



# DESIGN QUAR- TERLY

ISSUE 11



## EMPOWERING DESIGN

Setting the stage to  
achieve goals

# DESIGN QUAR- TERLY

ISSUE 11

**THOUGHTS, TRENDS AND INNOVATION  
FROM THE STANTEC BUILDINGS GROUP.**

The Stantec Design Quarterly tells stories that showcase thoughtful, forward-looking approaches to design that build community.

## IN THIS ISSUE: EMPOWERING DESIGN



One answer to the question what makes good design is that good design empowers. Ultimately, design should give end users the ability to do what they do better than before, more sustainably, efficiently, equitably, and safely. Good design helps organizations achieve their goals, it helps businesses flourish, it sets the stage for researchers to innovate. In this issue, we look at the various ways successful design helps our clients achieve their goals. Whether it is about making urban amenities available to more residents or creating a setting to share unique discoveries or making it easier to get mental health treatment, in every case we see that design matters when design empowers.

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 Nubian Square Ascends  
Boston, Massachusetts

# Reweaving the neighborhood

Promoting social impact and equity  
in urban redevelopment

BY ANDREW IRVINE, NANCY LOCKE, TAMARA ROY





**Nubian Square Ascends**  
*Boston, Massachusetts*

This new mixed-used project is designed to be a catalyst for equitable development via addition of new uses, public realm elements, and cultural programs.

In the mid-1990s, Denver shuttered its Stapleton International Airport and the jobs for nearby Park Hill community residents moved elsewhere. Fast forward 25 years, could the redevelopment of a 155-acre golf course unlock the neighborhood's potential and support the long-term viability of a local educational non-profit?

The Roxbury neighborhood was once a thriving entryway to Boston, Massachusetts and a center for African American culture and commerce, but by the late 20th Century it was struggling with redlining and infrastructural disinvestment by the City. In recent years, local black businesses have sought to promote development in the area, but the largest site in the very center of Nubian Square was City-owned and had let it languish for 25 years as a surface parking lot. >

Retailers lamented that it needed something more significant than market-rate housing to bring the vibrancy back. What kind of development would revitalize Roxbury's Nubian Square area as an economic and cultural hub?

This story focuses on two disenfranchised black and minority neighborhoods, and how developers and our designers found ways to make projects that are true to the local culture, balancing the desperate need for positive growth while avoiding the most destructive aspects of gentrification and displacement. These are the Nubian Square Ascends project in Boston, Massachusetts and the Park Hill Community Development in Denver, Colorado.

To accomplish the goal, it was critical for designers to get to know these neighborhoods deeply to envision a combination of programs and design a new place that would bring significant benefit to the minority community. Broadly speaking, our design solutions have a lot in common. Both projects provide a range of family-friendly arts and culture, culinary arts and commerce,



and affordable and artist housing, along with a full slate of open spaces where future events will bring people together. The most validating accolade we can earn from these collaborative design undertakings is from the neighborhood resident who says, "I can see myself here."

The national conversation about racial justice has put the spotlight on equity. Increasingly, we as designers are being asked (by clients, the community, local government) to design for social impact alongside goals such as well-being, economic growth, and sustainability. This work has led us to some deep

thinking on what design strategies, elements, and approaches are necessary for achieving equity. Here are ten elements we've found valuable in Denver and Boston.

## 01

### **What makes an equitable neighborhood**

How do we define what an equitable neighborhood is? It's a place where all people regardless of their color, ethnicity, age, disability, or sexual orientation feel

respected, safe, and healthy, where their lifestyles are accepted and valued. Residents have access to living wage work, they connect with others within their own culture and other cultures, and they have a choice in housing and shared spaces. They can access healthy food. It's a walkable neighborhood with its own recreation and nature. By approaching neighborhood development with these elements in mind we stand a better chance of achieving them.

## 02

### **Client commitment**

A developer or client who places social impact and equity among its chief goals for a project can be a game-changer—opening up a range of possibilities. At Nubian Square Ascends, our client had deep roots in the community and wanted to give something back that would leave a lasting impact—a cornerstone for the neighborhood. >

At Park Hill, the non-profit desired an outcome that would elevate the community and be a model of equity. With the transition of ownership to the developer it was incumbent on the developer to make this a transformational project. The developer embraced the mission the non-profit and the community established in the previous visioning process. But the developer took it further and saw the pursuit of equity as a differentiator. They want this to be a national model for inclusive, diverse, and resilient urban development.

### 03

#### **Community voice**

There's no way to achieve equity without the voice and input of the community. Public hearings and visioning sessions are an

essential part of our process for gathering the input that ultimately shapes and informs the project. We've found at Park Hill that making these sessions as interactive as possible—even creating a set-up for our client where participants can game the various possibilities for the site within a budget—gives users a sense they are respected and heard, that they add value to the conversation because they were able to make intelligent choices and gain a new understanding of the complex moving parts associated with urban development. This process elicits creative and powerful ideas.

At Park Hill, the community felt strongly that the project should include mixed-income housing. And the community members articulated that they wanted some open park land, but more specifically they wanted the opportunity to be able to touch nature—to have an actual habitat. With Nubian Square Ascends,

the client partnered with a Black-owned neighborhood incubator and Black leaders of local cultural groups. Their input into initial arts programming, master planning, and open space made the project intensely local. In the public meetings, community members spoke tearfully about how they finally feel heard and were relieved that the project would “lift everyone up, not just the developers.”

### 04

#### **Mixed-density, mixed-income, mixed-use**

Affordability has to be central to these projects from the beginning, we can't graft it on at the end. The challenge for the designer is to create spaces to a high level of desirability while controlling costs. ➤





Nubian Square Ascends  
Boston, Massachusetts

Creating mixed-income housing of various densities helps these projects blend into the urban fabric.

The mixed-use nature weaves in retail, dining, and service components that spur economic activity and create vibrant

places to live. Likewise, for the commercial uses of these urban developments, it is critical that there are shops that cater to a variety of income levels, and places people can occupy that don't require paying for an expensive drink or product.

## 05

### Economic tools

There are various ways to make housing more affordable and keep it that way. These projects can use tools such as a community land trust, for example, to create rent limitations and limit the terms of resale of properties that are intended to maintain their mixed-income status. They can also leverage Opportunity Zone funding from the city and state, and infrastructure grants for projects that benefit low-income neighborhoods.

## 06

### Creative strategies for parking, block sizes, housing type

At Park Hill, we're learning that we can make smart choices about parking—incorporating some surface parking in our block sizes—so that we can preserve affordability and control costs on projects, whereas in Nubian Square, a parking shortage was addressed by concealing an inexpensive above-grade precast parking structure in the center of the block. Housing types such as three-story walkups might not be flashy, but done right they have an urban presence and allow us to integrate mixed-income housing seamlessly into an existing urban fabric.

## 07

### Creating a job base

Not only is lack of jobs an issue in these underserved areas, but many residents tend to work elsewhere—sometimes far away. In many cities, workers in the service sector are increasingly challenged by long commute times which strain their social connection, pocketbook, and quality of life. Job creation is an important tenant of our equity-minded projects so that community members can work closer to where they live. And these jobs should, in theory, catalyze small business activity beyond the site itself. Boston's restaurant industry relies on labor from Roxbury, but few residents are ascending to the top of the foodie echelon. Nubian Square Ascends will house a Culinary Institute that will feature guest chefs from Boston's best kitchens training locals for long-

term careers. The office building above the Institute will be tenanted by local minority-owned businesses mixed with institutional users, creating a blended rent structure to support entrepreneurs.

## 08

### Make a destination

At Nubian Square Ascends, the client saw that rather than more affordable housing, what the community really needed was a hub for commercial activity—a mixed-use center to provide jobs. But more than that, it had to be a destination for people, a buzzing place that would draw traffic to ailing main street businesses. In response, we designed Nubian Square Ascends to intersect with culture, commerce, food, and craft. Nubian Square Ascends connects to and amplifies the existing and exciting Black >



Market, an outlet and incubator for artisans, with additional space in the Nubian Market where they can sell their wares. The new Cultural Hall at Nubian Square Ascends will host performances in its 350-seat performance space and connect to the complex's art galleries, bar, lobby, stage, and artist maker space.

We gave Nubian Square Ascends a bold look and presence to match its function. We were inspired by traditional African fabric rugs and used this notion of weaving in the colorful wavy brick design for this cultural and commercial hub.

## 09

### Connecting to the city network

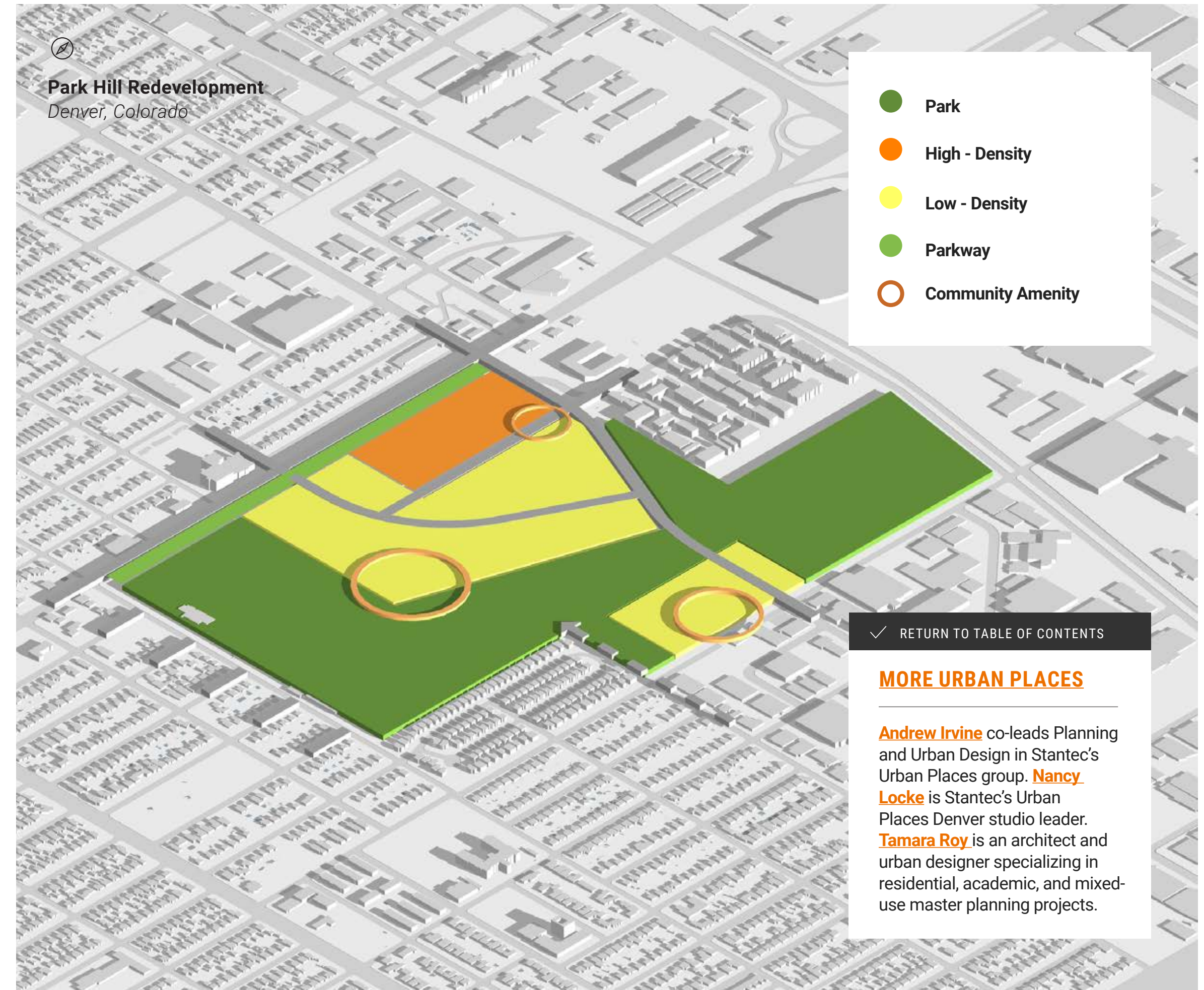
For these developments to work as destinations, as communities with connection to the full range of amenities the city has to offer, they must be united with the city grid and an array of multimodal transport from subway and bus to bike lanes.

