

 DLR Group

# VALUES

WORKSHOP FLASHCARDS

# Comprehensive Approach to Resiliency & Sustainability

Higher Education institutions are uniquely positioned to make worldwide impact in terms of the environment, society, and the economy, but most audiences have difficulty connecting all three comprehensively. **Sustainability at DLR Group focuses on the connections between people, the economy, and the environment and how those connections work together to achieve long-term prosperity and continued quality of life.**

## VALUES WORKSHOP

**VALUES stands for Viewing Architecture through the Lens of User Experience and Sustainability.** Understanding the challenges, needs and aspirations of a planning project from your stakeholders through a series of engagement sessions is a critical the first step in our process. When we discover diverse aspirations, we use a unique framework we developed called VALUES to help stakeholders prioritize, set targets for goals and metrics for success. The set of VALUES developed through various sessions become the guiding principles for the planning process against which, every major decision is filtered.

	<b>ENERGY NEED REDUCTION</b> How can you make intentional design choices to reduce the energy needs of your project and optimize performance? 	<b>DECARBONIZATION: ENERGY</b> Where is your project sourcing its energy from? How can your project replace fossil fuels with low-carbon energy sources? 	<b>CLIMATE JUSTICE</b> How can your project mitigate the effects of climate change to ensure that no single community or group of people is unjustly affected by the project's environmental burdens or benefits? 	<b>COMMUNITY RESILIENCY</b> What measures and features can your project provide to the target community it serves during and after an unexpected event? 	<b>EQUITY</b> How is your project allocating services, resources, and opportunities in a just and equitable manner, and prioritizing marginalized groups? 
<b>SEE</b>	LED LIGHTING; UPGRADED HVAC SYSTEMS	SOLAR PANELS; CURRICULUM INTEGRATION	INCREASE IN COMMUNITY HEALTH	RESILIENCE HUBS ON CAMPUS; TOWN AND GOWN PARTNERSHIPS; EDUCATION ON RESILIENCY	DIVERSITY OF VOICES INVOLVED IN PLAN'S DEVELOPMENT AND IMPLEMENTATION
<b>FEEL</b>	COMFORTABLE	PRIDE; EDUCATED; ACCOMPLISHED; MADE A DIFFERENCE	REDUCTION IN EXTREME HEAT	COMMUNITY PRIDE TO HELP ONE ANOTHER; CONNECTED TO GREATER RIVERSIDE COMMUNITY	SENSE OF OWNERSHIP FOR THE PLANS AS A REPRESENTATION OF ALL VOICES
<b>MEASURE</b>	REDUCTION IN HOT/COLD CALLS; ENERGY COST SAVINGS	SOLAR PV GENERATION; REDUCTION IN CARBON EMISSIONS	AIR QUALITY ON CAMPUS AND SURROUNDING COMMUNITY	IMPACT OF YOUR RESILIENCY HUBS DURING TIMES OF CRISIS	MEASURE THE SUPPORT PROVIDED TO GROUPS THAT HAVE HISTORICALLY BORN THE BURDENS OF CLIMATE CHANGE

VALUES WORKSHOP SUMMARY EXAMPLE

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# INTRODUCTION

## What is sustainability?

**Sustainability is centered around the core idea of meeting current needs while preserving the ability of future generations to do the same.**

It goes beyond ecological health and resource conservation to incorporate human health and community health; sustainability cannot be achieved without ecological, social, and economic balance. The VALUES exercise is organized into twelve themes that address this holistic definition of sustainability.

### ACCESS + MOBILITY

Encompasses transit-oriented design, providing transportation options, decarbonizing transportation, and improving walkability and safety.

### EQUITABLE DEVELOPMENT

A project can ignite change in communities by providing equitable access to programs, resources, and opportunities, promoting affordability, and advocating for those in need.

### OUTDOOR ENVIRONMENTAL QUALITY

Projects can use their outdoor spaces to restore ecology, build community, and create a strong sense of place.

### COMMUNITY CONNECTOR

A project can support its community by providing public resources and programs, encouraging neighborhood vitality, forging partnerships, and involving the public in decision-making processes.

### HEALTH + WELL-BEING

A project's design can promote mental, physical, and emotional well-being and support users in accomplishing their personal goals.

### PROCUREMENT + OPERATIONS

Projects can establish practices that support safety and security, efficient operations, and responsible procurement and disposal.

### CULTURE + IDENTITY

A project can use design to celebrate its history and context and develop a strong sense of place that speaks the identities of occupants and surrounding communities.

### INDOOR ENVIRONMENTAL QUALITY

Acoustic comfort, air quality, thermal comfort, and visual comfort support occupant health and well-being, cognitive function, and performance.

### RESILIENCY

Intentional design can support the ability of buildings, sites, individuals, and communities to respond to, withstand, and recover from stressful or adverse situations.

### ENERGY

Generating renewable energy, reducing energy consumption and cost, modeling how a proposed building design will perform in the future, and intentionally selecting building systems.

### MATERIALS IMPACT

Building materials impact human well-being, carbon consumption (both embodied and operational), and cost over the course of their lifetimes.

### WATER

Water encompasses water quality, water and stormwater management practices, hydrological balance, and water's cultural context in a community.

# INTRODUCTION

## *How do I read the cards?*

Each “card” within a VALUES theme has a front and a back.

The front of each VALUES card contains a graphic and a prompting question. As you read the question, think about how it may apply to your project and if you see potential to investigate it further.

Holistic sustainability solutions consider not only the impacts of a decision on the natural environment, but on the economy, communities, and human beings. The back of each card describes the benefits of that topic as related to the following categories:



### human health

A state of complete physical, mental, and social well-being that goes beyond merely the absence of disease or infirmity.



### resource conservation

The responsible management and protection of natural resources to benefit the current generation while maintaining capacity to meet the needs of future generations.



### ecological future

The ability of ecosystems and their non-human inhabitants to maintain balance, be healthy, and thrive for generations to come.



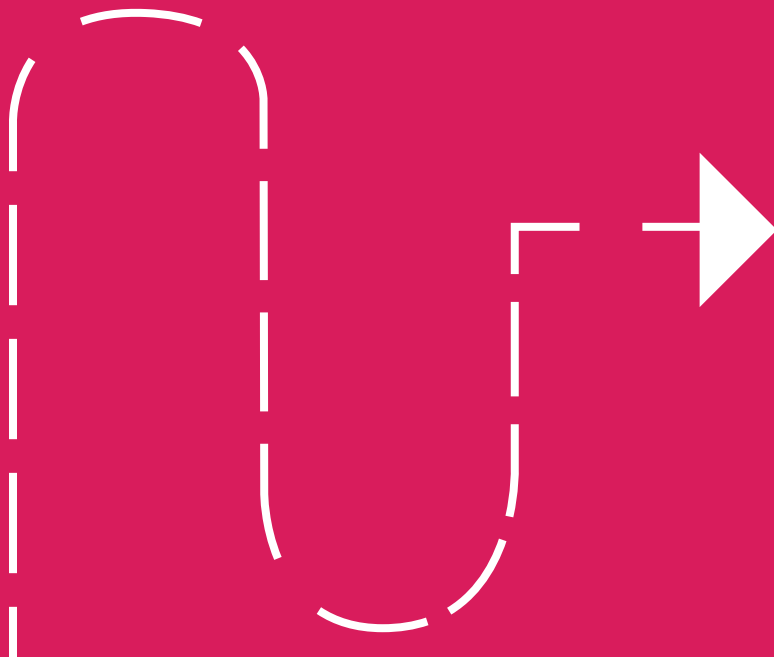
### community health

The availability of environmental, social, and economic resources to sustain emotional and physical well being among communities.



### behavior awareness

An individual's understanding of how their behaviors impact the health of people, communities, and the environment.



# ACCESS + MOBILITY

How can your project advocate and celebrate transit-oriented design, connections between transit hubs, and walkable communities?




**Why is this important?**

- resource conservation**  
Transportation accounts for 14% of global greenhouse gas emissions, and 28% of emissions in the US. Decarbonizing transit is essential in meeting global and national emissions reduction targets.
- ecological future**  
Reduced fossil fuel consumption can help mitigate global warming and minimize the ecological destruction caused by fossil fuel extraction.
- community health**  
Communities adjacent to freeways bear the undue health burdens of freeway smog. Decarbonizing transit will lessen exposure to harmful pollutants for communities near freeways and major roads.


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## MULTI-MODAL TRANSPORTATION


How can a site prioritize safe access and infrastructure for pedestrians, bicycles, public transit, and other alternative transit modes over single-driver vehicles?




## Why is this important?

---

-  **human health**  
Prioritizing alternative transit modes over single-driver vehicles can encourage active transportation.
-  **resource conservation**  
Transitioning away from single-use vehicles will reduce carbon emissions and fossil fuel consumption.
-  **community health**  
Providing infrastructure for all transit modes equalizes the playing field for those without access to a car.

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## WALKABILITY & SAFETY

How does your project foster community health through safe and walkable networks?



## Why is this important?



### human health

A safe and pleasant walking environment can encourage more people to walk, jog, and exercise outdoors.



### ecological future

Safe and walkable streets encourage travel on foot, reducing reliance on fossil fuel-consuming vehicles for transportation.



### community health

A safe and walkable project helps to create a safer and more connected community, which leads to greater access to essential services and opportunities for all.





# COMMUNITY CONNECTOR

How can your project support its surrounding community, build community partnerships, and connect residents to shared resources?




## COMMUNITY ACCESS



What aspects of your project can be accessed by the community? How can your project become a broader community resource?




## Why is this important?

---

-  **resource conservation**  
If individuals have access to the services and resources they need within their community, they can reduce the need to expend resources and emissions traveling to other areas.
-  **community health**  
Providing community access to services and resources allows for the conservation of limited personal and community resources.
-  **behavior awareness**  
Providing community access allows the opportunity for interaction and engagement with community stakeholders that one might not otherwise connect with.

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 **COMMUNITY PARTNERSHIPS**

How can your project connect with local organizations, governments, businesses, and thought leaders to exchange ideas and services for mutual benefit?



 **Why is this important?**

---

-  **ecological future**  
When groups come together, they can leverage shared resources to solve complex, interdisciplinary problems.
-  **community health**  
Partnerships can support local economic vitality and encourage innovation.
-  **behavior awareness**  
Community partnerships help build relationships that support your enterprise and raise your visibility among important stakeholders.


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## NEIGHBORHOOD VITALITY



How can the spaces of your project radiate activity, vibrancy, creativity, and innovation out into the community? How can your project connect to the neighborhood fabric?




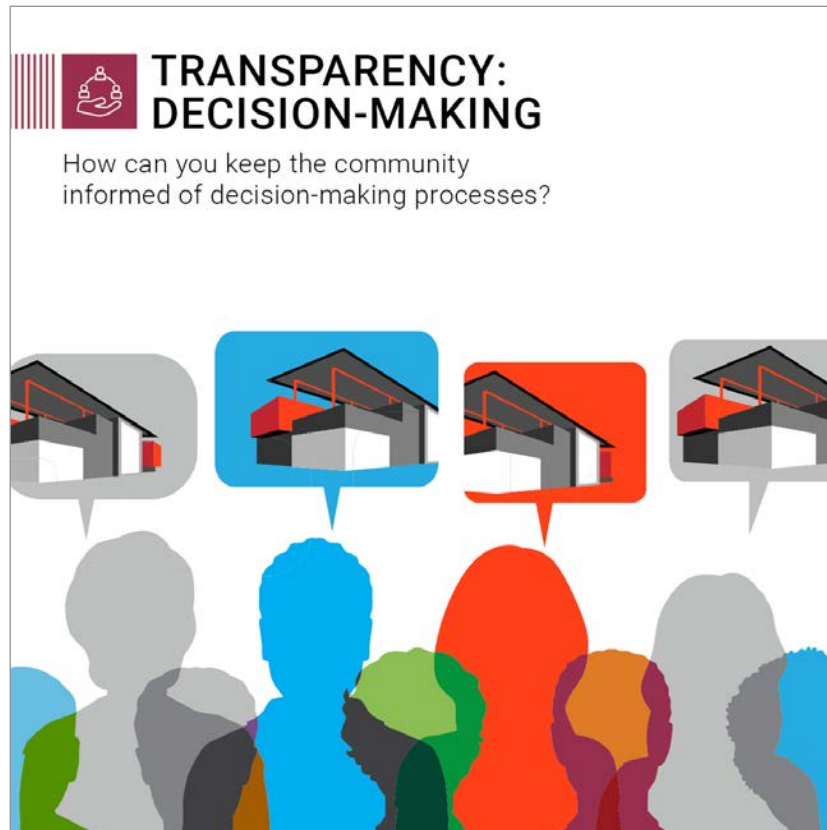
## Why is this important?

