
SHAPING THE PACIFIC NORTHWEST

Arup Seattle Office

October 2021



ARUP



PROJECT TEAM

OWNER
ARUP

ARCHITECT
NBBJ

CONSTRUCTION TEAM
HOWARD S. WRIGHT General Contractor
MACDONALD-MILLER Mechanical
PRIME Electric
CATALYST WORKPLACE Furniture

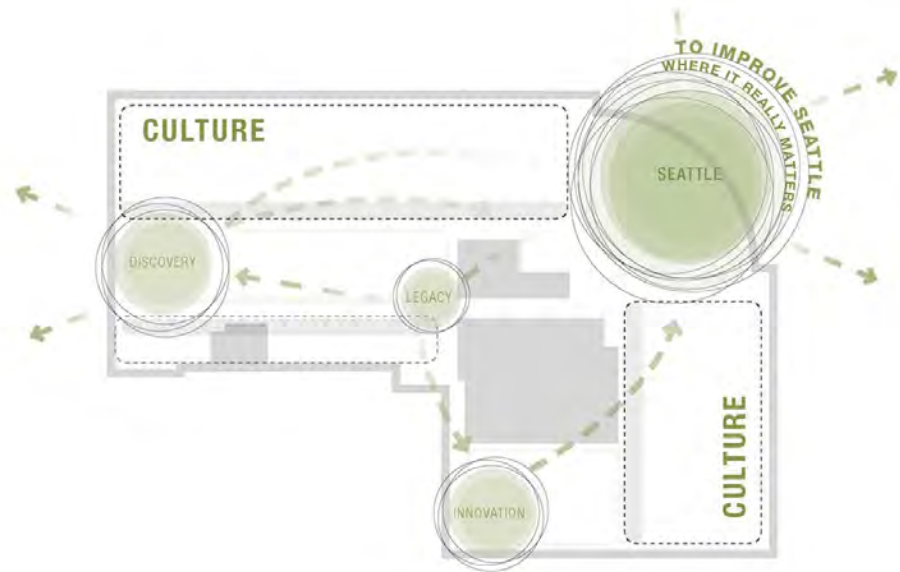


PROJECT NARRATIVE

For over 75 years, Arup has been a welcome home for the creative and ambitious. After opening a Seattle office 18 years ago, a new and larger local office was needed for this growing practice of engineers and consultants.

Our founder Ove Arup's conviction was that a more collaborative and open-minded approach to engineering leads to work of greater quality and enduring relevance. The timeless elements of quality and relevance are seen today in broader and deeper concern for the issues of health and sustainability.

Arup's new Seattle office was designed to comply with the WELL Building Standard as a result of the high value we place on employee health, well-being, and sustainability. By implementing several WELL design optimizations, including healthy materials selection, biophilic features like a moss wall, easy access to filtered water and fitness equipment, and acoustic control over noise intrusion, our office is anticipating WELL Gold.



DISCOVERY

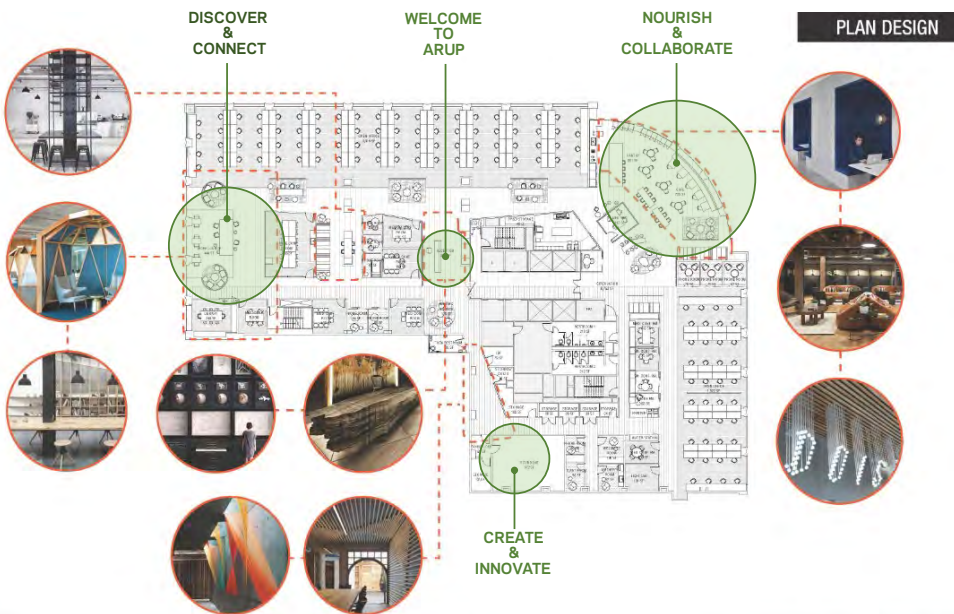
Arup has a rich history that is the underpinning of their global organization. Defining what that means for the Seattle Office required understanding the work and culture of the local team.

