

# **A Living Future for All**

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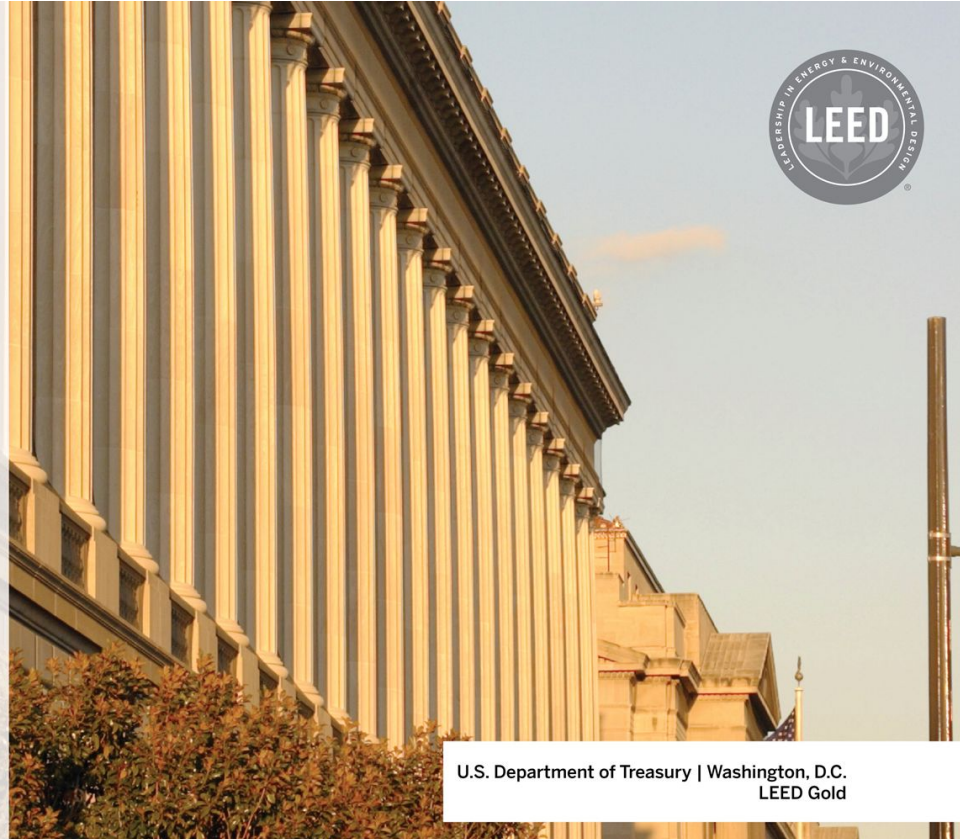
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## U.S. Department of Treasury

Washington, D.C.

- **GSF 510,000**
- Decreased potable water usage by **43%**, electrical usage by **7%**, and steam usage by **53%**
- Saves American taxpayers an impressive **\$3.5 million** every year



# National leaders...

## NATIONAL RENEWABLE ENERGY LAB (Colorado, U.S.)

- Largest net zero energy building in North America
- 33,445 m<sup>2</sup>
- LEED Platinum certified







*San Francisco City Hall is the Oldest LEED Platinum Certified Building in the U.S.*

## RECERTIFICATION





## What:

- new construction, retrofits, workforce, technology, materials

## How:

- requirements, incentives, demonstration, technical and financial support

# Public Buildings: Opportunity to Lead by Example

Leading by example:

- Establish public buildings requirements for new construction and for operations
- Tracking and benchmarking
- Show results and benefits
- Invest in cost-effective energy improvements, resilience & health





## Non-financial incentives

- Expedited Review/Permitting Processes
- Density and Height Bonuses

## Financial incentives

- Fee Reduction/Waiver
- Property Tax Reductions
- Income Tax Reduction
- Help leverage private sector finance
- Assist green, net zero buildings with grants, loans, revolving loans

