

GREEN+ 2026 - Session 8

WELL, Fitwel & Healthy Materials



GREEN+ INITIATIVE



GREEN+ 2026

SUSTAINABLE DEVELOPMENT
10 TRAINING SESSIONS

hosted and supported by

TEXAS ASSOCIATION OF COMMUNITY
DEVELOPMENT CORPORATIONS

Why Do We Need a Green CDC Training in Texas?

- Nearly one-third of Texans face high energy burdens, with low-income, minority, and rural communities disproportionately affected due to aging homes and inefficient infrastructure.
- Rising utility costs, grid upgrades, and new industrial demands like data centers threaten to worsen affordability and reliability across the state.
- While conservation and clean energy is a potential solution, public understanding is low and opinions are deeply divided along partisan lines, highlighting a need for broader education and policy focus on both supply and demand.
- Nearly 45% of households pay over \$200 a month on average for summer electricity. About one-third of Texans spend 7% or more of their income on energy — surpassing the high energy burden threshold of 6%.





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GREEN+

DSGN - Architect / Director of
Sustainability/ Principal



Intro to Green Building and
Overview of Types of 3rd
Party Certifications

Session 1
Today - January 13



Designing For Resilience

Session 2
February 10th



March 29 - 31
TACDC Conference



Passive Solar Design in
Texas

Session 4
April 14



Basic Energy Modeling &
Why We Do It

Session 5
May 12



Renovation & Reuse: The
Hidden Power of Existing
Buildings

Session 6
June 9



LEED & The Living Building
Challenge

Session 7
July 14



WELL, Fitwell, & Healthy
Materials

Session 8
August 11



Net Zero Energy (NZE)

Session 9
September 8



Carbon/Electrification & A
Year In Review

Session 10
October 13



WELL, Fitwell, & Healthy Materials

August 11

Healthy buildings mean healthier communities. This session will introduce the WELL Building Standard and Fitwel, two certification systems that focus on occupant health, comfort, and wellbeing. We'll cover the basics of what each system measures—like air quality, light, fitness, and community connection—and how they can apply to affordable housing and community development. In addition, we'll discuss the growing importance of healthy materials, including tools like Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs), and how transparency in product choices supports both certification and healthier environments for residents.



Presenters



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Agenda

1. Why do building owners pursue green building certification?
2. What are “Healthy Materials”?
3. Intro to WELL
4. Intro to FitWel
5. Comparisons
6. Q&A / Discussion

Healthy Materials: From Contents to Transparency

Where We Started (LEED v1 & v2 Era)

- Recycled content
- Regionally sourced / local materials
- Rapidly renewable materials
- Certified wood
- Still relevant — still part of the baseline

***It's no longer just about what a material
is made of — it's about manufacturers
telling us, and proving it.***

Where the Conversation Is Now

- Manufacturer transparency
- Third-party verified disclosure
- Environmental Product Declarations (EPDs) — life-cycle impact data
- Health Product Declarations (HPDs) — ingredient-level disclosure
- Higher accountability, driven by the profession and industry demand

Healthy Materials: From Contents to Transparency

Salvaged / Re-Used Materials



Reuse building materials and products in order to reduce demand for virgin materials and to *reduce waste*, thereby reducing impacts associated with the extraction and processing of virgin resources.



Habitat for Humanity®
ReStore

Healthy Materials: From Contents to Transparency



Recycled Content Materials

recycled aluminum tiles from Eco-Friendly Flooring, Inc.
The finish is vibrated aluminum.



Recycled rubber. A variety of flooring materials are available that are
fabricated from recycled rubber products, such as old tires.



Healthy Materials: From Contents to Transparency



Recycled Content Materials

recycled glass in countertops



RECYCLED POROUS PAVEMENT

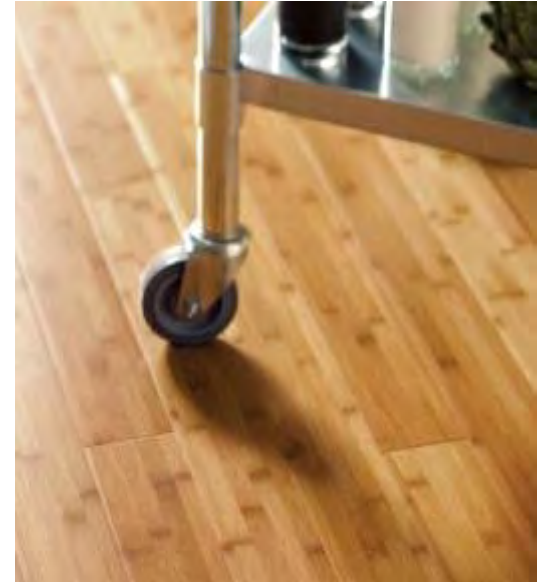
pavement companies such as FilterPave use recycled glass bottles and stone aggregate to create driveways, pathways, and sidewalks. It helps mitigate stormwater runoff and aims to improve water quality.



Healthy Materials: From Contents to Transparency

Rapidly Renewable Materials

Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials.



Healthy Materials: From Contents to Transparency

Regional / Indigenousness Materials

In Texas consider materials such as:

- Brick
- Stone
- Gypsum board
- Steel



Healthy Materials: From Contents to Transparency

Low VOCs and Low Emitting Materials

Reduce the quantity of *indoor air contaminants* that are odorous, *irritating and / or harmful to* the comfort and well-being of *installers and occupants*.





Shouldn't we
demand the same
information from the
materials we buy as
the food we eat?

LITTLE THINGS MATTER

Mercury – 89% (0.6 ppb)

Lead – 100% (11.7 ppb)

OP Pesticides – 83% (17 ppb)

PCBs – 100% (19.6 ppb)

BPA – 96% (2.5 ppb)

PBDEs – 100% (10.4 ppb)



Why disclose such small ingredients?

10,000 ppm



Cake, cream

1,000 ppm



Wheat flour, sugar, corn
syrup, niacin, water, high
fructose corn syrup,
shortening

100 ppm

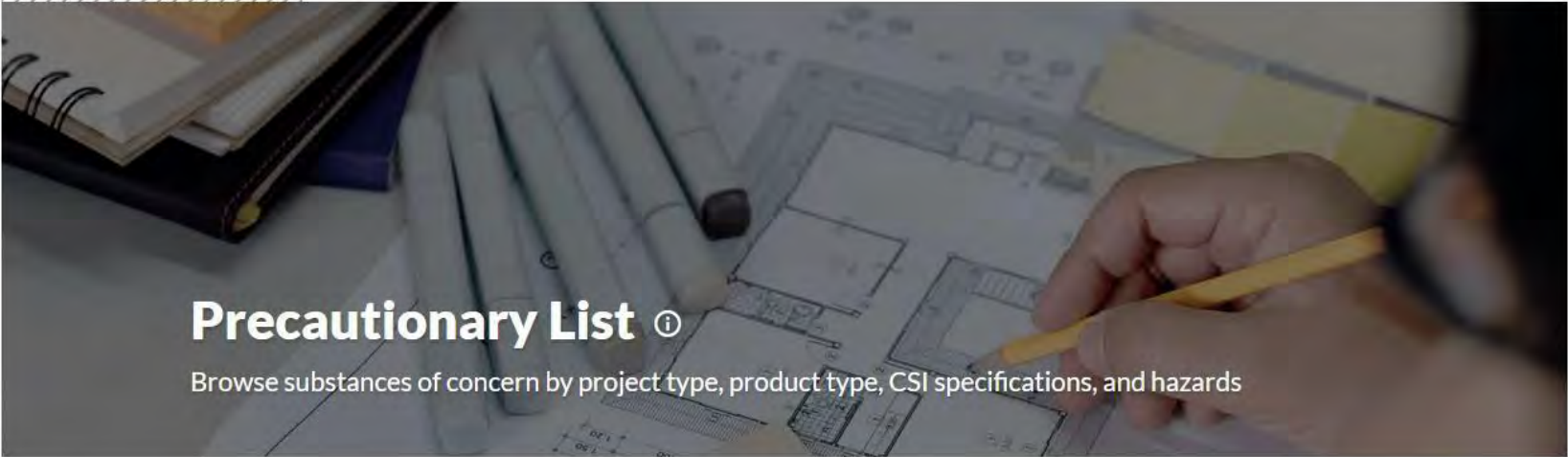


Enriched Bleached Wheat Flour [Flour, Reduced Iron, B Vitamins (Niacin, Thiamine Mononitrate (B1), Riboflavin (B2), Folic Acid)], Corn Syrup, Sugar, High Fructose Corn Syrup, Water, Partially Hydrogenated Vegetable and/or Animal Shortening (Soybean, Cottonseed and/or Canola Oil, Beef Fat), Whole Eggs, Dextrose. Contains 2% or Less of: Modified Corn Starch, Glucose, Leavenings (Sodium Acid Pyrophosphate, Baking Soda, Monocalcium Phosphate), Sweet Dairy Whey, Soy Protein Isolate, Calcium and Sodium Caseinate, Salt, Mono and Diglycerides, Polysorbate 60, Soy Lecithin, Soy Flour, Cornstarch, Cellulose Gum, Sodium Stearoyl

Perkins and Will transparency website along with ILFI and others.. starts to change the conversation

TRANSPARENCY

[LEARN MORE](#) / [PRECAUTIONARY LIST](#) / [STAY INFORMED](#) / [FAQ](#)



Precautionary List ⓘ

Browse substances of concern by project type, product type, CSI specifications, and hazards

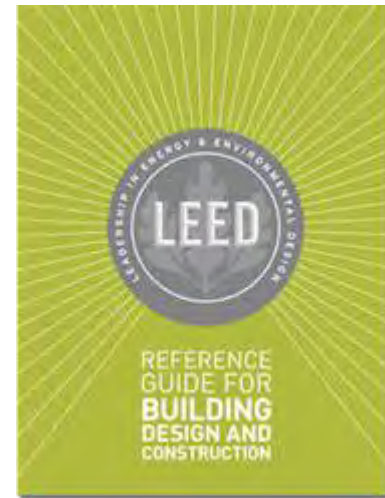
[PRECAUTIONARY LIST](#) / [WATCH LIST](#) / [SUNSET LIST](#)

SEARCH SUBSTANCES 	PROJECT AREA 	MASTERFORMAT 	PRODUCTS 	HEALTH HAZARDS 	ENVIRONMENTAL HAZARDS 
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 Antimicrobials - marketed with a health claim CASRN: Multiple*	 Bisphenol A (BPA) CASRN: 80-05-7
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THE CHALLENGE

call for transparency information



EPD – Environmental Product Declaration



Summary of Environmental Product Declaration		Environmental Impacts			
Central Concrete Mix340PG9Q1 San Jose Service Area EF V2 Gen Use P4000 3" Line 50% SCM					
		Impact name	Unit	Impact per m3	Impact per cyd
		Total primary energy consumption	MJ	2,491	1,906
		Concrete water use (batch)	m3	6.66E-2	5.10E-2
		Concrete water use (wash)	m3	8.56E-3	6.55E-3
Performance Metrics		Global warming potential	kg CO2-eq	271	207
		Ozone depletion	kg CFC-11-eq	5.40E-6	4.14E-6
		Acidification	kg SO2-eq	2.26	1.73
		Eutrophication	kg N-eq	1.31E-1	1.00E-1
		Photochemical ozone creation	kg O3-eq	46.6	35.7
28-day compressive strength	4,000 psi				
Slump	4.0 in				

A sample EPD for a concrete mix design by Central Concrete Supply Co.
Credit: Central Concrete Supply

“Transparency is the new green”

