Using Behavioral Economics to Create Playable Cities





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Introduction

Balanced and Active Play is Vital for Child Development

We believe that the well-being of society begins with the well-being of children. This is why we're such big advocates of balanced and active play, which is essential to enable kids to thrive. Just as a healthy diet balances proteins, fats, carbohydrates, and other nutrients, a balanced "play diet" should include a mix of all kinds of play, because different types have different benefits. For example, play-dough creations, blocks, and make-believe spark the imagination and teach problem-solving skills by encouraging kids to recombine ideas, make associations, transform objects, and appreciate that problems may have numerous approaches and multiple solutions ^{1,2}. Running, jumping, and climbing get legs moving and hearts pumping, and kids who engage in physically active play-at least two to three times a week-and engage in low levels of sedentary TV time are almost two times less likely to be classified as overweight³. Additionally, exploring playgrounds with families or playing hide-and-seek with friends helps kids learn to work together, collaborate, share, and be empathetic.



WHY WE WANTED TO PARTNER TOGETHER

KaBOOM! is a national non-profit dedicated to the bold goal that all kids get the balanced and active play they need to thrive, especially the 16 million American kids growing up in poverty, and ideas42 is a non-profit passionate about applying insights from behavioral economics to achieve social impact. This paper is a collaborative effort between ideas42 and KaBOOM! to answer the question of "how can cities ensure that all kids get the balanced and active play they need to thrive?" using a behavioral lens. To do this, ideas42 applied its proprietary "behavioral mapping" method, conducting qualitative interviews and collecting data to examine the relevant decision-making processes and context of our problem.

However, kids today are playing less actively than any previous generation, with sedentary time—inside and in front of a screen—replacing time spent building muscles, expanding minds, and being social. This lack of active play is causing them profound physical, intellectual, social, and emotional harm, and it is imperative that we reduce sedentary time and increase active play to ensure our children have long, healthy, and happy lives.

Getting enough playtime can be especially difficult for low-income kids. Low-income kids may lack access to safe playspaces in their neighborhoods. They are less likely to have recess and face cost constraints to participation in organized sports; the lowest-income schools have only 18 minutes of recess a day on average, while high-income schools have 30 minutes on average⁴. Twenty eight percent of schools with the highest poverty rates had no recess at all ⁵. Almost 1 in 5 families with income less than \$60,000 report that their kids participate less in organized sports due to cost ⁶.

Most parents, kids, and caregivers have heard that kids need to play and run around more, but they may not be acting on it. In fact, according to a recent Harris Interactive study done for KaBOOM!, although 82% of adults think kids today don't play outside enough, only 48% of adults agree that *their* kids don't play outside enough. Given the many structural barriers, particularly for low-income children, it is even more critical to find ways to make active play an easier choice for parents and caregivers.

We Need to Address both Structural and Behavioral Issues

Ensuring that kids are getting the daily balanced and active play they need requires tackling both structural and behavioral issues, but most of the work to date has focused on addressing the former. For example, KaBOOM! and other organizations have worked hard to tackle barriers such as lack of access to playgrounds and reduced recess time in schools, with KaBOOM! building over 2,500 playgrounds across America for kids in need and catalyzing the building, improving, and opening of thousands more.

Equally important, however, is solving barriers related to individual behavior change—how do we enable parents and caregivers to include more active play in their kids' daily activities? In most communities, kids can't get to playgrounds if adults don't bring them there. In addition to safety concerns, there are certainly real constraints on time—parents work long hours, and kids have school, homework, and other activities. However, we believe there are also behavioral barriers that can be addressed through innovative solutions focused on the psychological obstacles of active play.

Behavioral Economics Gives Us a New Way to Think About Enabling Active Play

When policy makers want to affect the behavior of individuals, the traditional method has been to educate them. Launch outreach campaigns; hang up posters; distribute leaflets! Indeed, these strategies have been tried by a number of organizations focused on active play. However, for all these efforts, child obesity, mental illness, and screen time are all still sky high. What's going on?

