

Local Action Global Impact:

The Universal Language of Green Building

May 21, 2007

High Performance Green Buildings

Dirksen Senate Office Building

Rick Fedrizzi

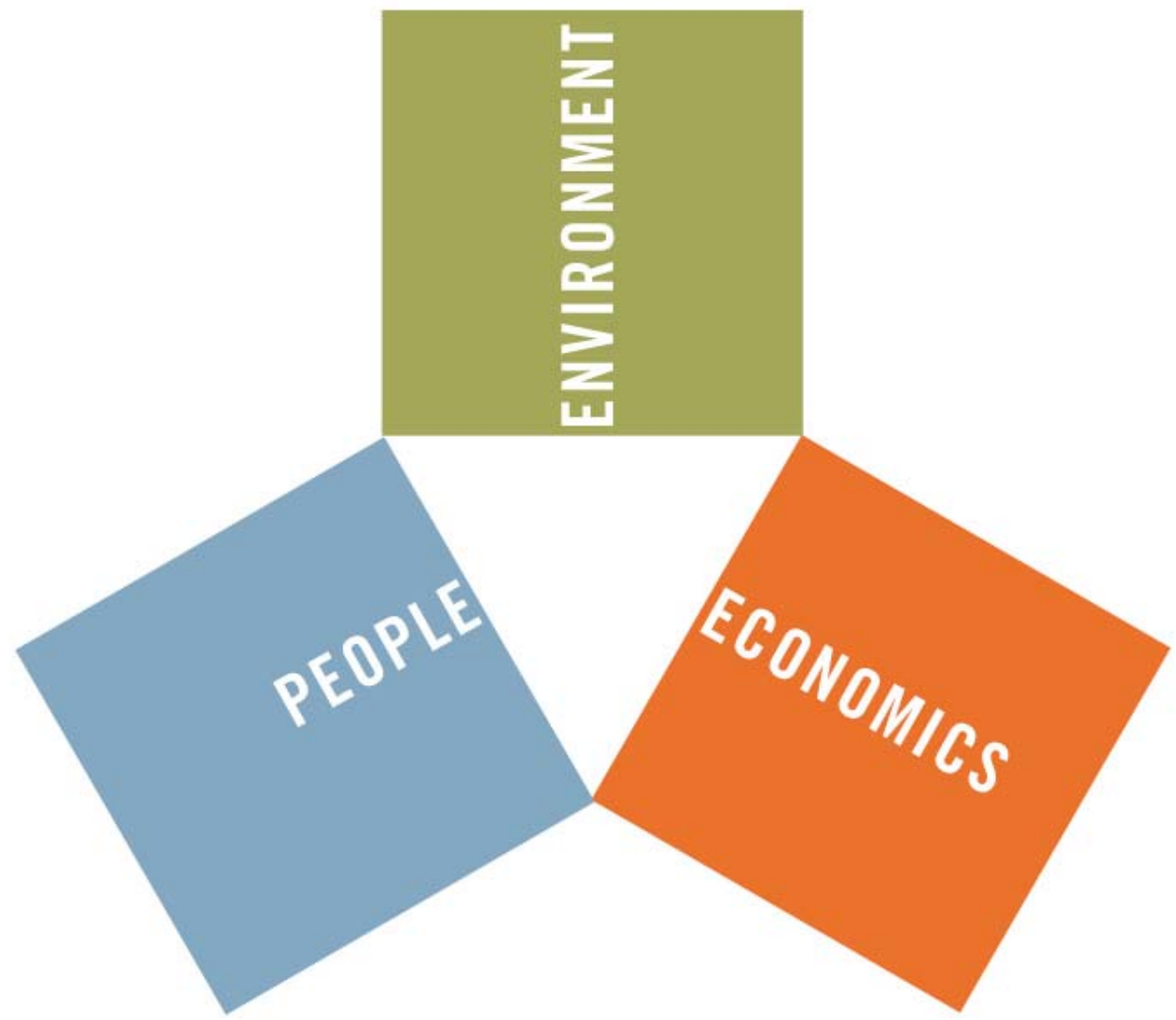
President, CEO &

Founding Chairman

U.S. Green Building Council



The Triple Bottom Line.

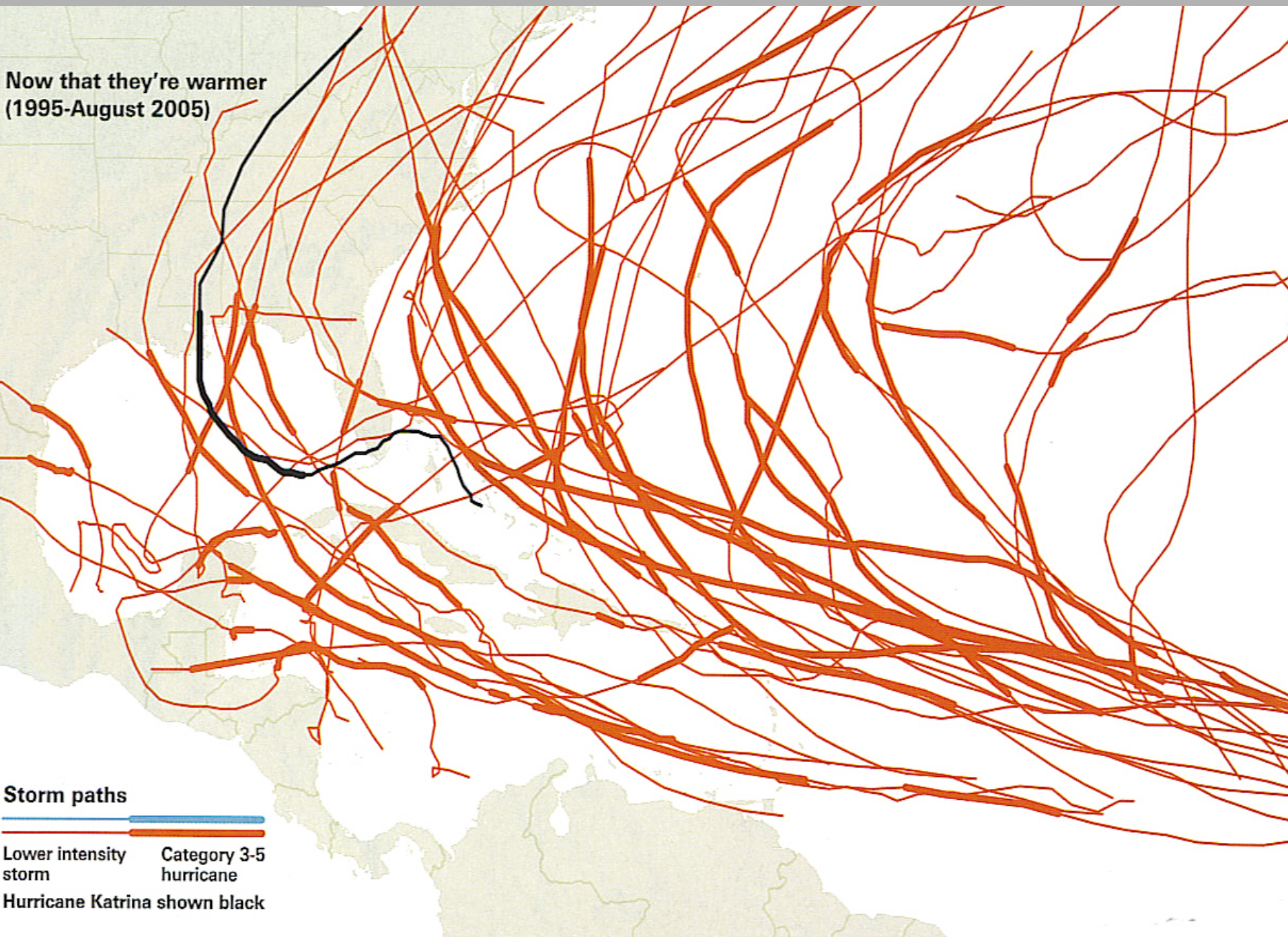


The Triple Bottom Line.

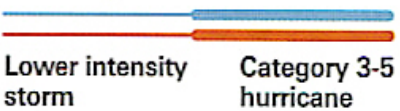
Reduced Environmental Impact.
Peak Efficiency.
Improved Capitalization Rates.
Increased Marketability.
Higher Lease Rates.
Improved Productivity.
Reduced Absenteeism.
Build Green.
Everyone Profits.



Now that they're warmer
(1995-August 2005)



Storm paths



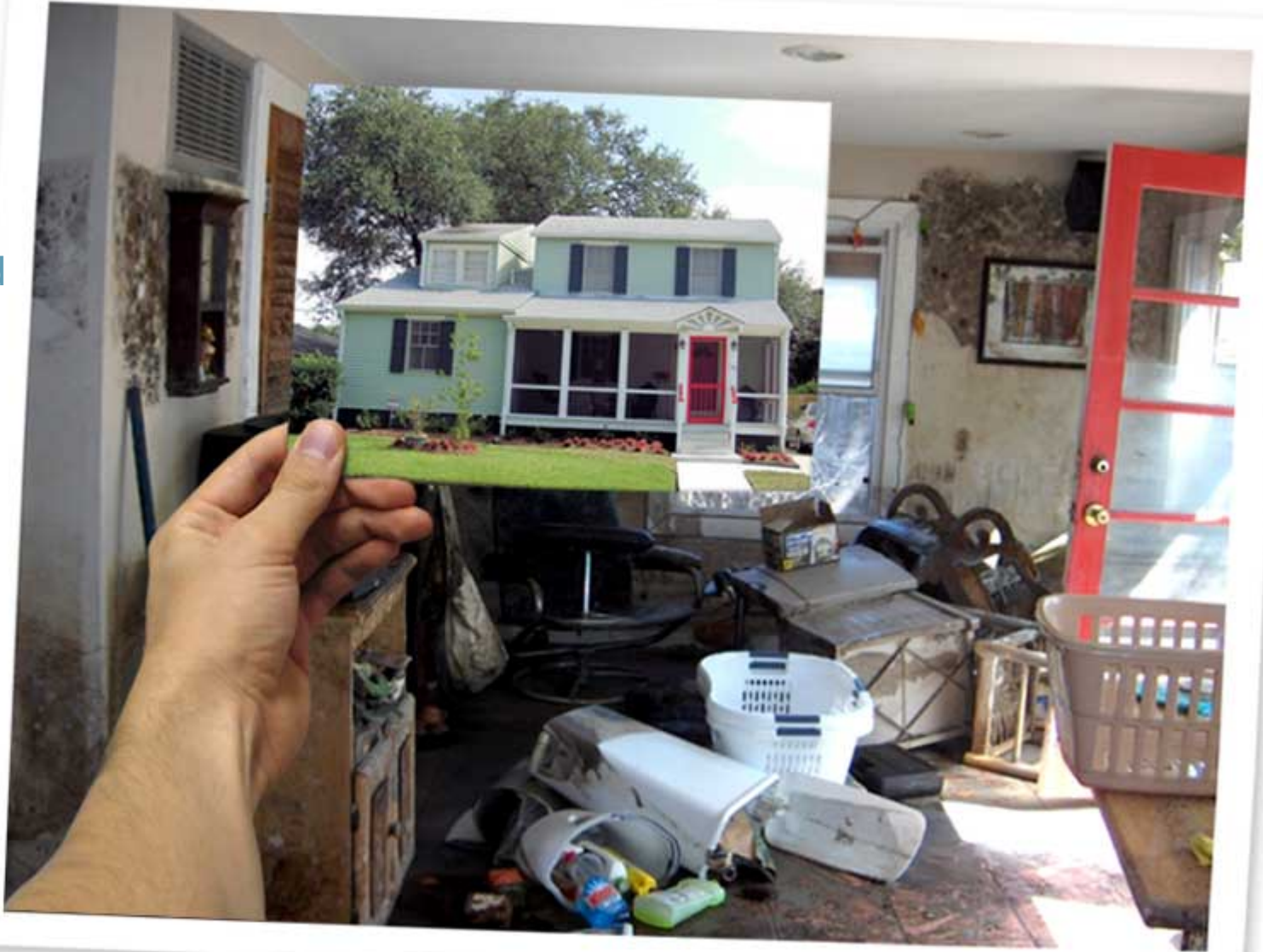
Lower intensity
storm

Category 3-5
hurricane

Hurricane Katrina shown black

Risks of Global Climate Change

\$75 billion in insured losses during 2004 and 2005, including \$45 billion from Hurricane Katrina alone.