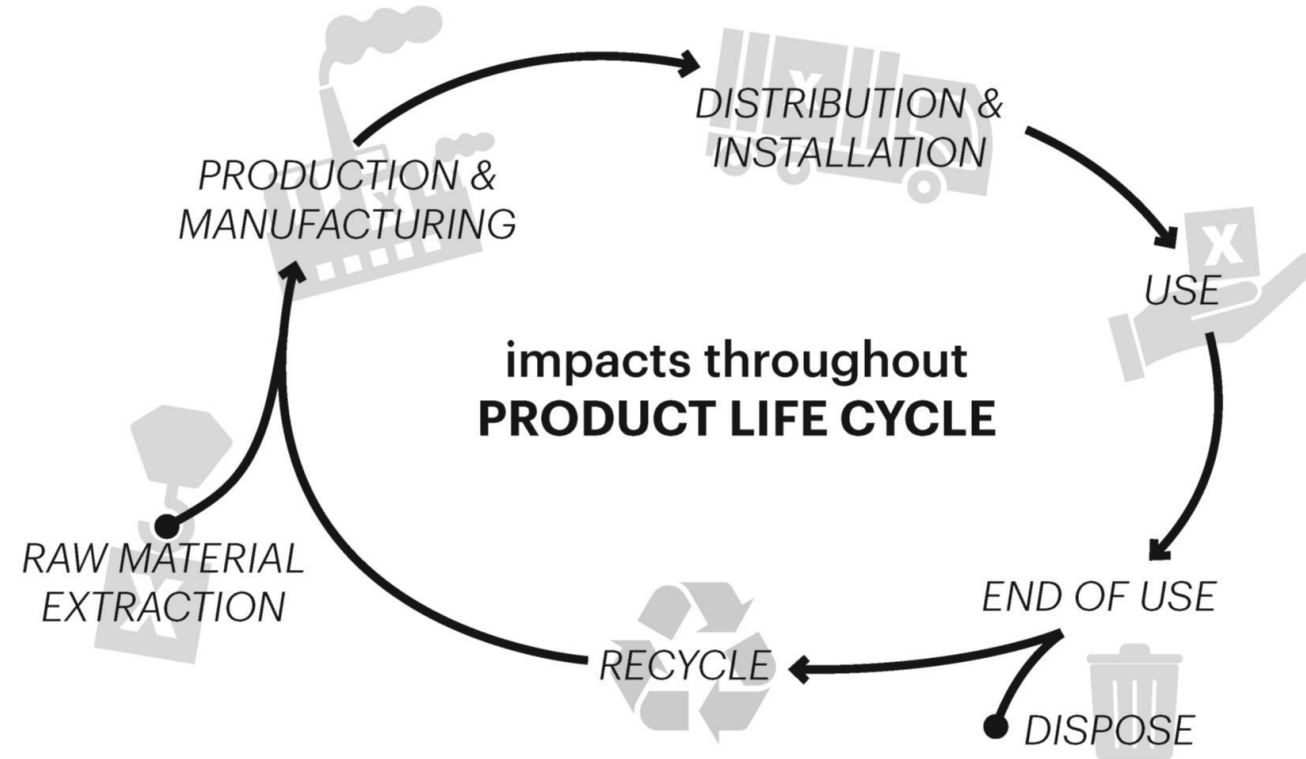
Environmental Product Declarations (EPDs)

EPDs standardize an **environmental impact report** for a product from

CRADLE TO GATE
or
CRADLE TO GRAVE

An EPD is not 'approval' of the product.

EPDs are based on Product Category Rules (PCR) produced by a Program Operator. EPDs are produced based on international standards.



Type III EPDs

3rd party certification

- Industry Wide (aka generic):
 - Typically created by an industry organization
 - Only applies to members of that organization
- Product Specific
 - Addresses one or more products from a specific company

IMPACT MEASURE ³	TOTAL ¹	PRODUCTION	USE PHASE	END OF LIFE	REDUCTION ²
Primary Energy (MJ)	10.3	8.9	0.4	1.0	-2%
Global Warming Potential (kg CO ₂ equivalent)	0.80	0.56	0.04	0.20	-2%
Ozone Depletion (kg CFC-11 equivalent)	2.20E-08	2.20E-08	2.46E-15	1.61E-14	-1%
Acidification Potential (H ⁺ moles equivalent)	0.21	0.18	0.01	0.02	-4%
Eutrophication Potential (kg PO ₄ equivalent)	4.83E-04	2.62E-04	3.60E-05	1.85E-04	-3%
Smog – Photochemical Oxidant Creation Potential (kg O ₃ -Equiv.)	0.054	0.037	0.004	0.012	-2%

ENVIRONMENTAL PRODUCT DECLARATION FABRICATED HOT-ROLLED STRUCTURAL SECTIONS AMERICAN INSTITUTE OF STEEL CONSTRUCTION



Hot rolled structural steel sections complying with the definition of structural steel in AISC 303-10 produced in the United States and fabricated by an AISC member fabricator.

Use of this EPD is limited to AISC members. Member names are available on-line at www.aisc.org/epd.



The United States structural steel industry annually supplies, fabricates and erects structural steel framing for more than 10,000 buildings, bridges and industrial projects through a network of producers, service centers, steel fabricators and erectors.

Long committed to the principles of sustainable manufacturing, the industry remains the world leader in the use of recycled materials and end-of life recycling, with the recycled content of hot-rolled structural steel beams and columns produced at US mills averaging in excess of 95% and an end-of-life recovery rate of 98%.

The American Institute of Steel Construction is a not-for-profit technical institute and trade association established in 1921 to serve the structural steel design community and construction industry. AISC currently represents 3 producers of hot-rolled structural steel sections and over 920 structural steel fabricators in the US.



HPD – Healthy Product Declaration



	Declare	HPD
Disclosure requirements	99% of ingredients to 100 parts per million	Flexible (but chosen level of disclosure must be disclosed)
Format	Database & product label	Multi-page declaration form
Free and publicly available?	Yes (in central database)	Yes (on manufacturers' websites)
Fee to manufacturers?	\$850 per product or product line annually (plus volume discounts)	None
Focused on LBC Red List?	Yes	No
Identifies health hazards?	No	Yes
Benchmarks against hazard lists?	Yes (EPA Chemical Action Plan, and EU REACH)	Yes (uses GreenScreen for Safer Chemicals methodology)
Includes certifications and VOC emissions testing data?	No	Yes
Includes CAS numbers for chemicals?	Yes	Yes
Identifies health hazards even for proprietary ingredients?	No (but can't be LBC Red List)	Yes
Referenced in LEED v4?	No	Yes

“Transparency is the new green”

HPD – Healthy Product Declaration

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Caesarstone**
ADDRESS: **1401 W. Morehead**
Charlotte NC 28208, USA
WEBSITE: **www.caesarstoneus.com**

CONTACT NAME: **Caroline Newman**
TITLE: **Marketing**
PHONE: **+972-4-610-9368**
EMAIL: **Caroline.Newman@caesarstone.com**

KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity	GLO Global warming	PHY Physical Hazard (reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive toxicity
DEV Developmental toxicity	MUL Multiple hazards	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	OZO Ozone depletion	LAN Land Toxicity
GEN Gene mutation	PBT Persistent Bioaccumulative Toxic	NF Not found on Priority Hazard Lists

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
BM-2 Benchmark 2 (use but search for safer substitutes)
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (insufficient data to benchmark)

LT-P1 List Translator Possible Benchmark 1
LT-1 List Translator Likely Benchmark 1
LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
NoGS Unknown (no data on List Translator Lists)

There is a key
on every HPD!

HPD 2.0 Quick-Start Guide

5 Easy Steps

Get what you need from a Health Product Declaration, *fast*.

Step 2

Check the disclosure threshold.

CONTENT INVENTORY
Threshold (per material):
■ 100 ppm
■ 1,000 ppm
■ Per GHS SDS
■ Per OSHA MSDS
■ Other

These appear in descending order of granularity. For example, 100 parts per million (ppm) looks at ingredients that make up at least 0.01% of the material. At each disclosure level below this, you get less data—so you might see fewer hazards listed simply because they weren't accounted for.

Step 3

Look for "no."

Based on the selected Content Inventory Threshold:
Characterized: ☐ Yes ☐ No
Are the Percent Weight and Rule provided for all substances? ☐ Yes ☐ No
Screened: ☐ Yes ☐ No
Are all substances screened using Priority Hazard Lists with results disclosed? ☐ Yes ☐ No
Identified: ☐ Yes ☐ No
Are all substances disclosed by Name (Specific or General) and Identified?

This section tells you how thorough the manufacturer was in disclosing ingredients.

- 1) **Characterized:** Did they list each substance in the product? For LEED v4, this has to say "yes" (they don't have to be listed by name).
- 2) **Screened:** Did they list all the hazards associated with the substances? For LEED v4, this has to say "yes" (with exceptions).
- 3) **Identified:** The HPD lets manufacturers keep some ingredients proprietary. Remember: for LEED, you still have to characterize and screen most substances.

Step 1

Note the expiry date.

EXPIRY DATE*:
* or within 3 months of significant change in product continues

First, make sure the HPD is valid. Search for an update if it's expired.

Step 4

Scan for GreenScreen red flags.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against GHS Priority Hazard Lists and the GreenScreen for Safer Chemicals. This HPD does not reveal all relevant data or findings from the product or will appear individually for chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR MINORITY
CONCENTRATION SCORE | HAZARD TYPE

Here's how to do a quick hazard scan.

- 1) **Skim the inventory for these three GreenScreen scores:**
 - **BM-1:** The most hazardous chemicals known to science
 - **LT-1:** On hazard lists all over the world but haven't undergone a full GreenScreen assessment
 - **LT-P1:** Probably hazardous, but there isn't consensus
- 2) **Do a reality check:** The presence of a hazard doesn't mean someone will be exposed to it, let alone get sick. Use HPDs to weigh tradeoffs.
- 3) **Look out for "false positives."** Check our free guide to *The Five Hazard Warnings You Can Usually Ignore* at BuildingGreen.com/Shazards.

Step 5

Consider accessories.

Page 3 of the HPD

Section 4: Accessories
Not listed: Do product, product or packaging have any accessories? If so, please list them in the table below. If not, please check the box. If you have a product with accessories, please check the box. If you have a product with accessories, please check the box. If you have a product with accessories, please check the box.

ACCESSORY PRODUCT OR MATERIAL NAME

That carpet might look squeaky-clean, but what about the adhesive? What about the stain-resistance treatments you're going to need? Check Section 4 to learn which accessories aren't accounted for in the product HPD.

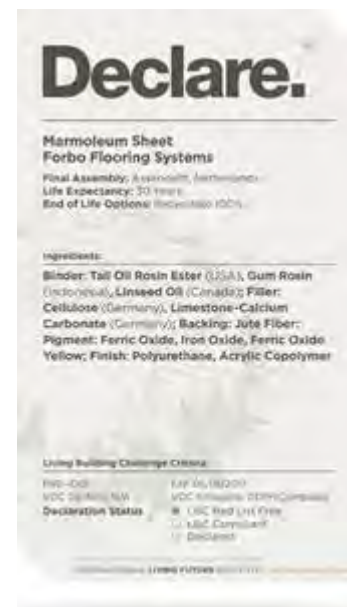
» Geek out on HPDs at BuildingGreen.com/HPD
Writing by Paula Melton | Graphic design by Julia Landvik

BuildingGreen

SPECIFY → DISCLOSE → SCREEN → COMPARE → DOCUMENT

Resources

Multiple declarations, certifications, and screening programs.



Resources

HEALTHY MATERIALS

Materials that support human health by reducing exposure to potentially harmful chemicals and improving transparency about what products are made of.

01 Know What's Inside

Material ingredient transparency

→ HPDs, Declare, manufacturer disclosure

02 Reduce Harmful Chemistry

Avoid or reduce chemicals of concern

→ Red List, GreenScreen, restricted substances

03 Consider the Bigger Picture

Health + environmental impact

→ EPDs, embodied carbon, sourcing, durability, circularity

Healthy materials ≠ “green” materials.

A product can have a low carbon footprint and still contain chemicals of concern.

Mindful Materials - broad material/product research

HPD Public Repository - search HPDs

Declare Database - ingredient + Red List screening

EC3 - EPD / embodied carbon comparison

LEED / WELL material resources - certification-specific requirements

Living Future / Red List resources - chemical avoidance

Manufacturer sustainability portals - primary-source documentation

SPECIFY → DISCLOSE → SCREEN → COMPARE → DOCUMENT

Resources

Living Future Red List Affordable Housing Materials List

"Where can I actually find healthier materials that fit the budget?"



Declare.

