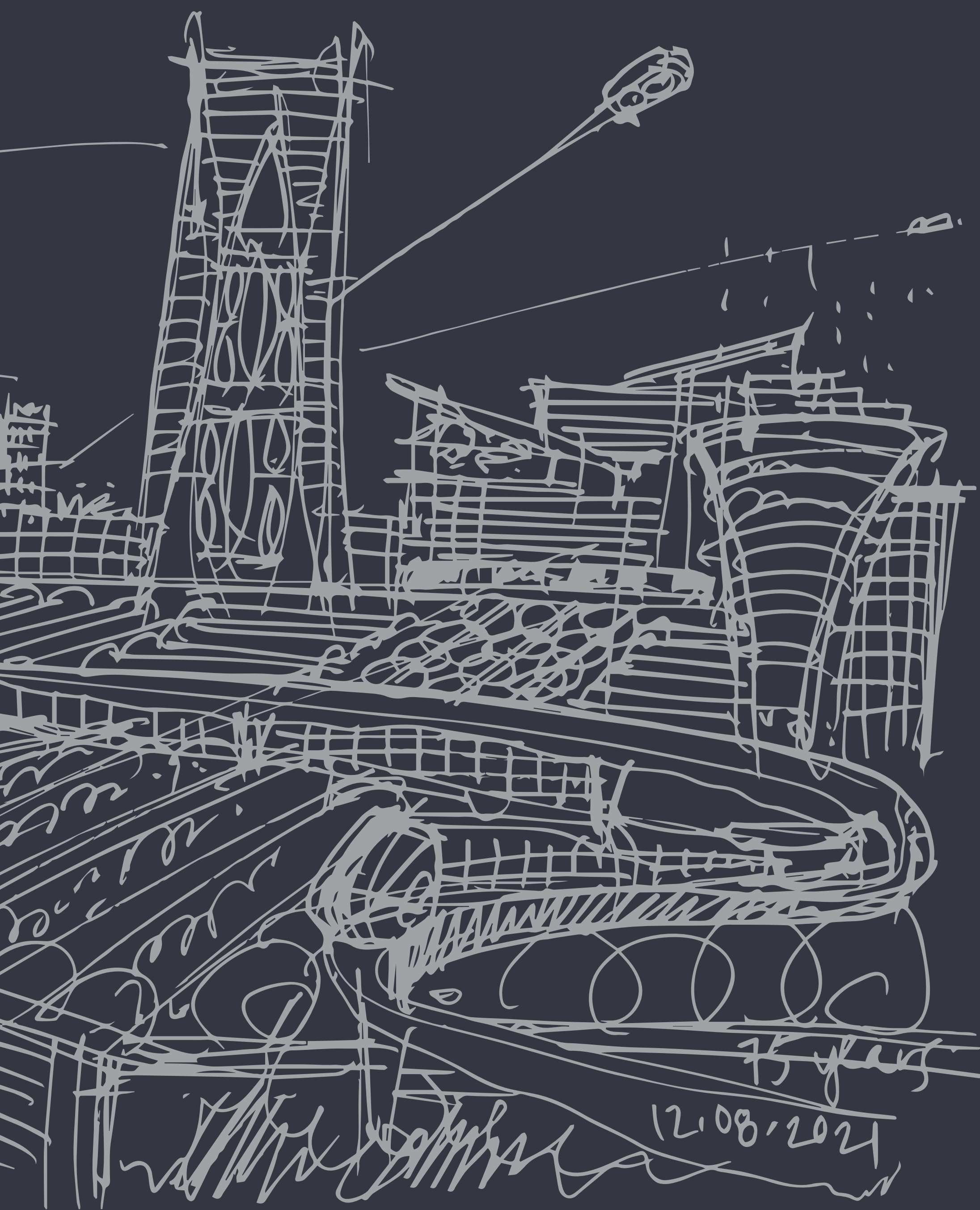
2022 FORECAST

Defining the design strategies that will shape the built environment in the year to come.



CRTKL

FOREWORD

2021, had moments of hope and tumult—from recovery, persisting pandemic, and political fracturing across the globe—it tested our collective resiliency. As the adage goes, change is the only constant, and the rapid pace at which we are shifting—forcing communities, governments, our clients and our industry to adapt—is providing ripe fodder for positive disruption across the built environment.

From climate crisis, urbanization, and digitalization to social responsibility, these significant forces are driving the need for sustainable, responsible, and smart solutions across market sectors. In response, this year marked notable financial metrics for ESG agendas of governments and businesses, spurring investments accordingly. The past two years have also fundamentally changed the nature of work. The Great Resignation is real, and firms feel the impact of post-pandemic work life.

In our second annual forecast, we continue to build on the inaugural edition, identifying market-specific themes and indicators in response to macro-trends. Fuelled by rigorous research and thought leadership from our market experts, we carefully curated viewpoints from the individual, like customer behaviours to urban implications occurring at the city scale. By leveraging a cross-section of our industry experts and a rigorous research-informed approach, we examine what is of critical importance to the built environment across hospitality, workplace, mixed-use, retail, urban design, healthcare, and residential sectors.

CRTKL is a steward of positive design for the benefit of people and the planet. As such, we focus our lens on sustainability, well-being, social responsibility and enhancing connectivity—designing lasting communities that allow people to thrive.

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PLANNING AND URBAN DESIGN

WITH BEHAVIOURAL CHANGE COMES URBAN SHIFT – WHERE WILL THIS PLAY OUT IN 2022?

While some may have adjusted to the seismic changes brought on by a health pandemic, the resulting financial strains and an ongoing climate disaster, our cities are still playing catch up to the altered lifestyles and expectations a new normal is placing on them.

Demographics are rapidly shifting to households with far fewer children and aging adults who are seeking to live in more compact, amenitized urban places—a change that has been occurring for decades and is not likely to change in a generation. Conversely, the loss of offices in urban cores—unlike in decades past—does not represent a flee to the suburban market. Instead, it presents a catalyst for the re-purposing of outmoded spaces into housing for a range of incomes and for the creation of more compact, critical mass in these cores to better support dining, shopping, culture, leisure, entertainment and upward economic mobility for the individual and the collective.

We are morphing into a period where uses and industries are being simplified and repositioned, and where the versatility and flexibility of building typologies will be a key component. Successful towns and cities will be developed through community dialogue that involves voices from all segments of the population—especially the under-represented. Engagement is shifting from outreach into a trusted partnership. The community is the expert; the role of the urban planner must involve convening, translating and learning from all stakeholder groups in a community in order to support and translate those needs for a more flexible and resilient future.

Humans prefer to be around other humans, and a compact city with mobility choices and rich amenities will serve to attract people for social and economic opportunities and success. This has been true of cities for thousands of years and will hold true for many more. The role of a city will continue to provide opportunities for those seeking connection, diversity, inclusion and upward economic mobility.

Governing bodies need to examine policies that lead to the elimination of bias, inequality and regulation of public spaces. With a new appreciation for community health, happiness, and well-being, necessary interventions to our civic centres and public realms are being brought forward to allow for greater flexibility and efficiency in the advancement of technology as an overlay to physical locations. The key shifts will centre on:

THE CLIMATE

As the most recent natural disasters (wildfires, floods, extreme weather events, earthquakes, etc.) have reminded us, our natural and urban environments are incredibly fragile. To protect communities in harm's way while fostering economic development, guiding future growth, providing new parks, housing, transit, and recreation and restoring natural habitats, a comprehensive approach to mitigate these effects is vital. Studies have shown that ocean levels are expected to continue rising. Cities across the world will experience chronic flooding and many buildings and their occupants will suffer and may become part of the growing number of climate migrants worldwide.

North Hills Innovation District
Raleigh, NC

THE HEAT ISLAND

Meanwhile, global warming will lead to a rapid rise in temperatures. Beyond outlining expectations of how human life may change should greenhouse gas emissions continue to climb, cities must now plan how they will fight the heat waves. More on living sustainably in a warmer world and design responses for extreme climates here.

THE PUBLIC REALM

The need now is for safer, more flexible, inclusive and humane spaces that connect natural and urban environments. Complemented by landscape and water, public seating, level access, shared surfaces, lowered balustrading, windows for wheelchair users, braille signage and tactile surfaces are all just the beginning. Greenery and nature will take centre stage. Urban areas across the world are set to expand to 2.5 billion people by 2050, so it is only through re-establishing contact with the natural world that cities will be able to function and support their populations. Singapore is a live example of a city that is embracing green tech with almost 50% of it designated green - other cities must follow suit. Expect living walls and urban farms housed in skyscrapers that provide food for office workers. Perhaps even our parks will be generating sustainable energy through photosynthesis for nearby buildings. More on how strong public space improvements and high-quality urban design standards can attract and enable private sector development and a 1,420% increase in value here.

THE SUBURB

Having tripled in the past five years, the domestic migration into suburban metros has led to an increased demand for mobility, access, housing choices and blended lifestyles in these locations. As these suburban locations begin to urbanize, successful places are learning how to deliver density and amenitize elements previously only associated with inner-city living and offering these within a relatively short walking distance. More on this here.

THE MICRO-MOBILE

With more active populations and more movement, traditional mobility infrastructures are being pushed beyond their limits. We need to get smarter about how we deliver mobility solutions and advocate for a new land-use relationship with mobility. Mobility and land use are intertwined and attempting to optimize one without addressing the other misses the point. How we move through cities and the multiple modes of transport this involves must be considered holistically.

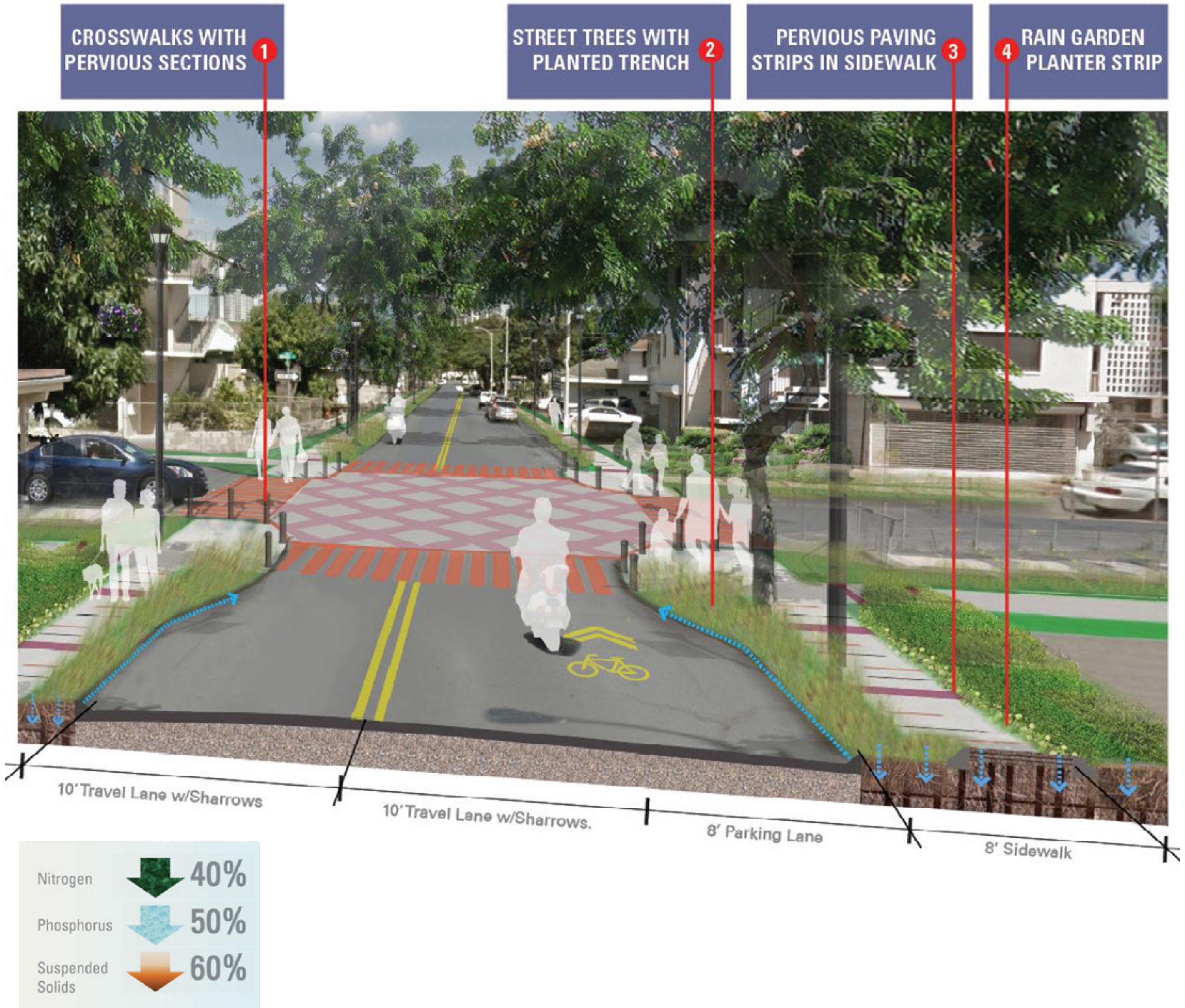
There are two trends worth identifying here. The first is the role of transit and how regional mobility services are being provided. The second is the impact of ride-share, automated and driver-less vehicles and micro-mobility on the right-of-way. With so many modes of mobility all vying for the space between the curbs and the sidewalk, the design and management of mobility modes needs to transform.

More on this in the below sections and [here](#).

[THE MAKING OF THE WORLD'S BUSIEST STATION](#)

THE STREET

In addition to parks and plazas, streetscapes are part of the connective tissue that make up the urban fabric. Streets have been focused on only solving the car's needs for too long. Surface lots, exposed parking garages, excess travel lanes, dedicated turn lanes and traffic signal timing for the efficient movement of cars are all counter to a safe and attractive environment for vibrant pedestrian activity. One key is the introduction of green infrastructure along multi-modal streets. Another is curbside management. With a slight reconfiguration, these spaces can become more equitable and flexible infrastructure can be introduced to accommodate rapidly changing needs, technology and temporary emergencies.



THE STATION

Aligned to shifting working patterns and the dispersal of a traditional five-day-a-week and its 8am–6pm commuter peaks, there is a huge opportunity to reconsider the way our fixed-guide-way stations (both rail and bus) and the land around them function. The adoption of transit-oriented design, which seeks to maximize the mix of residential, business, and leisure space within short walking distance of public transport will be vital and help build more equitable societies.

In future, the station may become a place to visit not transit through. Combining transit and creative industry, the station transforms into a people-friendly place, a centre of activity, and an integrated mobility hub. More on this [here](#).

