

# FUTURE FLOW

DESIGNING FOR  
BUSINESS CONTINUITY  
AND RESILIENCY

**bnim**



health



prosperity







# Designing for Business Continuity and Long-term Resiliency

Even before the pandemic, climate action required of humanity a new way of living – a way that is less consumptive and destructive, and more regenerative and generous. While still acknowledging the horrible human suffering that the pandemic has wreaked and the societal inequities that it has laid bare, it has also given us a glimpse into how our global community can respond in unison and with care for each other ... with generosity and within a different kind of flow. As we move ourselves out of our homes and back to the workplace and marketplace, the generosity of space that we now find more natural may be a guide to what we were looking for all along.

## **Human Purposed Integrated Design**

**Human Health and Wellness** - For too many decades, buildings were designed without human wellness in mind, enough so that sick building syndrome became a reality. Our buildings should, in fact, support the well-being of humans and the planet. This is accomplished most effectively through an integrated design process that involves a diversity of voices that weave together building systems in the same way an ecosystem connects organisms with each other and their environment. This is the beginning of health.

**Adaptive Spaces** - As witnessed during the pandemic, what was once a single-use building quickly became adaptable and multi-purposed. To reduce the embodied carbon of our built environment and to design for future flexibility, it is critical that adaptability be a key design element of our buildings. Robust structures that support variable environments within are most supportive of our ever-evolving human needs, while being gentler on our planet. Welsh architect Alex Gordon may have said it best back in 1974: long life, loose fit, low energy.

**Resiliency and Performance** - Resiliency in the built environment is an intricate balance of strength and flexibility. Too much flexibility can lack durability (think of a tent); too much strength can end in catastrophic failure (think of a levee). Our homes and workplaces and schools require resiliency within several key performance metrics: health of occupants (for human resiliency), reduction of greenhouse gas emissions and embodied carbon (for our planet's resiliency), low-energy and high-performance (for organizational resiliency). A high-performance design team will always focus on built environments that meet key resiliency metrics in human health, building performance, and generous design. **This is the new flow.**

## **FUTURE FLOW** goals and services

Design strategies for post-pandemic work continuity that enhances human health and well-being, improves building performance, and increases prosperity for a resilient future.

People, assets, and competitive advantage — these are key to success in any economy, as are decreased waste, increased productivity, and improved social and corporate equity. With a holistic approach to optimizing your greatest assets — people, property, and image — BNIM's **FUTURE FLOW** services stimulate the success of your business with retrofits that can also qualify for tax incentives, stimulus funding, or grants.

These services are designed to build upon each other, but can be completed as stand-alone services as well. Each can be adapted to meet the specific needs and goals of your facility and organization.



## Expand Human Health and Well-Being

Buildings are for people. The comfort and health experienced by occupants within your facilities drive productivity, employee and/or tenant retention, and can even impact rent and lease values of your property. BNIM's **FUTURE FLOW** services provide tools to identify issues and prioritize investments that impact your most important asset - your people. We believe that resilient design principles are impactful for occupants before, during, and after the pandemic. Our approach is to make the transitions flow smoothly into a new future.



## Improve Building Performance and Safety

Buildings must be heated and cooled for comfort, provide fresh water efficiently, and handle the operational daily waste and recycling. Building efficiency is about more than just utility bills; it connects to the wellness of the occupants. As evidenced during the pandemic, without public health, all else can come to a halt. BNIM's **FUTURE FLOW** services will help you dashboard your utility data alongside wellness metrics using tools that provide meaningful data that is both readable and shareable.



## Increase Fiscal Performance

Businesses require on-going investments, including debt service to the original capital cost, repairs and maintenance, utility bills, staff payroll, property taxes, and recurring interior remodels to refresh the spaces within. BNIM's **FUTURE FLOW** services are designed to optimize these on-going operational costs by identifying waste in the system and identifying opportunities for strategic improvement and clear, measurable outcomes. It is about increasing both human health and building performance in a way that also optimizes economic vitality.



# DESIGN FOR RESILIENCY people

## Buildings are for people.

We have created a practice that improves the lives of each individual we serve. In doing so, each organization, campus, and city we serve is better positioned to achieve its goals and aspirations.

At BNIM, we refer to our design process as Human-Purposed Integrated Design. Through this process, we can create solutions that advance human and organizational potential and building performance through design. This means helping students, faculty, staff, researchers, and investigators achieve more while working in environments that are better for them, more responsible to natural systems, and less expensive to own and operate.

Building design is directly correlated to the health and well-being of people, their families, friends, coworkers, and communities. Resilient design can protect against and mitigate the spread of disease through programming, material choices, and signage. It can support improved mental health through access to natural daylight and ventilation. Beautiful and effective design can help us be more impactful in our work while maintaining a level of flexibility that can respond to a global pandemic or other disruptive events.

If you have ever walked into a monumental government building, you may not know that bollards are placed there for a reason, or that different types of glass have been installed for protection, but your intuition tells you that you are safe even while the building is beautiful and stunning.

Striking this balance will be more vital than ever before now and into the future. Good design builds this balance and trust.







# DESIGN FOR RESILIENCY activities

## The six modes of working/learning and their impact.

The COVID-19 pandemic has launched the single largest work-from-home experiment in our collective history. It has accelerated what some were predicting would eventually occur anyway - more and more people working remotely. This experiment has forced employees and companies to re-evaluate how they work day-to-day and throughout each day with an intentionality to move their firms, services, and products forward.

The fundamental activities described here have the potential to be radically shifted as people and companies return to the workplace and prepare for potential future interruptions. Evaluating how effective these activities have taken place thus far during the stay-at-home orders and predicting how they will evolve moving forward are key steps to not just surviving the world's current predicament but using it as leverage to innovate, improve, and make work and our lives better.

