



**What Works Cities
Economic Mobility Initiative
DAYTON**

Dayton: Improving the promise of preschool for all young learners

High-quality preschool education is instrumental in fostering early childhood development and in laying the groundwork for a child's future success. The City of Dayton regularly works with a non-profit preschool organization – Preschool Promise – to help improve preschool education in the city. As part of the What Works Cities (WWC) Economic Mobility Initiative, the Behavioral Insights Team (BIT) supported and evaluated their efforts to produce six interventions supporting both in-person preschool attendance and remote learning. This memo summarizes our high-level findings and recommended next steps.

⚠ Issue Motivation

Ensuring access to high-quality preschool education to all Dayton children is a critical component of the City's economic mobility strategy. This is because early childhood learning amplifies future learning by developing much-needed literacy, numeracy, and socio-emotional skills in children. The best way to reap the benefits of early childhood education is by promoting regular attendance (defined as over 90% of school days) among students. The City has consistently championed this goal and strives to support disadvantaged children who may otherwise lack the means to access first-rate, affordable education. Yet, despite their efforts, there are still significant racial gaps in attendance and achievement outcomes. In Dayton, we estimate only about 52 to 54% of African American students meet the ideal minimum attendance level, compared to 70% of white children. To address these disparities, the City of Dayton teamed up with Preschool Promise, a local non-profit dedicated to boosting kindergarten readiness among Montgomery County children. The goal was to ensure that children have access to one year of high-quality, accessible, and affordable preschool – with a particular focus on Black, Hispanic, and Appalachian children. Together with BIT, they developed a set of interventions that would eliminate obstacles, foster preschool attendance, and promote educational achievements among local preschool-aged children.

"Even though we may not see the direct economic payoff from Preschool Promise for years, Daytonians have shown that they believe in investing in our kids as a long-term strategy."

— Nan Whaley, Mayor of Dayton

Our Approach

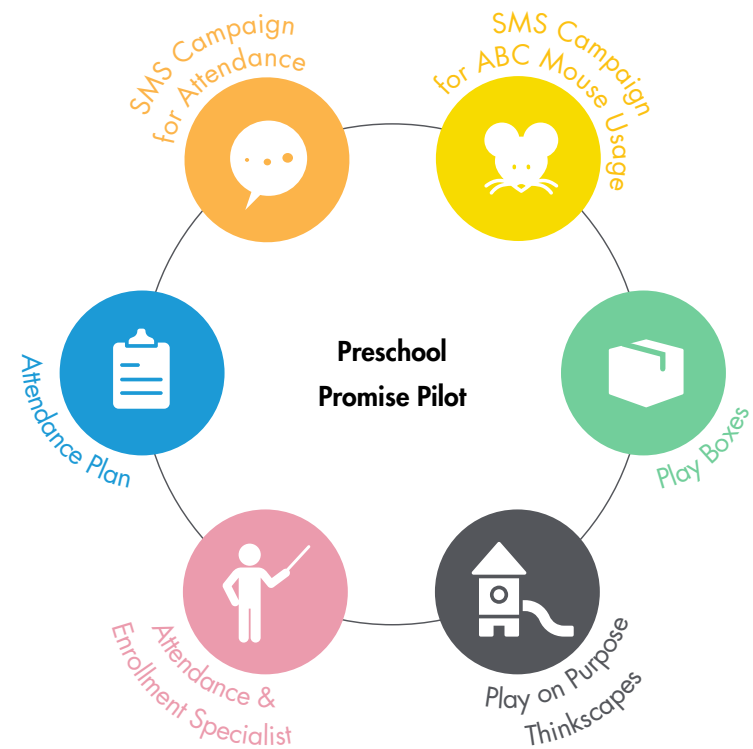
In 2019-20, Preschool Promise partnered with 83 preschools and their work benefited nearly 2,000 children. As part of their engagement with the WWC Economic Mobility Initiative, Preschool Promise developed six interventions aimed at boosting in-person attendance (prior to the COVID-19 pandemic) and supporting remote learning. Below, is an overview of the intervention components:

Interventions supporting in-person preschool attendance:

- * Attendance & Enrollment Specialist: New Preschool Promise employee hired to improve attendance, engagement, and enrollment
- * Attendance Plan: Tool developed to help teachers and parents plan to prevent chronic absenteeism
- * SMS Campaign for Attendance: Weekly text messages sent to parents to encourage them to have their kids regularly attend preschool