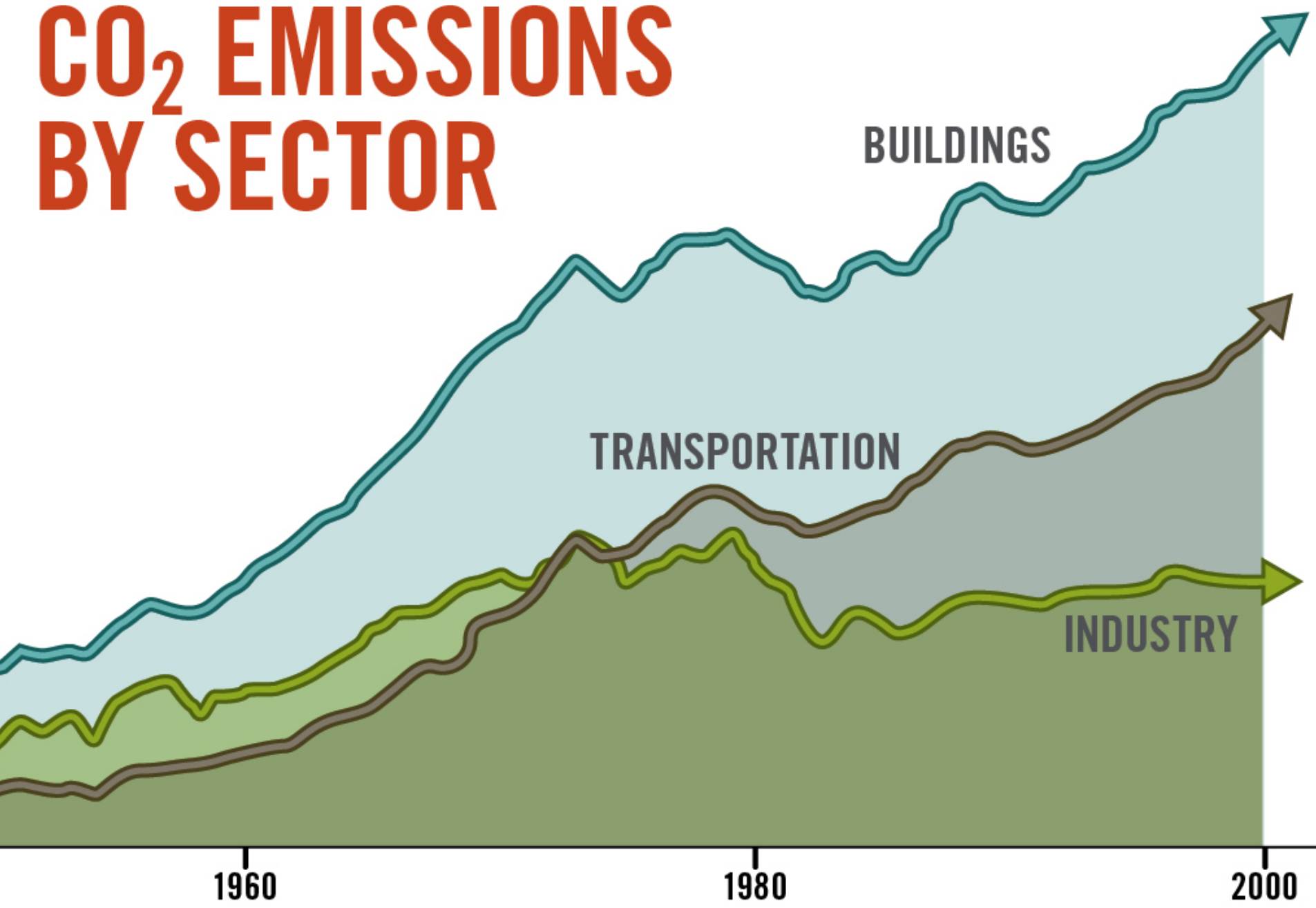




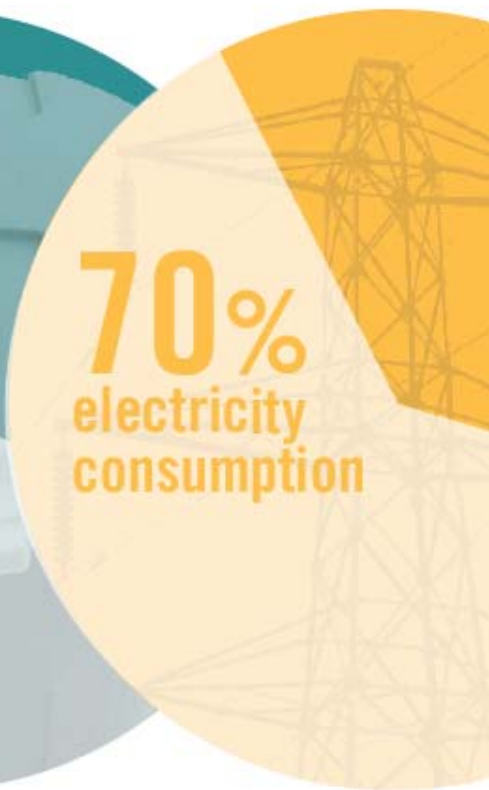
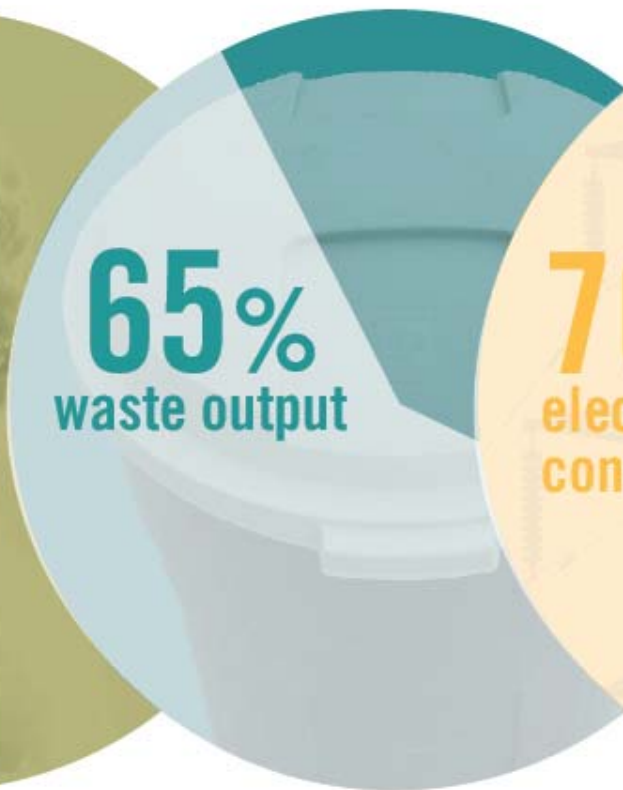
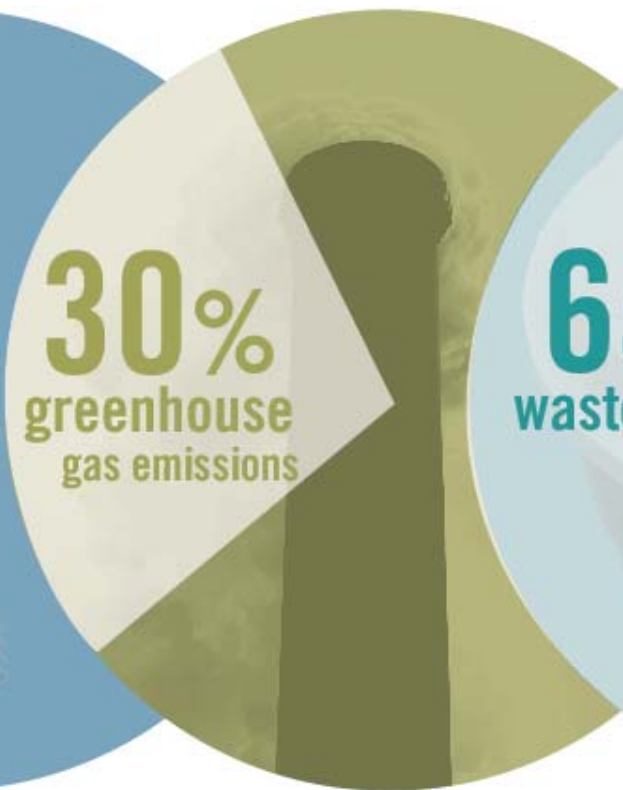
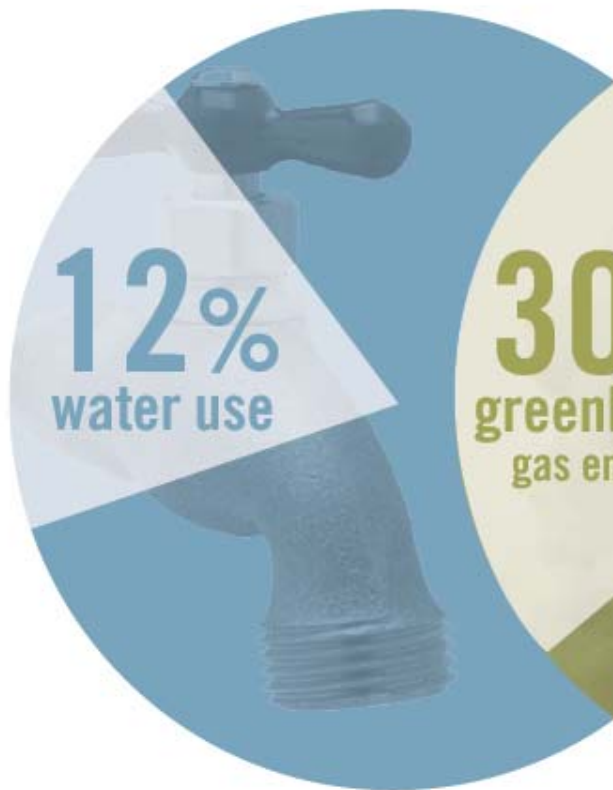
AVERAGE AMERICAN CREATES