Our research into workplace revealed that there are six fundamental activities and spaces within an office. These activities reflect different work modes and emerging ideas on office compression and horizontal hierarchy. The product of our work with the *Open Source Office* and a host of external collaborators, these six modes are regularly combined into clusters of intermixed individual and collaborative spaces for spontaneous discussion and innovation. Space allocation of the six work modes differs between work industries. The constantly adapting human condition plays a large role in planning a successful, collaborative office space that supports individual and organizational vitality.

The six core modes each support employees in different ways: they are spaces to **focus, meet, nourish, grow, nurture, and research**. Each mode can be tied to spatial organizations, adjacencies, and furniture selection. Different companies require different variations on the work modes to tailor to their own needs. Further, within each model, we integrate powerful connections to landscape and community.

This thinking results in spaces that are unexpected and inspiring. These are workplaces that support organizational needs while activating the engagement of its workforce. Our designs enhance workplace culture to deliver creative and human-centered solutions.



## Focus

An opportunity for an individual to pause and reflect on their work – or ignore it momentarily. Spaces that calm, inspire, recharge.

## Research

Opportunity to experiment, to test and develop new ideas. Spaces to innovate.

## Grow

Areas to train and learn, workshop areas to gain knowledge or expand potential. Spaces for focused learning or knowledge-sharing.

## Nurture

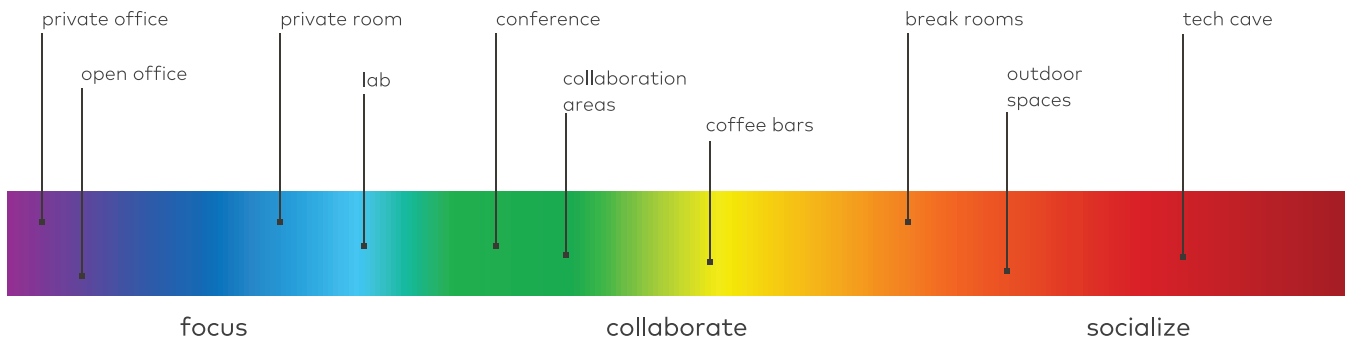
A welcoming place for family and visitors, a place where people can intuitively take the pulse of a company. These are spaces to chat, converse, interact, relax, play, be healthy.

## Meet

Places where individuals have purposeful interaction amongst a group of colleagues addressing a defined topic.

## Nourish

Communal areas to gather, refocus, connect. Areas that foster physical health and well-being through nutrition and connecting with others. Spaces that re-energize and are healthy.



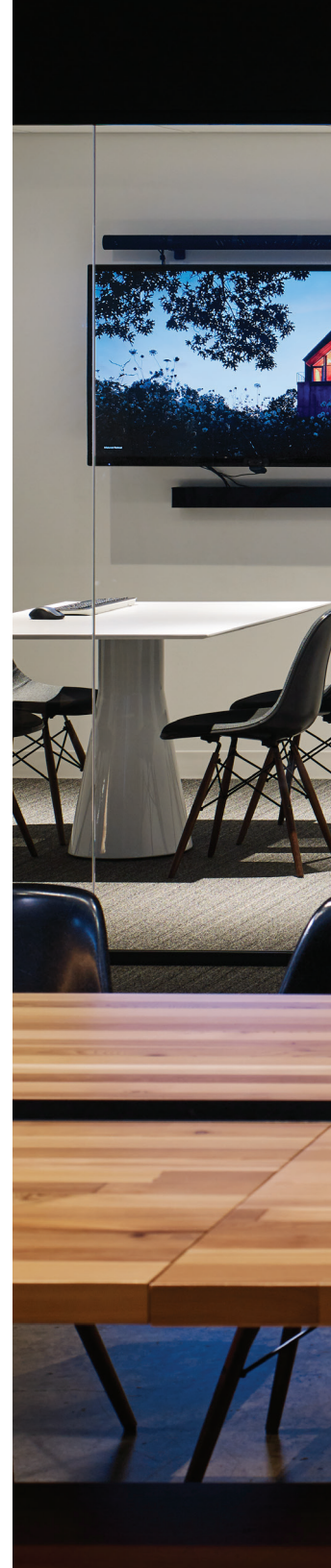
# DESIGN OF RESILIENCY adaptability

## Adaptable spaces for well-being, safety, and choice.

**Physical Arrangement.** As we make the transition back into our workspace, it is important to consider how these spaces bring value to our daily productivity. Our workplaces are not only a physical space for us to gather to do our work; they are places that build better professional relationships and support collaboration.

**Engagement.** As staff return to these environments, it is important for them to feel engaged and have their opinions valued. Engaging employees with changes to their physical work environments is the first step in a successful transition back to the workplace.

**Well-Being.** The focus of our future spaces will be well-being with an emphasis on safety and choice. Well-being happens when there is an intersection between our physical, cognitive, and emotional health. Eliminating physical risk of exposure will minimize fear, increase confidence, protect healthy, and improve productivity.









