



Greening America's Schools

New & Existing – Through LEED

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Rob Van Der Like, CSDP, CEM, LEED® AP
rvanderlike@cadmusgroup.com (352) 694-2478

**What is a green school and why
would we want one?**

What is a green school and why would we want one?

- **Healthier and safer indoor environment for students, teachers, and staff**
- **More responsive to local, regional, and global environmental needs**
- **More economically efficient**

What is the value of ...

sustainable purchases that benefit the
local community and region?

reduced toxic and poisonous materials?

reduced potable water use?

improved IAQ?

How do you measure it?

Is there a benefit to the local
community for ...

habitat protection?

reduced demand on local water and
waste water utilities?

recycling?

reduced potable water use?

reduced pollution?

reduced demand on local landfill?

**ENERGY
USE**

30-50%

**CARBON
EMISSIONS**

35%

**WATER
USE**

40%

**SOLID
WASTE**

70%

Average Savings of Green Buildings

CASE STUDY
30 Schools
Studied

33.4%

Average direct
energy savings

50%

Average indirect
energy savings

32.1%

Average water
savings



Architects

Product
Manufacturers

Building
Owners

Federal,
Local,
and State
Governments

Non Profit
Leaders

Planners



Engineers

Financial
Planners

Interior
Designers

Landscape
Architects

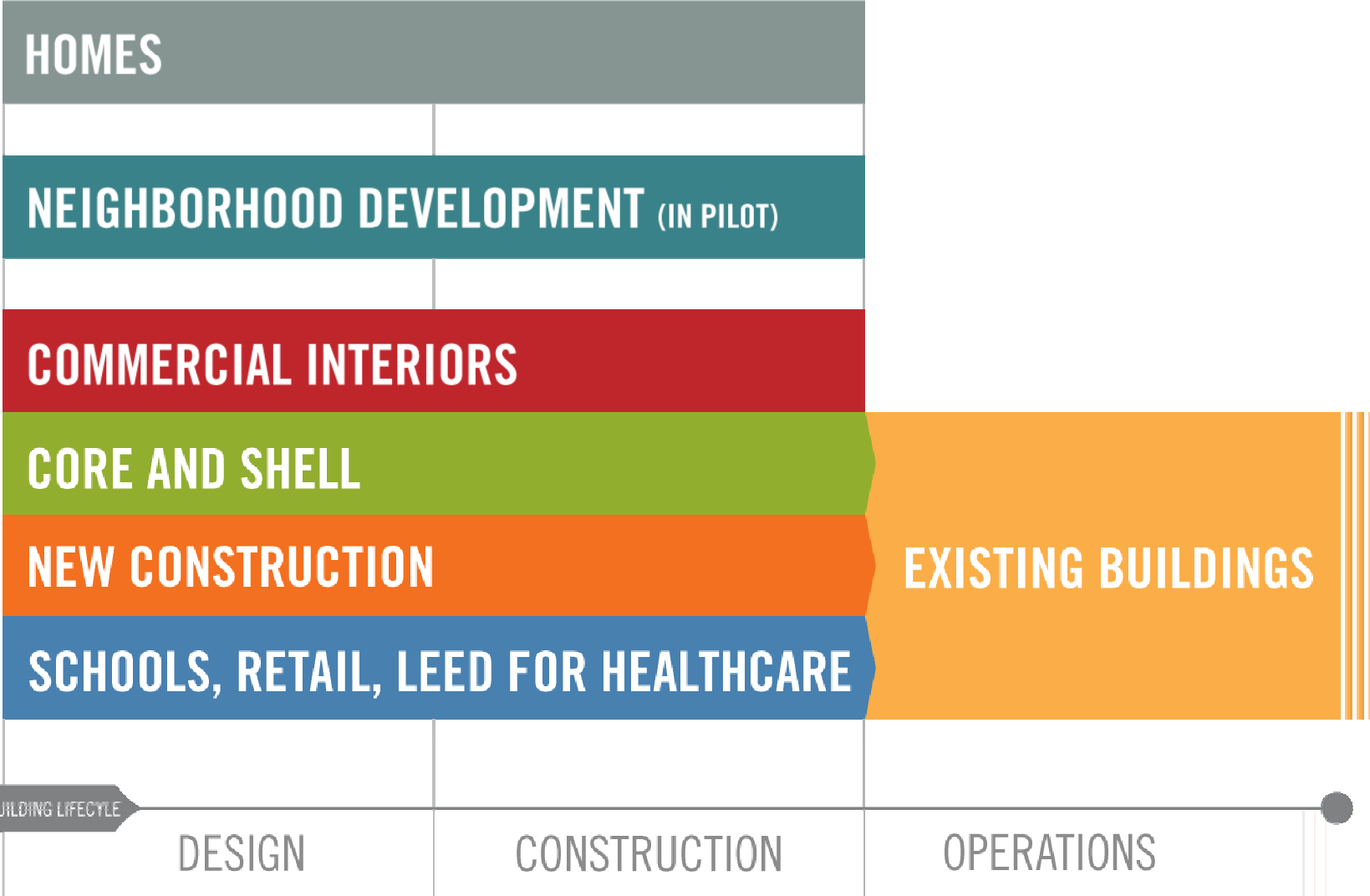
Utility
Managers

Code
Officials

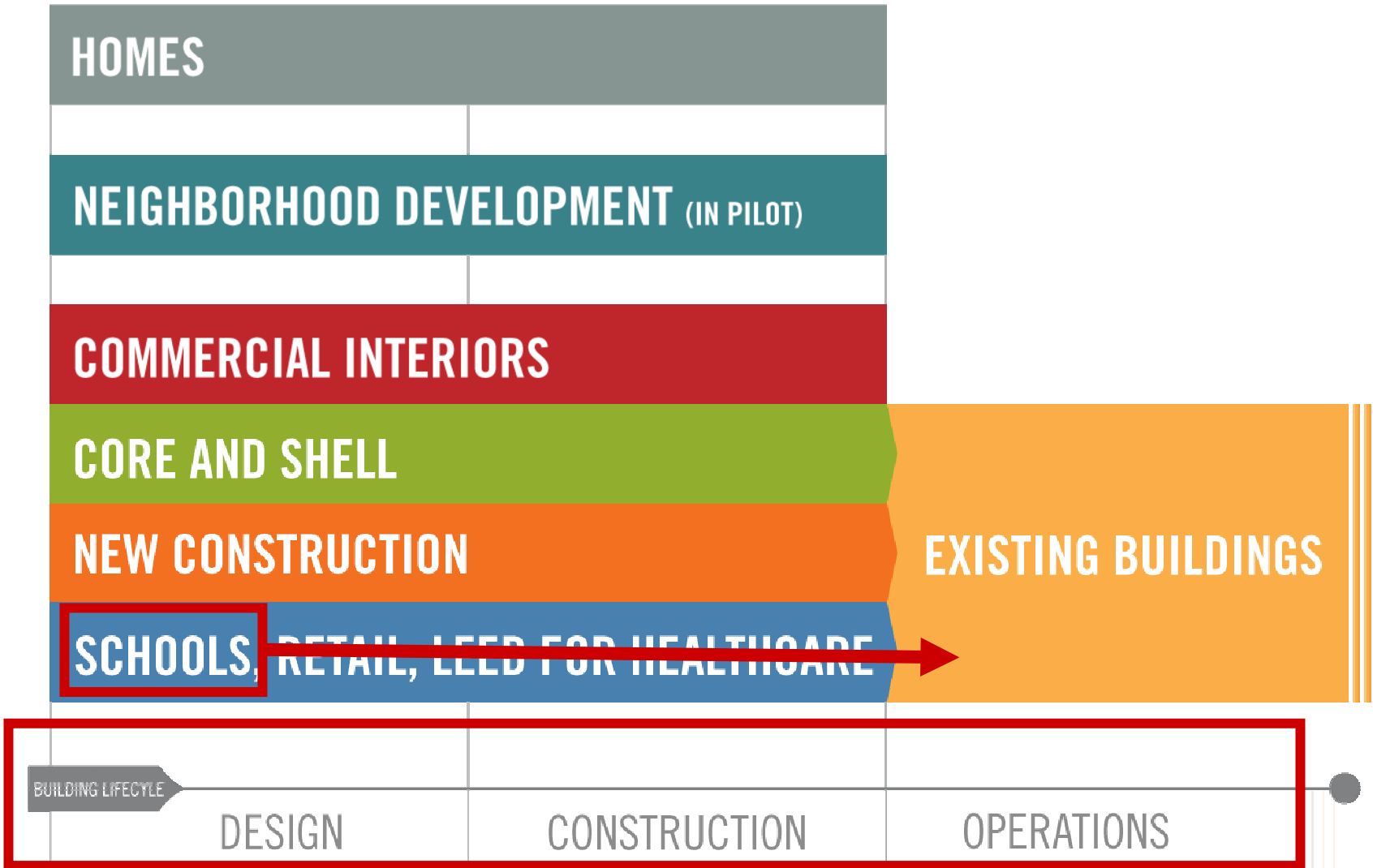
Property
Managers

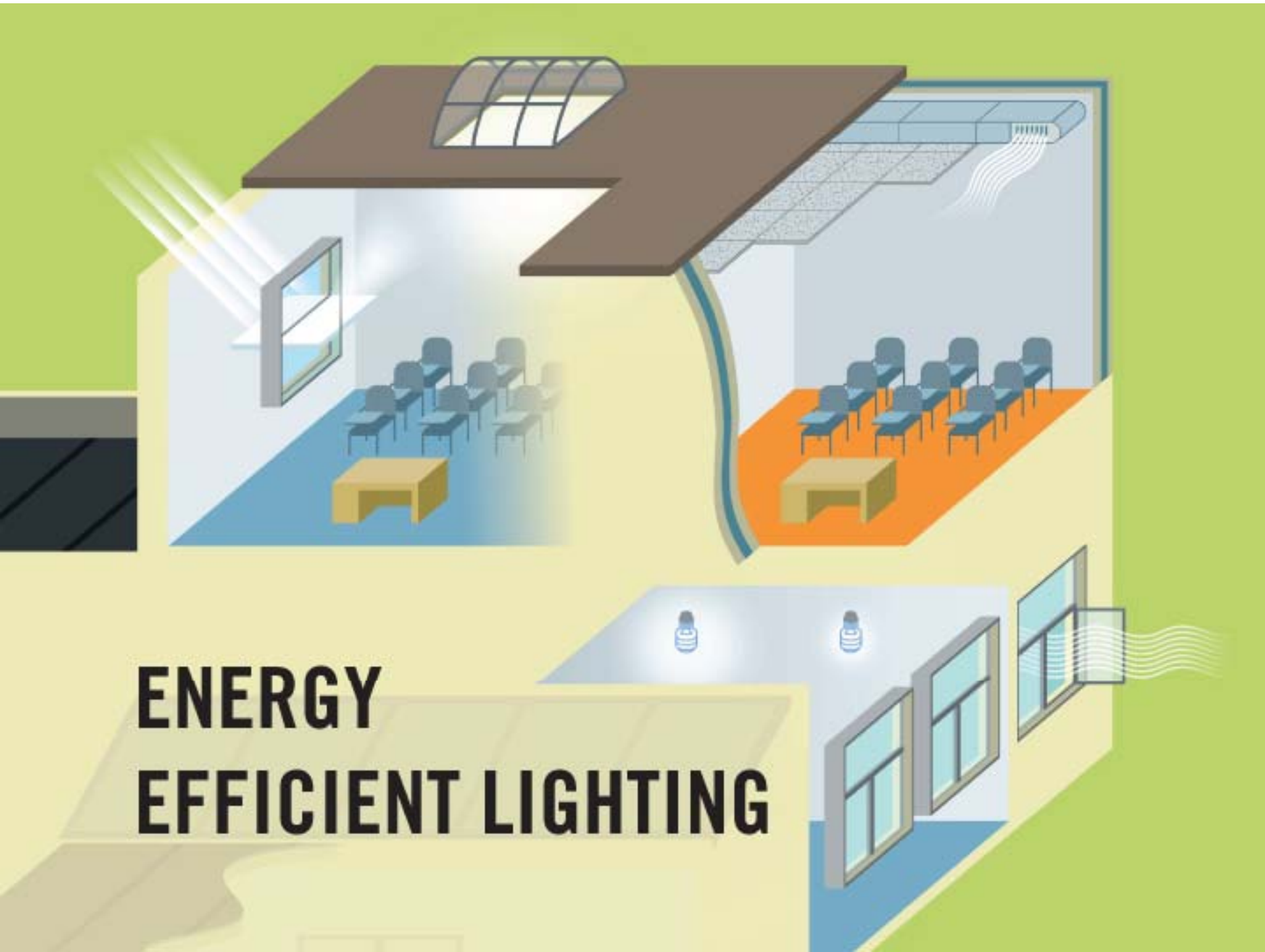
Building
Tenants

LEED addresses the complete lifecycle of buildings:

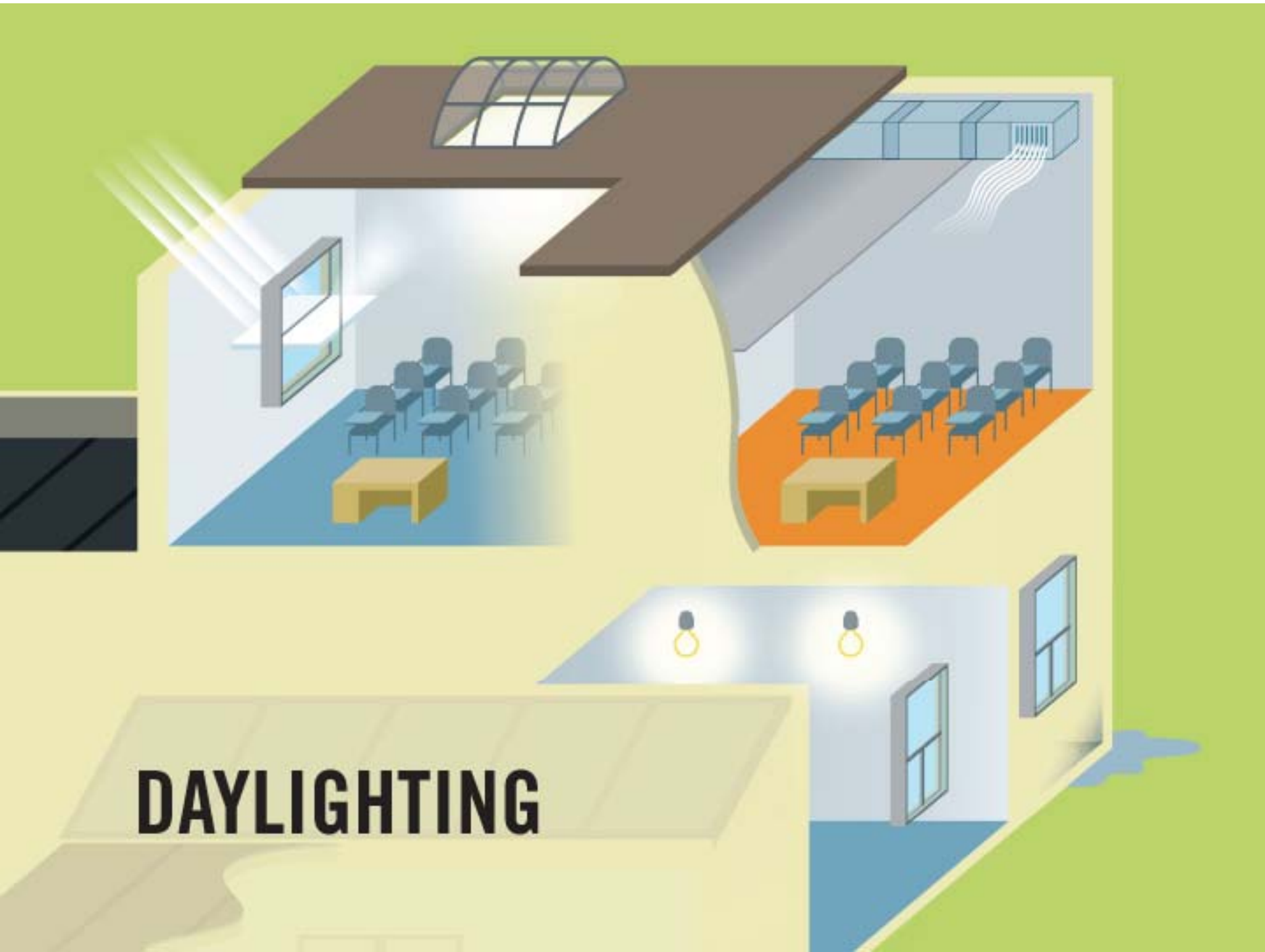


LEED addresses the complete lifecycle of buildings:

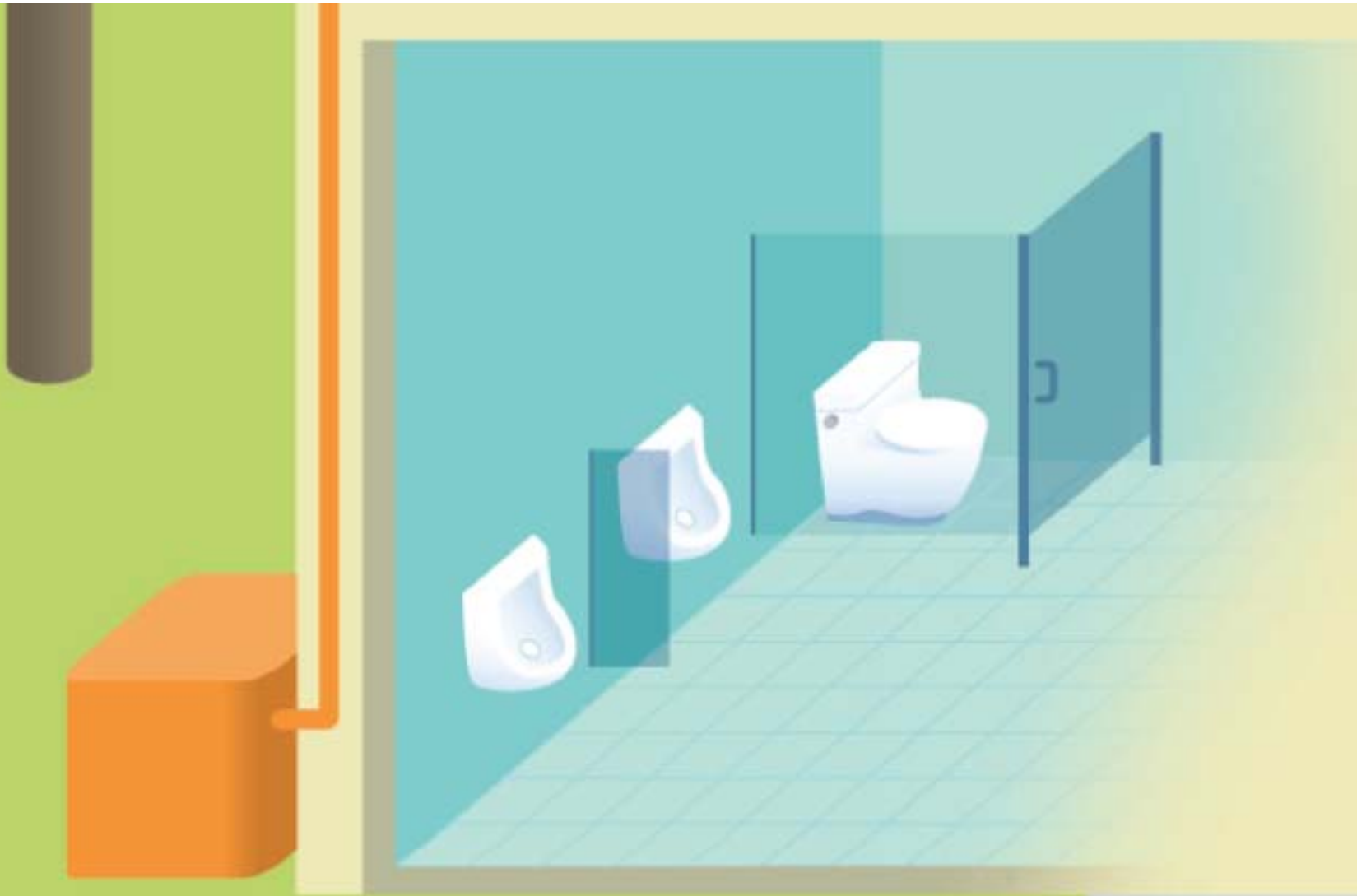




ENERGY EFFICIENT LIGHTING



DAYLIGHTING



WATER EFFICIENT

GREEN ROOF





MOLD PREVENTION



LOW-EMITTING MATERIALS

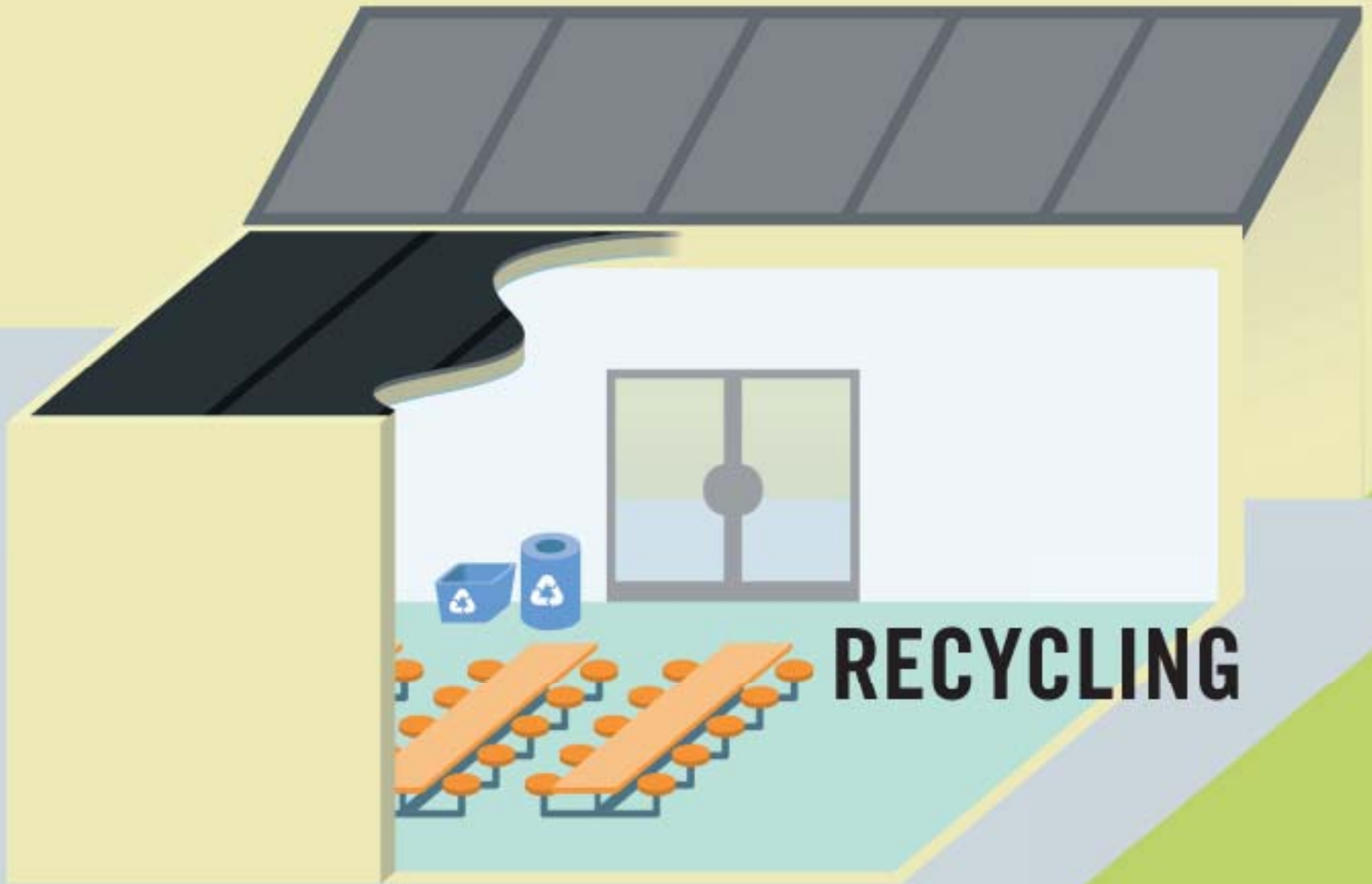




ACOUSTICS & THERMAL COMFORT



ALTERNATIVE TRANSPORTATION



RECYCLING

LEED Credit Categories

Sustainable Sites

Water Efficiency

Energy & Atmosphere

Materials & Resources

Indoor Environmental Quality

LEED Credit Categories

LEED for Schools

Sustainable Sites

Location, Impacts on local environment

Water Efficiency

Impacts on potable water and waste water systems

Energy & Atmosphere

Energy performance, M&V, Refrigerants, Renewables

Materials & Resources

Reuse, Recycle, Diversion, Locality, Renewables

Indoor Envir. Quality

IAQ, Source control, Occupant comfort, Acoustics

LEED Credit Categories

	LEED for Schools	LEED-EB: O&M
Sustainable Sites	Location, Impacts on local environment	Hardscape, Erosion control, Landscaping, IPM
Water Efficiency	Impacts on potable water and waste water systems	Cooling tower water management
Energy & Atmosphere	Energy performance, M&V, Refrigerants, Renewables	Operations, Auditing, Cx, Improvements
Materials & Resources	Reuse, Recycle, Diversion, Locality, Renewables	Purchasing, Waste management
Indoor Envir. Quality	IAQ, Source control, Occupant comfort, Acoustics	IAQ management, Occupant comfort, Green cleaning

LEED Rating Systems

LEED for Schools

- Delivery of a high performing green school
- Culmination of Design & Construction Effort
- LEED Certification managed by A/E

LEED-EB: Operations & Maintenance

- Initiation of green O&M practices
- The beginning of green operational processes
- LEED Certification managed by District

A green existing school includes ...