Behavioral economics teaches us that people don't make decisions in isolation—context matters, and other things going on in our physical and mental surroundings can greatly affect the actions we take (or don't take). So while parents or caregivers may read the posters and the leaflets, know and understand the benefits of play, and even intend to make sure their kids get the amount and types of play they need each day, other invisible psychological barriers may exist.

ideas42 uses insights from behavioral economics to tackle tough problems across many disciplines. Applying the "behavioral lens" allows us to better understand how individuals make decisions in the real world—the messy environment we all live in. Encouraging kids to play more actively is one of these tough and complex problems, and KaBOOM! and ideas42 have been working to use the behavioral lens to examine this challenge from a new angle. Together, we have developed several innovative solutions that city leaders can embrace to "nudge" kids, and the adults who care for them, toward better outcomes through play.

ideas42 supplemented our behavioral approach with qualitative interviews and observations. This paper is the result of this work. We hope that city leaders, policy makers, urban planners, developers, and architects—not to mention families—will use these findings to design innovative and effective solutions for their communities.

The Behavioral Economics Perspective

What Behavioral Economics Tells Us about the Challenge of Balanced and Active Play

At its most basic, the process of "playing" appears simple. The parent or caregiver decides to take the child out to play, and then they do it, right? In actuality, the process is more complex. When we look at the full decision-making process, and the context in which it occurs, we might see that it looks something like this:

Lisa gets home from work around 4:10 p.m. The bus drops off her 6-year-old son Damien 20 minutes later. He complains that he's hungry, so Lisa lets him snack while she cooks dinner and does chores. At some point—maybe earlier in the day, maybe while he's snacking, maybe when the weather clears up— Lisa needs to **consider the option** of going to the playground and **decide** that it's worth interrupting or forgoing other tasks to bring Damien out to play. Then Lisa **gets ready**. She packs a bag with snacks, extra clothes, books, and toys, dresses Damien in play clothes, and then, finally, they go out to play—out the door and down to the park. Note the key actions in this story (bolded): Lisa must consider play, then decide to take Damien out, and then prepare to play, before she can actually take him to play at the park. These actions are all potential behavioral "sticking points," or what we like to call "bottlenecks," starting with a step most of us are unaware of—just the consideration of the option to play. And again, as we can see by Lisa's busy schedule and Damien's hungry belly, this whole decisionmaking process doesn't occur in a vacuum—there are numerous contextual features that may affect what actions are taken along the way.

On the following page is a map of that decision-making process with the key behavioral bottlenecks called out in orange.

Next, we discuss these three major bottlenecks and the psychological effects around them. We also discuss an additional challenge low-income families face—the cost of dealing with scarcity.

WHAT IS BEHAVIORAL ECONOMICS?

Behavioral economics is the study of how people make decisions in a complex and textured world where details matter. Behavioral economics differs from standard economics because it uses a more realistic (and more complex) model for how we view people. It draws this deeper understanding of people from decades of research in psychology.

Behavioral economics has been used across a variety of fields to improve the way policies, programs, and products are designed and implemented. ideas42 has worked with partners on problems as diverse as helping people reach financial goals, improve medical outcomes, increase college attendance, and use energy more efficiently.

The Decision Making Process around Play

At its most basic, the process of "playing" appears simple. The parent or caregiver decides to take the child out to play, and then they do it. In actuality, the process looks slightly more complex:



Behavioral Bottlenecks to Play

Parents and caregivers may not even consider play



From a behavioral perspective, Lisa's *consideration* of the option of play—her "moment of choice"—is actually an important step. Kids today have many activities that occur at specific times—school, meals, TV shows, etc.—but play isn't usually a planned event, and that means parents and caregivers (and kids) may not even *think* about play. Or, if they do, the timing is wrong—they're passing a playground on the way to a doctor's appointment, or coming home for dinner after a long day.

As individuals, we make many apparent "decisions" that are not really decisions at all—rather, we did not even *consider* making the choice, and so we ended up sliding into a default or routine action with little conscious thought. Or, we may indeed consider the choice—but at the wrong time, when there is nothing we can do to act on it. This is especially true when there is no clear moment of action, or when we are busy with many other things. For example, many people sign up for introductory trial periods and find themselves paying for magazines, product shipments, or other subscriptions long after they intended to end the contract. Without a specific moment to act, it is often easiest to just continue the status quo.

This is one of the reasons education and outreach campaigns are often not as effective as their organizers hope. Education works best when there is a careful choice being made, and the target individual has a specific moment to consciously reflect on the pros and cons of a decision. With active play, it's easy for families to get caught up in all the other daily tasks and decisions and never have a moment to even consider the choice to play.

