Using Data to Strengthen Afterschool Planning, Management, and Strategy: Lessons from Eight Cities

Beth C. Gamse, Gamse Partnership
Julie Spielberger, Chapin Hall at the University of Chicago
Jennifer Axelrod, Chapin Hall at the University of Chicago
Angeline Spain, Chapin Hall at the University of Chicago
with **Samantha Burke**, Independent Consultant

CHAPIN HALL

Gamse Partnership

Commissioned by:
The Wallace Foundation®

Using Data to Strengthen Afterschool Planning, Management, and Strategy: Lessons from Eight Cities

Beth C. Gamse, Gamse Partnership
Julie Spielberger, Chapin Hall at the University of Chicago
Jennifer Axelrod, Chapin Hall at the University of Chicago
Angeline Spain, Chapin Hall at the University of Chicago
with **Samantha Burke**, Independent Consultant

Acknowledgments

TABLE OF CONTENTS

Executive Summary

Background and Introduction

Funded by the Wallace Foundation, the multi-year Next Generation Afterschool System-Building Initiative, or ASB2, was an effort to strengthen systems that support high-quality afterschool programs for low-income youth. The ASB2 investment, which followed earlier grants to Boston, Chicago, New York, Providence, and Washington, DC, also focused on strengthening afterschool systems, with similar goals: increasing youth participation in afterschool programs; improving program quality; strengthening infrastructure, including governance, policy, and coordination; and enhancing data use to inform afterschool systems. The Wallace Foundation (Wallace) focused most of its second wave of funding, from 2012–2016, on Baltimore, Denver, Grand Rapids, Jacksonville, Louisville, Nashville, Philadelphia, and Saint Paul.[1] Each had strong city leadership and mayoral commitment to participate, which signaled a solid foundation for an afterschool data system initiative. The eight cities endeavored to improve key elements of their afterschool data systems, to increase afterschool program availability and quality, and to generate actionable information for afterschool program managers, providers, funders, and system leaders. Wallace supported cities' efforts through direct grants, as well as providing technical assistance to deepen individual and collective grantee learning about afterschool system-building efforts.

Wallace also invested in a study to learn how communities plan, design, implement and use community-wide afterschool data systems. Conducted by researchers from Chapin Hall and the Gamse Partnership, the four-year study included regularly scheduled site visits and in-person and/or telephone interviews with afterschool system leaders, stakeholders, and providers; participation in annual, network-wide meetings; observations of selected professional development sessions; and access to relevant city documents. Interim findings based on the initiative's first two-plus years were summarized in a report called *Connecting the Dots: Data Use in Afterschool Systems*.[2] This report includes findings based on the entire initiative, focusing chiefly on cities' progress as of late 2016, and it draws from the full range of the study's data collection. It summarizes (1) how the funded cities approached afterschool data system building, (2) how they operated their data systems, and (3) how they used the data collected to improve their afterschool systems. The report also offers recommendations based on study insights.

Afterschool Data System Building, Operations, and Use

By 2016, all eight cities had established their own respective management information systems (MIS) designed to support increased data use. They had done so by building working coalitions across public, philanthropic, and non-profit sectors, including mayoral and municipal organizations, school districts, foundations, afterschool programs, and other key community stakeholders and groups. Although the cities' respective constellation of stakeholders all included a mix of public, non-profit, and philanthropic organizations, each city's mix reflected its contextual landscape. The eight cities invested considerable staff time and resources to create a central MIS for housing their afterschool data. Cities needed to make decisions about technology, specific data elements and data collection, and initial and ongoing human resource capacity building. Establishing and operating complex data systems required continued attention to three key foundational dimensions: ensuring

---

[1] In addition to the eight communities listed above, Wallace also selected and funded a ninth community, Fort Worth, Texas, to participate in ASB2. This report does not present information on data use in Fort Worth, as it initially focused on other grant-supported activities than building a management information system (MIS) to support data use.

[2] Spielberger et al., 2016. *Connecting the Dots: Data Use in Afterschool Systems*. Chapin Hall at the University of Chicago; see https://www.wallacefoundation.org/knowledge-center/pages/connecting-the-dots-data-use-in-afterschool-systems.aspx.

that the technology was in place and continued to function, that investments in human capital kept pace with system needs, and that policies and practices supported—and helped to routinize—data use.

When the initiative began, some data use was already evident, primarily for accountability and compliance purposes. All eight cities made notable progress in how they used system-level data in meaningful ways, both by expanding how data were used across the system, and by engaging providers more systematically and purposefully in using data for multiple purposes. Widening data use reflected a shift toward more nuanced and locally useful functions that applied to multiple aspects of program activities and processes, substantially beyond the compliance and accountability purposes already evident. Importantly, the expanded data use also reflected deeper understanding and increasing use of data to inform program strategy for the majority of cities.

Afterschool data systems that span multiple sectors and organizations are complex by definition, and viability over time meant that the cities managed varied challenges along the way. These barriers included turnover in frontline program staff as well as system leadership levels and the continuing need to encourage learning about and using data more effectively. The increased technical capacity to collect more data also required setting priorities about which specific data elements mattered most. Simultaneously, greater sophistication about data gradually translated into increased data-focused demands from key audiences.

Recommendations About Building a Functioning Afterschool Data System

The ASB2 initiative contributed to meaningful progress in how the cities and their afterschool data systems used data. Thinking more broadly about lessons learned, we offer insights about key steps and processes that may be helpful in other cities' efforts to develop similar complex initiatives. These include:

- Recognize that a new system needs a systems-level focus. This includes having shared goals, sustained focus on outcomes, and understanding of distributed contributions.

- Collaboratively agree on meaningful indicators that signal early progress and can generate visibility and recognition.

- Understand local circumstances, contexts, and expertise—and that expertise resides at multiple levels of a given system or context.

- Share progress and learning with relevant audiences by communicating regularly and tailoring information to constituents' priorities.

- Accept the reality that participating organizations share motivation yet may have different priorities, and that the initiative may need to balance collective and organization-specific priorities.

- Anticipate that not everything will proceed as planned. It helps to have resilience and flexibility to deal with the unexpected, even when building in procedural and managerial safeguards.

1

The Next Generation Afterschool System-Building Initiative

Initiative Description and Purpose

Funded by the Wallace Foundation, the Next Generation Afterschool System-Building Initiative (or ASB2) was a multi-year effort (2012–2016) to strengthen systems that support high-quality afterschool programs for low-income youth. The Wallace investment focused on increasing youth participation in afterschool programs, improving program quality, strengthening infrastructure (including governance, policy, and coordination), and enhancing data use to inform afterschool systems. The foundation selected eight cities to participate: Baltimore, Denver, Grand Rapids, Jacksonville, Louisville, Nashville, Philadelphia, and Saint Paul.[3] Each had strong city leadership and mayoral commitment to participate, which signaled a solid foundation for an afterschool data system initiative. The Next Generation Initiative built on insights from an earlier investment in five other cities: Boston, Chicago, New York, Providence, and Washington, DC, collectively known as the "First Generation" initiative or ASB1. Findings from the earlier investment are summarized in a three-volume report on afterschool, summer learning, and out-of-school time called *Hours of Opportunity*.[4]

These cities focused on improving key elements of their afterschool data systems to help increase the availability and quality of afterschool programs and to provide information to afterschool program operators/providers, funders, and afterschool system leaders about the participating youth in afterschool services. The Wallace Foundation supported the cities' efforts directly through grants, and indirectly, through funding technical assistance providers to support grantee learning on such topics as organizational development, quality assessment and improvement, data systems, and governance. Heeding the guidance outlined in the original RFP, the cities all prioritized strengthening their capacity to use reliable information, unanimously perceived as essential for improving afterschool experiences for children and youth. During the initiative, the cities' key participants attended cross-site meetings, conferences, and pursued other learning opportunities. These experiences allowed stakeholders and participants to share successes and challenges, and helped deepen individual and collective knowledge about afterschool system-building efforts.

In its 2011 Request for Proposals (RFP), the Wallace Foundation asked potential participating afterschool systems to address two or more of four components: participation, quality, coordination structures, and data use. The RFP also asked cities to address another key element: either the ability to use reliable information and/or affirm a commitment to quality in their system-building.

About the Study

The Wallace Foundation complemented the Next Generation grants and technical assistance with external research designed to describe the implementation and uses of the afterschool data systems. Wallace decided to focus the study on the new data systems, their implementation, and their use for the following reasons:

- After its 2003–2009 five-city initiative and resulting evaluation reports called *Hours of Opportunity: Lessons from Five Cities on Building Systems to Improve After-School, Summer School, and Other Out-of-School-Time Programs*, Wallace sought input from field leaders in the afterschool and Out-of School Time (OST) intermediary community. Those leaders expressed strong and consistent interest in learning more about community-wide data systems and their uses—a topic they perceived as both important, but absent, in reports they could meaningfully reference when seeking ideas for charting their own course with respect to data systems.

- The *Hours of Opportunity* reports had already addressed other major topics of interest to field leaders, including access and quality improvement efforts. Because the five "First Generation" cities had only just completed constructing their data systems, and therefore had very little experience using their data systems, the topic of data use was not addressed when *Hours of Opportunity* was written. The data systems were simply too new to have their uses analyzed.

- All of the Next Generation communities initially emphasized data systems as a central feature of their work. They varied, however, in whether and how extensively they sought to address the other topics supported by Wallace, such as participation, governance, and quality.

[3] In addition to the eight communities in the second Afterschool System-Building (ASB2) Initiative, Wallace also selected a ninth community, Fort Worth, Texas, to participate in ASB2, but Fort Worth did not pursue all of the initiative's activities. In 2014, Fort Worth created an afterschool system-building organization as an independent nonprofit 501(c)3 called *Strengthen after-school Programs through Advocacy, Resources and Collaboration* (SPARC). SPARC discussed the full list of goals pursued in the other ASB2 cities with a key partner – the city of Fort Worth – yet did not reach agreement on all goals. In particular, there was not agreement on the goal of creating a management information system (MIS) to promote the use of data by afterschool programs and their stakeholders, and consequently SPARC did not develop an MIS as part of the initiative (this was not done until mid-2018, after the research for this report was completed). However, SPARC, collaborating with its partners (including the city of Fort Worth) created an afterschool program locator, provided training for partner organizations' staff members, advocated for afterschool programs, and brought the community's afterschool providers together. This report does not present information on data use by SPARC since that was not then a focus of its activities; it would not be meaningful to describe SPARC's data use relative to the other communities in the absence of an MIS tied to Fort Worth's ASB organization.

[4] See http://www.wallacefoundation.org/knowledge-center/after-school/pages/default.aspx for more information on the Foundation's resources about afterschool programs; for information about the evaluations of afterschool programs, see McCombs et al., *Hours of Opportunity, Volume 2: The Power of Data to Improve After-School Programs Citywide*, 2010, Santa Monica, CA: RAND Corporation, MG-1037/1-WF, 2010.
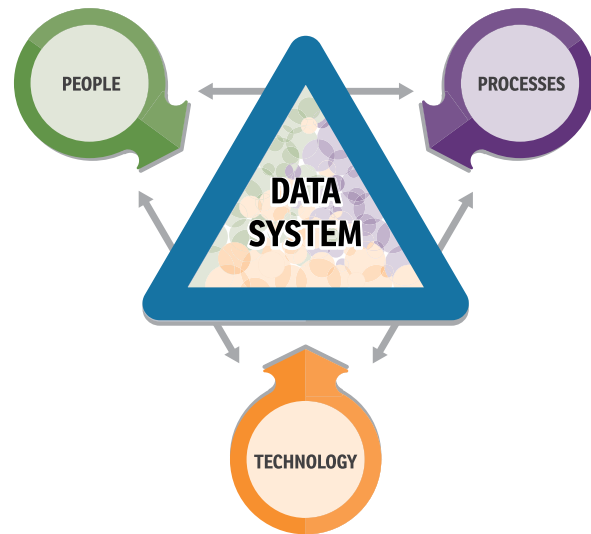
Consequently, Wallace sought a study that would fully examine the challenges—widely acknowledged as present and important yet not well understood—of how communities plan, design, implement and use community-wide afterschool data systems. The study, conducted by researchers from Chapin Hall, began approximately one year after the 2012 Next Generation initiative launch. Over the next four-year period, the study team conducted three waves of data collection that included site visits and in-person and/or telephone interviews (both focus group and individual) with afterschool system leaders, stakeholders, and providers. The team also attended two annual network-wide convenings during the data collection period, observed professional development sessions in selected cities, and reviewed relevant city documents about their data systems.[5] Additionally, study team members communicated with key system leaders through bimonthly telephone calls to provide regular updates about initiative progress, changes, and obstacles.

The overall study schedule was similar across the eight cities as they set about the multi-faceted challenge of building systems to support improved afterschool programming. However, the study team also adapted data collection activities to accommodate cities' individual trajectories as well as their varied approaches to system structure and governance. In practice, this meant that key afterschool system leaders, stakeholders, and staff were interviewed in all three waves of data collection, and program providers were interviewed in the second and/or third waves (see Appendix 1 for detailed information about data collection by city and wave). *Individual* interview participants were not necessarily consistent across cities or over time, however. This reflects three factors: (1) individuals' roles were not necessarily equally active at different points in time, (2) the timing of planned site visits did not always correspond to times when interviews could be scheduled or made sense to schedule, and (3) turnover among system leaders,

key stakeholders, and providers meant that some individuals were no longer in relevant positions. On balance, both the breadth of respondent categories and the number of interviews together provided a wealth of information about cities' progress in implementing their afterschool data systems.

Figure 1

Aspects of an Afterschool Data System

Interim findings based on nearly two years of data collection were summarized in an earlier report called *Connecting the Dots: Data Use in Afterschool Systems*.[6] That report highlighted the importance of three central pillars to developing capacity to collect and use data at a system level: investments in people, processes, and technology (green, purple, and orange circles, respectively), which together interact to support the data system at the center, as depicted in Figure 1. (See Appendix 2 for more detailed information about the people, processes, and technology framework described in the interim report.)