In the case of Park Hill, we can connect neighborhoods that were previously cut off to pedestrians by an impassable golf course.

## 10

### Sustainable, blended communities

Decades ago, society saw affordable housing as something to be placed in out of the way places, often resulting in disconnected living situations that were all too easy for authorities to neglect. Today, we can see that successful, resilient, meaningful communities come from come from integration of housing in mixed income neighborhoods. When we design for that, we get much more sustainable, blended, and healthy communities where people can celebrate, rather than be separated by, their differences. **D**



# BALANCE FOR ALL

Increasing access to mental healthcare for city dwellers

BY ENA KENNY AND ROBYN WHITWHAM



# Today, we know that mental health care is something that affects everyone.

## VARYING SCALE FOR URBAN MENTAL HEALTH SERVICES

Stella's Place is a young adult mental health center in Toronto, Ontario. A registered charity, it provides comprehensive services for people aged 16 to 29 who are experiencing mental health challenges. Its services include outpatient clinical treatment, group therapies, peer support and navigation, creative arts, fitness and wellness, as well as free, online support services. Stella's Place supports more than 1,500 young adults and their families each year. With demand for its services increasing, Stella's Place had outgrown its current space. Its new facility will be located right in the heart of Toronto's downtown, occupying a former candy factory built in 1912. The new space is set to open in late 2021.

Toronto, ON

Stella's Place



Traditionally, healthcare organizations favored isolated mental health facilities out of the way in the countryside, but increasingly we see modern facilities woven in the urban fabric. Globally, healthcare organizations continue to rethink the siting of mental health facilities—to meet clients where they live, to boost their visibility, and to improve access.

Societal stigma, ignorance, and prejudice about mental health care persists and remains a barrier to those seeking treatment. Our designs should work to reduce stigma for people living with mental illness and addiction, creating community connections that aid in a recovery and support hope, dignity, and inclusion. We design spaces to support clients as they navigate their paths to health and create a safe space in which to interact with loved ones, clinicians, and fellow clients. >

## Design questions

So, how should we design modern, purpose-built mental health spaces within urban cores? How can we keep spaces feeling as “normal” as possible to help break the stigma? How do we reinforce connections with the surrounding community?

Two recent projects in Toronto, Ontario show us that while the need for mental health care and support is universal, we don’t all access it in the same way. While quite different in scale and mission, there are numerous parallels between the two facilities in how design process and design elements can support our clients’ mission to connect to the community while supporting the well-being of users and staff.

## Community input/ Co-designing

The most valuable design advice comes from the occupants themselves. Young adults were the key stakeholders in designing the new Stella’s Place. The Stantec design team, all under 35, share generational experiences with and have some sense of the mental health challenges that the young people at Stella’s face.

For Stella’s, we engaged in a collaborative process and held several visioning sessions with the staff at Stella’s Place as well as young adults who utilize its services early in the process to learn what they wanted in their new building.

The clients spoke freely. Nothing was off the table—even the most pie-in-the-sky ideas communicated a feeling that designers valued. If someone said, “I want a roller coaster at Stella’s Place,” we understood that to mean, “Okay,

you want it to be fun, and light, and exciting.” Capturing those feelings in our visioning session resulted in inclusion of space to accommodate yoga, cooking classes, games, and other opportunities to be “playful and fun.”

At CAMH, thoughtful insights from the community of clients, families, staff, and neighbors shaped our design. During design, the clinical staff “experienced” the building using virtual reality, gaining confidence in layouts and sightlines. And we sought and incorporated input from clients (inpatient and outpatient) who brought to light their personal experiences in outdated buildings and hopes for the new spaces. Clients reacted positively to the openness and lightness of the spaces they saw in renderings, appreciated the individual ensuite washrooms for every bedroom, and shared their emotional and intuitive responses to the proposed colors and materials. >



## CENTRE FOR ADDICTION AND MENTAL HEALTH (CAMH)

Headquartered in Toronto’s Queen West neighborhood, CAMH is Canada’s largest mental health teaching hospital and one of the world’s leading research centers in its field. It offers clinical care to more than 34,000 patients each year. The 27-acre CAMH campus was once the site of the Provincial Lunatic Asylum, which was surrounded by a brick wall that was designed to quite literally keep patients in and the community out. A multiphase redevelopment plan is underway that intends to break down barriers and to strengthen CAMH’s ties to the community. Stantec has been supporting CAMH’s campus transformation for the past 12 years, first with Phase 1 B—a three building expansion and now with the completion of the latest phase—which helps the hospital achieve its vision of inclusive and recovery-oriented mental health care. The most recent Phase 1C project includes two new buildings, the McCain Complex Care & Recovery Building, and the Crisis & Critical Care Building both of which opened in November 2020.

## Select safe materials that feel non-institutional, uplift with color

Biophilia theorizes that people feel better with views of nature or natural things. At CAMH, we used a sophisticated and biophilic palette for materials and finishes in interior public areas: wood-look and real wood, natural stone, porcelain, and terrazzo. We incorporated colors that the clients preferred, calming tones drawn from elements of nature such as water, sky, and foliage. Uplifting accent colors aid in intuitive wayfinding, reducing the need for institutional signage. At CAMH a simple design aesthetic energizes semi-public spaces—like activity rooms and teaching kitchens—for interaction and learning by locating their “face” toward the bustle of the city. Public areas like reception desks are infused with vibrant colors like bright yellow. As one young former client said during a CAMH design consultation, “It feels more like a university campus space or a modern library than an institution.” Vibrancy is

a priority at Stella’s Place. For its young adult clients, comfort derives from a sense of belonging, and they want to see their bright personalities reflected in their surroundings.

In client visioning, we heard “I want it to be vibrant and I want it to be happy and inclusive and I want to show the raw materials of the existing building, I want to see brick and wood.” So, we sought to create lively spaces, to allow clients to build community—together. Building science testing on the exterior layers of brick determined that the walls provided adequate insulation, which meant that the client’s desire for exposed brick indoors could be fulfilled. We tested the existing thick timbers for load-bearing capacity and determined they could be fully incorporated into the warm, natural design.>

Toronto, ON

Centre for Addiction and Mental Health (CAMH) Crisis & Critical Care Building



## Openness, access to green space and daylight

Overcrowding and congestion can cause agitation and add to an institutional atmosphere. At Stella's Place, we designed open areas to avoid congestion and promote physical distancing. Inside, wide corridors with built-in benches and open concept gathering areas and lounges promote universal access, and prioritize personal choice.

## A range of spaces

At CAMH, we felt that private spaces, like bedrooms and inpatient unit lounges, should be positioned away from busy streets and toward green spaces and courtyards. Our CAMH design consultations revealed a preference for soothing, softer colors, and homelike differentiation within these private spaces.



Toronto, ON

Centre for Addiction and Mental Health (CAMH) Crisis & Critical Care Building



At Stella's Place we were focused on curating common spaces fostering social interaction. While Stella's only offers outpatient services, we learned that many of its users find places for a quiet moment alone equally important, so we're including those, too.

## Inclusive design

The cohort of young adults at Stella's Place spoke up for inclusive design. We agree that there really is no "average" person, spaces must accommodate a broad variety of users and experiences. So, we simulated walkthroughs of the space as a person with visual impairments, a person with a larger stature, a person with social anxiety, and as a person with a physical disability. >

## Welcome the neighborhood

If we make mental health more accessible and visible, we counteract stigma. But more than that, forging strong community connections to service providers is a critical step in recovery.

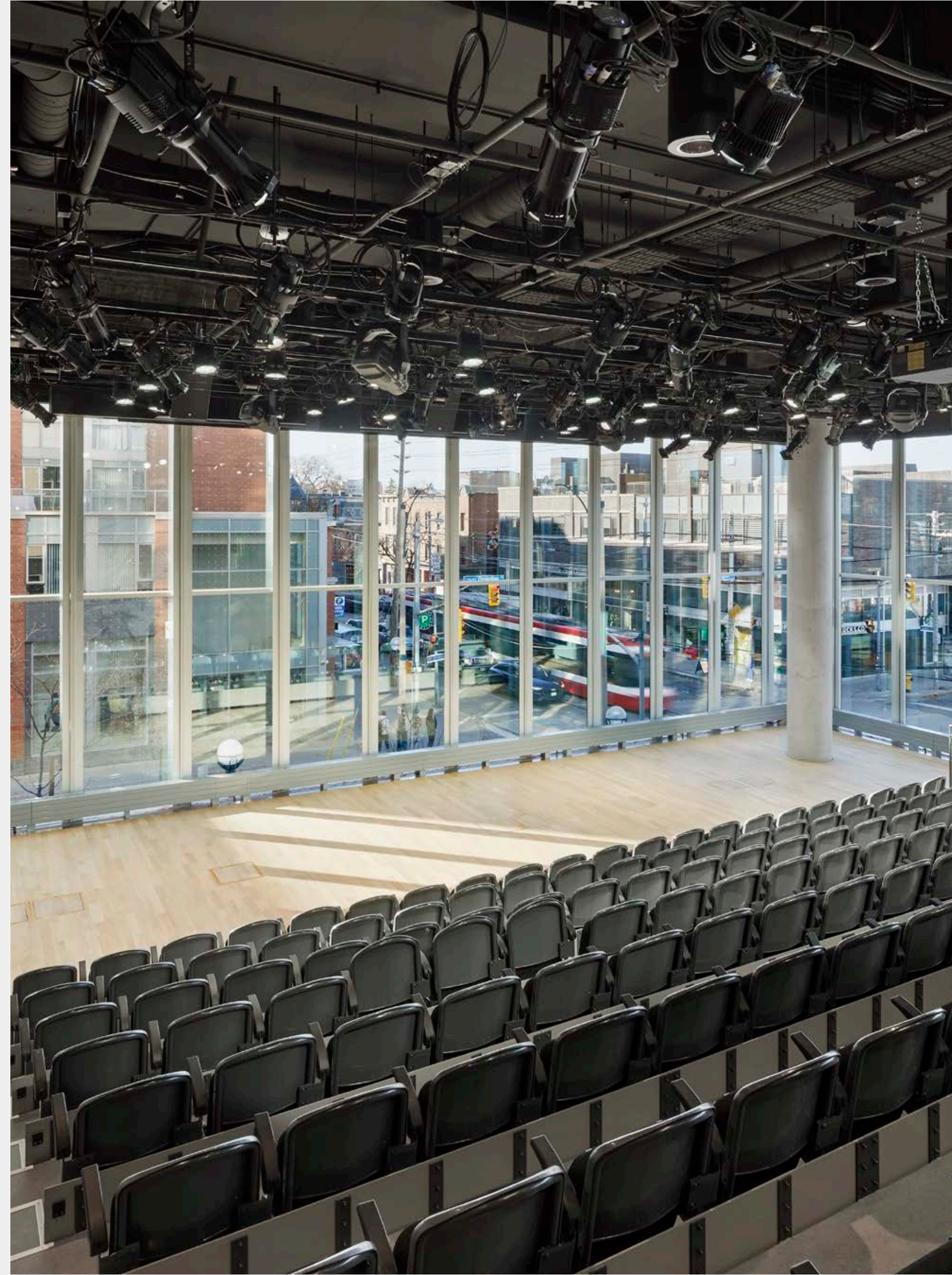
CAMH, therefore, connects to the streetscape of a bustling arts district. The plan extended city streets further into the campus and interspersed treatment buildings with retail and housing. The new dedicated mental health emergency department is accessible by foot, public transit, or drop off by car.