Product Name
Manufacturer

Final Assembly: First City, State, Country;
Second City, State, Country, Third City, State, Country
Life Expectancy: 50 Years
Embodied Carbon: # kg CO₂e/kg ■
Declared Unit: # m³
End of Life Options: Recyclable (95%), Landfill (5%),
Take Back Program (Program Name/Location)

Ingredients:

Your First Component: Sustainably Sourced Ingredient;
LBC Red List Ingredient: **Your Second Component:**
LBC Watchy List Priority for Reduction; Non-Toxic Ingredient;
Undisclosed (<0.1%)²

LBC Temp Exception RL-009 Formaldehyde
LBC Temp Exception RL-004var a Proprietary Ingredients

Living Building Challenge Criteria: Compliant

I-13 Red List:

☐ LBC Red List Free	% Disclosed: 99.9% at 100ppm
☒ LBC Red List Approved	VOC Content: # g/L
☐ Declared	

I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Product Available with FSC Chain of Custody

XXX-XXXX
EXP. 01 OCT 2021
Original Issue Date: 20XX

THIRD PARTY VERIFIED ASSessor
INTERNATIONAL LIVING FUTURE ACTIVITY

CSI Division		General Product Information			Attributes Required to Document for LBC Materials and Health + Happiness Petals				Labels, Certifications, and Sourcing			
Number	Name	Product Type	Product Manufacturer	Product Name	Red List Free	Red List Approved	CDPH (or International equivalent) Compliant	FSC Certified	Declare Label	Declare Expiration Date mm/yy	Living Product Challenge	Enterprise Green Communities Criteria 5.1
22 00 00	Plumbing											
22 10 00	Plumbing Piping and Pumps											
			ARI Foundry CHARLOTTE PIPE AND FOUNDRY COMPANY	ARI CAST IRON SOIL PIPE AND FITTINGS CAST IRON SOIL PIPE AND FITTINGS						11/1/2024		
			TYLER PIPE	TYLER CAST IRON SOIL PIPE						11/1/2024		
22 40 00	Plumbing Fixtures											
22 42 13	Water Closets, Urinals, and Basins											
			ROCA	INCOXROS DE PORCELANA						7/1/2024		
			TOTO USA	COMMERCIAL FLUSHOMETER 1.6GPF TOILET C1706(V)(L)(G)						8/1/2024		
			TOTO USA	COMMERCIAL FLUSHOMETER 1.6GPF TOILET C1708(V)(G)						8/1/2024		
			TOTO USA	COMMERCIAL WALL-HUNG HE 1.28GPF TOILET						8/1/2024		
			TOTO USA	COMMERCIAL WASHOUT HE 0.125GPF URINAL -UT105(U)						8/1/2024		
			TOTO USA	COMMERCIAL WASHOUT HE 0.125GPF URINAL -UT145(U)						8/1/2024		
			TOTO USA	ECOPOWER® 0.125GPF						7/1/2024		
			TOTO USA	ECOPOWER® FLUSH VALVE						7/1/2024		
			TOTO USA	ECO ULTRAMAX® 1.28GPF						8/1/2024		
			TOTO USA	ECOPOWER						7/1/2024		
			TOTO USA	ECOPOWER						7/1/2024		
			TOTO USA	ECOPOWER						7/1/2024		
22 42 16	Lavatories and Sinks											
			KOHLER COMPANY	SELECT STAINLESS STEEL						9/1/2024		
			ROCA	LAVALROS DE PORCELANA						7/1/2024		
			ROCA	LAVALROS DE SURFLEX						7/1/2024		
			TOTO USA	COMMERCIAL WALL-						8/1/2024		
22 42 18	Faucets											
			AMT Corporation	AEF-3XX ELECTRONIC						1/1/2025		
			ROCA	GRIFERIA						7/1/2024		
			ROCA	GRIFERIA ELECTRONICA						7/1/2024		
			Toto	Oberon S-Single Handle						7/1/2024		
26 00 00	Electrical											
26 30 00	Electrical Power Generating and Storing Equipment											
			GODOWE (GUANGDONG) POWER	STARLUX						4/1/2025		
			MAXEON SOLAR	MAXEON PANELS						1/1/2025		
			REC SOLAR PTE. LTD.	REC ALPHA PURE SERIES						7/1/2025		
			REC SOLAR PTE. LTD.	REC ALPHA PURE-RX						10/1/2024		
			REC SOLAR PTE. LTD.	REC ALPHA PURE-R						9/1/2024		
26 50 00	Lighting Fixtures											
			3Form	LIGHTART L&Z LIGHTING						12/1/2024		
			A-LIGHT (ACUITY BRANDS)	1W-BB-ECO						7/1/2024		
			A-LIGHT (ACUITY BRANDS)	A-LIGHT LEAN						8/1/2024		
			Aaire	A-LIGHT STITCH						11/1/2023		
			ACUITY BRANDS LIGHTING	SPECIALTY - 9MM FELT						8/1/2024		
			ALUZ	A3-ZELO-ARC-BIOS						2/1/2025		
			ARCHITECTURAL LIGHTING	LIGHTPLANE L2						11/1/2024		
			ARCHITECTURAL LIGHTING	LIGHTPLANE L4						11/1/2024		
			ARCHITECTURAL LIGHTING	LIGHTPLANE - SUSPENDED						11/1/2024		
			CONTECH LIGHTING	STEALTHMINI STEALTH						5/1/2025		
			CONTECH LIGHTING	CONTECH CURVE						10/1/2024		
			CONTECH LIGHTING	LIGHTING TRACK						5/1/2025		
			COOPER LIGHTING SOLUTIONS	PHRENTAUX LED LAMP						9/1/2024		
			CORONET LED	LS1/LSR1 THROUGH LSR6						3/1/2025		
			DAY-O-LITE	ALUMINUM LUMINAIRES						10/1/2024		
			DAY-O-LITE	STEEL LUMINAIRES						10/1/2024		
			DMF Lighting	LED DOWNLIGHT SYSTEM						4/1/2025		
			DMF Lighting	SURFACE-MOUNT LED						10/1/2024		
			ECOGLO INTERNATIONAL LTD	ECOGLO RED LIST FREE						1/1/2025		
			FINELITE, INC.	FINELITE TAILORED						9/1/2024		
			FINELITE, INC.	FINELITE TAILORED						9/1/2024		
			Gint Lighting	HERO RECESSED						5/1/2024		

Resources

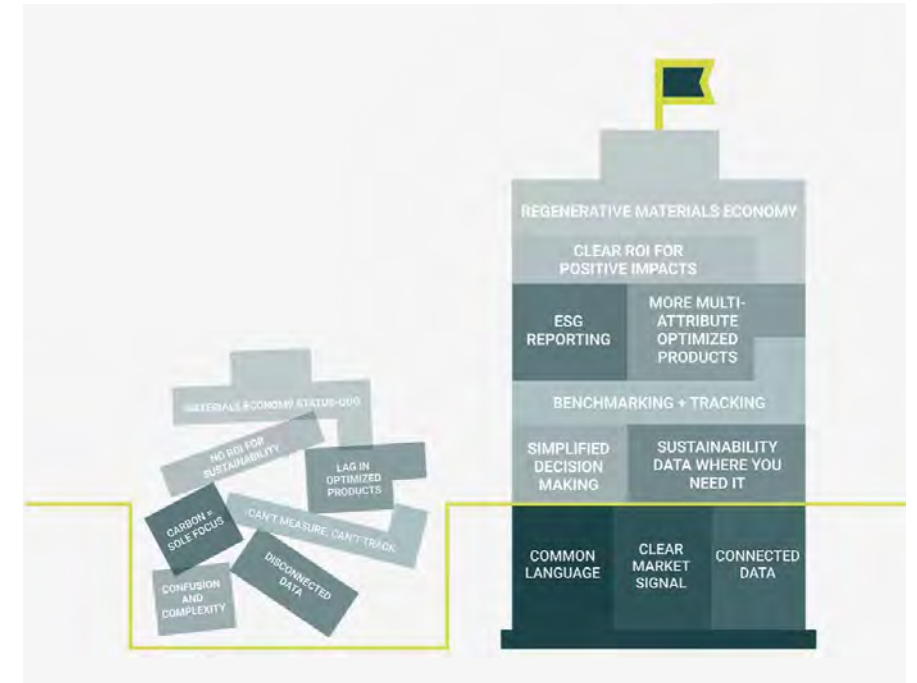
Mindful Materials

Common Materials Framework

Toolkits for all specialties.



Common Materials Framework



Third Party Rating Systems



What is WELL?



OUR STANDARD

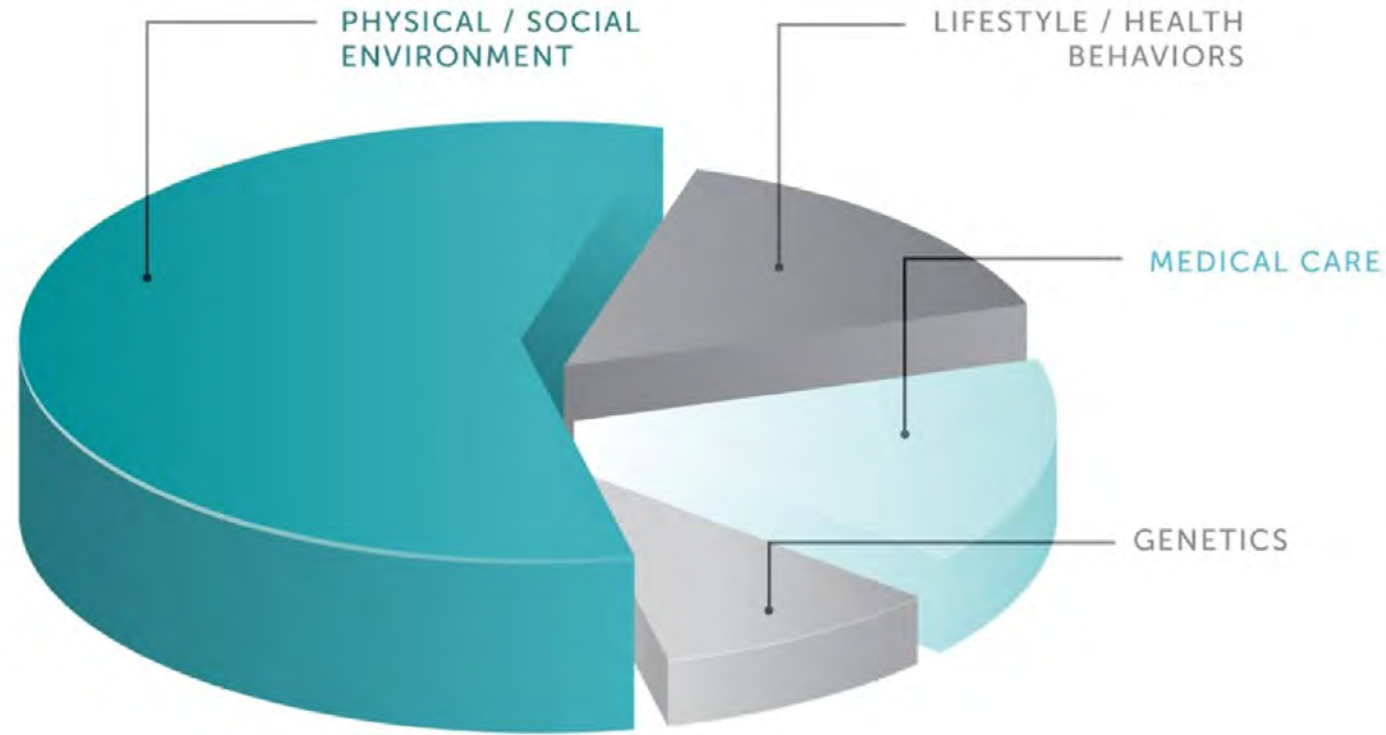
The premier global standard
for healthy buildings.

What is the WELL Building Standard?

WELL is the rating system
for people.

