NATIONAL LEAGUE of CITIES | INSTITUTE FOR YOUTH, EDUCATION & FAMILIES

BUILDING MANAGEMENT INFORMATION SYSTEMS TO COORDINATE CITYWIDE AFTERSCHOOL PROGRAMS

A TOOLKIT FOR CITIES

ABOUT THE
NATIONAL LEAGUE OF CITIES INSTITUTE FOR YOUTH, EDUCATION, AND FAMILIES

The National League of Cities (NLC) is dedicated to helping city leaders build better communities. Working in partnership with the 49 state municipal leagues, NLC serves as a resource to and an advocate for the more than 19,000 cities, villages and towns it represents.

The Institute for Youth, Education, and Families (YEF Institute), a special entity within NLC, helps municipal leaders take action on behalf of the children, youth, and families in their communities. NLC launched the YEF Institute in January 2000 in recognition of the unique and influential roles that mayors, city councilmembers, and other local leaders play in strengthening families and improving outcomes for children and youth.

Through the YEF Institute, municipal officials and other community leaders have direct access to a broad array of strategies and tools, including:

- Action kits and other publications that offer a menu of practical steps that officials can take to address key problems or challenges.
- Technical assistance projects in selected communities.
- Peer networks and learning communities focused on specific program areas.
- The National Summit on Your City's Families and other workshops, leadership academies, training sessions, and cross-site meetings.
- Targeted research and periodic surveys of local officials.
- The YEF Institute's monthly webinar series.

To learn more about these tools and other aspects of the YEF Institute's work, go to www.nlc.org/iyef.

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CITY LEADERS:

More than two dozen cities participated in a National League of Cities (NLC) survey in the fall of 2011, sharing a rich set of details on their afterschool systems-building activities, including their use of student and program information, priorities for afterschool management information systems, and experience with existing commercial and self-built systems.

NLC interviewed many of these city leaders between October 2011 and February 2012, and we are extremely grateful for their candid contributions to this report.

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We are grateful for the active support of the eight MIS vendors interviewed for this report, six of which provided a detailed overview of their work and offered their perspective, as systems integrators, on how city leaders can best prepare to undertake management information systems (MIS) building.

Each of the companies listed in this report's product comparison chart responded to a request for information issued by NLC and contributed to the MIS cost estimator available online at www.nlc.org/afterschoolmis.

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INTRODUCTION

City-led efforts to build coordinated systems of afterschool programming are an important strategy for improving the health, safety and academic preparedness of children and youth. Over the past decade, municipal leaders, foundations, major nonprofit intermediaries, and school and community-based providers have increasingly come together to expand the number of high-quality programs available, increase youth participation, and improve outcomes for young people. Yet even cities with strong leadership and effective coordinating entities are often challenged by the lack of reliable information to answer basic questions about the scope and impact of afterschool programs in their communities.

To improve access to critical information – for city leaders, funders, program directors and front-line staff – cities need both the technology to track and correlate information on youth participation across dozens of organizations, and networks of skilled professionals to share, analyze, and act on that information. In most cities, these systems do not yet exist or are only partially complete.

The decision to build or enhance a management information system (MIS) raises its own set of tough questions about what information to collect and how to use it; how to negotiate data sharing agreements without violating privacy laws; how to think about the difference between evaluating youth outcomes and measuring program quality; and whether to build or buy the technology backbone that will support the data needs of policymakers, service providers, program managers, and researchers.

The National League of Cities (NLC), through its Institute for Youth, Education and Families, produced this report to help city leaders, senior municipal staff and their local partners answer those questions as they work to strengthen and coordinate services for youth and families, particularly for those cities building comprehensive afterschool systems. It provides a thorough review of what it takes to build effective management information systems for youth services, including a detailed "how to" guide for preparing for and implementing an afterschool MIS and strategies for addressing privacy and security concerns in collaboration with schools and families.

The report concludes with a comparative analysis of six leading commercial MIS vendors and a cost calculator to help communities explore the expense of differently configured systems. In addition, city leaders and staff will find a growing library of resources on the NLC website to speed their progress, including sample requests for proposals, data sharing agreements, system architectures, and other useful tools to borrow and adapt.

WHY BUILD AN AFTERSCHOOL MANAGEMENT INFORMATION SYSTEM?

An abundance of research has demonstrated the value of high-quality afterschool programs and substantiated their positive influence on the health, safety, school attendance, and

academic performance of youth. Yet it is an immense management challenge for cities and other stakeholders to know if they are fully meeting the needs of youth and maximizing the potential impact of high-quality afterschool programming.

At its best, a strong, multi-faceted afterschool MI system can improve youth outcomes by:

- Providing policymakers and funders with accurate information on the utilization, quality and impact of afterschool programs to make better decisions and targeted investments at the systems level;
- Offering regular feedback to program managers and staff about the effectiveness of their efforts, both in absolute terms and relative to other programs, to promote continuous improvement;
- Reducing the time and money that programs spend completing paperwork to meet reporting requirements, freeing up valuable resources for direct programming with youth; and
- Empowering program sites and instructors with (near) real-time information on student outcomes such as attendance, behavior and academic performance that allows sites to tailor their instruction more closely to the needs of the youth they serve.

> *"We've come to the realization that the better coordinated the data collection effort is, the better we can serve Bridgeport's children. They desperately need additional resources to address academic deficiencies. We need to step up efforts to obtain this data and use it to make informed decisions about the types of programs and services our children will receive."*
>
> *~ Tammy Papa, Lighthouse Program Director, City of Bridgeport, Conn.*

Yet as the RAND Corporation described in its authoritative review of The Wallace Foundation's first round of investment in citywide afterschool systems, this level of coordination and intentional use of integrated data is rare.

> Within cities, out-of-school time (OST) provision can be fragmented and uncoordinated. Providers rely on an unsteady and often insufficient patchwork of city, state, federal and private funding and user fees. Further, in many cities, public funding is funneled through a variety of youth-serving agencies without interagency coordination.
>
> ~ RAND, *The Power of Data to Improve After-School Programs Citywide*

The experience of the two dozen city leaders surveyed and interviewed by NLC for this report confirmed the RAND report's observation. Collectively, these cities had patched together funding from general revenue, federal 21st Century Community Learning Center grants, local and national foundations, state awards, city tax levies, and the United Way to support and expand the availability of OST programs for students. Each of these sources of support has its own application requirements, funding cycles, reporting demands, and eligibility standards (Chart 1 on page 3).

Chart 1 – What funds city OST coordinating entities [n=24]

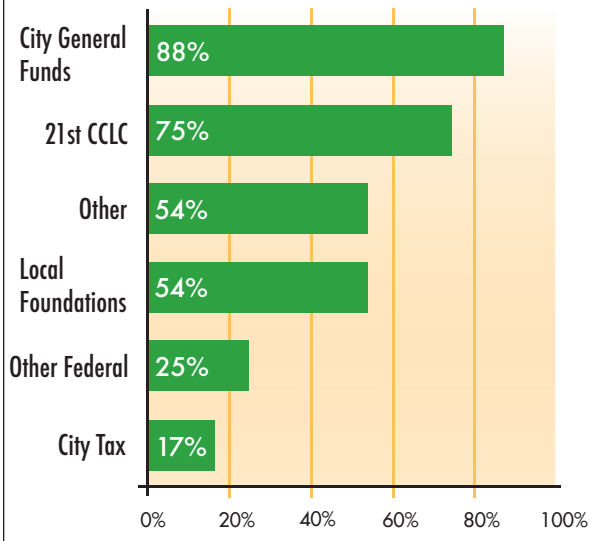
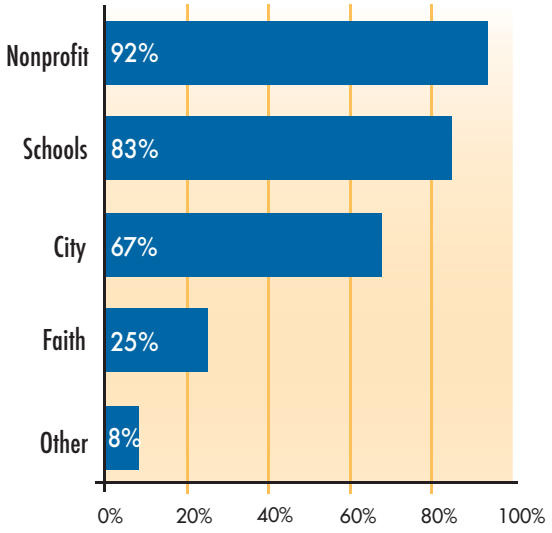


Chart 2 – Significant OST providers [n=24]



Source: 2011-2012 survey of city leaders by NLC

This funding supports programs at dozens of nonprofit and community-based programs, schools, city recreation departments and libraries, faith-based providers and others. Each of these providers has its own mission and approach to quality, and each negotiates a separate set of reporting and compliance demands with its funders (Chart 2).