10 tons
of carbon dioxide

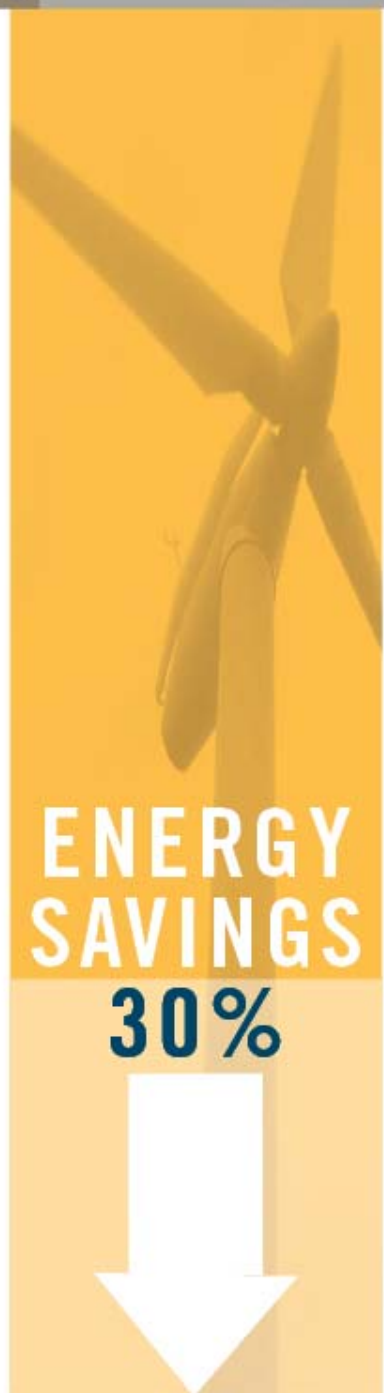
CO₂ EMISSIONS BY SECTOR



U.S. Building Impacts:



Average Savings of Green Buildings



Source:
Capital E

Green buildings emit

40% less CO₂



USGBC



Architects

Building Owners

Federal, Local, and State Governments

Product Manufacturers

Planners

Contractors

USGBC

Engineers

Financial Reps

Utility Managers

Interior Designers

Building Tenants

Landscape Architects

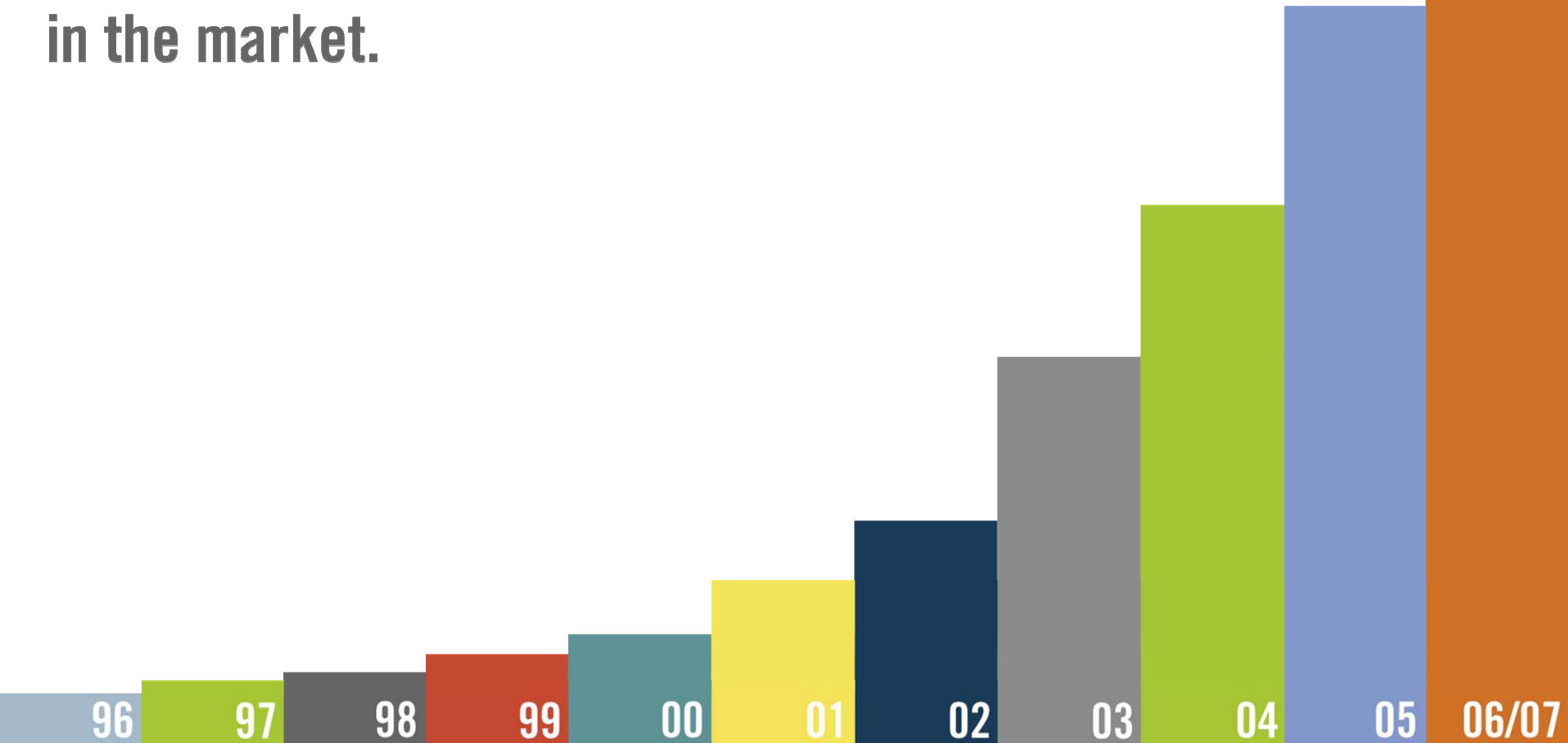
Property Managers

Code Officials



USGBC
membership
growth reflects
the expansion of
green buildings
in the market.

9000 +





U.S. Green Building Council

HEREBY CERTIFIES THAT

36,979

HAVE ACHIEVED THE DESIGNATION OF

LEED® ACCREDITED PROFESSIONAL

DEMONSTRATING THE KNOWLEDGE OF GREEN BUILDING PRACTICE
AND FOR SUCCESSFUL IMPLEMENTATION OF THE LEADERSHIP IN ENERGY
AND ENVIRONMENTAL DESIGN (LEED®) GREEN BUILDING RATING SYSTEM™.

11 federal agencies

22 states

33 schools

66 cities & counties

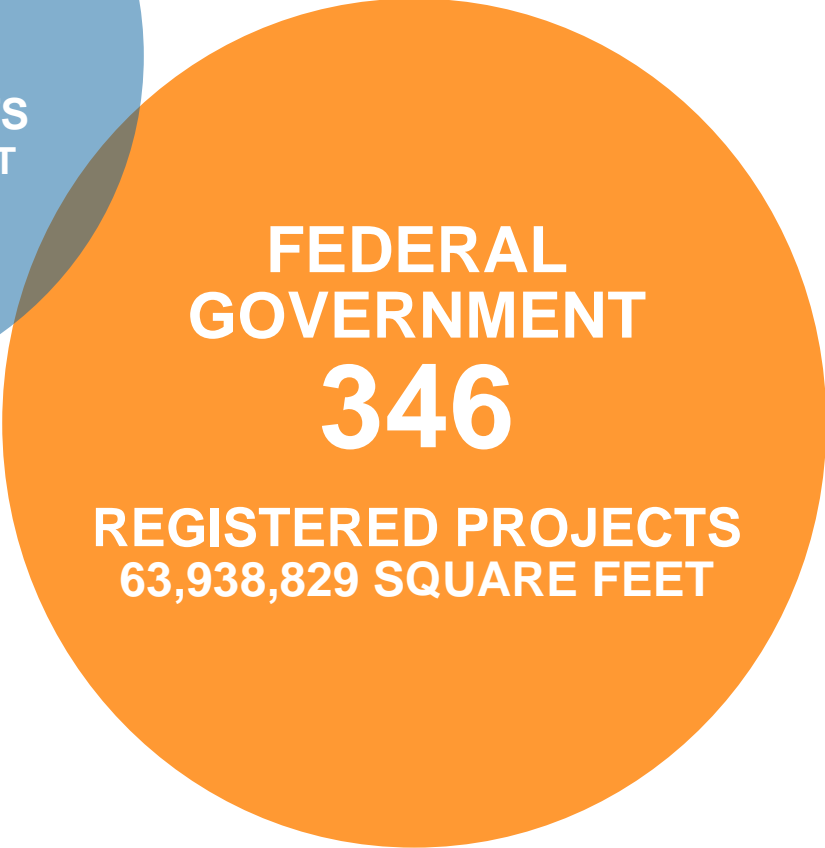
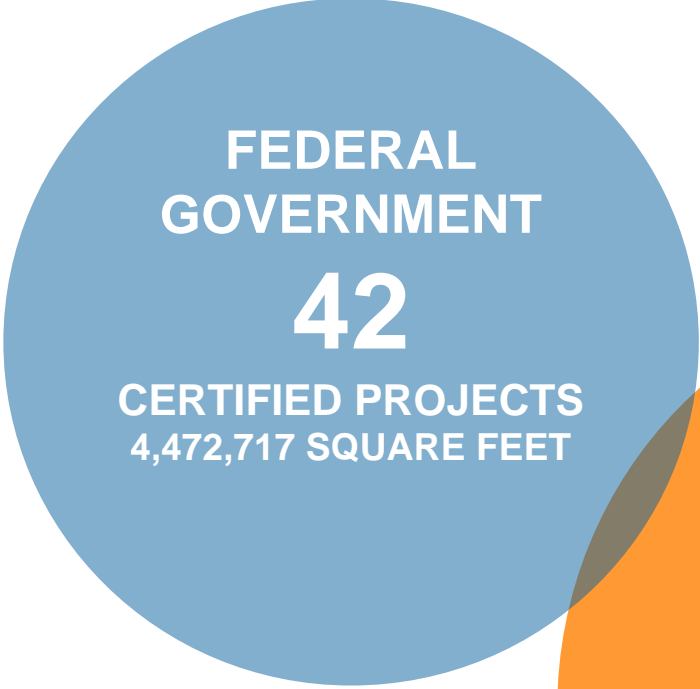