Organizational Commitment – Policies

O&M – Best Practices

Building Performance – Efficient, Healthy

LEED-EB: O&M

LEED-EB: Operations & Maintenance

- Building performance still a key aspect
- More focus on Operations & Maintenance
- Many departments involved
- Significant “People” component
- Policies, programs, and plans
- Cost issues (operating budget and capital budget)

Prerequisites

1. **WEp1**

Minimum water efficiency

2. **EAp1**

Minimum building commissioning

3. **EAp2**

Minimum energy performance

4. **EAp3**

Refrigerant management

5. **MRp1**

Sustainable purchasing policy

6. **MRp2**

Solid Waste management policy

7. **EQp1**

Outdoor air introduction

8. **EQp2**

Tobacco smoke control

9. **EQp3**

Green cleaning policy

Prerequisites must be accomplished before any points can be awarded.

Certification Levels

Certified

LEED 2009

40 – 49

Silver

50 – 59

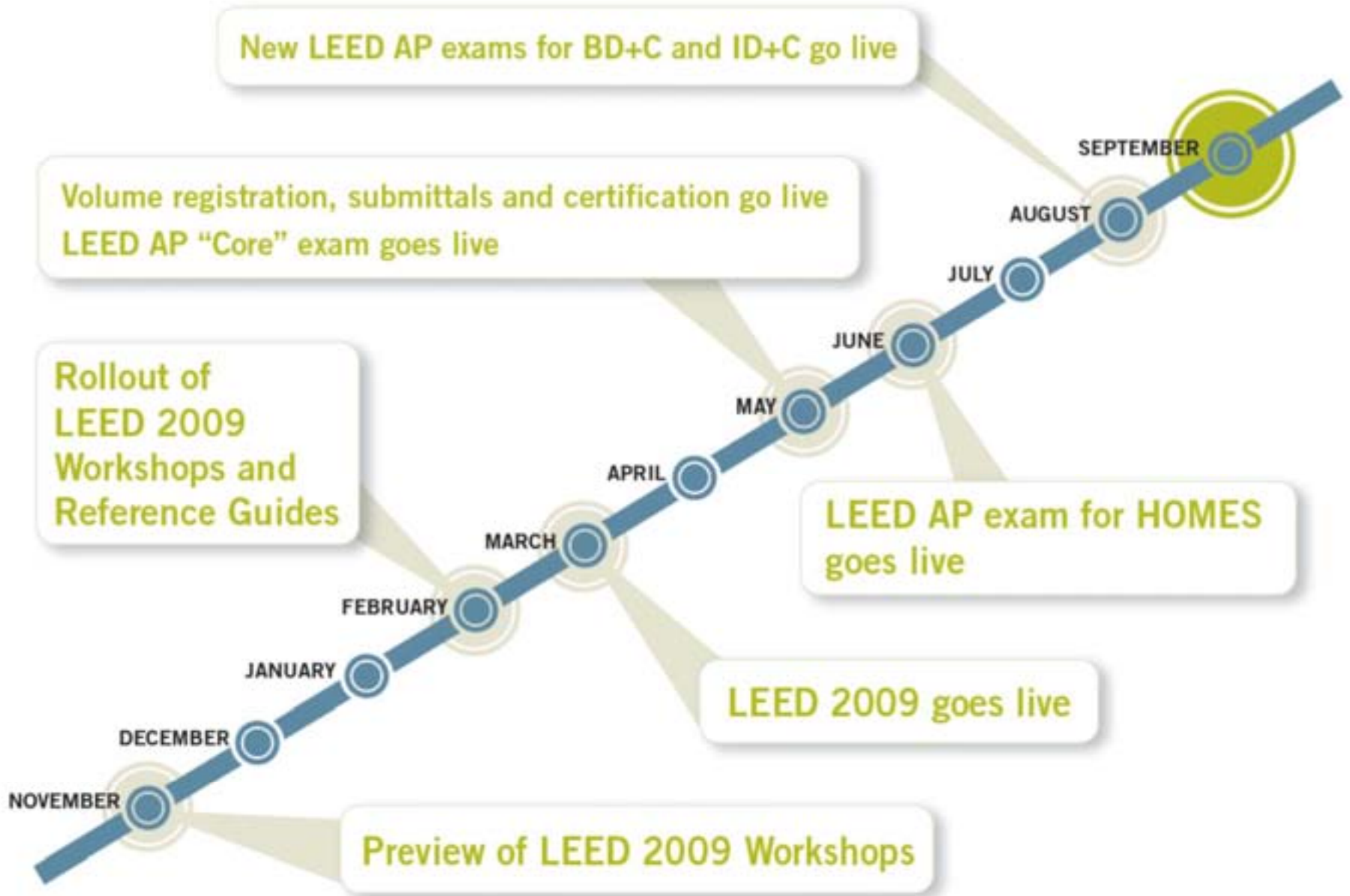
Gold

60 – 69

Platinum

80 – 100

Rollout will be completed by **September 1**



Getting Started

Implementation Strategies

- **High performing school leads the way**
- **Major retrofit project leads the way**
- **Gradual improvement over time**

