

for navigating uncertainty and adapting to change

Dezudio

In May 2020, Brooklyn Laboratory Charter Schools reached out to Dezudio to ask us to be part of a project related to preparations for safely re-opening the schools in the fall.

Like schools across the country, Brooklyn LAB faced the daunting task of planning to provide education in the upcoming school year during the pandemic. At the time, it was challenging to plan simple tasks two or three days in advance, let alone something major that was three months away.

There was no way to know how many students would be in the school, which teachers would be willing to come back, what the restrictions would look like in their districts—and which way this whole thing was going to go.



Brooklyn Laboratory Charter School offers middle school and high school programs, and promotes rigorous pre-college studies with high academic and behavioral expectations. The school is also "dedicated to serving the highest need students, regardless of their academic level, English language proficiency, or disability." This means they serve a population with about twice as many students with special education needs as the national average.

Many students enter LAB schools in 6th grade performing well below grade level, but by the end of middle school, they're doing better than their peers in the same district. The school's strategies for achieving these results include making strong personal connections with students, and providing extended time with longer learning days, weeks, and years, and with frequent in-person opportunities for enrichment.



LAB didn't want to sacrifice its unique approach to education in its preparation for a return to school in the fall. It was critical to provide a safe supportive environment where their scholars could learn and thrive. They decided the best way forward was an intensive planning process, with an equity-first mindset centered on the needs of their most vulnerable students. LAB was dedicated to openly sharing what we learned to give the school community opportunities for input, and so that other schools and districts might also benefit from the process.

Brooklyn LAB hired Dezudio, and we were able to bring on six graduate design students from our spring studio course at Carnegie Mellon University—students whose summers were otherwise in limbo due to cancelled internships. Our team's role was to lead the design process, and to create documentation and resources to share the process and outcomes with other schools and with LAB's own school community. In this presentation, we describe what we did and what we learned.



What we did. This section covers key features of the design process we followed with Brooklyn LAB teachers, administration, and families—and the experts they brought in to help LAB think through critical questions related to safe and equitable reopening of schools in the fall.

Processes + Principles

for navigating uncertainty and adapting to change

What we learned. Beyond discussing our role and the design process we followed, we want to use this opportunity to share some of the themes we took away from this experience.

What we did

Many aspects of our approach to this project are fairly common in design and innovation practices, so if you work in a related field, the ideas in this section might feel familiar to you. Dezudio's role was facilitating the process—helping each group of stakeholders and experts distill and refine their best thinking, and documenting and communicating the outcomes for access and use by a broader audience.

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Constrain the space, focus the challenge.



Constrain the space, focus the challenge.

Brooklyn LAB decided to orchestrate a series of design charrettes where they would bring teams of experts together to work in short bursts to tackle specific parts of the overall challenge. Charrette means "cart" or "chariot" in French. The use of this term for a design exercise dates back to the 19th century French architecture schools, where the students would work for days on end on a given problem—and often end up putting finishing touches on their drawings or models even as they were being carted away.

In this case, it was key to frame each charrette as a highly collaborative effort among a diverse group of individuals with a vested stake in solving the problem at hand. The group worked together within a condensed time frame to propose solutions as quickly as possible.

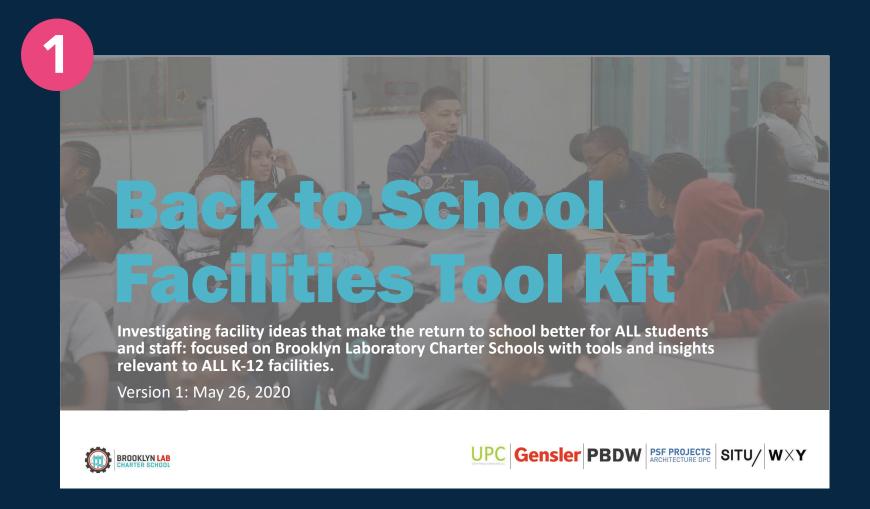


Engraving by Alexis Lemaistre from his book *L'École des Beaux-Arts dessinée et racontée par un élève,* Paris, Librairie Firmin-Didot, 1889

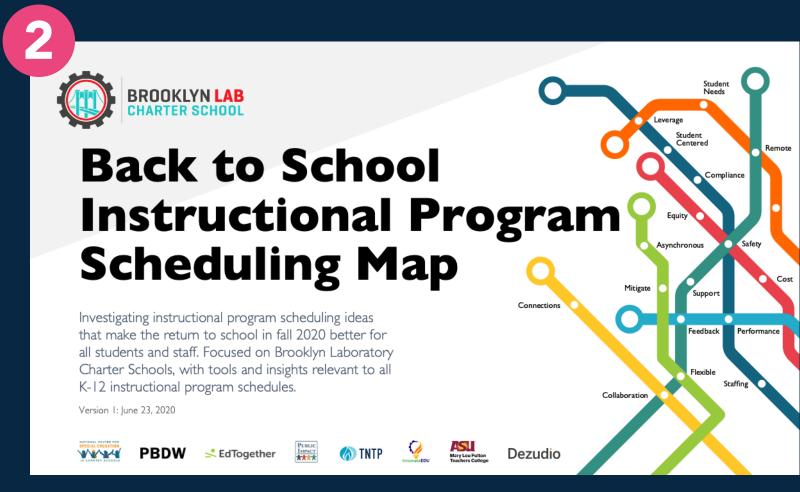
Constrain the space, focus the challenge.

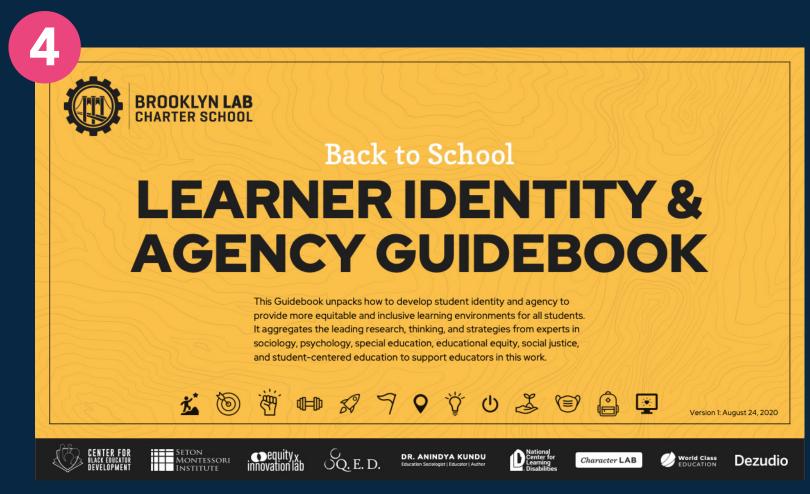
From June through early August, we worked through four charrettes, focused on answering LAB's most critical questions:

- 1. Where will students be learning, and how do spaces need to be reconfigured for safe in-person instruction?
- 2. What adjustments would LAB need to make to staffing/resources to cover new modes of learning? How could LAB support their staff as they continue to provide high-quality educational experiences?
- 3. Given the trauma of the past four months, how could LAB address the social-emotional needs of students to ensure they're able to keep learning and thriving?
- 4. Given that learning experiences would likely be less structured than in a traditional educational setting, how could LAB help students develop their identity and agency so that they could successfully navigate complex life and learning transitions?