Interventions supporting remote learning:

- * SMS Campaign for ABC Mouse Usage: Weekly text messages sent to encourage parents to use at-home virtual learning tools (COVID-19 pivot)
- * Play Boxes: Boxes of age-appropriate educational toys and instructions for skill-building activities were sent to families to use at home (COVID-19 pivot)
- * Play on Purpose Thinkscapes: Interactive educational playground within the community to model play-based learning



COVID-19 Modifications

Originally, the project was focused on increasing preschool attendance. However, the disruption caused by the COVID-19 pandemic led Preschool Promise to shift their support to at-home learning. To that end, Preschool Promise introduced “Preschool Promise Plus”: a set of remote learning tools created to aid parents and ensure continued preschool education. These tools consisted of a tablet with a subscription to the ABC Mouse preschool education program, and monthly Play Boxes containing guides and resources for parents and children.

The pandemic impacted the various intervention pieces in the following ways:

- * In spring 2020, the evaluation of the SMS campaign for attendance was interrupted due to school closings and decreases in enrollment. In its place, a new SMS campaign for ABC Mouse usage was launched to promote at-home learning.
- * The scope of responsibilities of the Attendance & Enrollment Specialist was expanded to focus on remote programming and learning. The yearly fund she administered, which was originally intended to help overcome attendance barriers, was repurposed for other remote learning interventions.
- * The inauguration of the first Thinkscapes was delayed to summer 2021 for logistic and safety reasons related to the COVID-19 pandemic.

Attendance & Enrollment Specialist

In February 2020, Ryhan Hoskins was hired as Preschool Promise’s first Attendance & Enrollment Specialist. Her responsibilities included helping families navigate preschool enrollment, troubleshooting attendance issues, and administering a dedicated fund of \$10,000 to help families address structural barriers related to preschool attendance. After the onset of the COVID-19 pandemic, she focused on supporting parents of children who were engaged in remote learning and on keeping the children intellectually stimulated.

Feedback from the Preschool Promise staff and parents’ social media comments suggest that the new role was successful and that Ryhan in particular did an excellent job. The Attendance & Enrollment specialist position played a critical role in supporting both the Preschool Promise team and parents through the pandemic. As a result, the position has been budgeted to continue full-time beyond the WWC Economic Mobility Initiative partnership.

Attendance Plan

The Attendance Plan is a worksheet that teachers and parents can use during their meetings to facilitate the conversation on attendance: it helps them to align expectations around preschoolers’ attendance, troubleshoot barriers and commit to a 90% attendance rate. Parents of chronically absent students were required to complete the plans together with teachers, while others were asked to do it independently at home.

The plan was piloted for two months by ten teachers and 115 students. Participating teachers indicated that the plans helped them connect with parents and better understand the barriers students face to regular (i.e., >90% of school days), on-time attendance. They also represented an accountability tool that helped build trust between parents and teachers around common attendance goals.

SMS Campaign for Attendance

The SMS campaign for attendance consisted of a series of weekly text messages sent to parents of preschool children in order to encourage regular attendance. The messages leveraged individual information about past attendance rates. For example:

"Hi <Parent's Name>, congratulations <Student's Name> didn't miss any days of Preschool last week! The chance to learn is the best holiday gift for <student's name>, so help get <him/her> to preschool everyday before the break."

One half of parents received the SMS every Wednesday and on specific occasions (e.g., snow days or holidays) and the other half received them monthly. We had originally planned a five-month pilot duration but, unfortunately, it ended after three months due to the COVID-19 pandemic (thus ending in March 2020).

Preliminary results showed a very small descriptive improvement (one percentage point) in attendance among families who received the weekly text messages (83.1% attendance) compared with families who received monthly text messages (82% attendance).

Furthermore, the group who received weekly messages had a higher proportion of students who achieved or surpassed the 90% attendance goal: 35.5% for weekly text receivers compared to 31.5% for monthly text receivers.