Getting Started

The Project Process

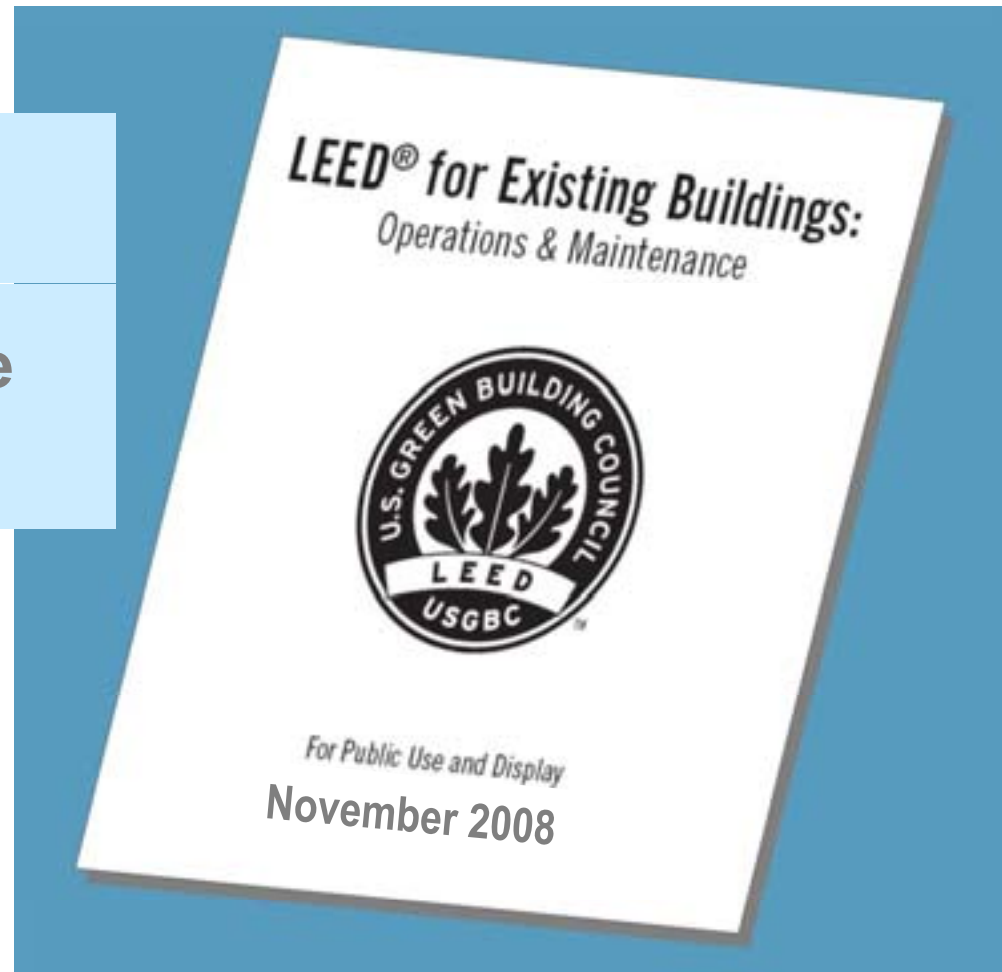
- **Preliminary Training and Coordination**
- **Project assessment & preparation**
- **Kick-off meeting (Charrette)**
- **Project Plan**
- **Rating System Training**
- **LEED Submittal Templates (LEED Online)**
- **Application**
- **Schedule Tracking**

Getting Started

Step One!

Download a free copy of the LEED-EB O&M Rating System from the USGBC Website.

The 2009 Reference Guide is now available for purchase



Green Excellence in Existing Schools

- USGBC Pilot for 12 School Districts across the nation
- June 2008 – December 2009
- *Companion Participants*
- Training, Information Resources & Tools

For more info, contact:

GreenExSchools@usgbc.org

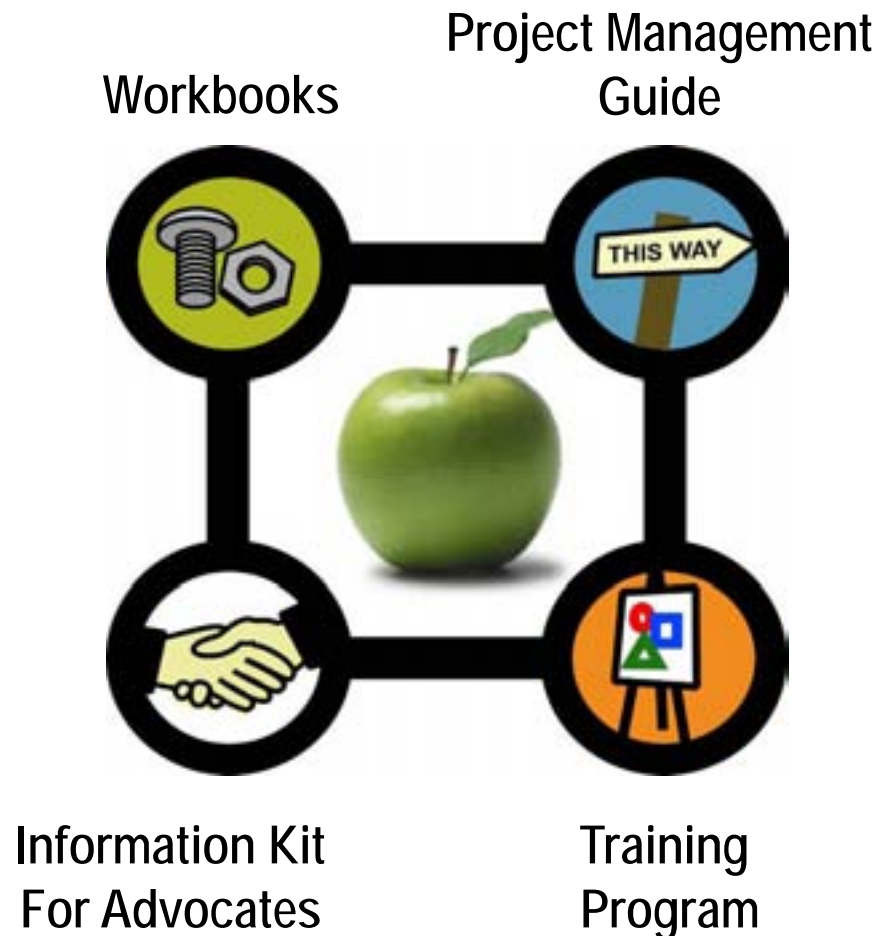
LEED in Existing Schools Pilot Project

Green Ex²

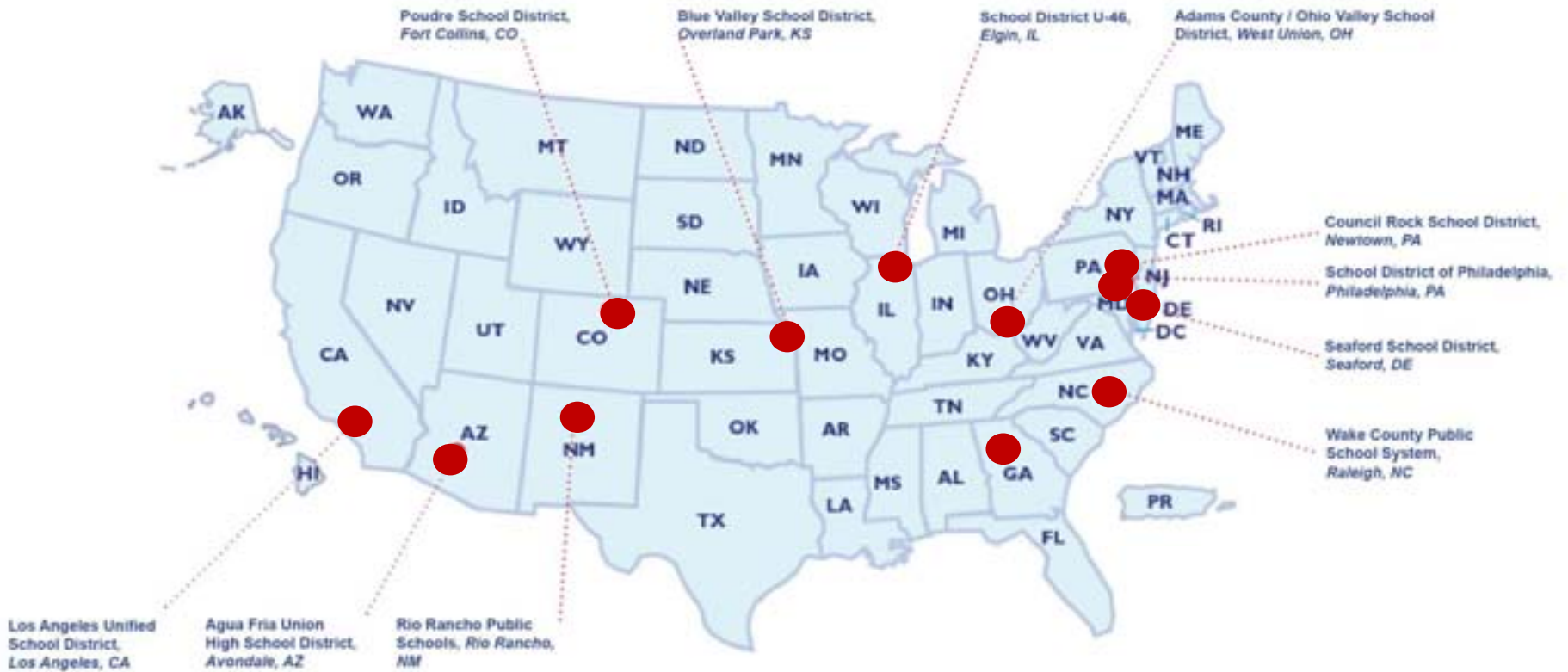


LEED in Existing Schools Pilot Project

Green Ex² Tool Kit



12 Participating Districts





U.S. GREEN BUILDING COUNCIL

Build Green Schools

Green Schools 101

LEED for Schools

News

Resources

Take Action



www.buildgreenschools.org



Questions? Comments?

May 20, 2009

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