Feedback on different types of activities is unclear

It may be unclear to parents or caregivers whether their kids are sticking to the right "play diet." Parents don't see any measurement of how many hours in a week their child has been playing, whether indoors or outdoors. Organized activities and school work have more salient "units" of measurement—soccer practice happens three times a week, school goes from 8 a.m. to 3 p.m., homework gets finished. Further, the benefits of play are not immediate, so that is not a source of feedback either.

Timely, salient feedback is an important behavioral cue. When we can know the impact of our actions, and how we are doing relative to some standard or norm, we are much more likely to change our behavior. For example, Opower is a company that sends people letters telling them how their energy consumption compares with that of their efficient neighbors. Even given just this simple feedback, people reduce their energy consumption by 2–3%. Energy prices would have to go up by more than 20% to achieve the same change ⁷! With active play, it's hard to know if you're "doing it right;" the impacts show up years, if not decades, after the actions.

Play can feel unexpectedly hard to do



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Taking Damien out to play requires many small tasks for Lisa. She packs a bag, she changes his clothes, she brings him out to the park—and once they get to the park, Lisa still puts in time and effort keeping an eye on Damien and maybe playing with him, too. For many of the families we interviewed, going out to the playground was seen as a significant undertaking, a half- or full-day outing that required planning around food, water, bathrooms, and transportation.

FINANCIAL CONSTRAINTS AND THE EFFECTS OF SCARCITY

In addition to behavioral snags, families facing financial constraints must deal with the underlying psychology of scarcity. Having to juggle tight budgets can actually exacerbate the effects of behavioral barriers by taxing an individual's cognitive capacity⁹. When people are living with scarce resources, they focus more strongly on each decision that affects those resources, leaving less attention for other, less urgent issues. While this "tunneling" can be helpful to solve the primary problem, it means that other issues may be neglected until it is too late.

For example, suppose that a single mom is on a tight budget, and her car breaks down. The repairs are more than she can afford right now, but she needs to get to work in order to keep food on the table. She "tunnels" on solving this crisis, so she might end up taking out a payday loan to fix the car, even though she knows that the high interest makes the long-term impacts far worse. She solves the problem now—but she'll have other issues later.

The psychology of scarcity affects families facing time constraints as well. It underlies many problems, and it makes it all that more important to carefully design programs and policies to be user-friendly and easy.

All of these tasks add up. This can lead to a

disproportionate focus on the small, short-term costs of play, even while parents like Lisa recognize the larger, long-term benefits. This last point is important—wellmeaning parents and caregivers certainly recognize the importance of their kids' healthy development, but the psychological effect of what we call "hassle factors" can be large. These hassle factors can exacerbate other behavioral effects, like procrastination—we can wait until tomorrow to deal with getting the kids out to play, but the laundry (or TV show) can't wait!

Hassle factors are everywhere. They can be a significant deterrent for us even when the benefits are large. For example, the FAFSA application for federal student financial aid is eight pages long. Clearly, the future benefit of a college education far exceeds the annoyance of filling out even a somewhat tedious form; but one 2008 experiment showed that helping low- to moderate-income families fill out the FAFSA forms not only made them more likely to submit the application, but also made them *more likely to enroll in college in the fall*⁸.

Designing Solutions through a Behavioral Lens

Understanding the ways psychology affects the decisions we do (or do not) make around play allows us to design a variety of solutions that work with these behavioral bottlenecks. Overcoming the play imbalance means, among other things, encouraging outdoor play and balancing indoor time. From a behavioral perspective, this means pursuing solutions that make outdoor play more visible and salient to parents, caregivers, and kids; improve parents' awareness of their kids' activity, and reduce hassles and make outdoor play easier, more feasible, and more appealing for everyone.

Below, we suggest three potential solutions for cities that use these insights, combined with observations from our research and experience, to help low-income families tackle the play imbalance. The ideas aren't matched specifically to the bottlenecks we described earlier rather, each solution would address one or more of the behavioral snags, possibly in multiple ways. These ideas focus on making regular active play easier and more appealing, and helping to balance things that encourage sedentary time, including targeting excessive screen time.

