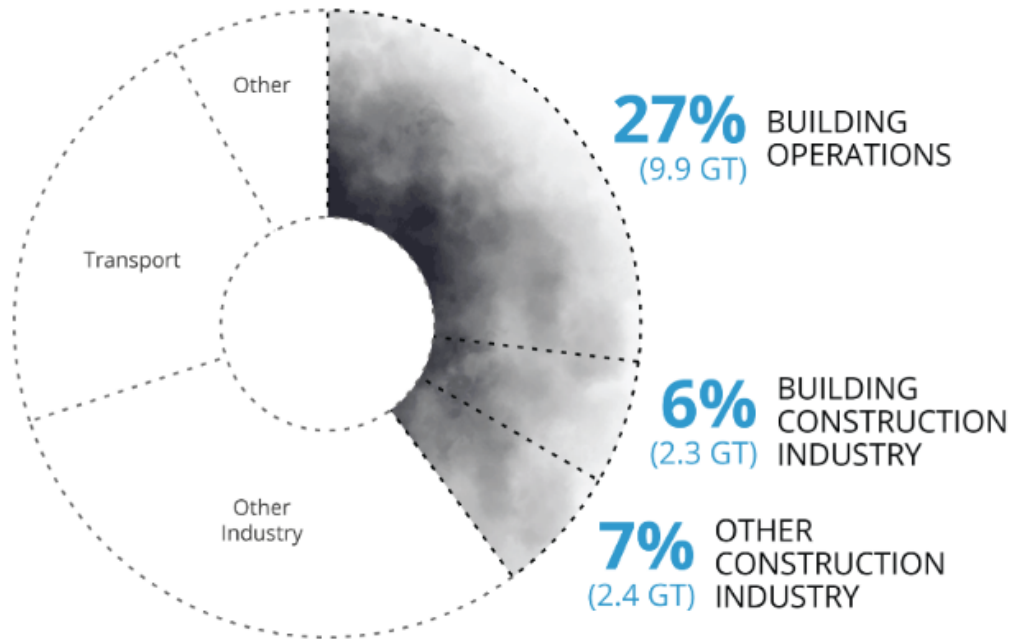
Your influence (handprint)

- Your professional work
 - Project outcomes and impact
 - Personal learning and process change
 - Knowledge sharing and shifting 'business as usual'
- Advocacy and activism to align baseline (bare minimum) expectations and incentives
 - Clients
 - Consultants
 - Communities
 - Policy makers



Impact of Buildings

Annual Global CO₂ Emissions



The built environment generates 40% of annual global CO₂ emissions.

Of those total emissions, building operations are responsible for 27% annually, while building and infrastructure materials and construction (typically referred to as embodied carbon) are responsible for an additional 13% annually.

© Architecture 2030. All Rights Reserved. Data Source: IEA (2022), Buildings, IEA, Paris

Building Construction Industry and Other Construction Industry represent emissions from concrete, steel, and aluminum for buildings and infrastructure respectively.

Existing Building Stock

In 2040, **2/3 of the global building stock** will be buildings that exist today. Without upgrades, they will still be emitting GHGs.



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Data Source: IEA Energy Technology Perspectives 2020, February 2021 Revised Edition

In 2040 approximately 2/3 of the global building stock will be buildings that exist today.

Without widespread existing building decarbonization across the globe, these buildings will still be emitting CO2 emissions in 2040 and we will not achieve the Paris Agreement's 1.5°C target.