---

-  **human health**  
In order to maintain mental well-being, people need spaces to explore, create, grow, and connect.
-  **community health**  
Vibrant, visible activity within a space or project creates more opportunities for community engagement and creative exchange.
-  **behavior awareness**  
Connecting your project to the neighborhood fabric helps individuals understand their role and place in the broader community.




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**Why is this important?**

---

-  **human health**  
When community members are involved in a decision-making process, they are more likely to feel supported and valued.
-  **community health**  
Involving community members in the decision-making process allows them to create and champion a collective vision, taking ownership of community conditions.
-  **behavior awareness**  
Through decision-making transparency, people can learn that they have the ability to affect community change. Involving the community in the design process will make the design more seen, accepted, and utilized by the community.

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# CULTURE + IDENTITY

How can your project celebrate its history and cultural context to develop a strong sense of place that speaks to the identities of occupants and surrounding communities?




## BEAUTY + INSPIRATION



How can beauty in nature and the built environment inspire and motivate user groups and communities to achieve their full potential? How can a strong sense of place instill pride and self-confidence in users' identities?


The illustration shows a grey silhouette of a human head in profile, facing right. Inside the head, there are three interlocking gears: a large blue one, a smaller green one, and a smaller red one. Dashed blue lines with circular endpoints connect these gears to various elements around the head: a red brick on the left, a green tree with red fruit on the right, a black and white house with a red roof on the right, and a green bush on the bottom left. Several black birds are flying in the sky above the head.

## Why is this important?

---

-  **human health**  
Being in a beautiful, inspiring place improves occupant's mood, boosts morale, and can create feelings of comfort and joy.
-  **community health**  
Aligning design to the community's core values helps them build a sense of community pride.
-  **behavior awareness**  
Understanding the elements of a space that inspire and bring joy can help occupants make positive changes to their own spaces.

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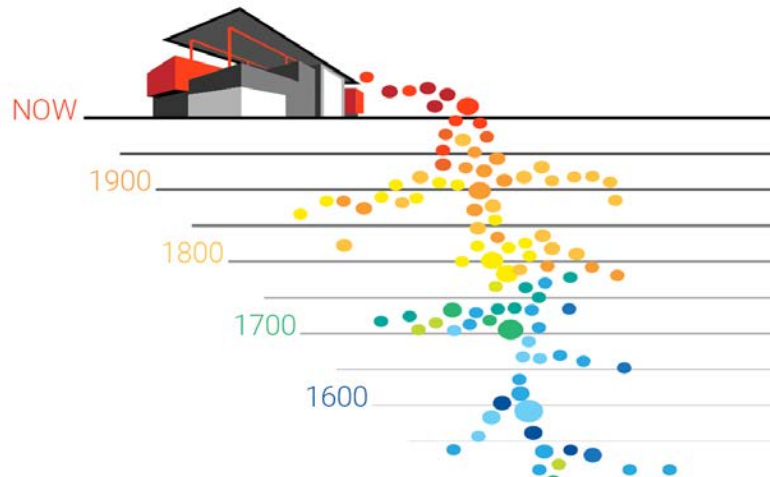
A row of five icons: a heart with a pulse line, a circular arrow, a plant growing from a base, a group of three people, and a head with a gear inside.





## HISTORICAL CONTEXT OF PLACE

How does your project connect to its location's cultural and built history? What uses, people, and events were there before? What is your project's relationship to its historical context and how does it respond to that context?



## Why is this important?



### ecological future

Drawing lessons from past environmental destruction or how the area was used in a sustainable way in history or pre-history can inform project goals going forward.



### community health

Leveraging the shared knowledge of local indigenous or community groups can create reciprocal benefits for the project and groups already promoting positive community behaviors.



### behavior awareness



When a design solution acknowledges the history of its setting and community, it helps teach people about which past behaviors are desirable and which should not be continued.







## INCLUSION



How does your project look beyond its base program to provide opportunities for groups that may be marginalized? How can it create a sense of belonging for individuals of all backgrounds and identities?




## Why is this important?

---

-  **human health**  
Inclusion welcomes individuals of different backgrounds and with different abilities. Inclusive design solutions offer opportunities to engage the most people, create healthy and enjoyable spaces, and reduce barriers for all.
-  **community health**  
When a design solution is inclusive, it presents more opportunities for people of different perspectives and resource networks to meet and connect – strengthening community health overall.

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## INDIVIDUAL VS. COLLECTIVE PLACEMAKING


What points of input inform the character of your project? What parts of the project belong to all, created and curated from the collective culture? Which areas should belong to individuals or small groups. adding control to

## Why is this important?

---

-  **human health**  
A combination of unexpected inputs, clear organizational identity, and a bit of “team identity” space provides a winning combination for productivity and wellness. When users have control over privacy, comfort, and surroundings, they have a safe zone in which to explore.
-  **behavior awareness**  
A built environment which has an identity as green, sustainable, or ecologically relevant brings greater satisfaction to occupants – and they may shift their own attitudes in favor of sustainable activities.

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## MULTI-CULTURAL RELEVANCE

How does your project reflect the values, issues, needs, and cultures of its immediate and neighboring communities? How does your project explore the cultures of its users while welcoming in new perspectives?



## Why is this important?



### human health

Contextually- and culturally-relevant design solutions take into account the various needs of users from multiple backgrounds. This impacts mental and physical health through reduction of stress, through validation and pride, as well as identification of health factors that impact one part of the community more than another.



### behavior awareness


Design solutions that are culturally and contextually relevant tend to be "stickier" - that is, the desired behaviors or outcomes tend to have more staying power with users.








## ORGANIZATIONAL TRANSFORMATION



How can your project catalyze transformations that support broader goals and values? How can the structures of your organization support change? How can intentional cultural shifts support your goals?




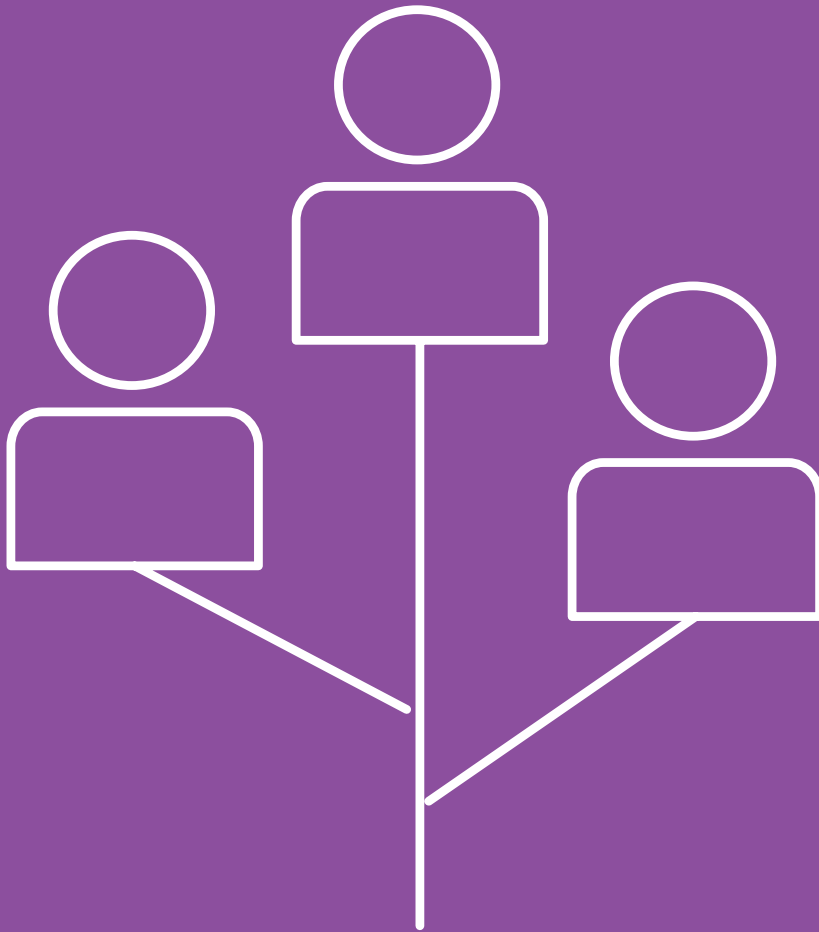
## Why is this important?

---

-  **human health**  
When an organization aligns with a broader purpose, individuals who are part of the organization feel more fulfilled and find their own sense of purpose.
-  **community health**  
Values-driven organizations can use their structures to affect positive community change.
-  **behavior awareness**  
Re-aligning organizational culture to reflect broader goals and values can encourage innovation and creativity.


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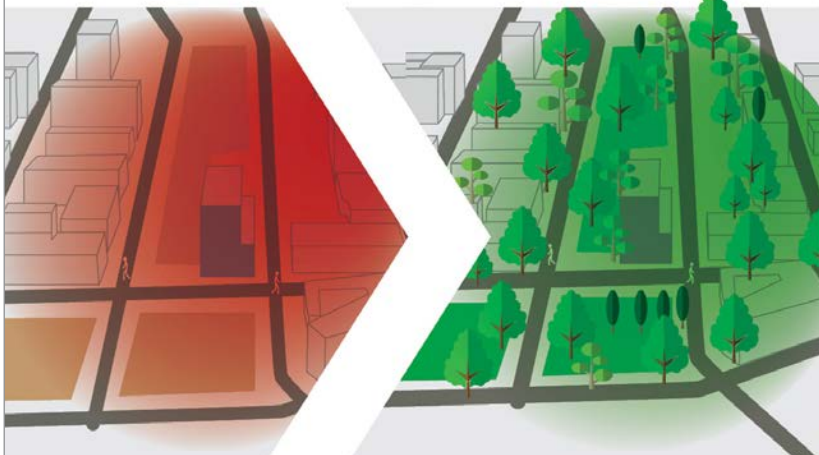
# EQUITABLE DEVELOPMENT

How can your project promote affordability, provide access to opportunity, and advocate for those in need?



## CLIMATE JUSTICE

How can your project mitigate the effects of climate change to ensure that no single community or group of people is unjustly affected by the project's environmental burdens or benefits?