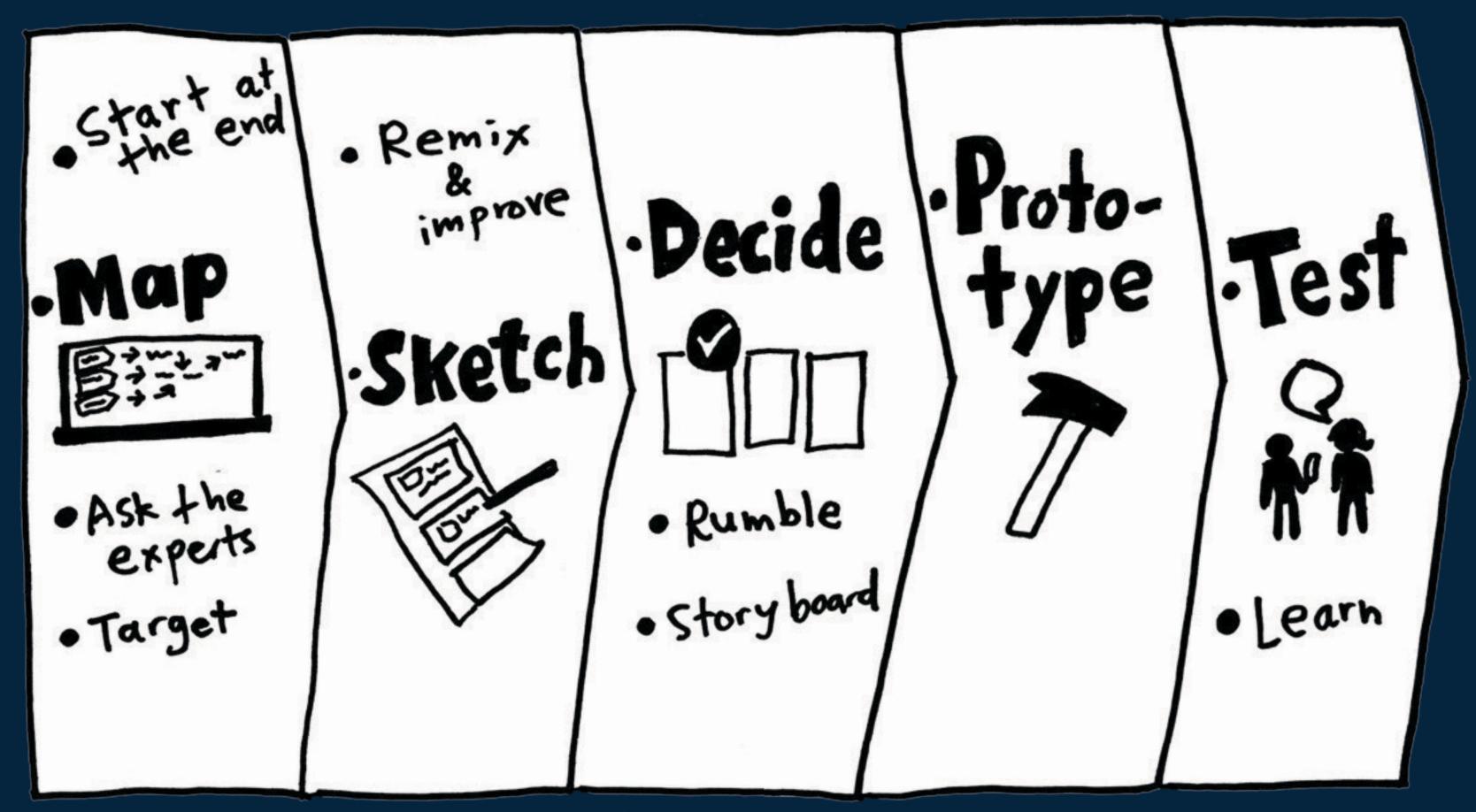
The time constraints on this project were real, but design charrettes with artificial time constraints are actually pretty common. You may know them well—these days they're called design sprints or scrums.

It's a useful approach. By constraining the space and focusing the challenge, you can:

- keep a variety stakeholders aligned and on the same page;
- send a clear strong message that something is a priority; and
- boost your team's morale, energy, and cohesiveness.

Sprints can certainly be useful—but if you approach everything this way, it's likely that teams and individuals will ultimately burn out. You run the risk of sacrificing a strong, stable core vision, or losing overall cohesiveness across different parts of a product or system.

We like the idea of following natural cycles of ebbs and flows—making a big push of focused intensity or action, and then creating time and space for recovery and reflection.



From Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days, by Jake Knapp from Google Ventures

Constrain the space, focus the challenge.

Bring a variety of viewpoints to the table.

In order for this condensed approach to work, it's critical to bring a variety of viewpoints to the table. Homogenous people bring homogeneous perspectives, and homogenous perspectives don't hold up to the stress tests of the real world.

For this effort, Brooklyn LAB was able to tap into its strong network of partnerships with education organizations and experts in related fields. These organizations are specialists in school architecture and classroom layout, teacher staffing and development, educational equity, trauma-informed learning, and creating cultures of success in schools.

Our stakeholders included developmental psychologists, community organizers, doctors, educators, designers, architects, policy experts, lawyers, activists, professors, and staff members from a variety of roles at Brooklyn LAB. These were very smart, inspiring, and dedicated people who were bringing decades of relevant experience to our four critical questions.





































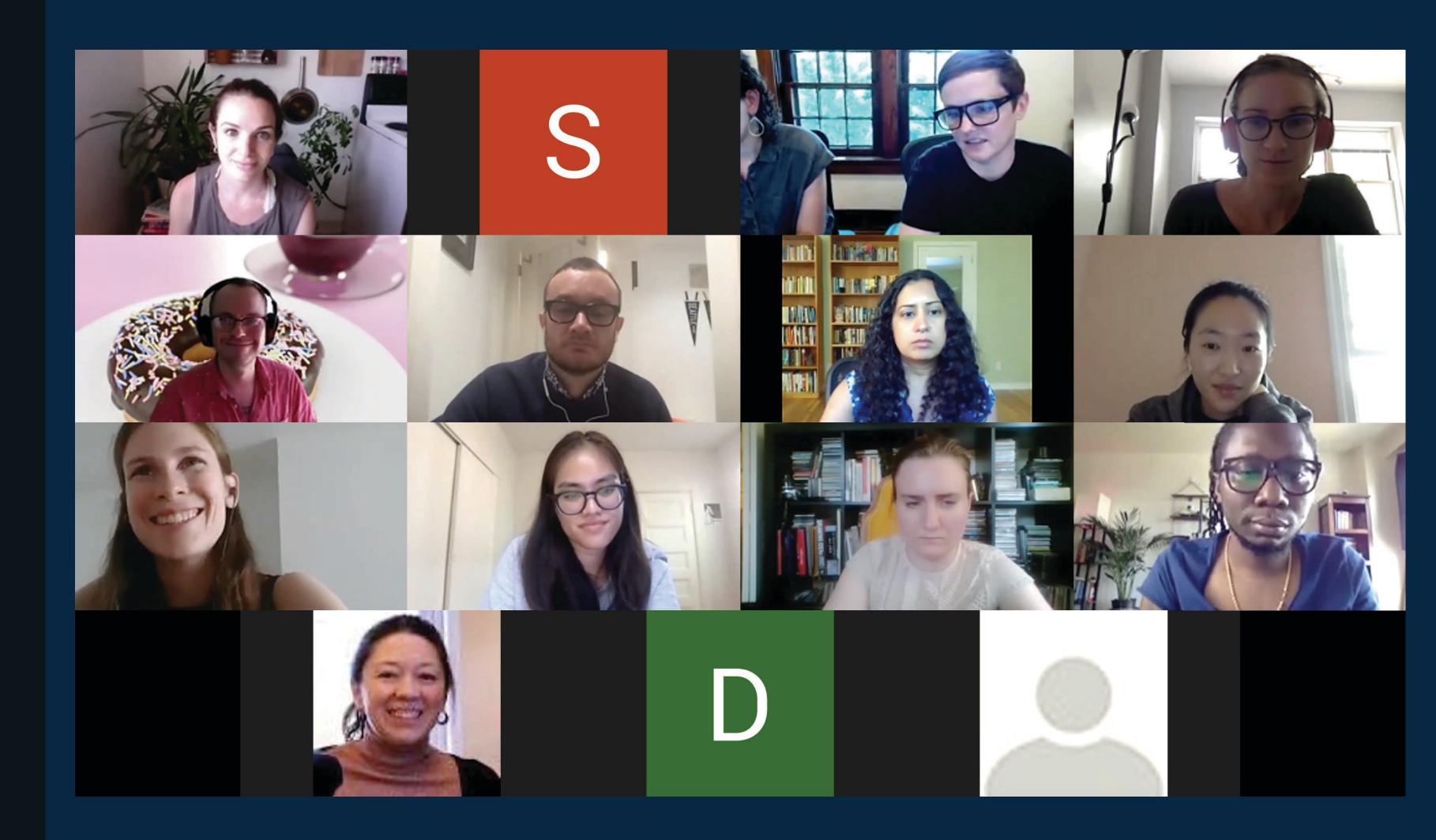


Bring a variety of viewpoints to the table.