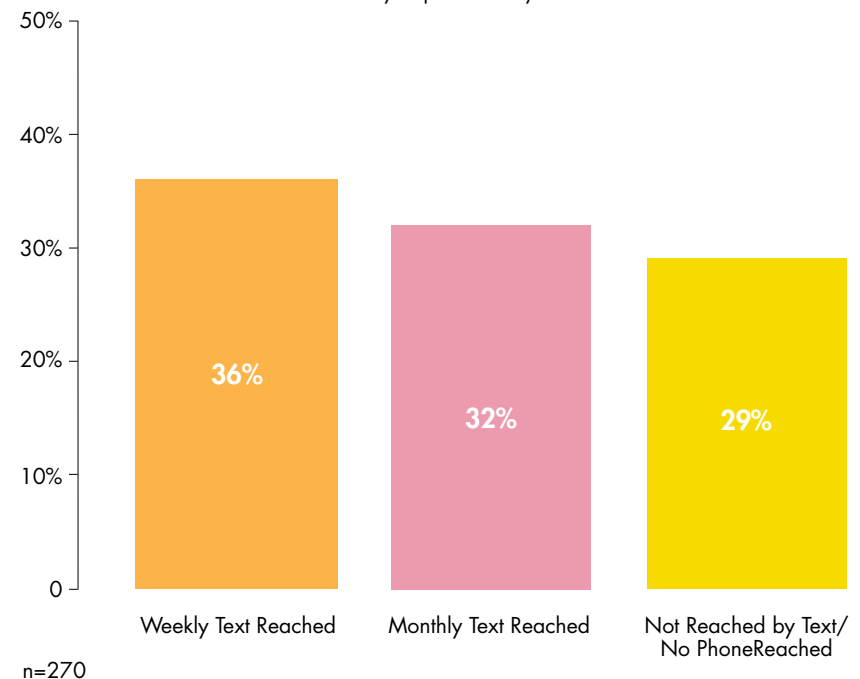
See Figure 1.

These trends represent initial promising results for the effectiveness of personalized texts in improving attendance; however, our conclusions are limited since the pilot ended early.



Figure 1. Average Percentage of Families Attending More Than 90% of Days

All data analysis provided by Dr. Richard Stock



SMS Campaign for ABC Mouse Usage

As part of their efforts to facilitate at-home learning following the onset of the COVID-19 pandemic, Preschool Promise sent a tablet with an ABC Mouse subscription to all the families of enrolled preschool children. ABC Mouse is an evidence-based educational app that improves early literacy and numeracy skills. BIT and Preschool Promise developed an SMS campaign to encourage tablet recipients to achieve the ideal goal of a 45-minute weekly usage for each child. Building on the insights from the SMS campaign for attendance, we drafted two sets of behaviorally-informed text messages: a standard one (which simply encouraged program usage) and a personalized one (which included information about individual usage from the previous week). For example:

"Hi <Parent's Name>, Spring is here and it's the perfect chance for a fresh start with ABC Mouse! Last week <Student's Name> used ABC Mouse for <#> minutes, but didn't reach their 45 minute goal. This week try an ABC Mouse activity like "<BINGO>". —Ryhan from PP

Between December 2020 and May 2021, 671 families participated in a randomized controlled trial to determine which type of SMS was more effective.

