



# Search for Solutions: Green Architecture

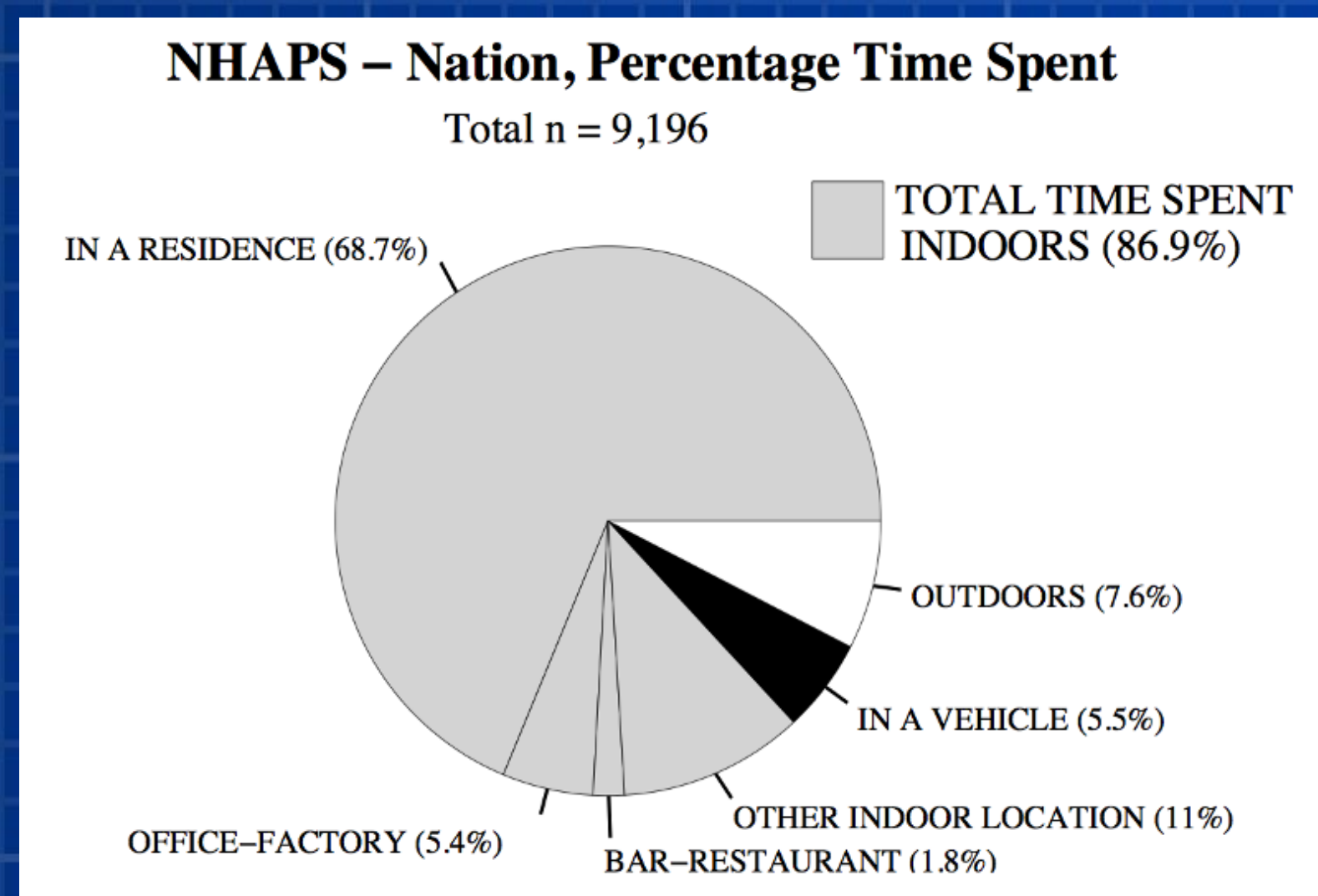
The world is going through human-caused climate change.

One way to curb the carbon is by designing net-zero carbon buildings.



## Introduction

We are creatures of the indoors. We in America grew up safe and secured inside buildings. Considering the fact that we spend almost 90% of our lives inside (1), should we not consider the consequences of such structures on the world?