USGBC X 68



**The Federal
Government's
Leadership in
LEED:**

05/07



Case Study EPA

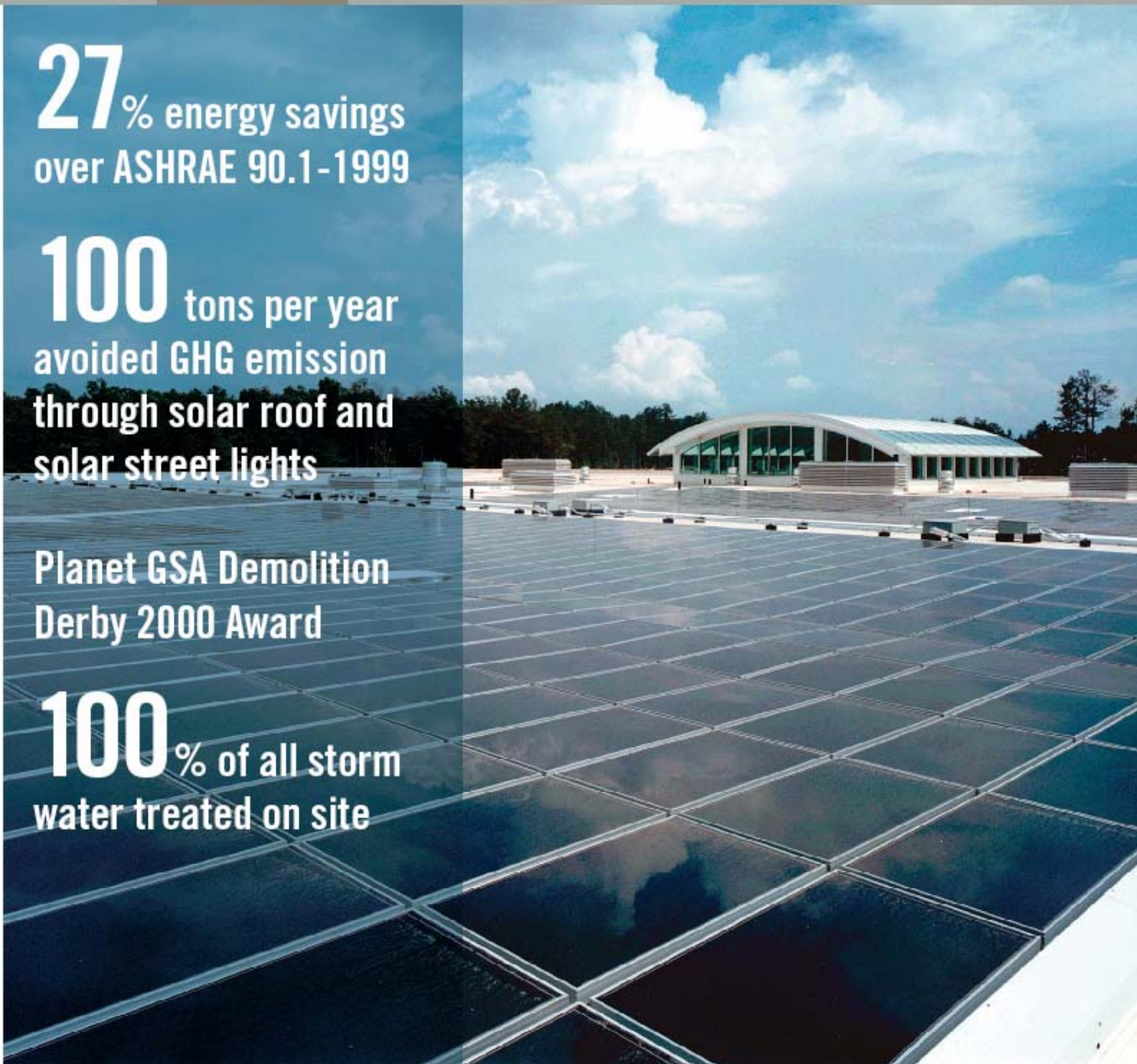
National Computer
Center (NCC)
Research Triangle
Park NC
New construction
LEED v2 Silver
100,000 sq ft

27% energy savings
over ASHRAE 90.1-1999

100 tons per year
avoided GHG emission
through solar roof and
solar street lights

Planet GSA Demolition
Derby 2000 Award

100% of all storm
water treated on site



Case Study National Weather Service

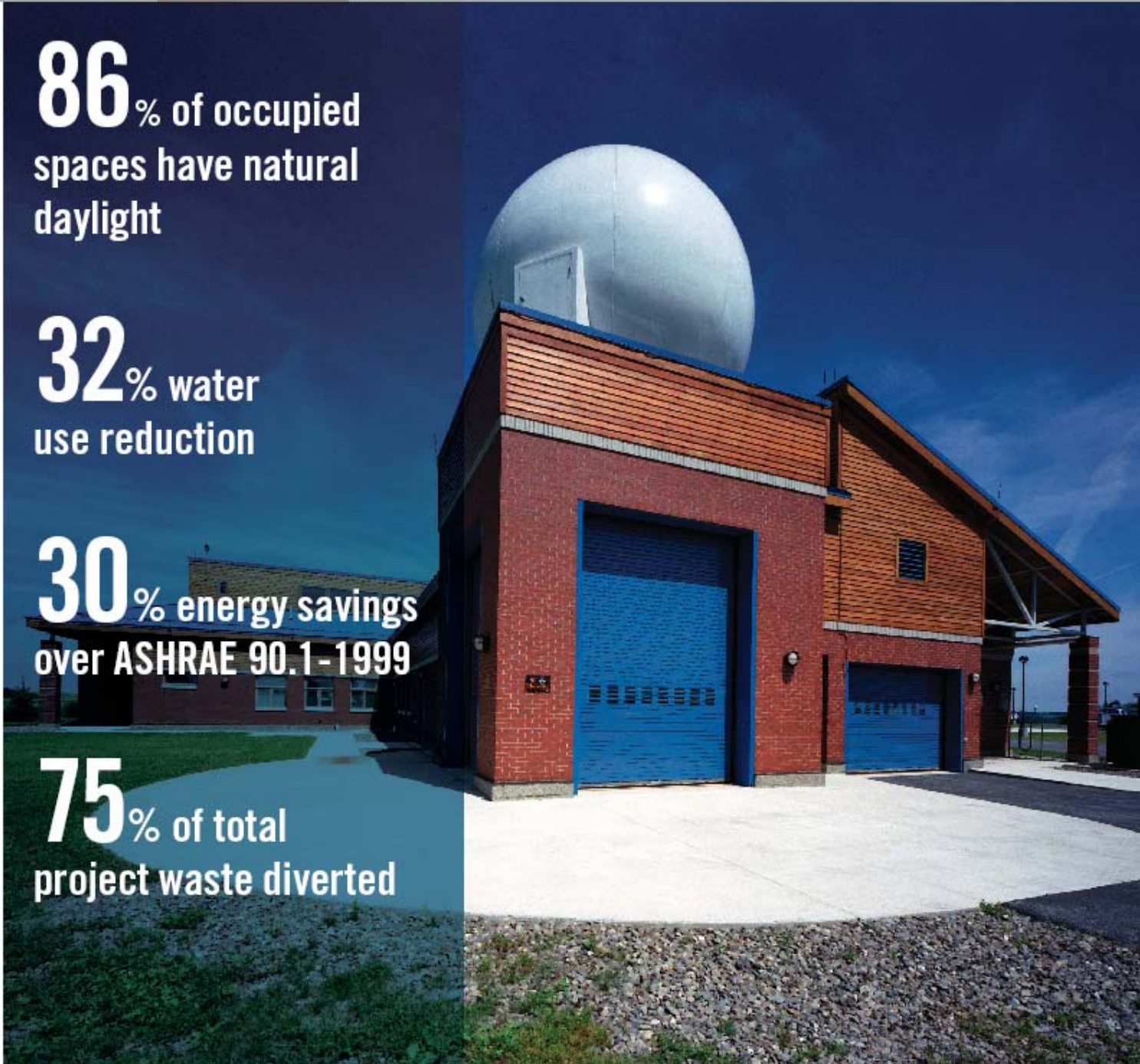
Weather
Forecast Office
Caribou ME
New construction
LEED v2 Silver
8,300 sq ft

86% of occupied
spaces have natural
daylight

32% water
use reduction

30% energy savings
over ASHRAE 90.1-1999

75% of total
project waste diverted



Case Study FAA

Seattle Terminal
Radar Approach
Control Facility
Burien WA
New construction
LEED v2 Gold
52,000 sq ft