City leaders strive to coordinate the millions of dollars being spent within their cities on OST programs to ensure they are consistently of high quality and reasonably well aligned with other initiatives underway. In many cities, major progress has been made toward measuring and improving the return on these investments.

However, many challenges remain. City leaders continue to struggle in assessing the reach and impact of their afterschool systems. How many youth have access to afterschool programs? How many of those with at least nominal access actually attend? Which of these programs are of high quality and have the impact that funders, providers and parents would hope for and expect? These are fundamental questions that, without an afterschool MIS, city leaders find it difficult or impossible to answer.

Only 27 percent of the cities that responded to a 2011 NLC survey believe they have a reasonably accurate count of how many youth are eligible to attend OST programs. **It is not surprising, then, that city leaders identify "reliable information" about afterschool programming and impact as the area in which they desire the most technical assistance.**

What does "reliable information" on afterschool programs encompass for a city leader? It begins with an inventory of programs available in his or her community, information on the enrollment and participation of youth in afterschool activities, data by which to assess whether programs are improving outcomes for youth, and responses from providers and parents on the many ancillary needs of youth in the system for tutoring, transportation, and social support. To be useful, this information must be accurate, timely, and reasonably comprehensive. Un-

WHAT IS A MANAGEMENT INFORMATION SYSTEM?

Management Information Network + Management Information Technology = MIS

An afterschool management information system is made up of a network of professionals who purposefully create, analyze and use information to improve youth development programs, and a stack of technologies that facilitate the work of these professionals. The most important decisions in building an MI system are not which technology to use. It is more important to decide which people to include and how to connect them to this flow of information.

Most fundamentally, MI systems allow afterschool providers to record program activities, such as youth enrollment, attendance and participation, and to summarize these activities through fixed, regularly scheduled reports to agencies and funders.

MI systems are often designed to do much more than this:

- Providers may use them to assess youth developmental assets, track the demographic characteristics of their participants, and support case management and referral.
- Policymakers may use MI systems to link afterschool participation with other administrative records to flag students who appear to be "at risk," estimate whether programs are improving college and career readiness, and evaluate the overall impact of a city's investment in out-of-school time programming.

When analyzed in support of organizational efforts to improve compliance, professional development, and process improvement, the purpose of MI systems is to create knowledge that enables providers to run more effective programs and helps administrators allocate resources to achieve their policy objectives most efficiently.

Most afterschool MI Systems are web-based. They may be custom-built by local school districts or city departments or purchased as a service from commercial vendors, including:

Cayen
CiviCore
COMET (SophiTEC)
CommunityTech Knowledge
Efforts-to-Outcomes (Social Solutions)
EZReports (ThomasKelly Software)
KidTrax (nFocus)
YouthServices.net (Cityspan)

For more information on each of these vendors, see Section 4 of the report.

fortunately, what city leaders more commonly receive is a mix of electronic and paper files of varying degrees of completeness and accuracy, covering a limited set of city-funded providers.

According to NLC's 2011 survey:

- Only 58 percent of cities used a management information system.
- Those who did not use a MIS were unsatisfied with their process for tracking information, and believed it was inadequate to support their OST systems-building work.

- Only 38 percent of cities share information with their schools either "regularly" or "frequently"; another 38 percent never receive information from their schools.

However, city leaders are quickly overhauling these outmoded arrangements, moving away from cumbersome paper records to capturing attendance online, establishing benchmarks against which to measure the results of their investment in OST, and building relationships with schools to share information on youth outcomes – in some cases, in real time.

STRUCTURE OF THE REPORT

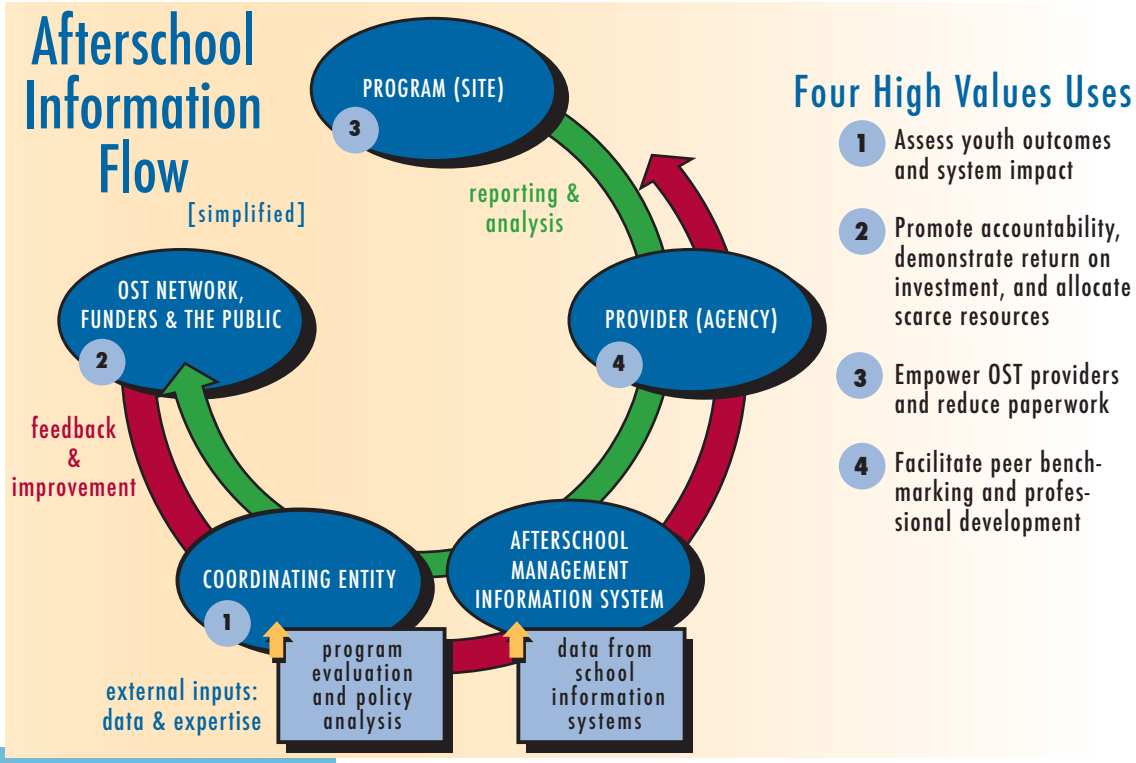
This report describes a number of the most promising approaches to building afterschool management information systems. It is a compendium of "what works," containing numerous examples of efforts led by different city departments, nonprofit intermediaries, schools and foundations. These examples include both self-built and commercial systems. Several of the systems profiled here are being developed as comprehensive databases of youth services while others are narrowly targeted to participation in afterschool programs.

The report is divided into four sections that comprise a practical roadmap for city leaders seeking to develop or improve an MI system to support their local afterschool initiatives. The first section outlines four key benefits of using data to guide afterschool investments. Section two presents an MIS "readiness checklist" that city leaders can use to build a management information system that responds to local needs and priorities. Section three offers guidance on navigating the data privacy and security issues that must be considered when handling and sharing sensitive information on youth. The final section compares the MI system features offered by the top commercial vendors that are working with cities to manage information on local afterschool programs and other youth services.

