



ESG IN DESIGN

Enhancing Resilience of Healthcare and Public Health Critical Infrastructure

Julie Hiromoto, FAIA, LEED AP, WELL AP, Living Future Accredited
HKS

9 Dec 2024

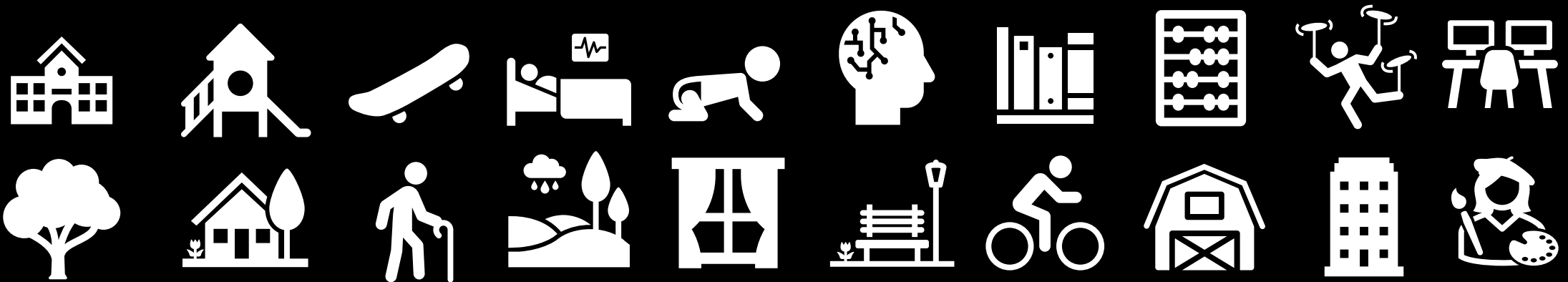
Where are you?

WHAT DO YOU OBSERVE, SENSE, FEEL?

HOW DOES THIS PROMPT YOUR BEHAVIOR?

What if...

EVERY capital infrastructure investment enhanced our potential?

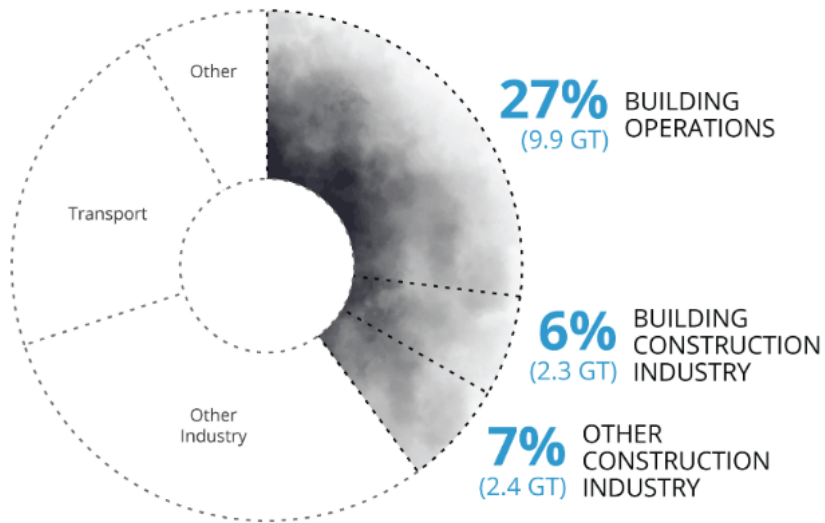


Built Environment as a Lever for Positive Change

CARBON, PUBLIC HEALTH... AND NOW COGNITIVE FLOURISHING

+40% of global carbon emissions

Annual Global CO₂ Emissions



© 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.

**How and Where you Live
Determines Life Expectancy**

**Infrastructure is
Public Health**

Infrastructure forms the foundation of a healthy community.

**water + air quality, parks,
transportation, safety, pollution**

Life Expectancy Gaps- Robert Wood Johnson Foundation
(2018)

**Policy Drives City &
Building design**



International Council of Local Environmental
Initiatives (founded 1990)

Resilience



Design Toolkit

Resilience Design Integration
For Architectural Projects

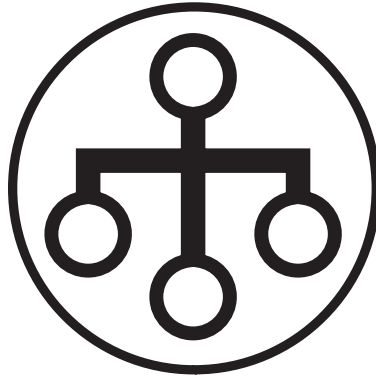


HKS

5 Forms of Resilience

Plan for physical and digital needs that enable and empower the site's use for the intended purpose, including reducing demand, operational inefficiency, friction and providing information for evidence-based decision-making and increased reliability