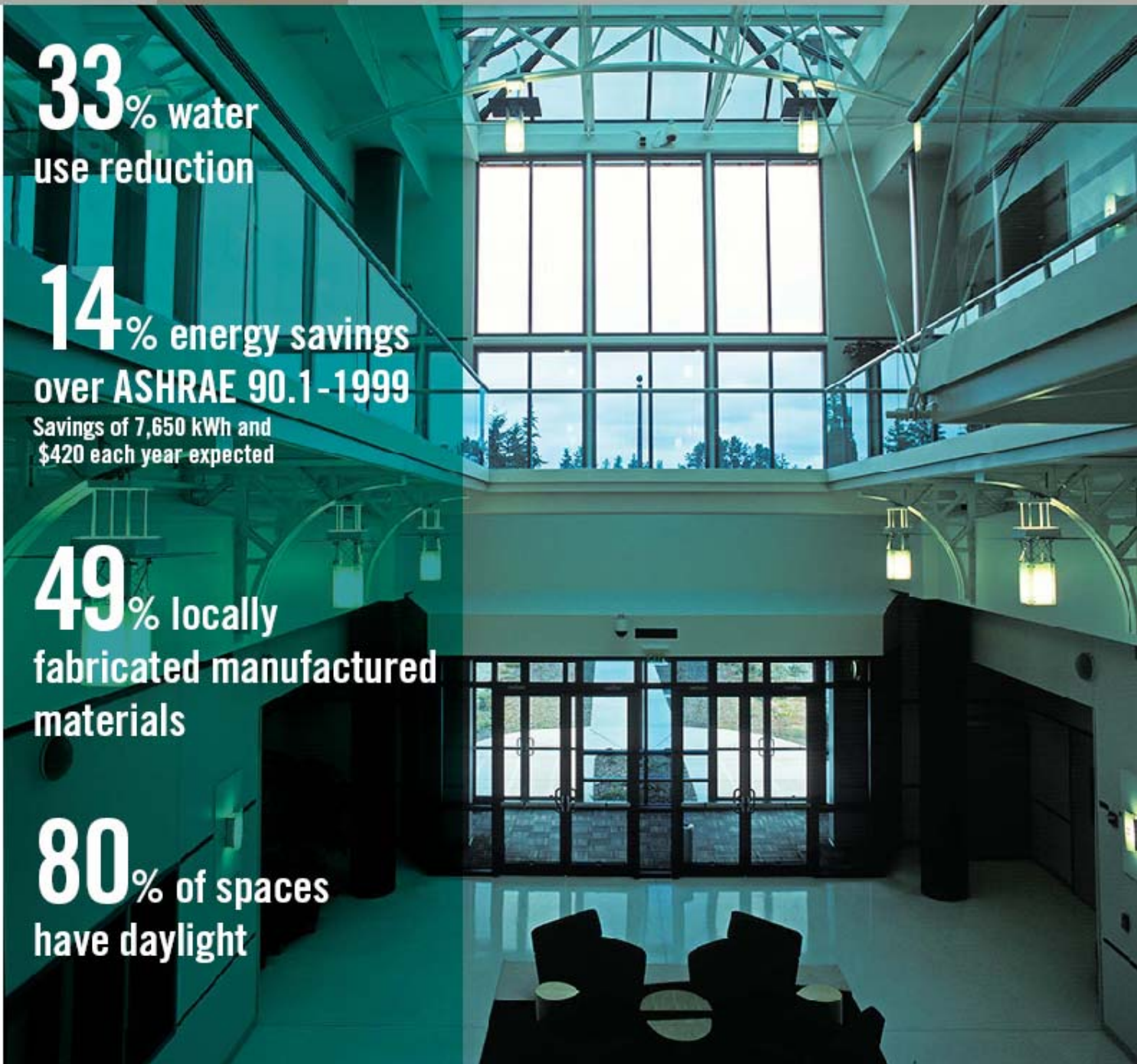
33% water
use reduction

14% energy savings
over ASHRAE 90.1-1999

Savings of 7,650 kWh and
\$420 each year expected

49% locally
fabricated manufactured
materials

80% of spaces
have daylight



Case Study U.S. Department of Transportation

Lakewood CO
New construction
LEED v2 Silver
128,000 sq ft

33% energy savings
over ASHRAE 90.1-1999

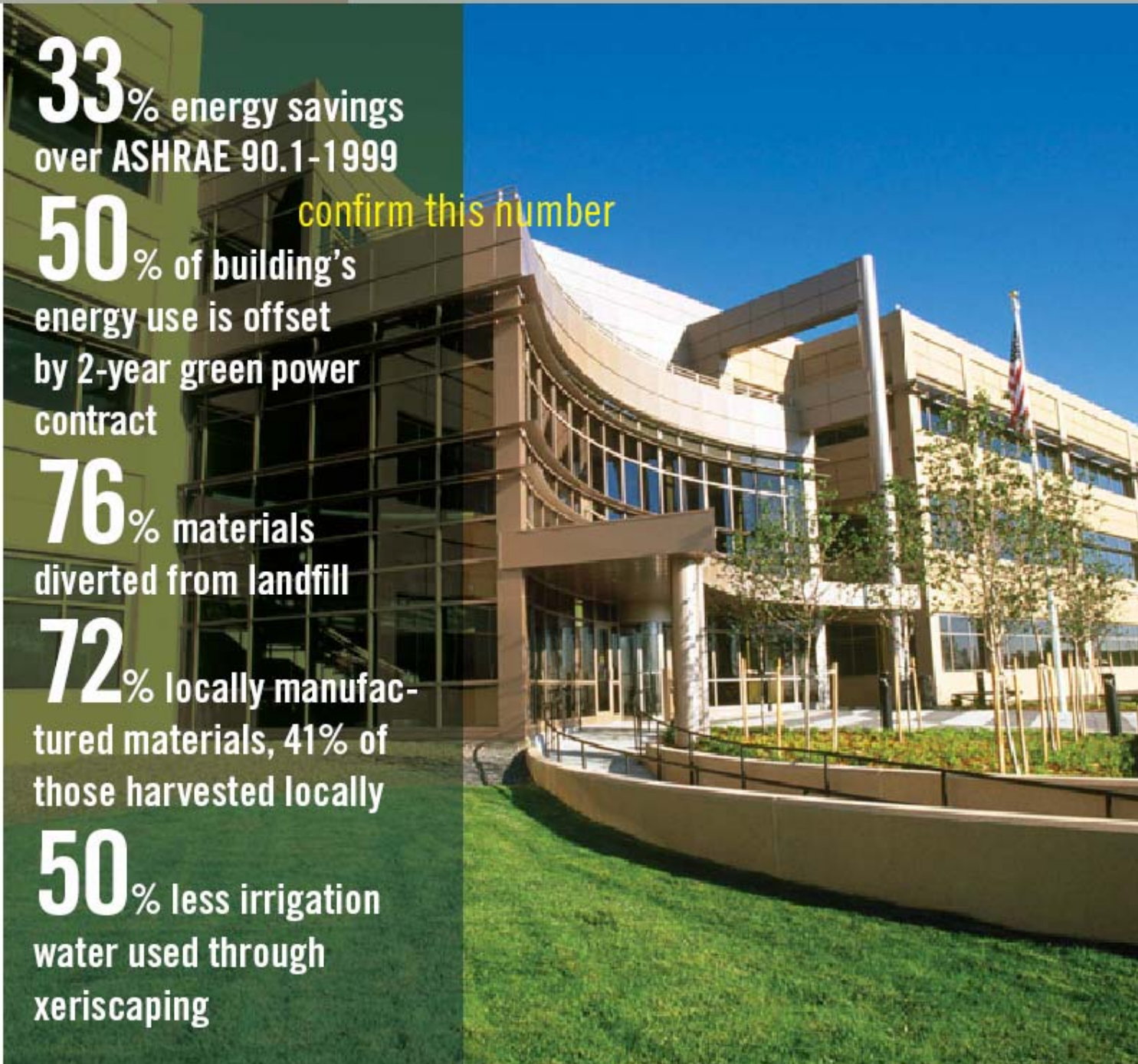
50% of building's
energy use is offset
by 2-year green power
contract

76% materials
diverted from landfill

72% locally manufac-
tured materials, 41% of
those harvested locally

50% less irrigation
water used through
xeriscaping

confirm this number





Chicago
The city adopted “The Chicago Standard” to establish a LEED benchmark for all new city-funded projects, guidelines for private developers, and fast track permitting.

Chicago.



New York.

New York, NY
Following the success of high-profile private LEED projects, in September 2005 the city passed **Int. No. 324-A** requiring LEED Silver for all city owned new construction and renovations over \$2 million



Portland.

**Portland, OR
Adopted LEED
for all city
facilities or
publicly funded
private projects
in 2001**

**Since 2005
requires LEED
Gold for new
public project
and LEED Silver
for all existing
city-owned
buildings**



Austin.

Austin, TX
Early adopter
of municipal
sustainability
initiatives
(1989)

Legislation
passed in 2000
requiring
LEED Silver
rating for all
municipal
buildings



Seattle.

Seattle, WA
Adopted LEED
in 2000 and
currently
requires LEED
Silver rating
all city-owned
projects over
5,000 sq ft

Financial
incentives for
public/private
projects to
conserve water
and energy and
obtain LEED
certification



Grand Rapids.

Grand Rapids, MI
Requires city construction and renovations over 10,000 sq ft or \$1 million to obtain LEED certification

Community Sustainability Partnership between public, private and academic sectors

California.



Executive Order

**Gov.
Schwarzenegger
requires all new &
existing state-owned
facilities to be LEED
Silver**

**95% of greenhouse
gas emissions
occur during
operational
lifespan**



Tax Credits

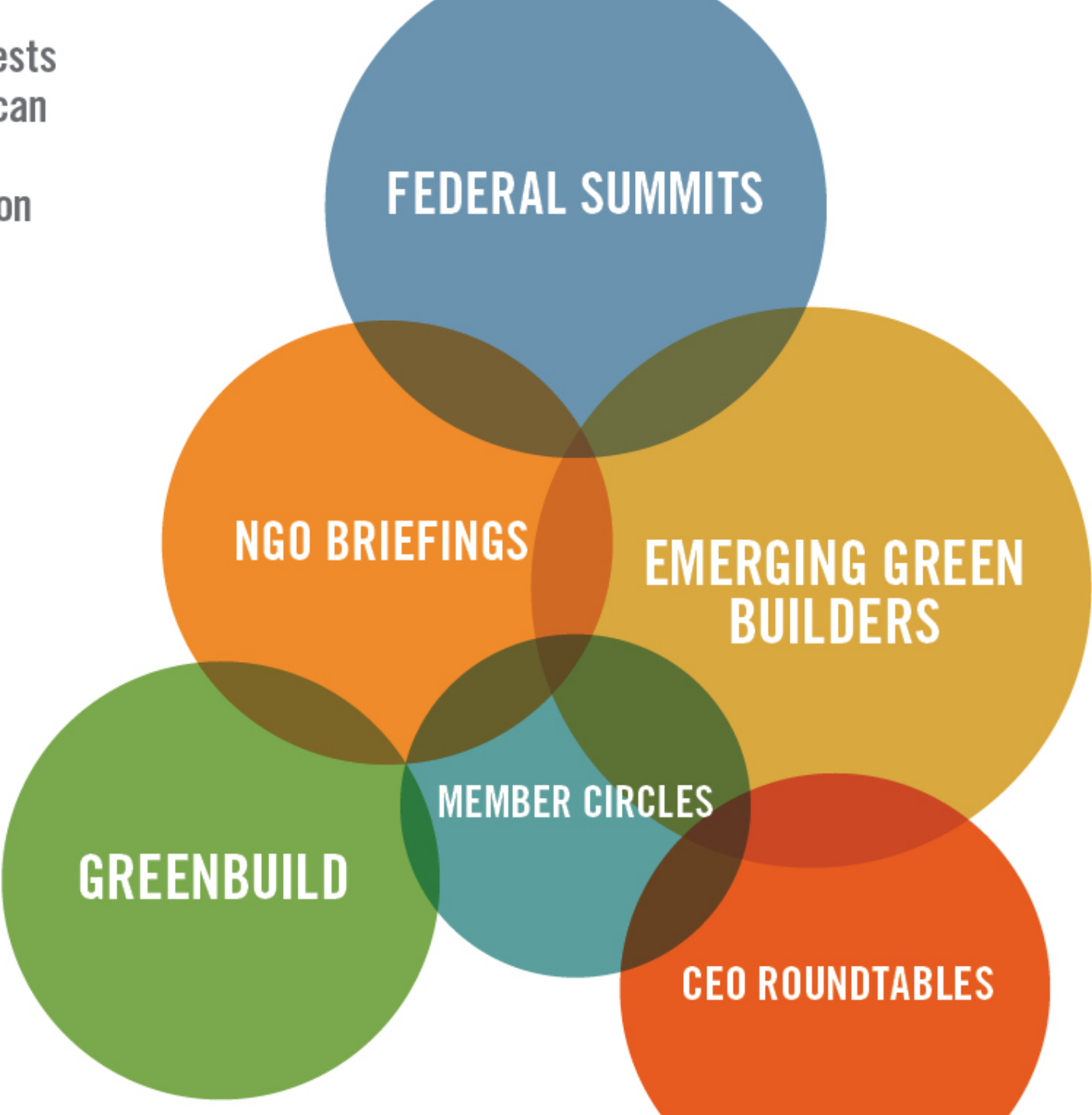
Pre LEED incentive:
1.8 million sf

Post LEED incentive:
20.7 million sf

Period:
less than 1 year

NEVADA.

Linking interests
in ways that can
advance the
larger common
good



A new minimum standard that will serve as a baseline for high performance green building and potentially be incorporated into building code.