Of course, design sprints or charrettes typically bring people together in a single space, but they can also happen remotely. We spent hours listening to presentations of early ideas, with experts fielding questions from the design team and from Brooklyn LAB's staff.

Each design intern was paired with a partner organization, but they all attended every review session so we could highlight key themes and define a common language and approach to the documentation.

Our role as designers was focused on careful listening and participating in the discussion to achieve clarity, then refining the message to make it accessible and amplifying its relevance by providing clear and compelling visual explanations.

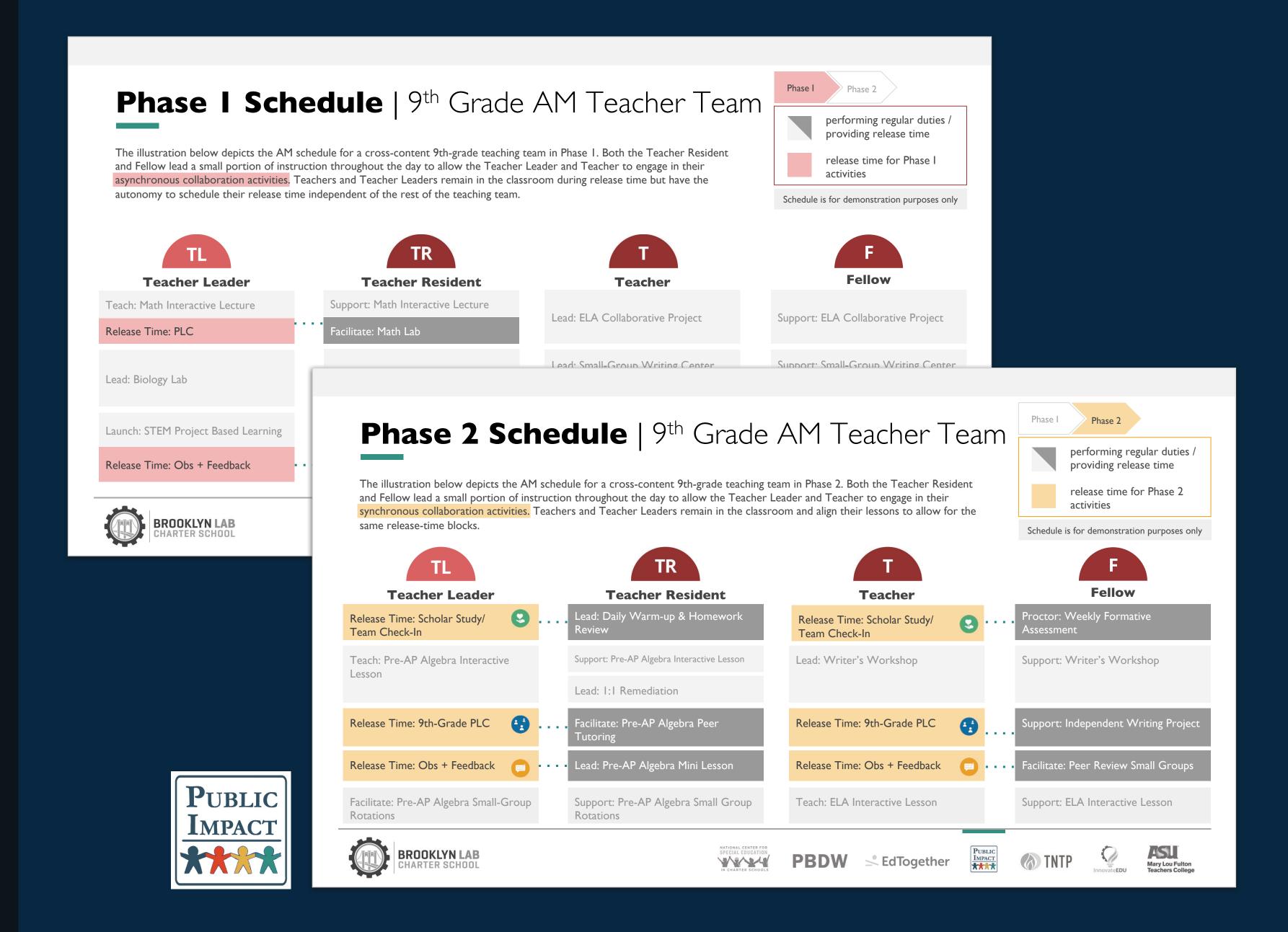


Create and share scenarios.

Each charrette produced tactical plans and ideas for Brooklyn LAB to execute during reopening, as well as a final presentation that distilled and refined each partner's thinking in a way that was accessible to a variety of stakeholders. The planning we did and process we followed ultimately became a case study that others could reference.

The outputs created often focused on documenting possible scenarios that captured how the recommendations would actually look across a variety of circumstances. We looked for ways to make the ideas as tangible and accessible as possible.

When we're thinking about staffing and resources, what do these recommendations actually look like in terms of teachers' schedules?



Student Journeys | ICT + SETSS

















Middle School

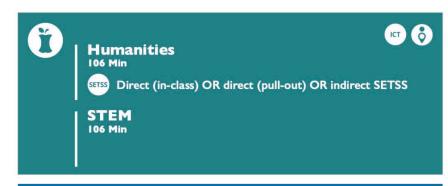


Darien

Darien is an 8th grade student who is president of the student council and plays basketball in a community league with some of his friends. Darien has dyslexia, which manifests itself with severely compromised word attack skills, word identification, and single-word spelling. He dislikes reading, but persists through reading activities with supports such as audiobooks. He also responds positively to individualized teacher attention.

Staff Specialization Requirements:

- Orton-Gillingham Specialization
- Assistive Technology Trainer







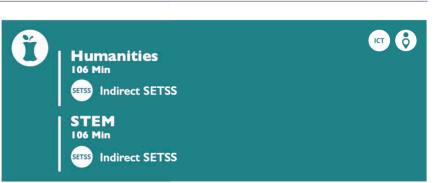
Middle School



Kiara

Kiara is a 9th grade student who has several favorite television shows for which she writes imaginary plotlines. Kiara has cerebral palsy and is able to walk but struggles with fine motor skills and speaking. She is educated in an inclusive classroom but receives occupational and physical therapy and is often pulled from the general classroom. Kiara is able to persist through the tasks presented to her, even when she perceives them to be difficult.