Over the course of two days, NBBJ hosted leadership interviews, workshops with the engineering teams, and a Keep / Toss / Create exercise with the facilities team to define the goals for the project, the work that teams do, and what elements are critical to a high-functioning space.

The outcomes were clear – the space needed to reflect Arup’s values:

- Global knowledge delivered locally
- Great people, great place, great culture
- Create the best places using the most innovative sustainable solutions.

Emphasizing the fundamental belief that “we’re all in this together,” the team established a series of design principles focused on reinforcing culture, building community, and crafting a space that reflects the local character. The results informed the space program, the design solutions, and the overall employee experience.



“...to make everybody aware of and interested in our aims to make the environment and working conditions as pleasant as possible within the available means.”

OVE ARUP
1970

CBE Livable Building Award

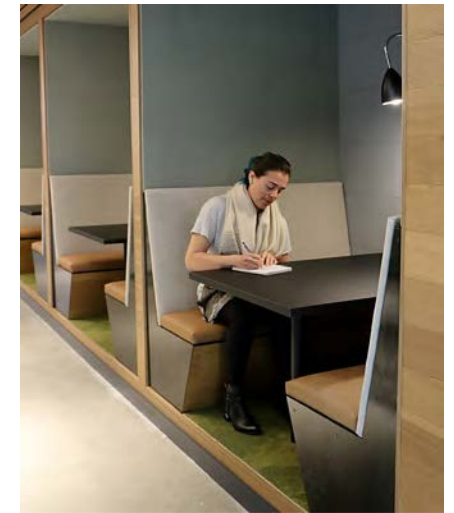
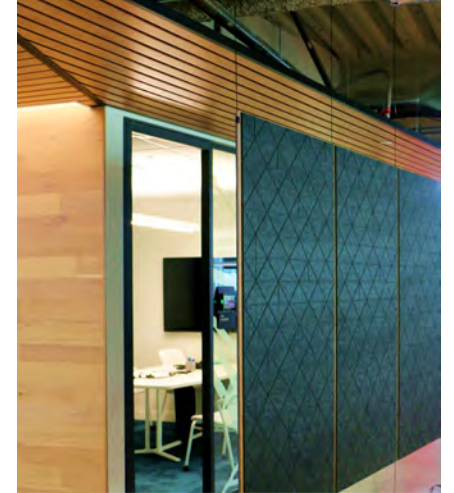


WELL CERTIFICATION

The new Seattle office exemplifies Arup's culture and collaborative mindset, with a unique environment that supports team members' work and wellness.

The WELL building standard is a performance-based system to measure the health and wellness impacts of buildings and the built environment on human systems.

We aligned our new office's design with WELL principles and are anticipating WELL Gold certification.



WELL BUILDING ATTRIBUTES

IMPROVED INDOOR AIR QUALITY

All selected finish materials and furniture have been third-party tested and verified to confirm low volatile organic compound emissions.

Outdoor air is supplied at rates 30% higher than those required by code and is passed through MERV-13 filters to further contribute to the space's excellent indoor air quality.

WATER FILTRATION, ACCESS, AND TESTING

Filtered water is readily available on either side of the office to provide all occupants with efficient and easy access to clean drinking water.

Water delivered to the space has been filtered and tested to confirm the reduced presence of inorganic and organic pollutants, herbicides and pesticides, and disinfectants.