PARKING GARAGE/THE CAR-PARK

In 1970, Joni Mitchell's hit 'Big Yellow Taxi' proclaimed, "they paved paradise and put up a parking lot." Perhaps it's time we revisited these underutilized spaces. During challenging times, custodians of the built environment must consider all options and solutions to help get the economy moving again and bring energy back to our towns and cities. Parking garages may hold the key. In addition to the opportunity to leverage reduced demand for these space on increased district-level density, there is a significant opportunity to redevelop these spaces into mixed-use hubs that blend housing with retail and cultural spaces. This aligns with the wider sustainability drive to reduce car usage and dovetails with the 15-minute city concept. More on this here.

THE SINGLE-USE ASSET

Single-use assets including shopping malls and office parks will need to reposition, reuse and redevelop to maintain their relevance and grow their economic value. Mixed and blended uses expand the number of potential owners, tenants and residents, and infuse these places with vibrancy well beyond their current hours of operation. However, not all of these will be successful. The sheer volume of the current inventory and rapid adoption of digitization will render many of these sites impractical for walkable, urban redevelopment that allows sites to maintain and grow their value. For some, the loss in land value will be so great and their poor location in the market will render it impossible to justify the costs of whole scale redevelopment for perhaps a generation at least. What do we do in the interim to maintain economic viability and improve environmental performance? More on this here.

THE UNIVERSAL BUILDING

If flexibility is the key to future resiliency, imagine what a 'Universal Building' that can easily change uses over time would mean. Negating the need for redevelopment and addressing the issue of embodied carbon, this concept is well-timed with the rethinking of historical city 'zoning'. This holistic, mixed-use approach to urban design can also mitigate the risk of single-assets and build within them the ability to shape shift from homes, offices, retail, and leisure spaces as current needs dictate. More on this here.

THE WORKPLACE & THE URBAN CORE

As work shifts from in-person to online and physical office space becomes secondary to streamlined workflows, greater emphasis must be placed on diversifying the urban core and supplementing what was a Central Business District with more civic and public functions. We must prioritize the health and well-being of workers. With people put before profit, the office will become an experience designed to attract and retain talent -- speaking more to the individual than a brand. More on this here.

THE HOME

Cities across the globe will continue to grapple with inadequate housing inventories to meet their ever- diversifying needs. Not only are new models of mixed-income buildings and neighbourhoods needed, a more robust financing tool-kit to deliver the sheer number of units is also required. More on this here.

THE HOTEL

The hospitality industry, much like shopping and entertainment, will need to adapt its business model and focus on providing a more localized experience geared toward domestic tourism. Hybrid models that blend the hotel and home experience, such as the 'apart-hotel' will unlock a new market for branded residences and long-stay typologies. More on this here.

THE HOSPITAL

Healthcare providers will look towards community-based healthcare clinics and telehealth centres. The focus will continue to shift towards prevention instead of treatment; on creating healthy communities that in turn create healthy people. This reflects a growing awareness that multiple physical health conditions connect with sedentary ways of living and mental health and social engagement are intrinsically related. Walkable environments that are welcoming, spur social interaction and encourage a better quality of life and wellness should be the minimum. In addition, the hospital as a campus will continue to adapt to a more adaptively mixed-use environment with mixed-income housing providing places for their workforce to reside in close proximity. More on this here.

THE STORE

The store purpose is becoming divided. There is the store-front as an experience portal, the store as the conduit between retailer and receiver – the key to last mile delivery and the store as the pop-up. The expansion of bricks-and-mortar retail into logistics, fulfilment, F&B, micro-retail and public realm activation is becoming as complex as it is lucrative. More on this here.

THE LOGISTIC CORRIDOR

Online shopping is changing more than just retail -- it is transforming urban form. Thoroughfares connecting airports and ports to the urban core are transforming into logistics corridors. When warehousing and storage are closely linked to transit networks they can function at their best – as a single system that can be optimized. More on new models of production and the reintegration of manufacturing into cities and mixed-use development on page 38 of this ***Microgrants Journal***.

As such, airports and seaports are no longer simply peripheral land uses—they are vibrant centres of activity that provide key economic and creative energy. This is attracting businesses, which are clustering around them in a bid to compete and collaborate. More on how a terminal can become an epicentre for urban life here.

Guadalajara Airport
Guadalajara, Mexico

Boxyard Research Triangle Park
Tulsa, OK

THE METAVERSE

How we move between experiences, spaces and realms, in this context, is not yet defined. However, today's digital shift continues to be a paradigmatic change for both cities and the practice of planning, landscape architecture and urban design. It influences the way cities and public spaces are conceived in two main ways: first through the rise of data-based decision making, management or design; and second through the extensive and rapid deployment of digital infrastructures in the environment. More on this [here].

Transforming underutilized BIM assets into an interactive tool within the metaverse will be an industry game changer, dive into what this platform might look like and our Building-Related Information Capsules (B.R.I.C.s) below:

> ***The focus should be on designing and developing urban areas not to solve physical problems but to meet social needs, achieve sustainable goals, and expand economic opportunity.***
>
> **CRAIG LEWIS**
> Principal
> Dallas

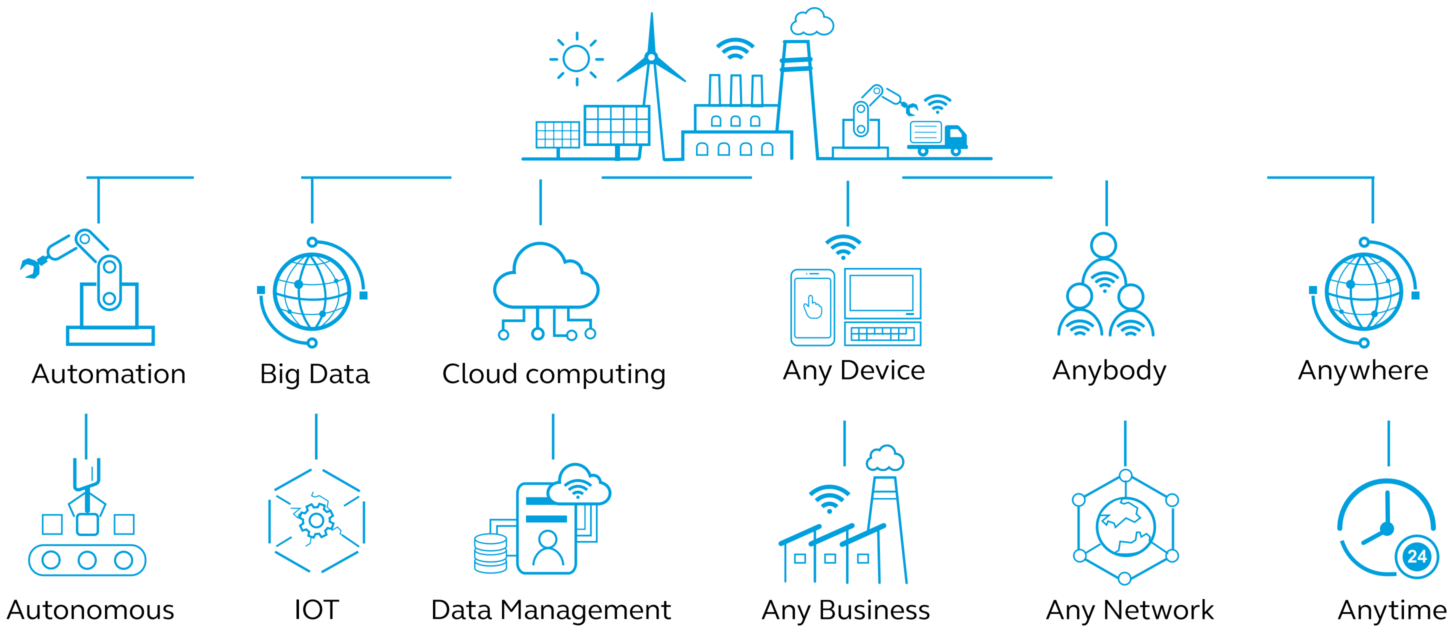
HOW CAN CITIES TAKE ADVANTAGE OF THE DIGITAL EVOLUTION WHILE RESPECTING DATA PRIVACY?

As citizen expectations change and businesses gear up for the Fourth Industrial Revolution, our urban environments must start working smarter not harder. For a city to be ‘smart’ it must integrate digital technology, data, cybersecurity and public-private partnerships – with these factors key to forecasting, monitoring, analysing and optimizing a city’s performance and improving the quality of life for those within it.

Technology has found its way into the public realm. From digital wayfinding, WiFi kiosks, electric vehicle (EV) charging stations, solar-powered trash compactors and to phone chargers. Next, sensors embedded in pavement will manage street lighting and pedestrian signal timing settings. All future buildings and infrastructure will “communicate” with each other to provide more effective energy usage, seamless mobility and an increased user experience. By leveraging this technology, cities can become smarter about their delivery of urban and public services and derive new environmental and economic gains. This will be complemented by automated electric vehicles, wearable tech and drone deliveries that make our lives easier.

Cities will continue to invest in building strategies that make them more resilient to changing weather patterns, fires and rising sea levels. This should be more than simply fortress strategies that double down on existing locations more susceptible to damage. They need to consider low hazard locations that can accommodate the next generation of urbanism and direct growth away from areas of impact. More on this and digital future proofing here.

Centralized power structures will be forgone in favour of district and building-level solutions that harvest energy from wind, solar, geothermal and biomass. Additionally, more affordable and flexible infrastructure such as a ubiquitous connectivity network at a faster speed is critical to powering global commerce and eliminating the digital divide. The Internet of Things (IoT) will not only connect devices, but also people and communities. If connected properly, citizens, enterprises, and local authorities become more agile, and minorities better heard.



There is, however, a social aspect to big data that remains largely unresolved. The intrusive data that smart cities depend on for their smooth running and infrastructure development raises concerns about data privacy, collection, and ownership, which need to be addressed.

A solution may see originated data controlled by an independent entity in charge of balancing the interest of personal privacy, public interest, and innovation. The digital service then sets safe data standards accessible to the community in real-time.

If a healthy city is defined as “one that is continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential,” a smart city could be considered as one with the digital infrastructure that makes this possible.

> ***By applying a digital overlay to the human experience, we create cities smart enough to sustain and heal themselves – places that give back to their people and planet.***
>
> **LILY WEI**
> Principal
> Shanghai

DATA MANAGING AND DATA-DRIVEN DESIGN

DIGITAL INFRASTRUCTURE

WHAT DOES THE NEXT GENERATION OF SPATIAL DESIGN LOOK LIKE?

The lines between the physical and digital world continue blurring every day. Eventually these lines will cease to exist and instead people, devices and environments will be seamlessly connected throughout space.

While our relationship with the built environment is generally understood, the digital world is growing exponentially and changing our sense of place. Gaming engines bridge the two environments and allow us to create a prototyping platform for the next generation of spatial design.

User experiences become more unique with data is simultaneously generated from the digital interactions.

By overlaying physical spaces with digitally designed elements, static spaces become interactive and participatory. Different perspectives and dimensions of the built environment are unlocked. Offering exponential choice, the user experiences is entirely customizable with each digital interaction simultaneously generating actionable consumer and community insights.

When the limitations of our current physical reality are removed, broader creative thinking can take place. Here, new ideas can be conceptualized, tested and optimized with vivid simulations able to solve problems that might not have otherwise been identified.

Encouraging humanistic behaviours with digital elements, participants become partners in uncharted virtual territory. The value of this to the AEC industry extends beyond the re-imagining of any one city and opens a new dialogue with the community, where learning and discovery can take place on neutral, virtual ground and the behavioural patterns observed here can inform real world outcomes. More on this here.

> ***The most successful cities – those that withstand crisis, grow sustainability and foster inclusivity – will combine machine learning with design intelligence and the human experience. This is how we advance outcomes in both our built and natural environments and realize the potential of automated systems.***

BILL KWON
Principal
Los Angeles

First Americans Museum Master Plan
Oklahoma City, OK

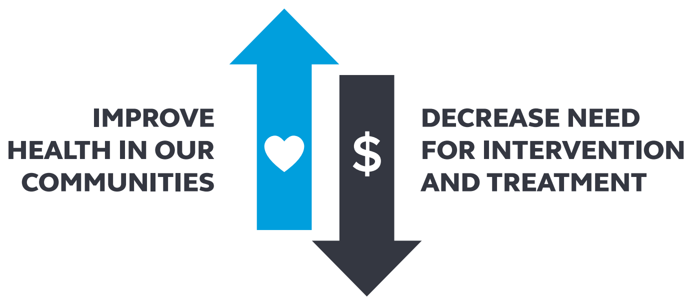
HEALTHCARE

HOW IS THE HEALTH AND WELL-BEING LANDSCAPE CHANGING IN 2022?

Health is multi-dimensional and holistic. It starts with the individual, yet is shaped by the environmental, socio-economic and civic aspects of our communities and cities.

While it is now more broadly understood that the built environment plays a critical role in our physical and mental health and well-being, the trillions spent every year on sick care, pharmaceuticals, medical technologies and biomedical research fail to address the underlying living environments that enable and contribute to such illness.

If we are to effectively address the global crisis of rising chronic disease and unsustainable health costs, this needs to change. We must re-frame the health and wellness landscape and expand our definition of 'care' with resource and investment focused on the places that shape our health outcomes the most – the home, the workplace and the community.