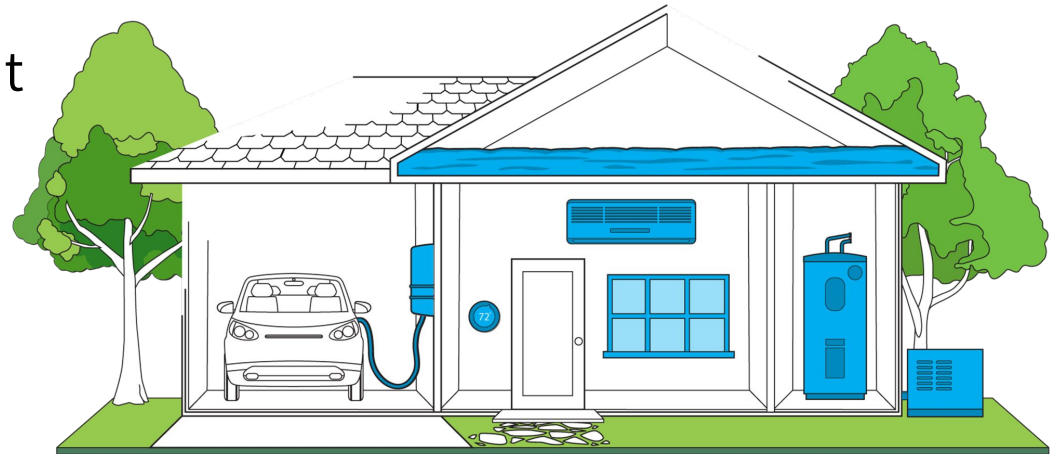




- Funding with grants, loans, revolving loans
- New housing
- Establish minimum code
- Above-code incentive or requirement for green homes
- Rebates for upgrading HVAC and appliances
- Workforce training

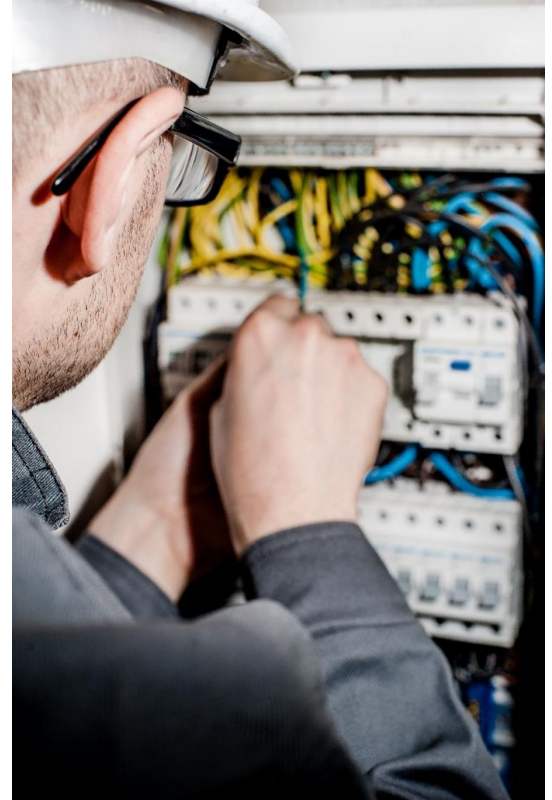
# Companion policies and emerging issues for decarbonization

- Beneficial electrification
- Net Zero energy/carbon/emissions
- Embodied carbon, Buy Clean
- Building performance policies
- Codes
- Utilities + load management
- ESG
- Equity