[5] Site visits were arranged both to ensure that key personnel would be available for interviews and to capitalize upon planned activities; when in-person conversations were not possible, the study team conducted telephone interviews.

[6] Spielberger et al., 2016. *Connecting the Dots: Data Use in Afterschool Systems*. Chapin Hall at the University of Chicago; see https://www.wallacefoundation.org/knowledge-center/pages/connecting-the-dots-data-use-in-afterschool-systems.aspx.

This report summarizes findings based on the entire duration of the initiative, focusing chiefly on cities' progress by the end of 2016 when data collection activities were completed. It incorporates findings based on analyses of site visit and telephone interviews with system leaders, key partners, and providers, observations of selected trainings and meetings related to data use, and the review of city-specific documents and reports. It summarizes how the funded cities approached afterschool data system building, how they operated their data systems, and how they used the data collected to improve their afterschool systems. This report builds upon the same people, processes, and technology framework as it seeks to address three broad questions about afterschool data system building:

1. How did cities *establish* the afterschool data systems? Specifically, who were the stakeholders responsible for designing the systems, how did cities identify technology needs and solutions, and what processes did they design for their systems?

2. How did the cities *operate* the afterschool data systems? Specifically, how did cities prepare stakeholders, research staff, and afterschool providers to collect and analyze data?

3. How did the cities *use* the afterschool data systems? Specifically, how successful were the funded cities in using data generated by the systems for the multiple intended purposes?

Study Limitations

The study was designed to examine how cities implemented their afterschool data systems over several years, drawing from a rich combination of data sources. It also focused on learning from and with the many city stakeholders and was purposefully centered on describing the accomplishments and challenges rather than judging the cities' efforts. However, the study also has some limitations. First, it began about one year after the cities had received funding from Wallace to launch their afterschool data system building efforts, and therefore does not have contemporaneous information (notwithstanding

city documents made available) about the first year. Second, the cities as well as the size and complexity of the data systems varied considerably. On a related note, key stakeholder roles were operationalized according to each city's needs, so both the configuration and number of interviewees differed by city and wave, which meant that interview data reflected different roles/numbers of respondents across the cities. Regardless of number and role (of interviewees), the study team endeavored to obtain the same types of information from each city during each wave, recognizing that the variability in configuration may well have affected what could be learned. Third, the cities' system leaders and other stakeholders experienced turnover, which meant that the study could not consistently draw upon informants' historical knowledge of the initiative and what had changed. Nonetheless, the fact that data collection in each city and wave deliberately engaged multiple respondents mitigates some of the inconsistency and variability encountered.

The remainder of this report addresses the three broad questions listed above. This chapter describes how the cities led and staffed their data systems, how they developed and/or accessed technology, and the varied processes they used to launch their systems. Chapter 2 focuses on the afterschool systems' operations, and Chapter 3 describes how the data produced by the systems were used. Chapter 4 summarizes key lessons learned.

Key Stakeholders

Diverse stakeholders, including public officials, funders, school leaders, governmental staff, and those with skills and experience with technology, data collection, data analysis, and data application skills collectively engaged in efforts to strengthen the data systems (see Exhibit 1.1).

In 2012, at the start of initiative, stakeholders—at individual, organizational, and institutional levels—focused on developing relationships, establishing coordinating entities, and creating governance structures (advisory boards, councils, and/or leadership team) and processes (designing training sessions, negotiating data sharing agreements) to develop and operate their respective cities' data system. Over time, as people transitioned and as information and technology needs changed, the afterschool systems continued to adapt and remain relevant to key stakeholders.
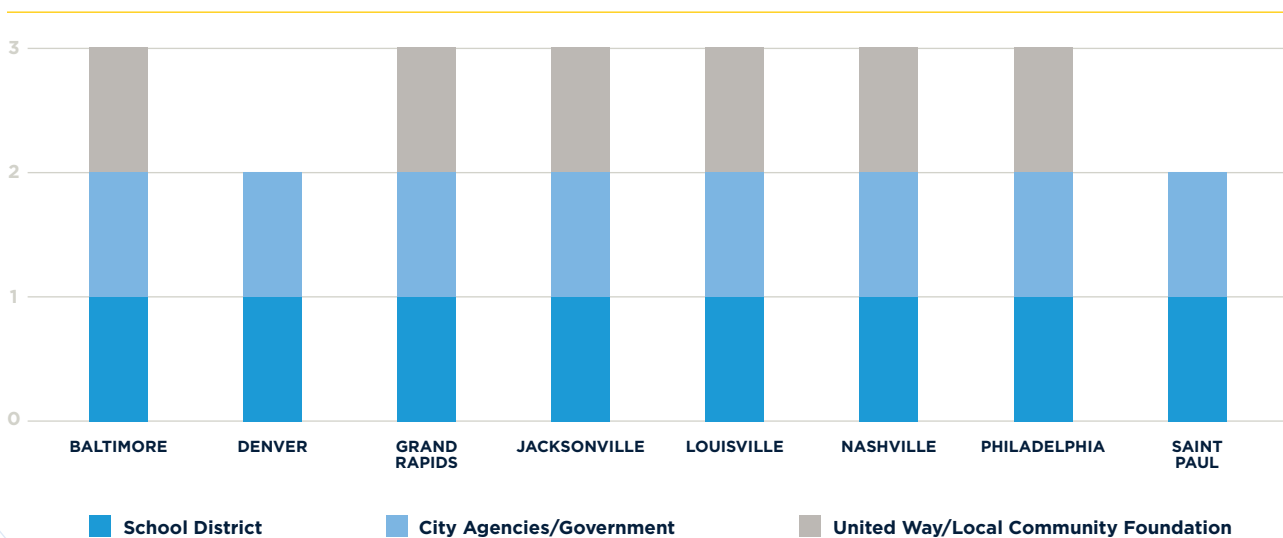
Stakeholder organizations in the Next Generation cities' afterschool systems generally included school districts, city/county agencies (i.e., parks and recreation programs, human services public agencies, libraries), and community-based non-profits, whether operated by smaller local organizations or larger, well-established multisite national organizations (see Exhibits 1.2A and 1.2B). Their involvement in the systems encompassed providing funding, programming, research or data expertise, space, and leadership and convening

power; importantly, some organizations played more than one role. Organizations' goals, structures, resources, and attention to quality facilitated, and in some cases, hindered, efforts to strengthen the cities' capacity to use data.

Because the Wallace Foundation had selected cities with strong mayoral leadership and local investment in afterschool programs, city agencies/government, as well as nonprofit organizations, were important stakeholders in all of the cities. School districts also became important partners in developing afterschool data systems; some districts also offered programs or provided space for community-based organizations to serve youth. Collectively, the

Exhibit 1.1. Key Afterschool Data System Stakeholders

Legend: School District | City Agencies/Government | United Way/Local Community Foundation

Cities (x-axis): BALTIMORE, DENVER, GRAND RAPIDS, JACKSONVILLE, LOUISVILLE, NASHVILLE, PHILADELPHIA, SAINT PAUL

diverse individuals and organizations assembled within each city established early priorities for system-building and shaped the overarching vision for their respective afterschool systems. Local foundations acted as significant partners in six cities. Each public and private partner organization had its own institutional mission, capabilities, and philosophy, which influenced the structure and goals of the afterschool system. The roles and responsibilities of partner school districts and city agencies varied substantially across the cities, and those partnerships, in turn, influenced the nature of the data systems being developed.

Each city identified a public or private intermediary or coordinating entity to manage its system-building activities. The coordinating entities, which differed in their respective organizational homes, structures, and funding capacity, were largely responsible for engaging key community leaders and diverse stakeholder groups, providing strategic direction, measuring progress and outcomes, and managing resources. The coordinating entities could serve multiple roles; in Baltimore, Jacksonville, and Nashville, for example, they were also major funders of afterschool programs, although their afterschool data systems generally included only those programs they funded directly. In these three cities, funding and accountability were viewed as effective levers for encouraging programs to adopt rules and standards as well as participate in the data system. The other five coordinating entities relied on incentives to encourage providers' participation (e.g., access to data about their own programs, opportunities to participate in professional development about data use as well as to join a larger professional community).

Exhibit 1.2A. Next Generation Afterschool Systems' Structures and Scope

City Funder (Y/N)	Coordinating Entity Type	Grades Served	Number of Network Providers, Sites, and MIS Data Users (As of 2016)[a]
Baltimore Yes	Family League of Baltimore Nonprofit intermediary	K–12	29 organizations (45 sites) MIS users: 88 sites
Denver No[b]	Denver Afterschool Alliance Locally coordinated network	K–8	Data use cohorts: 20 organizations (41 sites) MIS users: 80 sites
Grand Rapids No	Our Community's Children facilitating the Expanded Learning Opportunities (ELO) Network Local government	K–12	60 organizations (180 sites) MIS users: 41
Jacksonville Yes	Jacksonville Children's Commission (JCC)[c] Local government	K–8	27 organizations MIS users: 69 sites
Louisville No	Building Louisville's Out-of-School Time Coordinated System (BLOCS)	K–12	54 organizations MIS users: 48 sites
Nashville Yes	Nashville After Zone Alliance (NAZA) Local government	6–8	15 organizations MIS users: 43 sites
Philadelphia No	PhillyBOOST Locally coordinated network	K–12	72 organizations MIS users: 328 sites (131 enter data into DHS' PCAPS)
Saint Paul No	Sprockets Locally coordinated network	K–12	44 organizations (135 sites) MIS users: 38 organizations

[a] Because the numbers of organizations belonging to a given network differed from the number of organizations and numbers of actual individuals actively engaged in using the MIS data, this column includes information on the number of organizations in the network, the number of sites those organizations operated, *and* the number of MIS data users at either the organization or site level.

[b] The Denver Afterschool Alliance did not start out as a direct funder, although it began to fund programs during the course of the initiative.

[c] The Jacksonville Children's Commission subsequently changed its name to the Kids Hope Alliance (KHA).

Exhibit 1.2B. Next Generation Afterschool Systems: Foundational Partners and External Research Partners

City/Size (2016 Est.)	Foundational Partners	External Research Expertise Partner[a]
Baltimore 614,664	• Baltimore Public Schools • Mayor's Office	Baltimore Education Research Consortium (BERC)
Denver 693,060	• Denver Public Schools (DPS) • City Office of Children's Affairs • Boys & Girls Clubs of Metro Denver	DPS
Grand Rapids 196,445	• Grand Rapids Public Schools • Mayor's Office • Heart of West Michigan United Way • Kent School Services Network • Community Research Institute • Doug & Maria DeVos Foundation	Community Research Institute
Jacksonville 880,619	• Duval County Public Schools • Chamber of Commerce • Jacksonville Public Education Fund • United Way of NE Florida • Parks, Recreation and Community Services • Community Foundations	Jacksonville Public Education Fund (JPEF)
Louisville 616,261	• Metro United Way • Jefferson County Public Schools • Louisville Metro Government • Louisville Metro Alliance for Youth	
Nashville 660,388	• Nashville Public Library • Metro Nashville Public Schools (MNPS) • Mayor's Office of Children and Youth • Metro Council	Metro Nashville Public Schools (MNPS) Pilot project: American Institutes for Research (AIR)
Philadelphia 1,567,872	• School District of Philadelphia • Department of Human Services (DHS) • Parks and Recreation • Free Library of Philadelphia • After School Activities Partnership (ASAP) • The Police Athletic League (PAL) • Catholic Archdiocese Mission Schools	
Saint Paul 302,398	• Saint Paul Public Schools • Mayor's Office • Parks and Recreation • Saint Paul Public Library • Augsburg College • YWCA of Saint Paul	Amherst H. Wilder Foundation

[a] Six cities worked with external partners who provided research expertise and, in some cases, could help provide access to school district data through already existing data sharing agreements with school districts.

Approach to Technological Demands

Each Next Generation afterschool system had developed or was in the process of developing requirements for a management information system (MIS) when the initiative was launched. However, even when cities capitalized upon prior efforts, earlier experiences with building data systems had been limited to individual afterschool organizations' and providers' efforts to collect data—typically to comply with funders' reporting requirements. The earlier efforts had not focused intentionally on coordinating data collection *across* providers as a means to develop a broader, system-level understanding of service access, quality, and impact. By the end of the initiative (2016), all eight afterschool systems had an established afterschool MIS designed specifically to coordinate, and presumably use, data collection and analysis efforts at a system level.

Establishing (or refining) an MIS required system leaders to make multiple decisions. One key decision centered on the type of MIS most appropriate for each city's afterschool system. Options ranged from packaged software systems, hybrid systems that combined packaged and custom-built features, and completely customized approaches built specifically for a given afterschool system context. Each option had pros and cons in terms of its upfront and ongoing costs, adaptability, and usability. Other key decisions included selecting an organizational home for housing the hardware on one hand, and managing the software on the other. These had implications for how accessible data would be, who would be accountable for monitoring data quality, and the long-term resources that would be available to support the system.

Baltimore, Jacksonville, Louisville, and Nashville decided to use and/or adapt existing or "legacy" MIS that predated the initiative. The other four cities (Denver, Grand Rapids, Philadelphia, Saint Paul) built new database systems, either through an external software developer or a partnership with a local research organization (see Exhibit 1.3). The databases evolved idiosyncratically, leading to different combinations of systems able to compile data from multiple sources. For example, the Grand Rapids afterschool system collaborated with its external research partner to develop a single database flexible enough to collect and link data from different sources, and Philadelphia's new Efforts to Outcomes (ETO) system allowed a partner agency to upload and view data within the ETO system. Denver and Saint Paul used multiple databases: one for school district data, one for data on program quality (the Youth Program Quality Assessment [YPQA]), and one for youth engagement indicators based on the Survey of Academic and Youth Outcomes (SAYO).[7] Although the latter two cities could aggregate data across multiple databases, linkages across data systems were limited as they could only occur manually.