SECTION 1:
FOUR HIGH VALUE USES OF AFTERSCHOOL DATA

Management information systems (MIS) should be at the center of citywide efforts to collect, store, link, analyze, report, learn from, and use information on the afterschool programs that cities and their local partners operate.

The diagram below illustrates how an MIS can support data-driven decision making as information flows back and forth across the site, agency, coordinating entity, local afterschool network, and funder levels. As the information collected in an MIS travels from a program to its funders – including the elected officials who allocate local revenues to city, school-based or nonprofit programs – it is used to evaluate youth outcomes and system impact, to demonstrate return on investment and allocate scarce afterschool resources, and to sustain and expand support for high-quality afterschool programs. In a high functioning afterschool network, a system's coordinating entity "closes the loop" by sending the results of these analyses back down to individual providers and sites, using them to facilitate peer benchmarking and empower afterschool providers with more complete information on the youth they serve. Each of these "high value" uses of afterschool data is described in more detail below.



1. ASSESS YOUTH OUTCOMES AND SYSTEM IMPACT

Among the most important uses of an MI system is to provide a city's coordinating entity with the kind of information on system usage and youth outcomes that can inform decisions about efforts to expand access, improve program quality, and link afterschool initiatives to broader citywide goals such as college and career readiness and public safety. Measuring impact begins with answering basic questions about the scope of afterschool services available in the community, counting the number of participants in different programs, assessing how many youth are eligible to participate, and evaluating what proportion of those youth are enrolled in high-quality programs. Ideally, it also involves either directly measuring developmental assets or integrating data with outside systems to evaluate how afterschool programs are influencing a broader set of outcomes related to academic achievement, employment or public safety. Mapping these results can also highlight areas of opportunity for further afterschool systems development.

> *"The audience of people that should have this information should be so much broader."*

According to city afterschool leaders who responded to NLC's 2011 survey, only 27 percent of cities believed that they had a "fairly exact" count of how many youth are eligible to attend afterschool programs. Cities estimated that as many as 60 percent of those youth who do participate are attending programs that do not receive funding or professional development from the city.

Once obtained, the information on afterschool eligibility and participation may be surprising. One community discovered, upon implementing an MI system that gave each child a swipe card to check in to afterschool programs automatically, that actual attendance at several sites was sharply less than the figures those providers had been reporting by email.

City leaders are also interested in being able to tie their investments to specific youth outcomes and linking afterschool programs to broader citywide goals such as college and career readiness or public safety. Some cities use MI systems to measure youth development outcomes directly with pre- and post-tests such as the Search Institute's Developmental Asset Profile (DAP). Many others compare the academic and behavioral outcomes of afterschool participants in school against those of non-participants over time, and are able to make specific claims about how their programs improve student attendance and grade completion.

Just as it is a major missed opportunity for funders to collect afterschool program information without returning it to agencies as knowledge they can use to improve their programs, it is not enough for MI systems to facilitate peer learning without providing city leaders with the kind of aggregate information they can use to improve public policy. As one municipal director tartly observed of her city's management system:

> I can't say that this process is, shall we say, the best that it can be. I think that it's great that we have providers hearing this and having an opportunity to visit with each other. But I am not pleased with the level of reporting out, so that policymakers and those that support these programs can see the data and use it.…It needs to be written up in a way that's consumer-friendly, and the audience of people that should have this information should be so much broader.

PROGRAM QUALITY ASSESSMENTS VERSUS YOUTH OUTCOME EVALUATIONS

Program quality assessments and youth outcome evaluations are complementary approaches to understanding and improving afterschool programs. But they are very different tools with distinct uses and audiences, as Charles Smith, the executive director of the Weikart Center describes:

> There's almost a difference in ethic in terms of the way that the two very different purposes are viewed. One is evaluative – we want to come to some kind of summative judgment about the value of the services that the program is providing and we want to use that judgment in a higher-stakes way to allocate funds or assign professional development. And the other is this quality improvement side, where what we want to see is continuous improvement and to hold providers accountable to that process.

Program quality assessments (PQA) are most concerned with, and therefore relevant to working with, afterschool providers. They utilize performance standards and measures as professional development and can be an excellent way to initiate a conversation about quality improvement in programs that are skeptical of being benchmarked against youth outcomes that might be caused by many factors outside of the afterschool program.

It is a weakness of program quality assessments that they are not directly linked to the system-level outcomes that are important to funders, elected officials, and other policymakers. Even those who find value in the PQA acknowledge that, as one city leader described it, "there's sort of this leap of logic that if your program is of high quality then you have good youth outcomes." But this proposition can be (and is) disputed, and PQA cannot, by itself, demonstrate to those that are skeptical of afterschool programs that they are receiving the desired return on their investment.

Youth outcome evaluations are most directly useful at the systems level to identify areas of high and low performance, inform further investments, and sustain support for afterschool programs by demonstrating their value in supporting broader policy objectives and community priorities. Outcome evaluations can provide a more direct measure of what cities "really" care about: engaged, resilient, college and career-ready youth.

Critics of youth outcome evaluations point out that this kind of measurement has a track record of disrupting the good work that it wishes to confirm. Management information systems may emphasize compliance rather than improvement, and data reported to agency and system leaders by sites may never trickle back down to inform site-level practice. In other cases, funders may impose outcome measures for results that providers do not believe they can reasonably be held accountable for achieving.

In practice, many cities use both tools – and the most adroit use each to inform the other. In Nashville, Laura Hansen of Metro Nashville Public Schools reported that standardized outcome measures and performance data helped the process of allocating funding be more transparent:

> It can be scary, too. We've had some folks worried that this is going to be used as a stick to say 'hey, based on what we've seen, we don't want you back next year.' But our message to providers is that our goal is to use this as a continuous improvement

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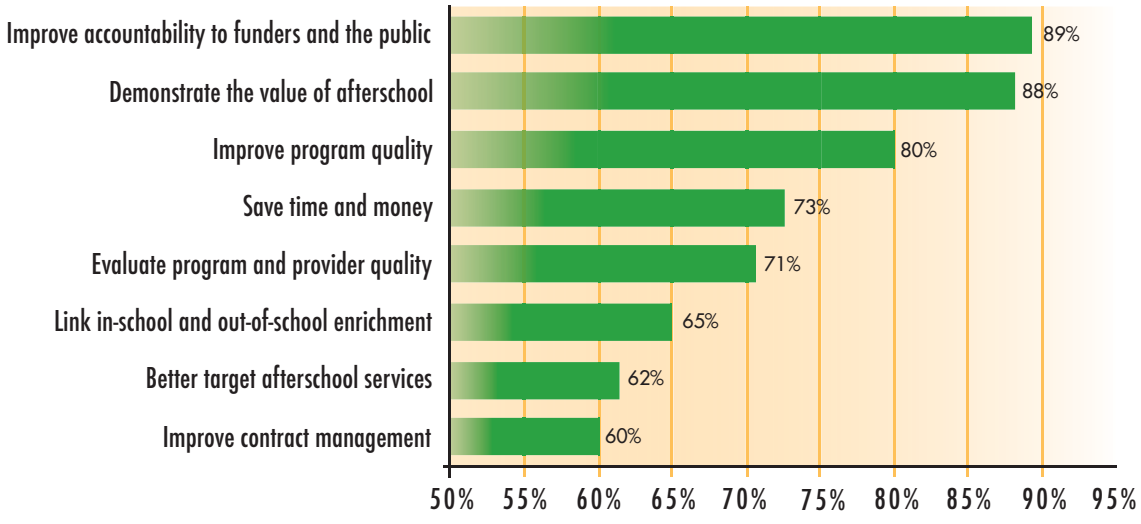
mechanism and, just like with [their program quality assessments], they'll get their program's feedback and they'll know if there's an issue, such as a high participant turnover rate, they'll have the opportunity to improve that. In marrying that to the quality standards, we can link professional development to what's going on at each program. We can take the YPQA coaches and send them to the programs where it looks like the students are really struggling. I think it can almost be an early warning system, and give people an opportunity to improve their program. The improvement part is what we're really after.