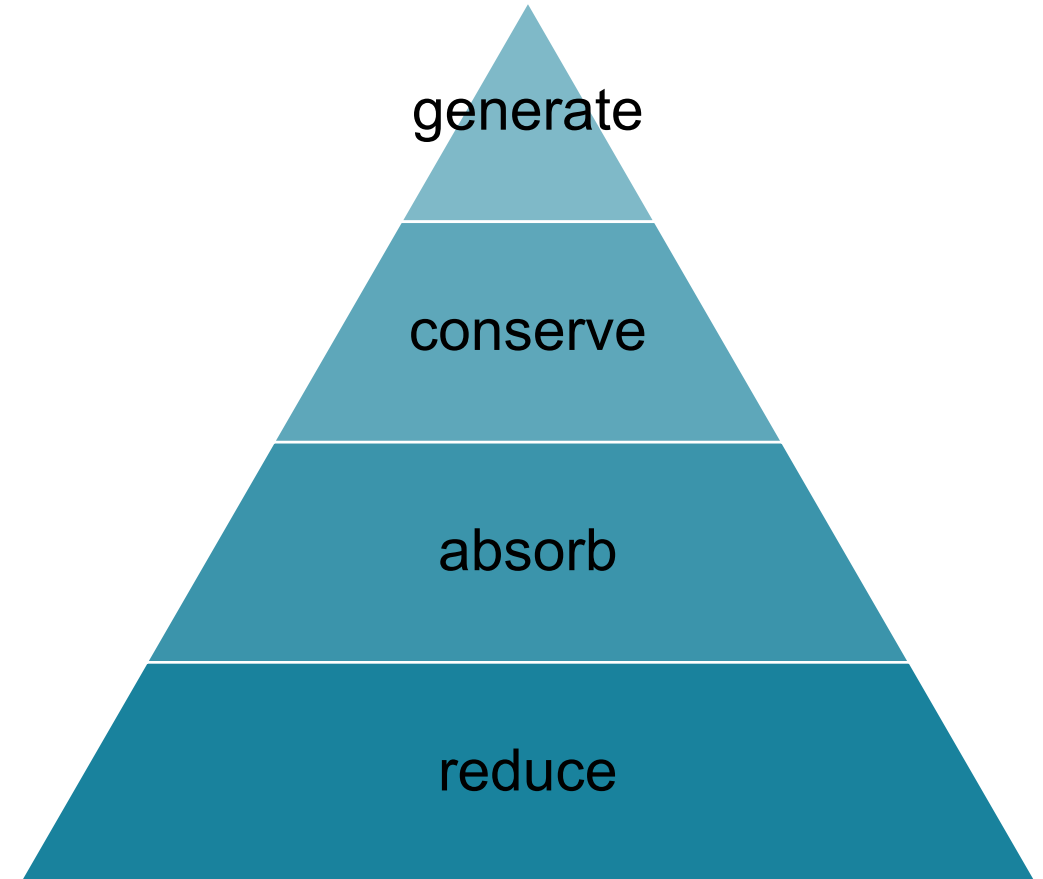
Achieving zero emissions from the existing building stock will require leveraging building intervention points to accelerate the rate of energy upgrades (increasing energy efficiency, eliminating on-site fossil fuels, and generating and/or procuring 100% renewable energy).

Actions for Existing Building

Start with the Fundamentals, then Build

Energy efficiency – zero carbon

- Good smart design
- Passive House strategies- super insulated, low infiltration
- Latent site assets
- Shifting and storing energy
- District systems



Trust in Market Innovation

OVERVIEW

The world's most closely watched urban renewal project, the World Trade Center links Tribeca to the Financial District, and brims with innovative architecture, renowned public artwork, and grand open spaces. This is a neighborhood reborn, pulsing with energy 24/7/365, and offering a vibrant, street-level experience that thoughtfully integrates the built environment into its surroundings.

LMDC
Lower Manhattan
Development Corporation



WTC Sustainable Development Guidelines
New York, New York

Experiment and Fail Fast

HKS Living Labs



Human Impact

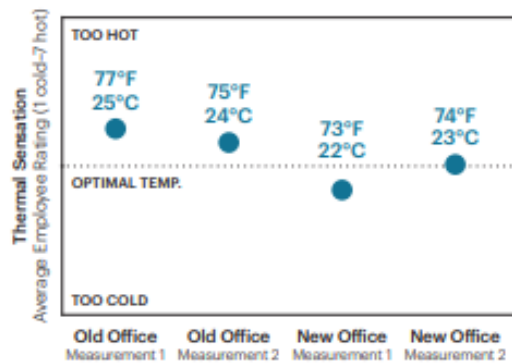
28% Increase in Air Quality Satisfaction

19% Increase in Healthy Food Options Satisfaction

20% Increase in Water Quality Satisfaction

26% Increase in Thermal Satisfaction

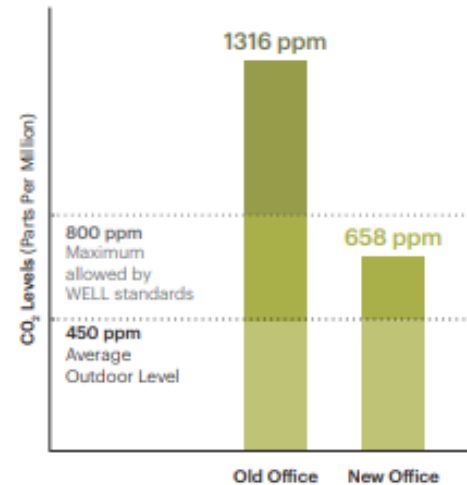
Over the course of four measurements of objective and subjective data, we were able to adjust the thermal environment to meet the optimal subjective rating.



Environmental Impact

48% Decrease in CO₂ Levels

Exposure to high indoor CO₂ levels may drastically reduce complex cognitive and decision-making performance. WELL Certification recommends a maximum of 800 ppm.



Business Impact

35,000+ Online Views of our Living Lab Story
HKS Website; YouTube; Facebook; Twitter; Instagram

2,410 People Visited Elsley House

Since our studio opening on December 18, 2017, we've hosted public events that welcomed 2,410 visitors to our office.