COMFORTABLE AND CONTROLLED LIGHTING DESIGN

Lighting design promotes visual comfort and acuity by integrating circadian lighting design and maintaining even, sufficiently bright, glare-free work areas.

Installed lighting sources accurately render colors and surfaces to mimic daylight and enhance lighting quality in the space.

WELL BUILDING ATTRIBUTES

BIOPHILIC DESIGN AND MATERIALS SELECTION

Outdoor views and a visual connection to nature heavily influenced the layout of the open office floorplan.

Indoor plants and lichen walls allow greenery and nature into the space.

Many materials highlight natural patterning, such as the oil-finished wood paneling, which is featured throughout the space.

ACOUSTIC ISOLATION

Both active and quiet zones maintain occupants' acoustic comfort.

Walls have been detailed and built to meet strict isolation criteria, reducing noise intrusion from one space to the next.

ACCESS TO FITNESS EQUIPMENT

All employees have access to fitness equipment in the building's shared gym facility.

The office also features a treadmill desk in its own dedicated space, as well as three desk steppers so employees can easily bring fitness into the workspace.

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ACOUSTIC QUALITY


With high levels of acoustic quality, the office provides loud and quiet zones with project rooms designed to keep outside noise intrusion at a minimum.

A wide-angle photograph of a modern, open-plan office space. In the foreground, a long white countertop with a sink and a chrome faucet runs along the right side. The wall behind the counter is covered in green square acoustic panels. To the left, there are several yellow armchairs and a blue patterned rug. In the background, there are desks with computers and people working. The ceiling features exposed concrete beams and a series of long, horizontal wooden slats with integrated lighting.

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LIGHTING

Zoning and light level requirements are met,
and brightness contrasts are managed.

A photograph of a modern office interior. In the foreground, a long wooden table is surrounded by teal and light blue chairs. To the right, there is a grey modular sofa with a wooden base, and a blue patterned rug. In the background, a glass-walled meeting room is visible, and a person in an orange jacket is walking on the left. The ceiling features large circular pendant lights and exposed ductwork.

ARUP

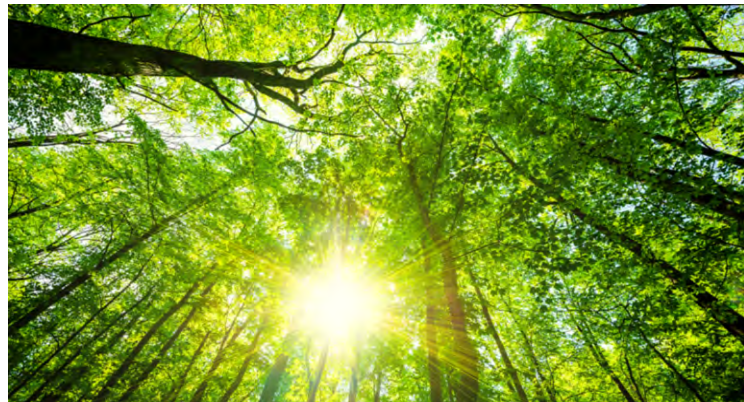
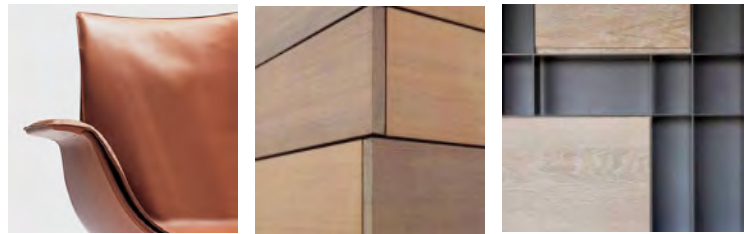
OFFICE LAYOUT

Seating and spatial layouts are organized into separate workplace zones and provide differing degrees of sensory engagement.



INDOOR AIR QUALITY

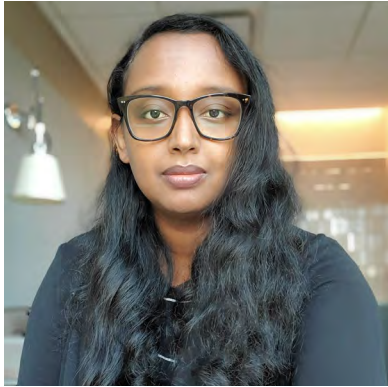
Interior paints, coatings, sealants, adhesives flooring, insulations, furniture and furnishings all comply with WELL criteria.