2. PROMOTE ACCOUNTABILITY, DEMONSTRATE RETURN ON INVESTMENT, AND ALLOCATE SCARCE RESOURCES

Related to their value in gauging afterschool system- and program-level reach and impact, MI systems enable city leaders and private funders to hold programs accountable for achieving desired results and analyze at a policy level where their investment of afterschool dollars is most needed and is likely to bring the largest return. According to city responses to an NLC survey conducted in 2011-12, the top reasons city leaders want to implement MI systems are to improve accountability to funders, demonstrate the value of investing in afterschool and improve program quality (see chart below).

CHART 3. City Leaders Want MIS to Improve Accountability and Increase Program Quality



Source: 2011-2012 survey of city leaders by NLC

One lesson many cities have drawn from the evidence is that high-quality programs are much more effective at driving youth outcomes than so-called "gym and swim" activities. Investment in professional development to improve and refocus existing programs has followed.

By collecting broad and accurate participation data that includes demographic and registration information, MI systems can also help city decision-makers map the capacity of their afterschool systems against their actual use and highlight areas of growing demand. Funds can be reallocated to underserved neighborhoods and critical age ranges.

"The mayor has asked questions like, 'How many kids are in afterschool programs and are we missing any neighborhoods?' Right now we can't answer those questions as a city department, never mind for the city as a whole. With the launch of this data system, we can now start to pull that information and look together at 'where are the gaps, where are the needs, where are we over- or under-serving?'"

~ Catherine Penkert, City of Saint Paul, Minn.

In addition, city leaders use hard data from MI systems to inform difficult and sometimes politically sensitive decisions to cut off funding to ineffective programs, thereby freeing up resources for programs that have a bigger impact. As one mayor's advisor told NLC, to begin this conversation, policymakers need to bring clear quality standards and solid performance measures to the table:

> The mayor recognizes that most of these providers don't have a consistent approach to quality standards. And he's looking at my office to give him a sense of [what they realistically can be accountable for improving], and to get enough information to make a decision about which of these programs that we have been operating forever should or should not continue. **That's going to be a very hard conversation to have, and you can't do it anecdotally.**

As Priscilla Little, initiative manager at The Wallace Foundation, has said, "Given the new economic climate in which cities and states are operating, out-of-school time is an increasingly data-driven enterprise with results-based decision making. Evaluations are non-negotiable. You have to have that data to support your claims."

On the flip side, MI system data can help local leaders make the case for sustaining and expanding high-quality afterschool programs. "Accountability," in this sense, is not only a bureaucratic necessity – it provides a framework through which afterschool providers and their supporters in local government can make a powerful argument for increased investment in afterschool systems. As Kim Luce, the 21st Century Community Learning Center director for Buffalo Child and Adolescent Treatment Services, argues, accountability is about "getting people on board to see the benefit [of this work], and to bring in national funding which would improve access and opportunity for quality programming. Anytime you are writing for support, if you don't have good data, your case is weakened."

Irrespective of federal mandates, programs are often very highly motivated to demonstrate to elected officials and parents that their children and their dollars are being carefully managed. As Amy Phuong, the City of Atlanta's Chief Service Officer, explained:

> Residents not only want us to make essential programs and services available, they want us to be accountable for making good investments toward high-quality programs. Mayor Reed understands this implicitly, and it's my job to get him the data to demonstrate that this investment in Atlanta's Centers of Hope is money well spent.

3. EMPOWER AFTERSCHOOL PROVIDERS AND REDUCE PAPERWORK

Afterschool data collected in MI systems allow city and non-city program providers to make better decisions and work more efficiently in several ways:

Informing Agencies and Managers

Individual afterschool programs generate management information on enrollment, attendance, participant demographics, and often parent or student satisfaction. Rapid shifts in any of these factors can be a signal to managers to step in and provide more direct program oversight, find additional resources, or arrange professional development. Getting agencies this kind of "business intelligence" is crucial to maintaining high-quality programs. Providing instructors with information that is continuous and immediate, rather than semi-annually reporting the outcomes of students no longer enrolled in their programs, is crucial to achieving better outcomes for youth.

Rob Clark, the afterschool director for the Family League of Baltimore City, sees an opportunity to combine information on student academics and program participation to identify students who would benefit from additional assistance:

> On the pro-active side – even starting in the spring and using data from the year just finishing – it would be great to take a look at those kids, to sit down with the principal and recruit for our summer learning program based on some of the data that we're seeing on which students need the extra help.

These tools provide afterschool managers with the type of client information that is taken for granted by other professionals. They also transform the kind of engagement that is possible between agencies and programs, and between programs and parents, from a yearly "report card" to an ongoing, substantive conversation about improving results.

Empowering Program Sites and Instructors

One of the more obvious – but difficult to implement – advantages of an MI system is the potential for afterschool programs to view participating youths' school records in (near) real time and to target and tailor their instruction accordingly. Changes in a student's school attendance, behavior, and academic ranks are all important signals to afterschool program providers.

Currently, many afterschool instructors receive this information only if they are school-based or fortunate to have a very close relationship with their students' teachers and principal. Often, instructors receive a report with aggregate results for children six or 12 months after the end of the class. As Edwin Hernandez, who co-leads the pilot of Grand Rapids' new "Believe 2 Become" initiative, points out, "It's of no use to know the attendance rates of your children six months after you've had them in your system. We want this data to be made available to providers on the ground as they are serving kids." For a description of the Believe 2 Become MIS, see page 52.

Reducing Paperwork

MI systems automate the creation of routine reports for instructors and site managers. The Providence After School Alliance (PASA), for example, uses an MI system to create the roster that matches students leaving school with their assigned program and bus. Something as simple as this report can be the "killer app" that wins over skeptical providers, says PASA's quality consultant, Elizabeth Devaney.

MI systems can also reduce or eliminate the demands on individual sites to gather student academic data and fill out compliance reports. In Philadelphia, Thomas Sheaffer, director of policy and evaluation within the Deputy Mayor's Office for Health and Opportunity, is planning to link his department's MIS with the school district's academic records in the city's data warehouse. Instead of each of his individual programs tracking its own student outcomes and filing compliance reports with multiple state and local funders, the city may be able to batch and send these reports in a fraction of the time. Philadelphia is already using a shared external evaluator to coordinate all of the school district and Archdiocesan student data required by the 21st Century Community Learning Center data system, PPICS.

FIVE DIFFERENT FLAVORS OF AFTERSCHOOL INFORMATION

MI systems can help afterschool leaders and providers collect and interpret information from multiple sources, including surveys of program quality and parent satisfaction, assessments of youth behavior and development, program participation information, and school transcripts. Each source has its own set of uses and limitations:

Program participation (attendance) is the most fundamental element tracked by an afterschool MIS. In many cities, program attendance is linked directly to the fee paid to afterschool providers by city agencies and private funders. Attendance is also a useful, though inexact, proxy for program quality and client satisfaction: high-quality programs prioritize regular attendance by the youth they enroll while programs with poor reputations struggle to enroll and retain students. *Use in MIS:* MI systems employ a number of strategies to track youth participation, including online rosters, handheld mobile devices, and swipe cards. Cross-tabulating and aggregating this information for site managers, agency staff and city policymakers are among the most important features of an afterschool MIS.

Program quality is usually measured by trained evaluators using tools such as the David P. Weikart Center's Youth Program Quality Assessment (YPQA). Using these tools, evaluators may observe factors such as site safety, standards of behavior for youth and adults, youth engagement, and adherence to other best practices. *Use in MIS:* Although these program quality assessments do not directly measure youth outcomes, many MI systems can store the evaluation results of each program and compare these scores to the achievements of that program's youth participants (measured separately).

Parent, student, and teacher satisfaction is often measured by survey, and sites funded by federal programs such as 21st Century Community Learning Centers are required to gather this information. *Use in MIS:* Many MI systems can generate online

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surveys of students and distribute these surveys by email to parents and teachers. Responses are automatically recorded and associated with the individual student and program.