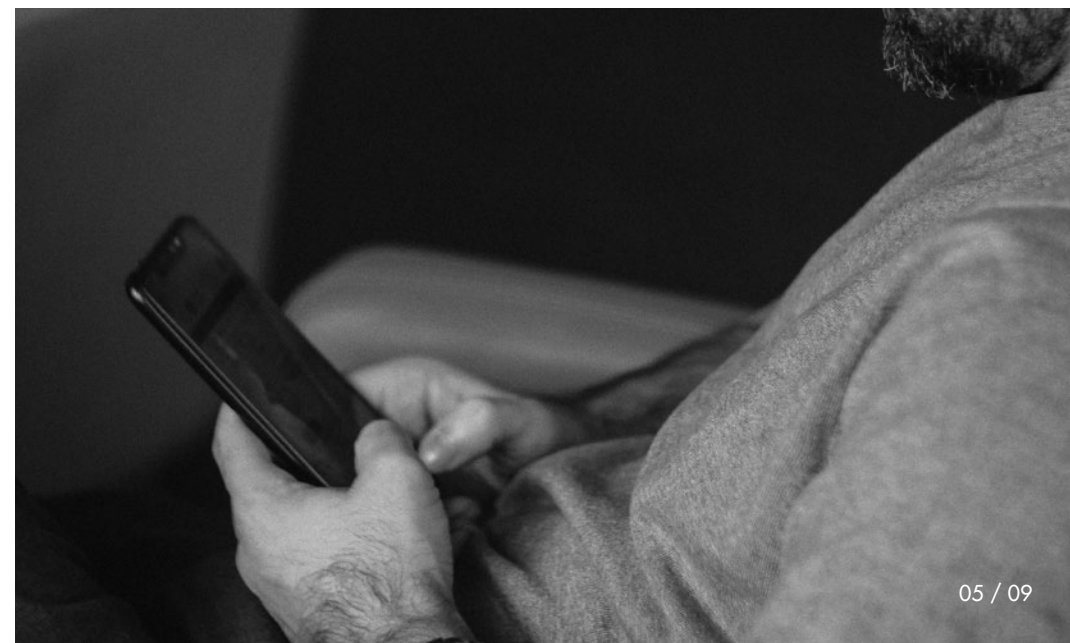
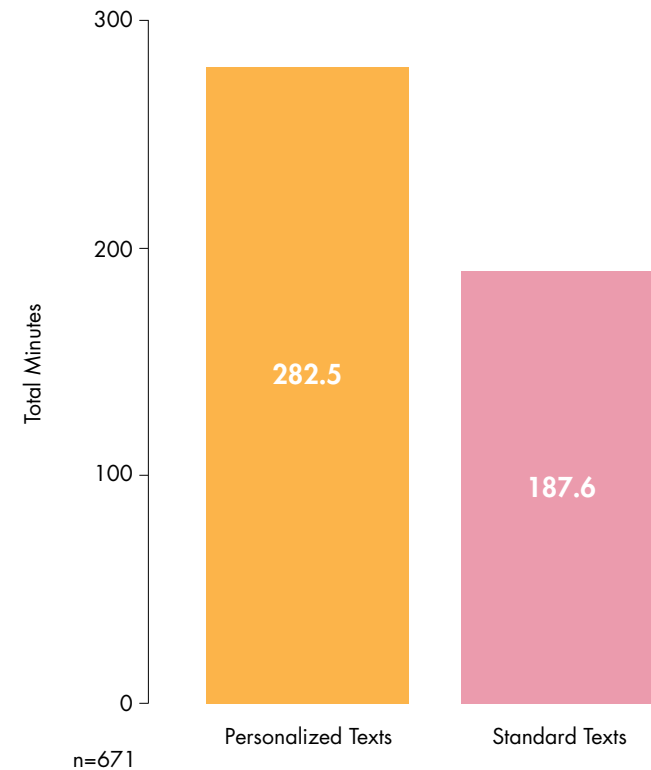
Families who received the personalized messages used ABC Mouse 50% more than the standard message recipients. They averaged 283 usage minutes over the pilot period, compared to the 188 minutes of standard message recipients.

See Figure 2.

Altogether, the analysis suggests that personalized messages lead to significantly higher engagement with the ABC Mouse platform. However, neither group consistently hit the 45-minute per week target.

Figure 2. Total Average Activity Time by Message Type (Minutes)

All data analysis provided by Dr. Richard Stock



Monthly Play Boxes were developed as a remote learning tool after the onset of the COVID-19 pandemic. The boxes were created through a combination of human-centered and behavioral design, with input from early-learning experts. They were intended to support the development of all types of kindergarten readiness skills via playful learning.