A PACIFIC NORTHWEST PALETTE

The beauty of the Pacific Northwest conjures landscapes of mountains, lakes, trees and rocky ocean views – all of which add up to a stunning color palette. The gray-blue coastlines, the rust-hued sunsets and the verdant forests all create a colorful backdrop for the office space. It's a playful range of mid-tone and modern neutral colors — the perfect hues for Arup's office.

OCCUPANT SATISFACTION



Mia Areaya
Project Administrator

"I love how flexible and open our office layout is. This flexible working environment feels freeing to me, like I am not stuck at my desk all day."



Andrew Birklid
Acoustic Consultant

"I really like the care that has been taken to make sure people can be social in the open floor plan but also find quiet places to work or take a break when needed."



Tony Bisio
ITC Consultant

"The adjustable height desks greatly enhance my ability to get my job done by providing the option to stand while working."

OCCUPANT SATISFACTION



Katherine League
Lighting Designer

"The open office spaces utilize as much daylight as the building orientation allows while supplementing electric lighting whenever the need arises.."



Alicia Pedneault
Structural Engineer

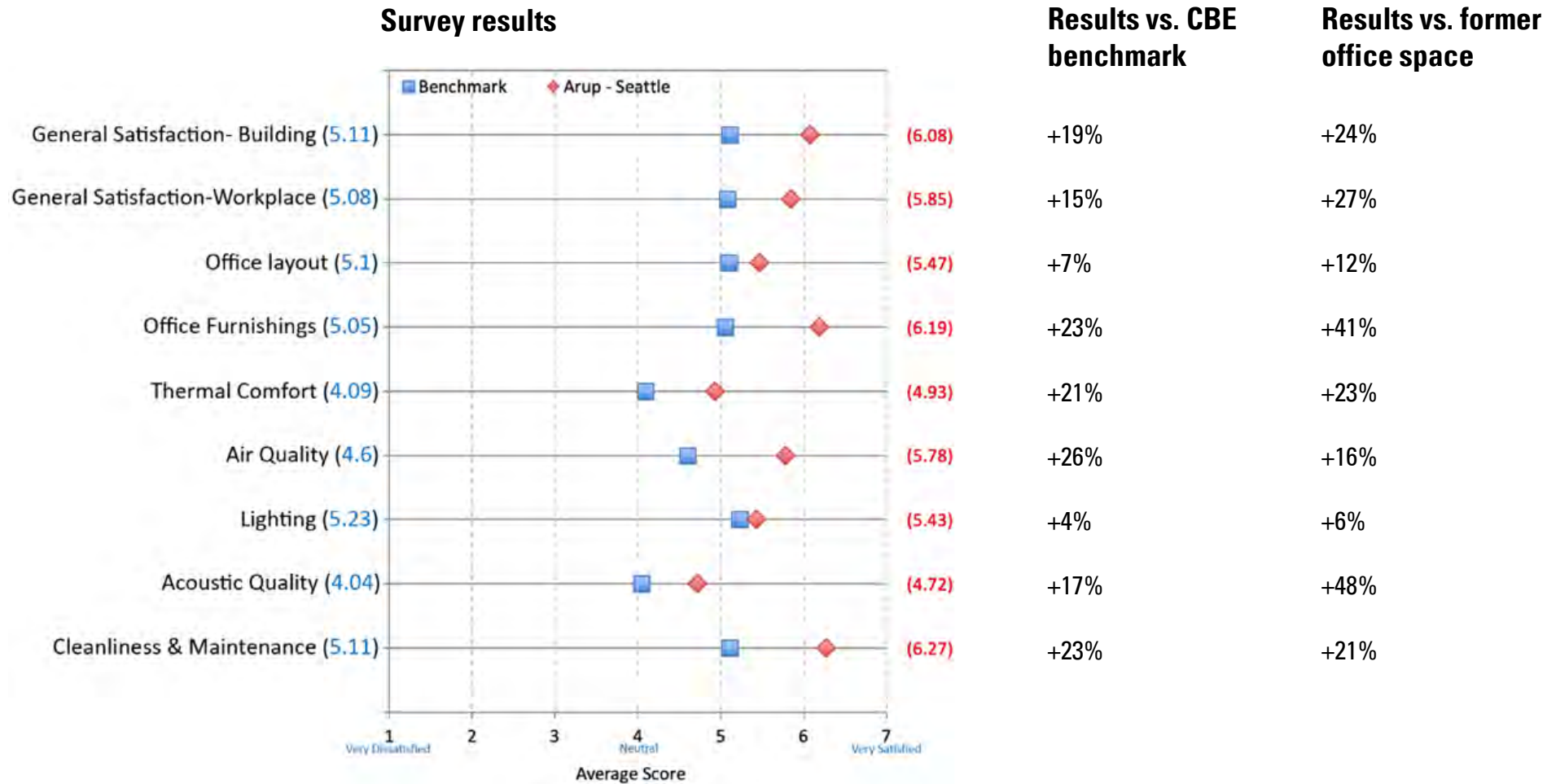
"The office has a modern aesthetic with bright colors softened by wood tones - perfect for the Pacific Northwest"