Staff Specialization Requirements: Assistive Technology Trainer









EdTogether



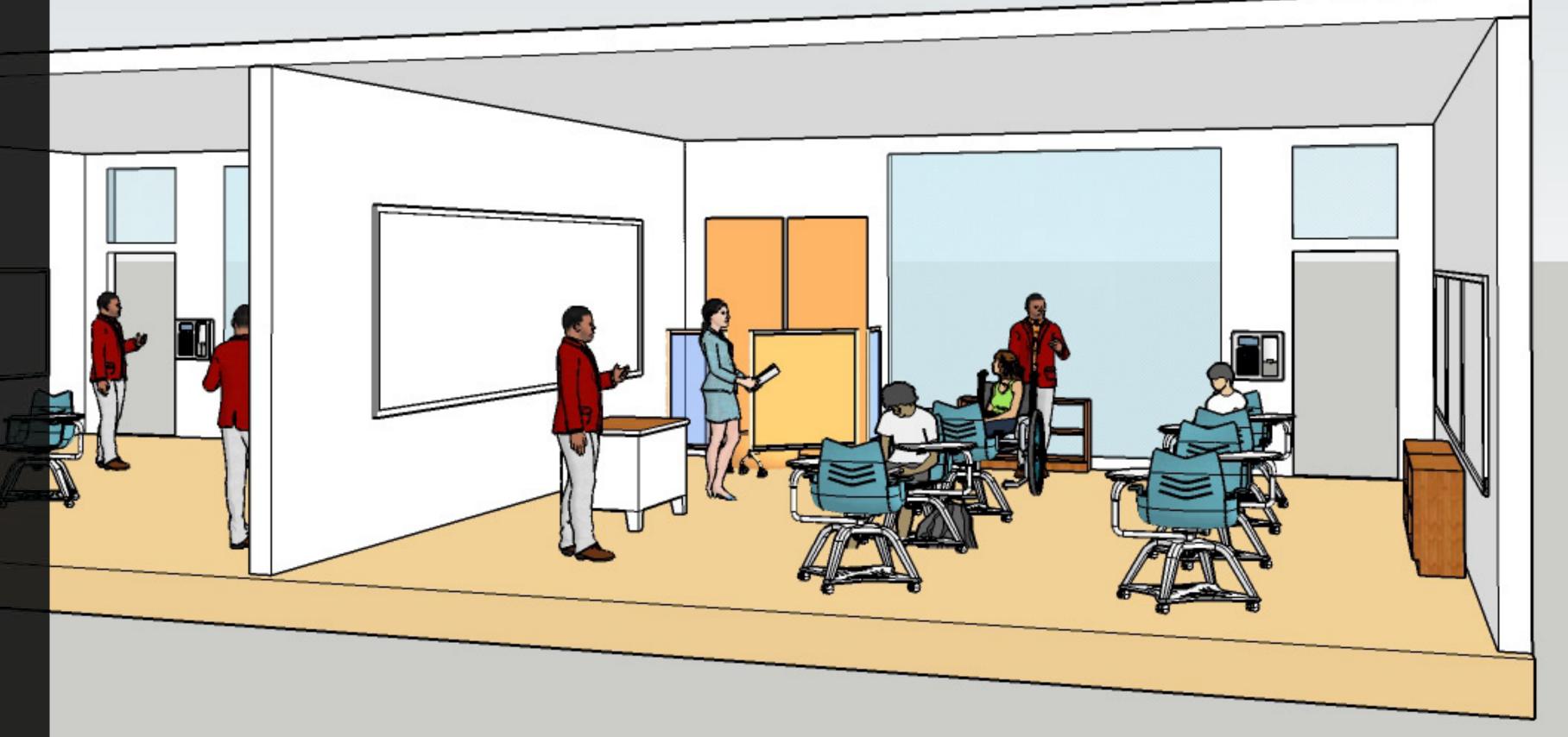
Compensatory Services
Weekly





How should classrooms be configured to maintain safe social-distancing practices, while accommodating the range of teaching activities and roles at Brooklyn LAB?

Finding ways to ground the discussion by talking about real-world scenarios—and sharing clear visual representations so that the school community and other stakeholders could understand them—were both critical parts of this process.



PBDW ARCHITECTS

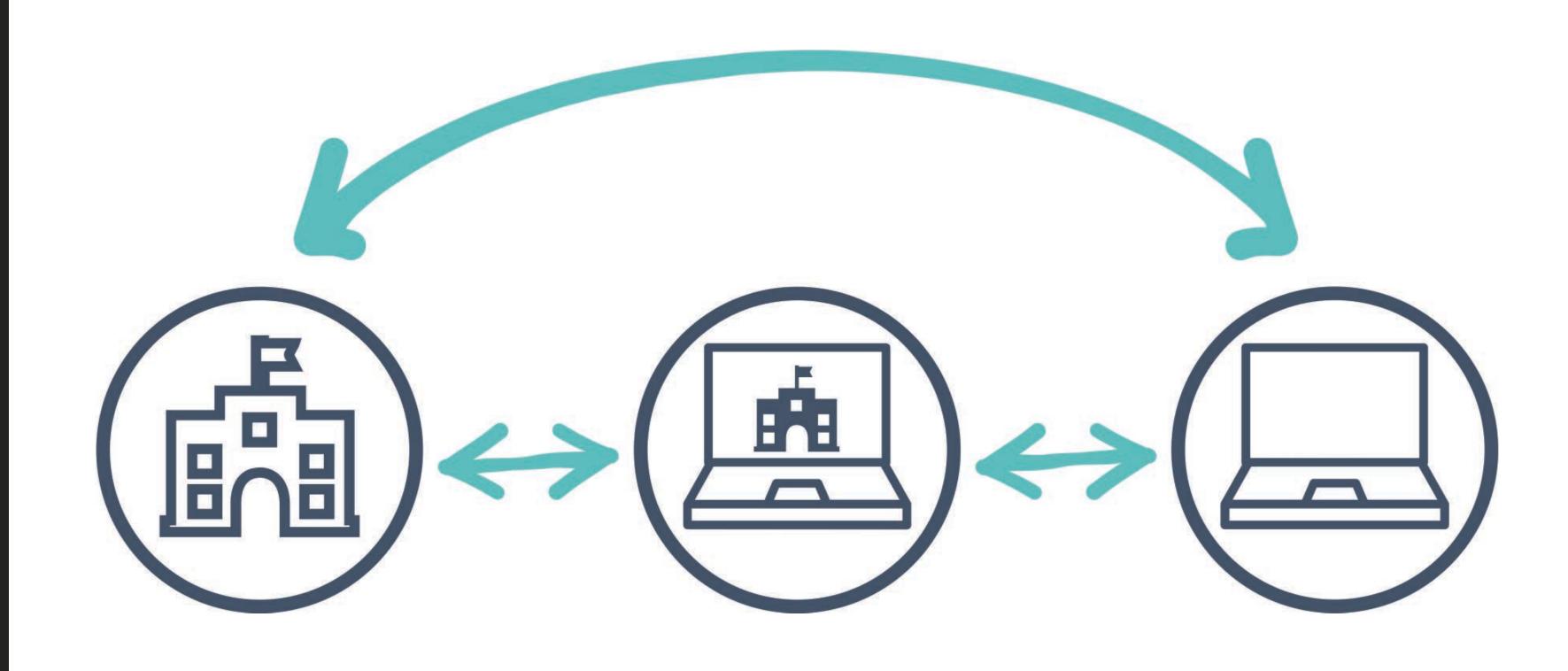
Create and share scenarios.



Focus on preparation over planning.

Given how fast things were changing, LAB was clear from the start about the need to prioritize preparation over planning. This was a unique situation because it wasn't clear whether students would be in an in-person, hybrid, or fully remote environment.

LAB knew that the school would need to remain flexible, and that it might need to switch fluidly between these modes at any time.



Focus on preparation over planning.

Rather than hard and fast recommendations, our partners frequently offered detailed information about the variables at play, or processes and criteria for how certain kinds of decisions might be made.

For example, one partner created and shared editable spreadsheets with staffing scenarios to help schools account for illness or quarantines.















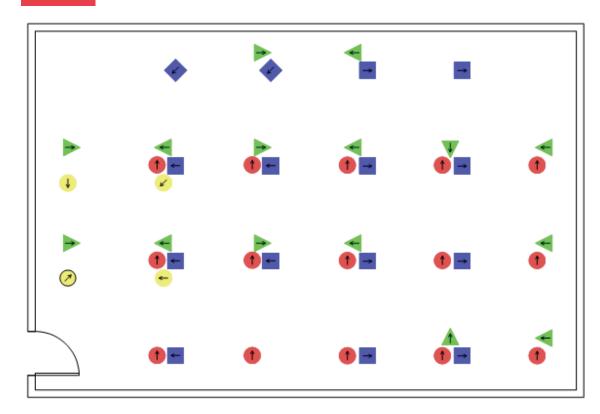






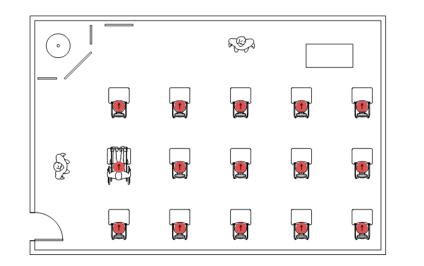
Architects recommended floor graphics that could accommodate different desk configurations to maintain social distance in a variety of teaching scenarios.

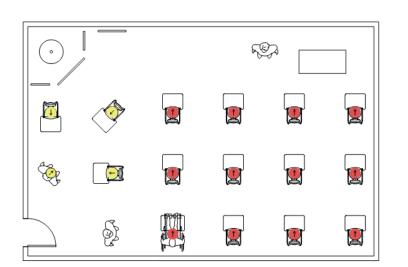
Floor Graphics | Sample Layout Diagrams

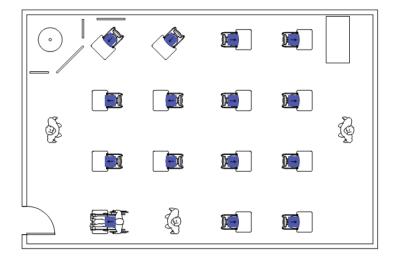


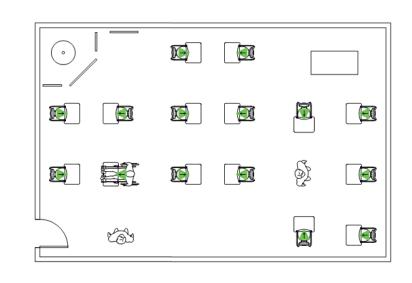
Promoting Classroom Flexibility

- Floor graphics with colored tape to enable quick and easy reconfiguration of classroom setups and ensure physical distances are maintained
- Furniture maps can be displayed on the wall to encourage student participation