20% Decrease in Acoustic Satisfaction

We are evaluating sound absorbing materials, sound masking systems, and have adjusted the amplification settings on speakers.

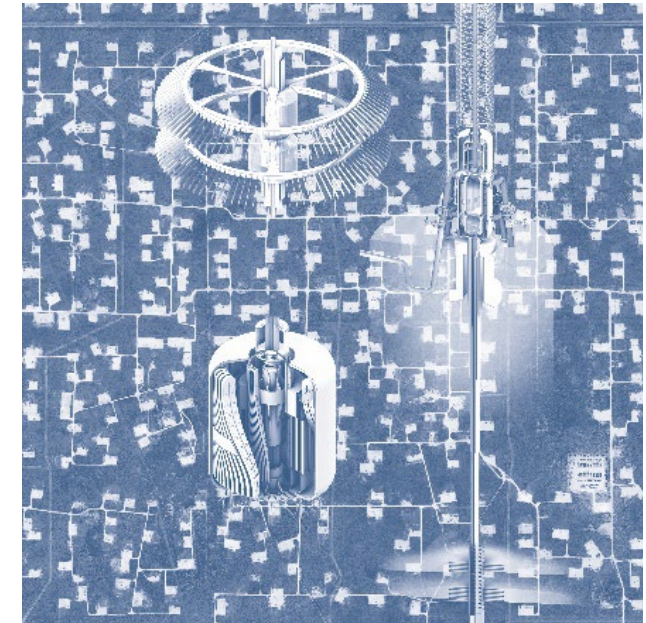
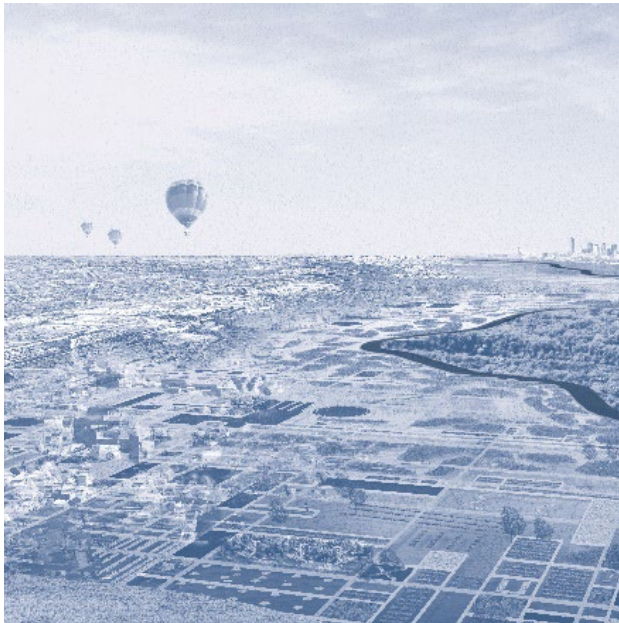
17% Decrease in Access to Nature Satisfaction

We are investigating opportunities to introduce appropriate planting adjacent to social areas to maximize people's exposure to nature.

Statistics from Delos WELL surveys, experience sampling surveys, and environmental sensors.