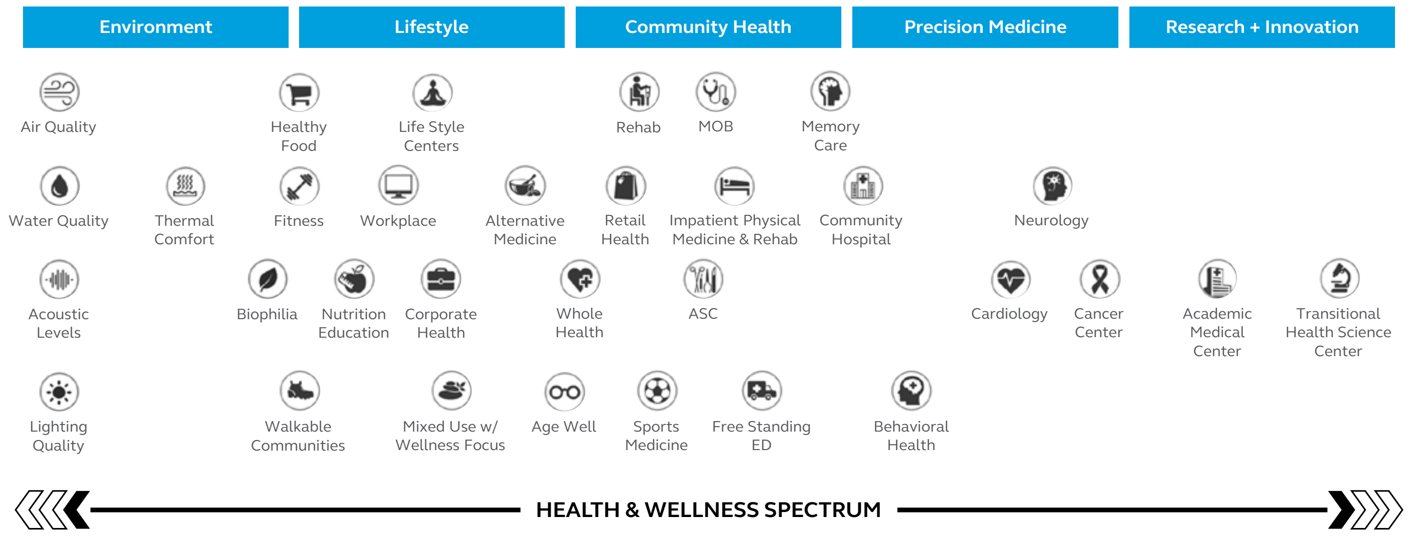
As the Global Wellness Institute (GWI) says, "Buildings and infrastructure are as important as immunizations; pocket parks, paths and plants are as beneficial as prescriptions; friends and neighbours are more important than Fitbits".

This requires the involvement of industries and professions beyond the medical field, those that create and manage our built environment and influence our health behaviours. From real estate investors and sustainability advisors to urban and transport planners, anthropologists, architects and more. Collectively we need to develop an intentional and holistic concept rather than another checklist or certification, which brings positive health benefits and a total well-being experience together to create a healthy and happy lifestyle. More on this here.

At the intersection of health, well-being, and real estate is a profound opportunity for market transformation. More on this and the other urban shifts at play here.

By fostering healthy living through the built environment, we can get ahead of debilitating health problems and decrease the need for expensive treatments. The future of healthcare is not just about care – it's about how health becomes a priority in every aspect of our communities.

JIM HENRY
Principal
Dallas



Stanford Adult Hospital
Stanford, CA

WHAT IS THE FUTURE OF THE WELLNESS ECONOMY AND WELLNESS REAL ESTATE?

Propelled by factors such as the aging population, growing global middle class and ongoing rise of chronic disease, wellness real estate has maintained the highest growth rate in the wellness economy, both before and during the pandemic.

Defined by GWI as "the construction of residential and commercial/institutional properties (including office, hospitality, mixed-use/ multi-family, medical and leisure) that incorporate intentional wellness elements in their design, materials and building, as well as their amenities, services and/or programming", it is predicted to hit US$180 billion by 2022.[1]

The United States and a few key countries in Asia (China, Australia, India) and Europe (UK, Germany) account for three-quarters of this global wellness real estate market. This market represents the future of healthcare and illustrates how the expertise and design strategies of this sector can be applied to the advantage of others.

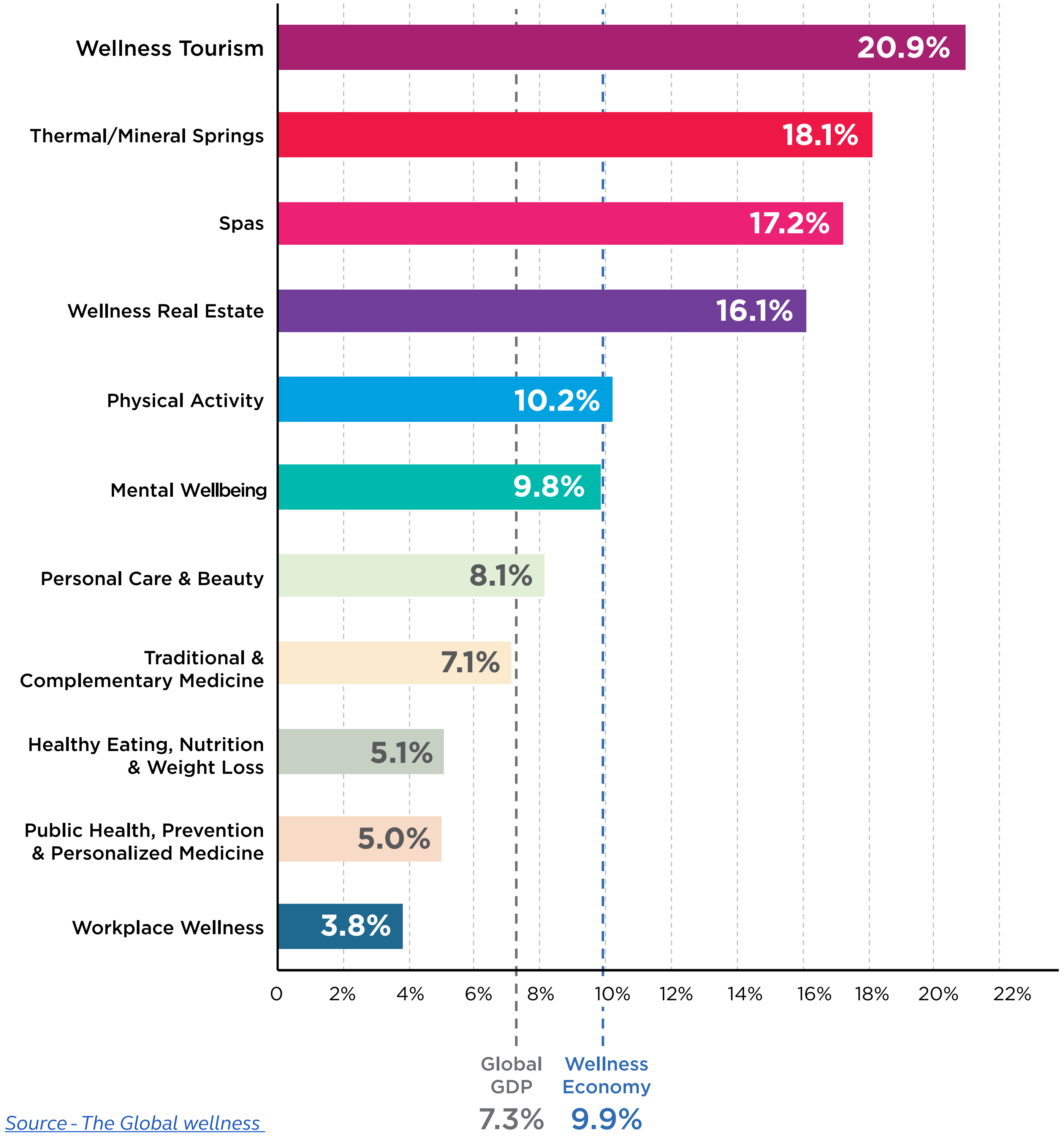
Retail-based healthcare will continue to expand opening new design opportunities for recombinant services. Meanwhile office, residential and senior living amenities will begin to incorporate behavioural healthcare, circadian lighting, in-house practitioners, resident dietitians, disinfecting bots, telehealth pods, and more with data from the buildings and homes further informing health scores and well-being profiles. More on this [here](#).

The move will be away from less traditional, 'institutionalized' settings toward a holistic model that is embedded into the community. More on this and true wellness [here](#).

The aim is to reduce feelings of isolation and promote a more accessible and inclusive level of care locally that can be adjusted for different abilities. This goes beyond accessibility standards and considers how the physical environment can be better designed for neurodiversity, mental illness, and introverts as well as extroverts. More on this [here](#).

> ***People are placing more value on wellness than on material objects. There is a new ethical consciousness around all aspects of our lives – where we live, how we work, what we consume and how much we exercise, socialize and travel. We are more aware of the direct impact our choices have not just on our own health, but that of our neighbours and our planet.***
>
> **BEAU HERR**
> Principal
> Dallas

Projected Average Annual Growth Rate by Sector, 2020-2025



Source - The Global wellness Economy: looking Beyond COVID

1 Global Wellness Institute, December 2021, **The Global Wellness Economy: Looking Beyond COVID Report**.

HOW DO YOU CREATE AN ENVIRONMENT THAT CARES FOR BOTH PATIENTS AND PRACTITIONERS?

It is essential to create easy and open access to care—be that an annual check-up, an outpatient procedure, counselling services or a friendly assessment of lifestyle and daily activity goals.

By expanding access to primary care outside of the traditional medical centre setting (hospitals), an overall population health will increase. If general primary and specialty care is accessible in a neighbourhood setting, somewhere people visit frequently and easily, like a service station or convenience store, it will encourage people to go more often.

This was tested in a recent impact study, where access to primary care was proven to improve community health – specifically life expectancies were increased by 3.2 years, while rates of heart disease, infant mortality, strokes, and chronic lower respiratory disease were all decreased. View the full study here.

A significant step toward value-based care, the aim is to make healthcare more convenient by offering same-day appointments, pharmacy, walk-in diagnostic imaging services, decreased wait times, extended hours and weekend care. This, in turn, allows facilities to increase access to patients and expand new service lines beyond a main campus. More on improving access to community-based telemedicine and its lasting impact on the health of citizens on page 23 of the *Microgrants Research Journal* here.

Additionally, healthcare facilities should be refocused on specific functions. For example, acute care centres should concentrate on assessment, stabilization and treatment, before returning patients to places better suited to healing—like chronic care facilities and birthing centres located within the community that focus on rehabilitation, education and elective treatment. Hospitals can also increase point-of-care clinical

St. Agnes 40 West
Baltimore, MD

Creating an Environment of Care - Design Applications

- Providing healthy food choices, sustainably grown, locally sourced, farm to fork
- Integrating exercise or movement
- Color pallet that evokes balanced emotions
- Sensory design that allows for appropriate stimulation, but also isolation of specific senses for re centering
- Views to nature
- Biophilic design
- Proper acoustics
- Adequate Daylight and appropriate lighting
- Ergonomics, user friendly, comfortable
- Purposeful and honest design, clutter free, natural materials
- Easy to clean, antimicrobial and natural metals
- Clean air and drinking water / promote hydration
- Personal and allows choice

support and improve staff efficiency by having an appropriately sized space. Rather than expand rooms to drive volume, the key is to optimize operations. Controlling non-revenue generating circulation space and the strategic placement of nurses' stations reduces the distance and travel time between departments and beds.

Serving as collaborative communication hubs, command centres in healthcare facilities are also becoming an essential operational ingredient to enhance telemedicine and coordinate disparate clinical and non-clinical activities that are actively interdependent.

Emerging technologies and the use of artificial intelligence (AI) are providing more convenient, personalized care for patients, and could create substantially more value for the industry as a whole—up to US$410 billion per year by 2025.[2]

Meanwhile, new generation robotics and software continue to reshape healthcare facilities and the way people manage their health. Ongoing care plans, clinic appointments, material deliveries to the home and nurse home visits that need to be included and coordinated within the healthcare system can all be managed within the command centre and can relieve the burden on nursing staff. With the realities of the recent health crisis continuing to impact nurses and care teams, technology like this will be critical in filling gaps in resources and informing decision making. More on this here.

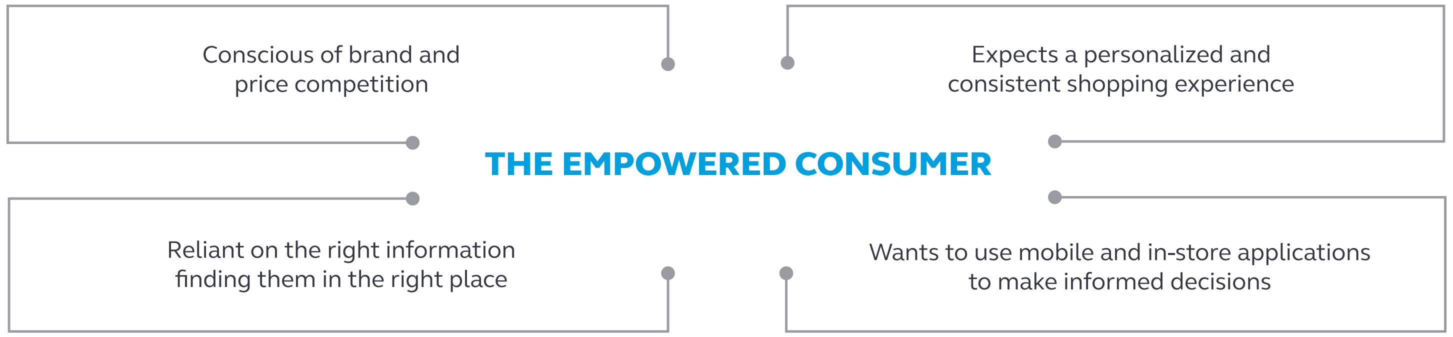
> ***When healthcare is convenient and proximal to daily activities there will be an improvement in the overall health of a community. Healthcare should no longer stand apart — instead, it should quietly permeate the urban fabric of the community and fully commit itself to the well-being of all within it.***
>
> **MARIO SANCHEZ**
> Associate Principal
> Los Angeles

2 https://www.visualcapitalist.com/7-ways-artificial-intelligence-is-improving-healthcare/

MIXED-USE

HOME

HOW DO TRADITIONAL MALLS STAY RELEVANT AND PROFITABLE?



The modern consumer is more likely to be found in their living room, in the gym, in transit, at their desk and any matter of places in between than they are in a conventional mall or shop. Drawing them into these more traditional shopping environments and away from the metaverse is a matter of creating a multi-layered, multi-service and interactive offering that cannot be replicated virtually.

Single-use, destination retail is becoming less and less viable. Blended spaces are becoming the norm as real estate transforms into a service industry that can be more responsive and flexible. More on next generation spatial design and the factors influencing this here.

This means homogeneous malls with generic anchors will not survive. Fixed structures bound by long leases will instead be carved up to make way for more flexible models that incorporate residential, hospitality, workplace, healthcare, education and transit offerings that deliver new, ready-made audiences to retailers. More on this here.

These spaces begin to form a series of interconnected urban rooms, threaded together using both hard and soft landscaping in the form of external courtyards and curated public amenity – The Grove in Abu Dhabi is a prime example.