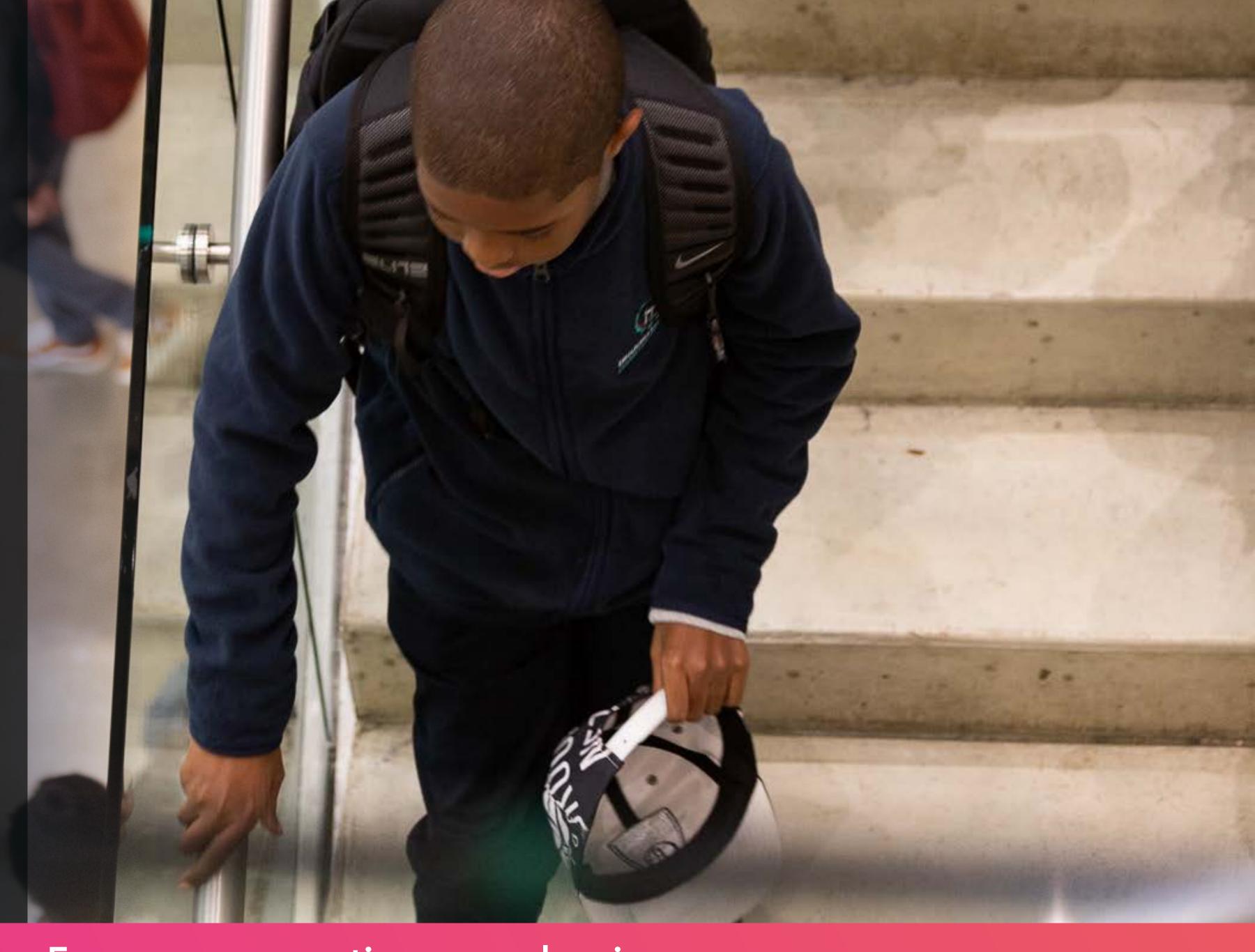
PBDW ARCHITECTS

Focus on preparation over planning.

The need to solve for multiple possible scenarios gave us the opportunity to reflect on how certain decisions were being made. What variables would impact the decisions? What were the underlying values or principles that would drive our approach?

In an early description of this work, Brooklyn LAB offered the critique that education—like many other domains—is prone to creating static plans that become quickly outdated. They wrote, "Preparation, by contrast, anticipates multiple scenarios, accounting for context, conditions, and learning. With a focus on preparation instead of traditional planning, we build the muscles we need to adapt and determine the right next step."

^{1. &}quot;Preparing to Reopen: Six Principles That Put Equity at the Core" https://www.gettingsmart.com/2020/05/preparing-to-reopen-six-principles-that-put-equity-at-the-core/



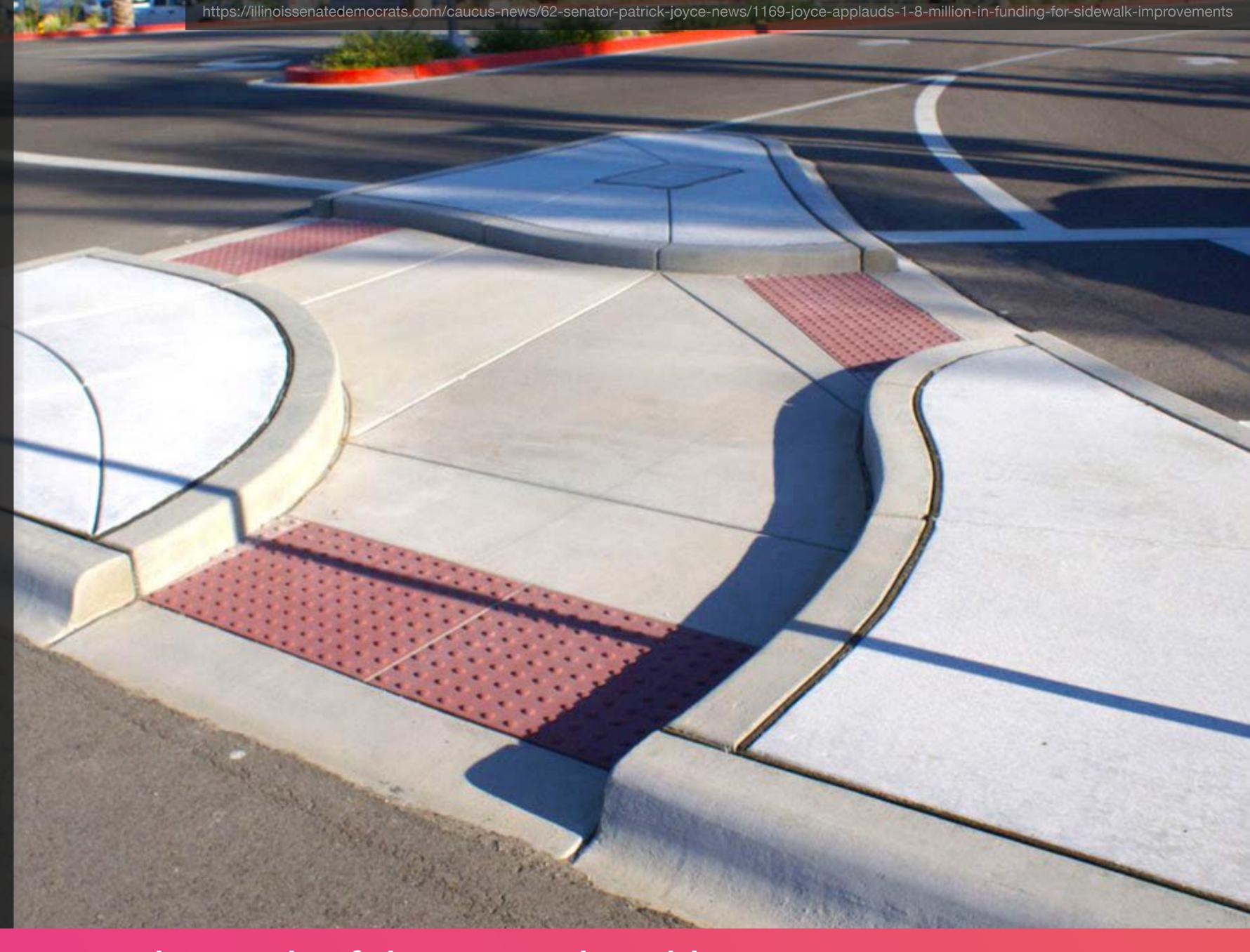
Focus on preparation over planning.

Prioritize the needs of the most vulnerable.

Prioritizing the needs of the most vulnerable was a core motivating value for this effort, and we approached this work with a deep dedication to meeting the needs of every scholar. Brooklyn LAB knew that not every student had a stable internet connection, or a quiet safe space to work, and that not all parents and families had the bandwidth to offer the support and structure that would benefit these students as they navigated new modes of learning.

They also knew that students and their families would be deeply affected not only by personal losses due to the coronavirus, but by the economic downturn, and by our collective confrontation of ongoing systemic racism. LAB fully embraced the charge of designing for the margins of its community, and brought this "equity first" mindset to every aspect of decision making.