# DESIGN FOR RESILIENCY systems

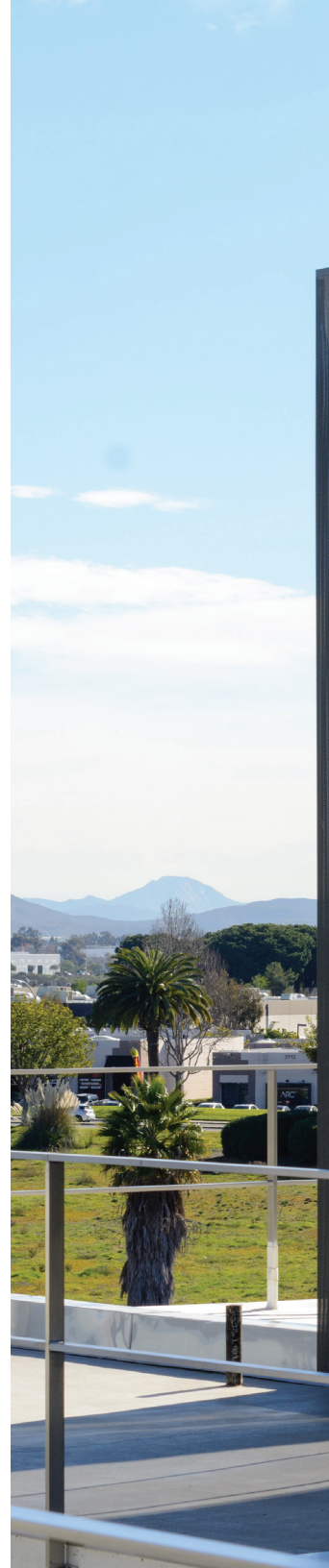
## Recalibrating systems for health and wellness.

Building systems - air, water, power, security, and more - are a critical link in developing health-focused strategies, impacting both existing and new construction.

**Active building comfort systems** can be tuned to zone, stratify, and filter airborne contaminants while providing improved occupant comfort. Most of the solutions are existing technologies that we have used in our buildings primarily to improve occupant comfort and energy-efficiency for decades.

**Air quality measurement systems** can display and alert users when particulate and contaminants in the air have reached unsafe levels, and can be tied into central building monitoring systems to control the amount of fresh air in most HVAC systems. Linking smart building components can develop increasingly intelligent buildings that can automatically balance air quality, energy, and comfort.

**Operable systems and building components** can be used to improve occupant choice in how to use the space and control individual comfort by giving ready access to fresh air, controlling air speed, and temperature.