## Why is this important?

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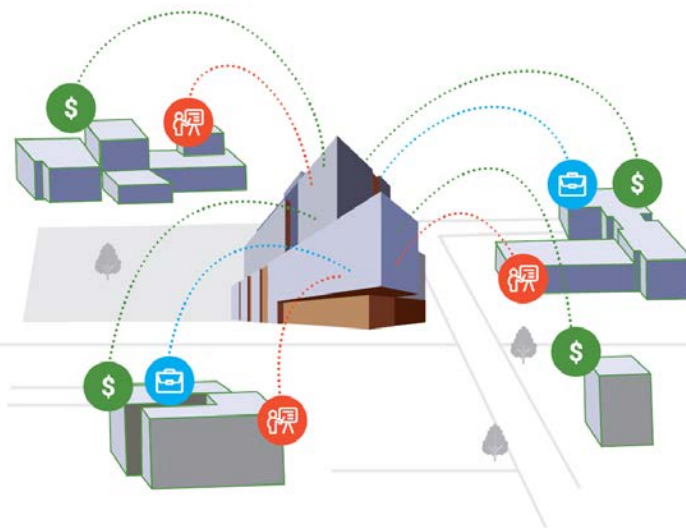
-  **human health**  
Climate justice addresses the negative health outcomes borne disproportionately by certain groups as a result of climate change, resource consumption, and environmental degradation.
-  **ecological future**  
Ecological health and human health are inextricably linked - climate change is a social justice issue.
-  **community health**  
Communities of color and low-income communities bear the brunt of environmental hazards caused by collective environmental degradation and consumption.

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## ECONOMIC DEVELOPMENT PROGRAMMING

What programs and initiatives within your project can build economic and social vitality in the surrounding community?



## Why is this important?


---

-  **human health**  
Economic development programming can improve household income and provide individuals with the economic opportunities they need to reach individual fulfillment, have a high quality of life, and thrive.
-  **ecological future**  
Balanced economic development goals can ensure an ecological future. Economic development can focus on practices, services, and products that solve climate issues and minimize environmental damage.
-  **community health**  
Providing access to local jobs, workforce development and training, and education, sharing assets and facilities with a larger community can help forge stronger partnerships with communities and help them thrive.


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 **EQUITABLE DEVELOPMENT SITING**

How can your project location foster a healthy, vibrant community that reduces disparities of ecological and economic health for underserved populations?



 **Why is this important?**


---

-  **human health**  
Equitable access to parks, healthy food, affordable housing, and circulation networks improves public health.
-  **ecological future**  
Equitable development can reduce disparities within communities to create a common ecological future. It addresses the needs of underserved populations using innovative design and reinvestment strategies.
-  **community health**  
Environmental justice and inclusive design choices, such as affordability, quality education, access to technology, active recreation, and mixed-use / mixed-income policies, support social and economic inclusion and help improve community health.



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



 **Why is this important?**

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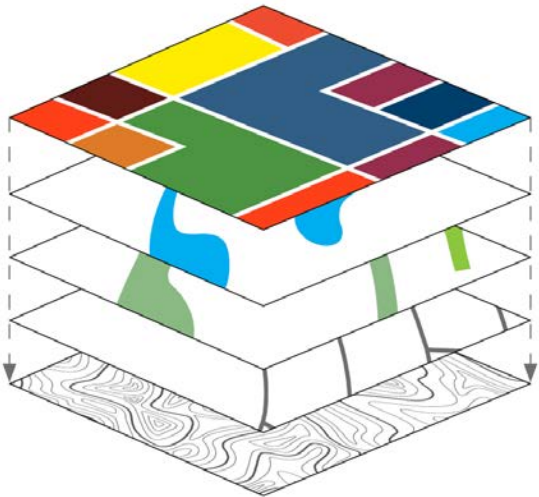
-  **human health**  
Allocating services and resources in an equitable manner means everyone has access to the resources they need to be healthy and thrive.
-  **resource conservation**  
Equity ensures that resources are fairly distributed to those in need, instead of certain groups consuming more than they need.


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 **LAND USE**


How could different combinations of activities and uses on your site affect the environment and human health? How do adjacent land uses affect your site's intended uses?









 **Why is this important?**

---

-  **human health**  
Land use impacts where we live, work, and play and our overall quality of life. It affects public health including air quality, water quality, physical activity, social and mental health and wellness.
-  **ecological future**  
Smart growth, compact development, and a mix of land uses integrated with multi-modal transportation can reduce sprawl that encroaches on agricultural land, forests, and biodiversity.
-  **community health**  
Land use planning and community development impact the community's ability to make healthy choices, have a healthy living environment, and achieve economic vitality.


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## SOCIAL JUSTICE




How can your project manifest a fair and just society in which individuals receive equal economic, political, and social rights and opportunities?







## Why is this important?

---

-  **human health**  
Social justice includes creating equal opportunities for health outcomes and reducing health disparities. Providing people with equal rights and opportunities helps them achieve individual fulfillment and reach their potential.
-  **community health**  
Social support systems and freedom from discrimination are necessary for positive community health outcomes.
-  **behavior awareness**  
Social justice can help individuals consider their own biases and the role they play in perpetuating or dismantling unjust systems.

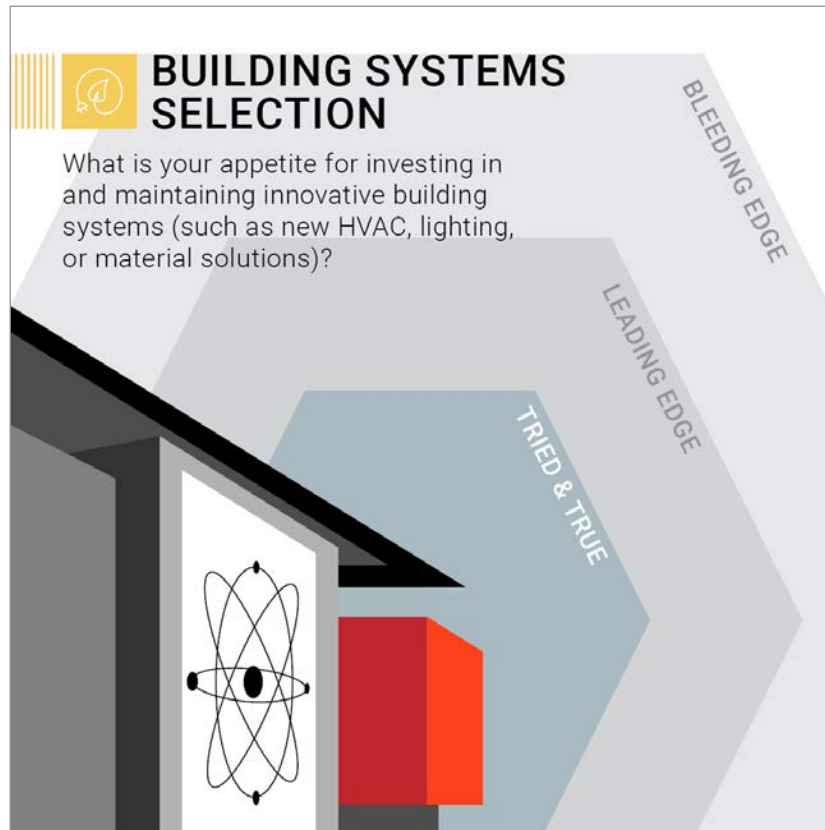
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# ENERGY

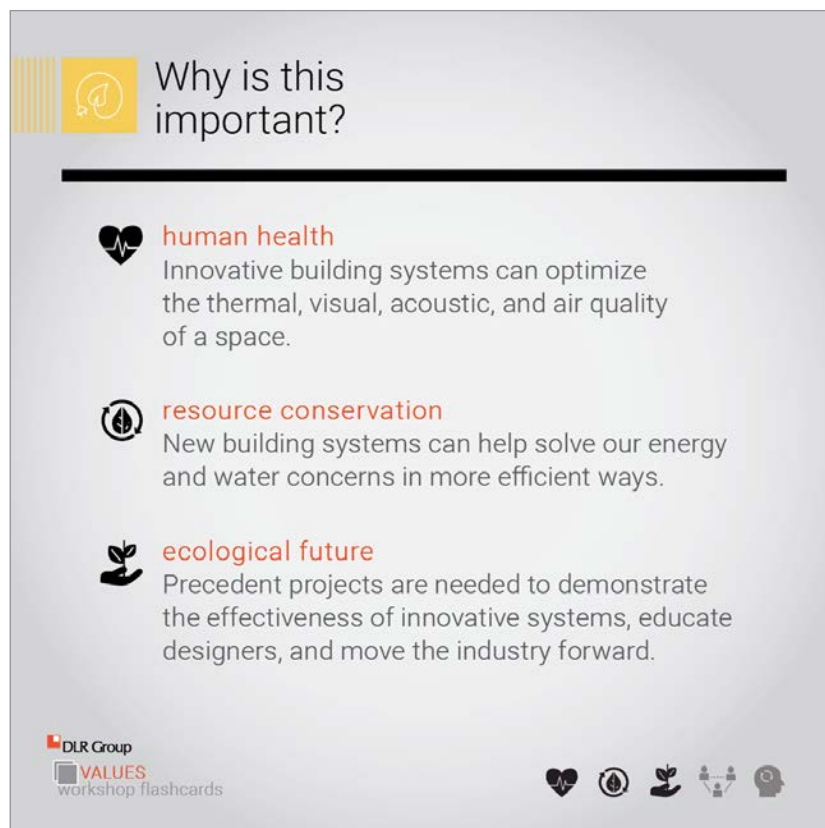
How can changes in energy infrastructure support your broader mission, reduce costs, and build a healthier planet?



**BUILDING SYSTEMS SELECTION**




What is your appetite for investing in and maintaining innovative building systems (such as new HVAC, lighting, or material solutions)?



The diagram shows a cross-section of a building with three levels of innovation represented by overlapping shapes: 'BLEEDING EDGE' (top, lightest), 'LEADING EDGE' (middle, medium), and 'TRIED & TRUE' (bottom, darkest). A stylized atomic symbol is shown in a window on the left.








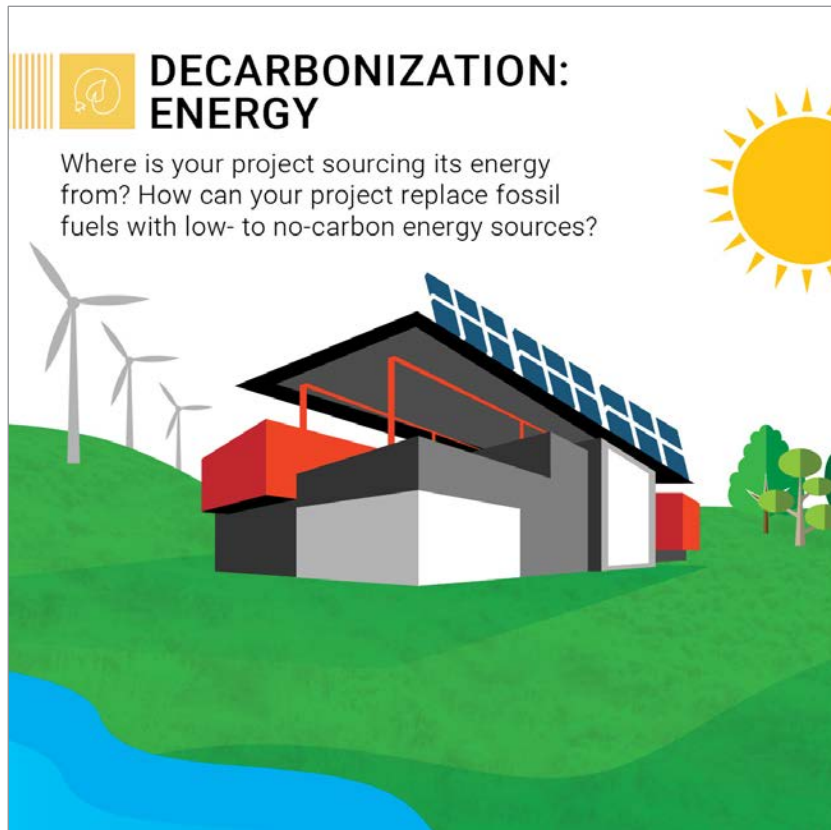
**Why is this important?**

---

-  **human health**  
Innovative building systems can optimize the thermal, visual, acoustic, and air quality of a space.
-  **resource conservation**  
New building systems can help solve our energy and water concerns in more efficient ways.
-  **ecological future**  
Precedent projects are needed to demonstrate the effectiveness of innovative systems, educate designers, and move the industry forward.