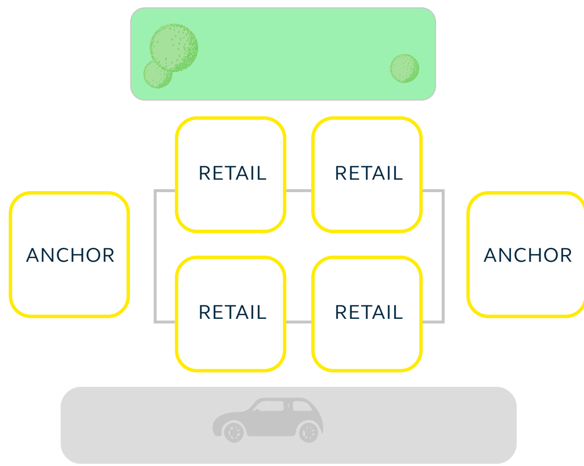

The Grove
Abu Dhabi, UAE

This arrangement also maximizes active frontages on the street periphery as well as throughout the interior, with new modular pop-up concepts such as the Sidewalk POD transforming underutilized public space into new commercial opportunities. Creating such permeability and variety will be the key in encouraging footfall and maintaining the vibrancy of these newly arranged spaces and uses.

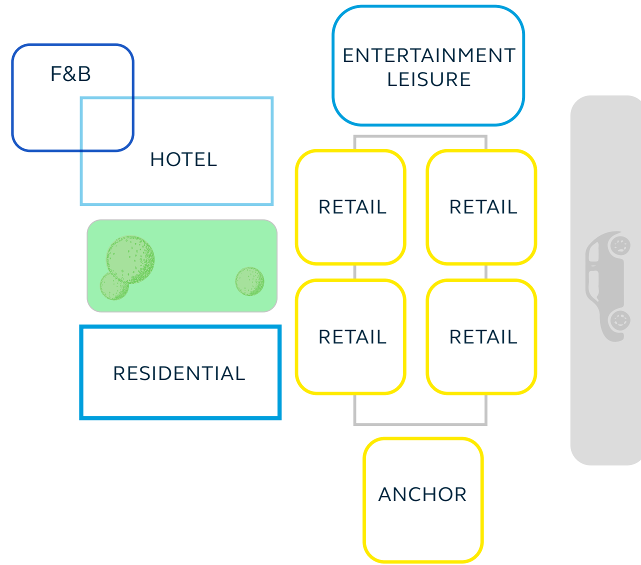
Interstitial space will become the main attraction with the spill of people through this blended-use model creating a lively experience, where it is possible to have all matter of basic needs met and higher needs fulfilled – more on those here.

Click here to see what this looks like in reality.

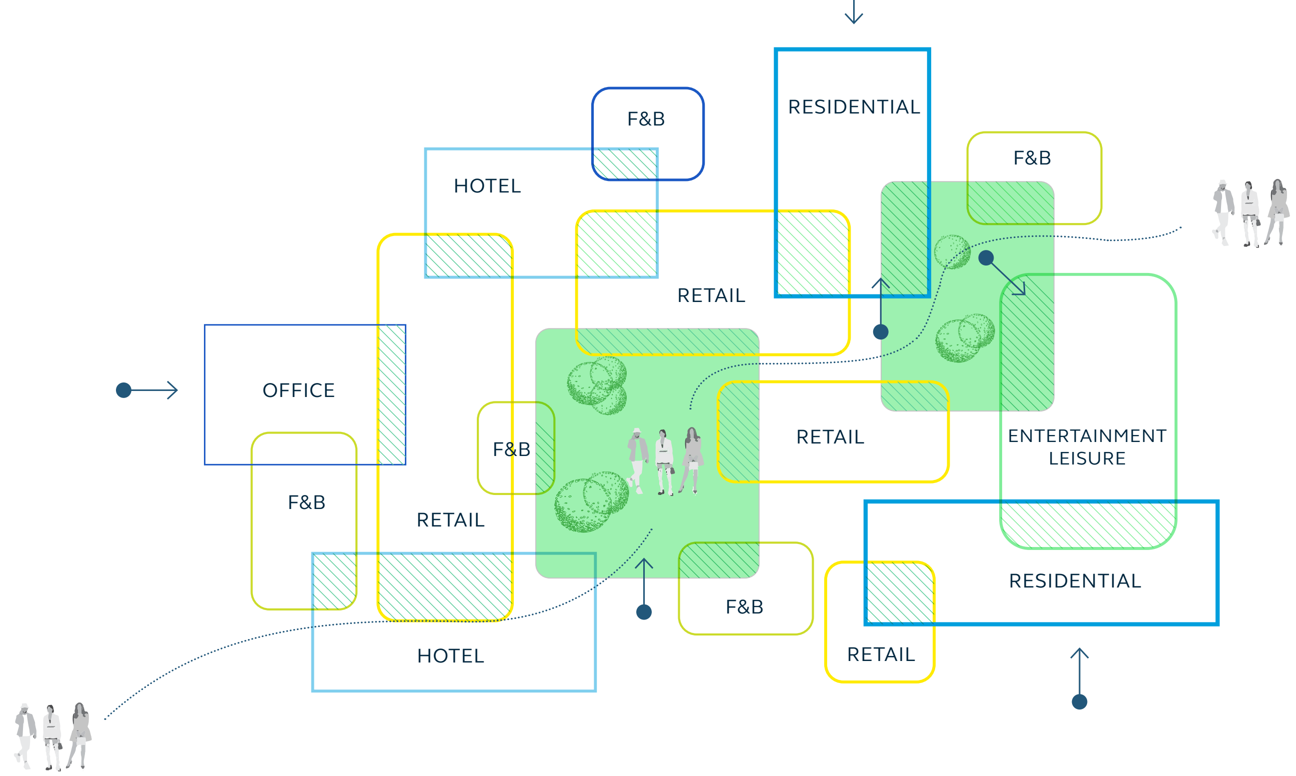
YESTERDAY: SEPARATE USES



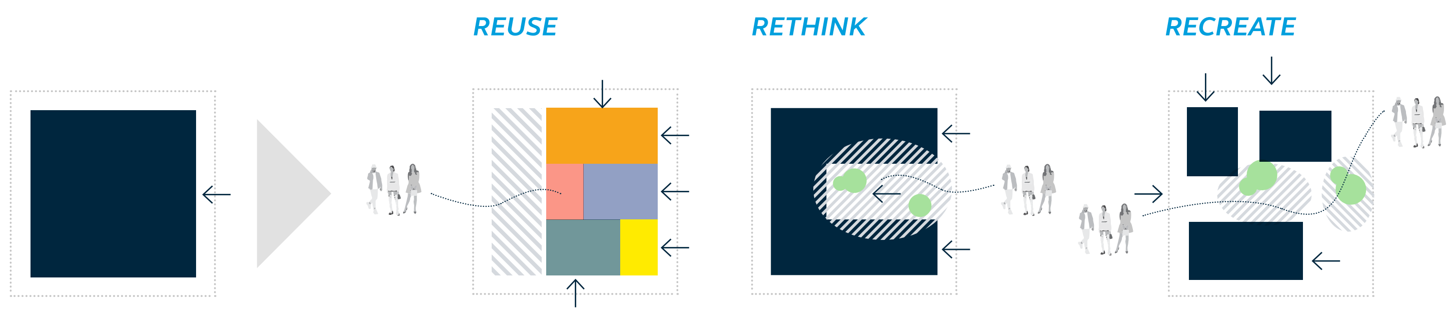
TODAY: MIXED SITE



TOMORROW: BLENDED USES AND SPACES



WHAT DOES THE SUCCESSFUL REPURPOSING OF A RETAIL ASSET LOOK LIKE?



There are a number of different ways to re-craft building stock that is no longer fit for purpose.

The following diagrams may be considered on the scale of the individual unit, a single building or an entire city block with three key approaches of Reuse, Rethink or Reshape:

REUSE

Puck Building
New York, NY

A retail anchor store or building is reconfigured and reprogrammed. A new life is injected into an existing single use shell with multiple curated uses within one footprint. The block is broken down into multiple components and re-stitched to form a vibrant new product with maximum permeability and multiple active frontages, rather than a singular entry point. If this is a retail unit, optimum sizes are given to each of the units to suit current demand.

RETHINK

St. Peters Lane
Leicester, UK

A series of courtyards or spaces are cut out of an existing form, enabling new streets or exterior spaces with continuous frontage both on the ground plane as well as new façades created above so that optimum floor-plates can be remodelled to suit a number of different uses—hotel, office or retail around bustling green public amenity.

RECREATE

Ballston Quarter
Arlington, VA

The existing building, unit or city block is no longer seen fit for purpose or part adaptation so is removed - to optimize value of the site, maximize public realm benefits and create new buildings at optimum floor-plates to suit multiple uses for an entirely new blended scheme.

Many mall developers and owners have an interest in retaining some portion of the existing mall within a new mixed-use setting. From a practical point of view, they seek to hold onto the most valuable retail tenants that still drive revenue both in bricks and mortar and virtual sales environments, while reducing the overall footprint of a mall that is larger than what the current retail universe supports.

Guildford Town Centre in suburban Vancouver was exactly that. Retain the most valuable enclosed mall as an un-anchored urban concourse that connects to new mixed-use parcels around the perimeter.

Ballston Quarter in Arlington, VA is another example, as is St. Peters in Leicester – more on this project and the time to adapt and reuse here.

While there are cases where a re-development could eventually replace an entire mall, a dead or dying one, a hybrid indoor/outdoor shopping environment provides all-weather options in a mall where sales are strong and have potential to be stronger, particularly in extreme climates like Houston, Vancouver, Miami and the Middle East. A look at the design of outdoor urban environments in the context of the local climate can be found on page 49 of this ***Microgrants Research Journal***.

> ***While the adaptive reuse of space is the more sustainable and environmentally responsible choice for development, retrofitting aging assets to take advantage of new, sustainable technologies may not always be practical or profitable — which is why we created a blueprint for building new but better here.***

JEFF GUNNING
Principal
Dallas

HOW HAVE RETAIL ANCHORS EVOLVED AND WHAT WILL THEY LOOK LIKE IN 2022?

While shopping centres and malls of the '60s were anchored by libraries, health and childcare centres, gyms and swimming pools more so than they were department stores, later centres have placed commerciality over community.

Where previously there was a desire to make centres 'watertight' and retail planning became almost anti-town centre, today experience and connection is everything.

Instead of a store anchoring a retail development, retail becomes the anchor or 'lead' for a mixed-use environment. More on whether a retail anchor can serve as a public connector across community here.

Likewise, arenas, theatres or galleries have given rise to sports-led and entertainment-led mixed-use environments that may be further anchored by an office, hospital, airport, set of privately rented homes or hotel and tennis academy as is the case with 360-Kuwait.

Immersive environments curated to attract, serve, and fuel their local communities first and visitors second are the future. Take for example L.A. Live, the 33-acre urban district where a unique 24/7 mixed-use development characterized by a major sports and entertainment hub has increased civilian employment by 77%, decreased housing vacancy rates, attracted 20+ million visitors annually and more – see full impact study here.

In many ways, it is a return to mall of 3,000 years ago -- to the souqs and the agoras that inspired them. More than somewhere to shop, these places were the heart of social, artistic, athletic, spiritual and cultural expression – economic drivers that brought citizens and consumers together with local merchants and artisans.

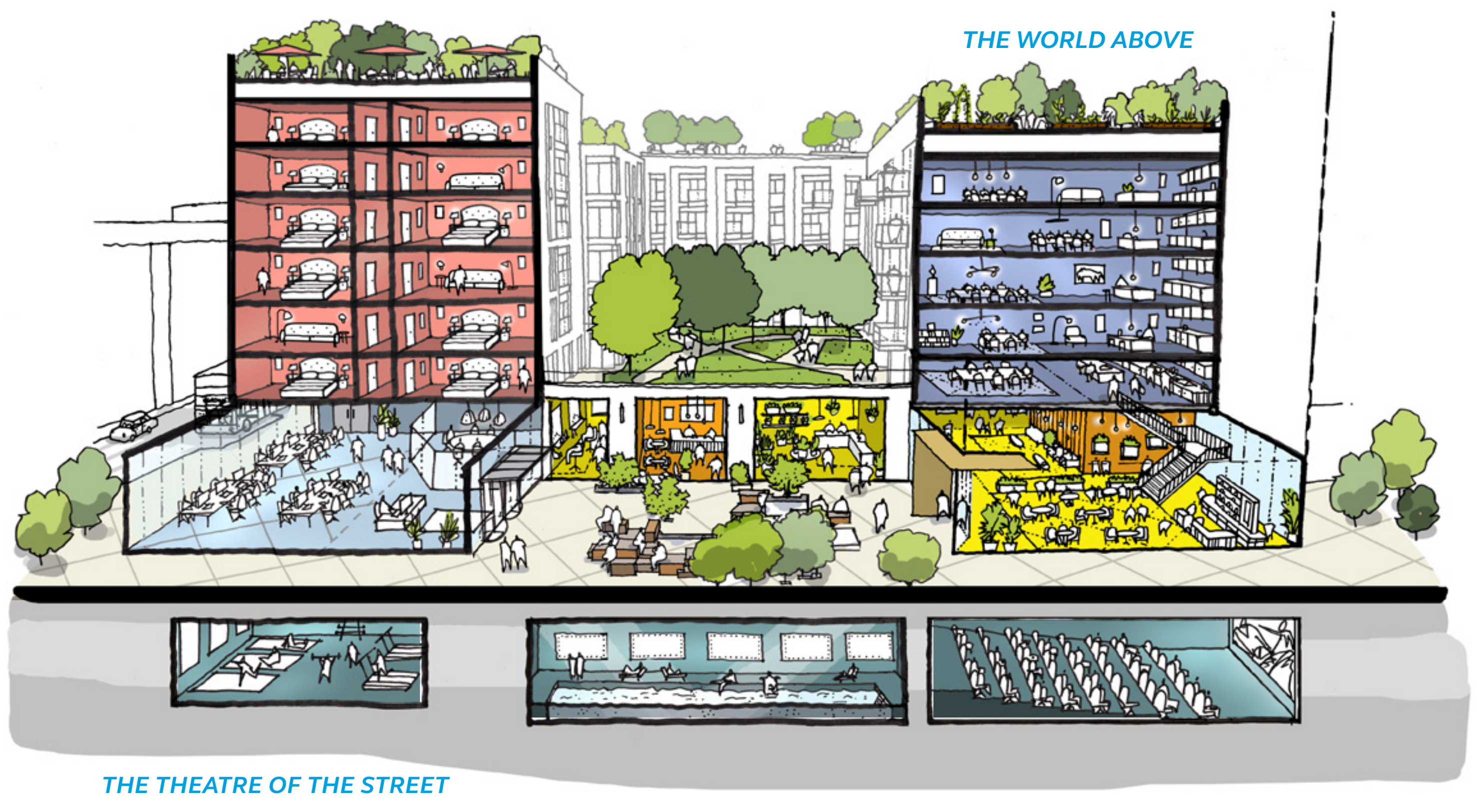
While our lifestyle ecosystems are certainly more diverse and globalised in a digital age, the ethos has not been lost. For evidence of this, look no further than the neighbourhood maker- and-creator workspaces that are becoming the next big thing in the world of flex, more on this here.