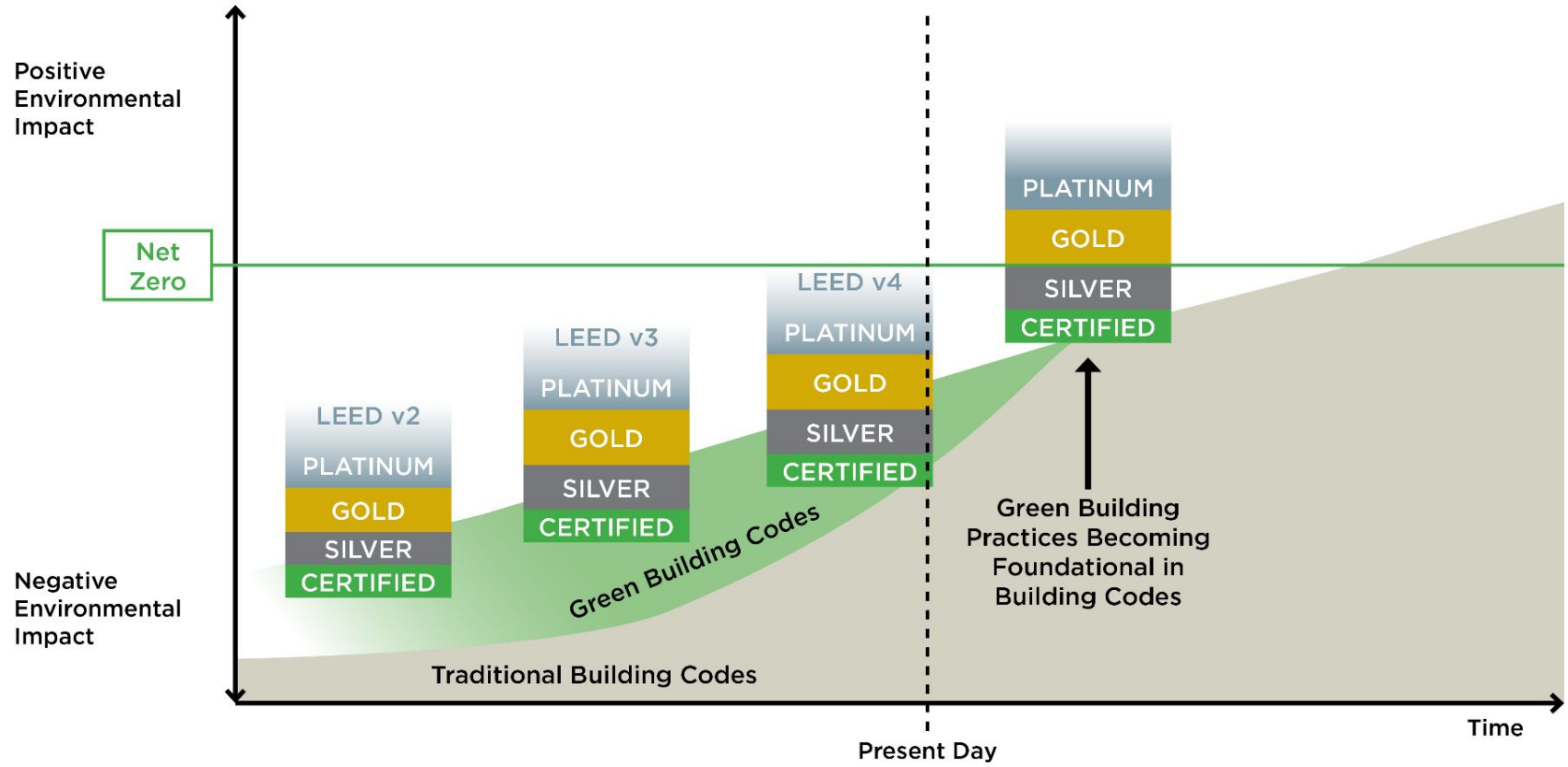


# Specific technologies

- Beneficial electrification
- Heat pumps
- Solar water heating
- Thermal storage
- Battery storage with renewable energy
- LED lighting
- Integrating ZEV charging needs
- Reducing construction-phase GHGs
- Reducing embodied carbon in materials
- Grid interactive buildings