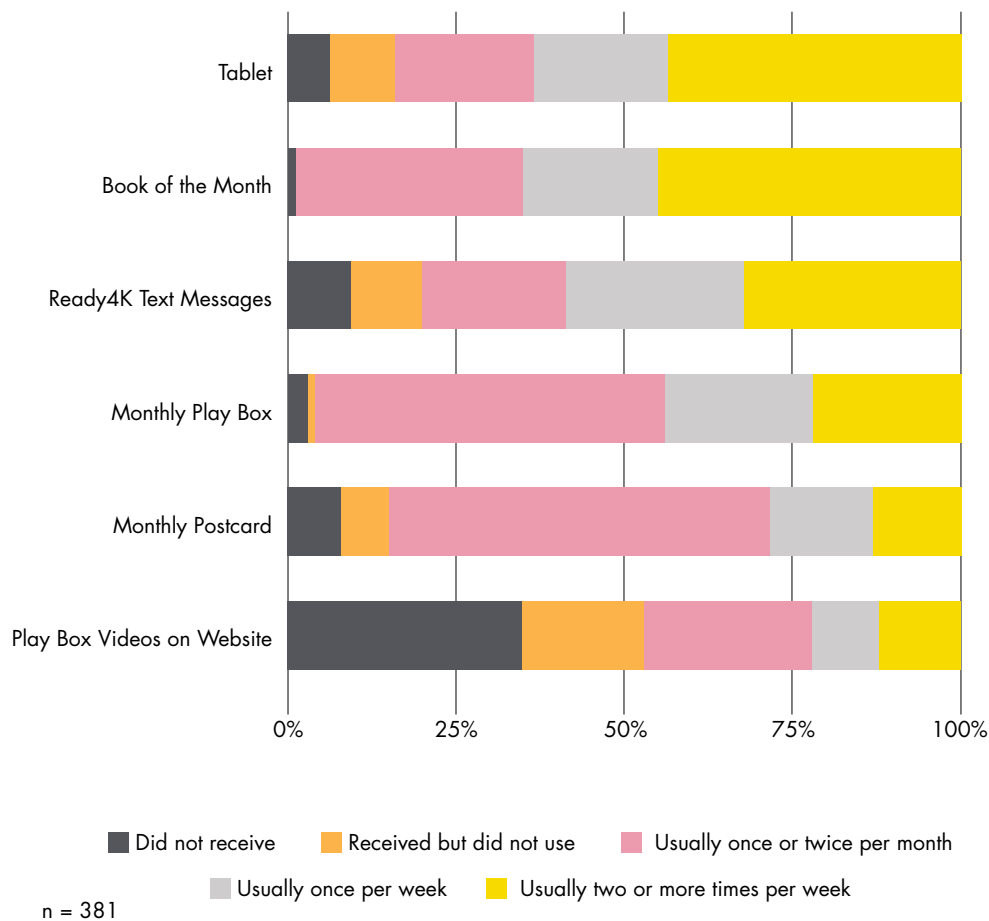
Between September 2020 and June 2021, 1,400 people (teachers and families) received around 13,000 Play Boxes, containing educational toys, activities, and a link to instructional videos on the Preschool Promise website and Facebook page. Play Box usage was assessed with two online surveys to gather parents' feedback:

- * Most (85%) said they used the Play Boxes at least once a week and 10% of families reported using them every day. Only a small number of respondents (3%) did not use them at all. Nearly one-third of families responded to our February 2021 survey (328 out of 1,145).
- * In the May survey, we had a similar response rate, but there was a decline in weekly usage (45%, down from 85%). Though families still consistently engaged with the Play Boxes (i.e. at least once a month).
- * Tablets and the Book of the Month were the most frequently used Preschool Promise Plus materials, and Play Boxes were in fourth place. **See Figure 3.**

Overall, parents' feedback and their continued use of Play Boxes indicate that they served as an effective method for engaging families in play-based learning.

Figure 3. Frequency of Usage of Preschool Promise Plus Materials

All data analysis provided by Dr. Richard Stock



Play on Purpose Thinkscapes

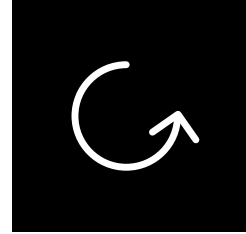
The Play on Purpose Thinkscapes are interactive educational playscapes for young children which embed playful learning in public community areas such as bus stops or supermarkets. Thinkscapes serve multiple purposes: they help young children build their kindergarten readiness skills and they create awareness around Preschool Promise's mission of boosting early-childhood learning.

Between July and August 2021, two Thinkscape experiences were introduced in high-traffic areas of the City: the Gem City Market outdoor plaza and the Hope Center for Families' campus. Early feedback from community members shows that they were enthusiastic about the Thinkscapes.

Given the warm reception of the piloted Thinkscapes, Preschool Promise partnered with the Dayton Metro Library, the Greater Dayton Regional Transit Authority (public transit agency), and other stakeholders to create a plan to integrate Play on Purpose experiences all over the City and greater Montgomery County.