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


**Why is this important?**

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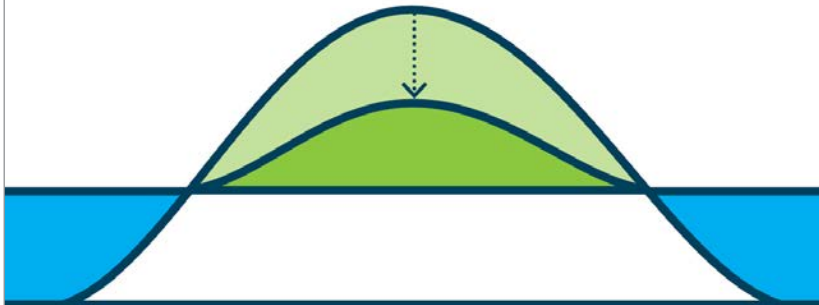
-  **resource conservation**  
Low- to -no carbon energy sources (renewables) reduce the demand for fossil fuel extraction and consumption.
-  **ecological future**  
Replacing fossil fuels with low- to no-carbon energy sources keeps carbon sequestered, reducing levels of atmospheric greenhouse gases that contribute to global warming.
-  **community health**  
Decarbonizing energy emits less harmful pollutants that affect community health.

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## ENERGY COST REDUCTION



How can your project optimize peak demand from the grid to reduce operational costs and right size mechanical systems?










● Storage Charging      ● Peak Demand Reduction

## Why is this important?


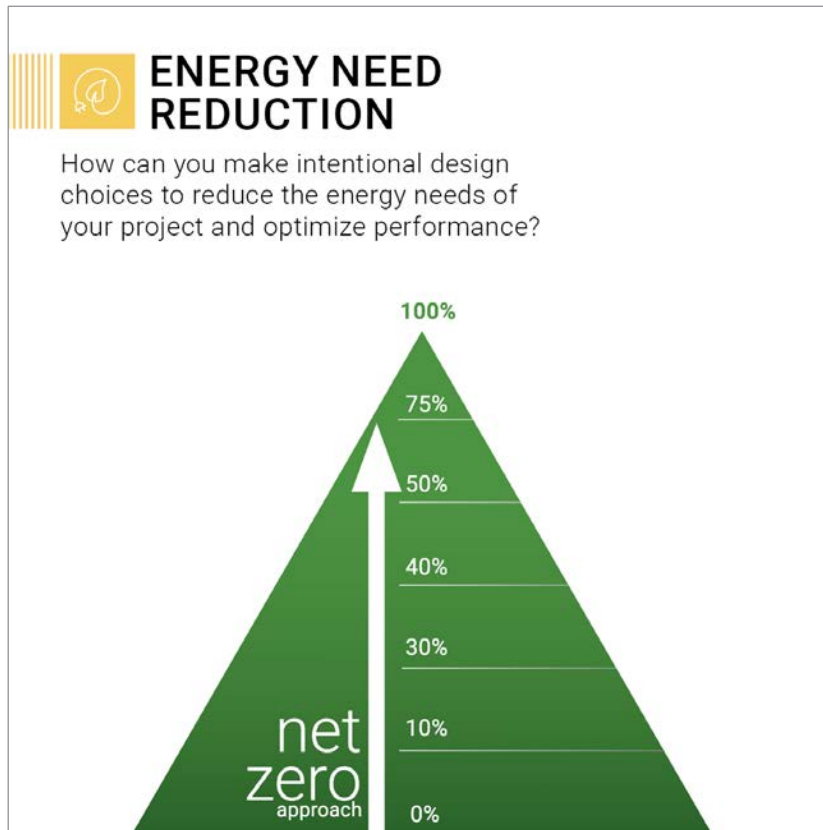
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-  **resource conservation**  
The lower the energy use intensity of a building, the less you will have to pay for energy consumption.  
  
The lower the peak energy you pull from the grid during high demand hours, the lower your peak demand charges will be and the less pressure you will put on the electrical grid.
-  **behavior awareness**  
By working with staff and occupants energy-efficient behaviors can be encouraged, the impact of which can be observed in reduced utility bills.

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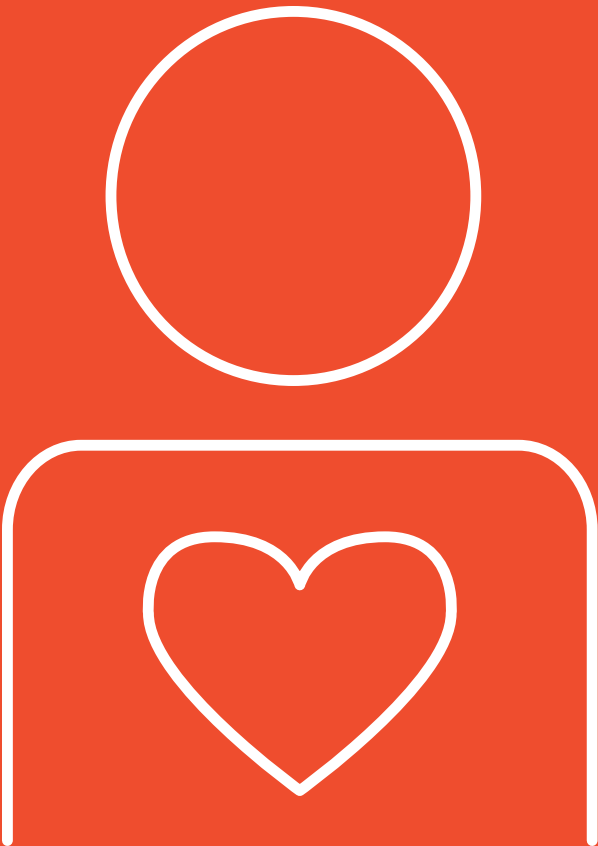
## Why is this important?

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-  **human health**  
An optimized building with low energy needs typically includes daylighting and an optimized wall construction, which makes the building naturally more comfortable without relying on building systems to provide artificial comfort.
-  **resource conservation**  
The lower the peak heating and cooling load of a building, the smaller the mechanical systems are.
-  **ecological future**  
By reducing your energy needs, you inherently reduce carbon emissions which helps ensure a better ecological future.

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# HEALTH + WELL-BEING

How can intentional design features actively promote users' emotional and physical well-being and encourage them to make healthier choices?



## ACTIVE SPACES

What aspects of your project can promote health and fitness-related activities and movement?



## Why is this important?



### human health

An active lifestyle improves an individual's health, decisions, and behaviors.



### community health

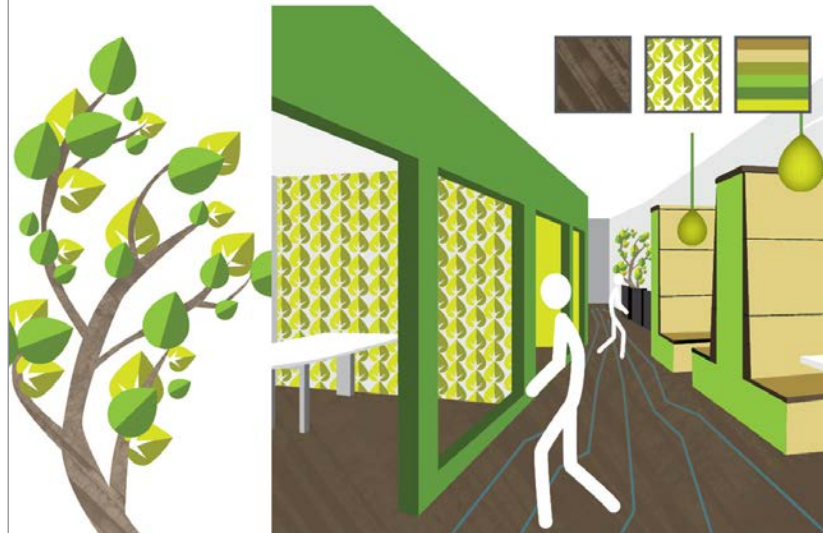
Encouraging activity in spaces open to the public can improve community health and build connections between a site and the community.





## BIOPHILIA

How can your project incorporate patterns and influences from nature into the design of the built environment?  
What natural experiences do user groups value and how can they support occupant health and performance?



## Why is this important?



### human health

The presence of natural elements found in biophilia in interior environments increases mood, happiness, and productivity, and can reduce stress and aid in health recovery.




### community health


When communities are exposed to biophilia in their local buildings, it can increase productivity as a whole, reduce sick days, create better community morale, and inspire.






 **EVIDENCE-BASED MODALITIES**



How do your cognitive and physical needs change while doing different tasks throughout the day? How can spaces best support the specific tasks they are designed for?


 **Why is this important?**

---

 **human health**

Our brains shift gears multiple times throughout the day, with different activities (modalities) using different areas of the brain. Coordinating all of this shifting, as well as making decisions and controlling impulses, uses a mental resource called “executive function.” When the space around us distracts or frustrates us, or when we’re shifting between tasks too often or without transition time, we use up our executive function ... leading to poor impulse control or lowered decision-making.

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## INDIVIDUAL FULFILLMENT

How can your project support the ability of individuals to grow and achieve social, intellectual, and emotional fulfillment? How can your project help its users develop skills that advance broader project goals?

## Why is this important?

---

 **human health**  
When individuals develop skills and find activities and vocations that fit their personality, they can realize greater meaning in life.

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## NOURISHMENT

How does your project promote healthy food choices and eating habits? How do your procurement policies impact healthy eating and sustainable food sourcing?



## Why is this important?



### human health

Promoting healthy eating choices on-site helps users develop healthy eating behaviors that they can bring home to their families.



### resource conservation


Local food sourcing reduces packing and transportation burdens on the food supply chain, conserving natural resources.



### behavior awareness


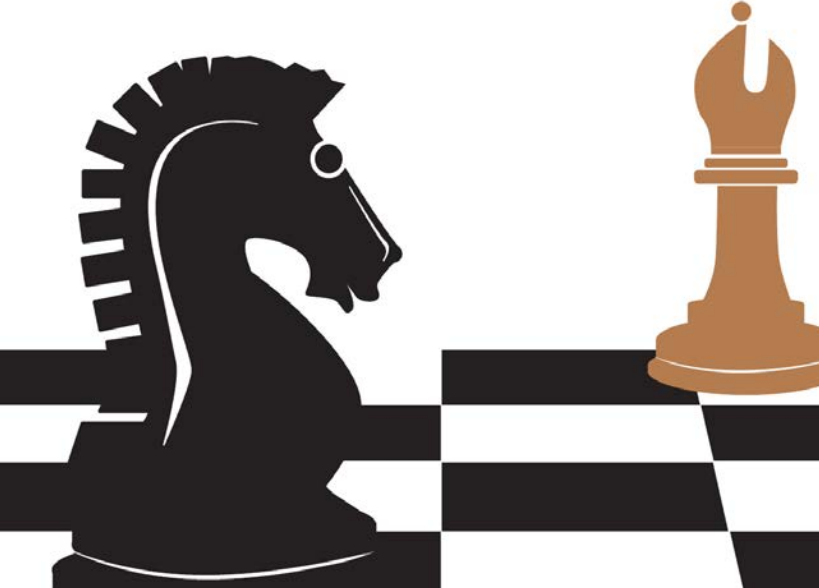
Raising awareness of food sources and production increases appreciation of healthy, local, and whole foods.







## PLAY



How can your project provide user groups with opportunities to play, explore, experiment, and find joy?