Exhibit 1.3. Technology in the Next Generation Afterschool Data Systems, 2014

MIS (Technology)	Number: Cities
Existing database ("in house" or proprietary)[a]	4: Baltimore, Jacksonville, Louisville, Nashville
New proprietary/ packaged database (Efforts to Outcomes [ETO], Cityspan)[b]	2: Philadelphia, Saint Paul
New database built "in house" in collaboration with coordinating entity[c]	2: Denver, Grand Rapids

[a] Nashville's NAZA Network used the school district data system, while Baltimore and Jacksonville focused on improving existing legacy systems. Louisville considered purchasing a new proprietary system, and established procedures for afterschool providers to access the district's data system.

[b] Philadelphia abandoned efforts to use the DHS database after stress testing showed it did not have the capacity to collect and process data for all afterschool programs in the city; it contracted with ETO for a new MIS located within city government. Saint Paul also contracted for a proprietary MIS which was housed by an external research partner.

[c] Grand Rapids and Denver each worked with an external research partner to build and house a new MIS.

Building and Adapting MIS: Two Approaches

Two major types of MIS emerged as the afterschool systems began building the technological infrastructure for their data systems. One type, used by four cities, was a self-contained MIS; the technology, tools, and skills for data access and use resided primarily within either the afterschool system or an entity directly contracted by the afterschool system, such as a research partner. Such self-contained systems allowed cities to address their priorities and particular needs through customized applications developed in-house or via proprietary software. To illustrate, Grand Rapids worked with its research partner to accommodate afterschool providers' varied data formats and measures; the partner developed, supported, and managed the system. This approach required significant technical capacity to align differentiated data structures, and while it met diverse partners' needs and served to facilitate their participation in the network, interest in standardizing data entry increased over time.

[7] The Youth Program Quality Assessment (YPQA) was developed by the David P. Weikart Center for Youth Program Quality to measure the quality of youth programs and thereby to target areas for additional staff training. The YPQA examines seven different domains, including: safe environment, supportive environment, interaction, engagement, youth-centered policies and practices, high expectations for youth and staff, and access. It is widely used in diverse youth-serving settings, and has been validated in previous research. Please see www.cypq.org/assessment for more information. The Survey of Academic and Youth Outcomes (SAYO) was developed by the National Institute on Out-Of-School Time (NIOST) to help youth programs identify program successes and areas for improvement. The SAYO measures eight outcome areas that research suggests are linked to long-term positive development and academic and life success in afterschool program youth: behavior in the program/classroom, initiative, engagement in learning, relations with adults, relations with peers, problem solving, communication skills, and homework. Please see www.niost.org/Training-Descriptions/survey-of-afterschool-youth-outcomes-youth-survey-sayo-y for more detailed information.

The other four cities used a second type, a composite MIS, in which the database, tools, and skills for data access and analysis were housed in another organizational system, typically the school district. For those cities, data collected by providers (e.g., individual youth assessments or survey responses) were recorded and transmitted using standard software or data management tools such as Microsoft Excel. Composite systems worked with existing and functioning infrastructure, and therefore were able to mobilize data entry and processing more quickly than self-contained MIS. Additionally, adapting technology already in use reduced startup costs. For example, the Denver Afterschool Alliance built an afterschool data structure capitalizing on the Community Partnership System (CPS) used by the school district, which it supplemented with an associated database for quality measures and youth engagement indicators (e.g., the YPQA and SAYO).

Both approaches presented challenges in development and launching an MIS. The biggest challenges cities faced in designing a self-contained system included managing the initial phase of developing the MIS and deciding what technology would best suit their needs, control costs, and define clear outcomes for how collected data would be used. City stakeholders worked to define and prioritize their goals, identify the needed skills, talent, and expertise required to reach their goals, and then assess which technology would best meet their needs. Stakeholders reported that such startup tasks required considerable energy for coordination, sufficient upfront resources to hire skilled individuals to manage the process and align technology, and the forethought to develop the processes necessary for the MIS to capture and produce high-quality information.

The main challenge cities faced in designing composite systems hinged on the extra coordination required to integrate, interpret, and transform data from existing systems and structures into integrated and actionable information. System leaders in the four cities using a composite system reported coordination challenges, including duplication of effort by providers and system staff, suggesting that lower upfront costs for adapting existing technology rather than purchasing a new MIS may be mitigated by unanticipated downstream costs such as staff time or other resources to link multiple data sources.

Two years into the initiative, by the end of 2014, seven afterschool systems had launched a working MIS capable of collecting, processing, and reporting data at a system level, and the eighth continued efforts with the school district to expand access to school district data. Five system leaders continued to explore ways to improve and/or change their MIS, and two systems' leaders reported satisfaction with their current MIS.

Design of the Data Systems: Data Elements and Data Collection

The afterschool data systems were designed to capture relevant data that could improve the availability and quality of afterschool programs and provide information to providers, funders, and afterschool system leaders about the youth participating in afterschool services. Along with selecting an MIS, afterschool systems had to decide what kinds of data to collect to address their information needs. The Next Generation cities engaged afterschool stakeholders in discussions about which specific data elements could potentially generate information relevant to system improvements. Some discussions focused first on data elements and MIS development concurrently, some approached the decision-making process sequentially, and some posed questions about existing MIS data elements as a point of departure from which to engage stakeholders about refinements. Each of these strategies was informed by the readiness of the system (e.g., existing MIS, data sharing agreements in place) to integrate technology with identified data elements.

> "Think carefully about what you want to know … be sure you can start broadly, but be sure that you narrow it down to three or four things that you can get a handle on that you can collect, ask, and answer well. If you are asking and answering poorly 25 questions, then it's just going to be really noisy, and you're not going to know what you're looking at."
>
> *Baltimore Stakeholder*

Exhibit 1.4. Types of data initially selected for system-wide data collection (as of 2014)

	Program Attendance	Program Quality	School Data	Youth Development/SEL
Baltimore	✓	✓	✓	✓
Denver	✓	✓		✓
Grand Rapids	✓	✓	✓	✓
Jacksonville	✓	✓	✓	
Louisville	✓	✓	✓	
Nashville	✓	✓	✓	✓
Philadelphia	✓			✓
Saint Paul	✓	✓	✓	✓

> **"Having really solid high quality data on a few useful components is better than having mediocre quality data for a lot more things."**
>
> *Philadelphia Stakeholder*

A majority (six of eight) of afterschool systems accessed data elements already maintained in school systems (e.g., free or reduced-price lunch eligibility, academic progress, attendance, and behavioral infractions) because of their relevance to city leaders and funders.[8] These afterschool systems also included data elements about features over which they had greater influence, including program attendance, quality of programming, and social and emotional learning measures. Such measures were collected by program providers and subsequently entered by frontline staff in participating provider agencies. By the end of 2014, the cities were collecting the kinds of data they had identified as essential for their MIS: eight collected program attendance and seven collected program quality data (see Exhibit 1.4). Over time, cities augmented those data with information on youth outcomes using school-based attendance and test scores, and social and emotional learning indicators such as

the SAYO (used by six cities) as well as the Holistic Student Assessment (HSA), a measure designed explicitly to focus on socio-emotional learning (used and/or piloted by five cities).[9]

Preparing for Data Collection

Although afterschool systems varied in their purposes for data use within their individual community and system contexts, they all similarly invested in people, processes, and technology to develop their capacity to collect data. Once system stakeholders had selected an MIS and a set of data elements, they engaged in several common processes to prepare themselves to collect and manage data. These processes included (1) establishing formal agreements and memoranda of understanding among network partners, (2) training members of provider networks on using the MIS and data collection procedures, (3) establishing procedures for checking and maintaining data quality, and (4) developing dashboards and report formats for sharing data.

Establishing Formal Agreements

Formal agreements were a crucial component of the data systems and outlined who was part of the afterschool system and who would have access to the MIS and its data. One type of agreement articulated how partnerships with the afterschool

---

[8] The six cities included Baltimore, Grand Rapids, Jacksonville, Louisville, Nashville, and Saint Paul.

[9] The Holistic Student Assessment was developed by The PEAR Institute: Partnerships in Education and Resilience; it relies upon self-report from children and youth grades 4 and above. For more information, see https://www.thepearinstitute.org/holistic-student-assessment.

system would function by spelling out expectations for participation in training, data entry, and program management. Such agreements also specified the level of access to information to be shared with other partners. Another type focused on data sharing that typically outlined permission levels for accessing and using administrative data. Agreements to share student-level educational data had to satisfy school districts' interpretation of the Federal Educational Rights and Privacy Act (FERPA), which varied across the eight cities. Developing and executing data sharing agreements with school district legal staff, in particular, took a significant amount of time.

Denver, Jacksonville, Louisville, and Nashville were able to access school data through directly negotiated agreements that specified how the systems could use data. In one instance, program data were matched by school district officials and subsequently, matched records could be analyzed; in another, providers could only review data in

the presence of district staff. The remaining cities relied on trusted independent, external research organizations to access administrative data, which allowed them to leverage existing data sharing agreements already negotiated between the research organizations and the school districts; this had an additional benefit of access to analytic capacity they did not otherwise have. Of these four cities, one eventually secured a negotiated agreement directly with the school district towards the end of the initiative.[10] Two cities struggled to gain access through either of these mechanisms and continued to explore possibilities throughout the initiative.

Initial and Ongoing Preparation for and Training of the Network

Launching an MIS to capture data about the afterschool system was but one aspect of building capacity for data use. The eight afterschool systems also established processes for training network

[10] Initially, Baltimore relied on its research partner for access; by the end of the study's data collection, it had obtained direct access to school data.

members to enter data, ensure data quality, and then analyze and use data. Even within the first year, ongoing staff turnover required afterschool systems to repeat basic trainings on data entry and data quality. Once the systems were operational, more intensive trainings on data interpretation and utilizing data for program improvement were offered.

Trainings on basic topics (e.g., learning about the MIS, basics of data entry) were usually conducted in half-day workshops. Seven of eight cities also provided some form of individual technical assistance or coaching, especially about using the MIS and data entry. Trainings about using data were purposefully scheduled so that providers had sufficient time to review their own data. Nashville used data "dives" in which providers and school administrators reviewed data together, and Saint Paul offered workshops, typically attended by multiple staff from each provider, about interpreting data from different sources and identifying goals for improvement.

Six cities offered training in using data for program improvement based on the results of the YPQA tool, including Baltimore, Denver, Grand Rapids, Louisville, Nashville, and Saint Paul. Four of those also developed a series of learning experiences that included afterschool programming content (e.g., positive youth development, youth voice and choice based on the YPQA) as well as the application of data.

Seven systems provided trainings to support the use of multiple sources of data and/or to build understanding of the data inquiry cycle. Baltimore, Denver, and Nashville incorporated participation in such training sessions into their agreements with the providers and tracked that information separately to inform their understanding of participation of provider staff over time, as well as to improve the training itself by reviewing participants' evaluations of the data use trainings.

Establishing and Maintaining Data Quality

Afterschool systems developed monitoring processes to ensure consistent data quality in the MIS, drawing upon both people and technology. These included creating common definitions of indicators, standardizing processes and timelines for data entry and cleaning, and giving feedback to providers about the data that had been entered (e.g., timeliness, missing or incorrectly entered information).

To ensure data quality, six systems (all but Grand Rapids and Saint Paul) relied on internal staff (including school district staff where school districts were key partners), and the other two relied primarily on their research partners. For example, the Amherst H. Wilder Foundation in Saint Paul reviewed afterschool providers' data and created a mechanism to standardize provider data rather than having providers change their internal data systems to conform to the system-level MIS. Wilder staff also reviewed the data linkage of the provider information with the administrative data and worked with providers to resolve any differences. In Jacksonville, a data manager reviewed enrollment and attendance data entered by providers and the school district, and then worked with providers to address errors and increase accuracy. Over time, the afterschool systems tried to streamline how they assessed data quality by building data check processes into upgrades to the MIS systems.

Developing Dashboards and Report Formats

Afterschool system leaders recognized that communicating effectively about data required more than simple data collection and analysis, and that better data visualization could facilitate more accurate interpretation. Consequently, system staff endeavored to develop and identify formats based on more intuitive metrics accessible to multiple audiences and stakeholders alike. Afterschool leaders in six cities, including Baltimore, Denver, Grand Rapids, Jacksonville, Nashville, and Saint Paul, designed streamlined reports with fewer data elements. The reports, which focused on representing system-level metrics reflecting city leadership priorities, were incorporated into training and coaching sessions to encourage the application of data for program and system improvement. System stakeholders believed that making information readily accessible for city leaders helped reinforce the value of the data system, create additional legitimacy for children/youth program services, and highlight positive impacts of the afterschool system. Increasing the accessibility and appeal of information about the system was perceived as an effective strategy for obtaining additional resources for the system.

Exhibit 1.5. Early Characteristics in Establishing Stronger Afterschool Data Systems

	Clear and Consistent Vision from the Outset	Building/Sustaining Effective Coalitions	Early Use of Meaningful Data
Baltimore	–	–	–
Denver	✔	✔	✔
Grand Rapids	✔	✔	✔
Jacksonville	–	–	–
Louisville	–	–	–
Nashville	✔	✔	✔
Philadelphia	–	–	–
Saint Paul	✔	✔	✔

✔ = Group 1 cities (consistent progress)

– = Group 2 cities (limited/moderate progress)

Afterschool systems had to determine which technology to apply to compile information efficiently as well as the right format for presenting information. Generally, afterschool system staff or research partners created provider-specific dashboards and reports. Denver and Nashville automated the generation of provider dashboards that displayed real-time or close to real-time information about programs and participants. Grand Rapids launched a system-wide website featuring aggregate comparisons on key indicators across time with clear graphics for each indicator that refreshed when new data were available.[11]

Commonalities and Differences in Establishing Afterschool Systems

Across the eight Next Generation cities, similarities and differences emerged in how afterschool systems sought to build their capacity to collect and use data (see Exhibit 1.5). Looking across the systems and their key investments in people, processes, and technology, two clusters of four cities emerged. The two groups differed chiefly in terms of whether key characteristics of a data system had been solidly established by 2014; four cities/systems had made more or more rapid progress (Group 1) than had the four cities/systems where key system features were still developing and/or in flux (Group 2).