USGBC

ASHRAE

IESNA

STANDARD 189

AIA





U.S. GREEN BUILDING COUNCIL

LEED CERTIFIED

2006



immediate
& measurable



Sustainable Sites

Erosion and Sedimentation Control

Age of Building

Green Site and Building Exterior Management

High Development Density Building and Area Alternative Transportation

Reduced Site Disturbance

Stormwater Management

Heat Island Reduction

Light Pollution Reduction



Sustainable Sites

Efficient Water Use

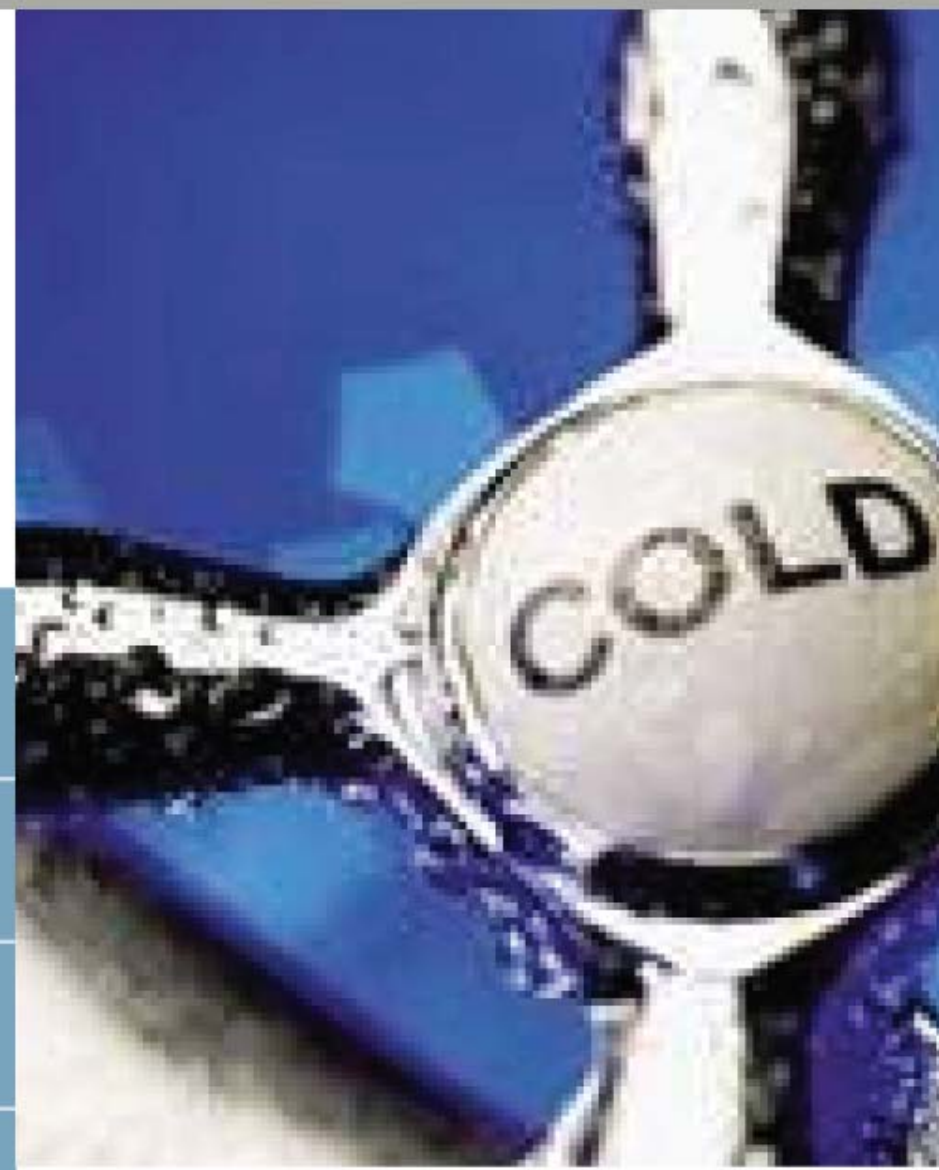
Minimum Water Efficiency

Discharge Water Compliance

Water Efficient Landscaping

Innovative Wastewater Technologies

Water Use Reduction



Sustainable Sites

Efficient Water Use

Energy & Atmosphere



- Existing Building Commissioning
- Minimum Energy Performance
- Ozone Protection
- Optimize Energy Performance
- On/Off Site Renewable Energy
- Building O&M
- Additional Ozone Protection
- Performance Measurement
- Documenting Cost Impacts



Sustainable Sites

Efficient Water Use

Energy & Atmosphere

Materials & Resources



- Source Reduction & Waste Management
- Toxic Material Source Reduction
- Construction Waste Management
- Optimized Use of Alternative Materials
- Optimized Use of IAQ Compliant Products
- Sustainable Cleaning Products
- Occupant Recycling
- Additional Toxic Material Source Reduction
- Recycled Content



Sustainable Sites

Efficient Water Use

Energy & Atmosphere

Materials & Resources

Indoor Environmental Quality



Outside Air Exhaust

Tobacco Smoke Control

Asbestos/PCB Removal

Outdoor Air Delivery Monitoring

Increased Ventilation Construction

IAQ Management Plan

Documenting Productivity Impacts

Indoor Chemical & Pollutant Source Control

Controllability of Systems

Thermal Comfort

Daylighting & Views

Contemporary IAQ Practice

Green Cleaning





A photograph of a modern office interior with a wooden floor, white walls, and a desk with a chair.

**COMMERCIAL
INTERIORS**

114 certified
647 registered

A photograph of a modern multi-story building with a glass facade at night, illuminated from within.

NEW CONSTRUCTION

598 certified
4,517 registered

A photograph of a modern living room interior with a blue armchair and a bookshelf.

HOMES

194 certified
5,931 registered

A photograph of a modern building with a glass facade and a balcony.


**EXISTING
BUILDINGS**

46 certified
434 registered

A photograph of a school building with a covered entrance and people walking outside.

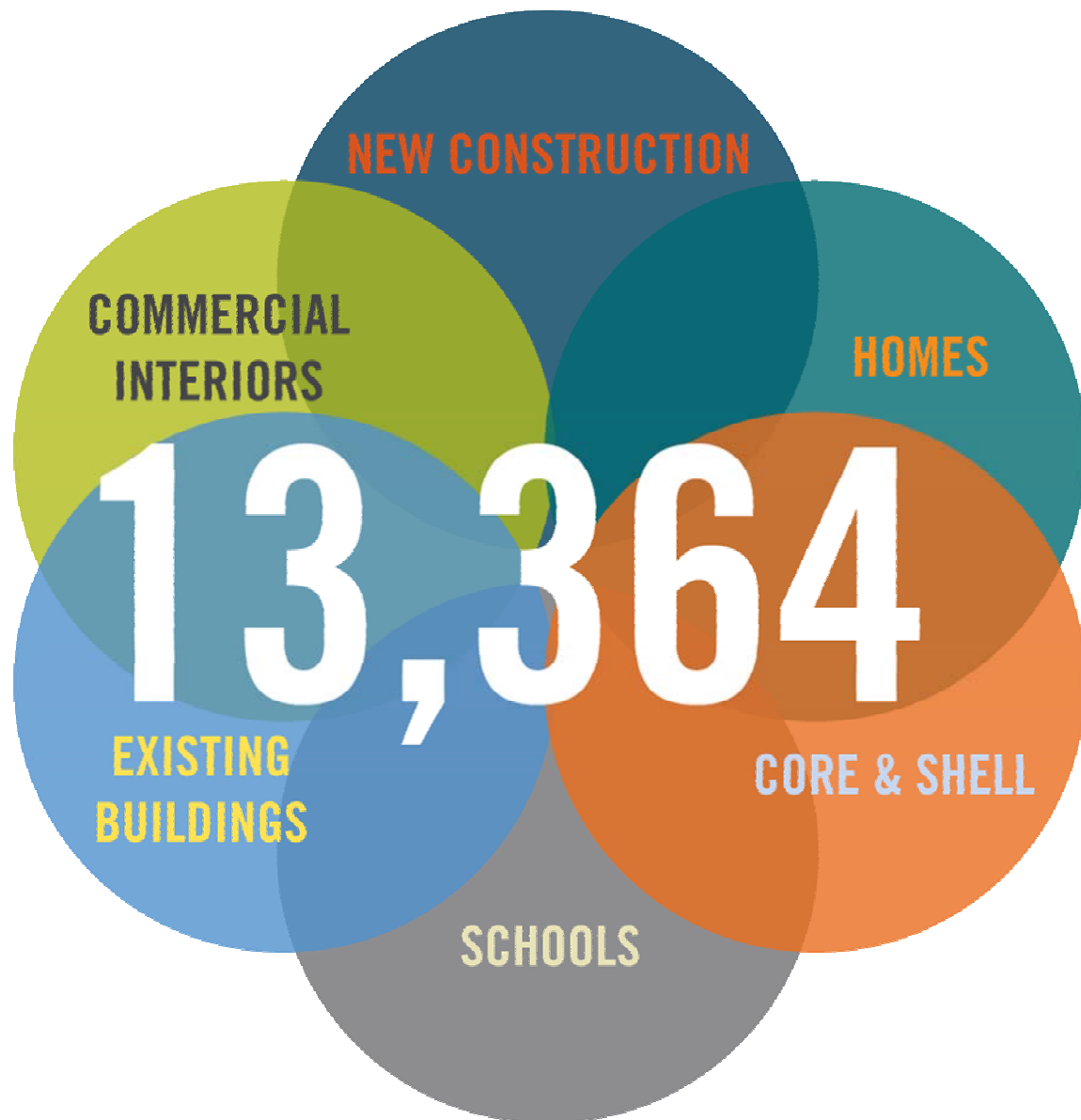
SCHOOLS

32 certified
277 registered

A photograph of a tall skyscraper at night, illuminated from within.

CORE & SHELL

34 certified
540 registered



Increase in
LEED projects
since 2002.