Such approaches remain underpinned by commercial interest, yet it is understood that if a space is entertaining, sociable, Instagramable and varied in its offering from season to season, it will encourage footfall, boost dwell time and, most importantly, inspire return visits. The most profitable mall in the United States proves the point here.

For pre-existing, traditional malls this starts with incorporating more lifestyle concepts into the mix and placing entertainment and community at the core. Even a single store with a car park can be transformed into an area that enables lasting experiences (more on this here,) and vacant flagship retail units could be filled with electric vehicle companies.

> ***The parallels between old and new worlds hint at a regained sense of purpose and identity that speaks to more to the individual than the transaction. Getting back to these origins, is the way our malls move forward.***
>
> **PAUL FIRTH**
> Associate Principal
> Dubai

The more experiences a place can offer, the more consumer traffic it can generate. The aim should be to create a fluid mix of flexible, programmable spaces that cohesively provide moments to gather, celebrate, heal, eat, restore, work, convene, live, make and buy. Exactly what this looks like should vary based on the needs of the people the development seeks to serve and what already exists within the community – they should inform the brief and help decide what is the best fit whether a bio dome, micro forest, urban farm, amphitheatre, ropes course, co-working space, music venue or something entirely unforeseen.



WORKPLACE

PUTTING THE WORKFORCE AHEAD OF THE WORKPLACE – WHY AND HOW?

We are living in a time known as the “Great Resignation.” It is an applicant’s market, with the retention and attraction of talent more competitive than ever. The roles are being reversed, the organizations are the ones being interviewed and the workforce is being prioritized over the workplace.

Bringing people to the forefront means bringing well-being and happiness to the top of corporate agendas. Within a single company there will be myriad ways in which people want to work. Understanding this is one thing; delivering a model that effectively facilitates this is quite another.

The future of work is hybrid, but what hybrid means in the context of a working environment has expanded beyond the ‘office versus home’ conversation. The desire now is ‘Work From Anywhere’ (WFA). Whether in the gym, café, car, bar, beach or other—people want autonomy over how, when and where they work. The emphasis will be on delivery, not location.

However, what works for one group of people or one organization, will not suit everyone—so the imperative is to establish a framework that allows the individual some autonomy while maintaining culture, knowledge sharing, productivity and brand.

This type of flexibility and agility requires the cooperation of HR, legal, finance and IT. For example, in China, working from home (WFH) is not as common with smaller living spaces --the lack of high-tech infrastructure in apartments and HR teams and managers find it difficult to ensure employees performance.

The interest here is in bolstering the provision of online/offline collaboration spaces to ensure sudden lock-downs, travel restrictions and the like do not affect workflow.

While coffee stands within lobbies are extending into co-working spaces here, the needs and goals of individual locations and teams must be considered uniquely alongside those of the organization. Where do they align, where do they drift and how will connection be established and maintained if employees are no longer tethered to a specific desk or time zone?

To understand this is to understand that corporate culture must be derived from something greater than employee proximity and instead tap into the five pillars of meaning, vitality, freedom, engagement and delight. More on this and the Happiness Ecosystem Index (HEI) that frames it here.

The key to improving employee engagement, satisfaction and performance and celebrating diversity is a variety-based approach to work styles that accommodates issues of privacy, comfort, safety and productivity. True inclusion must also take into consideration other groups based on race, religion, ethnicity, age, disability or economic status as well as gender identity and sexual orientation.

All of this requires ultimate flexibility in layout, furniture and mindset.

> ***The workplace is a reflection of a workforce, not the other way around—an office reinforces company culture, it does not create it.***
>
> **JODI WILLIAMS**
> Principal
> Washington, DC

American Association of Medical Instrumentation (AAMI)
Arlington, VA

HOW IS THE OFFICE EVOLVING?

The 'office' no longer refers simply to a physical place with four walls. It is more of a concept than a space – see here what the next generation of spatial design looks like and how the metaverse is extending this reality.

For some, the office will become a day out; an excuse to come into the city and an impetus for social catch ups with friends in and outside of work. For others, it may take the form of campus-style headquarters that is part education, part training, part showroom and part Research and Development (R&D) engine. More on the success of a live/work destination in a modern campus-like setting here.

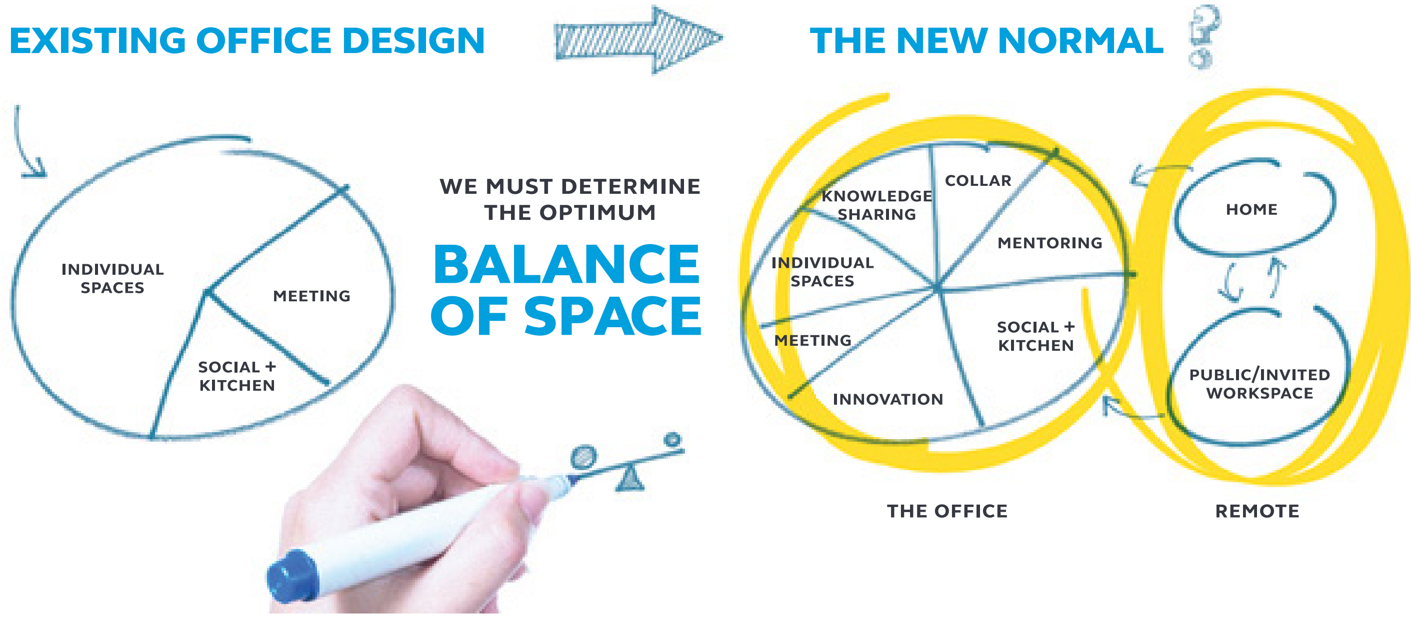
For scale-ups, Subject Matter Experts (SMEs) and entrepreneurs, the office may come to be a maker-and-creator workspace that provides a bespoke, design-led and customizable environment that takes on a different life from day to night and season to season. More on this here.

For those like CRTKL, the physical (and virtual) office will become a living lab to trial, measure, pilot, and optimize work-based initiatives, products and technology that positively improves the experience for our people, our planet and the bottom line. More on the impact of office locations on climate change on page 44 of the *Micrograndts Research Journal* here.

In all cases, the office will be more about camaraderie and connection, and less about accountability and presence. Its role will be to foster the freshest thinking and literally hold space for socialization, creativity, mentoring, professional development and innovation.

While the metaverse workplace can enhance this experience and that of a dispersed workforce, encouraging inclusive socialization and a seamless interactive experience that brings together all employees equitably can only be achieved with immersive technology (XR). For most organizations, this is a medium to long-term aspiration. So, until the joy and meaning of authentic connection can be simulated in a virtual environment, the more immediate reality and priority will be optimising the physical working environment.


The Grove
Abu Dhabi, UAE



The aim is to transform the office as we know it, into a flexible corporate asset with infrastructure that accommodates the current needs of the team and serves those of the organization well into the future – whatever that may look like. Not only will these new developments improve employee health and productivity, but they will also provide a more inclusive workplace that caters to a diverse group of people with varying needs and abilities. More on this and self-care for the workplace here.

The key to achieving this will be asking the right questions. Why will your employees be coming to the physical office? To collaborate? To focus? To socialize? Start with the why and then redesign environments and processes to fit this.

For many companies this looks like embracing digital methods of data collection, from apps to sensors as well as self-reported data (such as surveys) to understand how their workplaces are functioning. Collecting and managing big data from a work environment not only shed lights on the modus operandi (what spaces are being used, for what purpose, how often, by whom, etc.), it will highlight where there are spatial, environmental, and operational efficiencies to be gained as well as where to invest. This analysis can not only help attract and retain talent; it can also drive hybrid scenarios and inform strategic portfolio recalibration. More on the mining and responsible use of Big Data here.

Further research into the future of office on page 29 of the *Micrograndts Research Journal* here.

> ***Instead of designing new offices, we are creating the physical infrastructure to support new ways of working and varied typologies that empower people to choose how and where they work – be it in traditional office, digital or meta environments.***

KAREN LEE
Associate Principal
Shanghai

HOW IS THE OFFICE LEARNING FROM THE HOME AND THE HOTEL?

As more companies give their employees the option to work from home indefinitely, many are now paying a premium for an empty office. While the office and its typical business functions will remain pivotal for some, others can capitalize on what is now unoccupied space with new offerings that attract new audiences. In both instances there is an opportunity to re-imagine existing spaces or re-purpose them into a hybrid, flexible concept.

Reinvigorated lobby spaces for example, can become lively areas that serve office-based and mobile/virtual clients, partners, colleagues and the greater community. No longer just a space to pass through, lobbies can be activated and even monetized with the addition of private phone booths, reservable co- working spaces, small coffee stand s and the like that draw people into a building that they would never have stepped foot inside otherwise.

Another option is to create specialty spaces where employers or even landlords can provide equipment or places that are not available at home such as 3-D printers, virtual reality rooms or enhanced collaboration rooms. Additionally, landlords can offer "spec suites" that have spaces pre-built for particular tenant types. While some will use co-working facilities as a way to provide this hub-and-spoke solution, we will also see companies building or owning their own distributed workplace models. More on this here: *Digital Nomads Influencing Design: From Empty Lobbies to Community Hubs*.

With the reduction of traditional office space, comes the expansion of experimental and collaborative environments; communal zones where people can relax, shop and work. Staggered working days will allow overall 'work' footprints to reduce slightly. More on this and the changing life-cycle ecosystem here. This will lead to the rise of amenity-rich, hospitality-type spaces and markets.

Confidential Client

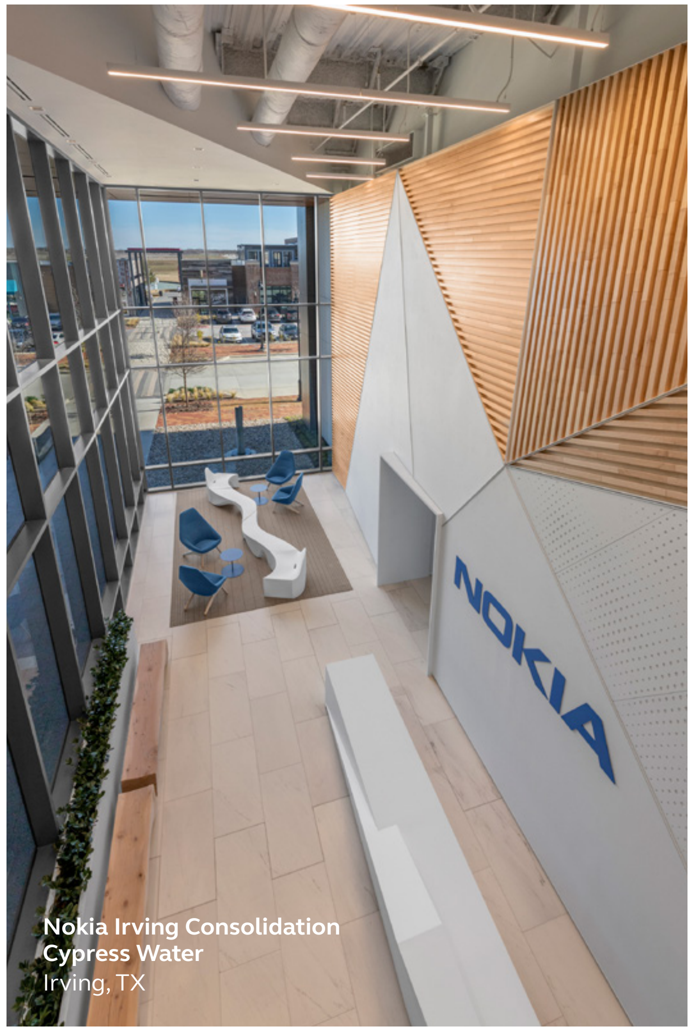
We are already seeing a shift in the hierarchy of amenities occupiers seek when choosing a new building or renovating their space. Demand for green and blue spaces are increasing, with ponds, walking trails, bike storage, cycling facilities, sports courts, auditoriums, cafeterias and the like are on the rise as employees seek out spaces to decompress, spark inspiration and enrich the workplace experience.

Furnished with a combination of analogue brainstorming components and new digital tools to spur virtual connectivity, these spaces will take cues from bars, cafes, hotels and homes. Just as outdoor space has become the most prized residential amenity, so too has open green space become more important in a commercial environment. Allowing for good ergonomics and biophilic design will contribute to the holistic health of the workforce, as will natural light, quality filtered air and acoustic comforts. Meanwhile, unexpected pops of pattern, calming contemporary neutrals and colours such as a contemplative teal will be used to influence the mood.