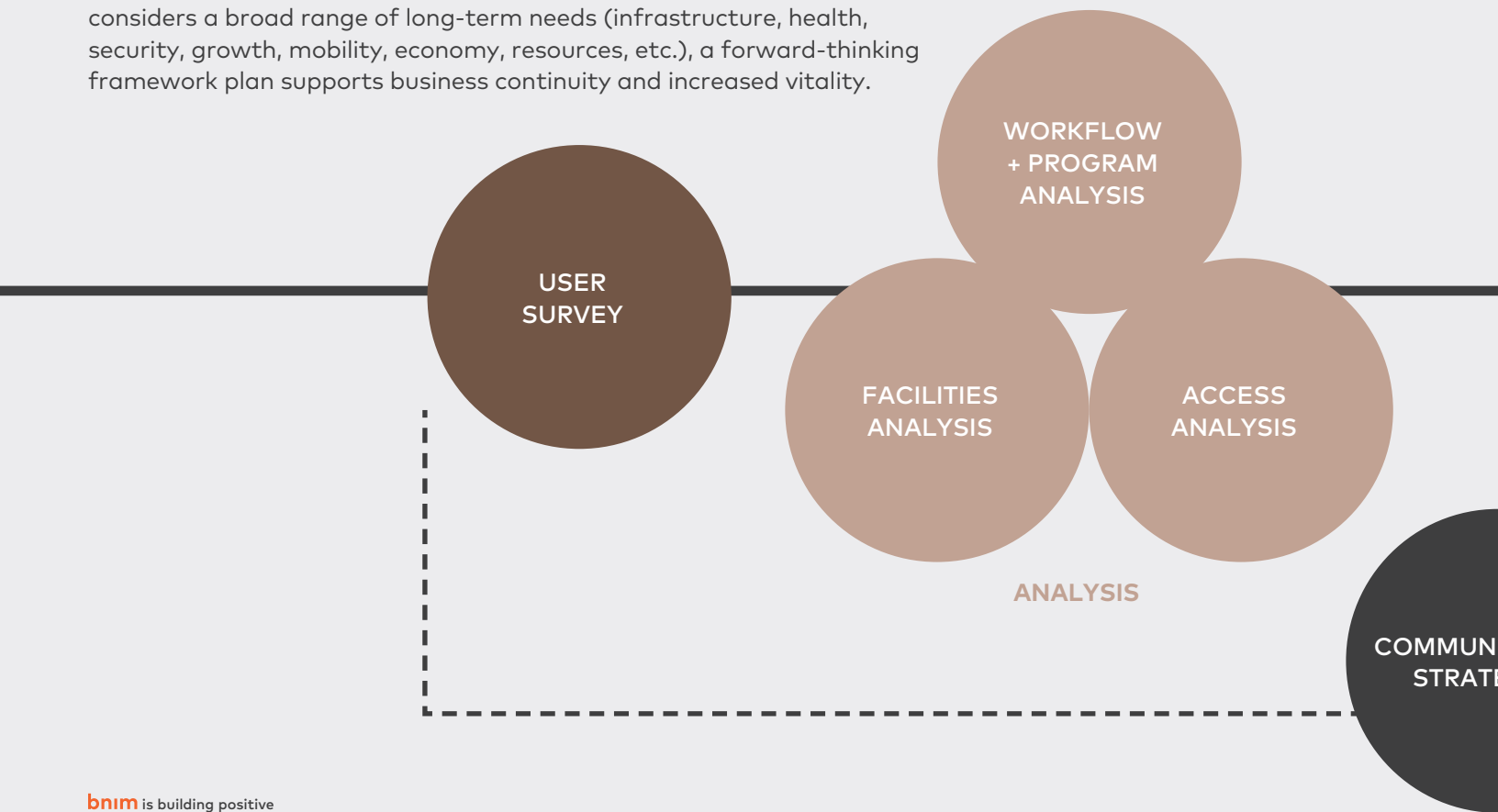




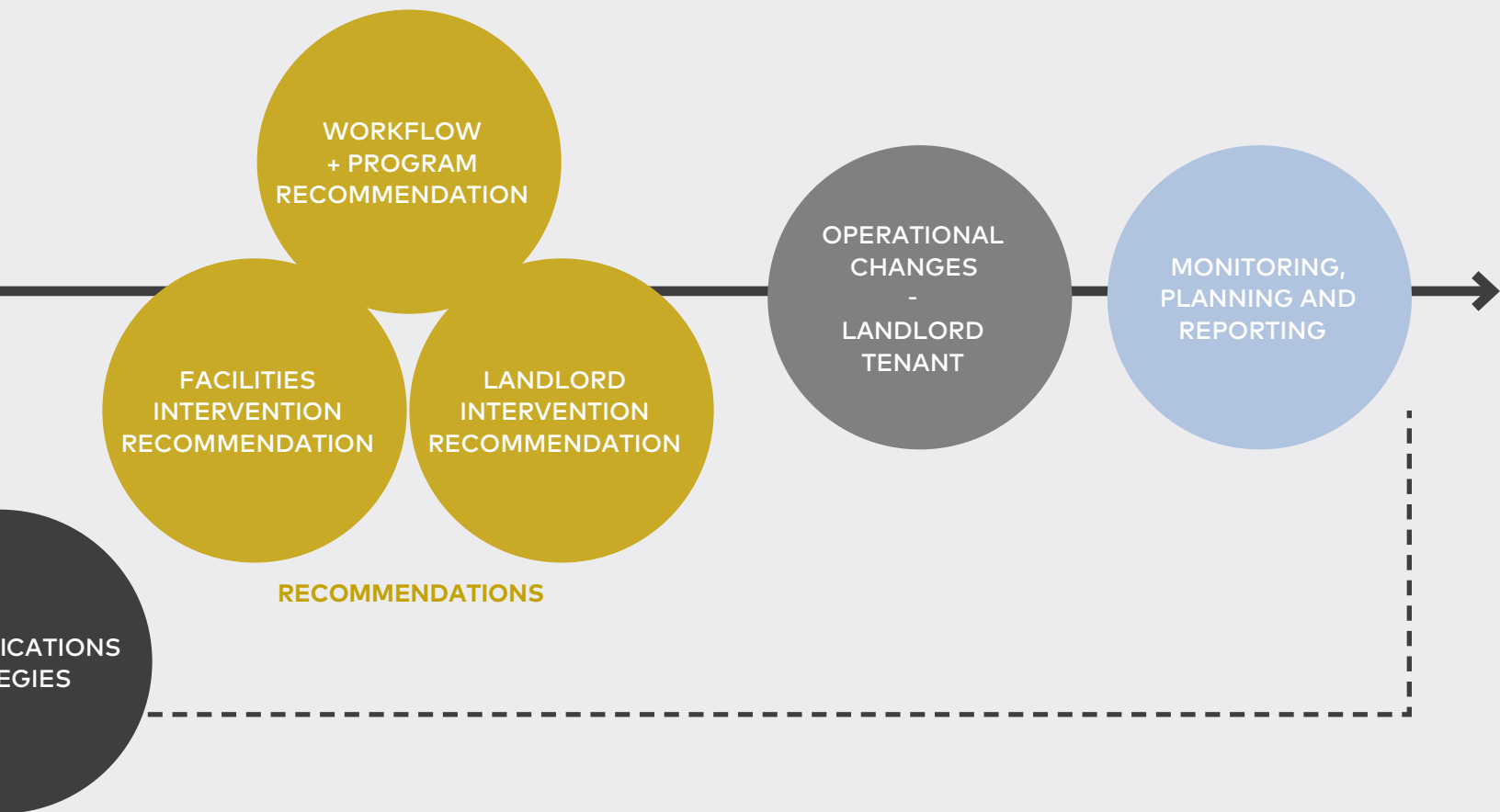
# FUTURE FLOW re-imagining return to a resilient normal

## Immediate - Near - Future Resiliency

We can withstand adversity best by creating a strong and resilient framework. Having spent two decades at the table with disaster-impacted communities, we at BNIM have begun to investigate ways to better prepare our clients to be more resilient, to evolve and thrive in healthy, progressive ways that prepare organizations and their people ahead of disaster or stress. We know the impact of building good frameworks. When used as a vehicle for smart, strategic planning that considers a broad range of long-term needs (infrastructure, health, security, growth, mobility, economy, resources, etc.), a forward-thinking framework plan supports business continuity and increased vitality.