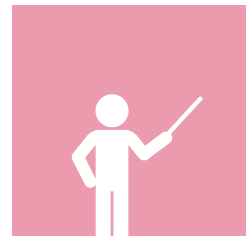
Scaling Opportunities & Recommendations



Overall

Explore opportunities to streamline data collection efforts for weekly attendance to support future initiatives and evaluations

The City of Dayton does not have the infrastructure to share data with Preschool Promise on a weekly basis or to access real-time data on attendance. This creates a significant burden for preschool providers and does not allow teachers or support staff to promote attendance efforts and interventions for at-risk students. Many of the interventions tested as part of this pilot relied on personalized data. Having access to this real-time data is a critical enabler of those interventions. We recommend Preschool Promise develop mechanisms or explore easy-to-use technology solutions to alleviate the staff workload, allow teachers and parents to easily monitor attendance, and lay the groundwork for future interventions and evaluations.



Attendance & Enrollment Specialist

Continue and expand the Attendance & Enrollment Specialist role

We recommend expanding the role's objectives beyond promoting attendance and enrollment to also supporting outreach campaigns targeting the parents of children who were withdrawn from preschool during the COVID-19 pandemic. This likely would involve expanding the number of specialists or growing the team to deliver on these objectives. Additionally, we recommend reinstating the \$10,000 fund to address barriers to attendance that are likely to reemerge as COVID-19 restrictions are progressively being lifted. The target of the fund could then be expanded to tackle any new barriers identified by the Attendance & Enrollment Specialist or through the use of the Attendance Plan.



Attendance Plan

Formalize and expand the “Attendance Plan” for the next school year

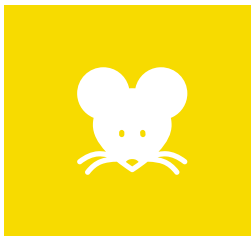
We recommend formally launching the plan at the beginning of the semester to leverage the “fresh start effect.” We suggest extending the collaborative teacher-parent planning style to the whole class to help normalize the practice.



SMS Campaign for Attendance

Restart weekly text messages for future school years and continue evaluation efforts

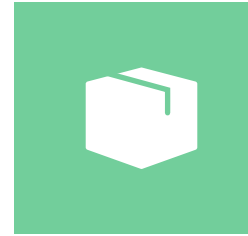
We recommend reimplementing the SMS campaign with continued monitoring. Preschool Promise can rely on the infrastructure and processes built as part of the pilot to continue the campaign in a cost and time-effective manner.



SMS Campaign for ABC Mouse Usage

Deploy up-to-date technology to improve engagement

Feedback from the Attendance & Enrollment Specialist suggests that parents struggled to run the program on outdated tablets, which may have contributed to lower usage rates. If Preschool Promise plans to integrate the use of ABC Mouse (or another learning program) into the in-person learning plan, we recommend exploring options to provide devices with updated hardware and operating systems to all families.



Play Boxes

Utilize the Play Box as a tool for engagement, enrollment, and attendance

We recommend continuing to use Play Boxes as a monthly learning checkpoint for families even after pandemic restrictions ease. For example, Play Boxes could include attendance reports and reminders of the importance of attendance or an update on what the child is learning in school to engage parents of preschoolers around attendance goals.



Play on Purpose Thinkscapes

Evaluate the impact and usage of Play on Purpose Thinkscapes

Given the high investment required to build a thinkscape, we recommend monitoring the use of each Play on Purpose Thinkscape and continuing to gather qualitative feedback from residents about the usefulness and impact of each site.

About this Initiative

The [What Works Cities Economic Mobility Initiative](#) is a program that aims to help nine participating cities identify, pilot, and measure the success of local strategies designed to accelerate economic mobility for their residents. Through the expertise of the What Works Cities' network of [local government leaders](#) and the support of Bloomberg Philanthropies, the Bill & Melinda Gates Foundation, and Ballmer Group, this initiative puts data and evidence at the center of local government decision-making. The Initiative launched in April 2019, with an 18-month timeline, but was extended to 30 months as a result of COVID-19. In each city, a project was selected in collaboration with the city leaders that met the following five criteria: evidence base, mayoral priority, scalability, feasibility, and stewarding taxpayer resources.

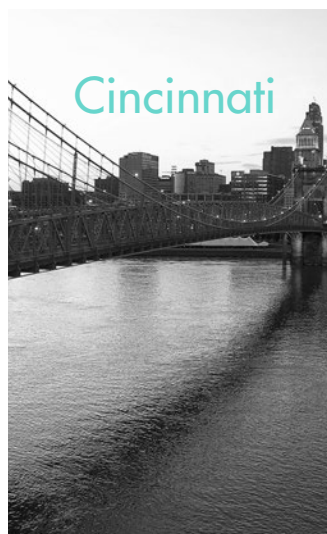
Launched in 2015, [What Works Cities](#) helps local governments use data and evidence to tackle their most pressing challenges and improve residents' lives. Learn more at [whatworkscities.org](#).