We will favour informality, with casual kitchens, social hubs and outdoor spaces for employees to connect, catch-up, and meaningfully engage with one another. Employees will have the choice and flexibility of working in solo pods, flexible hubs, relaxed armchairs, team rooms or even fully connected outdoor studio spaces. Many organizations are already taking this a step further and removing individually assigned space altogether and transitioning to a hotel scenario, allowing each workspace to be deep cleaned following use.

While the immediate future of work focuses on keeping people safe and healthy, longer-term solutions are geared toward providing meaning, relevance and authenticity for the workforce and generating additional income from mixed-use and hybrid offerings for the occupier and landlord.

> ***Savvy organizations will straddle the residential, hospitality and workplace sectors and recognize it is less about catering to hybrid work and more about servicing the hybrid lifestyle to attract and retain talent.***
>
> **STUART OLDRIDGE**
> Principal
> London



Nokia Irving Consolidation
Cypress Water
Irving, TX

RESIDENTIAL

WHAT IS THE NEW BRIEF FOR THE HOME AND THE HOME OF THINGS (HoT)?

The world of the living has changed. A new era is being driven by hybrid lifestyles and hybrid working cities. As a result, the brief for the home is also changing and being informed by how people can work and be productive within their living environments, as well as the technological infrastructure needed to support this.

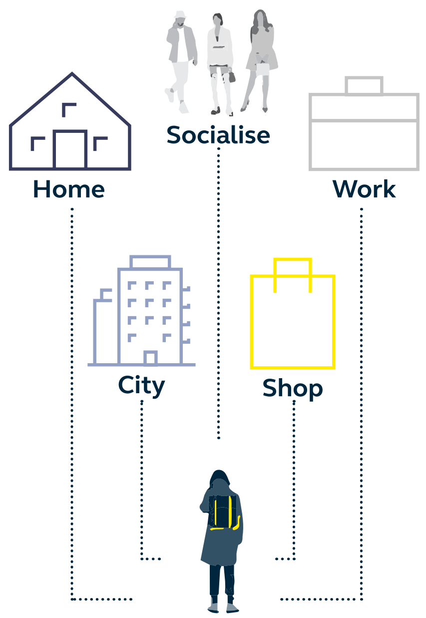
Residents are working, exercising, shopping, learning and meeting in entirely new ways. Where they physically spend time is now dictated by purpose rather than by demand. They want homes to work in, offices to shop in, hotels to live in, restaurants to cook in, nightclubs to exercise in – spaces and places that are fluid, flexible and authentic.

This is contributing to the growing demand for large, lifestyle-led residential investment assets including multifamily and Build to Rent (BTR). Seen as local hubs, these multifamily and BTR models are based on a blended offer that creates a sense of belonging for both their residents and wider community. This becomes especially important when people are spending more time at home and more time within their neighbourhood bubbles.

Where before these properties were kept to city fringe locations, now they are being introduced into previously unimagined locations, such as above high streets and shopping centres, adjacent to transit hubs and mixed in with commercial, hospitality and healthcare offers. More on this here.

The blurring of these lines is necessitating a different set of residential amenities, like live/work spaces and the Home of Things (HoT). Here is a closer look at one of the top-tier LEED projects in the world that laid the foundations for work to live/live to work models.

OLD MINDSET



NEW MINDSET

The HoT refers to the physical objects within the home that are embedded with sensors, processing ability, software and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks.

Beyond providing different spaces and settings for several types of work whether it be focused, collaborative, virtual or otherwise, residential amenities now need to supplement those of the office. From printing facilities to stationary cupboards, phone booths, private meeting rooms, IT support desks and semi-public co-working spaces. Connected and controlled through a resident's mobile device, these would all be integrated into a branded app that could also work with the HoT to track, measure and improve personal energy usage and well-being.

Biometric data gathered here could then be shared with in-house practitioners or resident nutritionists, counsellors and other health professionals that could rotate through a new type of hyper-local medical office or telemedicine pods that are built into the offer. Buildings can and should be playing an active role in the health and wellness of those that inhabit them. By providing access to community-based telehealth, multifamily and BTR developments can have a positive, tangible and lasting impact on resident and community health. More on page 23 of the *Microgrants Research Journal* here.

Advanced residential developments will also consider their part to play in last mile delivery and micro-mobility. Managing delivery surges, keeping perishables and takeaways to temperature, and providing access to a new breed of driverless vehicles, automated bots and air taxis are all part of the future of multifamily and BTR conversation. Drone ports and helipads may soon be coming to a residential rooftop nearby. More on this here.

People are outgrowing material desires. We don't want 'things' so much as we want meaningful connections and greater freedoms. We want to do and be better. This new-found ethical and health conscience is changing the brief for the home and opening up a market for climate positive, socially inclusive build to rent and multifamily communities.

JOHN BADMAN
Principal
London

The Wullcomb
Leicester, Northern Europe

WHAT ARE EXPERIENTIAL SENIORS DEMANDING FROM THEIR HOMES?

The senior living market is changing. New attitudes about health, wealth and family are transforming an industry that was formerly defined by medical care and home equity.

Generally regarded as the most affluent generation and expected to live longer than those who came before them, seniors are delaying entering interdependent living, choosing to age-in-place and increasingly demanding more urban settings and connections to communities and culture.

As residents, they want an urban lifestyle, impressive amenities, luxury services, superior care, varied culinary options and resort-like experiences where they can grow and thrive as aging individuals. Spaces that allow their lifestyles, hobbies and pets to move with them —where they can feel at home, host others and gain access to improved convenience and care.

More on creating an environment of care here.

To meet the needs of the booming elderly population, development is moving in a new direction – to lifestyle brands and an operational residential product with a hospitality approach based on a professionally managed rental model. Purpose-built to support independent and assisted living, these rental models can take the form of:

Seniors: Lifestyle Behaviors

	WHAT THEY VALUE	HOW THEY USE TECHNOLOGY	FINANCIAL BEHAVIORS	PREFERRED LEISURE ACTIVITIES
BABY BOOMERS (AGES 55-73)	Trying new things Personal growth Active, healthy living Individual choice Community service Their children	Some social media use Gradually adopting new tech Watching videos online Shopping online	Pay more for eco-friendly products Pay more for fresh food Spend money on world trips Spend money on pets Shop at boutiques Direct deposit	Traveling Entertaining neighbors Community activities Cultural activities Golfing
SILENT GENERATION (AGES 74-91)	Schedules and rules Duty before pleasure Community service Family Focus Tradition and simplicity	Texting friends Use pre-installed software Sharing content with family	Frugal savers Spend sparingly Discount shoppers “Waste not, want not” Pay for quality	Gardening Reading Watching television Cultural activities

Source - Claritas

RESIDENTIAL APARTMENTS

Supported Living

Supported living developments are aimed at working age communities and provide safe environments with access to activities and entertainment. The premises are not always registered with CQC but the care provided within the premises is registered.

Extra Care

Extra care residents receive managed personal care for a range of activities from housekeeping to meal preparation and transportation. The residents also benefit of access to some medical care and both the premises and care provided are CQC registered.

HOSPITALITY BEDROOMS

Nursing Care

Residents receive regular care and treatment from registered nurses with facilities for rehabilitation, including meals, activities, entertainment, and transportation and are CQC registered.

Memory Care

Memory care is 24-hour supervised care for long-term nursing that specifically caters to patients with Alzheimer’s disease, dementia and other types of memory problems and are CQC registered.

MORE FREEDOM, NEW CHOICES

CURRENT OPTIONS → *NEW OPTIONS*

Current options:
- Aging In Place
- The Senior “Village”
- Independent Living
- Assisted Living
- Nursing Home

New options:
- **Hybrid Care**
- **Life Care Communities/ “Live in Place”**
- **Branded Living**
- **Urban Living**
- **University-Affiliated Living**
- **Post-Acute Care/ Short-Term Rehab**

Push the limits in senior care by **integrating established healthcare** providers into your post-acute facilities.

Leverage predictive data analytics to determine best new locations for mixed-use senior facilities.

These models will focus on holistic health, community integration and mixed-use opportunities, incorporating senior wellness programs across education, exercise (both instructor and technology-led), health, nutrition and intergenerational connection. More on this and the opportunities inherit within the wellness real estate market here.

> ***Perspectives around age are changing. Aging is liberating, not limiting, and we need to design spaces that reflect this — where the best of residential, hospitality and healthcare are brought together to create a mature lifestyle offering with community and cultural connection.***

DAUN ST. AMAND
Principal
Los Angeles

WHEN ADAPTIVE REUSE IS NOT POSSIBLE, WHAT IS THE BLUEPRINT FOR BUILDING NEW?

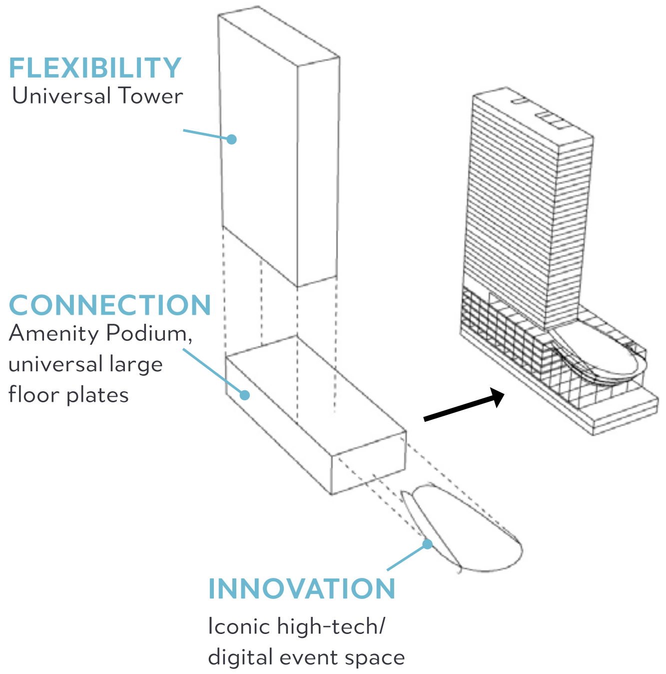
Adding a new building to the skyline comes with both opportunity and responsibility. It is a chance to respond to a changing world with a fresh approach aimed directly at the needs of the people.

The blueprint for this should be a hybridized model or a 'Universal Building' that blurs the lines between any one program or use. Instead, the new building typology should feature shared uses that come together to form a hub for a community of creatives, who blend living with working and socializing. The Universal Building responds to changing market needs by allowing for flexible development strategies to take shape over time. With the ability to easily shift the program mix, this supports a city's strategic goals in that it offers innovative housing and workplace options for an evolving and diverse community.

We are talking about a framework building with changeable systems, structure and modules. This is a uniquely flexible platform that can adapt program uses based on changing market needs. From the column grid to carefully considered floor to floor heights, the building will easily shift between residential, office and social spaces.

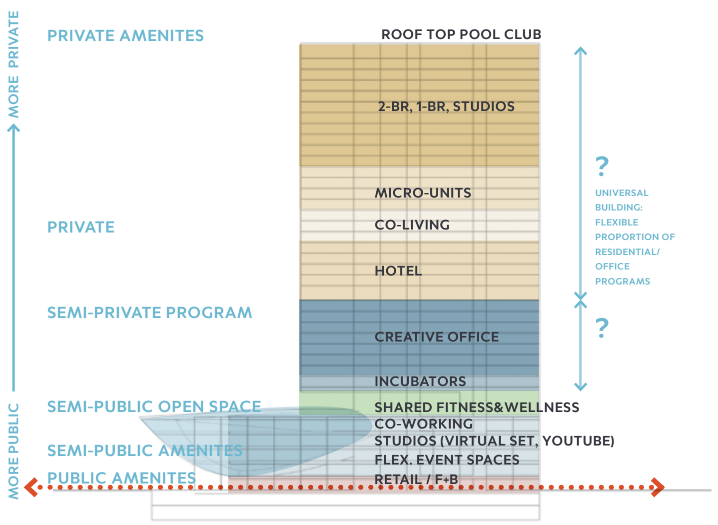
UNIVERSAL BUILDING IN CONTEXT

Create an adaptive building typology capable of transitioning between programmatic focus as demand shifts.



PROGRAM STACK

Diagram showing publicly accessible amenities in the podium with increasing privacy moving up the tower.
Amenities are concentrated in the podium as a central social hub for tenants/residents and the public.



Combining established market functions with start-up functions, the aim will be to foster an equitable community based on shared interests. Catering to the emerging market, this will see large social hubs balanced with small amenity spaces for focused work or play that inspire a dynamic mix of talents, minds and sensibilities.

> ***We are designing a new building typology — one that offers flexibility for today's changing market demands. It is envisioned as an equitable home for a diverse new community, built on the idea that creativity can be a conduit and an equalizer — both locally and globally. More than a blueprint for a new building, the 'universal building' is a blueprint for a new lifestyle.***

MARC FAIRBROTHER
Principal
Washington, DC

THE ESTABLISHED MARKET	THE EMERGING MARKET
1-2 Bedroom Residences	Affordable / Micro Units
Studio Residences	Hostel / Group Living
Music | Production Studios	YouTube Studios
Sports Facilities	E-Sports Venue
Traditional Media	Social Media
Traditional Offices	Creative Offices | Live/Work
Entertainment Space	The ONES
Conference Space	Holodeck VR Collaboration

HOSPITALITY

HOW ARE GUEST EXPECTATIONS SHIFTING?

The guest of 2022 is more likely to be domestic than international and to come seeking experiences and activities -- not just views. They will continue to mix business with pleasure, playing into the Bleisure trend, and will commonly work at some point during their stay. Their most prioritized luxury will be personal wellness, with this increasingly linking to the wellness and the sustainability of the places they visit and the alignment of these to their social and environmental values, 83% of global travellers think sustainable travel is vital, with 61% saying the pandemic has made them want to travel more sustainably in the future, more on this here.

10 CHANGES TO GUEST EXPECTATIONS:

1. **Food & Beverage (F&B) scope**
While the recovery has not been evenly distributed, Food & Beverage (F&B) will be the catalyst that changes this. The scope of these facilities will be extended to service both the guest and the community.

2. **The comeback of the (traveling) salesman**
Hospitality offerings aimed specifically at the lower and mid-tier business traveller will see a return in 2022, with group and business travel expected to recover well. There will, however, be a new awareness for the sustainability and frequency of corporate travel with many organizations tightening policies around this to meet carbon positive targets.

TOURIST PERSONAS

A tourist whose trip or destination is primarily motivated by wellness.

account for the bulk of wellness tourism trips and growth

3. **Work From Anywhere (WFA)**
With guests expecting to WFA and commercial real estate under stress, new demand is being created for hybrid hospitality/work spaces in central locations. Investing in membership programs beyond those that focus on loyalty will mean spaces that can be repurposed into co-working facilities stand to be easily monetized.