# IMMEDIATE AND NEAR TERM recommendations

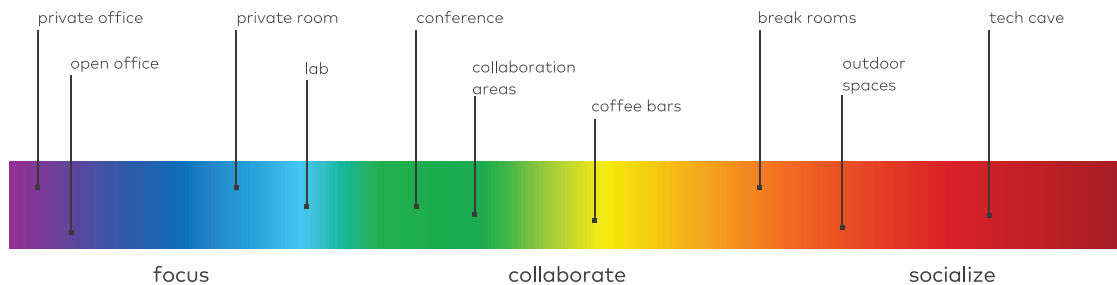
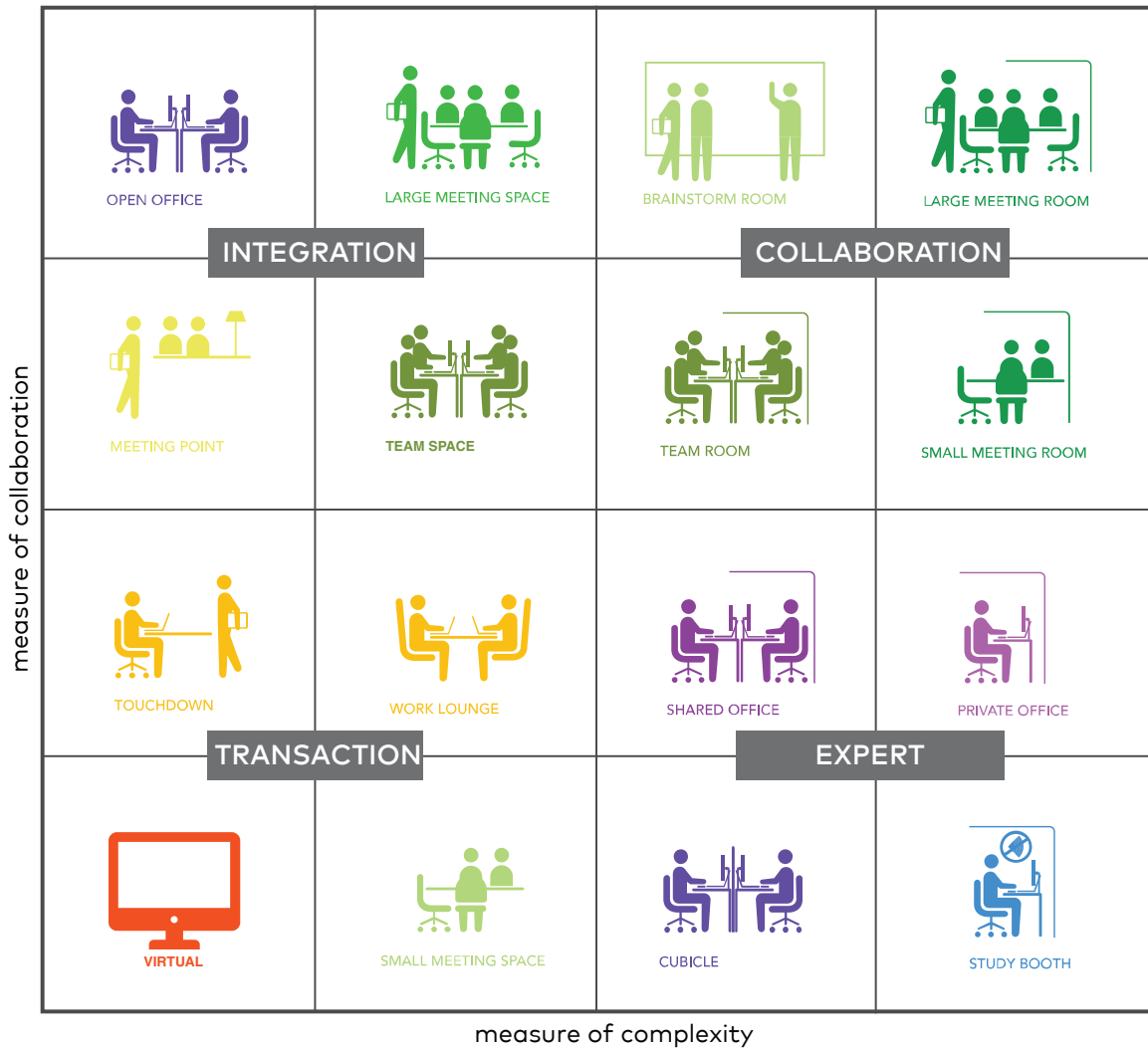
## Considerations for minor modifications.

**Density.** Today's open office workplace density is not designed to mitigate the spread of disease. Re-evaluating the physical arrangement of staff and their work areas is a key initial step in planning this transition. Physical distancing can be accomplished removing chairs and lowering occupancy with enclosed spaces. Protocols can be put in place to limit the number of people and groups of people who may occupy an enclosed space by evaluating the specific size and configurations of the existing environments. For meetings that do not require maximum privacy, the introduction of standing meetings at open areas and designated project teams open collaboration areas are options. This minimizes cross-contamination within shared collaboration spaces. Staggered work times and prioritizing the least mobile users will be considered.