In design, we're often guilty of planning for the happy path of 80% of "average" users, with the idea that we'll circle back and address the needs of the others down the road. While that may seem like an efficient strategy, in fact we're creating more work for ourselves. We're also dramatically increasing the chances that significant numbers of people are left behind.



Prioritize the needs of the most vulnerable.

By expanding our consideration for those on the margins, we're actually improving things for everyone.

A good example is Brooklyn LAB's approach to individualized education. Students with special education needs typically have individualized education plans, but often feel marginalized when they get pulled aside for those activities. Brooklyn LAB believes that all students benefit from personalized instruction in their areas of need, so they offer individualized instruction to every student. As a result, students' performance is improved across the board—and the students don't differentiate between special education and regular instruction.

And when you dig into the details, you'll often find that this "happy path of average users" is really just a myth. If you look closely enough, or if you look across time, you'll see that we all face challenges and difficult circumstances at some point. During those times, we appreciate that those "margins" were well considered.



Prioritize the needs of the most vulnerable.

How do we prioritize the needs of the most vulnerable? We can start by creating an inventory—listing out the challenges that the people we're designing for are likely to face.

We once attended a workshop with an accessibility specialist named Anne Gibson, who told us, "If you don't know what challenges your users face, you should just ask. They'll be happy to tell you."

Minimizing Harm Across Learning Models

Parents with school-age children expect public schools to minimize risks while supporting learning. In-person school entails public health risk. Purely remote learning can increase the risks of nutritional insecurity, loss of parental employment, lack of access to essential services, learning loss, social and emotional impact, and reduced detection of child abuse.















See: Parabola Project















Another way to prioritize the needs of the most vulnerable is by bringing them back to the forefront of the conversation. Remind other stakeholders of the challenges that may exist, and seek solutions that account for and address those challenges.

What Challenges Will Students Face?

Physical and mental health and safety: Schools must identify and address the stresses and trauma that students have experienced over the last 6 months and will continue to face this coming year. For example, students may face health and safety challenges that impact concentration, feel isolated from family and friends, or not feel safe in their homes.

Disengagement and retention: Student engagement is critical throughout the return-to-school process. Engagement looks different during remote learning. Teachers and students' lack of familiarity with remote learning may result in insufficient instruction by teachers and low motivation from students. A lack of access to infrastructure (connectivity, devices, quiet learning spaces) can create barriers. Students may become disengaged and unmotivated due to falling behind and be at risk of dropping out.

Increased economic pressure: The economic downturn's impact on livelihoods increases the risk that students and families have to focus on immediate priorities, including housing and food. Some students might look to find jobs instead of focusing on their education.

















What we learned

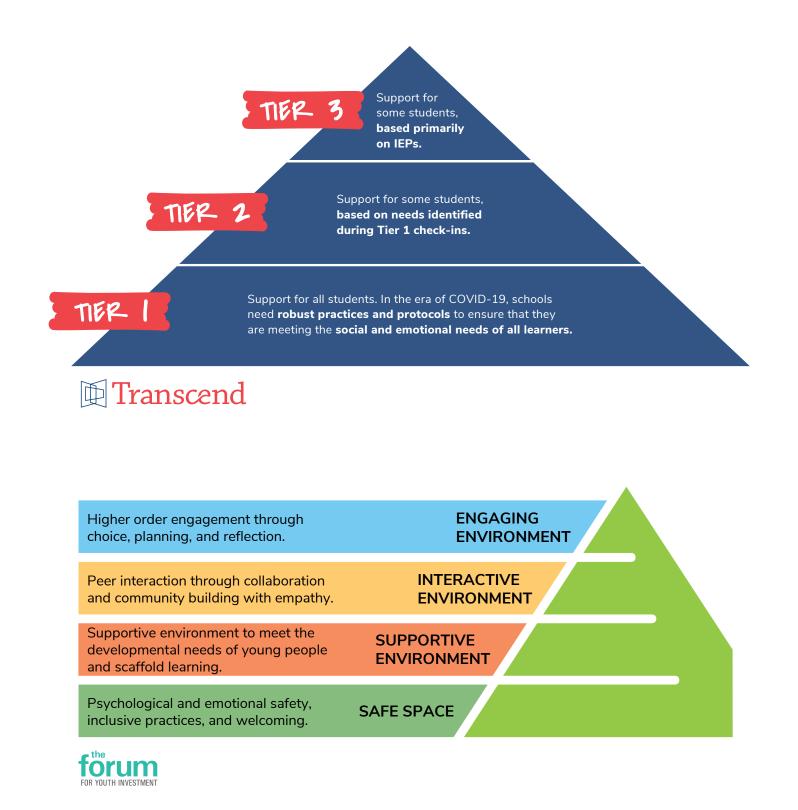
In this section, we'll share some key takeaways that we gathered from our work with our partners on these charrettes. We learned so much from this collaboration that we'll carry with us, but these ideas really struck a chord with us and seemed to have the potential for much broader relevance.

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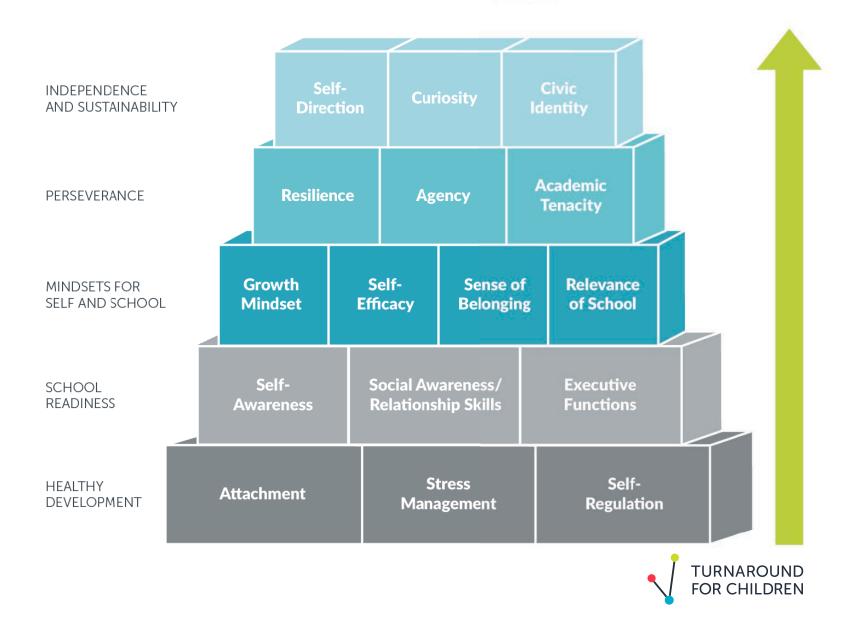
Focus on the fundamentals.

One thing we heard repeatedly—and across partners on a variety of topics—was that in times of great stress, it becomes even more critical to focus on the fundamentals. For students, focusing on the fundamentals means paying special attention to their social and emotional well-being.

Interestingly, many of the models that our experts shared had the same pyramid structure —whether they were related to supports for students, skills and attributes that can be fostered in children to help them learn and thrive, and attributes of the environment that foster success. When we asked those experts what aspects were the most critical given the current circumstances, they all pointed to those base layers of their structures.



BUILDING BLOCKS FOR LEARNING



Focus on the fundamentals.

For teachers, the fundamentals also meant remaining dedicated to core activities like mentorship, collaboration, planning, team building, and leadership development.

EL Education, an organization that specializes in building a culture of success within schools, told us that "the student culture will never exceed staff culture." Across partners, we heard how critical it was for teachers in schools to put in the work to create a strong, supportive network of adults who could navigate conflict and who had each other's (and their students') best interests at heart.



Re-align goals and activities to new contexts.

Many of us find ourselves in situations where we might be trying to accomplish the same things we always have, but navigating new and different circumstances. We learned that it's critical to step back and consider both our contexts and our goals to decide what activities can be optimized in our new reality.

When we were working on scheduling, we created staffing scenarios with the assumption that, in a hybrid model, instruction in the core academic subjects would occur in person in the main school building. It followed that related supports (like social-emotional learning or success coaching) might happen in a separate community building—or maybe even remotely.

Later, as we dug into the important role of success coaching, someone proposed that it might be more important to use in-person time to establish strong relationships with trusted adults—and that aspects of academic instruction might be better suited for the remote or asynchronous context. A light bulb went off for us when we realized we needed to take a step back to re-evaluate our first instincts. We needed to think more critically about our goals, and about the best ways to achieve them within our new circumstances.