## Community asset

The facility should reach into the community for the client's benefit, but it's just as important to find opportunities to bring the neighborhood and its people inside. The large library is among the newest amenities at CAMH that serve clients, staff, and the neighborhood. The new building's highly visible auditorium highlights its role in public interaction and education. Fostering employment opportunities is an important part of CAMH's vision for client recovery. Its teaching kitchen offers clients a place to learn life skills and fully connects to the Queen Street streetscape. >

Toronto, ON

Centre for Addiction and Mental Health (CAMH) McCain Complex Care & Recovery Building



THE MODERN MENTAL HEALTH CRISIS EXACTS A SIGNIFICANT TOLL ON OUR SOCIETY.

**ONE IN TWO** CANADIANS HAVE—OR HAVE HAD—A MENTAL ILLNESS BY THE TIME THEY REACH AGE 40.

MENTAL ILLNESS IS A **LEADING CAUSE OF DISABILITY** IN THIS COUNTRY, PREVENTING NEARLY **500,000 EMPLOYED CANADIANS** FROM ATTENDING WORK EACH WEEK.



Toronto, ON

Centre for Addiction and Mental Health (CAMH) Crisis & Critical Care Building



## Leave room for users to make it their own

The former location for Stella’s Place was beloved by the staff and participants because they had customized it over the years. The design team plans to bring beloved elements from its original location, including brightly colored walls adorned with participants’ art, local custom-made furniture, and cozy bean bag chairs, to the new space. Mental health spaces for youth need to allow for self-expression and creativity to happen and encouraging opportunities for users to make their mark will strengthen the personal connection to the surrounding space.

## Integrate artwork that creates a welcoming space

Toronto’s Queen Street is an arts district known for its murals and art galleries. CAMH’s design converses with the local culture and features a therapeutic art program of its own. The program includes a variety of art from digital installations to sculpture, photography, large scale graphics on glass, and carved stone panels. Many of the artists whose work is featured in the buildings are former clients and their pieces offer hope and beauty. Art in a mental health center can engage, act as positive distraction, aid in wayfinding and landmarking, and tell inspiring stories.

The modern mental health crisis exacts a significant toll on our society. One in two Canadians have—or have had—a mental illness by the time they reach age 40. And mental illness is a leading cause of disability in this country, preventing nearly 500,000 employed Canadians from attending work each week. No longer can we let mental health hide in the shadows. We need mental healthcare access on main street. **D**

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### MORE HEALTH

**Ena Kenny** is the interiors lead on Stantec’s Global Health Sector Leadership Team. **Robyn Whitwham** is an architect working in healthcare and community support services in Stantec’s Toronto office.



# MISALIGNMENT

BY MARY SORENSEN

A global pilot project during the pandemic uncovers an imbalance that needs attention when we go back to work.

Confidential Technology Client  
Madison, WI



## No aspect of modern life has been as upended by the pandemic so much as the workplace.

What's the future of the workplace in a world where we don't need to go to the office to work? What trends are going to shape the office as we attempt to go back to work? What adaptations will be necessary to keep us safe?

Prior to the pandemic, the office was already evolving, but now expectations for change have accelerated and intensified. In fact, 42% of our clients surveyed expect a contraction in the commercial real estate market. Now, our clients are asking questions about the office with more urgency. To answer these questions, we must take a look at where the workplace was headed pre-pandemic and what this global work-from-home pilot project has illuminated about the future.

### **Pandemic accelerated existing workplace trends**

Due to the availability of technology and the evolving nature of work, remote work was already an option for many before COVID-19 hit. But now, businesses that were reticent to enable employees to work outside the office have been forced by necessity to experiment with it. By and large, they have seen success. Now they have experience to support that they can still get work done without sitting at an office desk. In fact, Stantec's Workplace Transformation Survey found that of clients with an opinion, 54% felt that productivity has been positively impacted by working from home. >



**Confidential Technology Client**  
Madison, WI

On the user side, many employees are experiencing a kind of relief. There was already simmering demand for more flexibility and choice in the workplace. Pre-pandemic, in the knowledge worker arena, I saw data that showed **74% would quit their jobs to go to a company that would allow work from home**. Enabling choice for employees is one of the most influential, non-monetary benefits companies can provide to enhance satisfaction and improve retention.

There was already an evolution taking place in how we define the role of the office. The pandemic and work-from-home orders have accelerated it and showed us that, for many, it isn't what it used to be.

### **Economic pressures must be balanced against people-centered design**

From a business perspective, there are always economic pressures to re-engineer and find greater efficiencies. That often means re-examining the real estate portfolio. Since employees can be productive working elsewhere, 'Why can't we just shed that space and save some money?' is a current consideration. But before we throw the baby out with the bath water, it's imperative to remember that organizational effectiveness requires more than individual efforts. High performing workplaces enhance and promote

the sharing of ideas through collaboration and interpersonal connections. They promote a sense of community and reflect a culture to connect an individual's efforts to something greater than themselves. Engagement is a critical measure of employee satisfaction. Employers would do well to see the workplace as a strategic investment to optimize the value of their human capital.

### **Getting back to work, safely**

In the near term, clients want to know about reopening the office they have. Addressing health and safety is a primary concern. We have already helped clients modify existing furniture and layouts to reinforce social distancing and assess circulation and traffic flow. Employers are implementing new protocols for sanitation, along with new signage and wayfinding strategies. Providing obvious visual cues serves as not only a reminder of individual responsibility, but it communicates and reinforces that the company is invested in employee safety.

[Download Stantec's Getting Back to Business guide](#)

Less visible, but equally important adaptations to communicate are the engineering modifications of the space. We are working with clients on interventions such as touchless

controls, [modifications to MEP systems](#), including enhanced air filtration.

Even upgrades to [lighting systems](#) can be employed to provide passive disinfection. These COVID-related adaptations will become commonplace, as many are being evaluated as updates to building code requirements, or industry standards such as [ASHRAE](#).

### **Today's misaligned office**

Technology has taken us a long way, but it doesn't change the fact that we are human beings, that seek connection in spontaneous, chance encounters with others. These serendipitous interactions are key to sparking new ideas and creating a sense of shared purpose.

People want to be in the office but not necessarily back at their desk. They want to engage with their colleagues, face-to-face. [Stantec's Workplace Transformation Survey](#) indicates people want to come back to the office for collaboration/togetherness, but our benchmarking data shows that 56% of office space is dedicated to desks or individual/focus space with just 16% assigned to collaboration. There's a misalignment between needs and what offices offer. >



**What do you want your future workplace to be?**  
[Take the quiz.](#)

**There is no one-size-fits-all solution to the future workplace.** To optimize the workplace, we need a deep understanding of how work gets done, at all levels, starting with individuals. Then, we can design workplace solutions that are aligned to the strategic objectives and priorities of the organization. We have created an online tool to help illustrate a variety of workplaces types. Each type is a generalization or what an office might look like, for different types of organizations- from those heavily dependent on on-site employees, to those who need the office for short-term, "all-hands" team engagements.



The office will no longer be measured solely on its ability to support focus or collaboration. If individuals can focus elsewhere, the strategic workplace will provide what home and coffee shops cannot—community, connection, culture, and social engagement. This is not to suggest that we start building playgrounds. This is still about getting work done.

**But engagement, connection, sense of belonging, and mission—these are all elements of well-being, critical to organizational effectiveness where the physical workplace plays a strategic role.**

In re-envisioning the workplace, we ask what aspects of work do we set the stage for, that are not well supported in a virtual way? It seems that the scale is tipping, and the future workplace is where people come to work as teams, not as individuals. Employers will prioritize spaces that support being together. The high-performing workplace of the future will be a magnet, not just for employees. It will also bring together clients and partners, and for all these occupants it must visually and experientially communicate a company's culture and brand. **D**

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### **MORE WORKPLACE**


**Mary Sorensen** is Stantec's Global Workplace Strategy Leader.

**The Tennyson**  
Plano, Texas

# IN THE KNOW

Designing for knowledge sharing  
while building community

BY LEO LEJEUNE AND SCOTT SULLIVAN

 Temple University - Charles Library  
Philadelphia, Pennsylvania  
Stantec/Snøhetta

**The buildings we design to store and share knowledge say a lot about the communities we envision for tomorrow. Community gathering spaces such as libraries, sporting stadiums, or even convention centers must respond to the needs of community, build culture, and participate in knowledge sharing. But even more importantly, they serve a community need to congregate, interact, and create shared experiences. These spaces knit together diverse aspects of people and place and in doing so, form the backbone of our communities.**





**Temple University - Charles Library**

Philadelphia, Pennsylvania

Stantec/Snøhetta

For more than two thousand years, libraries have acted as repositories for community knowledge (originally tablets, then books). But they have also served as the intersections of social interaction, news sharing, and debate for

people. Today's university libraries must fulfill multiple functions—storehouses for information, but also as settings for research, hubs for social connection, spaces for learning, and gathering spaces for social belonging.

Despite the advance of technology and remote work, professionals still crave the personal and social connections. Spaces that serve to bring people together, to share ideas and knowledge like conventions have a key role to play in building stronger communities. Let's take a look at some recent work that connects people and places to create community.

**Empowering a research university**

Temple University wanted to change the game and reorient itself as a research institution—this was its call to action for its new library. They wanted a multi-faceted building that would become the vehicle for cross disciplinary research between biology and medical disciplines in the sciences or a relationship between business

administration and economics. They knew that they needed spaces that could foster that interaction.

**A 365 cultural experience**

The Calgary Stampede is an extravaganza of cowboy and horse culture famed for its Midway Rodeo, chuck wagon races, and mini donuts. It's been going on for over 100 years and it's Calgary's biggest tourism draw next to the Rocky Mountains. Unfortunately, for most, it only runs 10 days every July. So when Calgary wanted to build a new convention center to compete with the elite convention cities of the world, it needed a building to showcase Calgary and offer a bit of Stampede culture every day of the year. The new convention center will stimulate the local economy—through tourism, restaurants, hotels, taxis and more while exposing people from around the world to the city and culture.

**Bring communities together**

Temple saw the library as an opportunity to empower its communities, the Temple >

University community and the North Philadelphia community. Along with our partner firm Snøhetta, Stantec set out to redefine the academic library as a new community hub. Located at the heart of Temple University's Main Campus, adjacent to the iconic Bell Tower, the building is accessible to any of Temple's 30,000 students.