Outcomes of youth who attend afterschool programs are often measured against the outcomes of youth who do not receive this same support. Different programs will be interested in different youth outcomes, but outcome measures tend to be of two main types:

- **Academic outcomes**, including ranks, report cards, grade completion, achievement on standardized tests, behavior and – more generally – college and career readiness. *Use in MIS:* MI systems record afterschool attendance, participation and services received by individual students. By linking this "dosage" information against school and other information systems, programs can assess their impact on youth outcomes outside of their direct control or measurement.

- **Youth development outcomes**, such as social and emotional well-being, community engagement, and healthy behaviors as assessed by tools such the Search Institute's Developmental Asset Profile (DAP). *Use in MIS:* Many of these assessments can be administered using an MI system's web interface, and automatically scored, stored, and compared across programs and over time.

As Meridith Polin, program director for Public/Private Ventures, notes, it is important to realize that these kinds of outcomes must be measured carefully and may take years to materialize. There is often a "stepped" process of implementation, says Polin, where agencies begin by tracking attendance, use this information to inform and improve their practice, reflect on the underlying factors that influence the success of youth in their programs, and – bearing all of this in mind – begin measuring and comparing

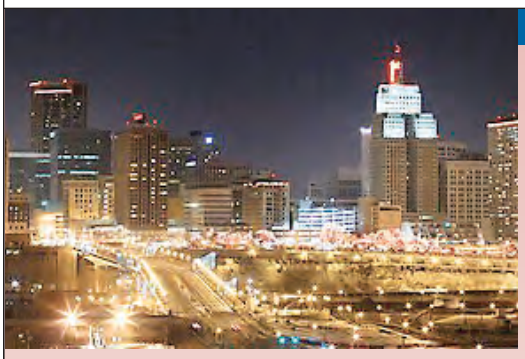
4. FACILITATE PEER BENCHMARKING AND PROFESSIONAL DEVELOPMENT

"You can only manage what you measure" is an adage that succinctly describes the importance of information to complex undertakings like building citywide afterschool systems. In many cities, that information flows only one way: from providers upward, through mandatory reports to funders with competing requirements and little or no cross-communication. In this environment, even programs that are data rich are likely to be knowledge poor – unaware of how their progress compares with peers, unable to share promising practices, and unsure of how their work aligns with the community's larger goal of ensuring that youth who participate in their programs enter adulthood college and career-ready.

More recently, cities have begun to use the implementation of afterschool MI systems as an opportunity to begin providing sites with meaningful feedback on their success, often as part of broader professional development initiatives. The Children's Commission of Jacksonville, Fla., for example, publishes an annual report that lists the results of every program they fund – by category – according to several established benchmarks, including promotion

rate, school attendance, and Florida Comprehensive Assessment Test (FCAT) scores. Not only does this provide a very public level of accountability, but the commission uses this information to evaluate whether their professional development efforts are successful. In several cases, failure to meet specified benchmarks has led to repeated visits to providers from the commission and, eventually, to better performance from these lagging providers.

Many city leaders find that, in order to establish baseline measures and negotiate the conditions of program success with their providers, more elemental assumptions need to be defined, such as "what counts as attendance?" The benefits of regular afterschool attendance have been well documented. In practice, however, different programs may count youth differently – counting a drop-in and mentoring session equally, for example, or failing to distinguish between recreational and enrichment activities. By developing common measures for how sites track their work and gauge their impact and by serving as a clearinghouse for this summary information across many agencies and funding sources, city leaders can transform these streams of data into knowledge that program managers can use to identify – and learn from – high performers.



CITY EXAMPLE:

SPROCKETS BRINGS KNOWLEDGE TO SAINT PAUL NEIGHBORHOODS

As Harvard University's public management guru Dr. Robert Behn wrote, "Despite the universal appeal of the seductive cliché, the data never speak for themselves...The data acquire meaning only when they are connected to some version of reality." That reality, recognized Catherine Penkert, project lead for the Sprockets database and a youth development specialist with the Saint Paul Parks and Recreation Department, can vary an awful lot between neighborhoods.

In 2011, the Amherst H. Wilder Foundation created a MI system to serve both St. Paul's Promise Neighborhood and Sprockets. 11 agencies are part of the afterschool pilot, with more being added in 2012. As the city moves toward better access to common afterschool measures, Penkert sees a need to provide more specific assistance to program sites participating in the data system and to the afterschool community overall.

Now, equipped with afterschool and academic performance data, Sprockets and Wilder staff will work directly with local program managers to interpret and use the information. In addition to discussing data at an organizational level, Sprockets will use their "Neighborhood Network Teams" to engage a broader afterschool community in using this new resource. In each case, says Penkert, the question is "'OK, Wilder gave us this information; what does it mean? And what might you do differently, knowing it?' We really hope that Sprockets can play this role, helping to connect the research data that we're generating to actual practice."

SECTION 2: MIS READINESS CHECKLIST

GETTING STARTED

A management information system is not, primarily, a technology project. It is a process of aligning the goals and resources of a great number of afterschool stakeholders, where technology plays an important supportive role. **The first rule of management information systems, then, is not to begin any discussion by talking about management information systems.**

Common Vision

Instead, many city and nonprofit leaders begin by convening people who care about youth to discuss how afterschool programs could be expanded and aligned to support other community objectives, such as reducing youth violence and improving college and career readiness. Cities that can articulate clear goals for expanding their afterschool systems are more successful at building the infrastructure that can accomplish that expansion, though the "right" alignment of these goals may vary substantially between cities and is likely to evolve over time.

Right People at the Table

Broadening this initial interest group to add seats around the table for all of the other key community players who have the resources, concern, and clout to pursue that vision is often a crucial second step. Rather than describing the purpose of a "comprehensive data system," these conversations present an opportunity to discuss priorities and explore how better information could help providers solve problems or help policymakers answer key questions. They also offer city leaders a chance to expand the resources available to them and form the "policy" group that develops a vision for afterschool investment, establishes common standards, negotiates information sharing relationships, and oversees the implementation of the work.

Coordinating Entity

A third step for this systems-building effort is the creation or designation of an executive body or coordinating entity to manage it and a series of ancillary decisions about how to govern and fund the effort. Though this entity is often a government office or a nonprofit organization, some cities have developed more decentralized and collaborative approaches to staffing their afterschool work.

CITY EXAMPLE:

SPROCKETS, SAINT PAUL'S VIRTUAL COORDINATING ENTITY

The Second Shift Commission, created by Saint Paul, Minn., Mayor Chris Coleman after his election in 2006, developed Sprockets, an organization that operates as a distributed network rather than being housed in a single government office or nonprofit organization. The Sprockets director is based within the city's parks and recreation and libraries departments, but the network is fiscally sponsored by The Friends of the Saint Paul Public Library. The associate director for quality and a network organizer are located at Augsburg College's Center for Democracy and Citizenship. The other network organizer is located within the YWCA Saint Paul.

Three committees, an operations team, leadership group and community advisory council, along with three neighborhood network teams of out-of-school time providers, structure the work of Sprockets, with additional subcommittees convened to focus on issues like professional development. The Saint Paul Youth Commission engages with Sprockets on a project by project basis and meets with the leadership group and community advisory council twice each year to ensure that youth voice is represented in larger policy decisions. The Wilder Foundation administers the network's data system and provides extensive technical assistance on research and evaluation. In all, more than 100 stakeholders participate in setting policy, engaging partners, and developing Sprockets' strategies within the community.

NLC's Institute for Youth, Education and Families has developed a series of resources – available at http://www.nlc.org/iyef – that explore each of these steps in more depth. In particular, NLC's strategy guide on *Strengthening Partnerships and Building Public Will for Out-of-School Time Programs* highlights cities that have engaged a broad range of local partners, kept afterschool on the public agenda, and led collaborative efforts to establish a common set of outcomes and a shared vision for afterschool. NLC's research report, *Municipal Leadership for Afterschool: Citywide Approaches Spreading Across the Country*, includes profiles of 27 highly advanced citywide afterschool systems, including descriptions of the coordinating entities that support these system building efforts.