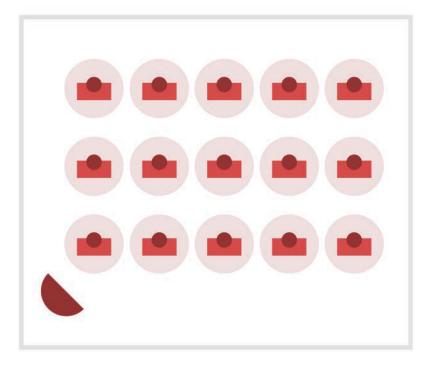
Main School Building

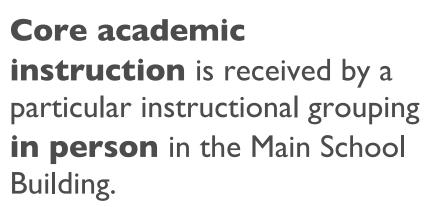


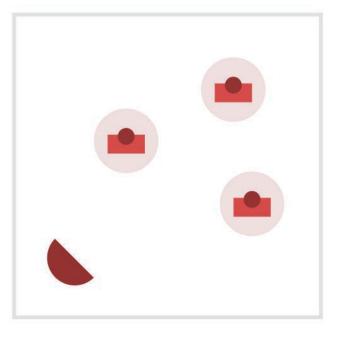
Annex Building



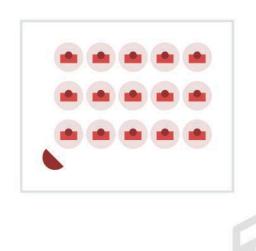
Home







Related support and services, social and emotional support, success coaching, and other types of related instruction are also delivered in-person, but outside of the main classroom building.



Remote learning that is linked to the **core academic instruction** in the Main School Building can happen **at home or in a community context.**

Reframe challenges as opportunities.

In business and innovation, we talk a lot about framing problems as opportunities. While this perspective is positive and often productive, it can seem disingenuous, even callous, to suggest reframing a global crisis as an opportunity.

In this case, we believe the key is to try our best to suspend the frustration and disappointment we feel about circumstances that are beyond our control, and to find ways to do the **best we can given the current reality.** In design, we know that constraints often foster creativity, so we can even challenge ourselves to keep an eye out for opportunities within these new constraints.

This image shows the "Front Porch" concept an idea that came out of the facilities charrette that exemplifies how new opportunities can emerge from significant challenges.

In a typical year, the sidewalk in front of the school in the morning would be crowded with students funneling through the main entrance. Brooklyn LAB had to consider the new requirements of performing the necessary safety screenings and maintaining social distance while getting students into the school in a reasonable amount of time.



Reframe challenges as opportunities.

In the facilities charrette, the team proposed using scaffolding to quickly and inexpensively erect a sheltered area for the students to queue for entry. They designed a scaffolding structure that was pleasing and that enhanced—rather than detracted from—the surrounding neighborhood.

They began to consider new opportunities to create a space that would make for a calmer morning entry, giving the students a time to get ready to face the day. Interesting ideas emerged about how to use this as a place to engage with the students, check in on their well-being, showcase their work, and possibly even offer a grab-and-go breakfast.

The Front Porch project went from concept to a testable working prototype in about six weeks. It's likely that the school will keep the Front Porch even after the pandemic ends, using it as a gathering space that serves as a bridge between the school and the wider community.



Reframe challenges as opportunities.

Looking beyond the silver lining, many of our stakeholders and participating experts emphasized that, in many cases, the challenges we face due to COVID-19 have merely exposed practices and systems that were already failing to achieve the intended results.

Now that these issues have come to the surface, we can seek to intentionally disrupt and redesign practices that have traditionally led to opportunity gaps for students. What have we been doing out of habit that's actually not serving us well? This watershed moment is an excellent opportunity to reconsider our strategies and tactics.



Reframe challenges as opportunities.



Consider the cumulative impact of decisions.

This idea was not necessarily new to us, but we saw some good examples of how and why it can be important—particularly when we're designing in complex spaces or domains.

We can often be guilty of working through design decisions logically and step by step. Each individual decision might be sound and even make perfect sense. But if we forget to step back and consider the cumulative impact of our decisions, the results can end up being a far cry from what we'd intended.

In design, we have tools like personas, scenarios, and journey mapping that can help us consider how things will play out in real life. Brooklyn LAB worked with the Community Success Institute to develop a set of personas that would help the school better understand and communicate what students' experiences might be like in this academic year.

What Situations Will Students Face? | Student Scenarios



Isabel Diaz

- Struggles with changing circumstances
- English as a New Language
- Individualized Education Plan (IEP) for a specific learning disability
- Lacks bandwidth



Sarah Diaz

- Has a health impairment
- Access to college
- Lacks bandwidth
- Loss of peer group
- Earn money for family





- Autism in changing environments
- School check-in and maskwearing is difficult
- Occupational therapy at home
- At high risk if infected by virus
- Parents require childcare



Dillon Baker

- Faces housing insecurity with fluctuating housing
- Parent works away from
- Academic excellence is hampered by changing schools
- Not initially allowed to attend in person



Sam Brauer

- Struggles with anxiety and depression
- Art room is safe space
- At-risk being away from school
- Musical instrument at-home
- Trusted adult at school