Group 1 cities shared three common characteristics. First, in each of these cities, afterschool system leaders had articulated a clear and consistent vision for the data system early on and reinforced that vision throughout the initiative. (In Denver, system leaders revisited and revised the vision early on, which meant that progress was guided by the same vision for the majority of the study.) Group 2 cities demonstrated moderate progress, reflecting longer amounts of time to get systems off the ground as well as more substantial shifts in vision and priorities during the study period. Louisville and Philadelphia each lacked support from key players (a city agency in one case, a school district in another) at different

[11] See https://www.gryouthdata.org/YCDC/progressReport.jsp for more information.

points, resulting in less rapid progress during the initiative. Afterschool system leadership changes in Baltimore and Jacksonville brought new visions for building a data system.

In addition, Group 1 cities actively built coalitions in support of the data system early on, in two key ways. First, the cities purposefully engaged representative stakeholders from multiple organizations. For example, system leadership in the four cities formally involved city agencies/government, school district, provider community, and funders in designing system strategy. Second, the cities intentionally aligned the data system's priorities with those of other locally influential public systems. For example, Grand Rapids included juvenile crime data to align with the police department's interest in monitoring juvenile crime, and Nashville prioritized alignment with the school district. In Baltimore, Jacksonville, and Louisville, system leaders in Group 2 also endeavored to align data system priorities with those of other public systems, although later on in the initiative.

Third, Group 1 cities were able to access or create a key resource—meaningful data—early on in the initiative. Denver, Grand Rapids, and Nashville perceived data collected by the school district as foundational to their data system-building efforts, and had successfully negotiated data sharing agreements with their school districts early on. Saint Paul system leaders prioritized data generated by the afterschool system itself. Group 2 cities' afterschool system leaders also prioritized access to school district data, yet securing data sharing agreements took substantially longer than planned.

Interestingly, how the systems were established and structured was not, in and of itself, a determinant of more meaningful progress. Cities in both Groups 1 and 2 had developed customized MIS and/or leveraged existing systems, and cities in both groups had used some of the same types of coordinating structures or incentives.

2

How Afterschool Systems Collect, Organize, and Analyze Data

INTRODUCTION

Moving from Establishing to Operating Afterschool Data Systems

By 2016, all eight cities had established an MIS. Launching and sustaining their systems required cities to invest considerable staff time and resources in creating a central MIS to house their afterschool data. Some cities created new systems, while others leveraged an existing database or a database housed at a partner agency. Afterschool systems reviewed choices that ranged from complete, external software systems to custom-made solutions. Once operational, the cities continued to improve the systems' functionality and maintenance, and in some cases, sought to reconfigure the systems.

Exhibit 2.1. Activities Underway in Operating/Using Data Systems, by City

	Define Data Elements	Designated Data Manager	Provider PD Offered	Multiple Formats of PD Offered	Collect Systematic Data	Review and Refine Data Elements	Dashboards	Pilot Changes to MIS
Baltimore	✔	✔	✔	✔	✔	✔	✔	✔
Denver	✔	✔	✔	✔	✔		✔	✔
Grand Rapids	✔	✔	✔	✔	✔	✔	✔	✔
Jacksonville[a]	✔	✔	✔	✔	✔	✔		✔
Louisville	✔	✔	✔	✔	✔			✔
Nashville	✔	✔	✔	✔	✔	✔	✔	
Philadelphia	✔	✔	✔	✔	✔		✔	✔
Saint Paul		✔	✔	✔	✔		✔	✔

[a] Jacksonville launched a pilot of its Full Service Schools PLUS model, focusing on behavioral health providers, which included piloting an alternative system to the original MIS.

The text below describes how the cities managed the systems, the nature of the data the systems were designed to collect and use, how the afterschool systems worked to maintain and sustain their databases, and the lessons learned by various stakeholders over the course of the initiative.

Establishing and operating complex data systems required the cities to continue attending to three key foundational dimensions: ensuring that the technology was in place and continued to function, that investments in human capital kept pace with system needs, and that policies and practices supported—and helped to routinize—data use. In some respects, the underlying technology, once operational, required less ongoing attention than the need to maintain user knowledge and skills about data use. Exhibit 2.1 summarizes the key processes each city used.

Establishing and using complex data systems required the cities to *continue* attending to three key foundational dimensions: ensuring that the technology was in place and continued to function, that investments in human capital kept pace with system needs, and that policies and practices supported—and helped to routinize—data use. In some respects, the underlying technology, once operational, required less ongoing attention than the need to maintain user knowledge and skills about data use.

KEY SYSTEM ACTIVITIES IN OPERATING AN AFTERSCHOOL DATA SYSTEM

» Define data elements collectively across all stakeholders.

» Create staff position(s) focused on monitoring data accuracy and quality.

» Build data entry and analytic capacity and confidence through professional development (PD) and other trainings focused on data use.

» Provide diverse formats of PD to reach and engage wide range of system users with differential technological and data savvy.

» Collect data systematically from participating providers.

» Review data elements to assess usefulness (e.g., dosage and retention at the individual student level may yield more useful information than average daily attendance rates).

» Leverage use of standardized reports and dashboards to make data available and accessible.

» Pilot planned system changes with smaller group of afterschool providers before implementing network-wide.

Investments in Technology: Managing MIS and Data

One of the first decisions afterschool system leaders had to make was where to house the MIS, as the institutional home for each MIS has subsequent operational implications for data access, management, and quality. Simply put, the systems were not static. By study end, half of the cities (Baltimore, Jacksonville, Nashville, and Philadelphia) were either planning to or in the midst of making significant upgrades or reconfigurations to their MIS systems, either because the original MIS was no longer processing data as efficiently as intended or because the systems were perceived to be insufficiently secure or compliant with privacy standards. Baltimore, Jacksonville, and Nashville were implementing a total redesign or replacement of their MIS, while Philadelphia issued a Request for Proposal to replace its system. Six cities continued to make smaller refinements to their MIS by improving data entry processes and conferring with providers about other potential changes; this list includes Baltimore, Grand Rapids, Jacksonville, Louisville, Nashville, and Saint Paul.

By the end of 2016, all eight cities had designated staff positions for monitoring data accuracy and quality. The majority had internal staff, while Grand Rapids and Saint Paul relied on external partners to monitor data quality. While their names and responsibilities differed, the internal data managers played pivotal roles. Their responsibilities included training providers on data entry, developing data queries, removing outdated data from the systems, and communicating with providers about attendance data accuracy. The data managers situated in two cities' external research partner organizations had similar responsibilities. For example, Saint Paul's partner conducted daily checks to ensure that names of afterschool program participants matched school district lists and looked for duplication errors. However, external data managers were also characterized as expensive and less effective than in-house staff, in part because outside partners were responsible for data quality yet not for providing trainings or other database-related tasks.

The effective functioning of the systems depended upon consistent data collection across providers, which in turn meant everyone connected with the systems had to use common definitions of data elements. Four cities, including Grand Rapids,

Louisville, Nashville, and Philadelphia, addressed that need by forming data committees and work groups early on in the initiative to define terms, determine the data needed to calculate key figures or statistics, and design professional development to reinforce the concepts. Communicating with stakeholders and providers about the definitions was not a one-time proposition; rather, system leaders learned to develop mechanisms for sharing standard definitions of data through provider and system staff trainings and network meetings. They also incorporated standard definitions of data into the formal data sharing agreements and Memoranda of Understanding (MOUs) between system partners and proposal requests. Similarly, definitions themselves were refined and updated as system staff knowledge and understanding of data increased over time.

Investments in Human Capital: Training and Supporting Staff System-wide

Afterschool systems used training and other professional development opportunities to (1) engage providers in the system and increase their understanding of how data can inform decisions about their programs, (2) develop the technical expertise needed to enter and analyze data, and (3) enhance providers' interest and skills in interpreting and using data to inform their program or system-building goals.

By 2016, all eight afterschool systems provided professional development on data entry and data quality, although the nature and prevalence

---

KEY FEATURES IN DESIGNING PROFESSIONAL DEVELOPMENT ABOUT DATA USE

» Refine professional development formats and topics based on participation, feedback, and need.

» Develop the system's internal capacity to offer professional development on data use by identifying staff with data expertise and strengthening their capacity to engage peers.

» Monitor the quality of and participation in data-focused professional development for afterschool providers.

of offerings varied considerably. Engaging and supporting providers with diverse backgrounds and skills required different training approaches and diverse formats, including workshops, individualized technical assistance, coaching, cohort-based professional development, and online training and manuals. However, the duration, frequency, and even number of participants for each type of professional development differed both within and across afterschool systems. For example, sessions involving front-line staff generally included larger numbers of participants than did those for agency leaders. System leaders described the diversity of formats as necessary in a workforce environment characterized by frequent turnover. They also realized that providers needed more support to analyze and apply data for improvement purposes, reflecting the afterschool systems' greater sophistication over time. They also increasingly recognized the value of more individualized learning opportunities to support all aspects of data use, from collecting and entering data into the MIS to interpreting and applying data. Most system leaders had learned to modify their professional development approaches to better meet providers' needs.

We begin by describing the training for system leaders, and then describe the much more varied formats used for providers and front-line staff.

Ongoing Training for System Leaders

Cities purposefully worked to increase the capacity of afterschool system leaders to develop and manage an MIS and to engage system partners and providers in data collection and data use. The John W. Gardner Center for Youth and Their Communities at Stanford University was the primary professional development provider for system leaders about data collection and use. Technical assistance to cities included developing logic models, formulating research questions tied to system-building goals, selecting appropriate measures and data to collect, and applying data to policy and practice.

System leaders and key partners from all eight afterschool systems gathered semi-annually for technical assistance (TA) and networking sessions focused on these topics. The TA/networking convenings were also generally attended by representatives from the five "First Generation" cities whose afterschool system-building efforts the Wallace Foundation had funded earlier; these cities included Boston, Chicago, New York, Providence,

> "The biggest evolution was our shift from trying to get as many people as possible access to as many different types of data as possible, to the really targeted investment and coaching in a smaller number of sites. When we think about scaling now, we think a lot about how we scale within an organization. Starting at one site and really deepening the skills there, while simultaneously building the capacity of the manager to then spread that in their own organization."
>
> *Denver System Leader*

and Washington, DC. The Gardner Center and other technical assistance providers for the initiative used regular group-wide conference calls focused on data collection and data use as well as individualized consultation by phone and in person, which meant that content and format of technical assistance varied from city to city. One system leader in Philadelphia characterized individual technical assistance as better able to target and support a city's needs because the eight cities grew and developed differently.

Technical assistance providers also encouraged peer networking by linking leaders to other leaders with similar concerns. Cities shared advice on MIS software and hardware, data elements and measures, and data sharing agreements; importantly, cities learned from one another as well as from "First Generation" cities through cross-city networking meetings and technical assistance calls. For example, the Nashville After Zone Alliance (NAZA) system in Nashville created an attendance threshold based on information from Providence.

Ongoing Training for System Providers

Providers continued to develop confidence and proficiency in data use over the course of the initiative, as reported in focus groups and interviews in the majority of cities; Denver, Grand Rapids, Louisville, Nashville, Philadelphia, and Saint Paul reported that participating providers had become sophisticated users of system-generated data reports. Ongoing provider-focused professional

development became an important mechanism through which the cities enhanced providers' data collection and analysis skills, thereby facilitating data-based decision making. Afterschool systems used training and other professional development opportunities to engage providers and increase their understanding of data-informed programmatic decisions, develop their technical expertise in entering and analyzing data, and enhance their interest and skills in interpreting data to inform their goals.

The need to support providers with different training needs led to diverse formats. All eight systems offered different types of training, and by the end of 2016, most (all but Jacksonville and Philadelphia) offered at least three different types of professional development for providers. These six cities relied on both internal staff and external research partners to conduct (primarily) data-focused professional development, although system staff assumed greater responsibility as they gained expertise and confidence. These systems had individual staff members who provided group and one-on-one training and support; occasionally, they

also contracted with providers to lead trainings, and sometimes used peer-to-peer training to boost cross-system learning, focus on topics most relevant to providers, and strengthen connections among providers, all at a lower cost. Resource constraints and uncertainty regarding future resources led system staff to consider how to deploy funds, time, and staff most efficiently to structure training strategies that addressed both providers' and system needs, and that were potentially sustainable as well.

By the end of 2016, the eight afterschool systems were regularly offering training to providers on data entry and data quality. Additionally, providers in all cities were trained to use either the YPQA or the SAYO tools by the respective developers, and those training sessions emphasized continuous improvement.[12]

Given the high rates of staff turnover in afterschool programs, cities learned the importance of offering ongoing introductory or onboarding sessions in collecting data and using the MIS. Those introductory sessions were complemented by follow-up coaching and MIS manuals to outline

---

[12] Seven and five cities, respectively, were trained on the YPQA (all but Philadelphia) and/or the SAYO measures (Baltimore, Denver, Louisville, Philadelphia, and Saint Paul).

key procedures to help mitigate staff churn by deepening the understanding of experienced and engaged staff.

The diverse formats cities used to provide training included

- cohort-based approaches;
- workshops;
- technical assistance (individualized and in groups);
- system-wide training events;
- coaching;
- peer-to-peer approaches; and
- online sessions and resources.

Each of these is described in more detail below.