City leaders who are just getting started in their efforts to enhance local afterschool programs can refer to NLC's *Action Kit for Municipal Leaders on Expanding Afterschool Opportunities*. The *City Platform for Children and Families* offers city leaders a broader framework for taking action on behalf of the children, youth and families in their communities. Finally, NLC's report on the *State of City Leadership for Children and Families* explores innovations and trends in city leadership for afterschool and other topic areas.

KEY AFTERSCHOOL PARTNERS AND RESOURCES

More than one city has compared the process of building its afterschool partnership to making "stone soup," in reference to the well-known fable. The analogy is apt: citywide afterschool initiatives need policy experts, technologists, analysts, trainers, and champions. Rarely does a single organization have the skills broad enough (or pockets deep enough) to provide all of these elements. Instead, successful initiatives recruit help from an array of organizations that share their mission and vision:

STAKEHOLDER	REPRESENTATIVES
City	Mayor's offices, city councilmembers, city managers and the heads of agencies such as parks and recreation, libraries, human services, police, any office of youth or education if one exists and the workforce investment board. City leaders can leverage and align valuable resources in support of afterschool programs.
Schools	Superintendent's offices and any relevant institutional research staff from the public schools, especially if many of the afterschool programs in the community are school-based or if academic information is important to the evaluation of afterschool programs. Nearby colleges and universities can also serve as a resource for research and evaluation.
Funders	United Ways, local and national foundations, and local philanthropists. Funders are often allies in setting quality and data standards for providers not directly funded by the city. They may also take a more direct managerial role in developing and piloting an MI system, as in Grand Rapids, Mich., and Winston-Salem, N.C.
Statewide Afterschool Networks	The 39 statewide afterschool networks funded by the Charles Stewart Mott Foundation. These networks foster powerful statewide partnerships to impact state policy on afterschool, increase funding and improve the quality of programs. They are frequent advisors to citywide systems-building efforts.
Nonprofits	Major providers such as the YMCA and Boys & Girls Clubs. These providers are likely to have MI systems that need to be accommodated, and may contribute their expertise. With smaller budgets and more limited capacity, smaller nonprofits have a separate set of needs.
Community	The faith and business communities. Faith-based organizations provide afterschool care in nearly every city surveyed by NLC, while chambers of commerce representatives and other business leaders play an important role in many citywide systems.

Any number of commercial or self-built MI technologies can be the right fit for a city's afterschool system. Some cities, such as Denver, Colo., and Boston, Mass., are designing citywide systems to accommodate afterschool providers who have already invested in

applications to track attendance and outcomes at the program level. Others, such as Fort Worth, Texas, were able to start nearly from scratch and provide a single system to their school-based providers. Several cities, such as Omaha, Neb., and Philadelphia, Pa., are interested in using MI systems and data warehouses to evaluate their afterschool investments against a broad array of education, health and human services data. Others, such as Providence, R.I., have tended to emphasize direct youth development outcomes, attendance, and surveys of students and parents. These very different business cases are supported by differently-configured MI systems.

The vendors described in Section Four of this report can accommodate all of these strategies to varying degrees, and each has received very favorable reviews from municipal clients interviewed by NLC. It is equally true, however, that without a deliberate and inclusive process for selecting and implementing a system, these same technologies will disappoint.

Successful cities have generally taken each of the following steps:

1. **Conduct a self-inventory.** City leaders may first ask what information systems and reporting relationships already exist. It is increasingly rare that any city is in a position to create a management information system from scratch. Many afterschool programs already use one or more reporting systems and are committed to certain technologies. Large and small nonprofits, community-based organizations and faith-based providers may have very different constraints and concerns even within the same city, and these are important inputs into the decision-making process. In fact, many citywide systems develop through a process of evolution rather than revolution.

2. **Develop shared measures and outcomes.** The information afterschool programs collect to manage their programs and meet reporting requirements is often just as diverse as their operational constraints and information systems. By creating a "data dictionary," establishing common benchmarks, and harmonizing reporting requirements, city leaders create more efficient afterschool systems that are better aligned with citywide strategies for youth development.

3. **Describe the high-level business requirements.** City leaders rarely complain that their specification for a major technology purchase was too detailed. It is not uncommon, however, for cities to realize late into the procurement process that they require user roles, case management functionality, or grant management features that they had not initially envisioned or for which they had not contracted. A description of how each of the participants in a city's afterschool network – administrators, agencies, providers and evaluators – will need to use it provides city leaders with both the criteria for selecting a vendor and a system specification to guide that company's work.

4. **Design the network and establish information sharing agreements.** An MIS is built from several key elements that may be located within different organizations from city to city, depending on the afterschool partnership and the resources

of each member. Decisions about where to host, link and aggregate data, what role schools or external consultants play in evaluation, and who administers the software can lead cities to design very different "network architectures." These decisions also raise legal and privacy concerns, which must be negotiated in advance (see Section Three of this report on Data Stewardship).

5. **Pilot the system.** To troubleshoot the inevitable glitches, build trust, and win advocates, city coordinating entities often opt to pilot MI systems with a limited number of their most enthusiastic providers.

6. **Expand and regularize.** Many of the challenges uncovered during the pilot stage, such as an ongoing need for training, inconsistent definition of basic terms like "attendance," and varying levels of data quality among providers, lead cities to explore different strategies for expanding their network and creating mechanisms for continuous improvement.

Cities interviewed by NLC have been able to move through these steps at different speeds, but sourcing and implementing a management information system takes time. The need to engage and consult partners within city government, schools and throughout the community, in particular, requires patience. As the director of student programs in the Denver Mayor's Office of Education and Children, Maxine Quintana, said:

> "We're not going to build this data system and then ask people to participate in it. Community-based organizations representing a wide variety of afterschool programs have been part of the system-building conversation from the beginning to help build this system. Their participation in the decision-making process is a huge benefit. **What I will say is that an inclusive engagement process takes a ton of time.**"

SELF-INVENTORY

Dozens of nonprofit and community-based programs, schools, city recreation departments, libraries, faith-based organizations and others provide afterschool services in most cities. City coordinating entities oversee substantially less than half of these organizations, and do not necessarily know how the other programs are tracking and using information on their participants.

A first step toward implementing a citywide MI system, then, is to find out as much as possible about existing programs. In some cases, cities undertake this self-inventory as part of a general survey of afterschool program capacity. For example, in 2006, the Omaha mayor's office contracted with the University of Nebraska to prepare a Youth Afterschool Needs Assessment (available at www.nlc.org/afterschoolmis) that guided the creation of the city's Middle School Learning Center Initiative (MSCLI). The study included a survey of parents, an inventory of afterschool program providers, and a geospatial analysis of underserved areas.

While a clear sense of the overall mix of existing afterschool programs and capacity of the local providers offers important context, developing a citywide MI system requires more detailed information about the collection and use of program data. Key questions include:

Bridgeport After School Network providers are concerned that they will be asked to enter information into yet 'one more' data management system. Therefore, whatever we do develop here in Bridgeport must draw from current data management systems to avoid duplication."

~ Tammy Papa, Lighthouse Program Director, City of Bridgeport, Conn.

What Information Systems are Already in Use by Providers?

A city's larger providers such as Boys & Girls Clubs and the YMCA may already have purchased a MI system or developed their own system. The variety of existing systems across the city will have to be accommodated by any new citywide system, with an aim to consolidate rather than multiply the number of information systems that afterschool providers have to manage. In addition, identifying local experts in one or more of the leading MIS products can be a great asset to cities.

What Compliance Reporting Relationships and Needs Exist at each Program?

Providers describe having to use as many as five – and in one case nine – information systems to fulfill all of the reporting and compliance requirements associated with operating their programs. These systems may include grant management, finance and MI applications preferred by each of their funders, including other city departments. "Compliance fatigue" can be a major obstacle to implementing any new citywide system. City leaders may look for ways to reduce this by consolidating systems, harmonizing reporting requirements among funders, or assuming some of the responsibility for compiling and distributing these reports.