### Ensure equity in access to knowledge

There isn't a public library nearby, so the Charles Library allows Philadelphians with an ID access to the library's books and movies, reading room, and to attend free events, exhibits, performances and workshops. The Community Computer User card enables them to check out computers. This sense of equity extends to the students. Chromebook vending machines in four locations throughout the library allow any student to go in and use their university ID to check out a Chromebook laptop and use that wherever they want in library.

### The Book Bot

Instead of having a traditional library with acres of tall browsable

stacks, we took 90% of the volumes of books that are in the library stored them underground in a concentrated vault roughly 50 feet tall and 150 feet long. Librarians access the books via an automated storage retrieval system (ASR) called the Book Bot. In this way, browsable stacks occupy just 20% of the footprint they would in a conventional library, and that frees up space for community.

### Space for study and collaboration

Temple wanted to create a culture of collaboration within the library. With the Book Bot freeing up that space could be dedicated to student study spaces ranging from small conference rooms to open formal reading rooms and a variety of informational collaboration areas. There are structured learning spaces and medium-sized conference rooms as well. More collaboration means there's more opportunity for new ideas to ferment, advancing research and Temple. In its 220,000 square feet of space, Charles boasts 40 meeting and seminar consultation rooms of various sizes and types, and includes roughly 1,600

seats for students in various configurations.

### Transparency and connection, reaching out to the neighborhood

The library had to be easy to navigate and understandable from the moment of entry. We designed it so users can physically see the other floors right away. So, a staff member can direct you to the maker space, for example, without showing you a map. There's also a large, inviting stairwell where students and staff to walk up and get to the floors with math and science tutoring, learning labs, maker spaces and the graduate study lab.

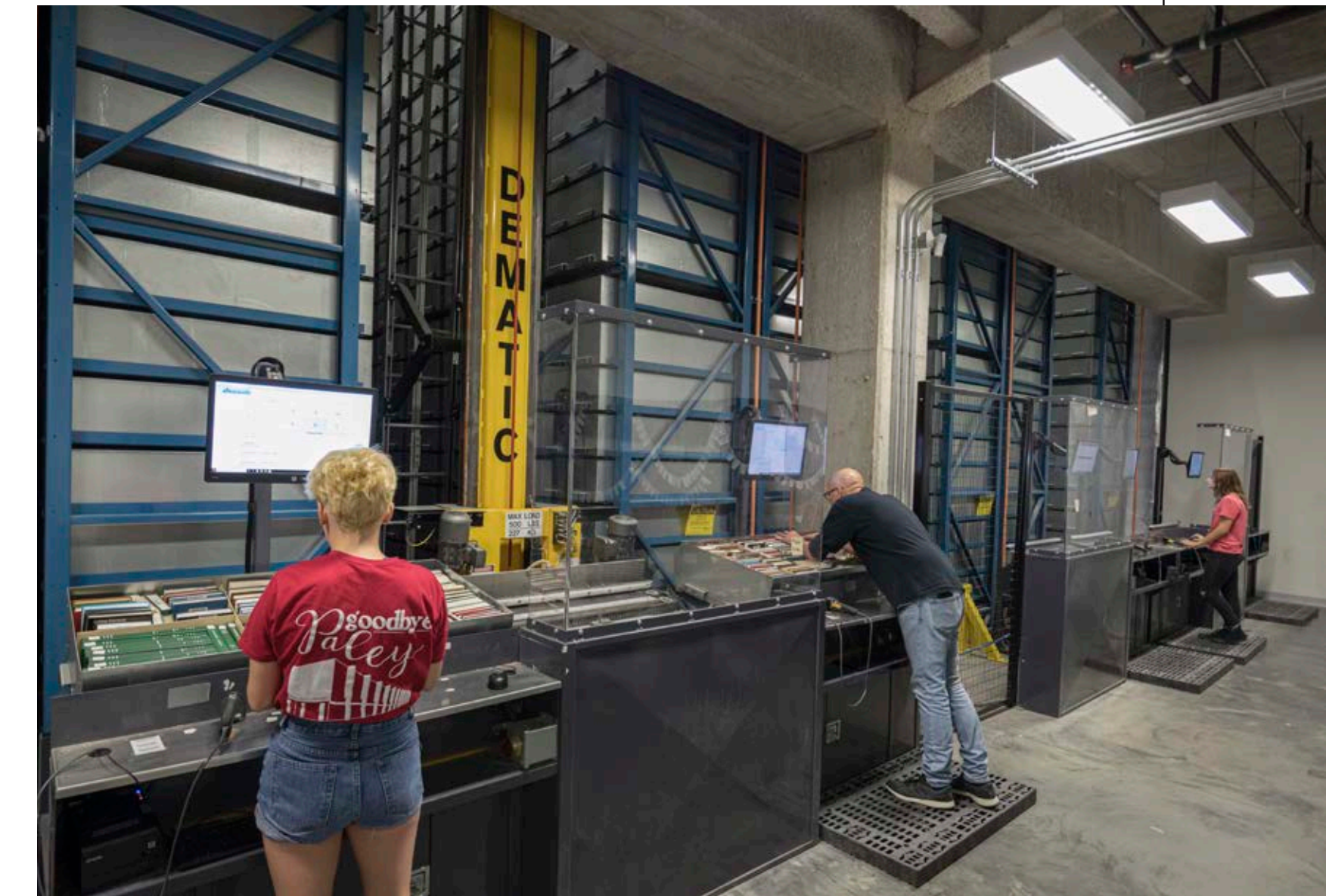
We wanted the library to offer a view of the outdoors wherever you were. So, there's lots of naturally lit windows that are spread out throughout the space. The most dramatic are the two arched windows adjacent to the lobby. >



**Temple University - Charles Library**  
Philadelphia, Pennsylvania  
Stantec/Snøhetta

## Thanks to the BookBot, Charles Library has 80% more user-facing space than its predecessor, Paley Library.

A high-density robotic Automated Storage and Retrieval System (ASRS), lovingly nicknamed the BookBot, houses 1.5 million volumes, 85% of the books previously held at Paley. The other 15 percent of the books will remain in the fourth-floor stacks as a rotating browsing section.



### A taste of the city

The Calgary Stampede wanted more than a convention center, it wanted the new building infused with that Stampede experience that could entertain visitors and locals every day of the year with a bite of that cowboy culture.

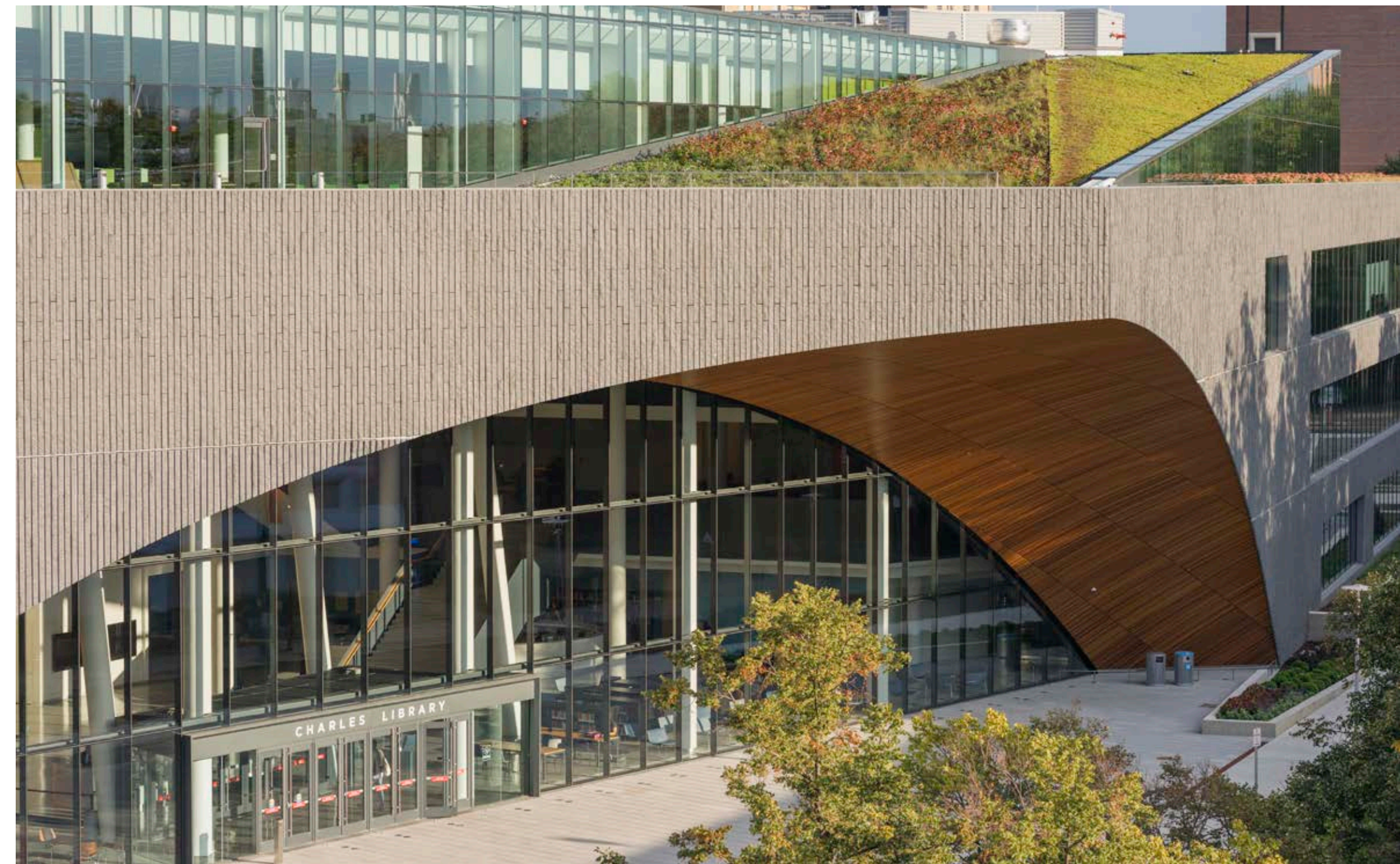
Picture a visitor from Ireland arriving in January. As a local Calgarian, I'd want to give you a taste of the region and culture, so I'd take you the BMO Centre, where we could get a glimpse of Stampede history, eat a high-end meal, shop for cowboy tack and Western wear and even get a view of the city and the mountains.



**Temple University - Charles Library**  
Philadelphia, Pennsylvania  
Stantec/Snøhetta



**BMO Centre Expansion**  
Calgary, Alberta  
Stantec, Populous and S2 Architecture



### Green roofs and stormwater mitigation

Philadelphia is an older city where stormwater management poses a perennial challenge. The **Charles Library has two large green roofs**. The green roof system and permeable pavers **absorbs 90% of stormwater run-off** and an on-site cistern captures an additional 10% of water and holds it and then naturally let it percolate back into the underground. This stormwater mitigation earns the project points toward the US Green Building Council for the LEED certification, as well as a \$7M grant. The Charles Library is certified LEED Gold. The green roofs benefit the broader community by helping manage stormwater but also provide a much needed biophilic reprieve for occupants. >



### The convention center of the future

Typically, convention halls are designed around their content, the technical specs and conference rooms they require to host large events. They are inward-focused containers and as a result, they are somewhat interchangeable. We were more interested in a building that would make memories, once-in-a-lifetime experiences that would set Calgary apart.