Cohort-based professional development. All eight afterschool systems implemented cohort-based professional development once or more, during which cities offered sustained learning opportunities focused on multiple forms of data collection and data interpretation to a small sample of providers with similar knowledge of data use. Six afterschool systems (all but Grand Rapids and Louisville) subsequently developed pilot cohorts as part of quality improvement initiatives. Several afterschool systems created regional cohorts for providers that emphasized the importance of time and continuity of learning with a group of peers (e.g., using zones or neighborhood areas, as in Nashville and Saint Paul, respectively). These cohorts functioned as professional or peer learning communities (PLCs), and system leaders and trainers began calling them PLCs over time.

Workshops. The eight afterschool systems all offered workshops on youth programming topics. In addition, the eight cities with established systems provided workshops on the use of the MIS, data collection, and data use, among other topics. Workshops were economical (training staff members in groups) and afforded participants an opportunity to connect with and learn from staff in other organizations. Some cities also targeted specialized workshops to providers needing assistance about a specific topic or information presented at a certain level. For example, Denver offered topic-specific workshops (CPS 101, 201, 301) designed to address varying levels of understanding of data use for Denver Afterschool Alliance partner providers. However, the group format did not address the specific needs of individual participants.

Technical assistance. All eight systems provided some form of one-on-one assistance to providers,

> "[Engaging providers to collect data] was a lot of one-on-one going out and meeting with them, especially in the beginning. It was taking time to do technical assistance and making sure that I'm always available for that. It also includes phone calls and emails, just being available to them when they need it, especially in the afternoons if they're doing SAYO. ...And the trainings we held here, the workshop, everything that was related to YPQI, bringing them together in that phase helped them to start seeing it as a system, and to start seeing other programs and encouraging each other to start building that culture."
>
> *Louisville Stakeholder*

generally via initial training about data entry protocols or a program quality improvement process. At the end of 2016, seven afterschool systems using the YPQA or Youth Program Quality Intervention (YPQI) offered individual technical assistance to providers (all except Philadelphia).

System-wide meetings. The majority of afterschool systems (seven) implemented system-wide meetings at least once each year; the meetings were designed to unify providers about system goals, priorities, and expectations. They generally included large-group presentations of data reports on the afterschool system and smaller breakout sessions focused on interpreting program-specific data.

Coaching. Coaching provided stakeholders more intensive, individualized technical assistance. Baltimore, Denver, Jacksonville, Louisville, Nashville, and Saint Paul implemented coaching programs to build the quality of program services and data entry. Coaching sessions were typically provided by system staff or by other providers with more skills and experience.

Peer-learning. This involved sharing ideas and expanding, refining, and building new skills and took two forms—one-on-one coaching and

professional learning communities—used by several cities, including Baltimore, Denver, Grand Rapids, Louisville, and Saint Paul.

The cities also attended to levels of provider participation in various professional learning opportunities, and efforts to monitor the quality of and participation in professional development became more important over time. Early on, cities used online registries to track providers' professional development about afterschool programming (used primarily to document the number of training hours), and they began to use YPQA results to identify training needs and guide development of new training activities.

Online training and manuals. Four afterschool systems, including Jacksonville, Grand Rapids, Nashville, and Saint Paul, explored online training to reduce cost, increase availability and convenience, and maintain data security during the initiative. The leaders of these systems, however, differed in their assessments of the benefits of this approach. At the end of 2016, Jacksonville and Saint Paul still offered online training related to data collection and data entry, while Grand Rapids and Nashville had stopped providing online training because of low participation rates. Several systems also developed materials such as manuals, guidelines, and curricula to boost providers' knowledge and skills and made these resources available online.

System leaders had to balance sensitivity to the barriers facing providers while emphasizing the importance of standardized and consistent data. Grand Rapids and Saint Paul both relied upon either their own staff or external data partners to standardize data and thereby reduce providers' burden.

Providers' confidence in data use grew substantially over the initiative. By the end of 2016, providers had become more sophisticated users of system-generated data reports; examples include understanding how to draw comparisons between the young people they served and similar populations elsewhere in the city, and using such data with greater frequency and intentionality. The afterschool systems continued to enhance providers' skills to use data to make informed, programmatic decisions.

Investments in Practice: Routinizing Data Collection and Analysis

Building Data Entry Capacity and Confidence

The cities grappled with a non-trivial challenge: developing capacity among providers to enter data consistently and reliably given such concrete obstacles as dependable internet access and chronic staff turnover. In four cities, internet access was a challenge, and consequently providers lacked the internet access needed to upload attendance or data elements from their work settings. For example, staff of programs run by the Philadelphia Parks Department were not able to upload attendance data to a central system even within their agency. Rather, they kept track of attendance on paper, and then sent the data to the central office for entry. This wasn't an issue in Denver, Grand Rapids, or Nashville, all of which enjoyed strong internet connections across agencies and providers.

Ensuring Data Quality

Capacity and confidence posed their own challenges, and so too did monitoring of data quality. Ensuring the quality of data required city afterschool systems to develop processes for monitoring the people entering and using the data and the systems into which people were entering data. By the end of 2016, all eight cities recognized the need for attention to data quality. The most common approach was to have one or more staff members dedicated to ensuring the quality of the data in their systems, and cities began to create various staff positions or to hire external consultants to serve in such a role. This represents an increase over the four cities that had formed data work groups or committees by 2014 to monitor and provide guidance for high quality data collection (this group included Grand Rapids, Louisville, Nashville, and Philadelphia).

As system leaders and staff gained more experience with data collection, respondents from the majority of cities (Baltimore, Grand Rapids, Jacksonville, Louisville, Nashville and Philadelphia), began to find ways in which data collection processes could be standardized and streamlined. Afterschool systems leveraged their MIS to streamline data entry tasks, reduce dual entry, and decrease the number of steps needed to upload data. These improvements served to reduce the burden placed on providers collecting and entering data and helped ensure the quality and integrity of data.

As systems leaders continued to focus and refine their selected data measures, they prioritized those data elements they believed could most usefully be collected and analyzed to support students in after school programs, their teachers, and the afterschool providers. The broad categories of data elements used across the cities included program attendance, program quality, and youth development. Each is described in more detail below.

Program Attendance

All eight afterschool systems collected daily attendance from providers and used it to calculate the average daily attendance (ADA) of afterschool programs across providers. The emphasis placed on attendance had implications for how dashboards and reports were structured. For example, Philadelphia structured reports to show the relationship between program retention and school attendance more effectively over the course of the year.

While all eight afterschool systems collected attendance data, leaders learned that collecting ADA data alone could mean that programs were more focused on filling seats than on supporting

> "You send [the SAYO survey] off, you don't get it back for a long time. When you get it back you get an average … You don't get anything that tells you much about any of your kids."
>
> *Saint Paul Stakeholder*

> "Now we're understanding that ADA, the way that we incentivize it, actually moves in opposition to student retention … If you have a student who's not showing up very often, because we're focusing on ADA, you're incentivized to fill that slot quickly with someone else."
>
> *Baltimore Stakeholder*

student learning, as funders typically asked provider programs to report on attendance rates without regard for continuity of students' participation. Concern about a potentially misplaced focus on maintaining high ADA rates whether or not the same students attended regularly led four cities (Baltimore, Grand Rapids, Jacksonville, and Nashville) to revisit their definitions of attendance. By the end of 2016, those cities were revising or considering revising their definitions to focus on dosage (the average number of afterschool hours a given student had attended), and retention (how long the same student stayed in a program); interestingly, they were able to leverage existing data to do so.

Program Quality

The afterschool systems also strove to collect data on program quality in their databases. By the end of 2016, all eight were either regularly collecting or piloting program quality data. Afterschool systems emphasized program quality as measured by two instruments: YPQA and SAYO. The importance of program quality measures reflected cities' varying level of interest. In Denver, the afterschool system created a professional learning community (PLC) focused on collecting and applying program quality data. One system staff member from Louisville described the benefits of using a tool to help create a shared language and vision in their system, and elaborated, "Now when you go out and say YPQI [Youth Program Quality Intervention], people know what you're talking about… We've managed to do a good job of permeating the culture and the language, which I did not see at all when I first started this job."

---

[13]Other limitations associated with the implementation of SEL measures are discussed more in-depth in the next section on data use.

[14]As noted earlier, FERPA regulations require after school programs to obtain parental consent on every student to access data from the schools; this process occurred annually in some cities and upon initial enrollment in afterschool program for others.

Youth Development

Just over half of the cities collected youth development data in their systems as part of their efforts to demonstrate the impact of afterschool programs on youth social emotional learning (SEL); this group included Baltimore, Denver, Grand Rapids, Louisville, and Saint Paul. Some system leaders reported that they found SEL to be a more appropriate measure of the impact of afterschool programs than academic measures, as SEL focuses on the knowledge, attitudes, and skills necessary to manage emotions, set positive goals, and show empathy for others. System leaders in Denver, Grand Rapids, and Saint Paul reported that their school districts and/or local governments were also articulating greater interest in SEL and in assessing SEL indicators. For example, a system leader in Denver explained how the school district's strategic plan aligned well with the program quality work its afterschool system was developing.

While leaders in these cities described youth development measures as important, both system leaders and providers expressed dissatisfaction with available SEL measures, including surveys and observational tools. Providers voiced concerns that measures relied on pre- and post-surveys that did not take student attendance into account, so surveys administered at one time point were not necessarily completed by either the same students or the same number of students at a subsequent time point. Providers and system leaders also reported that they had to wait too long

> "The consent process is really intensive because then we have to enter all the names and the data entry takes a long time. The coordination with the schools and the school district is a big time investment."
>
> *Grand Rapids Stakeholder*

for survey results and could not use them to make programmatic changes as quickly as they might have wanted.

Stakeholders also debated how best to define socio-emotional learning.[13] For example, Denver Afterschool Alliance system leaders conducted an inventory of tools the school district partner used to measure SEL and found 13 different definitions for the phrase 'social-emotional learning.' This led them to use SEL components of the SAYO tool until a new standard measure could be developed.

School Data Access Challenges

Afterschool systems also leveraged school district data, such as school attendance and grades, in their data collection efforts. While school data could be useful for afterschool providers, providers and system leaders faced challenges each year in obtaining parent consents to access student data and described the consent process as intensive and time-consuming.[14] Establishing trust among

different partners and dealing with the logistics of sharing data posed challenges—even when consent forms had been completed.

Some system leaders were deterred by the consent process and the time required to obtain consent for each participating child. Over time, however, systems developed strategies to address these challenges, including inserting the consent forms in program registration materials, or altering district policies so that consent was not required or only required once over the "life of a kid's tenure in school."

Data Reporting

All eight cities routinely shared information with providers, both to update providers and communicate results. Most of the systems (Baltimore, Denver, Grand Rapids, Louisville, Nashville, Philadelphia, and Saint Paul) used standardized reports and dashboards and made system-wide and/or provider-specific data available to users via consistent reporting formats. These communication tools served a variety of purposes, including:

- the efficient organization and matching of multiple sources of data;.
- the expansion of the number of data elements available to systems leaders; and
- the communication of data purposes and system level goals to providers.

Dashboards allowed users to "drill down" into the data and see how trends varied by participant type. Afterschool systems' focus on the dosage and retention of youth in afterschool programs also had implications for how to structure and display dashboards and reports. Although a majority of the cities (six) used such tools, their level of implementation was not necessarily consistent.

Persistent Challenges to Staff Capacity

System leaders repeatedly identified high turnover among frontline program staff as a challenge to building provider capacity. System leaders and staff reported the need to engage providers regularly, not just initially, about data-use basics, as opposed to relying on knowledge from prior data trainings and familiarity with the MIS. Although the

afterschool systems commonly offered trainings on data collection and analysis at the start of the school year, over time, they began to offer such trainings throughout the school year, reflecting the reality of new staff joining the initiative after the start of the school year. The more frequent need for resources and staff time to onboard new frontline staff reduced resources for other tasks, including more sophisticated uses of data.

Anticipating the future

Based on the successes and challenges encountered with their MIS systems, system leaders recommended strategies to build and sustain the MIS, including:

- ensuring the MIS was intuitive and user-friendly;
- adapting the technology to respond to the afterschool system information needs; and
- planning for its eventual obsolescence and for future upgrades and/or replacements.

Over time, system leaders became savvier in anticipating future technological needs, including updates to hardware and software patches, and made plans to update the technology to maintain its relevance to system partners. For example, system leaders in Grand Rapids and Jacksonville budgeted for continuous updates to their technology, whereas Baltimore was engaged in developing a completely new design for its MIS.

One approach was to design and test changes by targeting a subset of providers for pilot-testing ideas before adopting changes on a larger scale; this occurred in Baltimore, Denver, Grand Rapids, Louisville, Philadelphia, and Saint Paul. As these cities developed their data systems, this became a recurring theme: start small with plans to scale up gradually. Their afterschool leaders worked to ensure they "got it right" before expanding the number of data elements or engaging more providers. Systems in Baltimore, Jacksonville, and Nashville focused all system-building activities on a subset of afterschool providers in their cities, whereas the other five afterschool systems (Denver, Grand Rapids, Louisville, Philadelphia, and Saint Paul) developed their data systems and training for providers by first piloting new activities with a subset of providers.

---

[13] Other limitations associated with the implementation of SEL measures are discussed more in-depth in the next section on data use.

[14] As noted earlier, FERPA regulations require after school programs to obtain parental consent on every student to access data from the schools; this process occurred annually in some cities and upon initial enrollment in afterschool program for others.

3

How Afterschool Systems Used Data

INTRODUCTION

Over the course of the initiative, the afterschool system stakeholders—providers, system leaders, and system staff—increased their use of data to inform decisions and actions. For the purposes of this study, we define stakeholders' data use as the purposeful application of information systematically collected and analyzed. Using data effectively required the participating cities to have the (1) **technology** in place to collect and examine data, (2) **people** to collect, examine, and draw conclusions from the information, and (3) the responsibility, management, and forethought to develop **processes and structures** to support data use.[15] In this section, we describe how cities used the data made possible through their data systems.