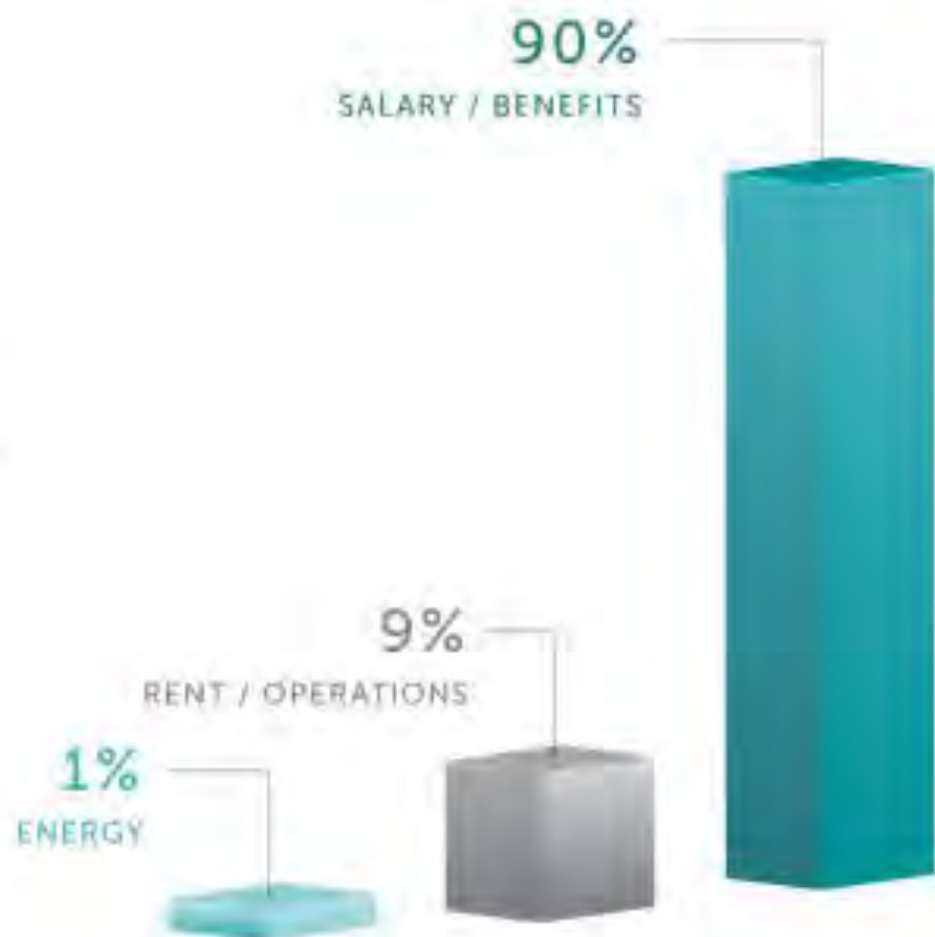
- It recognizes that we spend 90% of our time indoors.
- And that our environment is changing how we live.





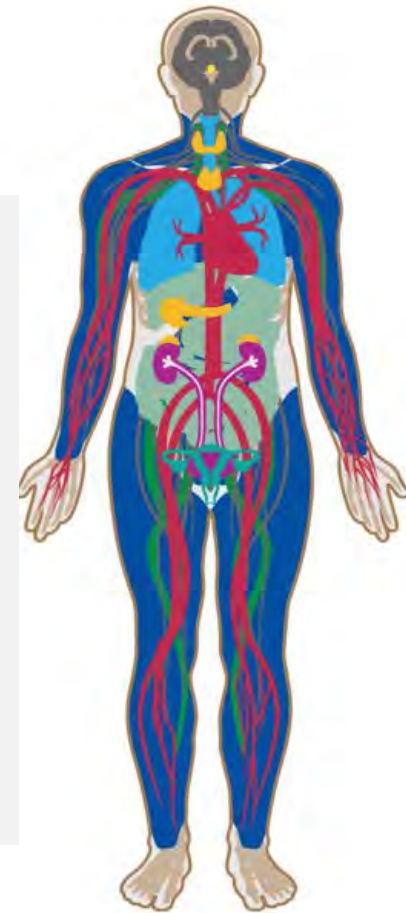
What factors affect our health and well-being?

INVEST IN PEOPLE FOR RETURN ON INVESTMENT

[illegible]

Human Physiology Applied to WELL Features

WELL was developed through scientific research, resulting in a framework based on environmental health, building design, human health, and behavioral factors.



Cardiovascular

Digestive

Endocrine

Immune

Integumentary

Muscular

Nervous

Reproductive

Respiratory

Skeletal

Urinary

Ten WELL Concepts



AIR



WATER



NOURISHMENT



LIGHT



MOVEMENT



THERMAL
COMFORT



SOUND



MATERIALS

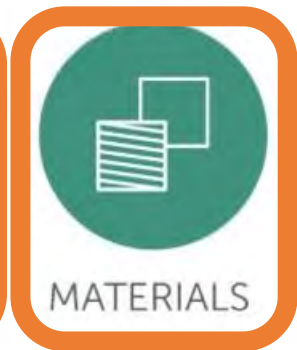
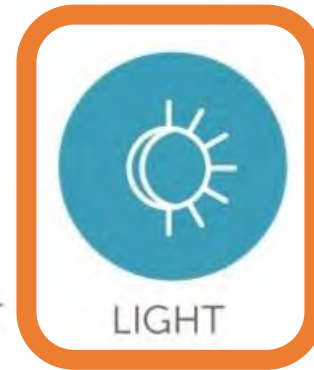
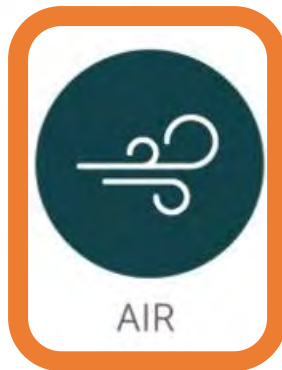


MIND



COMMUNITY

WELL Design Concepts



WELL Lifestyle Concepts



AIR



WATER



NOURISHMENT



LIGHT



MOVEMENT



THERMAL
COMFORT



SOUND



MATERIALS



MIND



COMMUNITY

AIR 7 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	A01.1	Meet Thresholds for Particulate Matter
Y		Required	A01.2	Meet Thresholds for Organic Gases
Y		Required	A01.3	Meet Thresholds for Inorganic Gases
Y		Required	A01.4	Meet Thresholds for Radon
Y		Required	A01.5	Monitor Air Parameters
Y		Required	A02.1	Prohibit Indoor Smoking
Y		Required	A02.2	Prohibit Outdoor Smoking
Y		Required	A03.1	Ensure Adequate Ventilation
Y		Required	A04.1	Mitigate Construction Pollution
Y		2 points	A05.1	Meet Enhanced Thresholds for Particulate Matter
Y		1 point	A05.2	Meet Enhanced Thresholds for Organic Gases
Y		1 point	A05.3	Meet Enhanced Thresholds for Inorganic Gases
Y		2 points	A06.1	Increase Outdoor Air Supply
Y		1 point	A06.2	Improve Ventilation Effectiveness
Y		1 point	A07.1	Provide Operable Windows
Y		1 point	A07.2	Manage Window Use
Y		1 point	A08.1	Install Indoor Air Monitors
Y		1 point	A08.2	Promote Air Quality Awareness
Y		1 point	A09.1	Design Healthy Entryways
Y		1 point	A09.2	Perform Envelope Commissioning
Y		1 point	A10.1	Manage Combustion
Y		1 point	A11.1	Manage Pollution and Exhaust
Y		1 point	A12.1	Implement Particle Filtration
Y		1 point	A13.1	Improve Supply Air
Y		1 point	A14.1	Implement Ultraviolet Treatment for HVAC Surfaces

WATER 3 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	W01.1	Verify Water Quality Indicators
Y		Required	W02.1	Meet Chemical Thresholds
Y		Required	W02.2	Meet Thresholds for Organics and Pesticides
Y		Required	W03.1	Monitor Chemical and Biological Water Quality
Y		Required	W03.2	Implement Legionella Management Plan
Y		1 point	W04.1	Meet Thresholds for Drinking Water Taste
Y		2 points	W05.1	Assess and Maintain Drinking Water Quality
Y		1 point	W05.2	Promote Drinking Water Transparency
Y		1 point	W07.1	Ensure Drinking Water Access
Y		1 point	W07.2	Design Envelope for Moisture Protection
Y		1 point	W07.3	Design Interiors for Moisture Management
Y		1 point	W08.1	Implement Mold and Moisture Management Plan
Y		1 point	W08.2	Provide Bathroom Accommodations
Y		1 point	W08.3	Enhance Bathroom Accommodations
Y		1 point	W08.4	Support Effective Handwashing
Y		2 points	W09.1	Provide Handwashing Supplies and Signage
Y		2 points	W09.2	Implement Safety Plan for Non-Potable Water Capture and Reuse

NOURISHMENT 8 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	N01.1	Provide Fruits and Vegetables
Y		Required	N01.2	Promote Fruit and Vegetable Visibility
Y		Required	N02.1	Provide Nutritional Information
Y		1 point	N03.1	Limit Total Sugars
Y		1 point	N03.2	Promote Whole Grains
Y		1 point	N04.1	Optimize Food Advertising
Y		1 point	N05.1	Limit Artificial Ingredients
Y		1 point	N07.1	Provide Nutrition Education
Y		2 points	N08.1	Support Mindful Eating
Y		1 point	N09.1	Accommodate Special Diets
Y		1 point	N09.2	Label Food Allergens
Y		1 point	N10.1	Provide Meal Support
Y		1 point	N11.1	Implement Responsible Sourcing
Y		2 points	N12.1	Provide Gardening Space
Y		1 point	N13.1	Ensure Local Food Access

LIGHT 8 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	L01.1	Provide Indoor Light
Y		Required	L02.1	Provide Visual Acuity
Y		3 points	L03.1	Meet Lighting for Day-Active People
Y		2 points	L04.1	Manage Glare from Electric Lighting
Y		2 points	L05.1	Implement Daylight Plan
Y		2 points	L05.2	Integrate Solar Shading
Y		2 points	L06.1	Conduct Daylight Simulation
Y		1 point	L07.1	Balance Visual Lighting
Y		1 point	L08.1	Enhance Color Rendering Quality
Y		2 points	L08.2	Manage Flicker
Y		2 points	L09.1	Enhance Occupant Controlability
Y		1 point	L09.2	Provide Supplemental Lighting

SOUND 10 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	S01.1	Design Active Buildings and Communities
Y		Required	S02.1	Support Visual Ergonomics
Y		Required	S02.2	Provide Height-Adjustable Work Surfaces
Y		Required	S02.3	Provide Chair Adjustability
Y		Required	S02.4	Provide Support at Standing Workstations
Y		Required	S02.5	Provide Workstation Orientation
Y		1 point	S03.1	Design Acoustic Staircases
Y		1 point	S03.2	Integrate Point-of-Decision Signage
Y		1 point	S03.3	Promote Visible Stairs
Y		2 points	S04.1	Provide Cycling Infrastructure
Y		1 point	S04.2	Provide Showers, Lockers and Changing Facilities
Y		2 points	S05.1	Select Sites with Pedestrian-Friendly Streets
Y		2 points	S05.2	Select Sites with Access to Mass Transit
Y		2 points	S06.1	Offer Physical Activity Opportunities
Y		2 points	S07.1	Provide Active Workstations
Y		1 point	S08.1	Provide Indoor Activity Spaces
Y		1 point	S08.2	Provide Outdoor Physical Activity Space
Y		1 point	S09.1	Offer Physical Activity Incentives
Y		1 point	S10.1	Provide Self-Monitoring Tools
Y		1 point	S11.1	Implement an Ergonomics Program
Y		1 point	S11.2	Commit to Ergonomics Improvements
Y		1 point	S11.3	Support Remote Work Ergonomics

THERMAL 10 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	T01.1	Provide Acceptable Thermal Environment
Y		Required	T01.2	Monitor Thermal Parameters
Y		3 points	T02.1	Survey for Thermal Comfort
Y		2 points	T03.1	Provide Thermal Control
Y		1 point	T04.1	Provide Personal Cooling Options
Y		1 point	T04.2	Provide Personal Heating Options
Y		1 point	T04.3	Allow Flexible Dress Code
Y		1 point	T05.1	Implement Radiant Heating
Y		1 point	T05.2	Implement Radiant Cooling
Y		1 point	T06.1	Monitor Thermal Environment
Y		1 point	T07.1	Manage Relative Humidity
Y		1 point	T08.1	Provide Windows with Multiple Opening Modes
Y		1 point	T09.1	Manage Outdoor Heat
Y		1 point	T09.2	Avoid Excessive Wind
Y		1 point	T09.3	Support Outdoor Natural Access