We designed the **BMO Centre Expansion** (as a part of the Stantec- Populous-S2 team) as a one of a kind convention center with a central hub/ atrium that can host crowds for a town hall, big dance, even live music. We wanted to set the stage for dynamic gatherings where groups can gather on the fly around topics of their choice. We considered every aspect of the attendee's journey—from the convention planner's booking to arrival, journey from the airport to the walk down the passageway to grabbing that first cup of coffee at the first conference session. And, we explored how technology now guides this journey, the registration table is a thing of the past.

Most importantly, we gave this **565,000 SF** building an outward focus—creating transparency and dramatic views of downtown Calgary, the surrounding Rockies. Rather than walling it off, we networked it in to Calgary and its culture.

### Sense of place

To infuse that Stampede experience in the building and offer a taste of regional culture, we connected the indoor market and retail network on the main floor to the city, with a café area offering everything from high-end chef creations to the local Stampede mini donut.

To create that sense of place, we used the center as a lens on the city and the surrounding mountains. We connected the building's interior spaces to the urban fabric at grade so that attendees can easily access the local flavor of restaurants, cafes and bars. We explored ways of increasing their access to the city through bike rental, access to the local greenbelt and bike paths as well as the transit network.

### Drawing the locals in...

The Calgary Stampede described a successful building as one that would host intermingling locals, visitors, and convention patrons. They wanted a destination. They wanted interaction. They wanted buzz.

The outdoor exhibit plaza can be programmed for everything from ice skating to live music, public art, the tallest Christmas tree in Calgary, and holiday season bonfires. The center's big exhibition doors open and spill out to this outdoor exhibit plaza so that passersby get a preview of what's happening >

## The BMO Center is already bolstering the local economy.

Every hotel room is booked for miles with 25,000 delegates coming from around the world for The World Rotary Convention in 2025.



**BMO Centre Expansion**  
Calgary, Alberta  
Stantec, Populous  
and S2 Architecture



## BMO Centre Expansion

Calgary, Alberta

Stantec, Populous

and S2 Architecture



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### [MORE CIVIC & CULTURAL](#)

Architect [Léo Lejeune](#) is based in Stantec's Calgary, AB office. Based in Philadelphia, [Scott Sullivan](#) has two decades of experience designing for higher education.

inside, such as the latest tech from a consumer trade show. We've created covered outdoor areas where a weekly farmer's market-style event can run and food trucks can pull up, offering their fare to international conference-goers and Calgarians alike. Elsewhere on the site, we've created an outdoor bandstand for concerts during the 10-day Stampede festival, the second largest music festival in North America.

### **Materiality and shape, transparency**

In its architecture and materiality, the BMO Centre building makes abstract reference to regional culture and topography. Rugged cowboy culture inspired the charcoal brick plinth, a rugged base which opens to the street. The second floor with its meeting rooms and two-story atrium offers internal transparency and views to downtown, nearby parks and arenas and from the ballroom to the mountains, so attendees always have a sense of where they are. The third floor is clad in a copper-colored composite metal panel that shimmers with the patina of a wrangler's belt buckle. The swooping canopy of the roofline over the pavilion echoes the movement at the Stampede rodeo, or of the amusement rides in the midway. The sculptural form of the building draws poetic inspiration from several contexts: a sinuous snow drift on the western prairie; the eroding banks of the adjacent Elbow River; or even the rolling foothills that lead to the Rockies. The interpretation is up to the visitor and unique to their experience and visit. **D**

# THE LILY PAD NETWORK

Developing a conceptual framework for advancing resiliency

BY JOHN MALUEG AND LAURA SACTLEBEN





WHILE HARVEY'S FLOODS WERE THE CATALYST FOR THE CONVERSATION, **THE LILY PAD SOLUTION** IS A BROAD, FLEXIBLE SOLUTION THAT CAN DEAL WITH WHATEVER THREATS AND STRESSES EMERGE AROUND THE COUNTRY.

Superstorm Sandy revealed the necessity of new thinking about resiliency in North America. The U.S. government, the City of New York and philanthropic partners like the Rockefeller Foundation elicited a boundary-pushing design competition (Rebuild by Design) to address the challenge of recovery. New York pushed for investment in resiliency that look at social, environmental, and economic metrics. From Rebuild by Design resiliency hubs emerged as a powerful conceptual approach. These hubs are assets that are integrated into a community which help it support, prepare, and respond to shocks and stressors such as an extreme weather events. But these assets can also contribute to quality of life during non-emergencies.

In the aftermath of Hurricane Harvey, a broad consensus emerged across Houston that the city must cultivate new ideas to plan and build for a resilient future. A year-long project initiated by the AIA and city council member David Robinson—Houston 2020 Visions—called for creative and innovative approaches to rebuilding the city to promote well-being, sustainable economic growth. The program challenged designers to create a vision for the city at all scales and facets. It was in this context that Stantec developed a concept, a holistic framework that would help Houston build

back better than it was before. We developed the **Lily Pad Network™** for [Houston 2020 Visions](#), and it was recently selected for inclusion in the Houston 2020 Visions exhibit and publication.

With the Lily Pad Network, we took the concept of resiliency hubs and applied it to the experience of Hurricane Harvey. The lily pad analogy came from the idea that resiliency hubs are like the elements that float above danger when disaster strikes. While Harvey's floods were the catalyst for the conversation, the Lily Pad solution is intended as a broad, flexible solution that can deal with whatever threats and stresses emerge around the country.

But then it takes it further. The Lily Pad Network challenges the concept of the resiliency hub to say yes, it's essential to have these hubs within the communities, but they need to be connected to each other. Threats and stresses impact each community differently. Even resilience hubs need a back-up. And the hubs in the Lily Pad Network do more than position the community to physically deal with a natural hazard like hurricane or drought, they also create an asset that the city can leverage to make a stronger social network to respond to other kinds of crises. >





### Why do we need a Lily Pad Network at all?

Resiliency is still a new concept, even a buzzword. To manifest resiliency, our society requires a shift in mindset across our industry, government, and communities. At the core of this mindset is an understanding of your vulnerabilities and risks as a community. If communities begin to consider their risks and vulnerabilities, their assets, and the potential consequences—they can quantify them. If they can assign metrics to these consequences, then they can prioritize which ones they need to mitigate. In many ways, we are coming from a place of ignorance to creating a baseline of knowledge. If we can identify risk, we can identify partners with whom we can reduce risk.

### What is a Lily Pad Network?

The Lily Pad Network concept acknowledges that every community has vulnerability and risk as well as assets, lily pads, that it can leverage. The Lily Pad Network is about using existing physical and institutional assets to help bolster communities and their resilience for the future. That lily pad could be a school, it could be a public library, it could be anything that is fixture within the community, a physical structure that could be retrofitted or renovated in order to act as a resilience hub.

When a community lacks social infrastructure or any kind of community facility, it may need to build a new typology (see Lily Pad Interventions, right) to serve as a Lily Pad for that area. The resiliency hub is relied upon in emergency situations, but it's also meant to be used day-to-day for education and services, therefore building social connections within the community that can be tapped into ahead of any disaster.

### A holistic approach, crossing silos, and reaping rewards

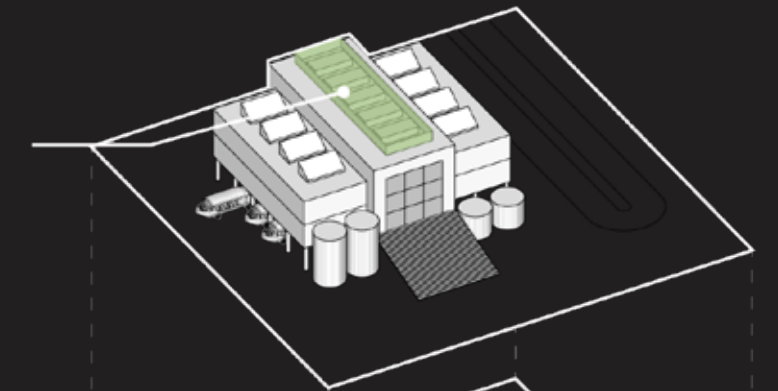
When we begin to look at resiliency as a multifaceted state that includes well-being, jobs as well as physical assets, we measure it differently. We can apply metrics against the social, environmental, and economic assets in a community. This approach is powerful, because it allows communities to better justify the investment in resilience. They can see the return-on-investment cross over from say infrastructure and education into health. Rather than seeing resilience as an extra expense in the design process, agencies that integrate it on the front end will see that the cost is low, and the benefits are high. >

## LILY PAD INTERVENTIONS

New Typology

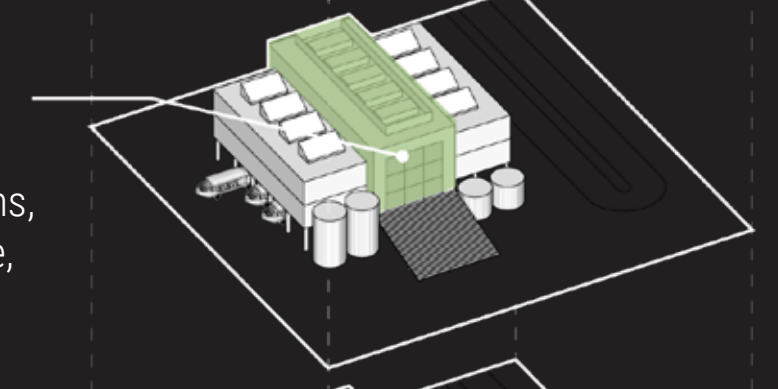
### WELLNESS

Air and water treatment system



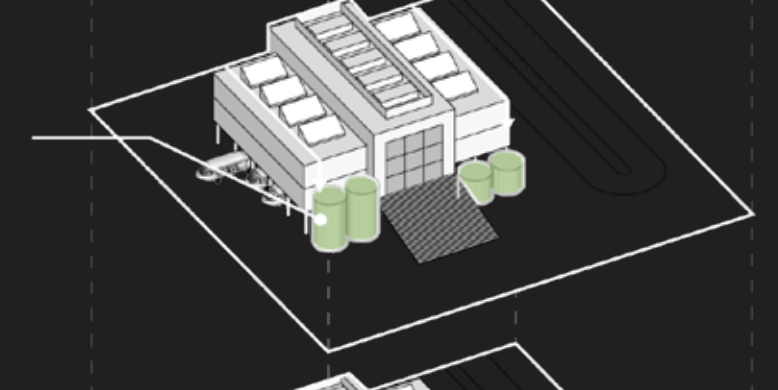
### COMMUNITY & SOCIAL INFRASTRUCTURE

Community gathering, social support programs, food and water storage, lighting and sight lines



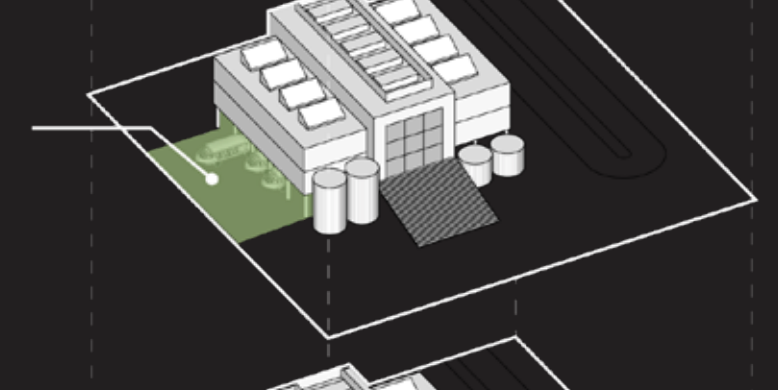
### LIVING WITHOUT WATER

Water harvesting and storage as well as landscaping (drought tolerant landscaping, biowales, etc.)