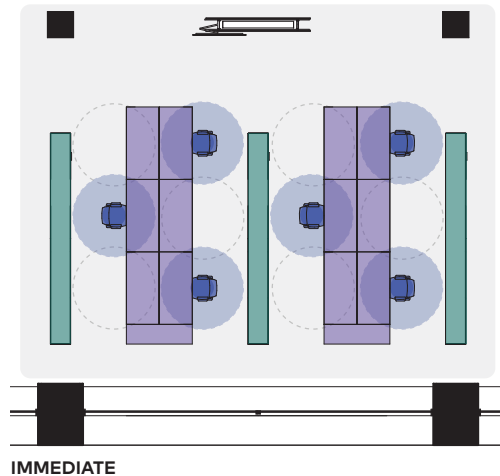
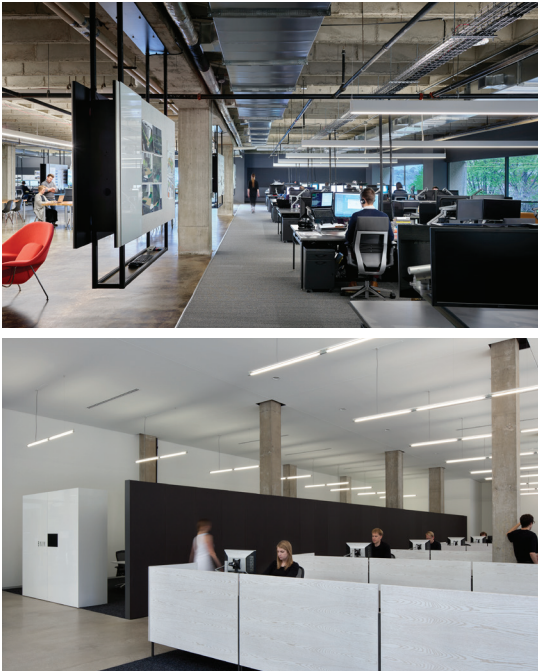
**Circulation.** It is important to maintain separation from the open office environment of workstations to passersby. Implementation of one-way routes through open office spaces helps avoid contact with individuals at workstations. The entry sequences into our spaces must also be considered. Using elevators and lifts for vertical circulation will be effected and likely create congestion at our lobbies due to queueing. Staff will be encouraged to use stairs that are marked for one-way up and one-way down designations.

**Surfaces.** Door handles, faucets, keyboards, and other peripheral devices - all are traditionally high-touch surfaces. Design adaptations and introduction of touchless technology will provide more protection. General solutions can be considered; in many cases, thoughtful re-design will address devices, materials, and protocols for cleaning.

## Our work dynamic



## Workspace

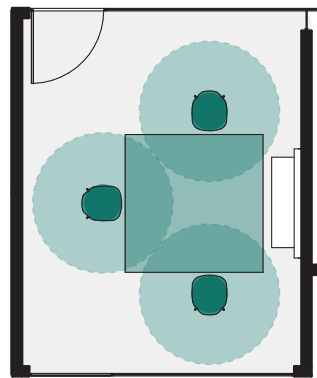


NEAR

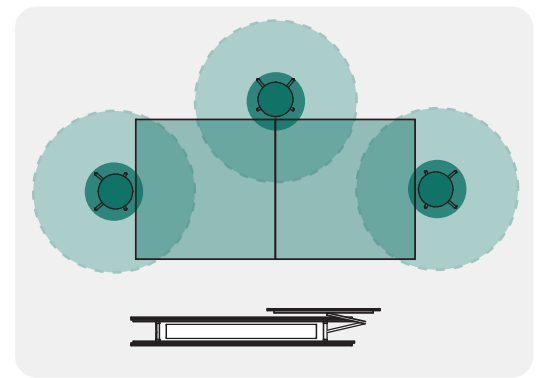
Initially, shift working or the retrofitting of existing unassigned workspace to assigned may be required to meet the needs and capacity for staff's return to work. Clearly defined workspaces that maintain a minimum of 6-foot separation between staff allow for employees to maintain a safe distance and allow for facilities to plan their cleaning schedules. Being transparent with staff regarding time and frequency of cleaning schedules is important, by posting the schedule within public zones. Implementing enhanced cleaning protocols for staff, requiring a clean-desk policy at the end of each work shift, and other protocol will allow for cleaning staff to have increased access to work surfaces and leave a healthy environment