With Whom do Providers Share Information?

Access to academic information is particularly important for programs receiving 21st Century Community Learning Center funds. Sites may receive information directly from teachers, principals or parents, through their evaluators, or as part of a more formal data sharing agreement with the local school district(s). Some sites collect written permission from parents to share their children's information with partners for a limited set of purposes, others do not, and not all programs understand or follow best practices in this regard. Standardizing these permissions processes and facilitating the exchange of information among afterschool providers and schools is a prominent way for a new citywide MI system to add value.

How are Providers Using Information? Are They Interested in a More Integrated Data System?

Most programs have specific procedures for using information that – while not always sophisticated – are integral to the way they manage sites, evaluate their performance, and

comply with requests from partners, sponsors and funders. Negotiating how to support, modify or abandon each of these procedures is a key part of expanding the citywide system and determining where professional development might be appreciated.

In addition, bringing providers on board involves addressing the "what's in it for me" factor, as Laura Hansen of Metro Nashville Public Schools put it, "for every single partner. People are not just going to give something away without expecting something in return." The afterschool self-inventory is an opportunity for the coordinating entity to assess where providers are frustrated or limited and to use these "pain points" to develop a sense of how an MIS can meet the operational needs of youth-serving organizations. It is also an opportunity to identify which organizations have the capacity, expertise, and enthusiasm to help build that new MIS, and which are likely to need extra persuasion and professional assistance. As Rebecca DeJarnatt, coordinator for the City of Louisville Office of Youth Development, says, "It's always a mixed bag. There are always some agencies that are saying, 'Yeah, that's what we need to do – I'm on board, I want to be in the pilot.' And then there are others that raise their hands and ask, 'How much is this going to cost us? What's the return on my investment for this?'"

Do Sites Have the Skill and Equipment to Implement an MI System?

Program staff may need assistance overcoming specific challenges related to new information systems. Some sites lack computers and Internet connections. Employees' computers skills may vary widely between programs, and typically high rates of staff turnover can make training an ongoing challenge.

Are the Majority of Students Served by Providers Located within Schools or by Community-Based Organizations Without Strong School Affiliations?

In some communities, public school districts are strong sponsors of afterschool systems-building, providing leadership, technology, and research and evaluation resources. (For examples, see the Negotiating the Network Architecture section on page 29 and the description of the Nashville After Zone Alliance on page 35.) In others, networks of public agencies and community-based organizations have found it desirable or necessary to establish these resources independent of the schools.

CITY EXAMPLE:

FROM DIVERSE ACTIVITIES, COMMON OUTCOMES IN BOSTON

Chris Smith moved from the Boston Private Industry Council to run Boston After School & Beyond (Boston Beyond) in late 2008. As executive director, he was interested

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in better aligning Boston Beyond's work with the city, funders, and the schools, increasing his organization's support of the city's approximately 700 afterschool providers, and focusing providers' attention on measurable youth development results. One of the chief problems, said Smith, was that "there was no coherent data collection and sharing strategy."

The results of a survey his office issued in 2010 described several of the challenges in greater detail. While a few programs used the Boston Public Schools-based MIS, most providers used Microsoft Excel or had no electronic system at all. Few programs had access to information from the Boston Public Schools or collected permission from parents to obtain that information. Those providers that gained access to student information had mostly done so by developing personal relationships with individual principals and schools.

There was, however, great interest from providers in being part of a Boston Beyond-led process to solve these problems and contribute to a common outcomes database. "We realized," said Smith, "that what we really wanted to do was address the barriers to a common data collection and sharing system." The additional attention afterschool programs began to receive as a priority of the mayor, the superintendent of the Boston Public Schools, and funders underscored this need for a citywide data system.

To begin, Boston Beyond created a data collection pilot with five of the city's biggest and most enthusiastic providers. "Even among these five organizations," said Smith, "we saw very different approaches to data collection and saw different agreements with schools guiding how they got data." Together, they developed a set of data standards – a limited data dictionary – and a new set of expectations around sharing information.

To extend participation to a larger cohort of the 700 providers, Boston Beyond is exploring a "federated" system that uses an online database of providers co-managed by Boston Beyond and the City of Boston as a portal through which providers can upload their program results in spreadsheet form. This model may be adapted even further to serve the city's Promise Neighborhood and a Wallace Foundation-funded arts expansion initiative. Boston is succeeding in using this citywide tool to serve a number of purposes without trying to be the primary enrollment system for each afterschool provider.

The result, says, Smith, is that "providers can be more intentional" and speak directly to outcomes rather than processes:

> If we can identify and measure the factors that really influence student success, then your typical middle school provider doesn't say "I run an afterschool program and we do arts – drawing on Tuesdays and painting on Thursdays" – and then finally get to the punch line and say "and through that we build teamwork skills." **I want to create a discussion where they say "I am an afterschool provider and we build communication and teamwork skills through the arts, and here's how we do it. We lead with the skills that we want to develop.**"

The self-inventory described above often reveals an incredible diversity of practices around tracking, recording and using information among afterschool providers in each city. This diversity reflects underlying differences in the type and quality of programming across sites: a mentoring program may think very differently about attendance than a drop-in recreational program, for example. Those two programs are also likely to find very different types of demographic and activity information useful to their evaluation and management routines, and therefore to track relatively few items in common. Exacerbating these differences may be additional variation in reporting requirements from multiple funders, each of which has slightly different rules for how the programs they support ought to measure, aggregate, and segment this information.

In order to take advantage of their investment in an MI system to develop common approaches to improving program quality, measure outcomes across sites, and identify strategies that are effective and cost-efficient, cities generally find that they and their many local providers need to agree on a common language and common measures for speaking about and evaluating afterschool activities.

Create a "Dictionary" of Data Definitions

A key aspect of establishing common measures is for all afterschool system participants to develop shared definitions for important activities and outputs. It is crucial for program evaluation, for example, that a city's programs have developed a syntax in which they are not only using the same language, but using the same language to describe the same phenomena. Through an iterative process, cities tend to discover inconsistencies in how different members of the network record their progress and, over time, align outcome measures so that they are able to speak more confidently about the impact of specific interventions.

As part of this process, some cities also develop a "taxonomy" to describe the types of afterschool programs they fund and support. Organizing the multitude of local programs into specific categories allows policymakers to quickly assess how many youth are attending arts-based afterschool programs compared with academic enrichment programs and to distinguish between outcomes in school-based and community drop-in programs.

Establish Common Measures

It is difficult to have a citywide conversation about improving program quality if providers have not agreed to a uniform set of quality standards. Establishing those standards requires a consensus-building process around what cross-program indicators would look like, as well as how they would respect and accommodate agencies' particular needs.

The experience of the Hartford Connects initiative is common, as described by Rachel Botts, the city's former program performance manager:

> In the beginning, we just wanted everyone to buy into this so much that we said yes to everybody and to everything. We caused ourselves a headache, quite honestly. Because

this agency wanted this tweak, and that agency wanted that tweak, and this agency wanted three tweaks and a bucket. And the next thing you know, we were managing an enterprise where there's not enough alignment – where we thought there would be (for more on the impressive progress of the Hartford Connects initiative, see page 42).

"Data runs in herds," as Results-Based Accountability founder Mark Friedman writes, and many citywide systems only gradually narrow their focus to a manageable set of variables that can serve as effective proxies for the rest. These indicators commonly include city-level outcomes related to financial sustainability, program-level outcomes around staff ratios and parental involvement, and youth-level outcomes that might include sustained afterschool attendance, on-time grade promotion, and pro-social indicators of confidence and character.