Infrastructure



Address comfort, safety and operational risk exacerbated by climate change and extreme weather events, as well as native species of a place

Environmental



Economic



Prepare, endure and operate through adversity, including circular economies, local/minority business support, diverse revenue streams, and continuity of business

Social



Support and adapt to community needs, including maintaining cultural and historic traditions that can define a sense of place- healthy individuals in community

Health



Promote and enhance physical, mental, social and cognitive health of individuals of a place. Flexibility and personalization, instead of designing for one fictional 'universal' individual

It's All Connected

INTEGRATED, SYSTEMS POTENTIAL



[Home](#) | [Dallas Climate](#)

[Experts Envision Dallas as 'Where Brain Science Meets Climate Action' » Dallas Innovates](#)





Building Brains Coalition

Academics, business leaders, philanthropy, investors, government officials and NGOs from across Texas and beyond helped us shape the future work of the Building Brains coalition, the first of its kind to bridge disciplines and industries to leverage the cognitive potential of the built environment.

<https://www.buildingbrainscoalition.org>

Oct 2024

Cove™ Treatment Area

PRE-FABRICATED, MODULAR, RAPIDLY DEPLOYABLE

At 1/3 the size of a typical 140 nsf exam room, this low-acuity treatment area increases capacity and efficiency without compromising the patient experience.



FDA Home as a Healthcare Hub

VIRTUAL PROTOTYPE – DIABETES MEDICAL DEVICE INTEGRATION



**Growing
Patient
Base**



**Shrinking
Provider
Network**



**Contraction
of Care
Facilities**

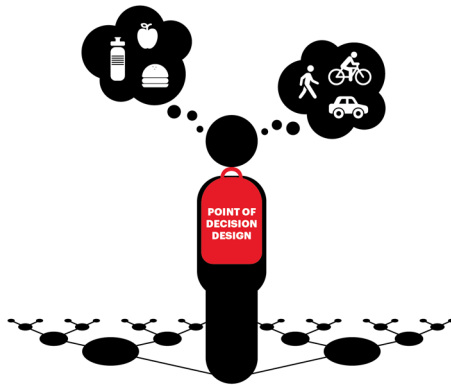


**Decreased
Reimbursement**



Educational Environments for Public Health

POINT OF DECISION DESIGN GUIDE

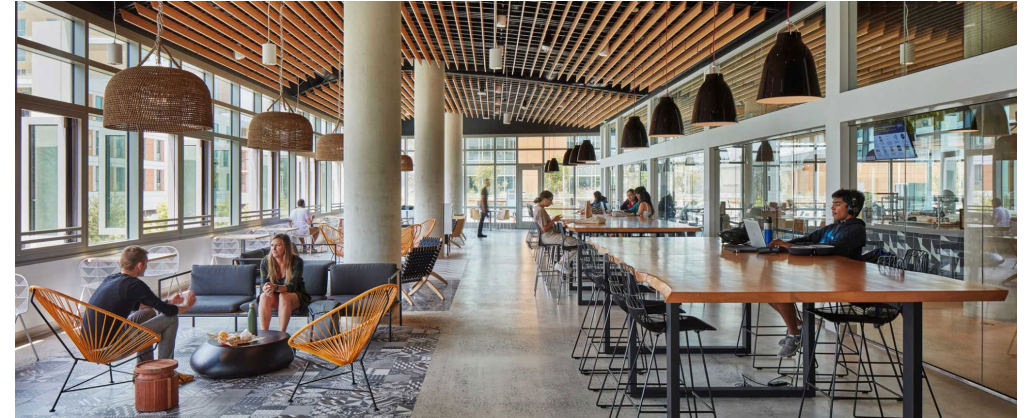


U.S. college campuses have become obesogenic environments.

How do we foreground the smart choice as the easy choice? Our digital and physical environments can prompt better decisions, ...impacting student mental health and academic performance, as well as define life-long habits.



DESIGNING FOR WELLBEING: LIVE-LEARN LAB



2000+ students moved into UC San Diego's North Torrey Pines Living and Learning Neighborhood during the pandemic.

- 8.2%↓ self-reported depression scores
- 11%↑ satisfaction healthy food amenities
- 8.4%↑ mobility satisfaction
- 12.85%↑ social space satisfaction





...ING: This product...
HKS
...ur highest performing
vapor yet
OVUSE|AIT

 Jhiromoto

www.hksinc.com



<https://www.buildingbrainscoalition.org/>

Pacific Plaza Pavilion
Dallas, Texas