Behavioral Solutions

PLAY EVERYWHERE Make play easy by integrating it into dead time in unexpected places



From riding the bus to a doctor's appointment, to shopping for groceries, to waiting for the laundromat dryer to finish—families spend a lot of extra time doing mundane tasks. This is especially true for low-income families, who spend a greater proportion of childcare time watching their kids while getting other tasks done ¹⁰. Often, parents and caregivers look for ways to keep kids busy or distract them. Kiera, a single mother, preferred that her 3-year-old son look around at the world rather than his kids' tablet. "Usually if we're going to the park, I won't bring it," but she admitted that it "keeps him occupied," when they are "going to the mall, or going to be on the train or something."

This "downtime" is a great opportunity for play. Consider a mom taking her kids to a health clinic. She struggles to get them to the bus stop, to keep them safely away from the busy street while waiting for the bus, and to occupy them while waiting for the doctor. Imagine instead that the kids eagerly go to the bus stop because the sidewalk is painted with hopscotch and other playful activities. They don't complain at the bus stop because they are enjoying the swings that replaced the benches, and they don't cause trouble in the clinic waiting room because they're busy playing games with their mom. If it is everywhere, play can turn moments of frustration into fun-filled moments of engaged family time, which help kids thrive.

Integrating play like this also brings it to the forefront of daily routines. This helps tackle the missing "moment of choice" problem. Without much advance planning, decision-making, or other contributors to hassle factors, families can still have meaningful play experiences. At the same time, it makes life easier for parents and caregivers who bring their kids to laundromats, grocery stores, and other businesses where waiting is part of the routine. Cities have many undiscovered assets that can be used to fill their communities with play everywhere.

PROXIMITY MATTERS

Create mini play destinations "around the corner"

"Access" to playgrounds is typically thought of as a question of having one in the neighborhood, or not. But from a behavioral perspective, the definition is not so simple. Psychological distance is not equal to actual distance: A park can feel far just because the parent has to drive or take public transportation, or even walk to a different part of the neighborhood. This makes going to the park or a playground seem like a major outing rather than something every day and incidental. Studies have found that people are willing to walk a quarter to half a mile at most to go to a park. The novelty of new playgrounds may increase their willingness to walk further temporarily, but it will eventually wear off.

If play feels like a special event rather than a routine activity, especially on weekdays when everyone is busy, kids are unlikely to hit the American Heart Association's recommended target of 60 minutes of moderate- to vigorous-intensity activity per day. This challenge is likely to be even greater for low-income kids because they are more likely to live physically far from a safe place to play, let alone psychologically. The majority of low-income parents we spoke with tended to take their kids out to play on weekends, in some cases, for several hours at a time—occasionally binging on play, rather than getting a healthy balance of play every day.

Of course, going to a destination to play does make the event special for both the adult and kid. In our research, we found that most adults enjoyed being identified as the type of parent to take their kid "out," to the playground or park. "I'm the type of parent that likes to do things with them," Layla, mother of a 9-year-old and a 2-year-old, told us. "I don't like to stay in the house with them. They like to run around and be active." She tries her best to take them to the local playground, but really only manages it on weekends.

Creating closer, and smaller, "play destinations" can help. This is like the difference between supermarkets and corner convenience stores: You stock up on groceries every week or two at a supermarket, but you might stop by the corner convenience store much more often to pick up some milk or snacks. When it comes to play, the equivalent of the supermarket might be a big playground in the nice part of town, with sprinklers and facilities. For low-income families, visiting that playspace is exciting and useful—but it takes a lot of effort.

We need to create a second type of playspace that is small and more modest, but right around the corner a "convenience store" for play. These spots might have only one or two interesting play structures and could be built in underused spaces in easy-to-access, visible locations. They also could be flexible and mobile, changing design or location periodically to keep them fresh and interesting and to encourage families to explore. This will require innovation on the part of urban planners, developers, and designers.

This approach helps create moments of choice by making playspaces more frequently visible, and it makes daily play more accessible. Seeing these mini-playgrounds may prompt parents or kids to consider play. And, mini-playgrounds would reduce hassle factors and psychological distance so that going to them won't feel like a major outing.