## Meeting Spaces



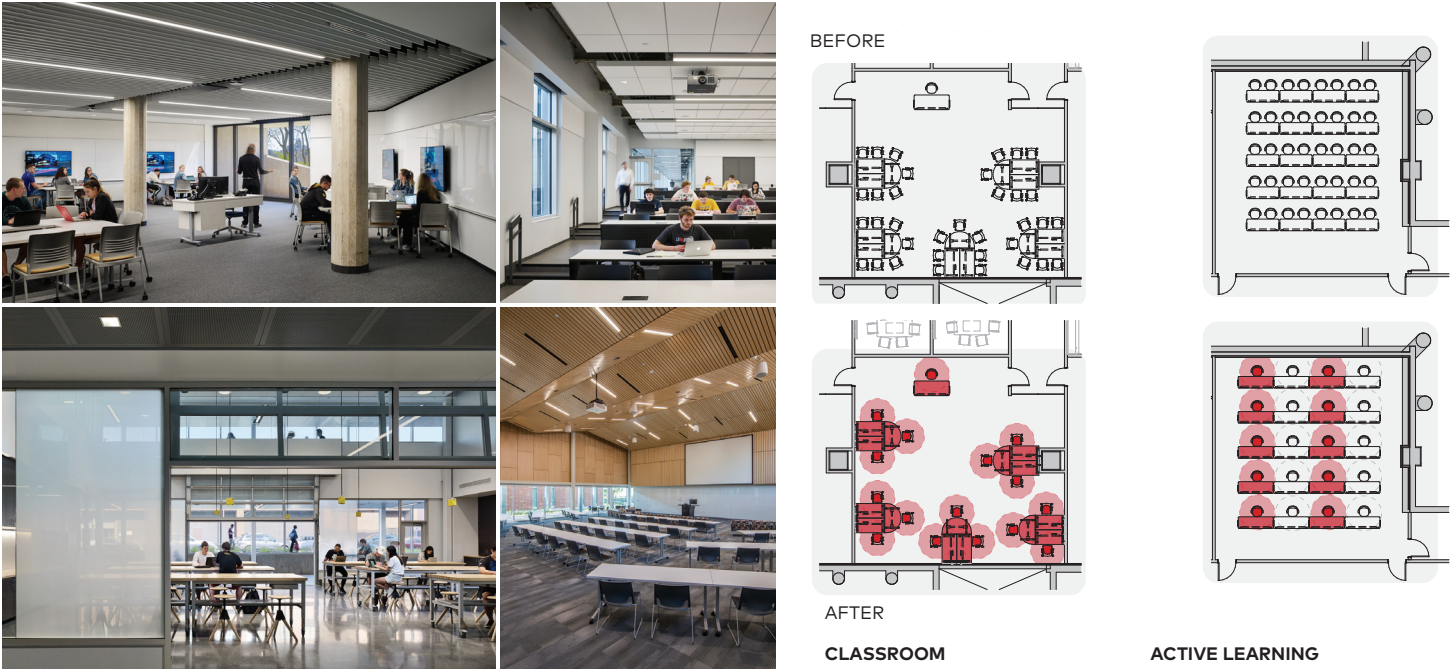
**ENCLOSED  
COLLABORATION**



**OPEN COLLABORATION**

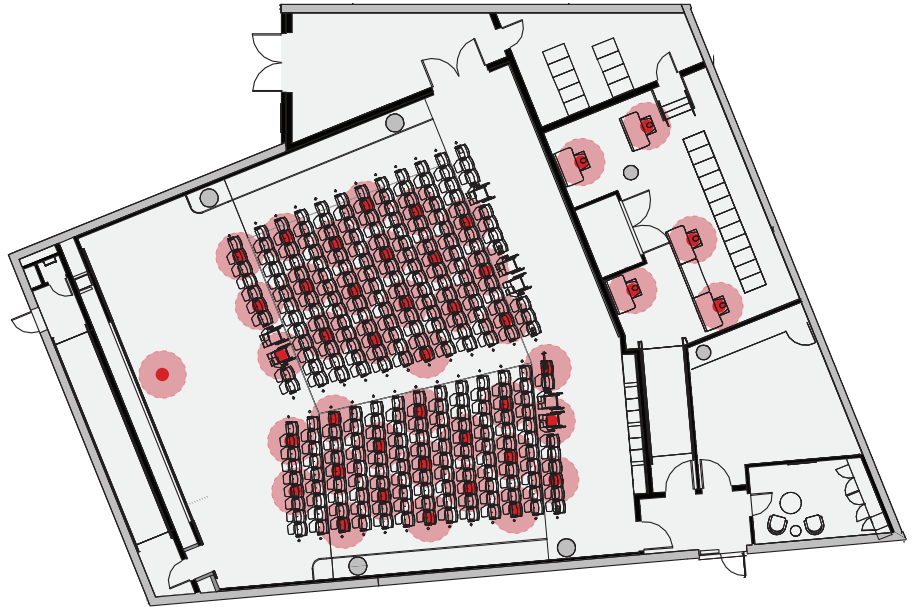
Create an inclusive space for collaboration. With travel being minimized, global teams will need new ways to connect. Introduce more large scale, integrated collaboration tools through the office to allow for clients and team members to be included while in-person or virtual. Video conferencing tools that allow good visibility of facial expressions and body language allows you to read the room, encourages all meeting attendees to be more present for virtual meetings and causes less interruption or speaking over one another. Consider introducing standing meetings at open areas which encourage meetings to be brief and assigning designated project teams to open collaboration areas can limit the number of people sharing digital tools.

## Learning Spaces



As we transition our education facilities back into operation, creating a future-proof campus by focusing on flexibility and resilience is key. The new classroom will need to serve learning both in person and virtually simultaneously. Under-utilized space should be evaluated to be retooled into new flexible learning spaces. The number of students may be reduced in the classroom, so additional learning spaces may be needed in order to maintain physical distance. Finding ways to incorporate virtual communities for students and teachers to connect gives students the support they need while also improving their mental well-being in a more virtual world. More than ever, technology will play a key role in the flexibility of the learning and communal experience for students. As new touchless features are integrated more and more into our daily environments, schools can use this as an opportunity to beta test new technology and tools that will drive the institution's innovation in education into the future.

## Assembly Spaces



While large gatherings will be limited during the transition back into our public realm. These spaces can be repurposed into additional learning space. The size allows for occupants to distance themselves more freely. Many of these space are already equipped with state of the art media and technology; consider using these spaces for improved remote virtual learning environments during this transition.

## Signage

Buildings are being adapted in new ways to respond to the global pandemic. This means that a new instructional overlay can help identify, orient and instruct all users on how to enter, occupy, move around and exit spaces both within and outside buildings.

Four key types of signage are important to adapt spaces.

1. **Directional Signs** - Entry processions and protocols are important for a safe transition into a building. Once inside the building movement into work or learning spaces, common resource spaces like breakrooms and essential spaces like restrooms, now need to be more instructive.
2. **Identifier Signs** - Occupancy of rooms is now limited by physical distancing to prevent spread of the virus. Adapting rooms to these new conditions through signs that identify new rules of engagement are essential.
3. **Informational Signs** - How to use or behave in a space even if understood inherently by the public is important to clarify based on the organization's rules and regulations.
4. **Physical Distance Indicators** - These are helpful to provide a sense of scale and distance when in a communal space.

Here are some examples.