Sarah McDowell
Mechanical Engineer

"I really appreciate the balanced use of calming colors and quality lighting. The overhead lighting that adjusts with the circadian rhythm along with desks designed for low glare and low contrast makes for a great place to focus while feeling good."

OCCUPANT INDOOR ENVIRONMENTAL QUALITY SURVEY



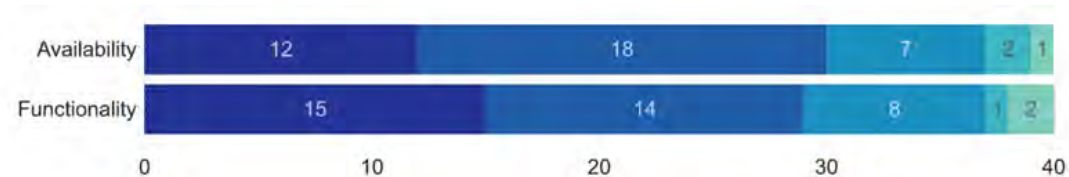
RESULTS: SATISFACTION WITH OFFICE LAYOUT

Results vs. CBE benchmark: +7% || Results vs. former office space: +12%

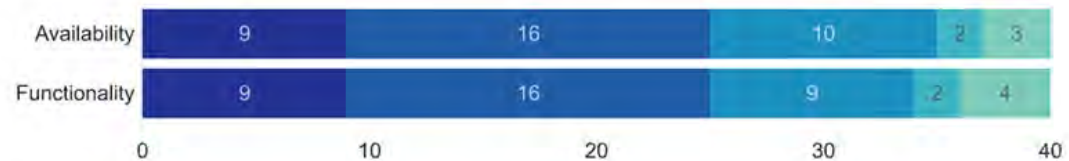
Relevant Feature:

- Feature 89 Adaptable Spaces: Seating and spatial layouts are organized into separate workplace zones and provide differing degrees of sensory engagement.

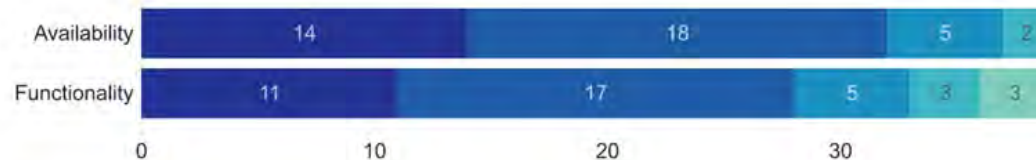
1-2 person meeting room(s)



3-5 person meeting room(s)



6+ person meeting room(s)



Very satisfied Satisfied Somewhat satisfied Neither satisfied nor dissatisfied
Somewhat dissatisfied Dissatisfied Very dissatisfied