Exhibit 3.1. Cities' Types of Data Use at the System Level in 2016

	Accountability	Improvement	Strategic Planning	Management
Baltimore	✔	✔	✔	✔
Denver	✔	✔	✔	✔
Grand Rapids	✔	✔	✔	
Jacksonville	✔			✔
Louisville	✔	✔		
Nashville	✔	✔	✔	✔
Philadelphia	✔	✔	✔	
Saint Paul	✔	✔	✔	✔

How Systems Used Data

Stakeholders articulated four clear purposes for using data when describing their afterschool systems' experiences and challenges. These purposes included using data to report on participant characteristics, program quality, and other indicators largely required by funders (**accountability**); applying data to identify opportunities for improvement of program content and system supports for providers (**improvement**); applying data to inform strategies for system planning, advocacy, and communication about afterschool system goals (**strategic planning**); and applying data to manage system and provider

activities in real time (**program management**). Table 3.1 summarizes the cities' respective capacity to use data for these different purposes (as of the end of 2016).

Perhaps not surprisingly, data were used most consistently for accountability purposes—although that did not represent a substantial shift from how data had been used earlier, as eight cities were using data for accountability when the initiative began. Data use for other purposes expanded between 2014 and 2016 for all of the cities. The text below describes how the cities' data use processes and practices changed.

Data Use for Accountability

As of 2014, Stakeholders in eight cities reported actively interpreting, using, or planning to use data for accountability purposes.[16] Providers and system staff were in the practice of connecting data to questions about afterschool programming and outcomes for external funder reports. However, how providers and system staff used data for accountability evolved between 2014 and 2016 as providers gained greater access to afterschool/school system data and became more experienced with using data to drive continuous improvement efforts. Overall, data for accountability were used to simplify and streamline reporting requirements and to deepen understanding of organizational operations and patterns.

> **COMMON OUTCOMES:**
> **DATA USE FOR ACCOUNTABILITY**
>
> » Go beyond use of self-reported provider data to summarize demographic data, participation, attendance, and enrollment.
>
> » Shift toward standardized reporting to capitalize on system-generated reporting for participating providers.
>
> » Highlight patterns for internal accountability.
>
> » Increase in efficiency due to improved technology and data availability.
>
> » Greater capacity to customize data for specific funders or targeted audiences.

---

[15] The topics in bold were the focus of *Connecting the Dots: Data Use in Afterschool Systems*, the first ABS2 report (Spielberger et al., 2016).

[16] Gerstein, A. (2015). Shifting the norms: From data for compliance to data for strategy. *Gardner Center Perspectives*. Palo Alto, CA: The Gardner Center.

Most providers had some experience using data for accountability purposes at the start of the initiative. Such prior data experience centered on internally developed surveys and, in some cases, school data accessed through data sharing agreements. However, system stakeholders in the majority (six) of cities described their reporting activities at the end of 2016 as more efficient because of increased data availability and reporting formats; this includes Baltimore, Denver, Grand Rapids, Nashville, Philadelphia, and Saint Paul.

The standardized reports and dashboards built out in cities' MIS summarized key indicators that providers had often found hard to report reliably to funders. These indicators included demographics of the children and youth served, program attendance, and (where available) school data. In addition, system staff in Baltimore, Denver, and Saint Paul had developed customized reporting functions in the MIS to support providers' data use for accountability. The initial investments in Saint Paul, for example, helped to refine and standardize types of reports providers requested, which meant that the MIS increasingly functioned as a "one-stop shop" that made it easier to adapt data reports to specific funders' reporting requirements. In Denver, system staff had recently built out custom reports in the MIS, reflecting providers' input about what to prioritize. A Denver provider expressed her appreciation of the time saved by accessing system reports that aligned with her mid- and end-of-year reporting requirements, noting that "all the graphs and the tables are already there."

System leaders in nearly all (seven) cities and providers in five cities appreciated the capacity of the system MIS to capture program performance on such indicators, particularly when their own staff lacked data- or evaluation-related expertise. Some providers were also able to reduce their dependence on paper files and homegrown tracking systems; one small Philadelphia provider observed, "We can't afford software like this. Otherwise we're going to be using spreadsheets [to] capture data."

Some administrators in larger provider organizations also described using data from the system MIS for internal accountability. For example, according to the leader of a large Louisville agency, access to the MIS provided "a snapshot of what we're doing and a little more of an intimate look of what the program looks like, what's happening, the kids that we're serving." The capacity to monitor characteristics of participating youth and their attendance emerged as an important tool for tracking performance across sites and promoting accountability within their organizations.

Data for accountability also served other purposes. For example, in Baltimore, Jacksonville, and Nashville—three cities that directly funded providers—system leaders reported that using data for accountability contributed toward raising expectations for attendance data. Those three cities established, and later raised, minimum benchmarks for average daily attendance that providers were contractually obligated to meet. In Nashville, a system leader described significant growth in

providers' use of attendance data, incentivized in part by the practice of using the minimum attendance data benchmark. The growth in attendance led cities to raise minimum attendance benchmarks over time: from 70 to 80 percent in Nashville and from 80 to 90 percent in Baltimore. In Jacksonville, the data system staff adopted a somewhat different strategy at the end of 2016. The Jacksonville Children's Commission (JCC) shifted its focus to units of service provided to participating children and youth in new provider contracts, and moved away from tracking whether providers met minimum average daily attendance benchmarks.

Data Use for Improvement

COMMON OUTCOMES: DATA USE FOR IMPROVEMENT

» Establish and use routines for reviewing program data.

» Build capacity to examine performance on key indicators with deliberate focus on program improvement.

» Connect quality standards and program data.

» Increase in providers' perception of belonging to a collaborative city-wide system rather than a competitive arena.

» Use internal program data to align programming and funding opportunities with organizational priorities.

» Use data to enhance and address equity and access to afterschool programming.

» Connect program data to resource allocation.

By the end of 2016, stakeholders in six cities—up from four cities two years earlier—reported using data for improvement by assessing program quality, developing improvement plans, and/or circling back to learn whether changes had resulted in programmatic improvements. Data were used to inform quality standards and program improvement, to influence resource allocation, and to ensure access and equity. In addition, cities recognized providers' roles and responsibilities in contributing to program improvement.

Afterschool systems promoted quality standards and used data for continuous improvement

Both system leaders and providers stressed the contributions of continuous improvement initiatives that used data from the YPQA and SAYO assessments (used in seven and four systems, respectively) for improving the quality of afterschool programming, including their efforts to strengthen youth engagement and voice. One Nashville system leader described being able to tailor programming to the needs of participating children and youth as a primary value of data. In six cities (all but Jacksonville and Philadelphia), where system staff worked either with specific cohorts or subsets of providers, participating providers began to perceive one another as colleagues rather than competitors. Specifically, providers in those cities reported that using data for improvement had influenced how they interacted with other provider organizations; one Grand Rapids provider commented that "...we're really coming together as colleagues." A Louisville system staff member observed that the combination of group participation in trainings and workshops and one-on-one technical assistance had been instrumental in shifting from a competitive to a shared culture. In Baltimore and Nashville, the regional provider meetings facilitated by system staff were described as opportunities to troubleshoot common challenges and learn from one another.

System staff and providers in Baltimore, Denver, Jacksonville, Louisville, Nashville, and Saint Paul described how increased awareness of quality standards within their networks contributed to observed improvements because system leaders

> "We were talking about some quality measures and just some different things that to me are like non-negotiables of youth work and it was like, 'Oh, there's a real big gap in knowledge here.' And so I think one thing that's been great is kind of bringing us all to the same page and saying, 'This is what quality is, this is what quality looks like, and this is how we talk about it within the city.'"
>
> *Denver Provider*

had prioritized continuous improvement in afterschool settings. The Jacksonville and Saint Paul systems promoted their respective state-developed afterschool standards to broaden understanding of what quality looked like. Denver system staff created a set of quality pillars in 2015 to supplement the state's afterschool standards, and staff offered quarterly "world café"-style workshops to help providers learn about program improvement.

Afterschool system staff in a slightly different group of cities (Baltimore, Denver, Grand Rapids, Jacksonville, Nashville, and Philadelphia), held providers accountable for participation in continuous improvement by monitoring the execution of an improvement plan and provider participation in professional development aligned with specified priorities. The systems required providers to use system-supported data tools and monitored their participation in nationally recognized models. A Baltimore afterschool system leader explained that Family League's expectation was that "if you wanted the funding, you had to do the learning and the quality work alongside us."

Providers used data to guide internal planning

Agency leaders in Denver, Grand Rapids, Louisville, Nashville, Philadelphia, and Saint Paul described themselves as becoming more sophisticated data consumers. Leaders' experiences with the MIS helped them refine learning and improvement goals within their own organizations. This translated into several changes in practice, including collecting and using data driven by organizational priorities rather than funders' reporting requirements, selecting potential funders on the basis of aligned rather than competing priorities, and adapting ideas about data use from the overall data system to inform

how specific provider staff collected and used data in their own programs (e.g., using data to monitor youth progress or to align programming with youth needs).

Providers used data accessible through the MIS to guide resource allocation

Providers in Denver, Grand Rapids, Nashville, Philadelphia and Saint Paul actively used data to attract new funders. Historically, they had relied on snapshots at particular points in time in their funding applications. However, the data accessible through the system allowed them to learn about participation and retention patterns for specific subgroups and communities. As a result, they could examine patterns over time, better anticipate growth, and target both resource allocation and additional funding using data. The MIS data essentially handed providers tools for understanding dips in attendance and individual

A Change in Data Access Presents a Challenge

In 2016, Nashville's NAZA-funded providers' ability to access data changed because the school district decided to revamp its data warehouse, which linked to the NAZA MIS. As a result, provider access was restricted to afterschool program data only, which represented a substantial curtailing of the access they had enjoyed. One provider noted that her team referenced academic reports available through the former MIS to determine how to respond to individual students. They used the reports to say, "Oh, on this skill, this student is struggling. So, let's build some activities around that." Multiple providers described the loss of access to school data as constraining their capacity to address their students' needs, both in terms of data for day-to-day decision making about programming and in terms of relationship-building between the afterschool and school systems (and staff) that had developed with shared access to the same data.

youth participation patterns they would not otherwise have had. Providers relied upon system-generated data to understand how they could expand their reach; for example, information about the geographic distribution of students eligible for free- and reduced-price lunch allowed providers to prioritize where summer programming would be offered throughout the city.

Coaching providers about interpreting patterns in data helped identify problems and potential solutions. In Nashville, for example, analysis of a large provider's program attendance data revealed consistently higher youth participation on certain weekdays. After meeting with a coach to discuss how to respond, program staff piloted a new schedule that spread popular enrichment activities out more evenly across the week. The change in programming contributed to more predictable participation rates across the week, and also facilitated new understanding about how operational decisions (at that organization) could affect youth engagement and retention.

Agency leaders began to define learning goals for their organizations with program quality data. For example, both Denver and Saint Paul providers relied on YPQA results to inform professional development content for their staff. Program directors in Grand Rapids monitored individual staff members' participation in professional development both to develop staff capacity and to improve youth engagement, and shared program quality data with board members to facilitate conversations about the program's ideal outcomes, the challenges encountered, and how to align available resources and priorities.

Afterschool system leaders used data to enhance access and equity

Afterschool system leaders in Baltimore, Denver, Grand Rapids, Nashville, and Saint Paul used data to reflect on and address access and equity of programming in their networks, focusing on the most vulnerable children and youth and high poverty communities. In Nashville, for example, when the system expanded into an area home to multiple public housing units and limited afterschool opportunities for middle school-aged students, system staff recruited existing NAZA providers from other zones to leverage their capacity to deliver quality programming. Examination of persistently low participation rates at one school site helped

NAZA staff identify cultural barriers hampering communication with an immigrant community; staff members then developed strategies to better engage these students and their families, which included physically moving to a new, community-based site.

Based on data providers uploaded to the MIS, Baltimore afterschool system leaders identified a sudden drop in summer learning opportunities in a community with one of the city's highest poverty rates. Although the decrease reflected temporary facilities-related issues, one system leader called it "a perfect storm"; however, because they had timely data, they were able to alert the city to the wider issue. Subsequently, afterschool system leaders worked with city agencies and private funders to establish a 15-neighborhood priority list, motivated by the idea of investing in these communities first, then spreading out their programming and reach.

Data Use for Strategy

COMMON OUTCOMES: DATA USE FOR STRATEGY

» Monitor provider participation in professional development about data use.
» Identify gaps in programming.
» Translate data into tools used for advocacy and communication.
» Learn from program providers about their data needs.

By the end of 2016, stakeholders in five cities reported using data to develop strategies or to make important connections to current strategies. System leaders described using data to realign programming with areas for student improvement or to target and expand program services to higher needs neighborhoods. Afterschool systems also explicitly linked data use to strategy in their strategic plans. Over time, the way in which system leaders used data for strategy decisions evolved. In addition to modifying afterschool system strategies to address youth and city needs, leaders incorporated data into efforts to solidify afterschool programming as a city priority with new mayors and city council members. Systems also

used publicly available and system data to enhance coordination with existing partners and to develop new partnerships, for instance, as part of collective impact initiatives.

The most common approaches to using data for program strategy included:

- Monitoring participation in professional development (7 cities).
- Helping to identify gaps in programming (6 cities).
- Parlaying data into tools for advocacy and communication (6 cities).
- Learning from program providers about their data needs (5 cities).

Afterschool system staff monitored provider participation in data-focused professional development

Use of professional development participation data expanded over the course of the initiative in seven cities (all but Philadelphia). Participation was monitored primarily in the context of provider

Using Data to Advocate

A Grand Rapids leader described the system's online data dashboards and the system's competitiveness for national grants as key to establishing a strong local reputation—and essential for demonstrating the importance of long-term funding commitments.