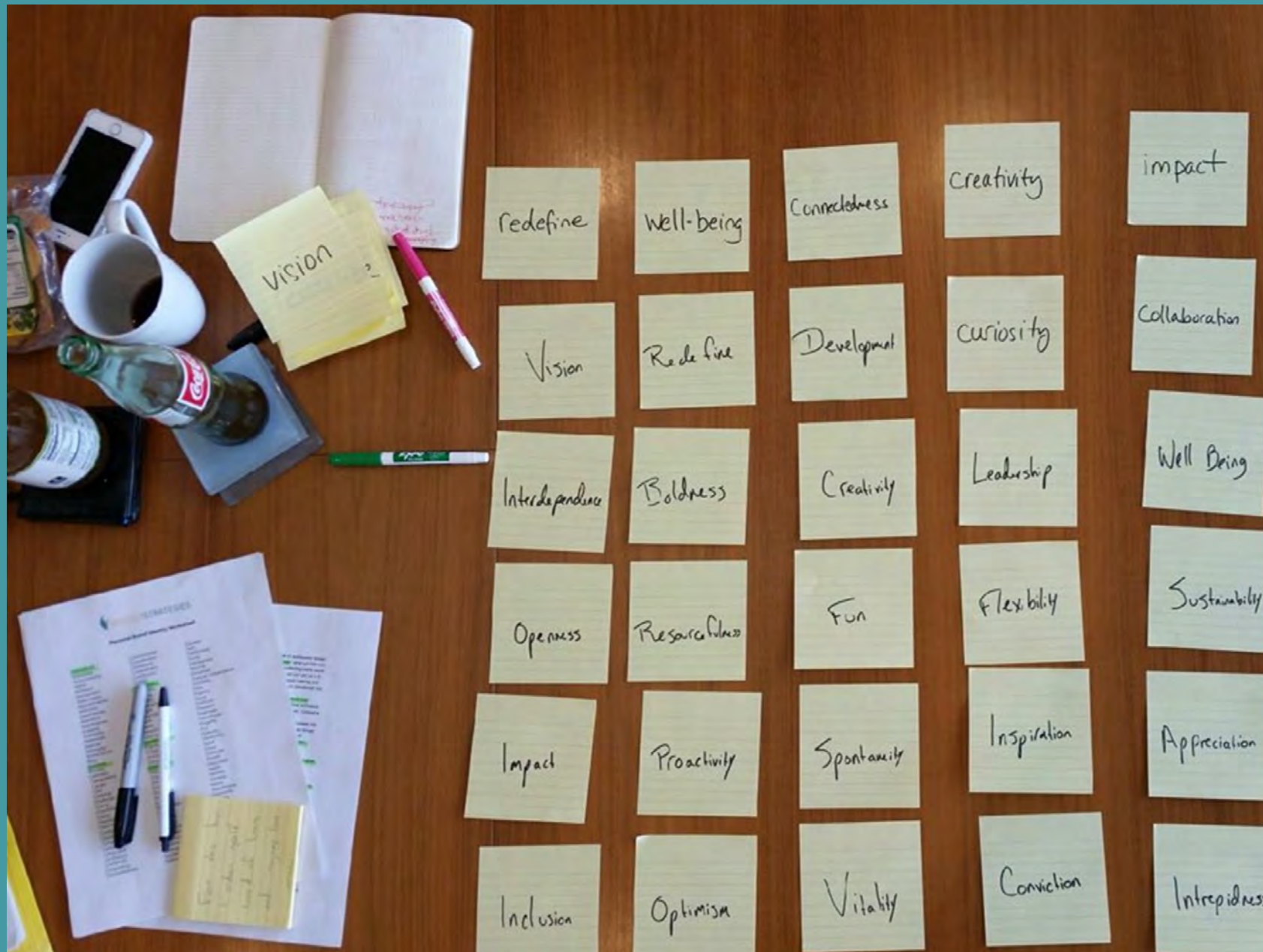
VIBRATION 10 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	V01.1	Label Acoustic Zones
Y		Required	V01.2	Provide Acoustic Design Plan
Y		3 points	V02.1	Limit Background Noise Levels
Y		1 point	V03.1	Design for Sound Isolation at Walls and Doors
Y		2 points	V03.2	Achieve Sound Isolation at Walls
Y		2 points	V04.1	Achieve Reverberation Time Thresholds
Y		2 points	V05.1	Implement Sound Reducing Surfaces
Y		1 point	V06.1	Provide Minimum Background Sound
Y		1 point	V06.2	Provide Enhanced Speech Reduction
Y		1 point	V07.1	Specify Impact Noise Reducing Flooring
Y		2 points	V07.2	Meet Thresholds for Impact Noise Rating
Y		1 point	V08.1	Provide Enhanced Speech Intelligibility
Y		1 point	V08.2	Prioritize Audio Devices and Policies
Y		1 point	V09.1	Implement a Hearing Health Conservation Program

MATERIALS 12 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	M01.1	Restrict Asbestos
Y		Required	M01.2	Restrict Mercury
Y		Required	M01.3	Restrict Lead
Y		Required	M02.1	Manage Asbestos Hazards
Y		Required	M02.2	Manage Lead Paint Hazards
Y		Required	M02.3	Manage Polychlorinated Biphenyl (PCB) Hazards
Y		Required	M03.1	Manage Exterior CCA Hazards
Y		Required	M03.2	Manage Lead Hazards
Y		1 point	M04.1	Assess and Mitigate Site Hazards
Y		1 point	M05.1	Select Compliant Interior Furnishings
Y		1 point	M05.2	Select Compliant Architectural and Interior Products
Y		2 points	M06.1	Limit VOCs from Wet-Applied Products
Y		2 points	M06.2	Restrict VOC Emissions from Furniture, Architectural and Interior Products
Y		1 point	M07.1	Select Products with Disclosed Ingredients
Y		1 point	M07.2	Select Products with Enhanced Ingredient Disclosure
Y		1 point	M07.3	Select Products with Third-Party Verified Ingredients
Y		1 point	M08.1	Select Materials with Enhanced Chemical Restrictions
Y		1 point	M08.2	Select Optimized Products
Y		1 point	M09.1	Implement a Waste Management Plan
Y		1 point	M10.1	Manage Pests
Y		1 point	M11.1	Improve Cleaning Practices
Y		1 point	M11.2	Select Preferred Cleaning Products
Y		1 point	M12.1	Reduce Respiratory Particle Exposure
Y		1 point	M12.2	Address Surface Hand Touch

MIND 4 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	M01.1	Promote Mental Health and Well-being
Y		Required	M02.1	Provide Connection to Nature
Y		Required	M02.2	Provide Connection to Place
Y		1 point	M03.1	Offer Mental Health Screening
Y		1 point	M03.2	Offer Mental Health Services
Y		1 point	M03.3	Offer Workplace Support
Y		1 point	M03.4	Offer Mental Health Recovery
Y		1 point	M04.1	Offer Mental Health Education
Y		1 point	M04.2	Offer Mental Health Education for Managers
Y		2 points	M05.1	Develop Stress Management Plan
Y		1 point	M06.1	Support Healthy Working Hours
Y		1 point	M06.2	Provide Nap Policy and Space
Y		1 point	M07.1	Provide Restorative Space
Y		1 point	M08.1	Provide Restorative Programming
Y		1 point	M09.1	Provide Nature Access Indoors
Y		1 point	M09.2	Provide Nature Access Outdoors
Y		2 points	M10.1	Provide Tobacco Cessation Resources
Y		1 point	M11.1	Offer Substance Use Education
Y		1 point	M11.2	Provide Substance Use and Addiction Services

COMMUNITY 12 POINTS				
Y	N	Weight	ID	Part Name
Y		Required	C01.1	Provide WELL Feature Guide
Y		Required	C02.1	Facilitate Stakeholder Charter
Y		Required	C02.2	Promote Health-Oriented Mission
Y		Required	C03.1	Develop Emergency Preparedness Plan
Y		Required	C04.1	Select Project Survey
Y		Required	C04.2	Administer Survey and Report Results
Y		1 point	C05.1	Utilize Enhanced Survey
Y		1 point	C05.2	Utilize Pre- and Post-Occupancy Survey
Y		1 point	C05.3	Implement Action Plan
Y		1 point	C05.4	Facilitate Interviews, Focus Groups and/or Observation
Y		1 point	C06.1	Promote Health Benefits
Y		1 point	C06.2	Offer On-Demand Health Services
Y		1 point	C06.3	Offer Sick Leave
Y		1 point	C06.4	Support Community Immunity
Y		1 point	C07.1	Promote Culture of Health
Y		1 point	C07.2	Establish Health Promotion Leader
Y		3 points	C08.1	Offer New Parent Leave
Y		1 point	C09.1	Offer Workplace Breastfeeding Support
Y		2 points	C09.2	Design Lactation Room
Y		1 point	C10.1	Offer Childcare Support
Y		1 point	C10.2	Offer Family Leave
Y		1 point	C10.3	Offer Bereavement Support
Y		1 point	C11.1	Promote Community Engagement
Y		1 point	C11.2	Provide Community Space
Y		3 points	C12.1	Promote Diversity and Inclusion
Y		2 points	C13.1	Integrate Universal Design
Y		1 point	C14.1	Promote Emergency Resources
Y		1 point	C14.2	Provide Opioid Response Kit and Training
Y		1 point	C15.1	Promote Business Continuity
Y		1 point	C15.2	Support Emergency Resilience
Y		1 point	C15.3	Facilitate Healthy Re-entry
Y		1 point	C15.4	Establish Health Entry Requirements
Y		1 point	C17.1	Disclose Labor Practices
Y		2 points	C17.2	Implement Responsible Labor Practices
Y		2 points	C18.1	Support Victims of Domestic Violence

INNOVATION 6 POINTS				
Y	N	Weight	ID	Part Name
Y		1 point	I01.1	Propose Innovation
Y		1 point	I01.2	Propose Innovation
Y		1 point	I01.3	Propose Innovation
Y		1 point	I01.4	Propose Innovation
Y		1 point	I01.5	Propose Innovation
Y		1 point	I01.6	Propose Innovation
Y		1 point	I01.7	Propose Innovation
Y		1 point	I01.8	Propose Innovation
Y		1 point	I01.9	Propose Innovation
Y		1 point	I01.10	Propose Innovation
Y		1 point	I02.1	Achieve WELL AP
Y		1 point	I03.1	Offer WELL Educational Tours
Y		1 point	I04.1	Complete Health and Well-Being Programs
Y		5 points	I05.1	Achieve Green Building Certification
Y		2 points	I06.1	Carbon Inventory
Y		3 points	I06.2	Carbon Reduction Goal
Y		3 points	I06.3	Carbon Reduction
Y		2 points	I06.4	Carbon Neutral



Incorporate Natural Light



Incorporate Natural Light



Design for Movement



Create Places for Nourishment



VERIFIED PERFORMANCE

WELL prioritizes accountability through a data-driven performance review and on-site environmental assessment.