RESULTS: SATISFACTION WITH FURNISHINGS

Results vs. CBE benchmark: +23% || Results vs. former office space: +41%

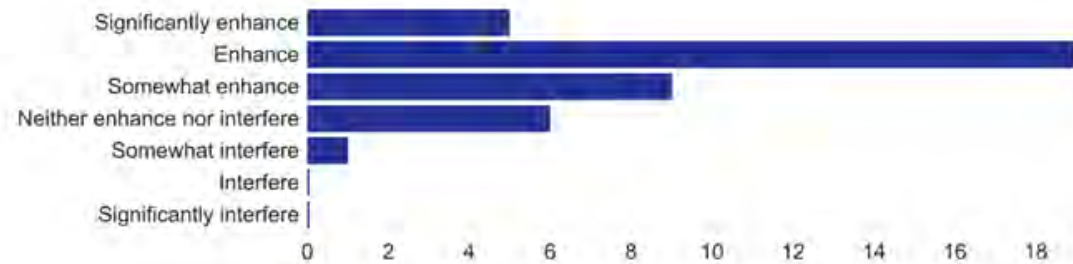
Relevant Features:

- Feature 71 Active Furnishings: At least one treadmill/bicycle/stair stepper desk is available; at least 60% of desks are height-adjustable.
- Feature 73 Ergonomics (visual and physical): All screens and seats meet the WELL ergonomic and adjustability criteria.

How satisfied are you with...



Do your office furnishings enhance or interfere with your ability to get your job done?



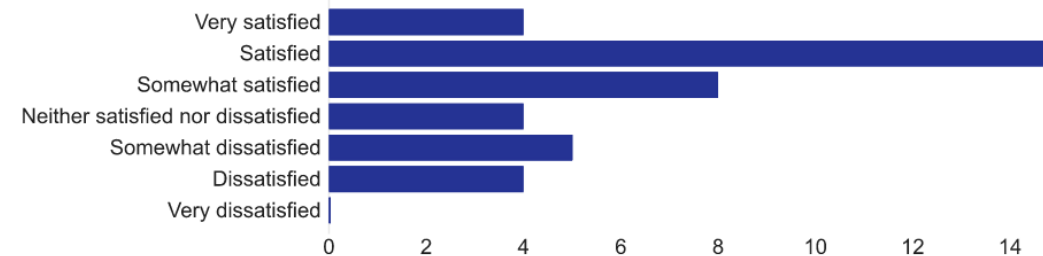
RESULTS: SATISFACTION WITH THERMAL CONDITIONS

Results vs. CBE benchmark: +21% || Results vs. former office space: +23%

Relevant Feature:

- Feature 76 Thermal Comfort: All spaces meet the design, operating, and performance criteria of ASHRAE 55-2013 Section 5.3.

How satisfied are you with the temperature of your workspace?



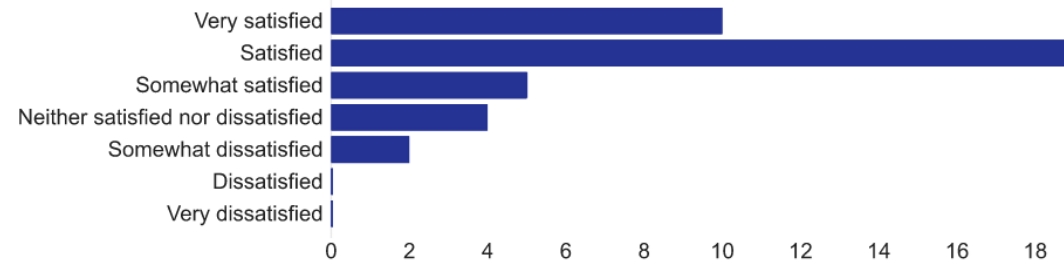
RESULTS: SATISFACTION WITH INDOOR AIR QUALITY

Results vs. CBE benchmark: +26% || Results vs. former office space: +16%

Relevant Features:

- Feature 3 Ventilation Effectiveness: Ventilation rates comply with ASHRAE 62.1-2013 (Ventilation Rate Procedure or IAQ Procedure)
- Feature 4 VOC Reduction: Interior paints, coatings, sealants, adhesives, flooring, insulation, furniture, and furnishings all comply with WELL criteria.
- Feature 5 Air Filtration: MERV 13 filters are installed and maintained; rack space is provided for future carbon filters and/or other additional filters.
- Feature 6 Microbe and Mold Control: Quarterly checks for mold growth on cooling coils.
- Feature 8 Healthy Entrance: Walk-off mats, which comply with the WELL criteria, are provided and maintained on a weekly basis.
- Feature 15 Enhanced Ventilation: ASHRAE 62.1-2013 outdoor air supply rates are exceeded by at least 30%.
- Feature 17 Direct-Source Ventilation: All bathrooms, chemical storage units, and copier/printers are in enclosed spaces with self-closing doors and dedicated exhaust systems.
- Feature 18 Air Quality Monitoring and Feedback: Concentrations of select air pollutants are monitored, recorded, and displayed to occupants.

How satisfied are you with the air quality in your workspace (i.e., stuffy/stale air, cleanliness, odors)?



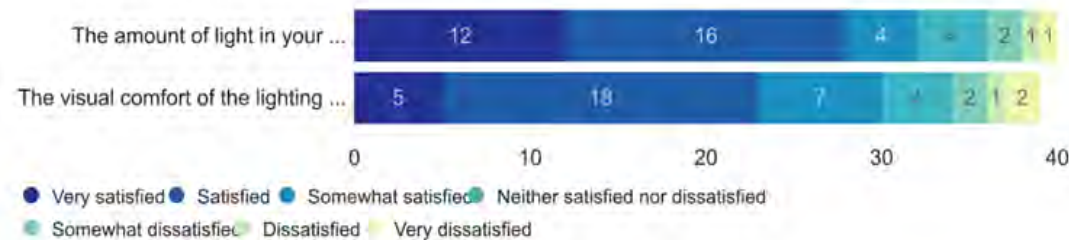
RESULTS: SATISFACTION WITH LIGHTING CONDITIONS

Results vs. CBE benchmark: +4% || Results vs. former office space: +6%

Relevant Features:

- Feature 53 Visual Lighting Design: Zoning and light level requirements are met; brightness contrasts are managed.
- Feature 54 Circadian Lighting Design: At least 250 melanopic lux is present at 75% or more workstations for at least 4 hours per day.
- Feature 55 Electric Light Glare Control: Lamp shielding and glare minimization criteria are met.
- Feature 56 Solar Glare Control: Controllable interior window blinds are provided.
- Feature 57 Low-Glare Workstation Design: All monitors within 4.5m of view windows can be oriented perpendicular to the window plane.
- Feature 58 Color Quality: All lamps meet WELL Color Rendering Index (CRI) criteria.
- Feature 59 Surface Design: Light Reflectance Value (LRV) targets are achieved for ceilings, walls, and furniture.

How satisfied are you with...



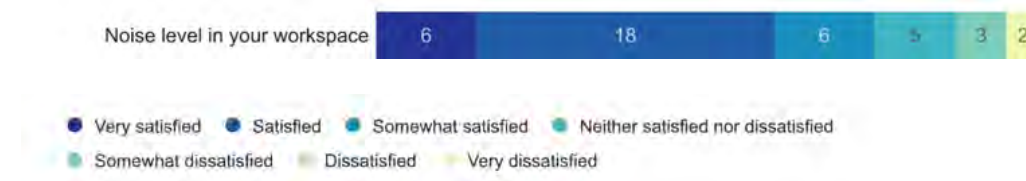
RESULTS: SATISFACTION WITH ACOUSTIC CONDITIONS

Results vs. CBE benchmark: +17% || Results vs. former office space: +48%

Relevant Features:

- Feature 74 Exterior Noise Intrusion: Average sound pressure level from outside noise intrusion does not exceed 50 dBA.
- Feature 75 Internally Generated Noise: An acoustic plan identifies loud and quiet zones and noisy equipment in the space. Mechanical equipment meets the required maximum noise criteria.

How satisfied are you with...