FAMILY-FRIENDLY CITIES Make play more inclusive and appealing to the whole family



Parents and caregivers like to take kids to fun places. In our research, adults talked in detail about trips to zoos, aquariums, museums, roller-skating rinks, and hiking trails. They even discussed dining out and visits to nail salons as special outings. These places were interesting for them as well as their kids. Shanna talked about her struggle to find inexpensive, interesting outings for her and her six kids, who range in age from 2 to 19. "We mostly try to do family things together, instead of individual things... We make decisions on what to do by voting... Sometimes there's not enough money. So that's why we look online for free things, and something different. Everybody always goes to the movies, everybody goes roller-skating, everybody goes somewhere that's got to do with money." The weekend before, they had taken the bus out of Boston to go hiking in Blue Hills.

Trips like these, however, were often limited due to financial and time constraints, as well as distance. For busy parents, play involves their free time, as well as their kids' time, and options can be limited.

Making local play opportunities more fun and social for parents and caregivers could help. Designing games and equipment that can be used by a range of ages and abilities can engage adults and kids of all ages. Existing destinations could be expanded to include more low-cost activity options that engage both kids and parents.

If we focus on creating family-friendly places that appeal to all generations, we will increase the motivation of adults to take their kids to play for longer and more frequent periods of time. Getting parents and caregivers excited about their own play experience lowers the bar for addressing other problems, including making play easier, drawing attention to it, and addressing time management issues.

How Screen Time Affects Our Play Time

Kids spend a lot of time in front of entertainment screens-televisions, computers, and smaller electronic devices. Even the most conservative estimates put screen time for children ages 0 to 8 at two hours per day¹¹, and a recent University of Michigan Health System study found that 26% of parents report that their children 2-5 years old have three or more hours of daily entertainment screen time¹². Other studies show that usage increases dramatically as children get older-as 8- to 10-year-olds are on screens for five and a half hours per day ¹³. There is no denying that TV and video games are entertaining, easy, and in some instances unique ways for kids to learn and have fun. However, watching TV (or pursuing other types of screen time activity) is often part of an automatic routine that crowds out other activities, and this type of sedentary play outweighs active play in kids' lives.

Parents may know that active play is good for kids and what the right play diet is; but it's hard to know to what extent they are sticking to the diet. Unlike active play, feedback on time spent sedentary and indoors is limited—there's no sun in the sky, no tiredness from running. This makes it hard to be aware of how much time has been spent inside, leading to an unconscious imbalance between time spent in sedentary versus active play.

Humans have a hard time accurately measuring how long they've been involved in an activity ¹⁴. When we're busy, time feels compressed. Certain types of low-effort, high-pleasure activities—like watching TV—may seem to pass more quickly ¹⁵, leading parents and kids to underestimate the amount of time they've spent in the activity. Active play is often the opposite parents may have little to do while they're watching their kids at a playground, yet they must remain engaged. An hour can feel like two.

During our research, we saw significant opportunities for sedentary indoor play (lots of toys and tablets) and screen time. Unless children were disruptive indoors, parents had little sense of how long they spent inside, but various ways to recognize how long kids had played outside. Layla took her two kids and their friends out to the playground after a long week at work. She laughed when recalling how they didn't want to come home. "We can't stay at the park all day and all night!... They're not tired, but I'm tired! Because I have to keep an eye on all of them, run around after all of them...and I'm tired." This was after "about two hours" on a weekend.

The ubiquity of entertainment screens everywhere in the home, from living rooms, to kitchens, to bed rooms, also contributes to the imbalance. Research shows that even a *television on in the background* disrupts other types of play ¹⁶. Yet observations during qualitative research revealed heavy screen presence in almost every home, and parents, like Melissa, who struggled to limit screen time for her 11-yearold daughter Kaley in the face of televisions everywhere. "If we go to my sister's house, [my daughter] is in her [aunt's] bedroom. We're outside enjoying the weather but she's inside

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watching TV. She'll go outside for a little while but then go back in." Kaley has a television in her bedroom at home, too. Sometimes Melissa will get fed up and flip the breaker switch late at night, permanently ending any secret late-night watching by Kaley.

The American Academy of Pediatrics (AAP) recommends that children and teens spend no more than 1–2 hours a day engaging with entertainment media, and that children under two avoid screens completely. However, limiting the time spent in front of screens is difficult because there is often little feedback on how

FAMILY SOLUTION Changing your home environment

One way to tackle this is by focusing on physical cues. The AAP recommends establishing children's bedrooms as "screen-free" zones ¹⁷. From a behavioral perspective, this could be an excellent strategy. Habits are very sensitive to cues in the physical environment ¹⁸. If there are no screens in the bedroom, kids may automatically spend less time on the TV and on the internet. Visible timers may be effective, too. And with the TV off, kids might be more likely to create a moment of choice when they say, "I'm bored, let's go outside!"

much time has passed. It is easy to watch more than you realize, and it is often difficult for parents to know exactly how much screen time their child is spending.