## The Idea behind Green Architecture

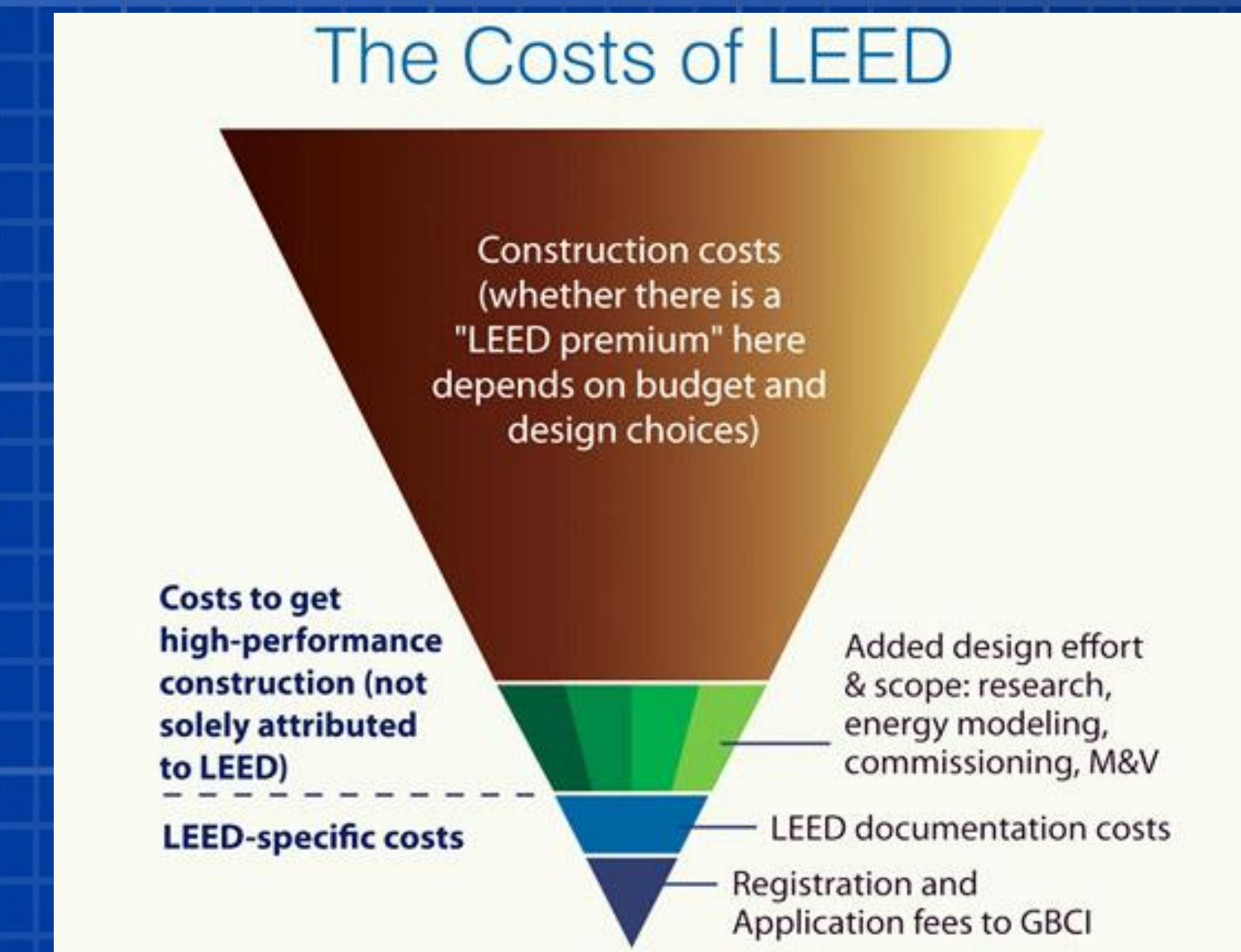
The integration of eco-conscious systems into the construction and operation of a facility



A green building minimizes disturbances and even improves local, regional, and global ecosystems both during and after its construction and service life (2).

## So is this solution worth it?

### Revenues vs Expenditures



While the cost of construction of green architecture is often higher, over the course of the building's lifespan money is saved due to the higher efficiency systems integrated into the building.

## Example: Green roof gardens



Scientists have schemed some *astonishing* ways of producing sustainable buildings.

## Benefits



Cumberland Hall of the University of Maryland, College Park implements green roof gardens.

**Client:**  
CPSG2001 Science & Global Change Sophomore Colloquium

**Client's deadline:**  
November 12, 2018

**Site managers:** Andrew Kret, Liam Vienneau, & Thomas Wun

### Collaborators (fact bibliography):

- (1) Klepeis, N., W. Nelson, and W. Engelmann. 2001. *The National Human Activity Pattern Survey (NHAPS): A resource for assessing exposure to environmental pollutants*. Journal of Exposure Analysis and Environmental Epidemiology **11**: 231-252. doi:10.1038/sj.jea.7500165
- (2) Hwang, B. and J. Tan. 2012. *Green building project management: obstacles and solutions for sustainable development*. Sustainable Development **20**: 335-349. doi:doi/full/10.1002/sd.492

### Contractors (images bibliography):

- Bottom middle and right: <https://smi.biz/carbon-footprint-building-integration-a-w2aaw2kku/>
- Top Middle: <https://www.spc.com/company/capabilities/sustainable-building>
- Graph: <https://bracketsmackdown.com/green-buildings-in-india-ppk.html>
- LEED: <https://inhabitat.com/report-reveals-the-cost-of-leed-certification/>
- Cumberland Hall: <https://psb.umd.edu/about/photos-galleries>