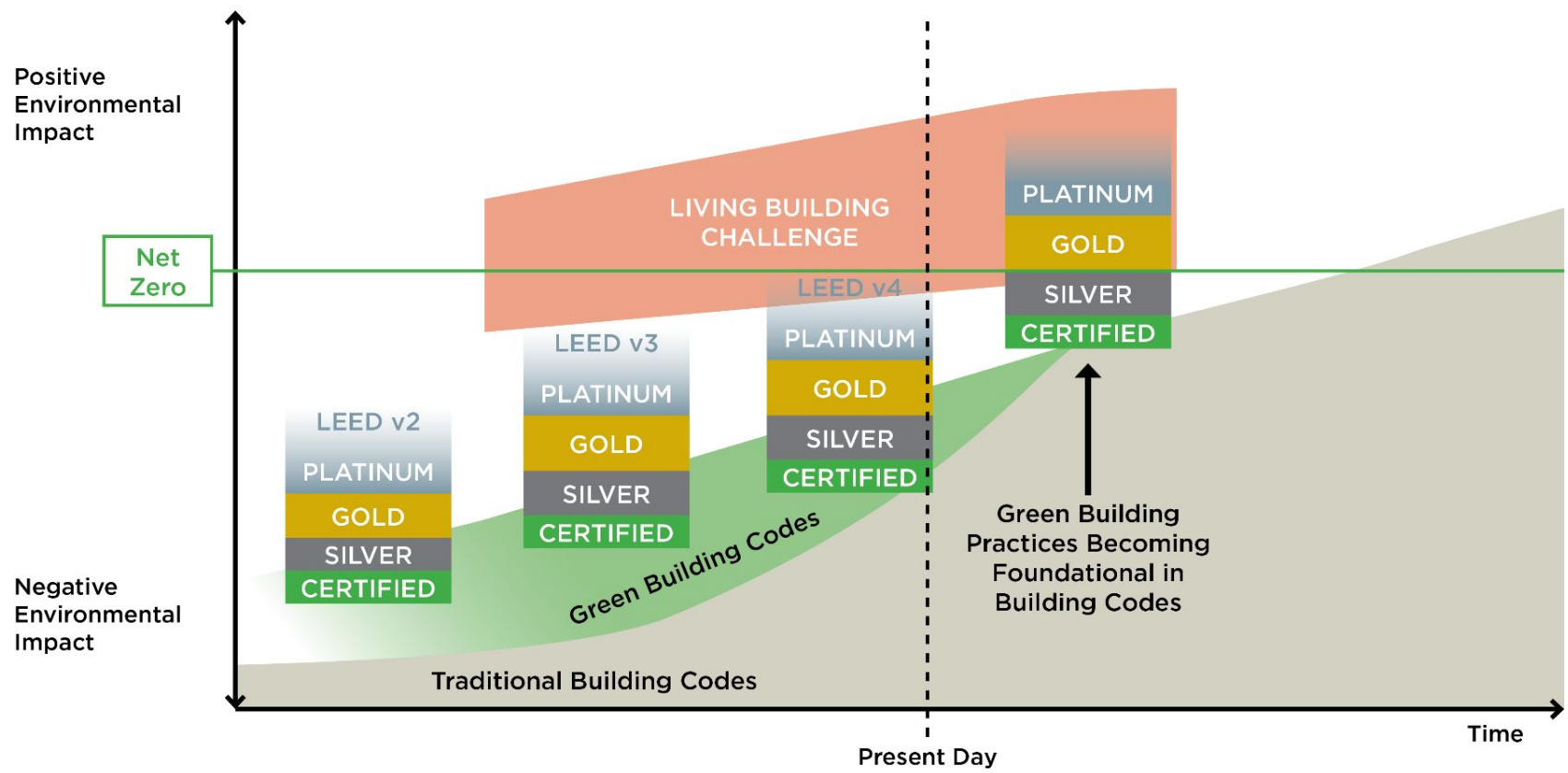


# LEED Raises the Ceiling, Codes Raise the Floor





# Living Building Challenge Sets “Endgame” Goals





Advocacy efforts at USGBC have helped **more than 300 municipalities, 32 states, and 14 federal agencies or departments** implement LEED as a best-practice for achieving their sustainability goals for buildings. We provide policymakers and community leaders with the tools, strategies, and resources they need to inspire action toward a sustainable build environment.

# Get started by taking stock of current policy



March 2020

## POLICY RESOURCE

### LEED for Cities: Building Policy Self-Assessment



Please follow up your assessment response (Yes/No/Not Sure) with as much information as you can.

Question	Assessment
1. Does the jurisdiction have a green building requirement for its own new construction and major renovation projects?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure

Scope (all buildings or only some; are schools included; etc):

Requirement:

How is compliance tracked:

How are outcomes / building performance tracked:

Key departments or staff:

2. Does the jurisdiction have a green building (such as LEED) or energy efficiency (such as ENERGY STAR) requirement for its own existing buildings operations?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure
---	---

Scope (all buildings or only some):

Requirement:

How is compliance tracked:

How are outcomes / building performance tracked:

Key departments or staff:

3. Does the jurisdiction have any climate action plans, goals or committees?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure
--	---

Scope (all buildings or only some):

Requirement:

How is compliance tracked:

How are outcomes / building performance tracked:

Key departments or staff:

- National, state, and local governments have a variety of levers to support green building
- Governments can start with leadership in their own buildings
- Incentives for green building certification, codes and permit conditions, and technical assistance and education can help the private market thrive
- Adopting green buildings helps governments save money and stay competitive



# USGBC - A Parent Organization to Many



WORLD  
GREEN  
BUILDING  
COUNCIL



CASCADIA  
GREEN BUILDING COALITION

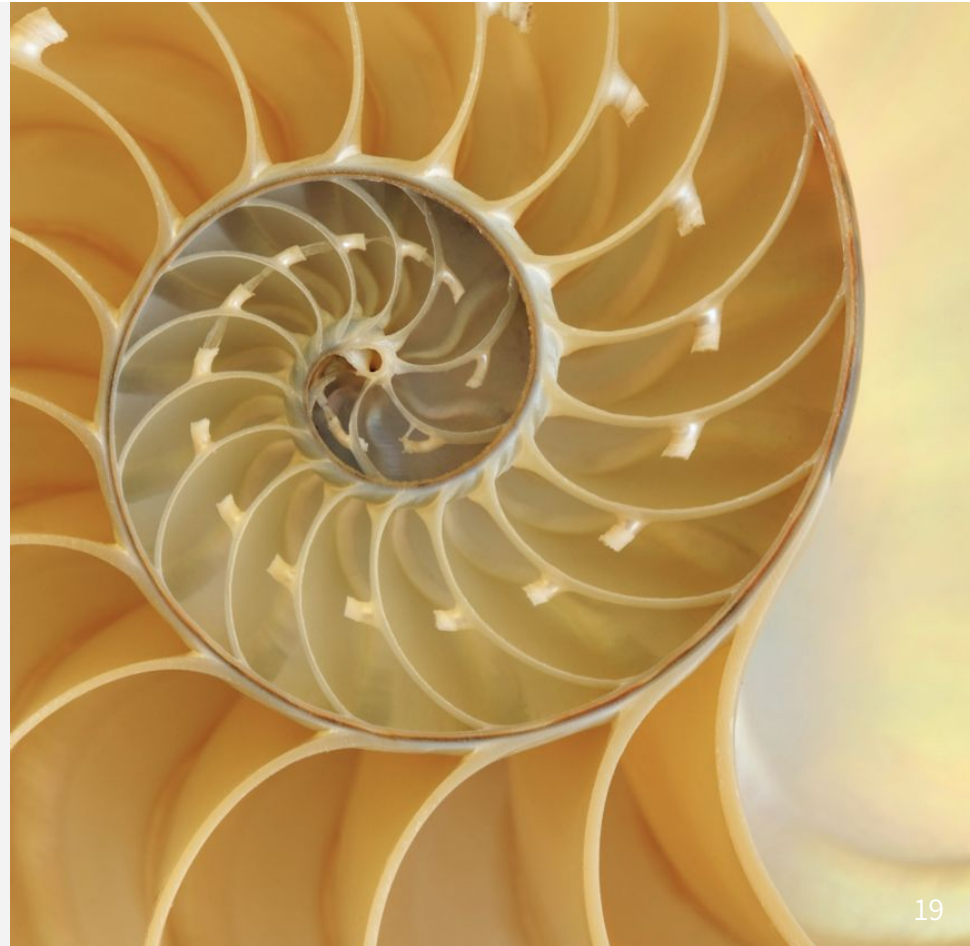
# Why Living Building Challenge?

- Inspiration fuels change
- The psychology of the 'end game'
- Differentiate the early adopters
- Spur rapid transformation
- Stir the pot
- Pull the market forward



# Addressing a Changing Context

- Rapid adoption of LEED and green building principles
- Projects achieving top levels of certification
- Examples of excellent performance in specific areas but not holistic solutions
- Human impacts increasingly clear – we must accelerate our response to the climate emergency



# Flower As Metaphor

Rooted in place and yet...