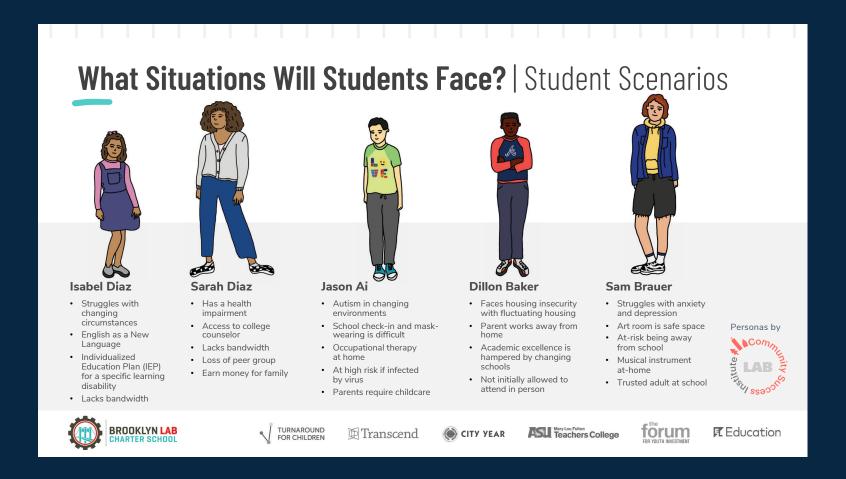


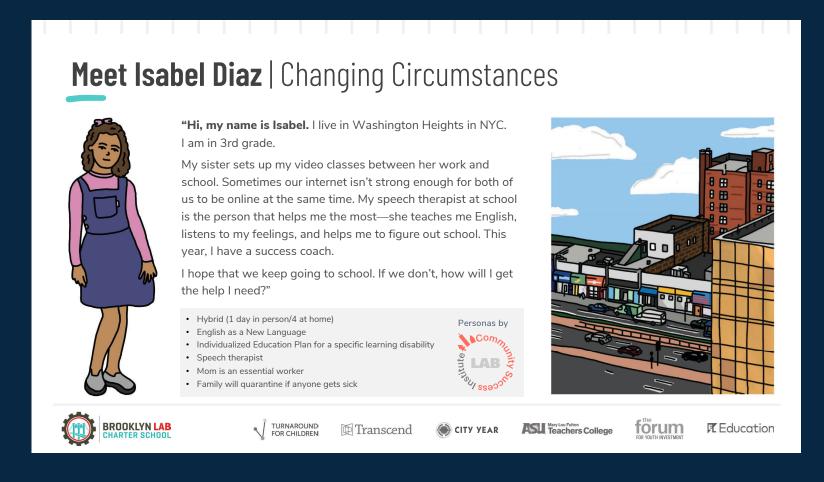


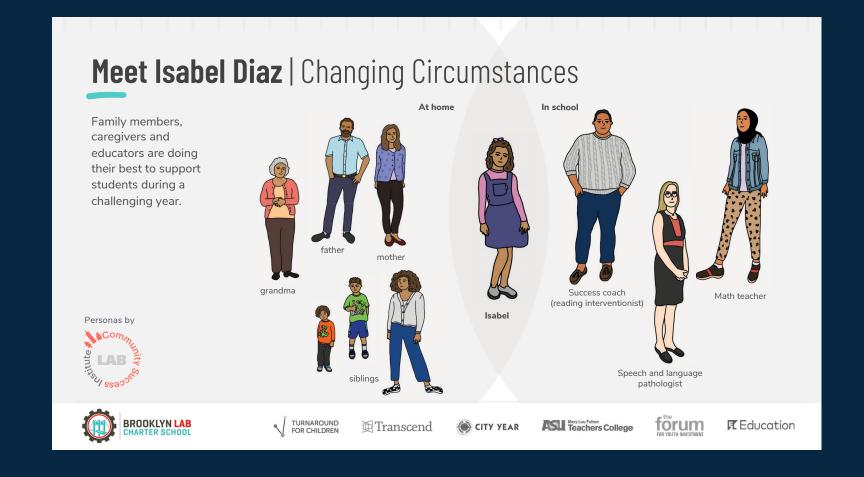
R Education

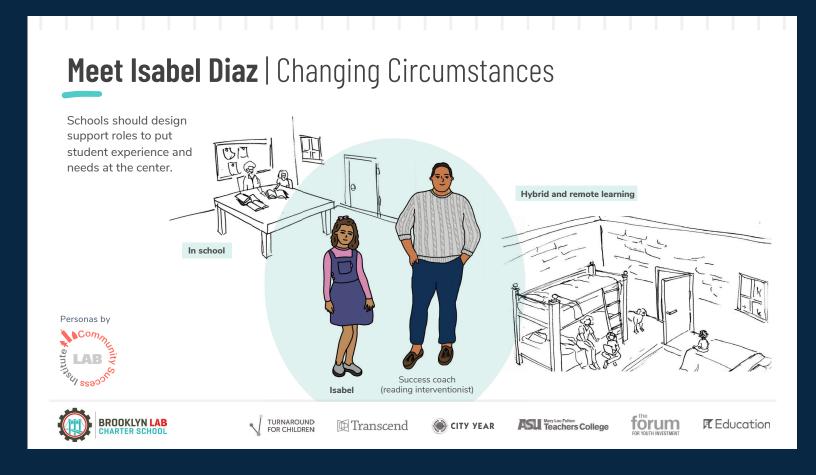
For each student, the team sketched out some brief biographical information, identified important people in that student's life, and shared stories about specific challenges that student might face.

Often things that seem simple and direct in isolation can become complex and overwhelming when they all add up. It's important to remember that the decisions we make are experienced cumulatively in a broader context. Design tools and methods can be extremely useful for putting us in touch with what happens in the real world.









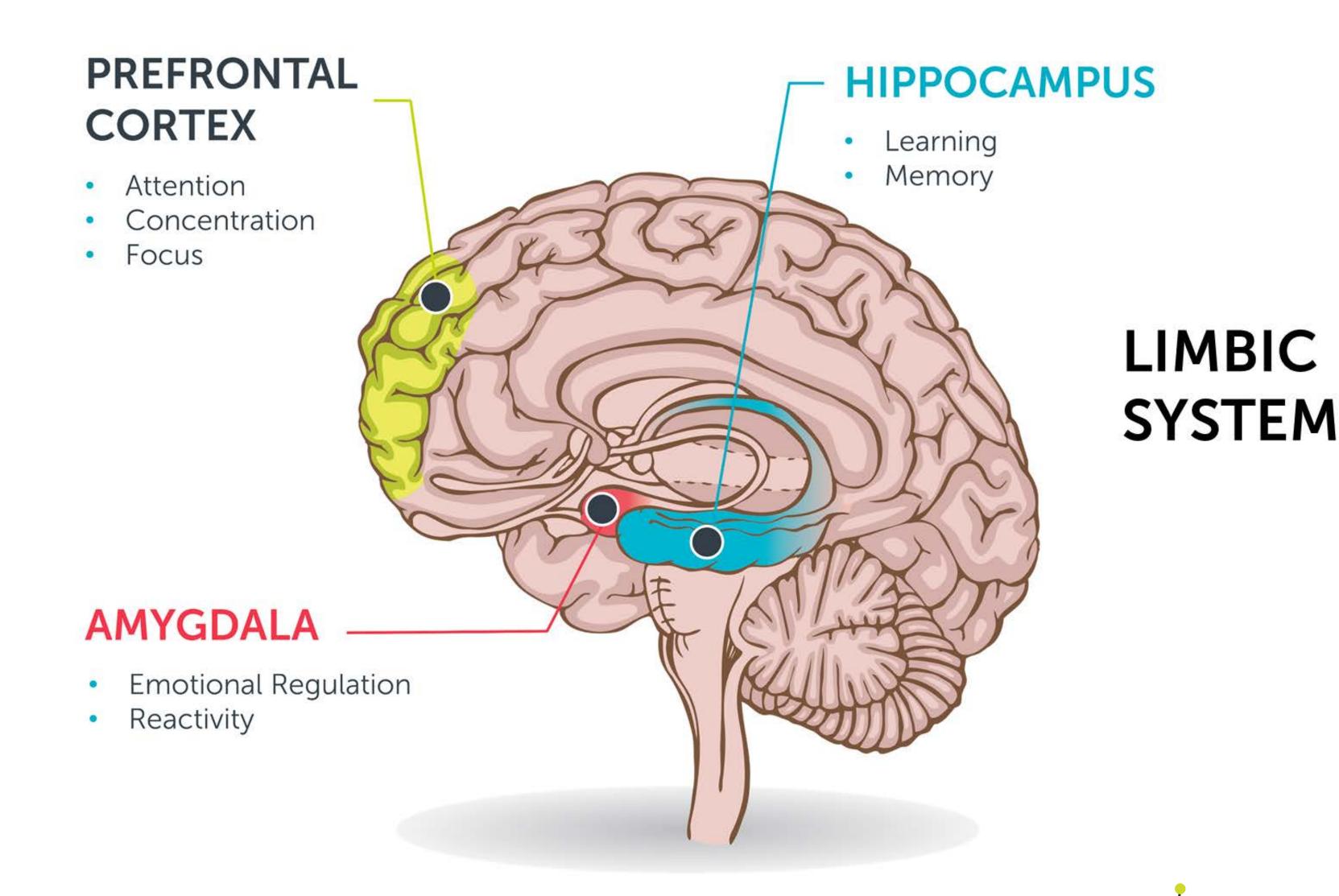
Human relationships are the antidote to stress.

We learned that context—the environments, experiences, and relationships in our lives—is the primary driver of who we become, including the expression of our genes. Fewer than 10% of the 20,000+ genes in our DNA are ever expressed in our lifetimes. Genes are chemical followers; they are triggered into expression by what we experience.

The brain is a dynamic living structure that is the most susceptible to change from experience of any tissue in the human body. The limbic system, shown here, is the learning center of the brain. These three structures are cross-wired and interdependent, and are covered in receptors for two hormones.

Cortisol is a stress hormone. It triggers the "fight, flight, or freeze" response, and makes you alert, sharp, and focused. It helps you prepare and perform. But ongoing stress that is not buffered can result in toxic stress. Children who experience multiple adverse experiences (or trauma) can get stuck in a state of biological stress. These children struggle to focus and are easily triggered.¹

1. For a full explanation, see https://turnaroundusa.org/video/pamela- cantor-delivers-keynote-to-washington-dc-public-school-leaders/



turnaroundusa.org



LIMBIC

But oxytocin is the trust and love hormone.

It hits the same structures of the limbic system as cortisol—yet is more powerful. Relationships that are strong, consistent, positive, and caring can trigger release of oxytocin. This hormone helps us manage stress, prevents damage from cortisol, and even makes us more resilient to future stress. It can protect children at a cellular level from the damaging effects of cortisol.¹

This year, Brooklyn LAB has recruited teachers, staff members, and even community volunteers to serve as coaches who are charged with helping students learn in any scenario, navigate uncertainty, and cultivate resilience. Every student has a success coach who is there to forge a strong personal relationship, and to provide the right support at the right time.

Another core part of this approach is to make sure every adult in the school building—teachers, staff, coaches, and mentors—knows that their number one responsibility is to form strong, positive relationships with students.

^{1.} For a full explanation, see https://turnaroundusa.org/video/pamela-cantor-delivers-keynote-to-washington-dc-public-school-leaders/



Human relationships are the antidote to stress.

What we did

- 1 Constrain the space, focus the challenge.
- 2 Bring a variety of viewpoints to the table.
- 3 Create and share scenarios.
- 4 Focus on preparation over planning.
- 5 Prioritize the needs of the most vulnerable.

What we learned

- 1 Focus on the fundamentals.
- 2 Realign goals and activities to new contexts.
- Reframe challenges as opportunities.
- 4 Consider the cumulative impact of decisions.
- 5 Human relationships are the antidote to stress.



To learn more about the work Brooklyn LAB is doing to promote the safe and equitable reopening of schools during COVID-19, please visit

equitybydesign.org

If you're interested in more detail about anything in this document, we hope you'll reach out.

Thank you!

Dezudio

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