One Nashville system leader explicitly acknowledged the value of using data to strengthen partnerships: *"It is really important for me to be able to have results like this that I can shop around to elected officials, both the school board and the council and the mayor on a regular basis…They're predisposed to be supportive, but I've got to have some of this evaluation data in order to keep them engaged."*

contracts that specified a certain number of training hours. By 2016, system staff in those seven cities had begun to track participation and feedback from providers more systematically to inform professional development offerings. In Louisville, system staff reported that their providers had trouble meeting the minimum number of hours per year of professional development, which led to exploring alternatives to how the professional development had been structured. And once Nashville system staff realized that low participation rates early in the school year reflected the fact that providers were still hiring and onboarding new staff, they adjusted the schedule accordingly. Other efforts to integrate professional development data into afterschool system activities included using an online tracking tool to facilitate provider registration for professional development offerings; the data helped system staff better communicate with provider organizations about the system's learning agenda.

Afterschool staff used data to identify gaps in programming

One key use of data used for strategy centered on afterschool staff utilizing their data and analysis to identify gaps in programming that needed to be addressed in their cities. Six cities used geospatial data in different ways for this purpose (in Baltimore, Denver, Grand Rapids, Louisville, Nashville, Philadelphia, and Saint Paul). Baltimore afterschool system leaders, in collaboration with local funders and the city, developed maps that showed the distribution of summer programming seats across the city and violence hot spots. By the end of 2016, staff were leveraging several types of data to describe program quality and the engagement of students and community stakeholders. In Philadelphia, system leaders used geospatial data to illustrate how funding changes played out across the afterschool landscape and presented their analysis to the city council. Using geographic information also allowed systems to distribute information about locally-based programs to families within those neighborhoods; in Denver, for example, school staff used the program locater to connect students with afterschool programs physically located on their campuses rather than anywhere in the city.

> "We survey ELO members in terms of the value add of the network— the benefits of the network if they feel that we are fulfilling the work of a collaboration. If they feel that we're well organized and that meetings are efficient."
>
> *Grand Rapids System Leader*

providers to understand perceptions of the network (i.e., strengths, satisfaction), gather feedback about reports that could be built out in the MIS, and learn how different provider staff were involved. Jacksonville system staff used provider feedback to inform their strategies; they also surveyed providers to identify what they would value most in data coaching. The city then used this information to structure priorities for their coaching. Grand Rapids and Philadelphia sought out providers' perspectives and feedback via surveys, which then helped improve the system.

Afterschool systems used data for advocacy and communication

Stakeholders in the majority of cities (including Baltimore, Denver, Grand Rapids, Nashville, Philadelphia, and Saint Paul) also described data as a tool for increasing community confidence in afterschool programming. They emphasized the value of being able to customize how they integrated data into advocacy and community efforts so that it resonated locally. Afterschool system staff, for example, created funding reports disaggregated by city council zone or by zip code. Further, they used data to describe academic, attendance, and behavior gains made by students participating in afterschool programs. In Philadelphia, system stakeholders attributed city leaders' growing interest in afterschool programs to system-generated data about the distribution of programming across neighborhoods, because the data highlighted gaps with respect to community and student needs. Baltimore, Denver, Grand Rapids, and Nashville used evidence about impact for communication and advocacy. Incorporating data into reports and referencing data-based accomplishments in policy briefs raised the visibility of their afterschool systems. This approach also helped make a case to multiple audiences (city leaders, school administrators, and providers) for continued investment in afterschool programming.

Afterschool system staff solicited provider feedback about the data system

All systems informally gathered feedback from providers about high priority topics for professional learning opportunities and about the quality of sessions. Five cities (Baltimore, Denver, Grand Rapids, Jacksonville, and Saint Paul) surveyed

Additional strategies used by some afterschool system leaders and staff

Afterschool system staff used data to identify opportunities for the system to scale quality programming. As of the end of 2016, Denver, Grand Rapids and Nashville had developed a standardized afterschool curriculum and new tools to help providers address system priorities. In Grand Rapids, afterschool system leaders identified youth engagement and positive motivation as a community-wide need. In response, the afterschool system identified four domains related to engagement and partnered with an education scholar to design and pilot test a K–12 program to promote youth agency and resilience in afterschool settings. System staff in the same three cities discussed the use of data to broker partnerships between individual providers and school sites. They engaged in regular meetings with school principals and other staff to identify programs that addressed

specific needs (in one case, including school administrators in system-wide data sessions) and to enhance the alignment between what students are learning in afterschool time and what happens during the school day. Some providers also used attendance data to engage school staff.

Finally, in three cities (Baltimore, Jacksonville, and Nashville) afterschool system staff began to use the program attendance data they collected to examine youth retention. In response to findings from network-wide data analysis, some cities altered contract requirements for attendance to emphasize youth retention rather than program attendance.

Data Use for Program Management

COMMON OUTCOMES:
DATA USE FOR PROGRAM MANAGEMENT

» Troubleshoot program-specific patterns to improve individual program operations.

» Use data to address programming decisions.

By the end of 2016, system staff were using data for program management purposes in Baltimore, Denver, Jacksonville, Nashville, and Saint Paul. System staff reviewed participation (e.g., attendance) and program data (e.g., number of programs offered at a given school site) to troubleshoot issues with providers on a one-on-one basis. In Saint Paul, system leaders compared providers' current data use to inform program management to their earlier use of paper checklists or simply not tracking particular indicators. One member of the Denver Afterschool Alliance (DAA) system staff described her work with providers; she noted that efforts to connect data and analysis included problem-solving related to recruiting students and determining the best locations for program sites, among other program management issues.

Providers in four cities (Baltimore, Denver, Louisville, and Saint Paul) reported turning to data to solve programming problems more regularly. For example, a Saint Paul provider described using the data reported to the system to troubleshoot challenges faced in recruiting middle school students. To complement this effort, afterschool

system staff also created a middle school-specific page in the Sprockets program locater to publicize middle school opportunities.

Barriers to Meaningful Data Use

COMMON BARRIERS TO DATA USE

» Turnover among system leader and provider organization staff.

» Sustaining interest and motivation in data use.

» Having too much data poses challenges in prioritizing which data elements matter.

» Increased data-focused demands from funders and stakeholders alike.

By the end of 2016, access to data in and of itself was no longer a significant barrier for system staff and providers, and some providers had begun to indicate greater interest in particular kinds of data (e.g., individual student level information or better SEL data). Yet system leaders and providers acknowledged several ongoing barriers that limited their capacity to use data as effectively as intended. The most commonly reported obstacles listed above are described in more detail below.

High rates of turnover among provider organizations' staff plagued systems in seven cities (all but Jacksonville) and posed an ongoing challenge in terms of data use. The combination of low salaries, lack of benefits, and limited opportunities for career advancement translated into high attrition among providers. This created challenges for data use. One system leader in Grand Rapids noted that those "closest to the work, who need the data the most, probably are getting… the least amount of utilization." Similarly, in Nashville, a system leader described the need to redevelop capacity over and over again as a barrier, because shorter tenure meant that providers were not there long enough to realize they could use data to redesign their programming to be more engaging to staff and youth (and potentially to the providers themselves).

While stakeholders made explicit note of turnover among provider organization staff, the afterschool system leadership itself also experienced substantial attrition over the study period. Leadership changes at the coordinating entity occurred in all cities

> "Even though we see this snapshot of what our data was, we may have half of a brand new staff this year. Then it's like you're just constantly starting over."
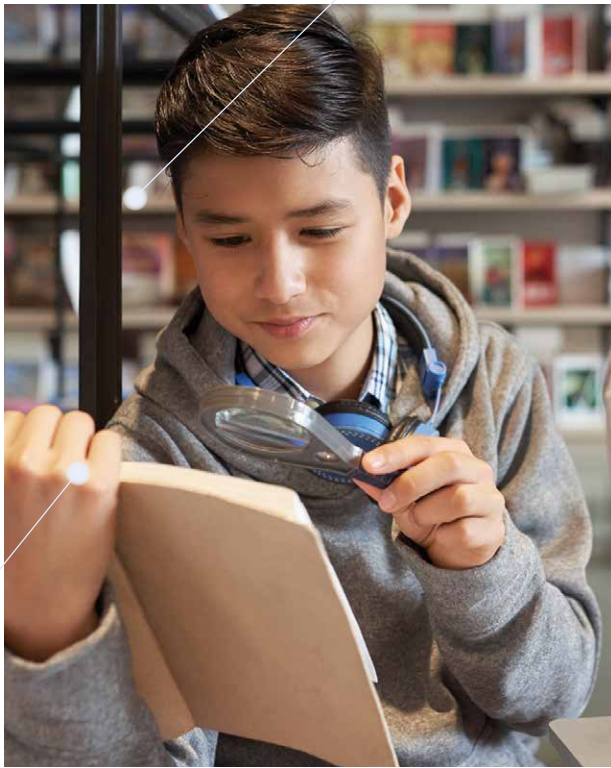>
> *Grand Rapids Provider*

except Grand Rapids and Nashville, as did changes among program staff in all cities except Jacksonville and Louisville. Although not as prevalent, there was also turnover other in several cities among mayoral representatives, on one hand, and school district partners on the other (Grand Rapids, Jacksonville, Nashville, and Philadelphia; Baltimore, Jacksonville, and Nashville, respectively). Transitions at the leadership level led to realignment of responsibilities and priorities, lengthened decision-making processes, and schedule delays.

Maintaining interest and motivation to use data represented an ongoing challenge reported by seven cities (all but Jacksonville). In Grand Rapids, system leaders noted that without holding providers accountable for the use of data, they sometimes struggled to prioritize data-related activities. As one system leader explained, even for providers eager to know more about the quality of their programs, it could be "easier to let it slide … because of the time it takes to coordinate it and enter their scores."

Denver system leaders also described the need to identify "better incentives" to engage a broader group of providers (beyond the cohorts of providers working most intensively with data) to collect and report data as an area of growth for the system.

Stakeholders from seven cities described ***access to too much data*** as a challenge; providers were overwhelmed by more data than they could comfortably or functionally use in Baltimore, Denver, Grand Rapids, Jacksonville, Nashville, Philadelphia, and Saint Paul. One Grand Rapids provider explained that the data reports created by her system suggested a wide range of opportunities, but "[the data] was so much that it didn't highlight where to go next. It didn't make it accessible to my staff."

Commonalities and Differences across Cities' Data Use

While each city had its unique contexts, processes and challenges, some cites were indeed able to use data in multiple ways, moving beyond the accountability and compliance applications that characterized the Next Generation cities' data use practices at the start of the initiative. One feature that distinguishes cities' efforts was the multi-faceted nature of their data use. The five afterschool systems that made more progress both expanded beyond using data primarily for accountability purposes, and also used data in multiple ways within each of the broad types of data use (see Exhibit 3.2).

By examining how (and which) cities used data, it becomes clearer that there are two groups of afterschool systems: those in which data use consistently occurred in multi-faceted ways across the four broad categories of data use, and those in which data use occurred across categories, yet to a lesser degree. For example, cities in the first group, with both more and more nuanced data usage, drew upon data for internal program accountability, for continuous improvement, for monitoring participation in professional development, and for identifying gaps in service delivery. Interestingly, as described in Chapter 1 and summarized in Exhibit 1.5, four of those five cities had made more rapid progress in the first year of the initiative: Denver, Grand Rapids, Nashville, and Saint Paul, whereas early progress in Baltimore had proceeded more slowly. Additionally, these cities managed to formalize data sharing agreements sooner than the cities whose data use patterns were less nuanced by the end of 2016. Otherwise, however, there are no distinguishing characteristics that might meaningfully differentiate these five cities from the other cities (e.g., governance structures, configurations of stakeholders, or approach to building an MIS).

Over time, system staff and providers described *increasing data demands from* funders, about program quality, student characteristics, and other program elements; this occurred in Baltimore, Denver, Louisville, Nashville, Philadelphia, and Saint Paul. Increasing external interest helped to generate and sustain provider interest in the MIS and other data-related resources supported by their city afterschool systems; yet it simultaneously meant a perpetual learning curve for providers. One Denver system staff member observed, "A number of years ago, saying that you have a safe environment and that you support a hundred kids on a daily basis, people would have been thrilled. That doesn't cut it anymore." A Philadelphia provider described a similar change in her city, explaining that funders wanted quantitative data and outcomes instead of children's' drawings.

Exhibit 3.2. Using Data for Accountability, Strategy, and Management, by City

	Baltimore	Denver	Grand Rapids	Jacksonville	Louisville	Nashville	Philadelphia	Saint Paul
Accountability								
More Efficient Reporting	✔	✔	✔			✔	✔	✔
Internal Program Accountability	✔	✔	✔	✔	✔	✔		✔
Attendance Data Emphasis	✔			✔		✔	✔	
Continuous Improvement	✔	✔	✔		✔	✔		✔
Increased Awareness of Quality	✔	✔		✔	✔	✔		✔
Monitoring PD	✔	✔	✔	✔		✔	✔	
Internal Planning		✔	✔		✔	✔	✔	✔
Strategy								
PD Participation	✔	✔	✔	✔	✔	✔		✔
Identifying Gaps	✔	✔	✔		✔	✔	✔	✔
Communication & Advocacy	✔	✔	✔			✔	✔	✔
Listening and Learning	✔	✔	✔	✔				✔
Management								
Solving Problems Case-by Case	✔	✔			✔			✔

4

Summary

This report summarizes key insights about ongoing implementation of the Next Generation afterschool data systems in eight cities funded by the Wallace Foundation. The broad goals of the Next Generation initiative were to increase the strength of the afterschool systems that serve low-income children and youth, and ultimately improve outcomes for participating children. The chief mechanism for stimulating such improvements was investment in strengthening cities' use of data at the system level to help cities coordinate and provide afterschool programming more effectively.

The earlier chapters summarize how the Next Generation cities established and used their afterschool systems as well as how they used data for multiple purposes. On balance, the Next Generation afterschool systems made substantial progress in the initiative's four-year duration. Based on findings from an evaluation of its initial investment in afterschool systems (the "First Generation" cities), the Wallace Foundation had purposefully invited applications only from cities able to demonstrate that key infrastructure elements were already in place, including mayoral commitment, broad representation and commitment across relevant stakeholders, and sufficient data systems capacity.