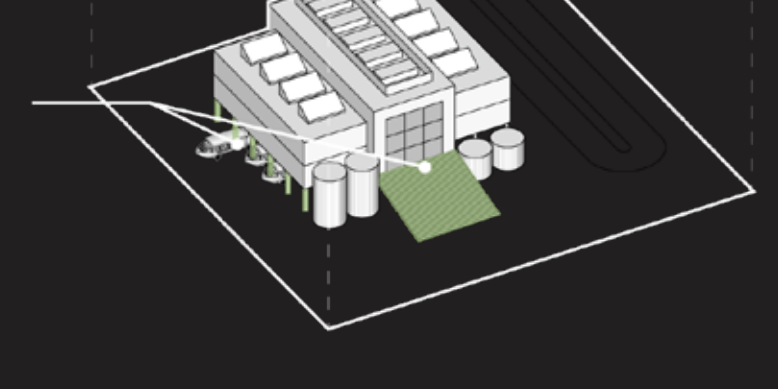
### CONNECTIVITY

Mobile fleet & space to house fleet



### LIVING WITH WATER

Elevate building



**The lily pad analogy came from the idea that resiliency hubs are like the elements that float above danger when disaster strikes.**

### Scalable

The Lily Pad Network recognizes that resiliency occurs at multiple scales. This scaled approach to resilience looks at the individual, the neighborhood, the community, and the city scale. The Lily Pad Network concept then becomes a useful jumping off point to consider ways of connecting individuals, community, and built assets for the purpose of resiliency.

### Lily Pad App


The Lily Pad app concept imagines technology that connects individuals within a neighborhood to educational media about resilience. It can be used to connect individuals to their neighbors and their local Lily Pad so that they are prepared ahead of time. During an emergency, users can get up-to-the-minute info and directions.

### Lily Pad Fleet

The conceptual framework could also include mobile elements such as the idea of a Lily Pad fleet. We imagined it as an aqueous vehicle fleet that on sunny days goes out to neighborhoods to educate residents on resilience and preparedness—in Houston, that might be hurricane and flooding preparedness. Then, in

emergency situations, such as a flood, the fleet goes out and brings people to safety at their local resilience hub.

### Flexibility

The Lily Pad Network concept has wide applications. Houston is already using the the lily pad concept as a framework for approaching its resiliency building efforts. And we have proposed using the Lily Pad Network in a study for the National Science Foundation, applying it to the shock of COVID and vulnerable populations in public housing, while looking at emergency assets in health and safety, jobs and education. Now, we're working with Native American tribes in Alaska on building resiliency using the Lily Pad Network concept. 

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### MORE RESILIENCY

**John Malueg** is a global leader in recovery and disaster management and manages Stantec's resiliency programs. **Laura Sachtleben** is Stantec's Global Education/S&T Sector Leader.

THE CONCEPT IS A NOD TO THE BIOLOGICAL STRUCTURE OF THE LILY PAD.

**LILY PADS REPRESENT THE RESILIENCY HUBS THAT SERVE THEIR COMMUNITIES.**

ON THE SURFACE THEY APPEAR TO BE FLOATING INDIVIDUALLY, BUT AS YOU LOOK CLOSER, YOU REALIZE THAT THEY'RE CONNECTED AND SUPPORTED BY A SUPPORT SYSTEM THAT INCLUDES GOVERNMENT POLICY, PUBLIC / PRIVATE PARTNERSHIPS, THE BUILT ENVIRONMENT AND PEOPLE.

WANTED:

# Laboratories

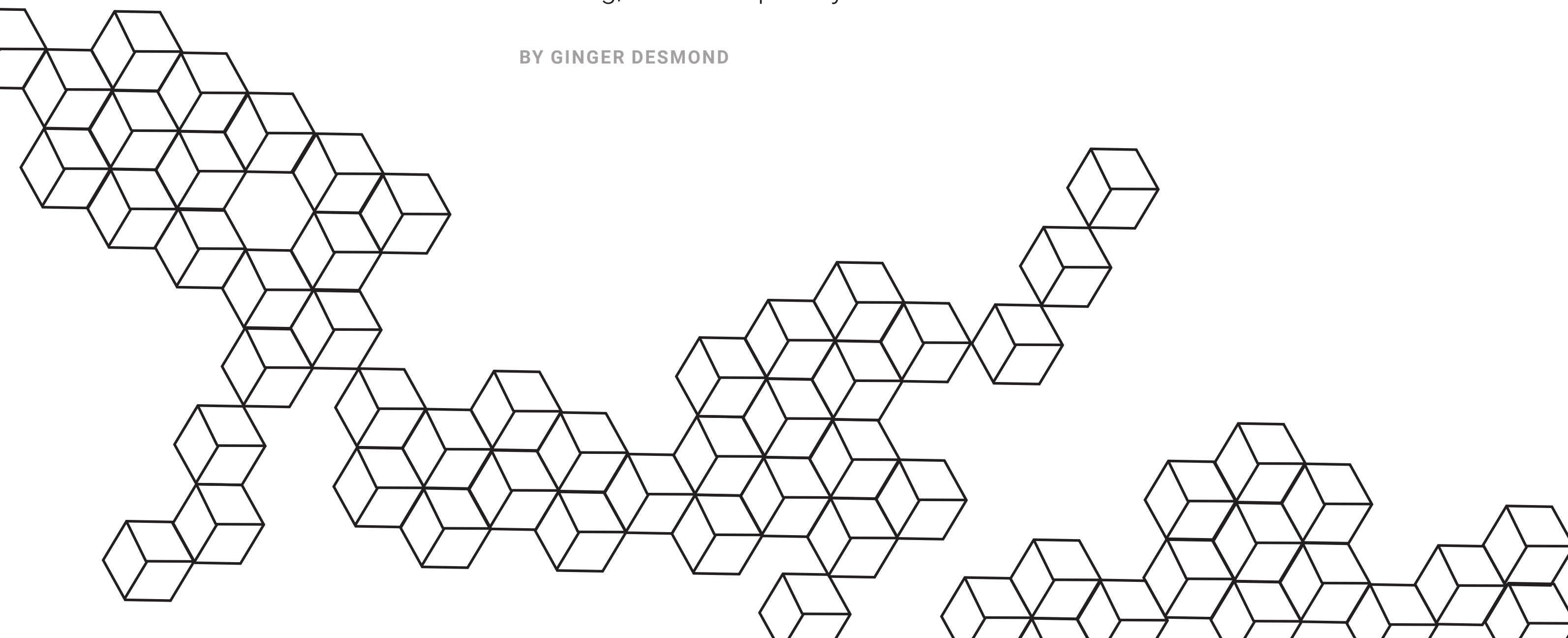
Designing spaces that meet the needs of fast moving, multidisciplinary research

BY GINGER DESMOND

## Boom in research

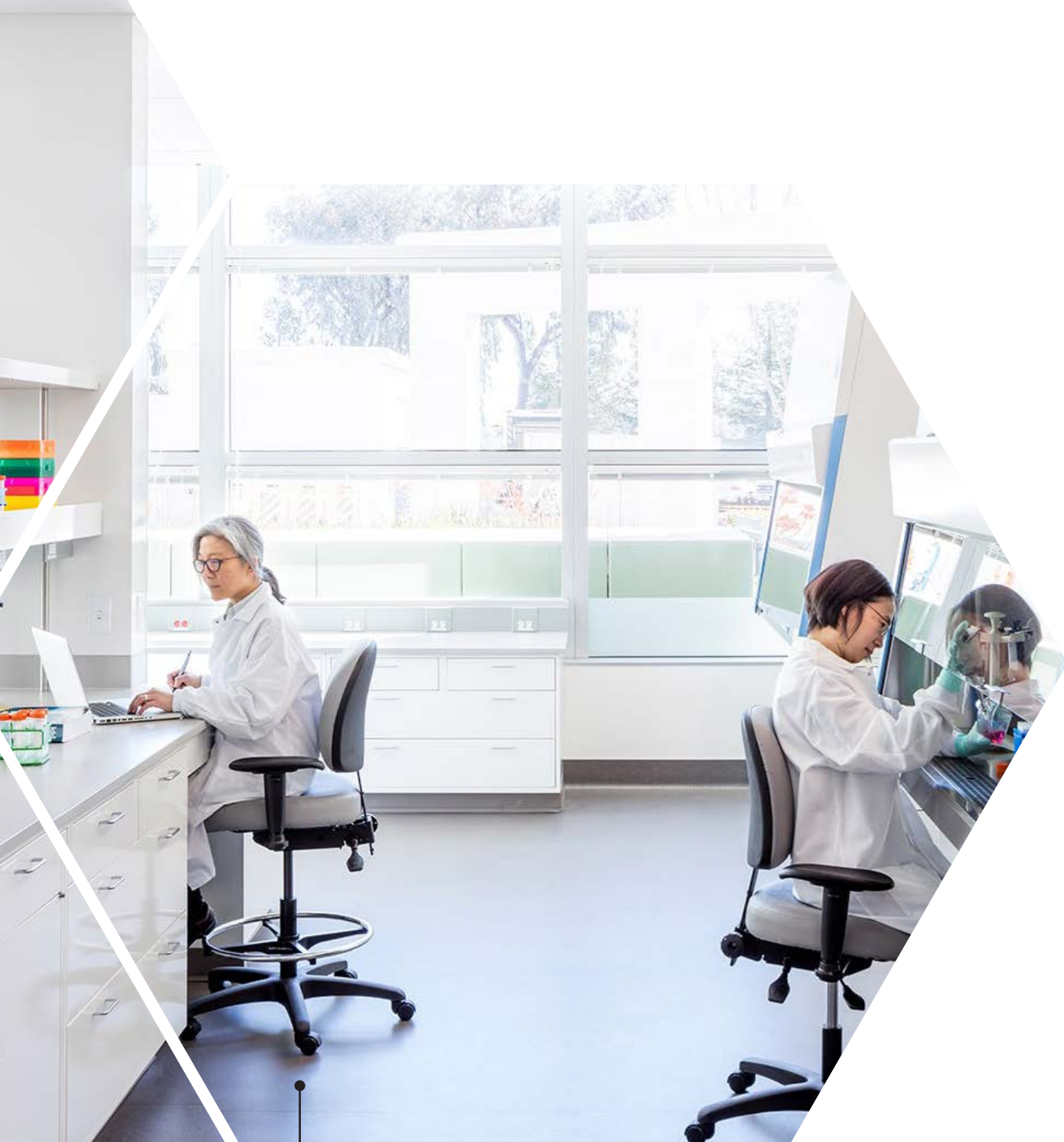
It's no secret that globally we're witnessing an explosion in research and investment in the biotech and pharmaceutical realm and the fields of life sciences, genetics, biotechnology, nanotechnology, artificial intelligence and quantum computing. The stakes are high in a quest for healthcare innovation too, for example, developing therapeutics that can change lives worldwide. On the surface, these disciplines might sound distinct and unrelated but increasingly they converge in many interesting ways.