RESULTS: SATISFACTION WITH CLEANING/MAINTENANCE

Results vs. CBE benchmark: +23% || Results vs. former office space: +21%

Relevant Features:

- Feature 9 Cleaning Protocol: A cleaning plan is created and implemented in accordance with WELL criteria.
- Feature 28 Cleanable Environment: High-touch and non-porous surfaces are smooth and free of visible defects, finished to maintain smooth weld joints, and free of sharp internal angles, corners and crevices; only carpet tile is installed; space is provided for movable items to allow high-touch surfaces to be completely cleared during cleaning; right angles between floors and wall/windows are sealed.
- Feature 29 Cleaning Equipment: All applicable cleaning equipment, cleaning agents, and chemical storage areas meet WELL criteria.

How satisfied are you with...



WELL MATRIX

DRAFT SEPTEMBER 2021

Anticipated	Likely	Possible	Not Achieved	INTERIORS
1				P 1 Air quality standards
1				P 2 Smoking ban
1				P 3 Ventilation effectiveness
1				P 4 VOC reduction
1				P 5 Air filtration
1				P 6 Microbe and mold control
1				P 7 Construction pollution management
1				O 8 Healthy entrance
1				P 9 Cleaning protocol
1				P 11 Fundamental material safety
		1		O 13 Air flush
		1		O 14 Air infiltration management
1				O 15 Increased ventilation
		1		O 16 Humidity control
1				O 17 Direct source ventilation
	1			O 18 Air quality monitoring and feedback
		1		O 19 Operable windows
		1		O 20 Outdoor air systems
		1		O 21 Displacement ventilation
1				O 22 Pest control
		1		O 23 Advanced air purification
		1		O 24 Combustion minimization
		1		O 25 Toxic material reduction
		1		O 26 Enhanced material safety
		1		O 27 Antimicrobial activity for surfaces
	1			O 28 Cleanable environment
	1			O 29 Cleaning equipment
				P 30 Fundamental water quality
				P 31 Inorganic contaminants
				P 32 Organic contaminants
				P 33 Agricultural contaminants
				P 34 Public water additives
			1	O 35 Periodic water quality testing
			1	O 36 Water treatment
				O 37 Drinking water promotion
				P 38 Fruits and vegetables
				P 39 Processed foods
				P 40 Food allergies
				P 41 Hand washing
				P 42 Food contamination
				P 43 Artificial ingredients
				P 44 Nutritional information
				P 45 Food advertising
				O 46 Safe food preparation materials
			1	O 47 Serving sizes
			1	O 48 Special diets
			1	O 49 Responsible food production
			1	O 50 Food storage
			1	O 51 Food production
			1	O 52 Mindful eating
				P 53 Visual lighting design
				P 54 Circadian lighting design
				P 55 Electric light glare control
				P 56 Solar glare control
				O 57 Low-glare workstation design
				O 58 Color quality
				O 59 Surface design
			1	O 60 Automated shading and dimming controls
			1	O 61 Right to light
			1	O 62 Daylight modelling
			1	O 63 Daylighting fenestration
				O 64 Interior fitness circulation
				P 65 Activity incentive programs
				O 66 Structured fitness opportunities
				O 67 Exterior active design
				O 68 Physical activity spaces
				O 69 Active transportation support
				O 70 Fitness equipment
				O 71 Active furnishings
				P 72 ADA accessible design standards
				P 73 Ergonomics: visual and physical
				O 74 Exterior noise intrusion
				P 75 Internally generated noise
				P 76 Thermal comfort
				O 77 Olfactory comfort
				O 78 Reverberation time
				O 79 Sound masking
				O 80 Sound reducing surfaces
				O 81 Sound barriers
				O 82 Individual thermal control
				O 83 Radiant thermal comfort
				P 84 Health and wellness awareness
				P 85 Integrative design
				P 86 Post-occupancy surveys
				P 87 Beauty and design I
				P 88 Biophilia I - qualitative
				O 89 Adaptable spaces
				O 90 Healthy sleep policy
				O 91 Business travel
				O 92 Building health policy
				O 93 Workplace family support
				O 94 Self-monitoring
				O 95 Stress and addiction treatment
				O 96 Altruism
				O 97 Material transparency
				O 98 Organisational transparency
				O 99 Beauty and design II
				O 100 Biophilia II - quantitative
				O 101 Innovation feature I
				O 102 Innovation feature II
				O 103 Innovation feature III
				O 104 Innovation feature IV
				O 105 Innovation feature V

THANK YOU

seattle@arup.com | www.arup.com