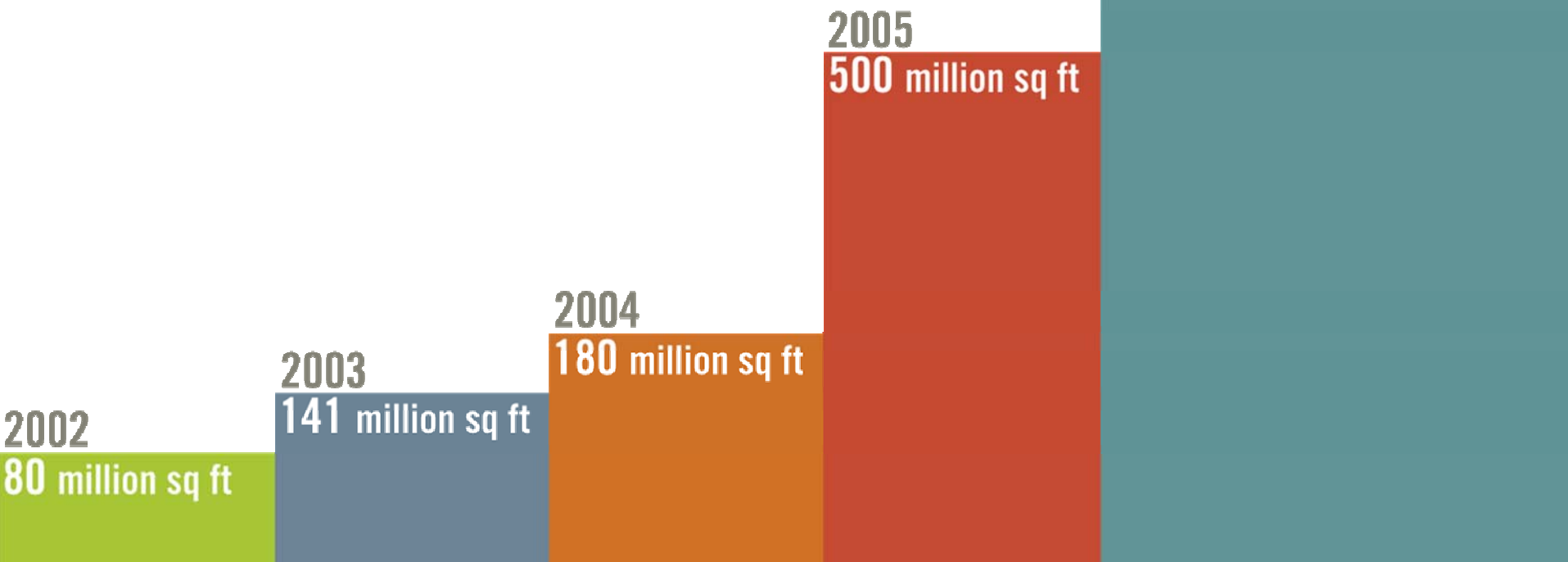
2002
80 million sq ft

2003
141 million sq ft

2004
180 million sq ft

2005
500 million sq ft

2006/2007
More than
1,062 million sq ft



CRACKERS ANIMALS[®]



Nutrition Facts

Serving Size 8 crackers (28g)

Servings Per Container About 2

Amount Per Serving

Calories 120 Calories From Fat 30

% Daily Value*

Total Fat 3.5g **5%**

Saturated Fat 1g **5%**

Trans Fat 0g

Polyunsaturated Fat 1.5g

Monounsaturated Fat 0.5g

Cholesterol 0mg **0%**

Sodium 140mg **6%**

Total Carbohydrate 22g **7%**

Dietary Fiber Less than 1g **3%**

Sugars 7g

Protein 2g

Vitamin A 0% • Vitamin C 0%

Calcium 10% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet.

CONTINUED ON OTHER SIDE



LEED® Facts

**Banner Bank Building
Boise, ID**

LEED for Core & Shell Development
Certification awarded July 27, 2006

Platinum **49***

Sustainable Sites 13/15

Water Efficiency 5/5

Energy & Atmosphere 12/15

Materials & Resources 6/9

Indoor Environmental
Quality 10/13

Innovation & Design 3/5

*Out of a possible 62 points

Increased Productivity.

SCHOOLS

20%
BETTER TEST
PERFORMANCE

HOSPITALS

2 ½ DAY
EARLIER
DISCHARGE

RETAIL

INCREASE
IN SALES PER
SQUARE FOOT

FACTORIES

INCREASED
PRODUCTION

OFFICES

2-16%
PRODUCTIVITY
INCREASE



immediate
& measurable



Case Study The Willow School Phase 1

Willow School
Gladstone, NJ
owner

K-12 Education
13,866 sq ft

LEED Gold

25%
energy savings

34%
water savings

84%
waste diverted
from landfill



Case Study
Milton Academy
Schwarz
Student Center

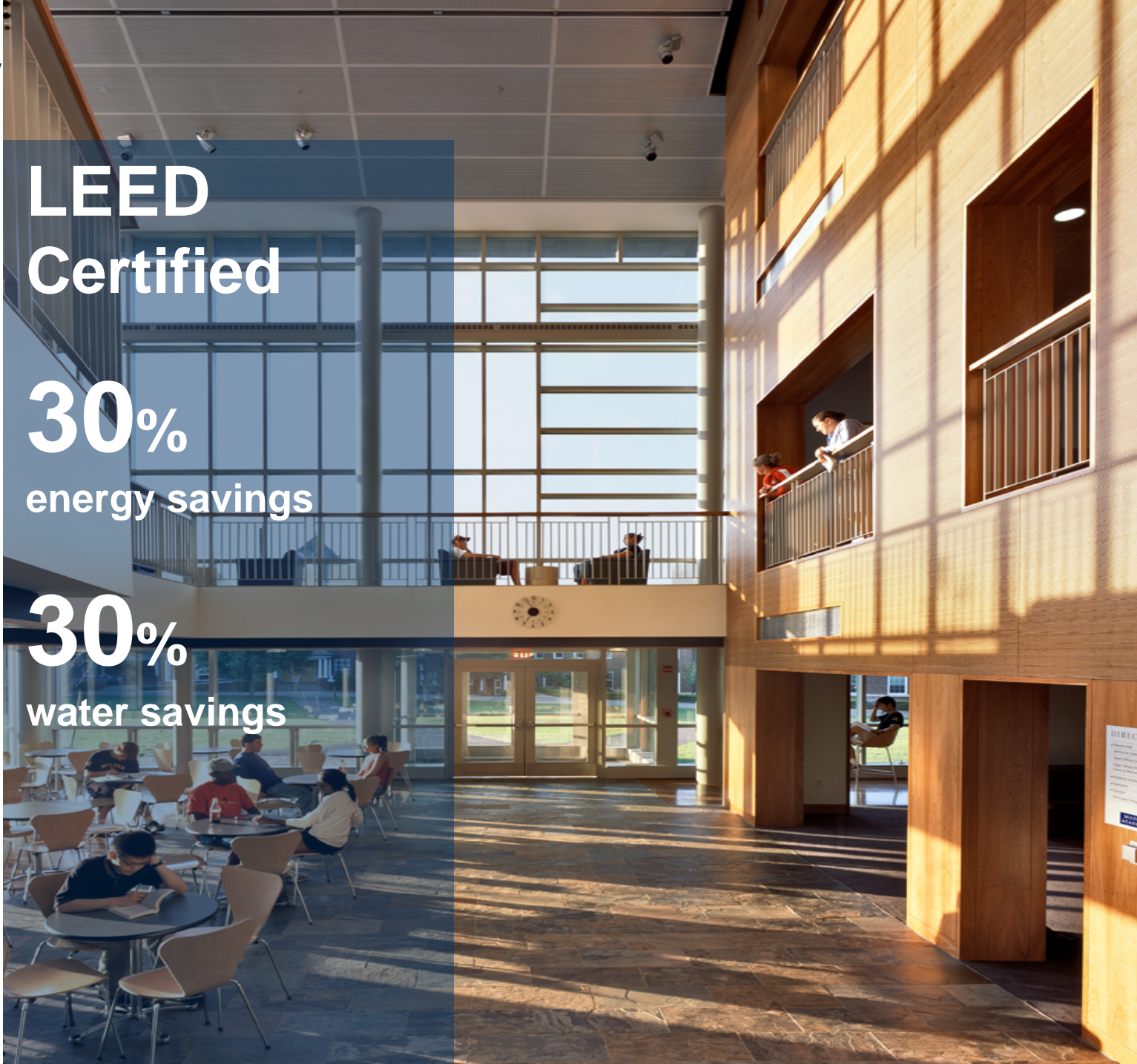
Milton Academy
Milton, MA
owner

K-12 Education
50,984 sq ft

LEED
Certified

30%
energy savings

30%
water savings



Case Study Combined Transportation Emergency & Communications Center

City of Austin
owner/manager

14 acre "mission
critical" emergency
response campus
80,600 sq ft

LEED Silver

25% energy savings

100% of irrigation is reclaimed water

12% recycled content site is redeveloped brownfield



Case Study

20 River Terrace The Solaire

Battery Park
City Authority
owner

27-story high-rise
apartment building
386,000 sq ft

LEED Gold

67%

energy savings

88%

water savings

93%

construction
waste salvaged



Case Study
SUGEN, Inc.
Building 3

SUGEN, Inc.
San Francisco, CA
owner

Laboratory
67,674 sq ft

LEED Gold

46%
energy savings

36%
water savings

82%
waste diverted
from landfill



Case Study The Chicago Center for Green Technology

Chicago Dept.
of the Environment
owner/operator

Multi-use:
government and
commercial offices,
assembly and
educational
40,000 sq ft