Today, cross-disciplinary clinical research spurs the innovation that many tech start-ups and successful research firms are built on. This research boom, therefore, is taking place in geographic areas traditionally strong in health science and medical discovery, places like Boston and Cambridge, MA and North Carolina's research triangle where universities, research, and entrepreneurship flourish. >





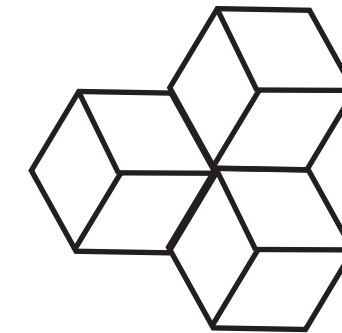
Boston, with its proximity to major research universities like MIT and Harvard, has long been a center for health science and medical science research. Today, its Kendall Square and Longwood areas are home to a high concentration of life science, biotech, and biomedical research firms.



**Confidential  
Client**

### **Offices out and labs are in**

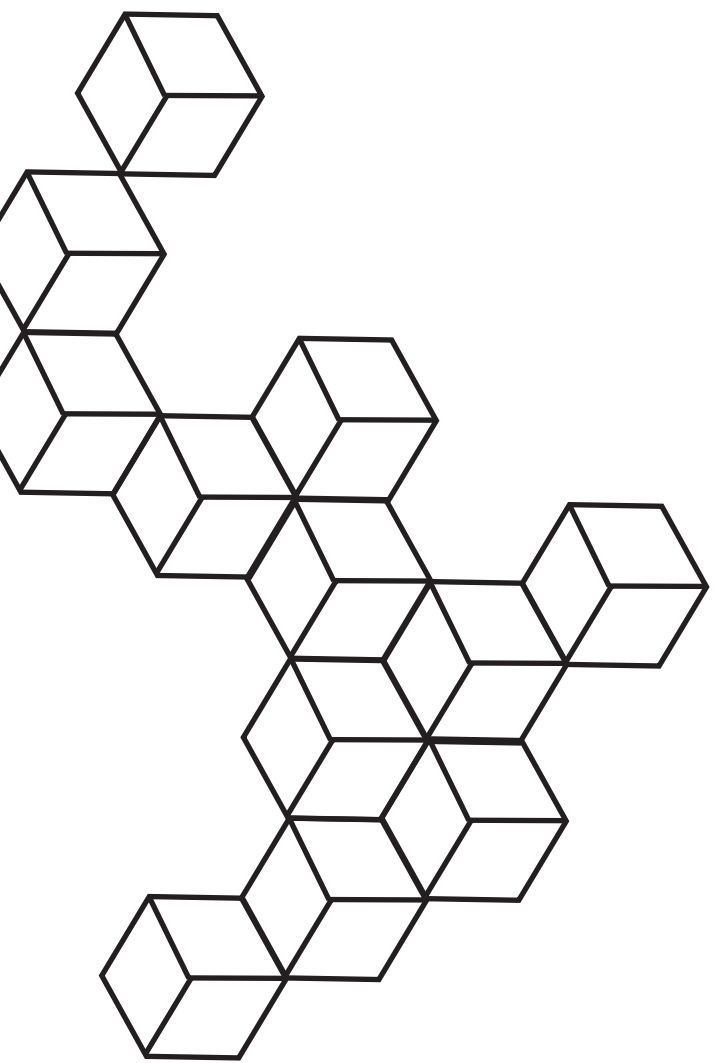
Meanwhile, the real estate picture has shifted. Developers who are building new or renovating—some may already have a permit in hand or a building in the ground—are adjusting their plans in light of the uncertain future demand office space during and after a pandemic that’s made remote work commonplace. Demand and the continuing need for new lab space remains strong, however, because the majority of science research requires specialized spaces and equipment not found in a home office. In addition, because of the chemicals and other potential hazards used in “wet” laboratories, these labs require specialized environments equipped with a high degree of safety features. The boom in drug discovery and search for a COVID-19 vaccines and therapies has only amplified this demand for labs. So, developers are choosing to build lab space, often in mixed-use projects. However, many are new to the research market and must get up to speed quickly to understand how they can create spaces that truly meet the needs of this dynamic industry.



### **Multidisciplinary**

The research community is increasingly multidisciplinary and new laboratory spaces must reflect that. Today’s research incorporates everything from artificial intelligence (which can look at the qualitative information and increase the speed of data processing) to materials science, biomedical engineering, genetics and molecular biology. A researcher might be working on medical research—such as exploring the use of synthetic chemistry to create material for a nanotube designed for pinpoint accuracy in drug delivery—while using physics to measure and predict the behavior of the tube. It’s not just traditionally more segregated branches of science such as biotechnology or bioscience or biochemistry that researchers are using in their day-to-day work. It’s an intersection of different technologies in different spheres of work which is becoming commonplace and accelerating. That’s one of the main drivers for space and trends in the research workplace. >



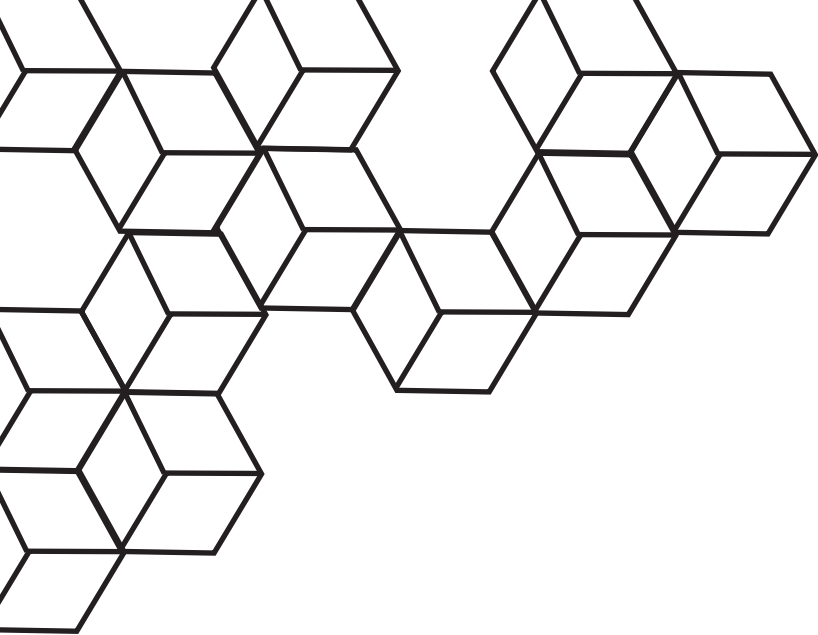


## Coworking

Research and lab spaces are taking their cues from the coworking world, places like WeWork, etc. in incubators such as Lab Central, biolabs, and Greentown Labs. Such coworking spaces in existing biotech clusters such as Kendall Square offer start-ups access to shared, powerful equipment (from 3D printers to centrifuges and clean rooms) that they otherwise might not have the budget for, access to peers, organized poster sessions and conferences, and collaborative culture. These spaces give firms a chance to recruit recent graduates who possess the latest innovative ideas and energy. But perhaps more important, they allow them to outsource the non-science parts of their business (facilities management, environmental health and safety) so they can concentrate on their research or product development. I see a lot of successful start-ups emerging from these coworking situations. >



Confidential Client



**Yale University Science Building**  
New Haven, Connecticut

**Even more open, flexible,  
and modular**

We've been designing labs to be open, flexible, modular for decades, but today the interdisciplinary nature and speed of changing technologies in research makes this even more important. As research teams change the technologies and disciplines they require for development of their concept or product, they will require a space that can change with them. Companies need the ability adapt their space to those technologies—they must be able to add a new piece of equipment quickly and effectively, for instance, as needed.



Today, we design research space that is specific enough to address the specific needs of scientists, but also flexible enough that our clients can change that without tearing the laboratory apart and starting over from scratch.

Planning electrical, plumbing and other services or service pathways and locations for maximum floor plate flexibility with minimal physical change is increasingly critical to achieving maximum long-term flexibility within research environments.

Research spaces on developer-led projects need the features of a typical lab building, but with more flexibility because we don't know who's going to be moving in. If the user is focused on bio engineering, they have a very different set of needs than users doing traditional biopharma work. Bio-engineering (making improvements in bio-sensitive robotics for artificial limbs, for example) can be much more hands-on than research in a pure biology or pharmaceutical lab.

This is where plug-and-play technology, modular and movable casework on wheels or legs, services (electrical, exhaust, gases, etc.) from the ceiling are essential. Because sometimes changes need to occur on the fly in a matter of days. The availability of elements such as a modular clean room, built offsite and plugged in to an existing building, further extend the flexibility of these new lab spaces. >



### Small scale production

Traditional pharma products are made in giant facilities on an assembly line, stored and shipped off for distribution. But more targeted individual therapies are emerging. And in some cases, the pharma industry needs smaller scale production for these products. Small production run drugs—for non-commercial drugs or targeted therapies, for example—will require flexible, modular spaces for a production line that can be adjust as needed. Adaptability of production for varied or smaller scale production will only become more important to the industry.

### Smart MEP

Smarter technology is making the mechanical supply of fresh air and ventilation, electrical, and plumbing systems that labs require more efficient. Smart tech can control when the system exhausts air and when it is required for use or increasing exhaust of spill fumes in emergencies, for example, to save energy. And labs can automatically run in a more efficient mode with fewer air changes when unoccupied. With active chilled beams, ventilation can be used independently from heating and cooling. These technology advances mean that while laboratory spaces will likely require more power and air, they won't be as hungry as usual.

### Shift work

Many of the safety protocols for working in laboratories are, ironically, well suited to life during a pandemic. Researchers are already used to wearing PPE, masks, gloves and goggles or face shields. But like everyone else, corporate labs are also having to adjust in response to COVID-19. Shift work is the major operational change we see. Rather than sit face-to-face at benches all day, lab workers and researchers are now broken up into shifts, working every other day or morning or evening hours, so that the density of lab occupation is cut by half or more. It will be interesting to see how the implementation of shift work affects that collaborative culture at these research and discovery-oriented firms.

### Marketing flexibility

Developers face a challenge in how they can market a space to a wide variety of potential users engaged in research. But what they can offer is a combination of design features that promote rapid reconfiguration, coworking space with shared equipment, and hybrid environment which blends ideas and culture from a wide variety research typologies. And that can make a difference—for both start-ups and corporate researchers in the fast-moving race toward innovation. **D**



Abiomed Headquarters  
Danvers, Massachusetts



## Climate change and resiliency and pharmaceutical delivery

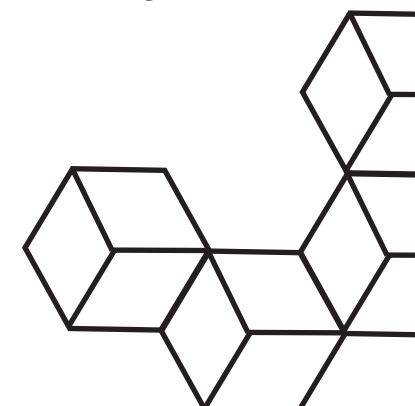
BY KEVIN MERRIKIN

On the other side of the pharmaceutical industry are the manufacturing, storage and delivery infrastructure that the industry needs to bring drugs to market. These facilities and warehouses must be carefully climate-controlled to maintain the integrity and effectiveness of drugs. They can't get hot. But today, uncertainty about the long-term effects of climate change makes it more challenging for us to design these clean spaces for resiliency. Designing to today's climate data does not ensure a space will be viable in 20 years. We must, then, design with extra capacity to meet the challenges of more extreme weather events, heavier rainfall and with flexibility in these spaces should they need system upgrades. Access to water will also emerge as a long-term consideration for these facilities.