EMPLOYEES ONLY



work zone



occupy with  
masks on only



maintain  
6' distance



Directional +  
Informational Signage

EMPLOYEE OR  
VISITOR KIOSK



Stop at the line  
keep 6' distance



wait to have your  
temperature  
taken, then  
proceed to the  
entry door



Identifier +  
Informational Signage



enter one  
person at a  
time



wear a mask



wash your hands



Informational  
Signage

maintain  
6' distance



leave  
unoccupied



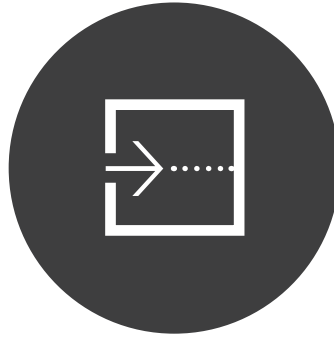
Physical Distance  
Indicator

# IMMEDIATE AND NEAR checklist



## Communication and Tracking

- Staff
- Visitors / Customers / Clients
- Students / Faculty



## Guidance on Entry Procession

### Doors

reduced touch solutions,  
sensors, walk-off mats

### Vestibules

visitor control, ventilation,  
health screening, cleaning  
stations, tracking

### Elevators

air filtration, occupancy, voice  
activation, antimicrobial  
materials

### Stairs

clarity on circulation flow (up  
and down), ventilation



## Workspace/Classroom Configuration

- Limit exposure to droplet spread
- Spacing
- Orientation
- Dedicated space
- Common space guidelines
- Screening
- Sanitizing stations
- Procedures and protocols
- Access / circulation
- Signage for reminders



### Work/Meeting/Eating Surfaces

- Sustainable and anti-microbial
- Cleanability
- No-touch operation of doors, lighting, security, AV, and other touch devices



### Air Quality

- HVAC
- Load reduction
- Spot filters
- Air stratification
- Active monitors
- Plants
- Seasonal strategies
- Best practices





# FUTURE FLOW continuity + resiliency

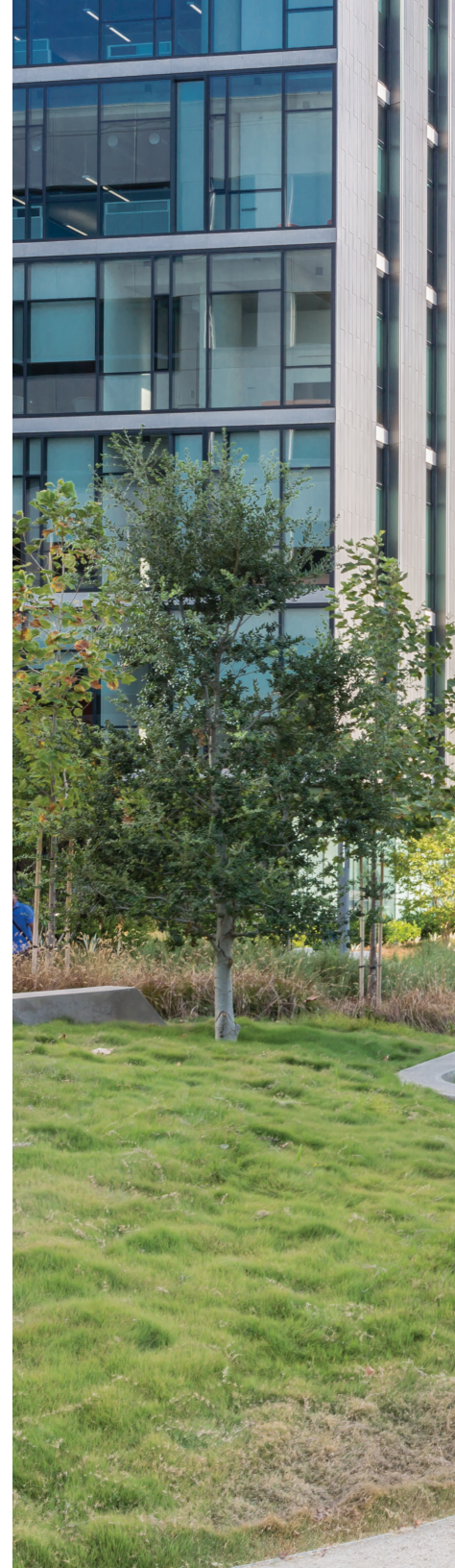
Arundhati Roy recently suggested that the "pandemic is a portal." Many rallied around this idea because of the clarity it brings to our current state ... and the hope it embodies for our future. It posits that there is potential for a better world on the other side of the pandemic - better workplaces and schools, better gathering places, better communities and cities.

Because we are now all living within the "portal" and already disrupted, it is our best opportunity to re-orient ourselves to a new future and leave the old baggage behind. It is the time to say good-bye to poor air quality inside and out; to high-consumption transportation and industry that inflates our global greenhouse gas emissions; and to buildings that are inefficient poor vessels for humans and dangerous neighbors to the environment.

It is also about building back an economy that is centered on a resilient future. How do we improve our food distribution, our travel, our buildings, and the goods we purchase?

Designs for the near and immediate term may feel awkward and different at first, but in this time of expedited evolution, our efforts are experiments for how we can design ourselves into our better future together. Each effort should be thoughtfully considered and focused on continuity of health and welfare, elimination of the destructive, and resiliency and adaptability for the future.

We look forward to leaning in with you and designing this new future flow for all.









# FUTURE FLOW team



Laura Lesniewski, AIA



Danielle Buttacavoli, AIA



Jeremy Knoll, AIA



James Pfeiffer, AIA



Kevin Nordmeyer, AIA



Craig Scranton, AIA

Contact the team at [futureflow@bnim.com](mailto:futureflow@bnim.com)





Ashley Perrin



Greg Sheldon, FAIA



**bnim** is building positive

2460 PERSHING RD  
SUITE 100  
KANSAS CITY  
MO 64108

816 783 1500

[bnim.com](http://bnim.com)

317 6TH AVE  
SUITE 100  
DES MOINES  
IA 50309

515 974 6462

797 J ST

SAN DIEGO  
CA 92101

619 795 9920

**bnim** is building positive