LEED Silver

40% energy savings

50% of storm water is reclaimed

84% construction waste salvaged



LEED for Homes



**52 Baldwin Road
Freeport, ME**

LEED Silver



Lot 20
Millstream
Subdivision

Case Study
Ford Rouge
Visitor Center

Ford Motor Company
owner/manager

visitor center
31,200 sq ft

LEED Silver

N/A

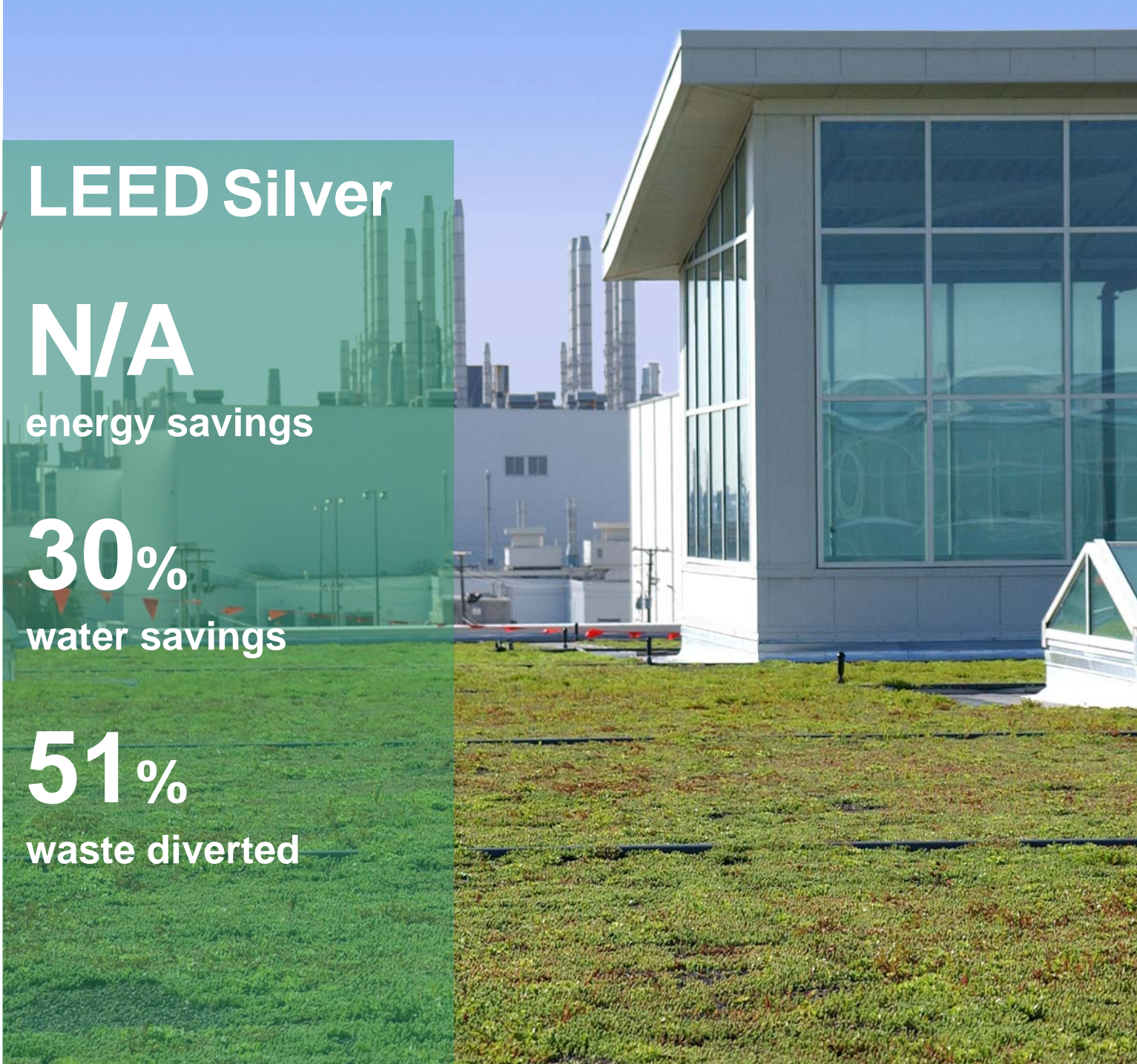
energy savings

30%

water savings

51%

waste diverted



Case Study Seven World Trade Center

Silverstein
Properties, Inc.
developer

High-rise
commercial
office building
1.7 million sq ft

LEED Gold

17% energy savings

53% water savings

75% construction waste salvaged



Case Study REI Portland

Recreational
Equipment, Inc.
Portland, OR
owner

Retail
37,448 sq ft

LEED Gold

32%
water savings

96%
waste diverted
from landfill



Case Study Calvin College Bunker Interpretive Center

Calvin College
owner

Multiple use
5,270 sq ft

LEED Gold

60% energy savings

74% water savings

84% construction waste salvaged



Case Study Oregon Convention Center

Oregon Convention
Center
owner

Largest convention
center in NW
1,000,000 sq ft

LEED Certified

30% energy savings (over Oregon code)

39% water savings

80% construction waste salvaged



Case Study City of Seattle Justice Center

City of Seattle
owner

Municipal courts
and police
headquarters
288,000 sq ft

LEED Silver

33% energy savings

Rainwater reclaimed for irrigation

88% construction waste salvaged



Case Study Vancouver Port Authority Offices

Vancouver
Port Authority
Vancouver, BC
Canada
owner

Offices
55,000 sq ft

LEED Gold

37%
energy savings

40%
water savings

70%
waste diverted
from landfill



Case Study Chong Partners Architecture

Chong Partners
Architecture
San Francisco, CA
owner

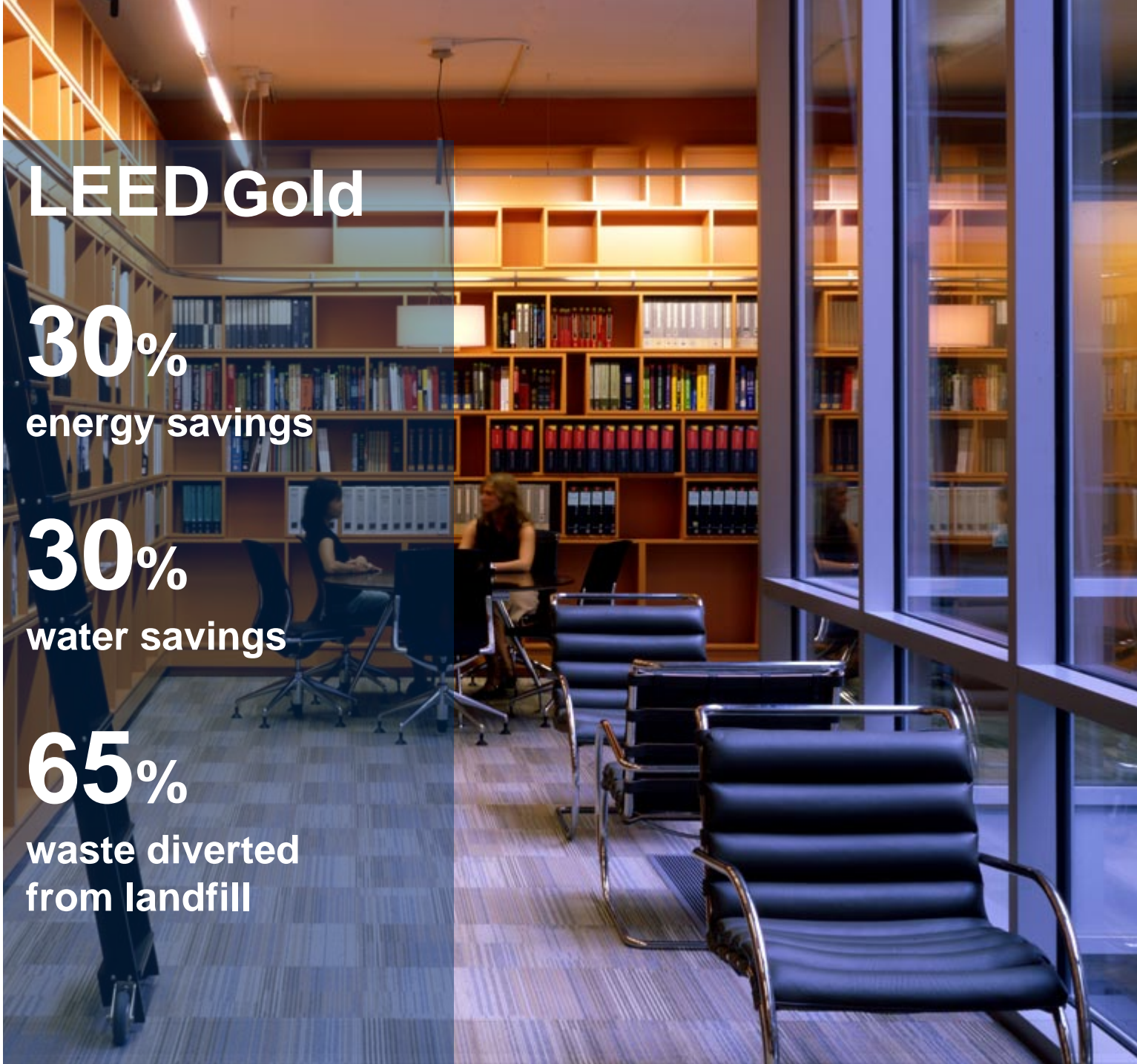
Commercial office
43,254 sq ft

LEED Gold

30%
energy savings

30%
water savings

65%
waste diverted
from landfill



Case Study Fossil Ridge High School

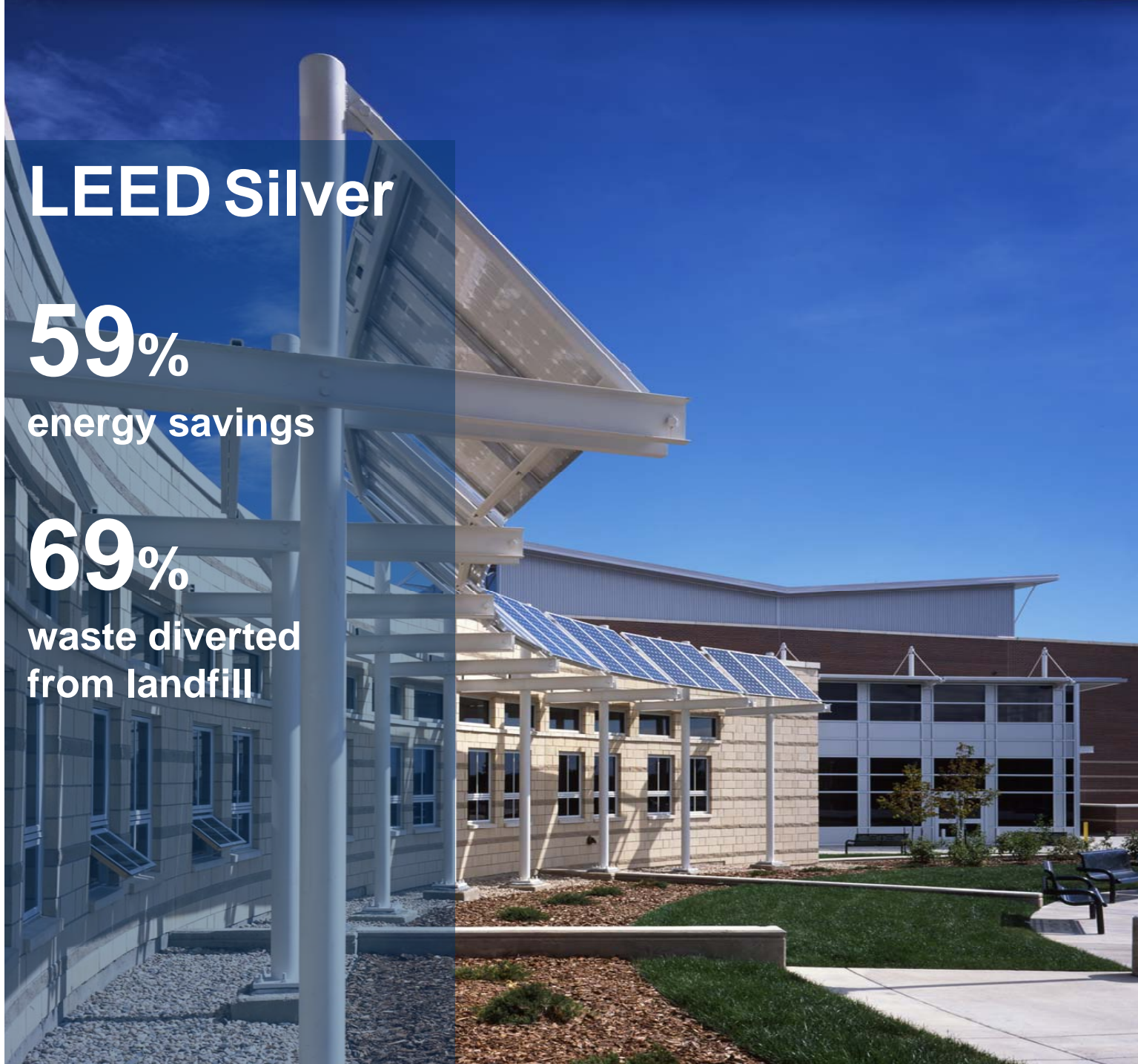
Poudre School
District
Fort Collins, CO
owner

K-12 Education
289,100 sq ft

LEED Silver

59%
energy savings

69%
waste diverted
from landfill



green building

ACCELERATING GREEN COMMUNITIES

CHICAGO

NOVEMBER 7-9 2007





CHANGE





50% reduction

CO₂



Energy &
optimization

2+

In 2007, we're offering another incentive that can provide an immediate measure of energy and carbon reductions:

**certified
CORE AND SHELL**

**certified
NEW CONSTRUCTION**

FREE EB REGISTRATION







Offset program

Zero CO₂



CO₂