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### [MORE RESEARCH AND LABORATORIES](#)

**Ginger Desmond** is a project manager and lab planner based in Stantec's Summer Street office in Boston.



Q & A



Capital Region Welcome Center  
New Baltimore, New York

## ASK AN EXPERT:

# How did you jumpstart your career in interior design?

Interior Designer **Cori Emery** began as Stantec's sole interior designer in our Albany, New York studio. Today, she's leading several science and tech office interior projects. The Design Quarterly talked to her about how the Stantec's Women's Career Empowerment program helped her focus her ambition and accelerate her design career.

INTERVIEW BY JOHN DUGAN





**Being open to the possibility of opportunity, that's what has led me here.**

**CORI EMERY**

**Q How did you end up on this career path to begin with?**

**CORI:** Having retired from a career as a NYC firefighter, my father went back to architecture school while I was still in high school, so it was something I was exposed to growing up. I really got a feel for the design industry and wanted to pursue it. But after taking an architecture class in high school, I knew I didn't want to be an architect. I really wanted to work with people regarding spaces and how spaces worked for users, so that pushed me towards the interiors side.

**Q Over the course of your 11-year career, what kind of projects have you worked on?**

**CE:** I hopped around firms until I landed at Stantec. I've worked on everything from boutique retail through airport retail, multi-story additions to historic buildings, incubator spaces, and welcome center concept projects. Now that I'm at Stantec, the science and technology sector is my current focus, but I find myself jumping back

into different projects when my schedule allows—and I love that variety. Because of my location in Albany, I can easily collaborate with our Boston and New York City offices on their projects, which have included multifamily housing and hotel work.

**Q What's the Women's Career Empowerment program at Stantec and how has it influenced your career?**

**CE:** I was part of the pilot program for the Women's Career Empowerment program in 2019. Roughly 45 women from all over Stantec buildings and engineering had the opportunity to talk through the challenges and frustrations that we've faced. We sounded off about how we feel, and whether we've been heard or not in our in our discussions about our careers. Historically, it's been a challenge to be a woman in the architecture, design, and engineering fields. In the past, our voices were not heard and our advancement expectations were not met to the same degree as our male colleagues.

As much as that was part of the discussion, it was a relief to hear that most of us have seen a huge change in the industry, myself included, where our supervisors are open to listening to what we have to say.

The program also provided a platform and sounding board for understanding how we could achieve our goals. It was really helpful to break off into smaller groups to delve into our individual goals and talk about how to achieve them in manageable steps with women who had the same experience and challenges.

It can be isolating to work through this all on your own. I loved being able to talk with the cohort, and work through our struggles and thoughts together. It wasn't so much about gender as about helping us be more proactive and get out of our own way by developing an understanding of our own capabilities and self-confidence. >



Capital Region Welcome Center  
New Baltimore, New York



The Capital Region Welcome Center, shown here, was inspired by the Dutch Colonial Architecture prevalent throughout the Capital district.

**Q** How did it influence your career trajectory?

**CE:** I was trying to refocus on what I wanted to get out of my career and understand what I wanted to do, both for me and my team. At the time I had just moved to the Albany office and I was still the only interior designer in the upstate New York region—aside from a few interior designers for healthcare. I'd taken a project management training botocamp and realized I wanted to be more of a design lead than a project manager. With such a small interiors practice in Albany, it meant I needed to grow something here, bring in work for myself and our interiors studio—to grow our portfolio.

The empowerment program gave me an opportunity to breakdown my long-term goals of building a team and a strategy into manageable chunks that allowed me to progress. And it was a really great opportunity to identify not only what I needed to do, but to share experiences with other designers and engineers that had similar goals.

**Q** What sort of opportunities have you surfaced since the program?

**CE:** I'm more confident of myself and clear in what I want to achieve in my career. I was able to bring in more work and lead projects to provide more of a foothold in interior design for this office, which was my goal. I wrote proposals for interior design work, often for the science and tech market, and built those client relationships. We also do master planning for these clients. I was also able to contribute my design talent to the Southern Tier Welcome Center project, which you may encounter on your next New York state road-trip. >

**Q** What kind of mindset allowed you to make your career dream a reality?

**CE:** Being open to the possibility of opportunity, that's what has led me here. When I first left school, I was basically a CAD designer drawing architectural details. Understanding what I wanted for my career and being collaborative has opened a lot of doors. I was open to learning from and working with different trades directly which gave me a good reputation with our mechanical, electrical, and structural engineers, not just our architects.

**Q** What would you like to do more of?

**LM:** I enjoy and want to continue working on the offices for the science and tech industry. But I also thoroughly enjoy working on public spaces such as the New York welcome centers, and I would love to get into working on some hospitality restaurant projects. We have a lot of craft beverage companies here in upstate New York, it would be fun to do a brewery. **D**



Capital Region Welcome Center  
New Baltimore, New York

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**MORE WORKPLACE**

**John Dugan** is the Editor of the Stantec Design Quarterly. **Cori Emery** is a Senior Interior Designer in Stantec's Albany, NY office.





Musée du Fleuve  
Niamey, Niger

FINALTHOUGHT

# Celebrating Niger's rich heritage

Designing cultural centers in West Africa epitomizes our strengths as a global firm

---

BY REBEL ROBERTS





The NigerHeritage group engaged Stantec to develop full architecture, planning, sustainability, engineering, and branding services for a pair of innovative, net positive energy cultural developments in Niamey and Agadez, Niger.

**There's a place near Agadez, Niger that's absolutely extraordinary. Visitors can walk in the desert to certain sites there and literally see dinosaur bones coming up out of the sand without any excavation.**

From there one can hike 30 yards to the east and find a burial site where an ancient village once stood. There's nothing quite as educational

or breathtaking as seeing evidence of prehistoric life preserved undisturbed right next to traces of the places where people chose to live. Much of what is now desert in Niger was once a green valley rich in animal life and human activity. The West African nation of Niger possesses rich anthropological and paleontological resources—but we rarely hear about them. Very few see these places in person.

Over the past three decades, scientists have unearthed significant archaeological and paleontological finds in Niger. But with little appropriate infrastructure to house precious items the artifacts are rarely displayed. Stantec is now designing two new cultural attractions for Niger's cultural and paleontological treasures for the NigerHeritage project with the goal of creating

compelling learning environments, that will attract more tourism, encourage investment and increase national pride. The NigerHeritage initiative is very important to our design team, but it is also aligned with our values and the range of diverse skillsets that identify us a global design firm. This project is emblematic of our commitment at Stantec to collaborative design with community and passion for improving quality of life.

### **Long-term partner**

Today, we're building on a 25-year relationship with Dr. Paul Sereno, a paleontologist, archeologist, and professor at the University of Chicago and Explorer in Residence at National Geographic. He's passionate about science, culture, and roams the globe looking for big fossil finds in remote places. Sereno's work knits together the origins of life on the planet with cultural anthropology and along with scholars and scientists from Niger, Dr. Sereno has made extraordinary discoveries in Niger. Dr. Sereno wants to create places to feature Niger's patrimony. >

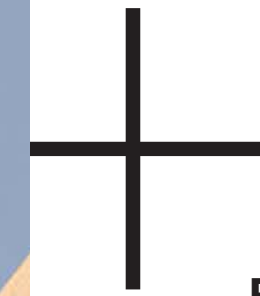
# This kind of project, where design directly **impacts** communities for generations, is why many of us become designers.

## An authentic team

Recognizing the need for authenticity and diverse input on this project, we joined with Dr. Sereno and created NigerHeritage as a design and planning group to include architects from Niger and the Niger diaspora, representatives from the cultural ministry, experts from the Smithsonian, and academics with expertise in West African history and culture. Nurtured by grants from the *Neubauer Collegium for Culture and Society Foundation* at the University of Chicago we held two international collegiums in Chicago which also featured mayors, governors, a Sheik, and representatives from Niger government for culture and finance. This broad coalition of people spoke about what the opportunities might be for the project, and the process for planning the project itself. Importantly we focused on what it means to create an authentic place. This year, to get even more perspective from Niger's residents, especially students and educators, NigerHeritage undertook an expedition to Niger. The town halls, field visits and dinners we participated in gave us time to present our ideas and solicit feedback. Following that, we convened a design charette with the NigerHeritage group in Stantec's Chicago office.

Agadez, Niger

Musée des Deserts



**BOTH BUILDINGS ARE DESIGNED TO LEED PLATINUM STANDARD AND NET POSITIVE ENERGY.**

## Benefits to Niger

How will a cultural center and museum benefit Niger? Broadly speaking, these new places—a museum of the river and a cultural center for the desert—will spur scholarship in paleontology and archeology in Niger. They will be world-class destinations, boosting tourism and international scholarship. These buildings also have the potential to increase awareness and propriety in Niger's residents about the country's fascinating ecology and history. >

## A museum of the river – Musée du Fleuve

The first cultural campus will be a national museum pavilion for the capital city of Niamey and house a collection of pre-Egyptian human artifacts and dinosaur fossils. Niger's extraordinary fossil record includes Africa's greatest dinosaurs and extinct crocodiles, footprints, and towering fossil trees.

The design idea draws on Niamey's role as a consolidation of villages and the site's location on the Niger River connected to the Kennedy Bridge. The design concept creates a series of pavilions that echo clay brick structures and nomadic tensile structures and connect public space and the city to the museum, offering visitors access to a café, public gathering spaces and lecture halls along the way. Views of the National Assembly Building, Abdou Moumouni University, and the Niger River introduce visitors to contemporary life in Niger—its people, history, and ecology.

## A museum of the desert – Musée des Deserts

Agadez began as a rendezvous point for caravans traversing the Sahara and its Grand Mosque is a UN World Heritage site. It also suffers from violent sandstorms, so walled structures characterize its buildings and gardens. The second project is a multi-faceted cultural center in the oasis of Agadez to house the unique natural and cultural heritage of the world's greatest desert and its nomadic peoples, including fossils, music and crafts, as well as creative studios for learning and composing.



Musée du Fleuve  
Niamey, Niger

The museum will be walkable from the university and mosque.

Drawing its inspiration from the surroundings, it is designed as an object within a walled-garden. The walled structure allows market stalls featuring regional crafts to encircle its perimeter. Inside, a generous brick style structure welcomes natural light.

## Miles to go

We still have miles to go on these ambitious projects. We are now facilitating outreach to the International Monetary Fund, the European Union, African Development Fund and other institutions to obtain the financial backing necessary for these endeavors.

This kind of project, where design directly impacts communities for generations, is why many of us became designers. We make an impact every day in the communities where we live. But as a global team, we collaborate across our geographies and disciplines, making us perfectly suited to tackle global challenges, to partner with communities elsewhere, create design that enhances people's lives and lifts up the very best of culture. NigerHeritage is one of the greatest initiatives I have been a part of and I'm honored to be involved in this transformation project. **D**

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& ENTERTAINMENT**

**Rebel Roberts** is Stantec's Discipline Lead for Design.



# DESIGN QUAR- TERLY

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