While it is possible that the large majority of Next Generation cities might have begun to use data about their afterschool systems more consistently and effectively absent the Wallace investment, the substantial progress made suggests that the application requirements played a valuable role in helping the cities marshal resources more quickly and effectively.

All eight cities capitalized upon the investment by expanding system-level data use in meaningful ways. This occurred both by broadening how data were used across the system, and by engaging providers more systematically and purposefully. The expansion of data use reflected a shift toward more nuanced and locally useful functions that applied to multiple aspects of program activities and processes, substantially beyond the compliance and accountability purposes evident when the initiative began. Importantly, the expanded data use also reflected deeper understanding and increasing use of data to inform program strategy for the majority of cities.

Thinking broadly about how other funders and cities might approach such an ambitious task, what lessons or insights could be drawn from this study? We offer several observations, based upon the progress cities made in their efforts to build and use their afterschool data systems, as well as upon reflection about the people, processes, and technology components that together help create data systems.

BUILDING A FUNCTIONING AFTERSCHOOL DATA SYSTEM: RECOMMENDATIONS

» Recognize that a new system needs a systems-level focus.

» Collaboratively agree on meaningful indicators of early progress.

» Understand local circumstances, contexts, and expertise.

» Share progress and learning with relevant audiences.

» Realize that participating organizations share motivation yet may have different priorities.

» Anticipate that not everything will proceed as planned.

We discuss each of the above in turn.

Central to the cities' efforts is the notion that an afterschool data system is indeed *a system comprised of interconnected elements*. A functioning system requires shared goals among multiple stakeholders, each of whom contributes meaningfully yet differently, and each of whom may accrue both common and distinct benefits. Additionally, a functioning system is able to weather transitions at different levels, from leadership to specialized expertise to front-line staff, despite the fact the likelihood of some transitions is near certain even while specific transitions are not necessarily anticipated. Sustained focus on the shared system-level goals can allow participating organizations to adapt leadership, obtain access to necessary expertise, and adjust training to accommodate front-line staffing patterns. By approaching staffing from a systems perspective, complex initiatives are better able to recognize the distributed contributions across organizations/sectors and weather unexpected transitions.

The cities making more substantial progress achieved *valuable early successes*—whether those successes were as much inward-facing to the afterschool system-building (e.g., negotiating data sharing agreements or finalizing data elements to be built into an MIS) or outward-facing to city stakeholders (e.g., developing data dashboards or customizing reports to funders). That suggests the importance of identifying key milestones reachable within a short enough period of time to signal meaningful progress and committing resources toward early accomplishments that build visibility and appreciation.

The afterschool data systems purposefully included representation from diverse organizations in both public and private sectors. Representatives from different organizations each contributed specialized knowledge as well as understanding of their local sector contexts, both of which can help the system as a whole. Recognizing that *each organization contributes specific expertise and contextual knowledge* (e.g., understanding management information systems, knowledge of local communities, or youth development) helps establish partnerships in which each participant is perceived as offering value.

Communicating with a broad range of stakeholders was evident in all the cities. Relying upon multiple communication strategies may also be important given the diverse audiences and the span of the afterschool systems across neighborhoods and communities. Developing customized reports for providers, funders, or other constituencies, sharing information with city and school district leaders, establishing online data dashboards, and disseminating information to parents represent some of the approaches that cities can use.

The afterschool systems included organizations united by common goals related to improving outcomes for children, yet each organization has its own mission and goals. It may be helpful to recognize that the commitment to common goals remains constant, yet simultaneously ***appreciate the differential motivations*** and broader organization-specific goals driving partner organizations' commitment to change. That recognition may alleviate some of the tensions between shared and idiosyncratic goals, and pave the way for compromise when needed.

Over the course of the initiative's four-year duration, all of the cities experienced changes, ranging from mayoral transitions to shifts in spending priorities to turnover among school district leaders or program staff to other secular changes. Yes, the initial requirements for applying for Next Generation funding deliberately attempted to safeguard against changes in city leadership and support for afterschool systems, yet ***expecting some unpredictability*** remains a pivotal axiom. That may translate into building robust and resilient enough management and decision-making processes to address unpredictability, while recognizing that some flexibility can allow more meaningful responses to the unexpected.

Finally, it is important to note that the afterschool data system building efforts summarized in this report are ongoing; the findings described here represent observations over a discrete and bounded time period. The cities continue to learn from their own experiences, and from one another, about how they can benefit from the data systems supported by the Next Generation initiative.
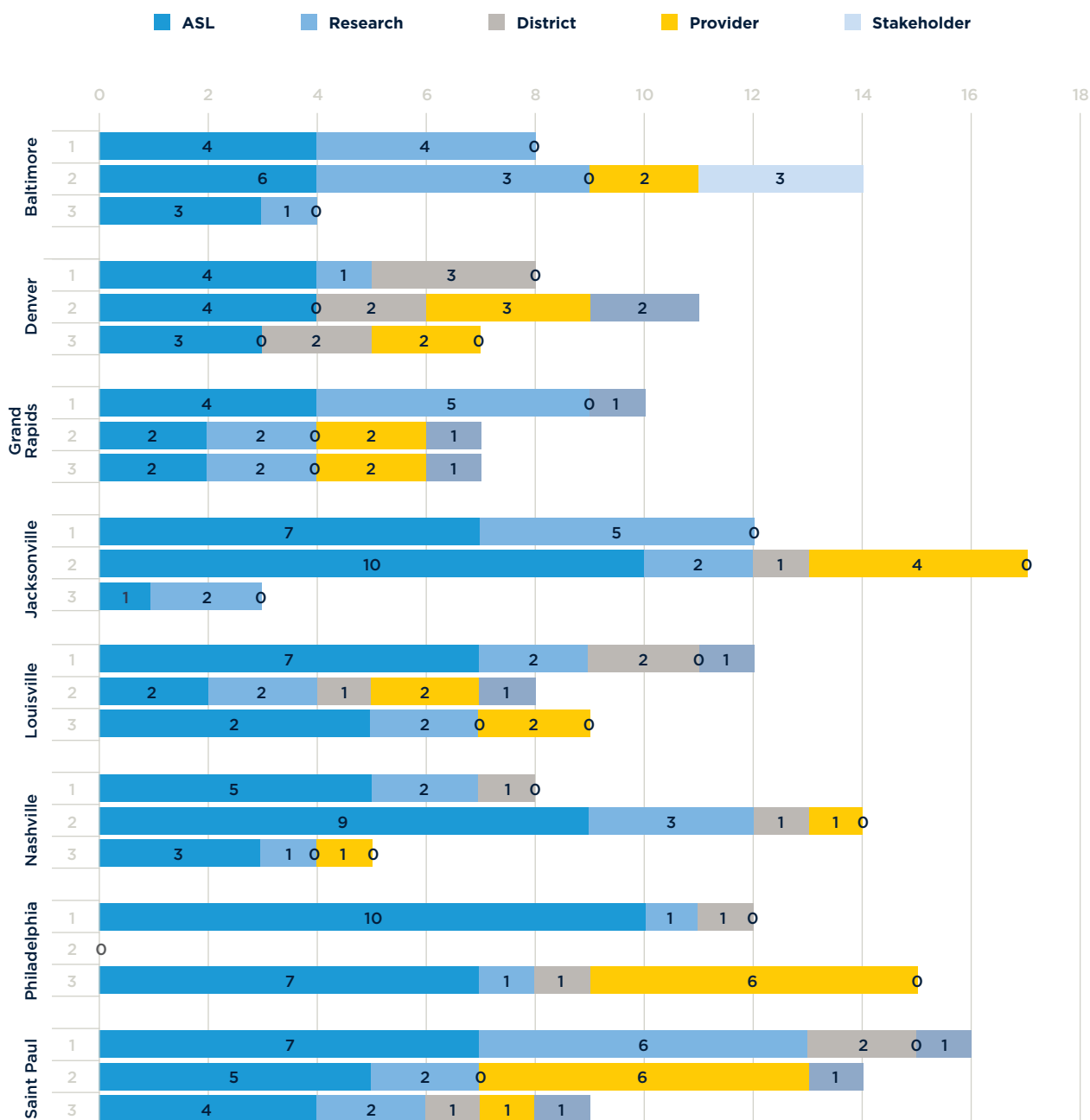
REFERENCES

Gerstein, A. (2015). *Shifting the norms: From data for compliance to data for strategy*. Gardner Center Perspectives. Palo Alto, CA: The Gardner Center.

McCombs, Jennifer S., Orr, N., Bodilly, S. J., Naftel, S., Constant, L., Scherer, E., & Gershwin, D. (2010). *Hours of Opportunity, Volume 2: The Power of Data to Improve After-School Programs Citywide*. Santa Monica, CA: RAND Corporation.

Spielberger, J., Axelrod, J., Dasgupta. D., Cerven, C., Spain, A., Kohm, A., & Mader, A. (2016). *Connecting the Dots: Data Use in Afterschool Systems*. Chicago, IL: Chapin Hall at the University of Chicago.

APPENDIX 1: ADDITIONAL INFORMATION ON THE STUDY'S DATA COLLECTION

Exhibit A.1 below shows the number of interviews by respondent category for each city. The number is indicated in light blue for afterschool system leaders, orange for research/data leaders, gray for school district staff, yellow for providers, and dark blue for other stakeholders, and the wave of data collection is indicated by a '1' or '2' or '3.' A "0" on a horizontal bar indicates which categories of respondents were *not* interviewed during a given wave of data collection. For example, in Wave 1 in Baltimore, interviews were conducted with afterschool system leaders (light blue) and research partner staff (orange), and not with district staff, providers, or other stakeholders (gray, yellow, and dark blue, respectively).

Exhibit A.1 Summary of Interviews, by City and Wave

APPENDIX 2: THE PEOPLE, PROCESSES, AND TECHNOLOGY ORGANIZING FRAMEWORK[17]

People

Stakeholders (individuals, institutions, organizations) involved in the operation of the afterschool system and the dynamic connections among them

Staffing: Staff time dedicated to the creation and maintenance of the data system

Human capital: Skills, knowledge, or expertise of individuals, institutions, and organizations involved in the creation and maintenance of the data system

Roles and functions: Distribution of responsibilities among individuals, institutions, and organizations for the creation and maintenance of the data system

Partnerships: Formal contracted or documented connections between individuals, institutions, and/or organizations involved in the data system that facilitate coordination, collaboration, or sharing

Power: Individuals, institutions, and organizations who shape the direction, goals, or the course of events related to the creation and maintenance of the data system

Relationships: Informal or personal connections between individuals, institutions, and/or organizations involved in the data system that leverage trust or historical engagement to facilitate coordination, collaboration, or sharing

Aspects of an Afterschool Data System

Processes

Routines, norms, and/or practices that evolve and are repeated over time that include the collection, organization, analysis, interpretation, and use of data to meet the goals and inform the operation of the afterschool system

Indicators and tools: Identifying and refining data elements to include in the system, instruments to collect them, ways in which they will be reported

Data governance: Formalizing and enforcing the standards for data sharing, transfer, reporting, and use which are aligned with state and federal regulations

Training: Providing initial and ongoing instruction in the collection, organization, analyses, and application of data

Data collection: Gathering data from multiple sources such as surveys and other data systems

Analysis and interpretation: Transforming data into usable knowledge

Compliance: Using knowledge to measure progress towards goals for the purposes of accountability

Continuous improvement: Applying knowledge to improve access, quality, practices, and outcomes

Communications: Sharing knowledge with stakeholders in diverse formats that reflect the way in which they use information

Technology

Means by which data are organized and accessed to inform the operation of the afterschool system including the hardware and software systems, often called Management Information Systems (MIS)

Database: Tool or platform where data is integrated, stored, and accessed and which outputs reports and other useable forms of data

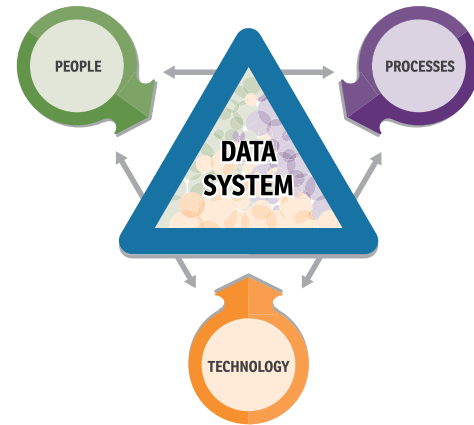**Hardware/software (interface):** Tools and protocols used to access and review the data

Hardware/software (infrastructure): Tools and protocols used to store, integrate, and manage the data

Data visualization: Dashboards, reports, and summaries from the MIS to support data use

Capital investment: Funding mechanisms to support the purchase, construction, and maintenance of technology, including contracting and compliance structures

[17] This page is presented in the 2016 Spielberger et al. report: *Connecting the Dots: Data Use in Afterschool Systems* (pages 6, 8).

About Chapin Hall

Chapin Hall is an independent policy research center at the University of Chicago that provides public and private decision-makers with rigorous research and achievable solutions to support them in improving the lives of children, families, and communities. Chapin Hall partners with policymakers, practitioners, and philanthropists at the forefront of research and policy development by applying a unique blend of scientific research, real-world experience, and policy expertise to construct actionable information, practical tools, and, ultimately, positive change for children, youth, and families.

About Gamse Partnership

The Gamse Partnership works collaboratively with philanthropic and nonprofit organizations to assess, plan, and monitor education-related evaluation needs, as well as to conduct evaluations about program implementation and outcomes.

CHAPIN HALL

1313 East 60th Street,
Chicago, IL 60637
www.chapinhall.org

Gamse Partnership

14 Walker Street
Cambridge, MA 02138

Commissioned by:

The Wallace Foundation®

5 Penn Plaza, 7th Floor,
New York, NY 10001
www.wallacefoundation.org