4. **Hybrid hospitality**
The move to remote services has culturally blurred the lines between work and play, between entertainment and exercise, and between many more previously opposing parts of life. Guests now expect hospitality offerings to accommodate this mix, make extended stays possible, and provide spaces for various activities and moods. Lifestyle hotels have the formula with enhanced F&B and entertainment options that amp up revenue and invite the community to participate in the energy. This will be a very powerful position in 2022.

Virgin Hotels New Orleans
New Orleans, LA

5. **Biometrics & data exchange**
Gone are kiosks and touchscreen assistants. Guests now expect all hospitality services to be accessible via smartphone and to have the option of a completely contactless experience. This makes deploying digital far easier and cheaper, and data collecting far more consistent. However, care needs to be taken with the luxury traveller as high-touch experiences will continue to be the expection.

6. **Psychographics & behaviours over demographics**
Rich data on guest behaviour gives us a much better view into their attitudes, perceptions, expectations and aspirations -- the "why" behind their hospitality preferences -- and spending. This is what we will mine and analyse moving forward.

7. **Profiling & personalization**
With the move to mobile, guests expect increased personalization. Following in the footsteps of AirBNB, YouTube and many more, we will analyse available data to shape a guest experience that is highly curated and able to refer guests to the services, amenities, and offers most relevant to them

8. **Transactionless travel**
Guests expect ease and convenience. They will spend more when you make it easy and pay a premium for a seamless door-to-door experience that removes any points of friction. Membership programs are moving to incorporate biometric technology into their room keys, identity cards, payment points and more.

9. **IRL over URL**
Digitally native guests will also want real-life experiences. Invisible technology will make for effortless experiences and operational efficiencies, with employees focused on building rapport, preempting guest demands and responding to their desired level of human interaction.

10. The local guest

Guests want to live as the locals do. There is no greater validation than becoming a local institution—a place where locals and visitors alike seek out. Hybrid membership programs that make hospitality amenities accessible to locals for work, entertainment, health and socializing will increase the value of an asset and give it greater relevance among multiple audiences. More on a new design vernacular for cultural and geographical relevance here.

> *To get ahead of changing guest expectations, design for attitude — not age, for co-working — not business travel, for future uses not short-term pressures. Use tech to maximize experiences, not just minimize human interactions. Make the tech invisible and the data work harder. Create an offer that is as appealing to locals as it is to travellers, and respect the ecosystem you are a part of.*

PAUL CONDER
Principal
New York

360 Tennis Expansion
Kuwait City, Kuwait

HOW CAN YOU GENERATE GREATER ROI AND ATTRACT NEW DEMOGRAPHICS TO YOUR PROPERTY?

More than just "heads in beds," there are many opportunities for revenue generation beyond guest-rooms.

It is as much about the flexibility of individual spaces as it is the flexibility of the hotel on the whole. Think about how underutilized portions of the property can be monetized. How lobbies, food and beverage areas, conference rooms and leisure centres can serve dual purposes. Open up public areas to the exterior, activate street frontages, create sufficient space for locals to socialize and design these areas to accommodate multiple uses.

Using prefab components will mean shorter downtime, while incorporating sustainability into renovations will pay dividends in the long run by reducing energy, water and waste. Integrating the latest technologies will improve the experience for all; employees are just as important as the guest in this sense, with the operational efficiencies they gain being passed onto the guest in the form of more personalized service from happier and more motivated staff.

Introducing flexibility into the rental model will also attract new audiences. Daytime room rates can appeal to those looking for private workspaces, while longer term leases for serviced and branded apartments will create a more blended residential offer. This overlap between hospitality and build-to-rent or multifamily can be explored further with later living and co-working. More on this here.

More on creating resilient hotels here.

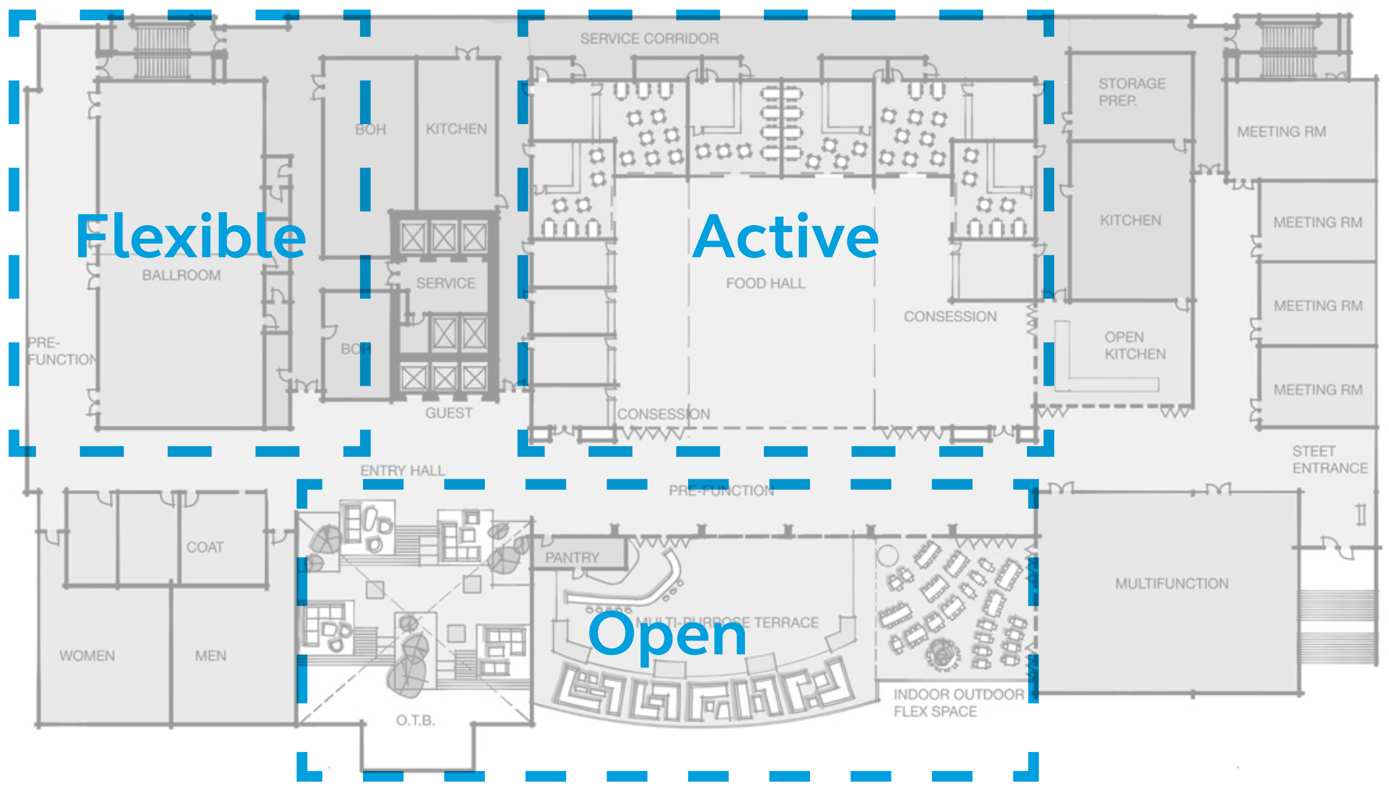
Meanwhile, creating a competitive advantage within the room might involve upgrading conventional models into ones that promote wellness. Growing aat 50% faster than conventional tourism, wellness tourism is high-yield tourism. More on this and the growth of the wellness economy here.

FROM TRADITIONAL, CONVENTIONAL AND BORING

ACTIVE, FUNCTIONAL AND FLEXIBLE

> *Flexibility equals resilience and returns in the short, medium and long term. Monetizing underutilized space is the quick win — designing these spaces with the ability to pivot according to changing guest expectations and travel restrictions is the mid-play. Together, they buy time for informed decision-making about the strategic repositioning of the whole asset in the response to macro behavioural trends and mixed-use opportunities.*

TODD LUNDGREN
Principal
London



HOW CAN F&B BE USED AS A CATALYST FOR HOTEL RECOVERY?

Food & Beverage (F&B) offerings are recognized as an essential contributor to a hotel's positioning within the market. While consumers are becoming increasingly discerning, F&B presents hotels with unlimited opportunities for additional revenue sources.

While bars often lack underutilized space, kitchens have far more capacity than most would think. There is usually enough space to create other food programs and integrate ghost kitchens into the existing kitchen area. Kitchen takeovers, culinary classes, and pop-up collaborations with local institutions and chefs will strengthen community ties and create stronger referral business.

These affiliations with local restaurants and suppliers can be further leveraged to create localized minibars, grazing stations or grab-and- go selections and to supplement room service hours where condensed menus can simplify operations.

Meanwhile, bars can leverage these back-of-house areas to introduce new food programs as different brands both within the bar itself and for the community. This allows bars to supplement revenue while capitalizing on app-based ordering, pickup and third-party delivery trends.

On slower nights, the front-of-house can play host to tasting and 'meet the maker' events, with local producers invited to showcase their products and re-imagine happy hour. More on the evolution of front-of-house concepts and how technology is facilitating the customer journey here.

For some, there is also the option to use low rooftops with raised pavers to create new entertaining with views and expand the scope of F&B venues beyond designated dining areas. Others can integrate dining into exterior landscapes, create independent physical entrances, establish Streateries (street eateries) and push outdoor dining into sidewalks, alleys and parking spaces with modular pop-ups like the Sidewalk POD. More on this here.

F&B is more than a hotel with a restaurant. F&B is a catalyst for recovery. Expanding the scope of these venues will introduce new revenue streams, elevate the guest experience, embed the hotel into the community, and give people a reason to come back time and again.

CLAY MARKHAM
Principal
Dallas

Porter at Port Imperial
Weehawken, NJ


Scents on Tap
smell wonderful
DALLAS
Buff City Soap
TX
Handmade Daily
Soap Whip
Champagne Bubbles

RETAIL

WHAT IS THE STORE'S NEW ROLE AND HOW IS DATA/DIGITAL BEING LEVERAGED FOR IN-STORE DECISIONS?

Next year will be about the "anti-narrative" narrative.

The retail industry has developed an obsession with experiences that communicate a story —a narrative that explains why it does what it does. Consumers care less now for these stories than they do for convenience.

In 2022, we will see physical retail environments simplify in-person transactions. Enabled by mobile digital tools, they will offer more bespoke, localized and service-based experiences. Digital interactions will focus on the consumer rather than the brand and leverage integrated technology that links to their profile in the metaverse, which seamlessly extends into the physical realm. More on this and the next generation spatial design prototype here.

Technology within the physical store will focus on digitizing operations and enabling employees to deliver a more personalized shopping experience where product advice and brand advocacy come across with greater authenticity.

Meanwhile, many brands are in need of a real-world presence to demonstrate what they can do in the virtual world. Here, we see the store become a showroom or a playroom-- where physically interacting with the products is prioritized over their transaction.

Retailers are already redesigning brick-and-mortar locations to accommodate product distribution, converting retail stores into micro-fulfilment spaces and offering curbside pick-up and return services, many large stores are also looking to distribute essential customer services across a small network of physical locations. With small-format stores dedicated to fulfilment, higher-profile stores can act as showrooms or experiential locations. Take, for example, the Tempur-Pedic NYC Flagship that won RDI's 2021 Store of the Year-- where a one-of-a-kind immersive digital experience was created as a way of connecting the consumers to the product, to the brand and to their optimal health.

Focusing on key themes of escapism, sustainability, access to nature and multi-sensory experiences, the store elevates the conversation beyond any one purchase and taps into the lifestyle and well-being aspirations of its clientele through seamless and responsive technology. More on this below and here.

Meanwhile, existing anchor spaces are being repurposed into fulfilment warehouses and operational hubs to help improve last-mile delivery speed. These large, empty anchor spaces are finding new purpose in fulfilling orders and meeting growing sales demand. In this sense, big-box stores on the periphery of urban centres are becoming mini-warehouses that coordinate pick-ups and deliveries. More on this here.

Although the digital retail experience and technological innovation of customer service are well-established, the issues arising in the last mile of delivery are not something the retail industry can fix on its own. Retailers in urban environments are now facing operational and logistical challenges with storage, distribution, traffic congestion, and curbside management. More on this here.

To solve these issues, urban mixed-use touch-points for retail are emerging. More on this and the new shared infrastructure solutions being considered here.

> ***The 2022 store will be about how things feel, fit and function. Digital design can be leveraged to enrich and educate — with its central goal being the creation of a more seamless experience.***

PAUL CONDER
Principal
New York

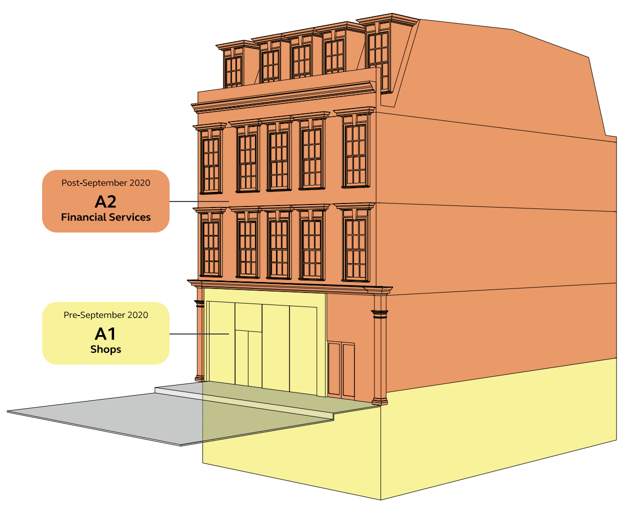
HOW CAN BIG BOX RETAILERS BE RECONFIGURED TO BENEFIT THE HIGH STREET AND SHOPPING MALL?

Many big-box retailers are adaptively reusing suburban shopping malls that buckled due to e-commerce and mandatory lock-downs as fulfilment centres for online sales. The evolution of this is a drone port concept that favours the repurposing of sites in a way that is still related to retail and capable of adding more value to the community.

Tackling one of the biggest challenges associated e-commerce: how to get goods to the customer, the drone port packs a traditional fulfilment centre or warehouse into a footprint smaller than the existing mall structure and opens the land for other uses to complement distribution. More on this here.