- harvests all energy + water
- is adapted to climate + site
- operates pollution free
- promotes health + well-being
- comprised of integrated systems
- is beautiful









# Paradigm Shift: From Technology to Ecology





# The Interconnectedness of All Things



# Proven Performance and Model for Others



Image: living-future.org



# Breaking Down Barriers



# We Are All Ambassadors



BCA ACADEMY



PHILOSOPHY



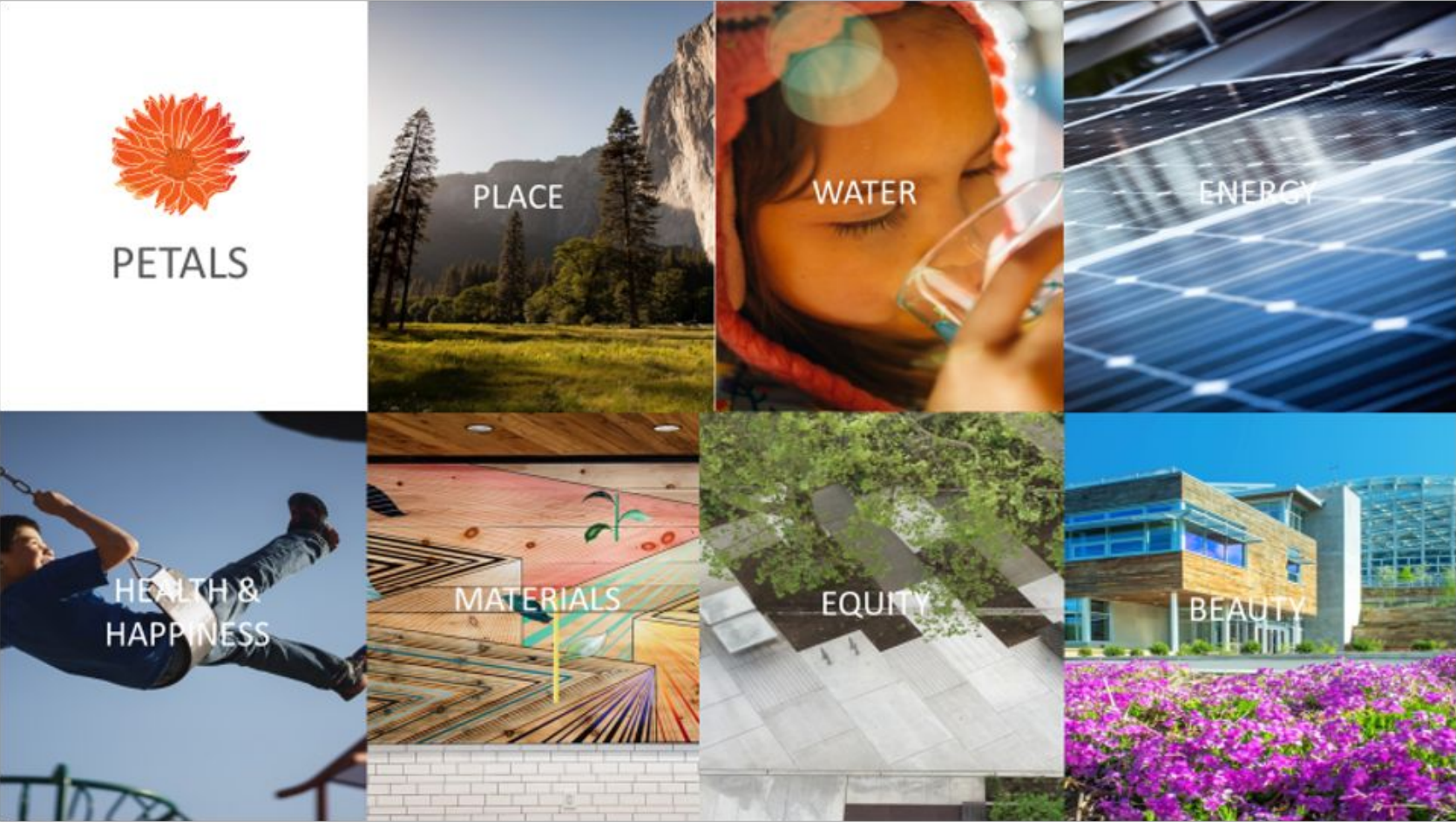
ADVOCACY TOOL



CERTIFICATION PROGRAM



# Living Building Challenge Program Summary



# Petal Certification - If You've Got it, Flaunt It!

## Celebrating All Successes

Helps move the market, expand awareness, and demonstrate what's possible!