## Why is this important?

---

-  **human health**  
By engaging in different types of activities – from structured to exploratory – people can restore mental energy, experience their own personal limits, and gain an understanding of their own self and others around them.
-  **community health**  
Creating elements of fun and mystery that are accessible to the community enhances collective joy and community pride.

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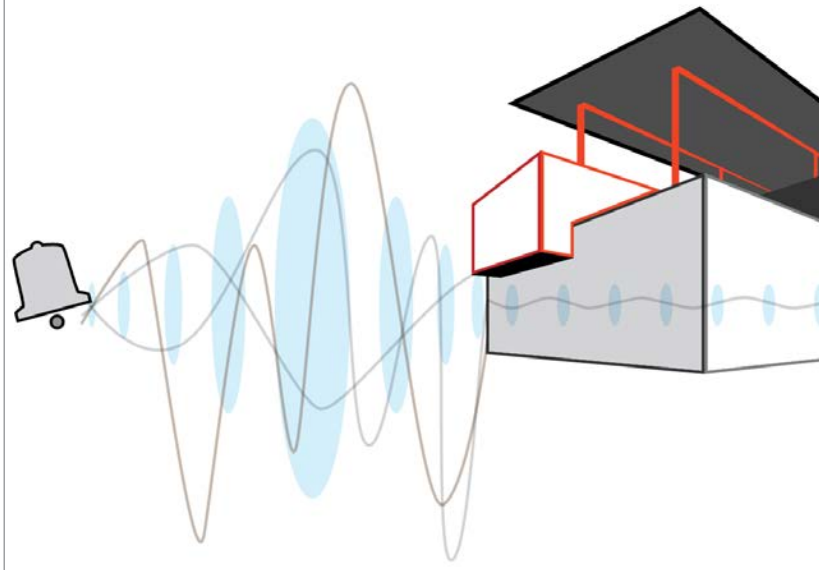


# INDOOR ENVIRONMENTAL QUALITY


How can intentional design features actively promote users' emotional and physical well-being and encourage them to make healthier choices?

 **ACOUSTIC COMFORT**


What acoustical distractions need to be controlled to allow concentration on the primary activities in the facility?





The diagram illustrates sound waves originating from a bell on the left, entering a building on the right. The waves are shown as blue and grey oscillating lines. The building is depicted with a grey base and a white upper section, with red lines indicating internal structure or furniture. The waves are shown entering the building and reflecting off the walls and ceiling, representing how sound can become a distraction inside a facility.

 **Why is this important?**

---


 **human health**  
Stress-free acoustical environments improve focus, attention, and effective communication.

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The bottom of the slide features five small icons: a heart, a leaf, a person, a group of people, and a head, representing different aspects of indoor environmental quality and human health.



 **AIR QUALITY**

What pollutes the indoor air that occupants breathe? How can pollution be avoided or treated?

The illustration shows a grey rectangular filter with a grid pattern positioned vertically. To its left, blue and grey wavy lines represent air flow. To its right, various small geometric shapes (circles, triangles, squares) in grey, black, and yellow represent air pollutants. The filter appears to be capturing some of these particles.

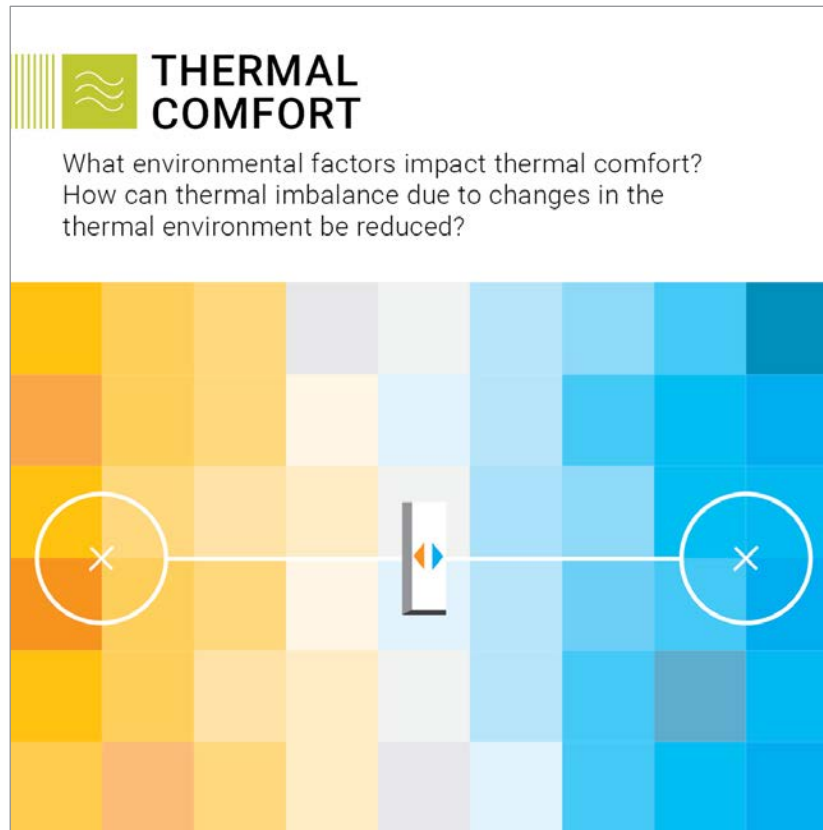
 **Why is this important?**


---

-  **human health**  
The cardiovascular and respiratory health of occupants depends on the quality of the air they breathe.
-  **resource conservation**  
The higher the pollution level, the more energy resources are required to treat it.

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 **THERMAL COMFORT**


What environmental factors impact thermal comfort?  
How can thermal imbalance due to changes in the thermal environment be reduced?







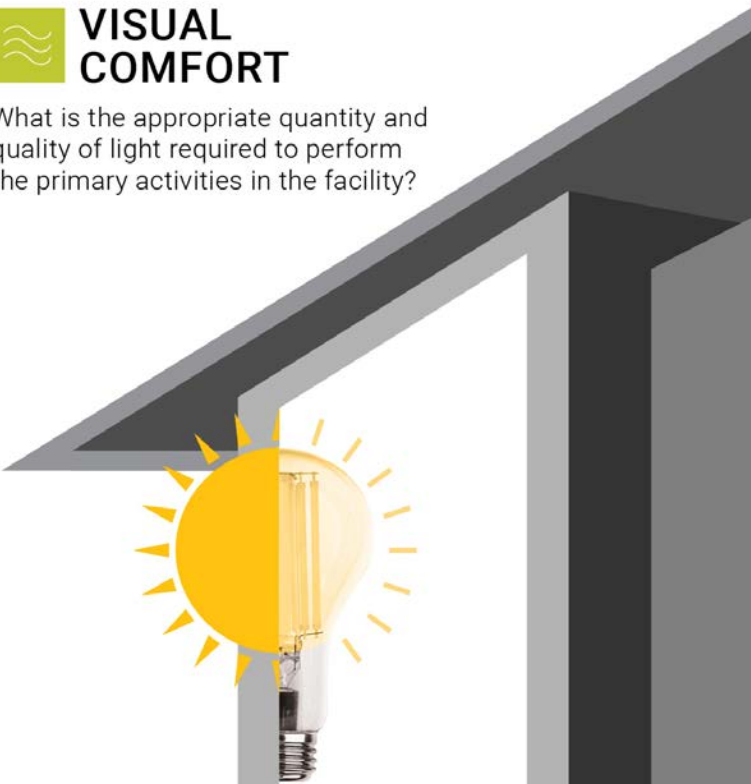
 **Why is this important?**


---

-  **human health**  
A thermally comfortable environment improves productivity and well-being.
-  **resource conservation**  
Using active systems to provide thermal comfort increases resource needs.


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 **VISUAL COMFORT**



What is the appropriate quantity and quality of light required to perform the primary activities in the facility?








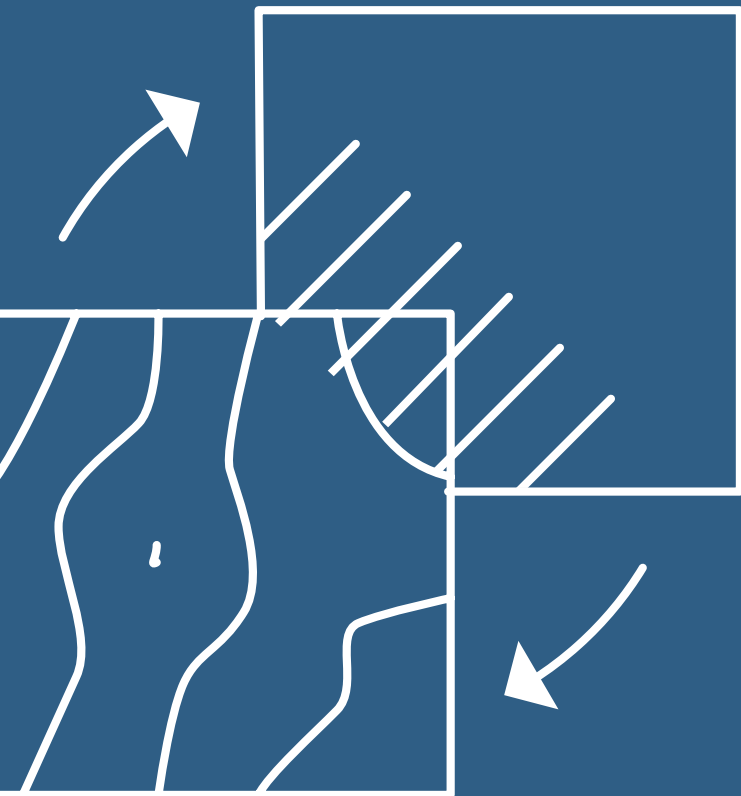
**Why is this important?**

---

-  **human health**  
Providing visual acuity is critical to enhancing productivity.
-  **resource conservation**  
Adequate lighting that can be controlled based on the activity and climate minimizes energy consumption.

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# MATERIALS IMPACT

How do your materials choices support healthy ecology, communities, and economies?




## CONSCIOUS MATERIAL SOURCING

How can we source materials that support local economies and protect local ecology?



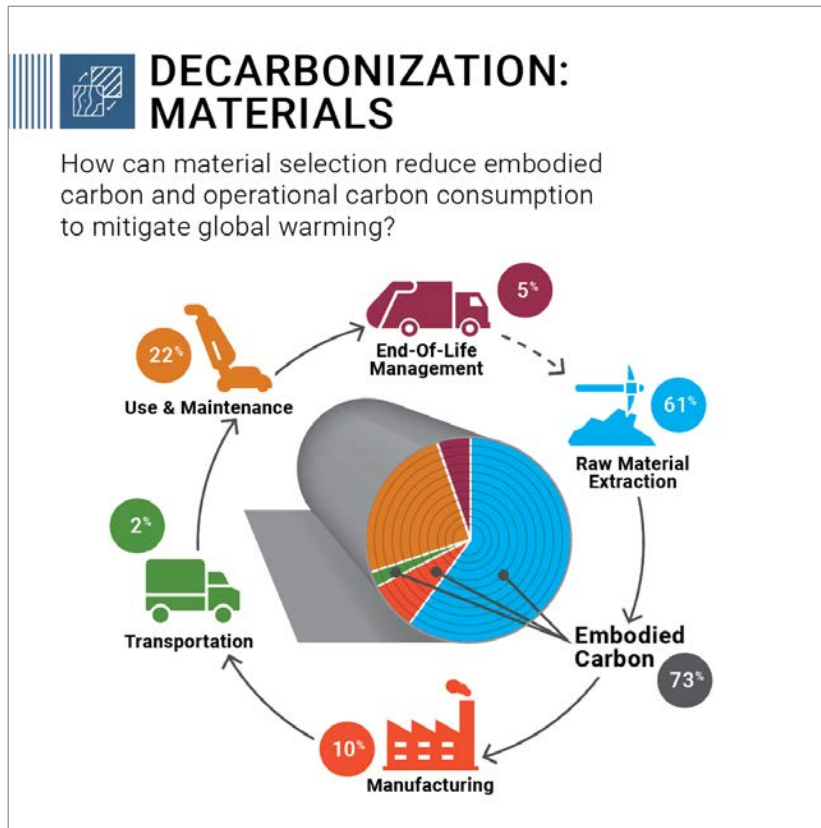
## Why is this important?