PRIVATE SECTOR SOLUTION Create better ways to measure feedback about active play or lack of it

Creating mechanisms for feedback cues can help parents and kids know where they stand on balancing sedentary activity with active play. These cues may increase awareness of the passage of time sedentary activities, like watching television—imagine a timer that turns off the TV for five minutes after a set period of time. Or, like Fuelband, Fitbit, Jawbone, or Zamzee, a device could be used to highlight positive time spent playing, moving, and having fun. Feedback cues could be shared among friends or family to leverage social norms and group commitments to spending time playing actively.

Call to Action

The solutions above build in different ways on the insights we gain from turning a behavioral lens on play. These solutions target common behavioral "bottlenecks" in multiple ways and can be combined and adapted by city leaders to address the particular challenges in their communities. The play process first requires that kids and parents think about the option of play. Cities can create these "moments of choice" by making active play more visible and appealing. And cities can make play easier and more fun by integrating play everywhere, increasing access hyper-locally, and finding ways to include and engage the whole family. To complement city efforts, the private sector can help parents and kids decide to play by giving them feedback on how they are doing and making them more aware of time spent on low-effort sedentary tasks.

We know play makes kids healthier and happier. We also know that play is critical to building 21st century skills such as creativity, critical thinking, empathy, and collaboration—skills that are integral to the jobs and economy of the future. We also believe that—through fostering deep and meaningful adult-child bonds—play acts as a preventative factor against toxic stress that so negatively limits healthy child development, particularly for low income kids growing up in the face of extreme adversity.

At the same time, cities are fiercely competing for residents—not just 20-somethings, but also families who breathe energy and enterprise into neighborhoods. Everyone wants to live in a safe community with ample job opportunities. In addition, families want great schools and abundant places to play. Creating kid-friendly, familyfriendly cities filled with play is a competitive advantage for cities. We hope that the ideas we've recommended serve as inspiration for city leaders to create solutions that make it easy for **all** kids in their communities to get the balanced and active play they need to thrive. In turn, cities on the vanguard of applying a behavioral lens to create playable communities will inspire other cities to follow their lead.

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ideas42

ideas42 is a non-profit organization that uses the insights of behavioral economics—which helps us understand the choices and decisions people make—to design innovative solutions to tough social problems at large scale. The consequences of the behavioral issues we tackle are often profound. All too often, the reasons for these failures turn out to be small and remediable—but also usually overlooked or dismissed as unimportant. We work, therefore to identify subtle but important contextual details and design innovative solutions that overcome their effects.

We work in a number of areas: consumer finance, economic mobility and opportunity, health, education, energy efficiency, and international development. Our work involves a lot of observation, plenty of patience, and a willingness to be surprised. Most of all, however, it involves asking the right questions that others may not ask. Learn more at ideas42.org.

KaBOOM!

KaBOOM! is a national non-profit dedicated to the bold goal of ensuring that all children, particularly the 16 million American children living in poverty, get the balanced and active play they need to thrive. Since 1996, KaBOOM! has worked with partners to build, open or improve nearly 16,000 playgrounds, engaged more than one million volunteers and served 7.4 million children.

We also work with cities to increase their playability through our Playful City USA Recognition Program, annual City Leaders Summit, and by convening thought leaders and municipal decision makers to reimagine livable cities. In the same way that walkability is the metric of how easy it is for pedestrians to get to work, run their errands, and enjoy their leisure time, we believe cities need to move towards enabling all children to easily get active and balanced play. This is because an essential ingredient in vibrant communities is young families, and young families are increasingly demanding to live in cities that allow children to get their bodies moving and their minds engaged.

Finally, we engage the parents and caregivers who are critical to the process of raising a healthy and happy next generation, getting them invested and taking action for the cause of play. To learn why #playmatters: visit kaboom.org or join the conversation at twitter.com/kaboom.



To see how cities are putting families first, follow @kaboom on Twitter