Requires achievement of 3+ Petals  
Must include at least Water, Energy,  
OR Materials





# Living Building Challenge Registered Projects





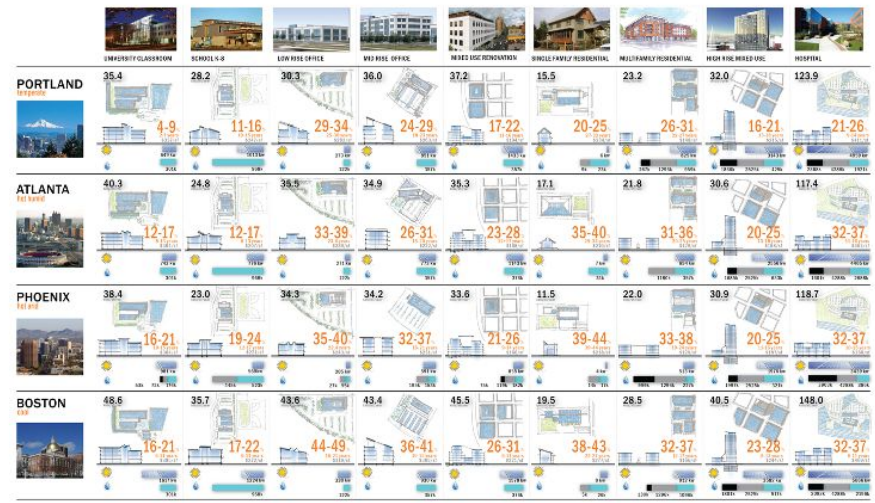
# Living Building Challenge Certified Projects



# ILFI Portfolio of Certifications

LABELS	Declare.	Just.	Reveal.
CERTIFICATIONS	 ZERO ENERGY CERTIFICATION	 ZERO CARBON CERTIFICATION	 CORE GREEN BUILDING CERTIFICATION
CHALLENGES	 LIVING BUILDING CHALLENGE	 LIVING PRODUCT CHALLENGE	 LIVING COMMUNITY CHALLENGE  INTERNATIONAL LIVING FUTURE INSTITUTE

# Living Building Challenge Financial Study (2009)



## WHAT MATTERS:

- Building Type & Scale
- Climate Zone
- Energy & Water Cost
- Owner's Financial Horizon



# Piloting a Living Future: The Bertschi School



LIVING BUILDING CHALLENGE 2.0  
A VISIONARY PATH TO A RESTORATIVE FUTURE

LEED V4.0

**SKANSKA**

# Impacting Policy: Brock Environmental Center



LIVING BUILDING CHALLENGE 2.0

A pathway into a sustainable future

www.lbc20.org

LEED Platinum

SKANSKA



# Celebrating Impact: Brock Environmental Center

Our Brock Environmental Center was awarded Best of the Best Green Awards by Engineering News Record. This honor recognizes the Brock Center for overcoming rigorous challenges in order to attain the strict performance areas of the Living Building Challenge.

**Rainwater**  
Supply and Demand  
Estimated three-week  
Water Use: 3,045 gallons  
Actual Capacity of  
Cistern: 3,300 gallons



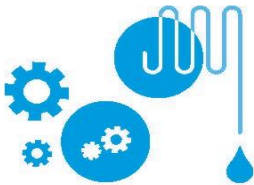
## 1. Rain Falls

Virginia Beach receives more rain on a yearly basis than Seattle, Washington



## 2. Rain Captured

40% of rainwater is captured by the Rooftop Catchment Area at Brock Environmental Center, the remaining 60% is diverted to rain gardens



## 3. Rain Purified

Rainwater goes through a multi-step treatment before being supplied to the building from pressure tanks



## 4. Rain Brewed

Purified rainwater supplies a number of needs such as drinking... or beer brewing



Source: Brock Environmental Center

# Piloting Policy: Stone 34



# Key Take Aways - Living Buildings

- Encourage project teams to approach building projects in new or unconventional ways. Celebrate innovative solutions.
- The portfolio of ILFI programs complement the portfolio of USGBC/GBCI, IWBI and ISI programs. Select the program that supports your work.
- Even the most advanced LEED and Living Buildings can be cost effective.



## **USGBC**

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## **International Living Future Institute**

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# Thank you



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