City Partners

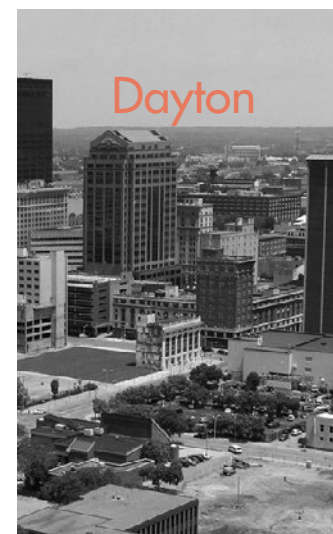
These projects were supported by many dedicated community partners, including Preschool Promise (all interventions), Dr. Richard Stock at the University of Dayton (conducted data analysis for all interventions), Miami Valley Child Development Centers (MVCDC) (SMS campaign for attendance), Hope Center for Families (Play on Purpose Thinkscapes), and Gem City Market (Play on Purpose Thinkscapes).



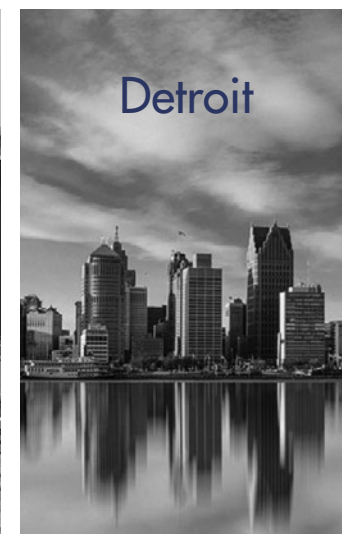
University
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Cincinnati



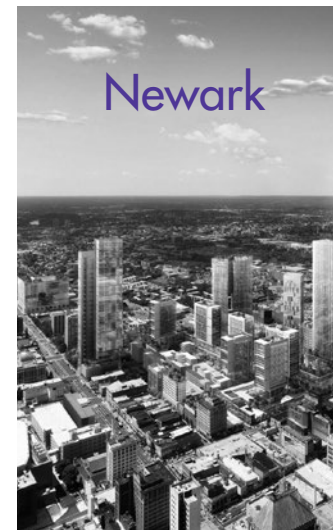
Dayton



Detroit



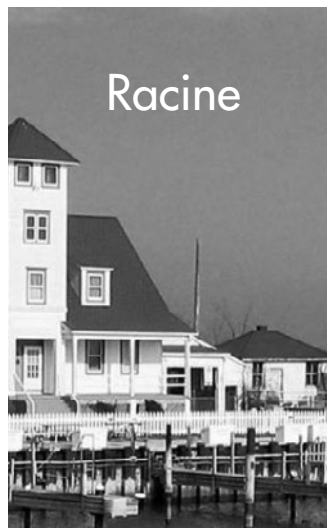
Lansing



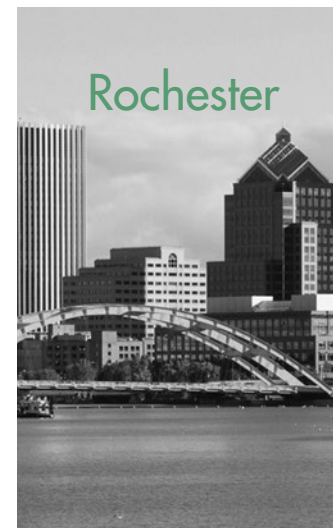
Newark



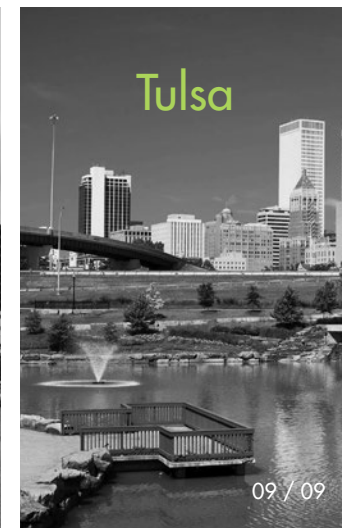
New Orleans



Racine



Rochester



Tulsa