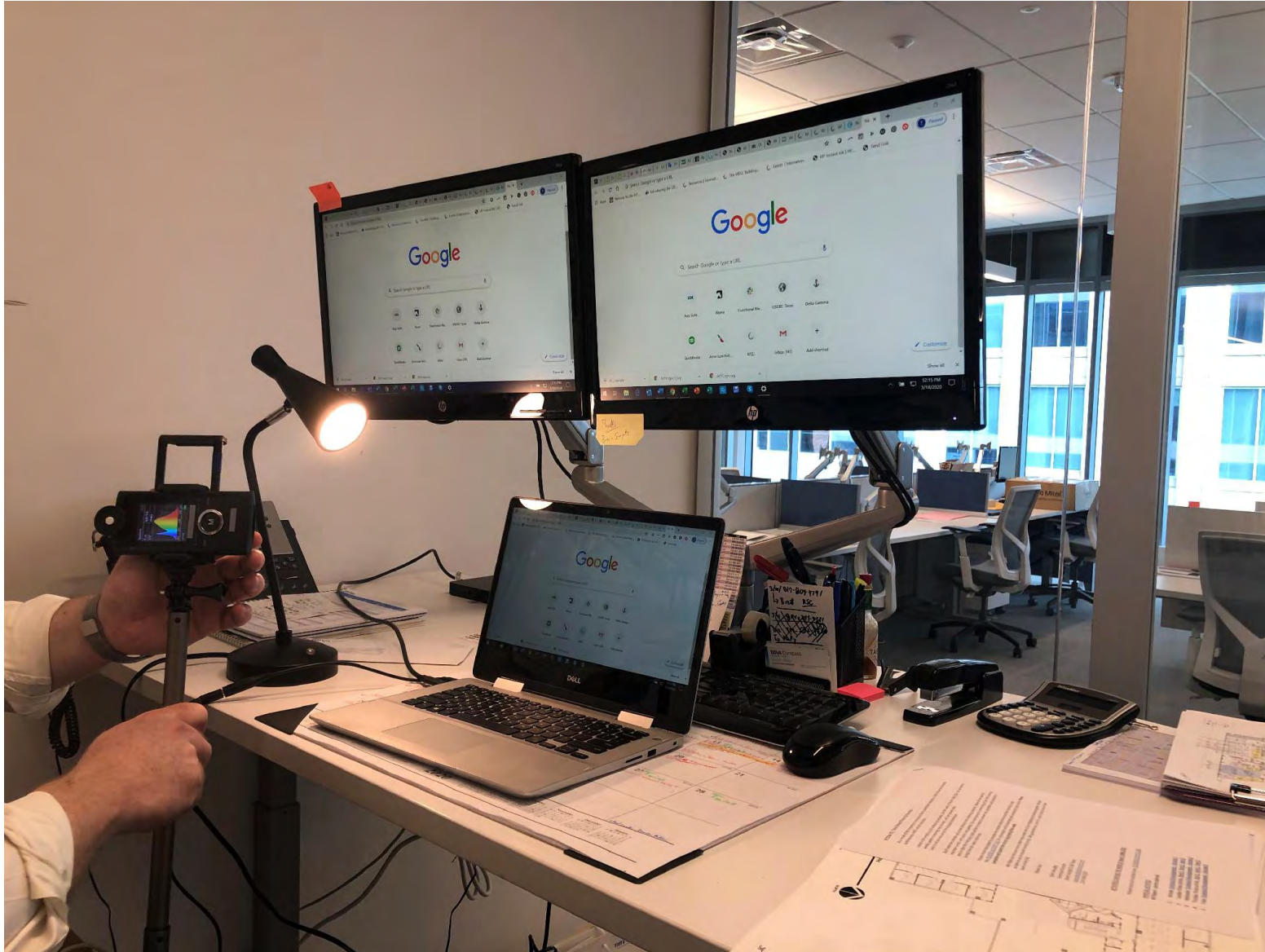
ONSITE TESTING
+
PERFORMANCE REVIEW
=
PERFORMANCE VERIFICATION



WELL Performance Verification - Air Testing



WELL Performance Verification - Light Testing



WELL Performance Verification - Light Testing



WELL Performance Verification - Thermal Comfort Testing

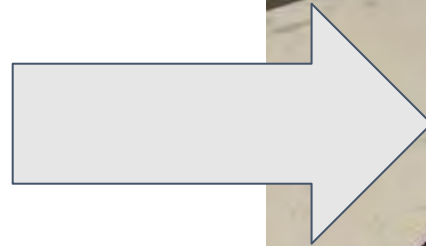


WELL Performance Verification - Water Testing



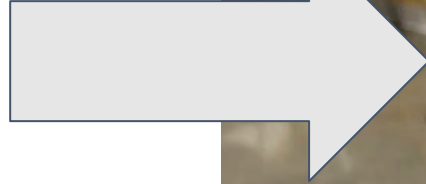
WELL Performance Verification

Unfiltered
Water
Sample



WELL Performance Verification

Filtered
Water
Sample



WELL Performance Verification - Water Testing





WELL GREEN

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fitwel



What is Fitwel?



Fitwel is the World's
Leading Certification System
that Optimizes Buildings to Support Health

Fitwel Champion: Vornado

★ ★ ★ Bloomberg Headquarters

START A PROJECT

What is Fitwel?

Developed by:

1. US Center for Disease Control and Prevention (CDC)
2. General Services Administration (GSA)

Third Party Certification:

Center for Active Design (CfAD)



Fitwel 101



low-rise residential



residential



workspaces



community

Fitwel 101

7 Health Impact Categories

Fitwel includes 55 evidence based design and operational strategies.

Each strategy is linked to one of seven health impact categories.

They are weighted on the strength of evidence and impact on occupant health.



Impacts Community Health



Reduces Morbidity + Absenteeism



Supports Social Equity for Vulnerable Populations



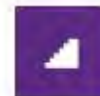
Instills Feelings Of Wellbeing



Provides Healthy Food Options



Promotes Occupant Safety



Increases Physical Activity

Fitwel 101

Fitwel Strategies are categorized into 12 sections:



Location



Building Access



Outdoor Spaces



Entrances and Ground Floor



Stairwells



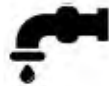
Indoor Environment



Workspaces



Shared Spaces



Water Supply



Cafeteria / Prepared Food

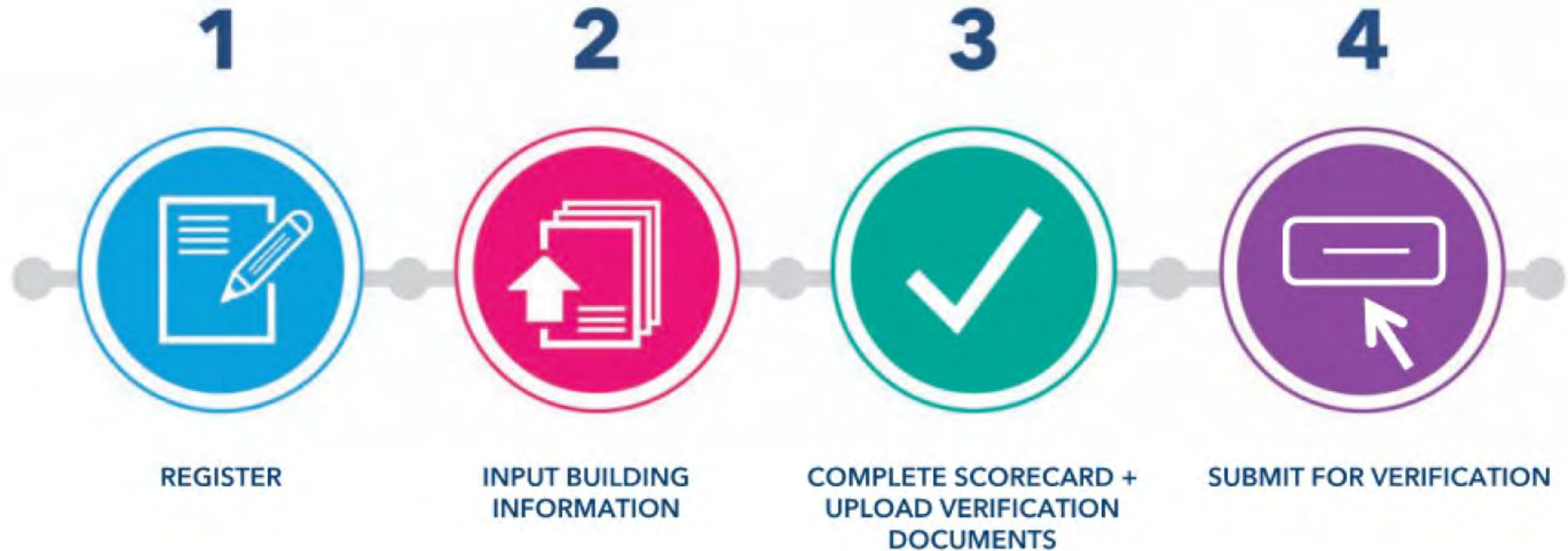


Vending Machines / Snack Bars



Emergency Procedures

Fitwel Certification



Fitwel Scorecard

Fitwel Workplace: Commercial Interior Space

Project Name:

Date:

Design Certification

Built Certification

Score	0	Score	0
Star Rating	0	Star Rating	0

Key Terms

Project Boundary: The project boundary includes all spaces within the building footprint. For multi-tenant base buildings the project boundary includes owner-controlled areas, tenant spaces, rooftops, parking garages, and common areas.

Regular Occupants: Number of habitual users of a workplace including all full- and part-time employees and volunteers, but not transitional occupants (such as subway commuters passing through a portion of the building.) Number may be estimated using full-time equivalent figures used for code or zoning filing. For commercial interior spaces, regular occupants are considered occupants of tenant controlled areas only.

YES	NO	MAYBE	STRATEGY ID	SUB-TITLE	FITWEL STRATEGY	DESIGN CERTIFICATION	BUILT CERTIFICATION	POINTS EARNED		POINTS AVAILABLE		
								DESIGN CERT.	BUILD CERT.	YES	AC	NA
1. LOCATION												
			1.1	Walkability	Building located in an area with a Walk Score of 50 or above Buildings and campuses in more walkable locations can increase opportunities for regular physical activity, social interaction, and access to amenities, fostering improved health.			0.00	0.00	3.00		
					STRATEGY REQUIREMENTS	COMPLIANCE DOCUMENTATION		COMPLIANCE DOCUMENTATION				
					The building must meet <u>one</u> of the following:	Submit <u>one</u> of the following:		Submit <u>one</u> of the following:				
					1. have a Walk Score of 50 or above	1. A copy of the building's Walk Score from www.walkscore.com .		1. A copy of the building's Walk Score from www.walkscore.com .				
					2. identify a minimum of <u>three</u> of the following amenities located within a 1/2-mile or an 800-meter walking route of the main building entrance: food outlet (including cafe, restaurant, food court, deli, grocery store) – financial service (including bank, ATM, cash machine) – gym, recreation, or leisure facility (including fitness center, gym, sports facility, recreation center)	2. A minimum of <u>one</u> annotated map clearly detailing all of the following: – the location of each required amenity – the main building entrance – the walking distance from the main building		2. A minimum of <u>one</u> annotated map clearly detailing all of the following: – the location of each required amenity – the main building entrance – the walking distance from the main building				
						No		No				

Fitwel Scoring

Fitwel Certification is awarded at the following levels:



90–104 Points



105–124 Points

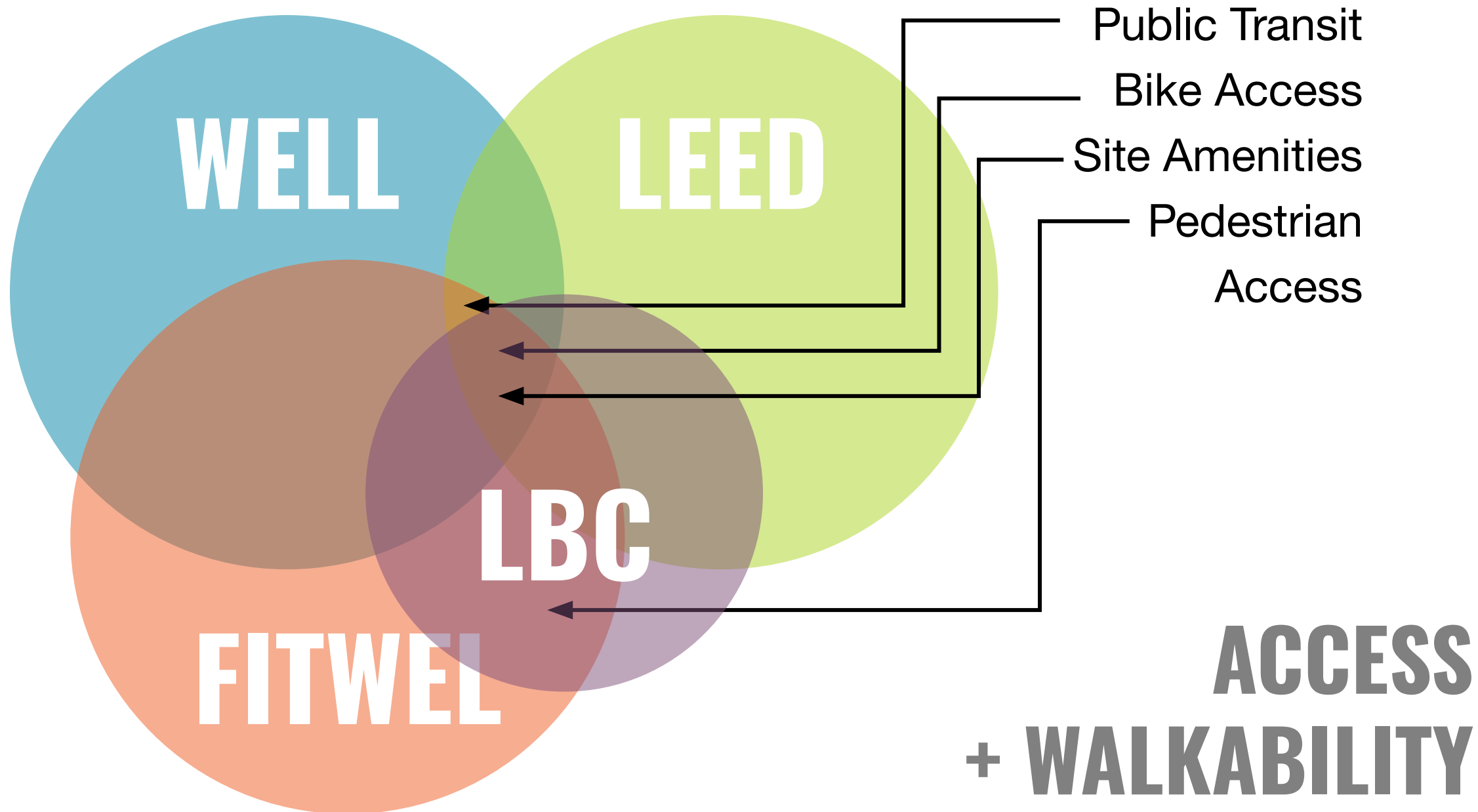


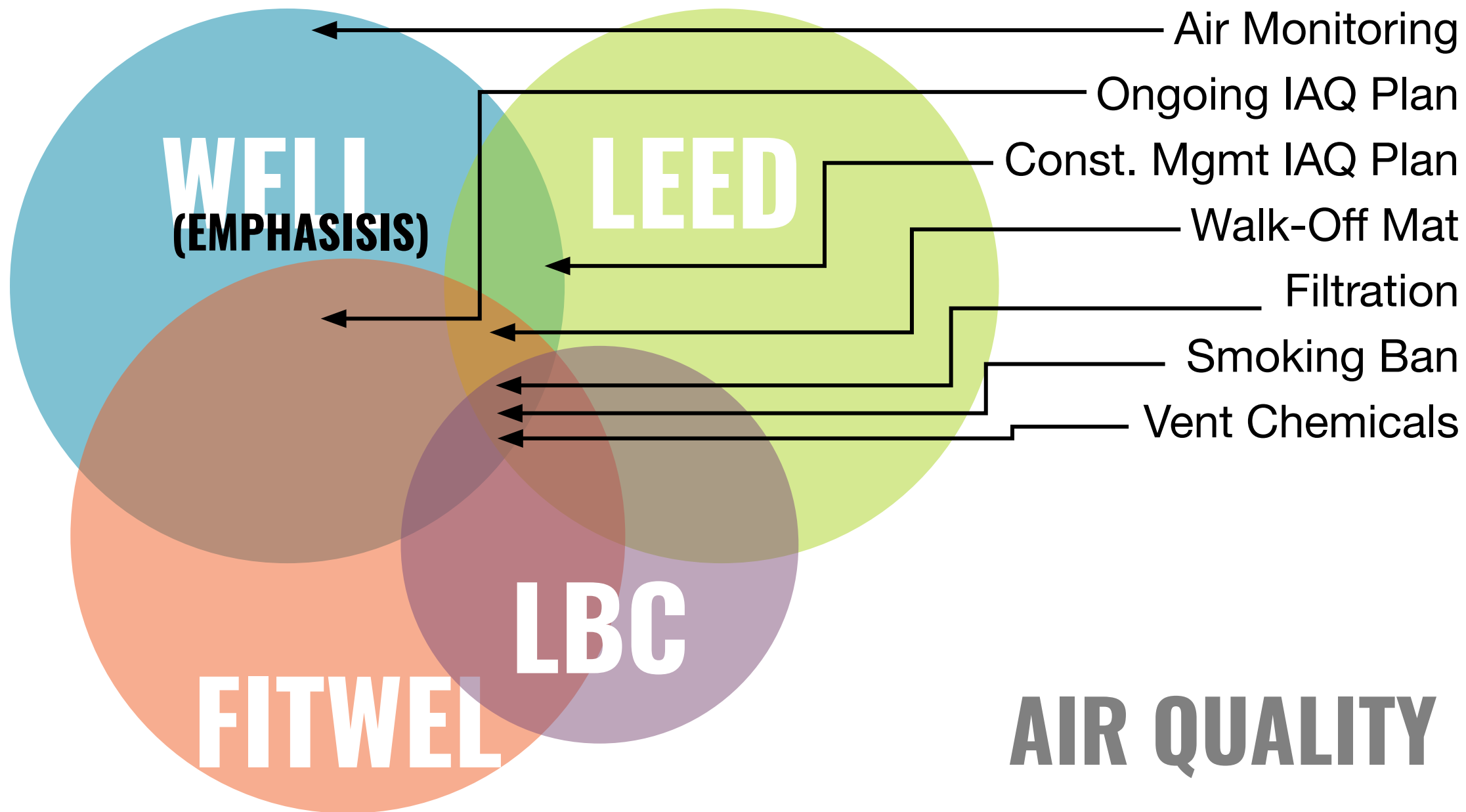
125–144 Points

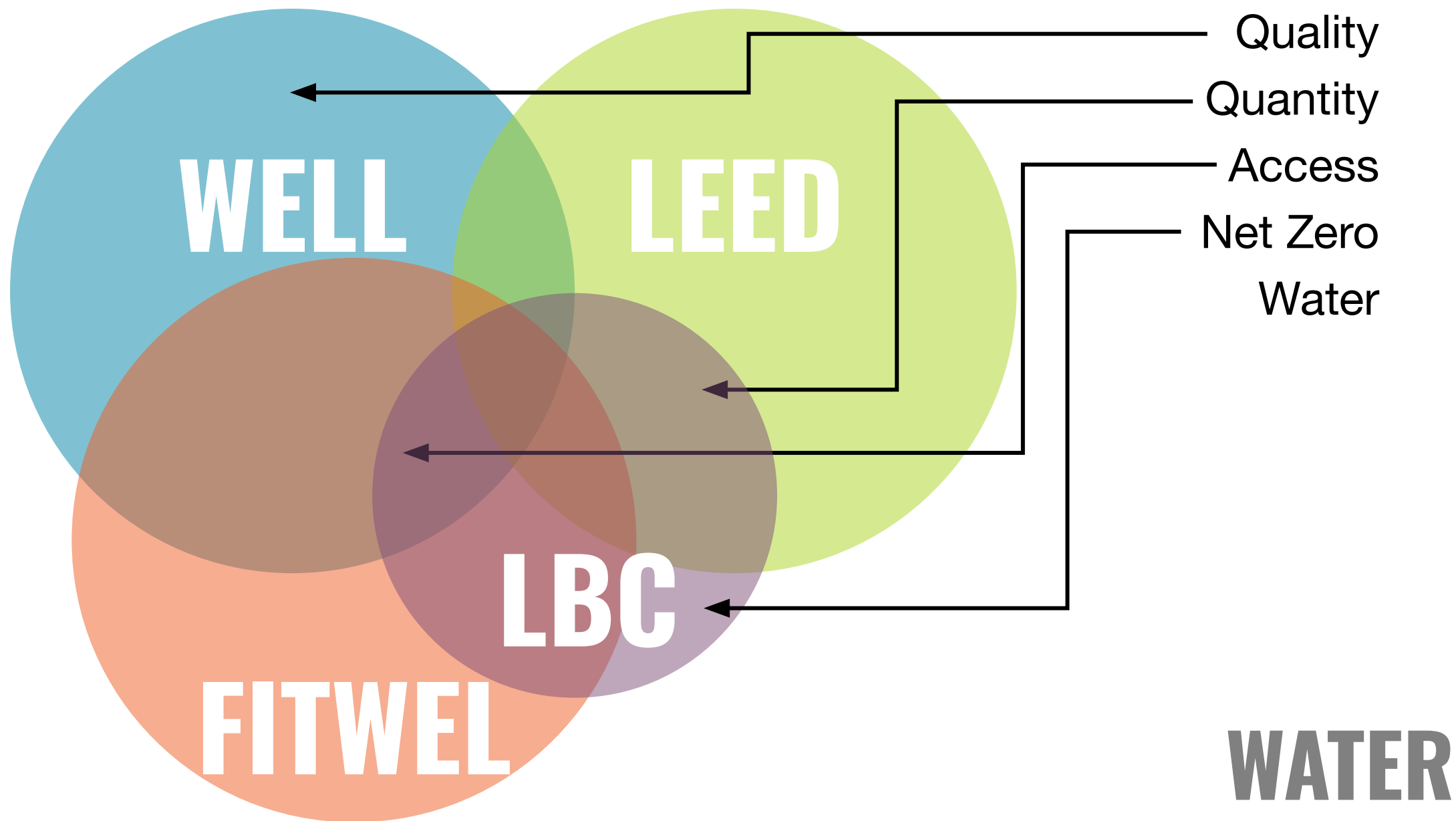
Fitwel Plaque

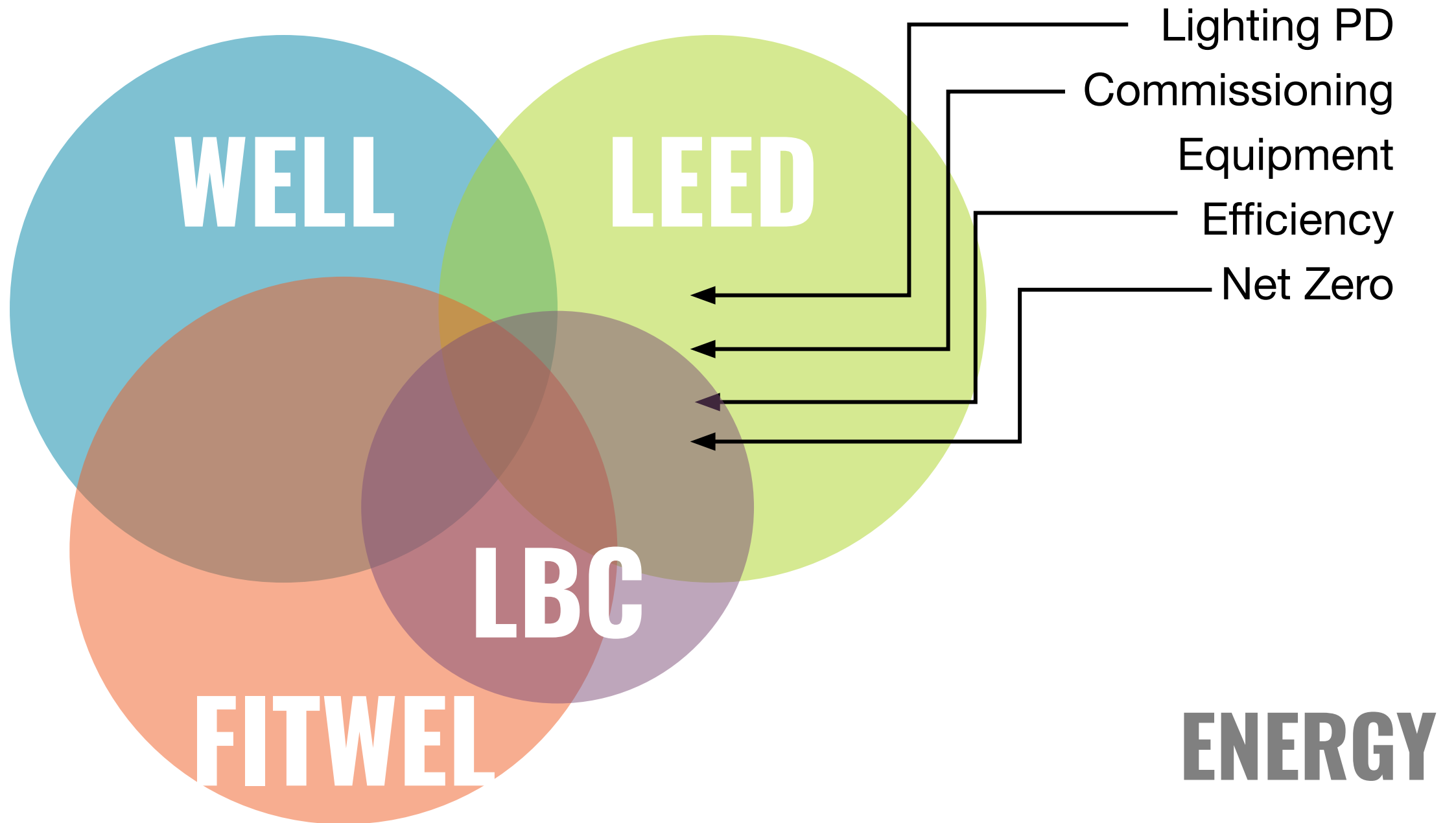
Similar to LEED – there is a plaque or decal that can be purchased after completion of the certification