---

-  **resource conservation**  
Considering extraction, manufacturing, and transportation of a product will conserve resources while ensuring the local economy benefits from the product's use.
-  **ecological future**  
Locally sourced materials have less impact on the planet by reducing transportation emissions. Salvaged and recycled-content materials can sequester carbon and help prevent emissions.
-  **community health**  
Sourcing local materials helps employ the local economy, generate revenue, foster community pride, and build lasting partnerships.

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## Why is this important?

---

-  **human health**  
Ingredients and carbon should not be decoupled, but the industry still lacks instances where both are proven. Some products optimized for ingredients and toxicity might be the most impactful from a carbon perspective.
-  **ecological future**  
Life-cycle assessment lanes address global warming potential, acidification, natural resources consumption, land use, and ozone layer depletion at a minimum. Salvaged and recycled-content materials can sequester carbon and help prevent emissions.

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## DESIGN FOR DISASSEMBLY

How can we think and design beyond a building's lifespan to create a cycle of material recovery, value retention, and meaningful reuse?



The diagram illustrates the concept of design for disassembly using colorful building blocks. On the left, a small, multi-colored structure is shown. An arrow points to the right, where the same structure is shown being disassembled into individual blocks. Below this, the blocks are shown scattered on the ground, representing the end of the building's life cycle and the beginning of material recovery.

## Why is this important?

---

-  **human health**  
When materials are recycled or upcycled, less waste is burned in landfills. This prevents small particles of plastic and other harmful chemicals from entering into our soil and water at the end of a material's life.
-  **resource conservation**  
Reusing materials limits the amount of materials added to landfills.
-  **community health**  
When parts of a building and material are reused in a unique way, it can tell a story back to the community – one of its past that also demonstrates a desire to build for future generations.

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**Why is this important?**

---

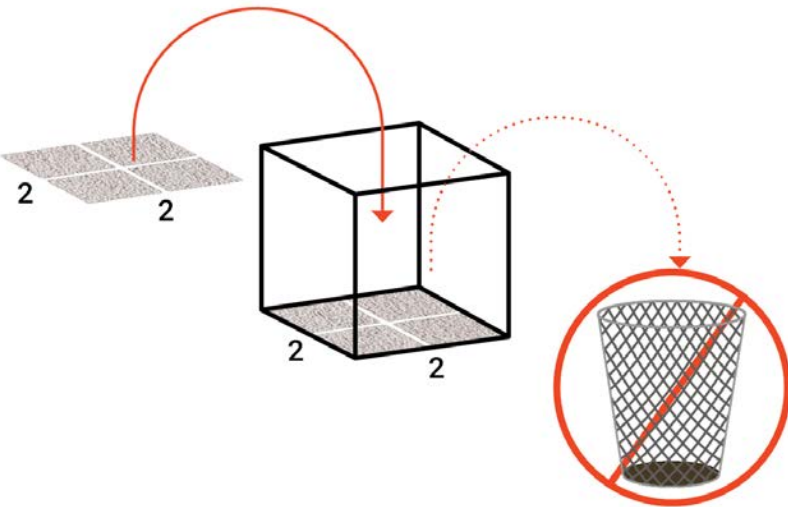
-  **ecological future**  
Footprint is a measure of human pressure on Earth's resources. Handprint is a measure of what we can do individually, and together, to restore the balance between consumption and the planet's carrying capacity.
-  **community health**  
Handprinting creates awareness of the hidden economic, social, and community impacts of a material. Awareness can bring people together to change material practices and improve community health.

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## PURPOSE OVER SURPLUS

How do purposeful design choices reduce material consumption and the generation of construction waste?



## Why is this important?

---

-  **resource conservation**  
Designing on a material or product module ensures reductions in labor, manufacturing, storage, and transportation, further reducing waste.
-  **ecological future**  
Designing on module reduces manufacturing and storage needs for custom material sizes if adjustments take place before arriving to the construction site. Less square footage needed for manufacturing helps optimize operations and right-size production needs.

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## TRANSPARENCY: MATERIAL INGREDIENTS

How can material transparency highlight material ingredients to make healthier choices for building occupants?



### Material Facts

**Building Per Serving** 1  
**Building Per Block** 4

---

**% Daily Value**

---

**Declare**  
Red list free, red list compliant, declared

---

**Health Product Declaration**  
LT-1 free

---

**Cradle to Cradle:** Certified  
Platinum

---

**Cradle to Cradle:** Material Health Certificate  
Platinum

---

**Living Product Challenge**  
Certified



## Why is this important?

---



**human health**

Validating a material's ingredients helps avoid the presence of harmful substances that can affect occupant health.



**ecological future**

Ingredient awareness helps us demand the replacement of toxic ingredients with ones that have no hazard or cautionary indicators, many of which are derived from plants. This can improve both human and ecological health.

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# OUTDOOR ENVIRONMENTAL QUALITY

How can your project's outdoor spaces restore ecology, promote biodiversity, build community, and create a strong sense of place?



## BUILDING ECOLOGY

How can intentional design choices at the building level, such as dark-sky lighting and avian-friendly design, promote ecosystem health?



## Why is this important?



### human health

Building Ecology can restore our inherent connection to nature and provide mental and physical health benefits.



### ecological future

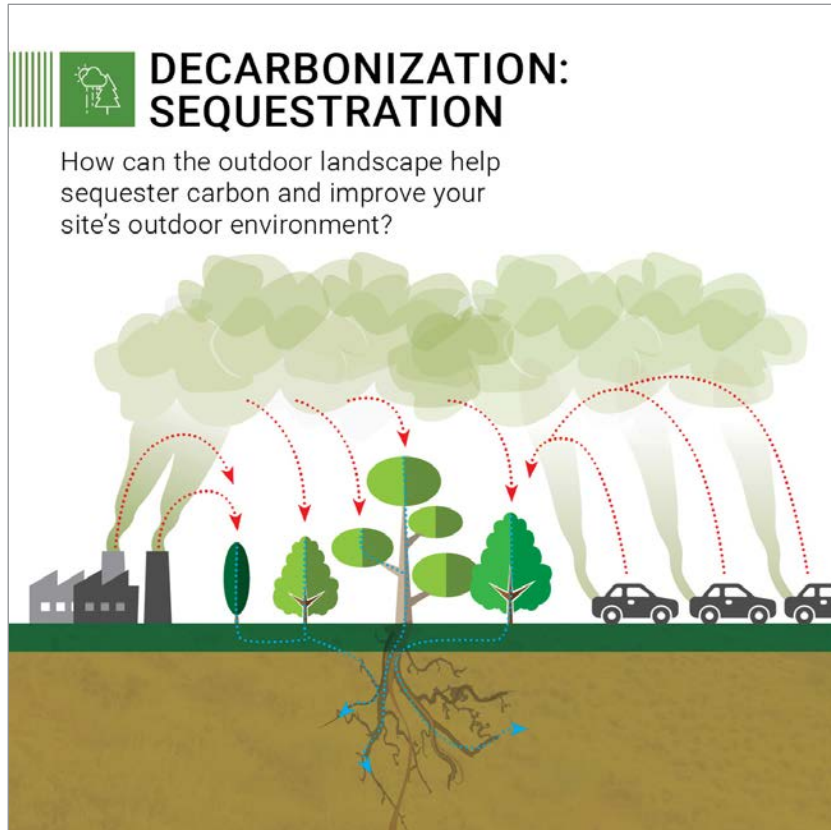
A building's design for ecology can support biodiversity and integrate into a site's ecosystem, providing habitat, food, and shelter for people and other species.






### community health



Buildings designed with site ecology can absorb stormwater, clean air, grow food, and provide other stabilizing services to local communities.








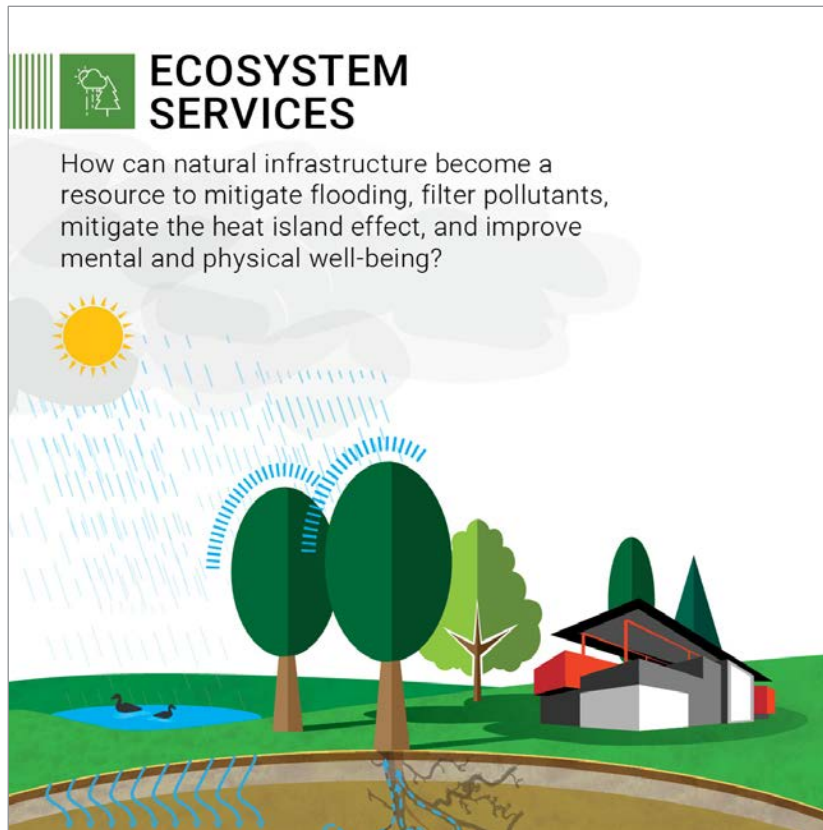


## Why is this important?

-  **human health**  
Carbon sequestration reduces the impact of climate change on vulnerable populations and improves ecosystem health, which in turn improves human health.
-  **resource conservation**  
Climate change can disrupt natural resources, from forest fires to higher seas contaminating freshwater resources. Reducing carbon in the atmosphere can help stabilize Earth's natural systems.
-  **ecological future**  
Planting trees and improving soil health sequesters atmospheric carbon, provides habitat for species and beauty for our enjoyment.

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 **Why is this important?**

---

-  **human health**  
Healthy natural environments provide intrinsic value to people, and improve mental and physical well-being.
-  **resource conservation**  
Natural infrastructure can reduce the resources needed to construct and operate man-made infrastructure.
-  **community health**  
Ecosystem services can build community resiliency by providing natural protection against hazards like erosion, flooding, extreme heat, and pollution.