Watershed Urbanism

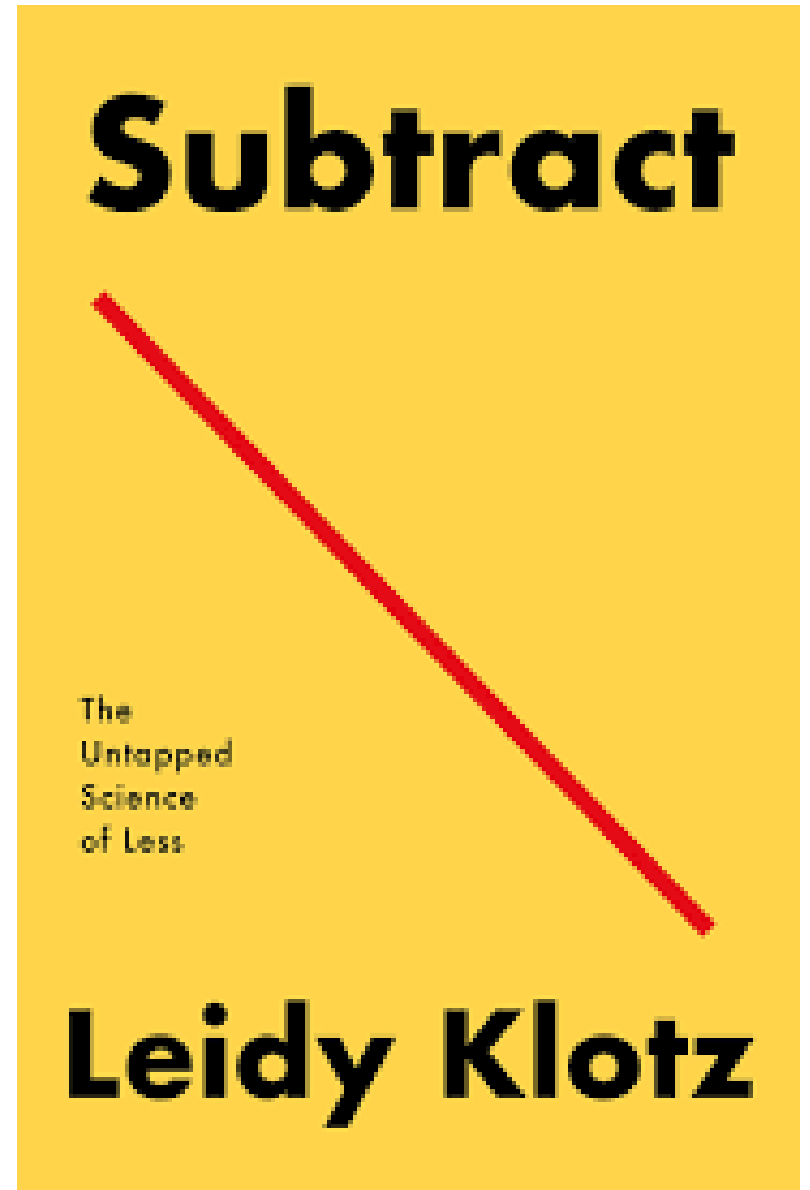
An ideas fellowship



Additive vs. Subtractive

More is not always better

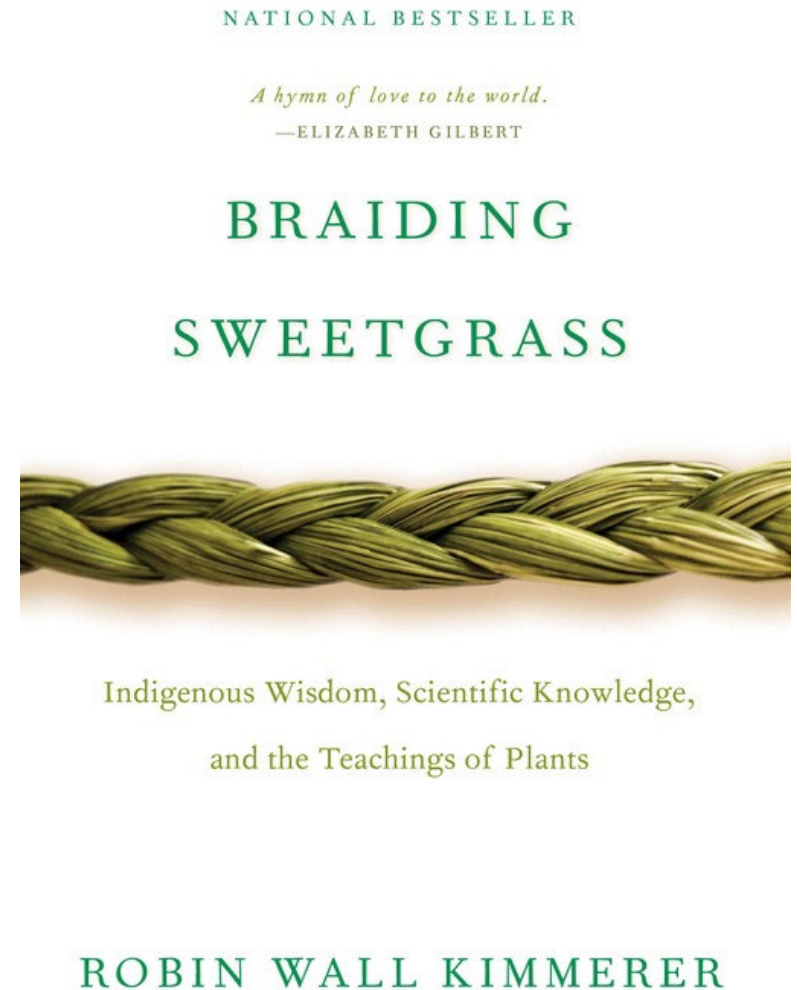
- INVERT- Try *less* before *more*
 - Triage
 - Words matter: clean, carve, reveal
- EXPAND- Think add *and* subtract
 - add diversity by subtracting racism)
- DISTILL- What's at stake?
 - What are you really solving for?
 - Embrace complexity but strive for the essence.
 - Subtract information and accumulate wisdom.
- PERSIST- keep subtracting



Relearning what we've forgotten

Nature and Indigenous Culture as Teacher

- Indigenous wisdom
- Scientific knowledge
- Teachings of plants
- Botanist trained to ask questions of nature with the tools of science.
- Potawatomi Nation



ESG IN DESIGN