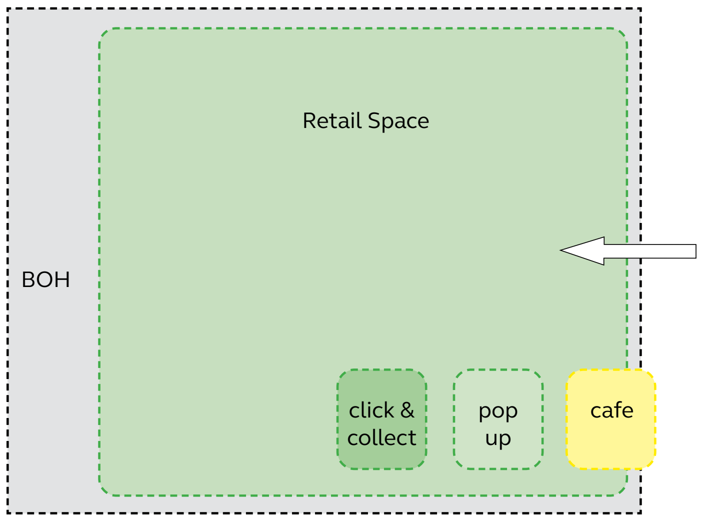
Closer to town, urban malls and high streets are finding new opportunities to reconnect, recharge and redefine the community by recurving existing structures and adding new residential, commercial, and hospitality offers into the mix.

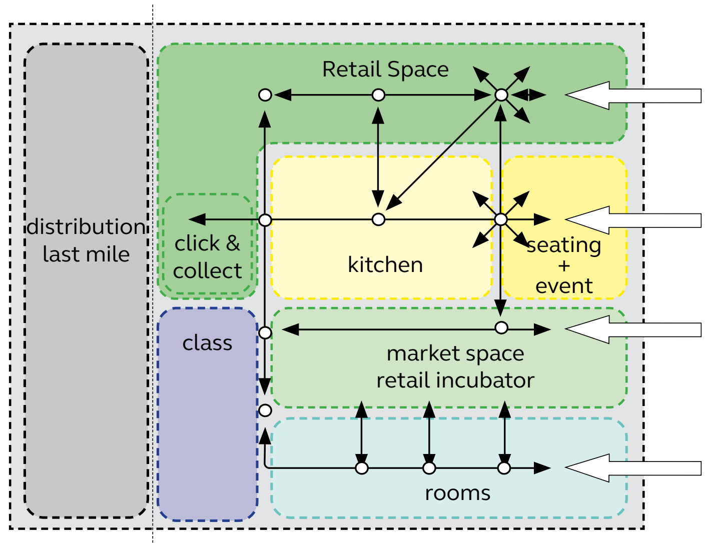
Updates to planning legislation (such as those made to the permitted development rights in England), are further incentivizing this and shorter, more flexible leasing terms. This opens up physical retail to non-traditional, independent brands and local operators, which can now have a presence on the high street. In turn, high streets benefit from a more unique and diverse mix of offerings that see pure- play retail strips transformed into community hubs for

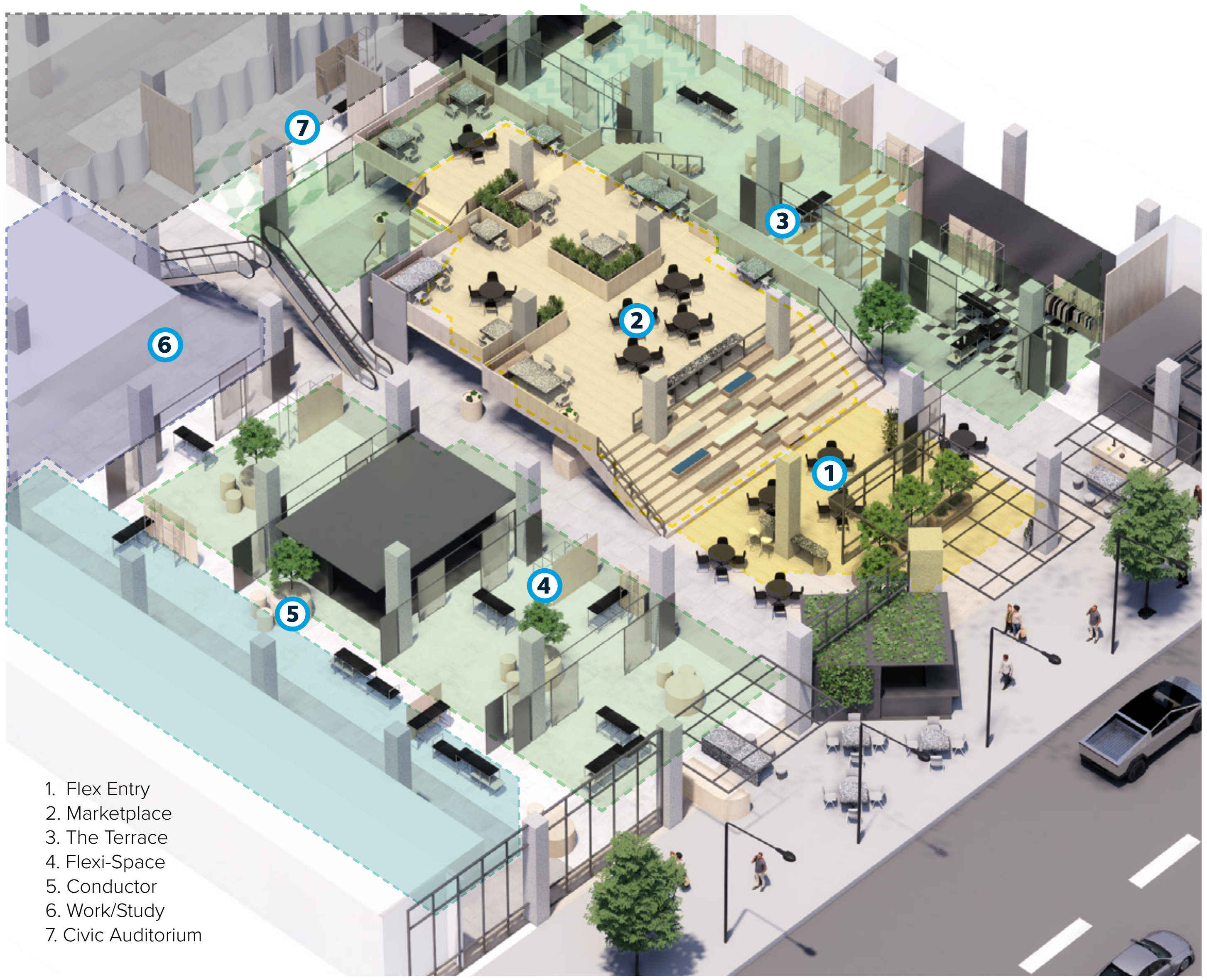


Block A
Typical high street block pre-September 2020 planning reforms

Block B
Typical high street block demonstrating the scope of potential for flexible use without change of use consent post September 2020 planning reforms







1. Flex Entry
2. Marketplace
3. The Terrace
4. Flexi-Space
5. Conductor
6. Work/Study
7. Civic Auditorium

commerce and culture alike. More on this here. Meanwhile, large floor-plate malls and department stores are being internally reconfigured to better accommodate community-centric spaces that reflect and support a hybrid lifestyle and the new ways people are living, working, shopping, dining, exercising, socializing and more.

These integrated spaces serve more than one purpose and more than one generation. The future is a 1,200 sq. ft customizable canvas, a modular pop-up, an incubator-style hub – flexible and shares spaces where local suppliers, brands, makers, creators and more can take up daily rotations and seasonal residencies. Instead of the typical fixed 12,000 sq. ft chain stores -- which are available everywhere, including online -- the ancient agora model will return to favour and regenerative buildings will set a new blueprint. More on this here.

> ***Spaces for the new economy, especially malls or department stores, can have different uses at different times of day —from a yoga studio in the morning to events or gallery space in the evening. The blend of experiences is critical. A space is productive and profitable when people are engaged and using it, so it is time we think of these environments in constant motion and function— not static and singularly purposed.***

DAVID CASSIDY
Principal
Dallas

Hyundai Department Store PARC1
Seoul, South Korea

WHAT DOES THE POP-UP LOOK LIKE IN 2022?

While last-mile delivery and unmanned experiences like Amazon Lockers provide convenience, they do not provide connection. By fulfilling one situational need, they absolve a more human one. In seeking to serve both needs, more retailers are adding new components to an ecosystem of retail that is inventing itself.

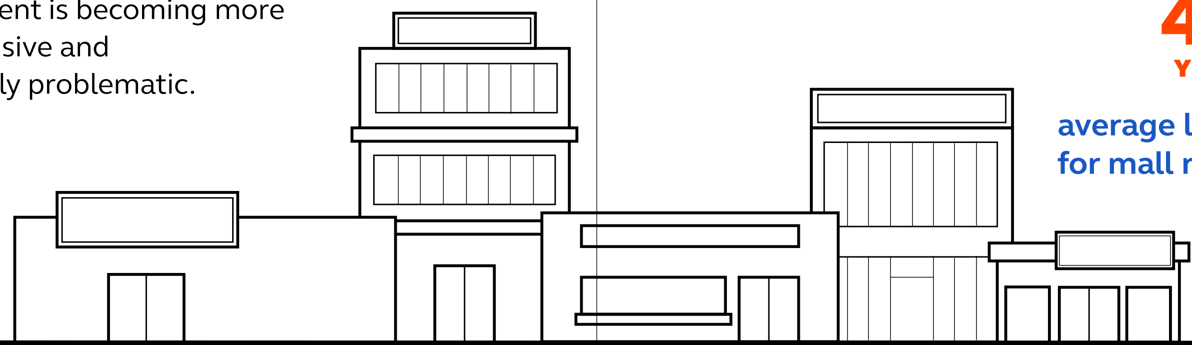
The pop-up is one such example. No longer simply a marketing tool, it is an integrated retail solution that allows retailers, brands, and F&B groups alike to strategically reposition and compete with the on-demand economy that is changing the retailer's business model.

Born out of the lock-down and social restrictions that characterised the past few years, these temporary solutions are maturing and transforming under-utilized public space into new commercial opportunities.

Prefabricated systems like the Sidewalk POD are designed to fit within most urban curbside parking zones and extend operations beyond the boundaries of an operator's limited footprint.

These pop-ups or pop-up kit of parts provide a controlled, adaptable, sustainable and cost-effective way for brands, retailers and operators to 'beta test' the next evolution of store and product services without making permanent, costly changes that may not resonate in new locations or suit changing consumer behaviours.

As brands evolve to remain culturally relevant and competitively positioned, how this plays out in the built environment is becoming more resource- intensive and environmentally problematic.



101
BILLION TONS
global material extraction each year

Short life spans. Retail environments have predictable lease lengths. The same team members who built out a space might still be involved at its end of life. That enables planning ahead, before the design process and start of construction.

Existing spaces. Most retail build outs are renovations rather than new ground-up construction. While a space may look completely different before and after, the underlying elements remain the same. This can allow for reuse directly on site.

Concepts like the Sidewalk POD are building a well-rounded view of how waste in the construction, renovation or decommissioning of existing retail spaces can be reduced. Likewise, many of the inherent sustainability challenges in retail architecture actually create prime opportunities for material reuse and redistribution.

The question thus becomes, how do we harness these aspects to develop proactive practices that reconsider social and environmental impact? And further to this, how can the access and redistribution of building materials support local communities? This is investigated further here, *Getting to Zero Waste – Deconstruction and Material Reuse in Retail Architecture.*

4.5
YEARS
average lease lengths for mall retail tenants

2.2
BILLION TONS
estimated annual solid waste by 2025

Premium products. High-quality materials are valuable in themselves. Commercial-grade products are standardized, built for durability, and efficient assembly. It's clear how these spaces come together and what components are inside.

Small but many. Retail brands build with consistent concepts geographically dispersed across markets. What a team solves in one project can apply in another, even as local context changes some of the variables.

Long-term partnerships. Retail clients, consultants, contractors, and vendors often work on multiple projects together. Deeper ongoing relationships lets teams build streamlined collaboration at the program and portfolio scale.

HOME

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CallisonRTKL (CRTKL), a global architecture, planning and design practice, began over seven decades ago and has evolved into a cultural agency to advance positive outcomes in our local and global communities. Through a human-centric design approach, our team addresses the imperatives of resiliency, well-being, mobility and technology and their influence in the built environment.

Please contact Shineade Andric
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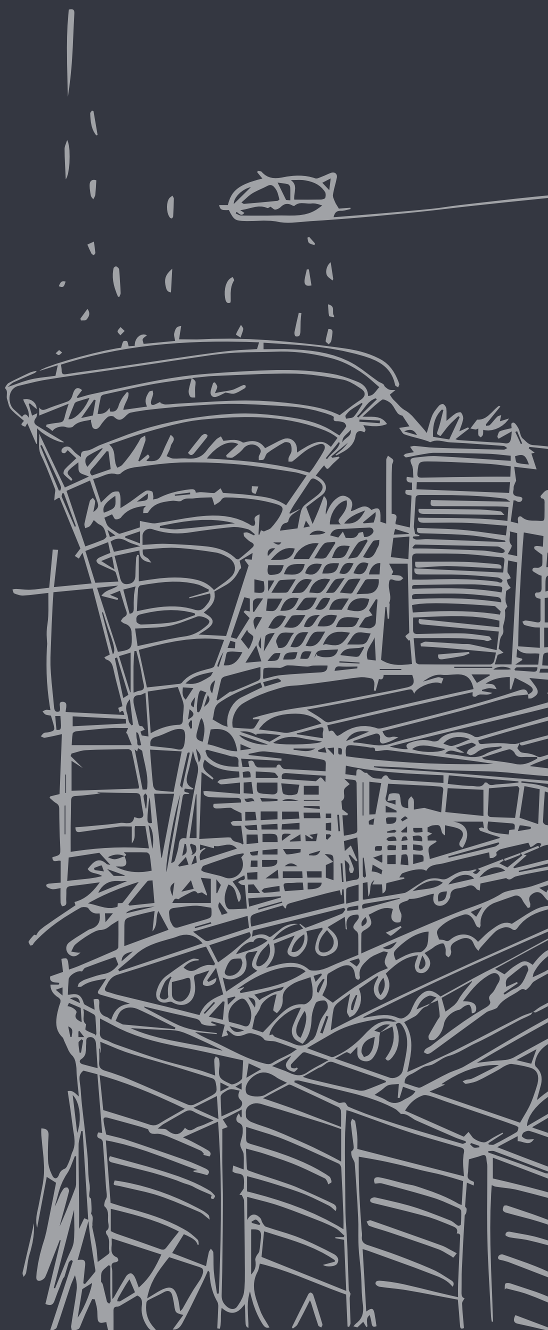

Sketch by David Chamness