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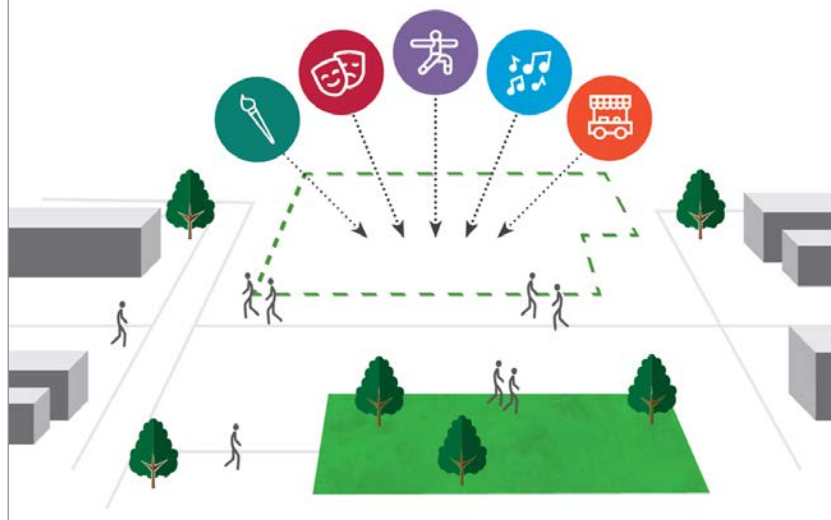
    





## PUBLIC SPACE




How can outdoor public space promote connectedness, community, health, expression, and civic pride?





The diagram illustrates a public space layout. At the top, five circular icons represent different activities: a green circle with a paintbrush (art), a red circle with theater masks (theater), a purple circle with a person running (exercise), a blue circle with musical notes (music), and an orange circle with a bus (transit). Dotted lines connect these icons to a central green rectangular area representing a park or plaza. This central area contains several trees and a few people walking. The surrounding area shows a sidewalk with more people walking and some grey rectangular blocks representing buildings.

## Why is this important?

---

-  **human health**  
Social interaction, and spaces to interact, are vital for human well-being. Access to quality public space encourages a more active lifestyle.
-  **community health**  
Communities need shared places to express their identity and culture, connect with each other, and engage in civic life.
-  **behavior awareness**  
Shared experiences of natural systems in public spaces can change how we value our natural world.


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## SITE ECOLOGY



How can a site's selection and design regenerate ecosystem health, connect habitats, promote biodiversity, and protect non-human species to ensure a more resilient community?




## Why is this important?

---

-  **resource conservation**  
Humanity needs 1.5 Earths to meet our current resource demands. Designing for healthy Site Ecology can help sequester carbon, promote biodiversity, and improve a site or community's ability to bounce back from a disruption (resilience).
-  **ecological future**  
Land Development is the primary cause of biodiversity decline globally. Conserving ecologically sensitive sites, native landscaping design, and integrating ecology with the built environment can lead us to a regenerative future.

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# PROCUREMENT + OPERATIONS

How can intentional design features actively promote users' emotional and physical well-being and encourage them to make healthier choices?



 **CONSCIOUS CLEANING + UPKEEP**

What aspects and programs in your project can minimize cleaning, maintenance, and pest management needs? Can you use non-toxic supplies that maintain human and ecological health?



### Why is this important?

---

-  **human health**  
Reducing levels of chemical, biological, and particulate contaminants can improve human health.
-  **ecological future**  
Reducing levels of chemical, biological, and particulate contaminants found in chemical cleaners and pesticides can improve the health of ecosystems and waterways.
-  **behavior awareness**  
By researching updated methodologies toward cleaning and upkeep, operations can lead to a safer and environmentally friendly option. Sharing methodologies with building occupants can help inform them on safer options to bring to their own home.

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## GOODS + SUPPLIES

How can you intentionally procure furniture, electronics, and supplies in a way that eliminates waste and extends the timeline for replacement?




## Why is this important?

---

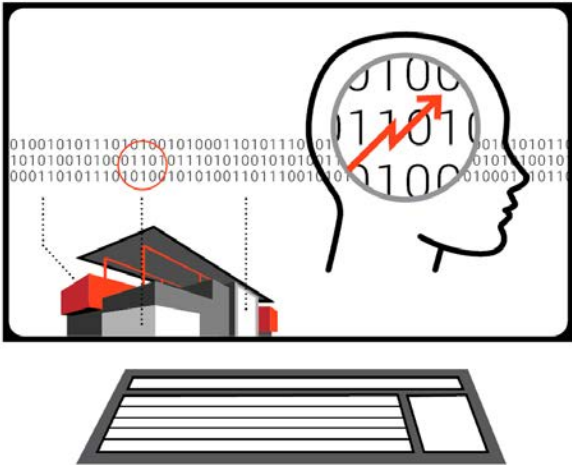
-  **human health**  
Avoiding chemicals of concern within products purchases can have a positive impact on human health.
-  **resource conservation**  
Sustainable procurement policies, such as buying goods and supplies built to stand the test of time, can reduce resource consumption.
-  **ecological future**  
By sustainability harvesting regenerative resources, local ecosystems bear less of a burden than harvesting resources that would lead to an imbalance of the ecosystem.

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 **OPERATIONAL OPTIMIZATION**


How can building systems intelligently connect and respond to trends in behavior, operations, and performance? Can proactive measures be taken to meet user needs and ensure continued function?






 **Why is this important?**

---

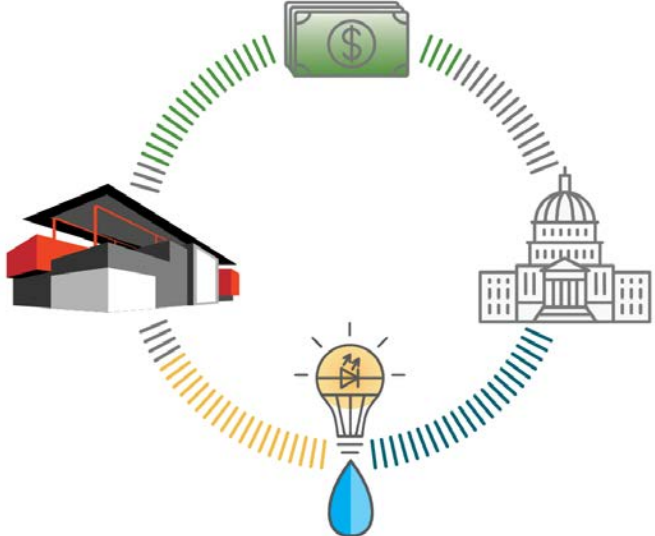
-  **human health**  
Building systems are designed to create healthy environments. It's important to optimize their operation to enhance the comfort and well-being of occupants.
-  **resource conservation**  
Monitoring and transparency ensure that a building is operating efficiently to conserve energy and resources.
-  **ecological future**  
Conserving water and energy is part of building optimization. Reducing water and energy use protects local ecology.

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## REGULATORY PARTNERSHIPS

How can your project take advantage of local programs and incentives to procure more sustainable infrastructure and resources?



The diagram illustrates a cyclical relationship between three elements: a building under construction (representing infrastructure), a government building (representing regulation or incentives), and a lightbulb with a water drop (representing sustainable resources). A circular path of lines connects these elements, with a stack of money at the top, suggesting a flow of funds or incentives between these entities.

## Why is this important?

---

-  **resource conservation**  
Partnering with local programs and incentives can reduce the cost of resources and open avenues for more sustainable water, energy, and material sources.
-  **community health**  
Regulatory partnerships help establish community-based implementation of policy and can lead to innovative policy solutions.


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 **SAFETY + SECURITY**



How can the design of a facility enable safe, comfortable and secure environments for all users?




 **Why is this important?**

---

 **human health**  
Accounting for safety and security measures while balancing ideas of self-efficacy and autonomy for all users is critical to user comfort, healing, transformation, and equity.

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## TRANSPARENCY: BUILDING PERFORMANCE

What aspects of building performance can be transparent and communicated to users?

## Why is this important?

---

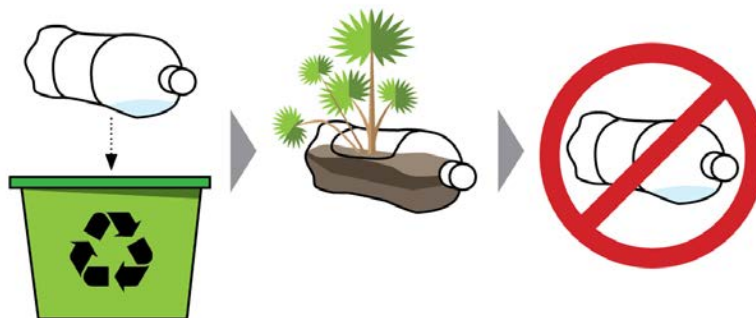
-  **human health**  
Building performance factors that affect human health can be monitored to ensure a space stays healthy.
-  **resource conservation**  
Monitoring and transparency ensure that a building is operating efficiently to conserve energy and resources.
-  **behavior awareness**  
Building transparency can help educate communities on the infrastructure and processes that reduce resource consumption.

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## WASTE

What aspects and programs in the facility can promote recycling, upcycling, and waste reduction?



## Why is this important?



-  **ecological future**  
Reduced waste disposal at landfills can lessen soil and groundwater pollution and reduce the need for harmful extraction processes.
-  **community health**  
Communities located next to landfills are more vulnerable to environmental toxins.
-  **behavior awareness**  
Championing conscientious waste management practices on-site can improve behavior patterns at home.






# RESILIENCY

How can your project help its users and community adapt to and recover from unexpected situations?




## BUILDING RESILIENCY

What intentional design features in a facility can easily respond to and support the primary functions for users during and after an unexpected event?



## Why is this important?

---

-  **resource conservation**  
Simple, repairable, resilient systems reduce the need for resources on an ongoing basis. Investing up-front in resilient buildings reduces the costs incurred during a disturbance (e.g. insurance, delays in service, repairs).
-  **ecological future**  
A facility designed to survive and thrive during a hazard will result in less waste and reconstruction of both the building(s) and surrounding habitats.


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 **COMMUNITY RESILIENCY**


What measures and features can your project provide to the larger community it serves during and after an unexpected event?





 **Why is this important?**

---

 **human health**  
When a project is intentionally designed to survive and serve the community during stress and unexpected hazard events, community members have a safety-net, contributing to both mental and physical well-being.

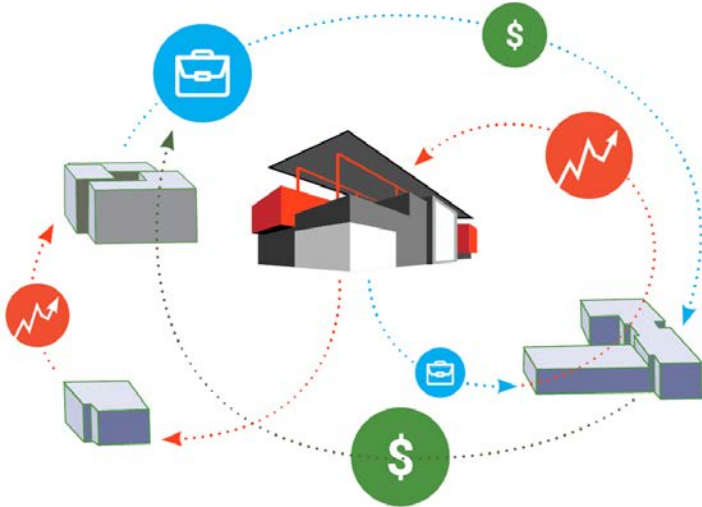
 **community health**  
Providing resources to the community in times of need helps sustain populations in need through unexpected events.

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## ECONOMIC RESILIENCY


How can your project create a supportive balance of uses and revenue sources to ensure continued economic vitality in the face of unexpected events?




## Why is this important?

---

 **community health**  
The economy's ability to cope, recover, and reconstruct helps sustain communities during and after unexpected events.

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## EMERGENCY PLANNING


How can we define a clear plan of action for operating your building / site during a short term or long term hazard event?



## Why is this important?

---


-  **community health**  
Identifying services your project site can offer to the community following an unexpected event can allow your entire community to heal.
-  **behavior awareness**  
Clear communication of your own project's emergency plan for continuity of operations may bring awareness to your users to create their own emergency planning for their home life.