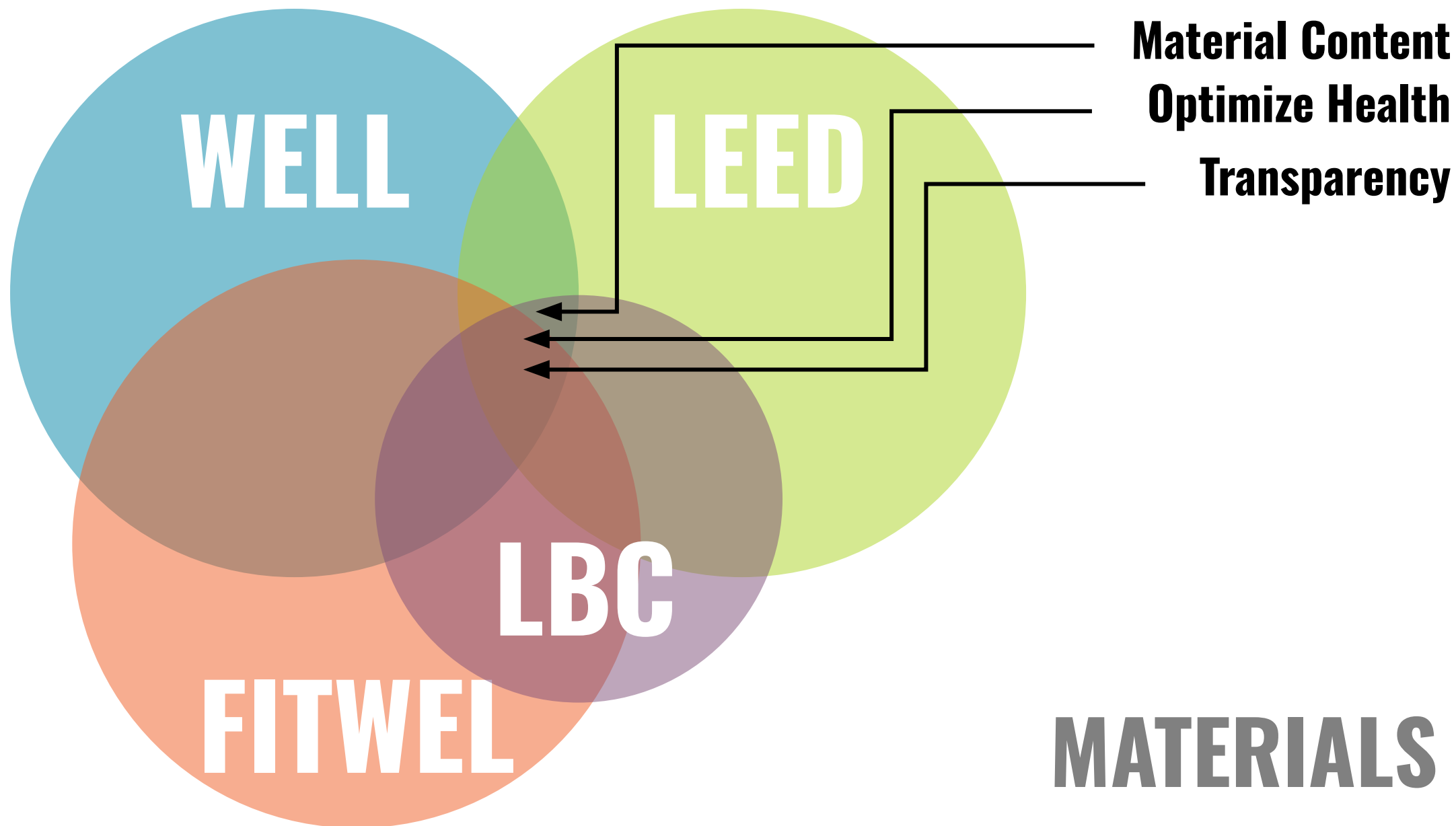


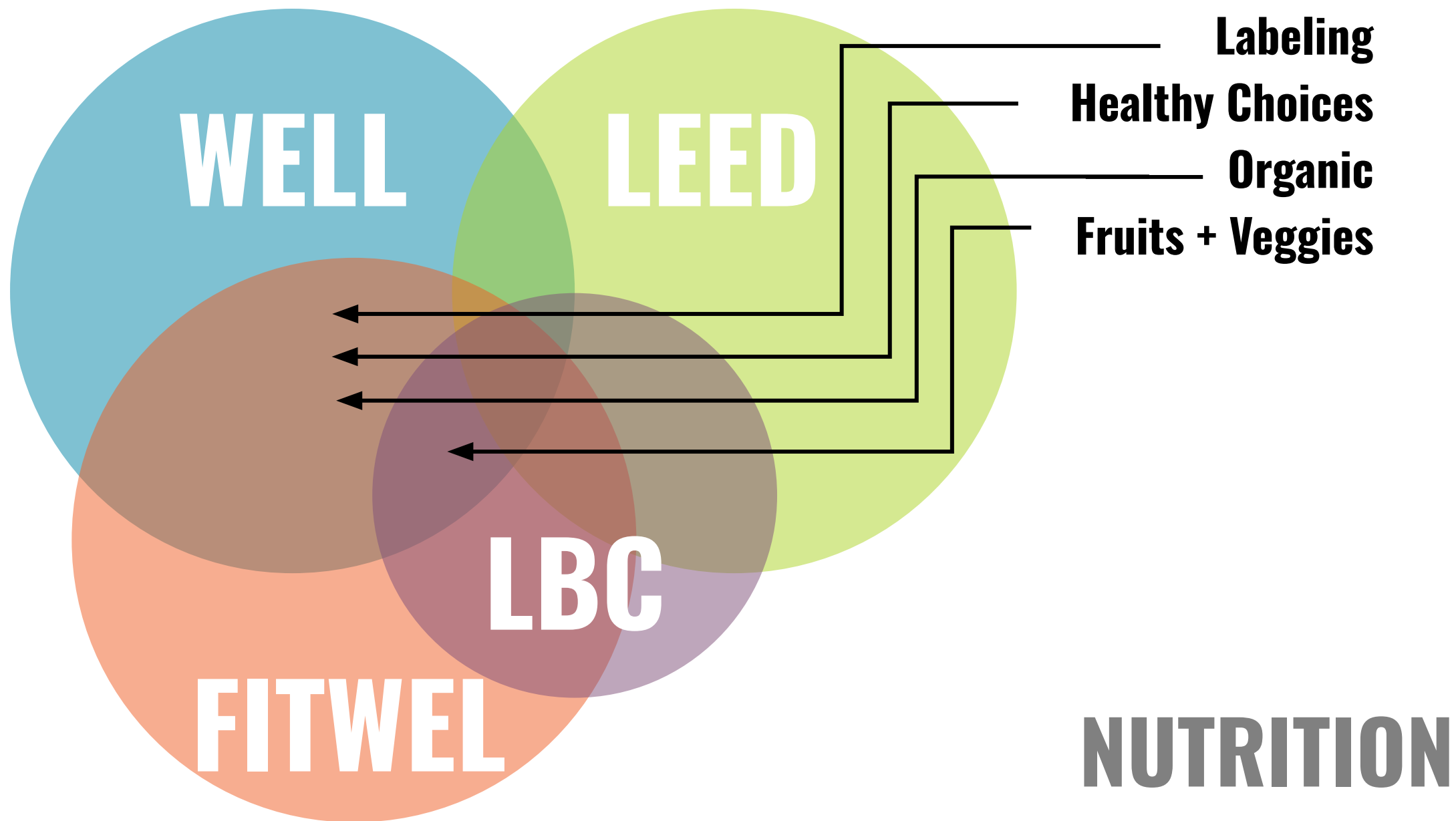












WELL

People

LEED

People
Planet
Profit

FITWEL

People

LBC

People
Planet
Profit

**TRIPLE BOTTOM LINE,
EARLY ADOPTION, AND GOALS**

COMPARING KEY HEALTH & WELL-BEING CERTIFICATIONS: WELL BUILDING STANDARD VS. FITWEL



WELL BUILDING STANDARD

ADMINISTERED BY: IWBI



COMPREHENSIVE HUMAN HEALTH

Biological, environmental, and behavioral health.



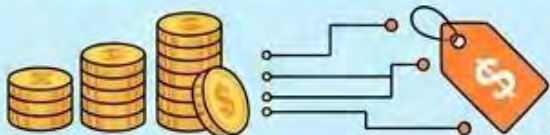
HIGH EFFORT

24 Mandatory Preconditions. Performance testing, specialized monitoring, detailed policies.



ONSITE PERFORMANCE TESTING

Third-party assessor visits to test air, water, light, acoustics.



HIGHER COST

\$3,000 Registration + variable sq ft fees + Performance Testing.

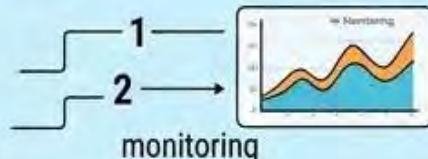


PRESTIGE & MEASURABLE IMPACT

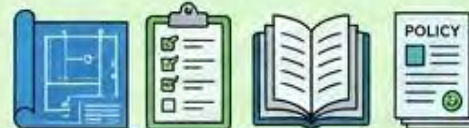
Market leadership, detailed health data for ESG reporting, optimized environment.

EVERY 3 YEARS

Requires data, continuous monitoring, and policy updates.



PRIMARY FOCUS



EVIDENCE-BASED DESIGN & OPERATIONAL POLICY

Design & policies for healthy behavior.

EFFORT & RIGOR



MODERATE EFFORT

Flexible Point-Based Scorecard. No universal preconditions. Policy-focused.



No universal preconditions. Policy-focused.

VERIFICATION METHOD



ONLINE DESKTOP AUDIT

Documentation upload & review via secure portal. No onsite required.

COST STRUCTURE



LOWER COST

\$500 Registration + Certification starting ~ Performance Testing.



LOWER COST

\$500 Registration + Certification starting ~\$6,500-\$7,500.

KEY BENEFITS



SPEED & SCALE

Rapid deployment across portfolios, lower capital constraints, direct health outcomes.

RECERTIFICATION



EVERY 3 YEARS

Requires updated policies and document resubmission.



EVERY 3 YEARS

Requires updated policies and document resubmission.

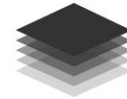


OPERATED BY:
CENTER FOR ACTIVE DESIGN (CFAD)



Net Zero Energy (NZE)

Session 9
September 8



Carbon / Electrification & Year in Review

Session 10
October 13



Questions & Discussion



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