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## EMOTIONAL RESILIENCY



What aspects of the project can provide safety, refuge, and emotional support to help occupants adapt to stressful situations?




## Why is this important?

---

-  **human health**  
A healing environment helps build emotional support for users.
-  **community health**  
When a project becomes a refuge in the community, it allows individuals to seek support and leads to a positive impact on community health.
-  **behavior awareness**  
A refuge space can help individuals develop the capacity to cope with life's inevitable ups and downs and promotes positive adaptation to any situation no matter how serious and stressful it might be.

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## RISK ADAPTION + MITIGATION


How can we proactively identify and mitigate the risks that could prevent you from providing the primary functions of your facility?

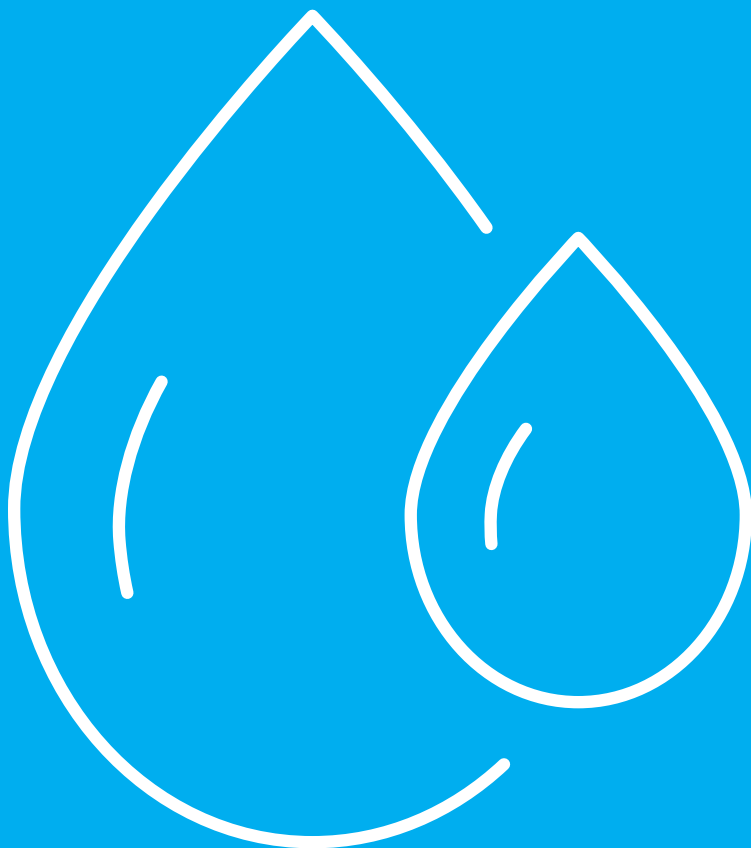
## Why is this important?

---

-  **human health**  
 Understanding, planning for, and mitigating the potential impacts of your project's biggest threats will allow individuals to bounce back following an unexpected event, improving their stress levels and overall health.
-  **resource conservation**  
 By planning ahead for risks, a project can reduce the costs of repairs and replacement after an unexpected event.
-  **community health**  
 Planning ahead for risks like sea level rise, flooding, drought, and extreme weather can protect vulnerable communities from destruction and displacement and help them adapt to a changing climate.

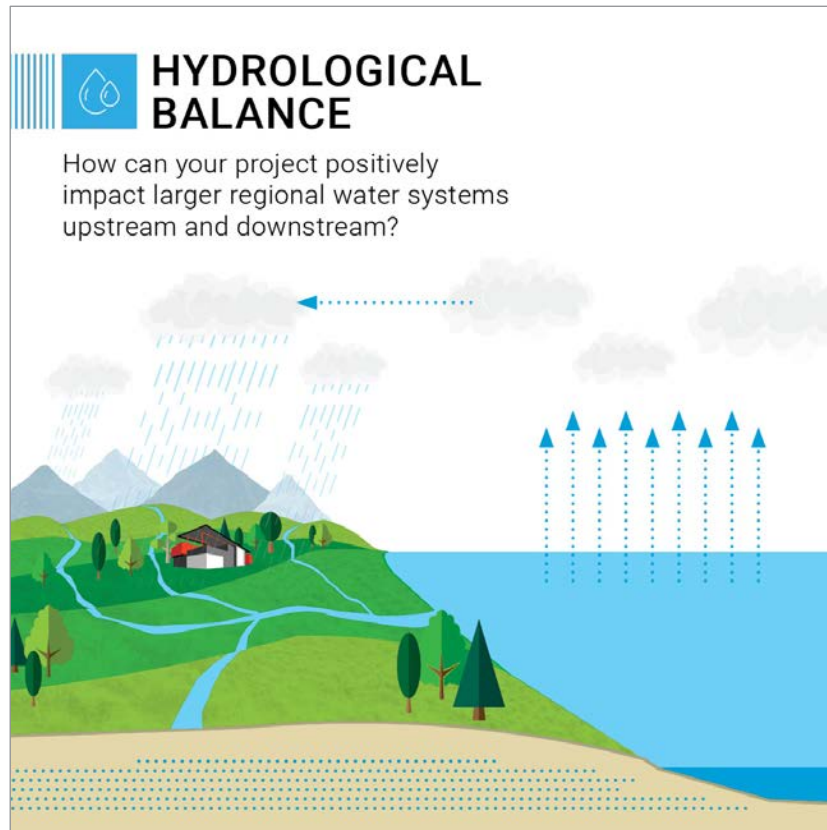
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# WATER



What connections to water are important to your users and neighboring communities?





## Why is this important?

---

-  **resource conservation**  
By identifying challenges within the local hydrological cycle, solutions can be handprinted (exported) to a location outside of the site when it is not feasible within the project boundaries.
-  **ecological future**  
Beyond the boundary of the project site, understanding the larger context of water's journey upstream and downstream enables protecting and conserving water for all species.


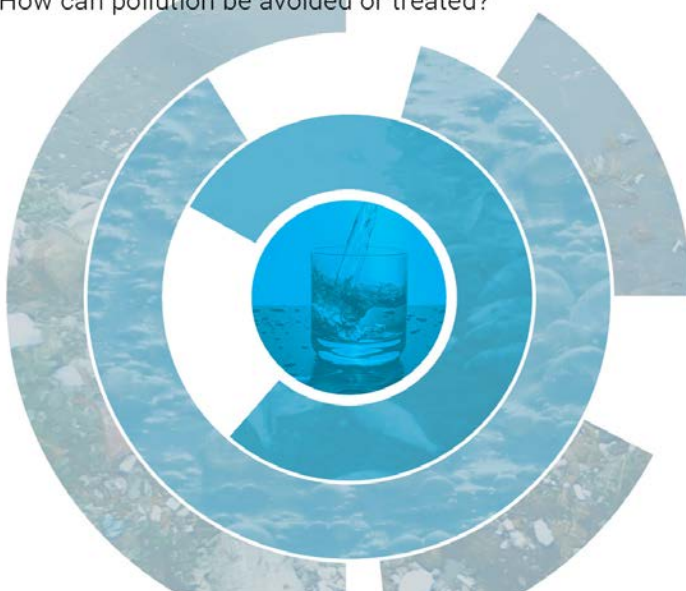
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## POTABLE WATER QUALITY



What pollutes the water for human consumption inside and outside your facility?  
How can pollution be avoided or treated?




## Why is this important?

---

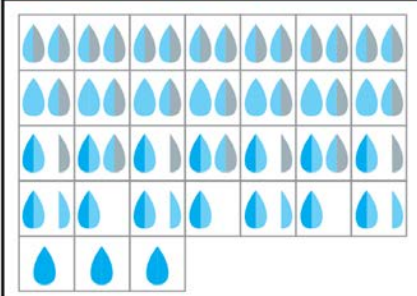

-  **human health**  
Access to clear, good-tasting water helps promote proper hydration.
-  **resource conservation**  
When we understand water quality we begin to conserve potable water by using non-potable water for non-potable water uses.
-  **community health**  
Low-income and minority communities are more likely to be exposed to drinking water contaminants that can increase the risk of cancer and birth defects.

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## (STORM) WATER MANAGEMENT


What is the long term water need for the facility in quantity and quality? How can needs be reduced and quality maintained throughout the life of the facility?





## Why is this important?

---


-  **human health**  
Stormwater management is an important public health intervention to reduce disease. Improper drainage forms stagnant pools providing breeding sites for disease vectors.
-  **resource conservation**  
Using water more than once through innovative technologies reduces potable water needs and lessens the burden on wastewater management.
-  **ecological future**  
By controlling stormwater volume and timing, sustainable stormwater management practices also improve ecosystem services such as water supply, water storage, climate regulation, and flood control.


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 **WATER CONTEXT OF PLACE**


How does your project connect to its location's water history? How can your project solve the local challenges associated with water? How can it celebrate the cultural relationships people have with water?









 **Why is this important?**

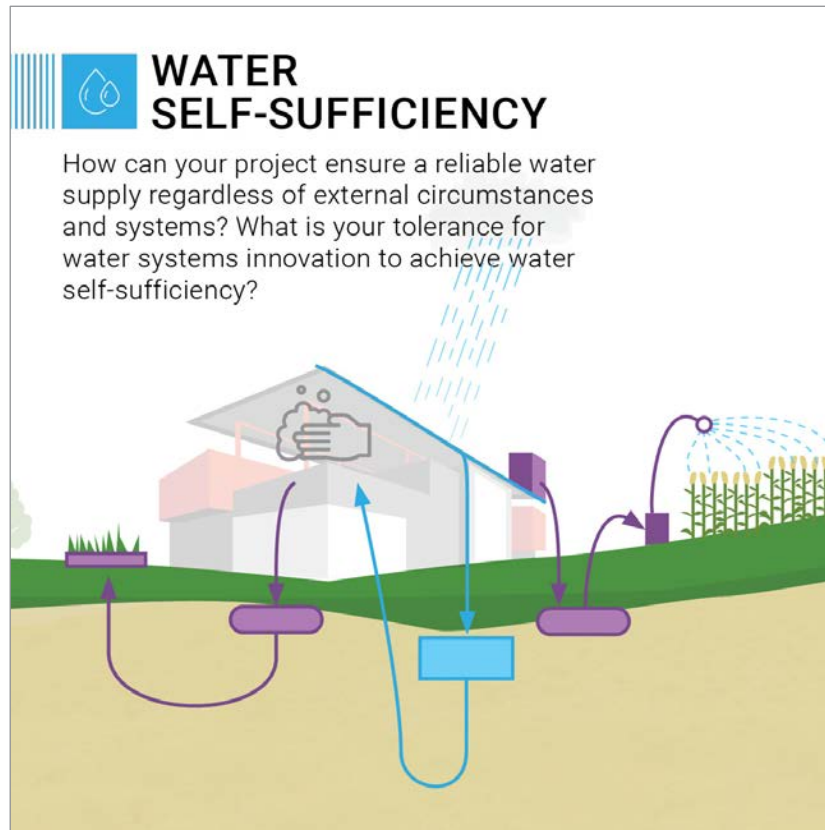
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 **human health**  
Water is life. Respecting a location's water history deepens our relationship with the place and strengthens emotional resilience.

 **community health**  
Water unites communities when cultural stories of water stewardship are leveraged and shared.

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## Why is this important?

-  **human health**  
Natural or man-made hazards cause temporary or permanent disruptions to healthy drinking water access. Water self-sufficiency builds resilience against these disruptions.
-  **resource conservation**  
Living within the carrying capacity of the project site reduces the burden on extending and maintaining the water infrastructure.
-  **community health**  
Low-income and minority communities are more likely to be impacted by water supply disruptions. Water self-sufficiency supports such communities' resilience.

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