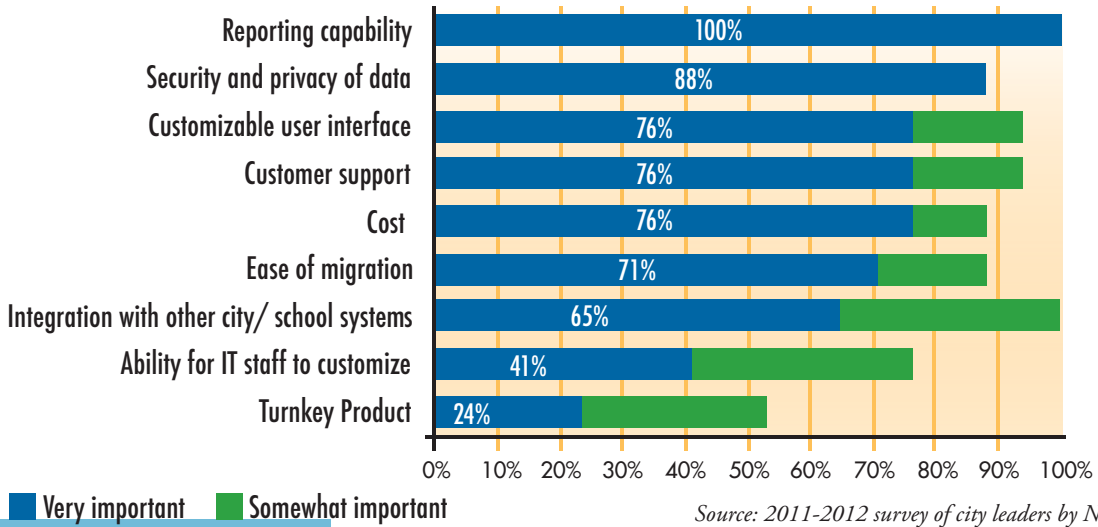
Harmonize Reporting Requirements

Ideally, local funders of afterschool programming such as city agencies, United Ways and community foundations will lead this process by revising their reporting requirements to better correspond with one another and with the newly-developed citywide standards. Not only does this allow for a better comparison of program activities and results across systems, but it can also sharply reduce the administrative burden on program operators, many of whom receive multiple sources of support.

DESCRIBE THE HIGH-LEVEL BUSINESS REQUIREMENTS

Each member of a management information system network – on-site staff, program managers, city administrators, evaluators and others – has a specific set of requirements from an afterschool management information system. Exploring and documenting these uses is a painstaking and collaborative process, but the result is a well-defined set of specifications that become the basis for a city's request for proposals and implementation plan. Defining these "use cases" is often the bulk of the work.

Chart 4. Reporting Capabilities and the Ability to Protect Data are the Top Two MIS Needs



Source: 2011-2012 survey of city leaders by NLC

Each network's system specification will be different. Sometimes, the system requirements are driven by the priorities of the city leaders and/or coordinating entity that funds and builds the MIS. In other cases, the challenges and opportunities identified by the system partners through a self-inventory play a larger role. Ideally, these two sets of needs correspond to one another and are further developed through conversations with MIS vendors and other experts.

Below is a checklist of many of the common functions that cities contract with MI system vendors to provide. A version of the request for information (RFI) developed by NLC to compare six commercial MIS vendors is available online at www.nlc.org/afterschoolmis. We encourage city leaders to download the model RFI and adapt it as part of their own procurement process.

MIS FUNCTIONALITY CHECKLIST

ENROLLMENT, ATTENDANCE AND PARTICIPATION

- ☐ Enroll and register youth in programs
  - ☐ Create printed rosters
  - ☐ Track attendance using a computer or mobile device
  - ☐ Track attendance using a card reader or scanner
- ☐ Track activity participation (dosage)
- ☐ Attribute participation data to specific grant-funded programs for reporting purposes
- ☐ Group family units (i.e., affiliate youth with parents or siblings)
- ☐ Option to import enrollment/attendance information from other MI systems

CASE MANAGEMENT AND REFERRALS

- ☐ Record individual youth service plans and milestones
- ☐ Record staff interactions and communication
- ☐ Facilitate referrals across organizations that do/do not participate in the MI system

AGENCY, SITE AND STAFF INFORMATION

- ☐ Record site and organization characteristics such as program quality ratings, program location, services, presence of bilingual staff, and transportation options
- ☐ Record information on staff such as credentials and years of experience
- ☐ Associate staff with programs and program sites
- ☐ Publish an online provider directory

SURVEY AND EXAM ADMINISTRATION

- ☐ Administer surveys and assessments to youth (such as the Survey of Afterschool Youth Outcomes or the Search Institute's Developmental Assets Profile)
- ☐ Administer online surveys to others (e.g., parents, teachers, or instructors)
- ☐ Vendor has preloaded survey and youth assessment instruments
- ☐ Enable local administrators to create custom surveys
- ☐ Enable vendors to implement new survey instruments for the city (and include information on cost/terms of delivery)

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REPORTING

- ☐ Provide built-in compliance report templates (list any required, such as 21st CCLC)
- ☐ Pre-build stock reports for administrators, agencies, and programs
- ☐ Enable local administrators to create new reports
- ☐ Enable vendor to create new reports (and include information on cost/terms of delivery)
- ☐ Integrate with business intelligence applications (such as SAP/Crystal Reports)
- ☐ Offer advanced reporting features (e.g., an RBA Scorecard, dynamic reports with Microsoft Live, a management dashboard)

INTEGRATION WITH OTHER DATA SYSTEMS

- ☐ Provide an API or another kind of interface that allows third-party applications to extend the functionality of the software
- ☐ Aggregate information from third party afterschool MI systems
- ☐ Link to school student record databases
- ☐ Provide afterschool sites with information on individual students (alternative: aggregate information only)
- ☐ Provide afterschool sites with real-time student information (alternative: periodic or annual)
- ☐ Provide sufficient user roles and suppression of private data to avoid violating FERPA

TRAINING AND USER SUPPORT

- ☐ Provide training to sites, agencies, administrators (list requirements)
- ☐ Make training available from vendor or user group thereafter (including information on cost/terms of delivery)
- ☐ Make customer service available (including information on cost/terms and medium of delivery)

This checklist is not meant to be comprehensive. More information on each of these functionalities is available through the vendor comparison in Section Four. Cities may require additional features such as grant management or longitudinal data on participants that are not part of a "core" afterschool MI system, or may have very specific needs around connecting youth activities and case management services with particular funding sources for billing and reporting purposes.

Often, the process of defining business requirements and identifying the best way to meet them is an iterative one. Afterschool providers will express their specific needs and limitations around technology, training, and information for generating grant requests and reports. School districts and other informational partners may suggest a path for negotiating privacy concerns or raise objections to a city's evaluation plans. Vendors, once they have a fairly clear sense of a network's needs, can provide invaluable consultation around what strategies have worked in other cities. This is a "rolling process of discovery," as one major vendor described it, and city leaders should not expect to single-handedly draft an RFP and issue a contract. Most cities should, however, consult with multiple vendors about their needs.

CITY EXAMPLE:

SELECTING A VENDOR IN WASHINGTON, D.C.

In 2008, the DC Children and Youth Investment Trust Corporation, a nonprofit intermediary that plays a key afterschool coordinating role in the District of Columbia, had an incumbent MI system that they felt the organization had outgrown. Keith Watson, a former Trust employee and president of Kairos Management, was hired to manage the process of replacing it. He and Natasha Harrison, the Trust's grants management and training consultant, began by thinking backwards from the result they sought:

What data are we going to need to get out of the system at the end point? If you imagine some future state where the system's been in use for a couple of years, what kind of data do we want to be able to pull out? What kind of reports? How do we want to manage performance? What statements do we want to be able to make to stakeholders about who we served and what outcomes we've achieved?

Watson mapped out the roles of each of the Trust staff and their grantees and charted how they might interact with a new system to track student attendance, review management information and manage grant cycles. This detailed work is crucial, said Harrison. "You have to make it very clear to everybody – and to your vendor – what you need. Customizing sounds great, but the lesson we learned is to be very specific and be sure what you are getting will [work when it is first implemented]."

With this system specification roughed in, Watson issued a 14-page request for information. A lot had changed, he said, since the Trust had selected its first system. They wanted to understand the state of the art, to get smarter about the market, and to get a better sense of what kind of money they might have to spend.

The Trust's request for proposals, issued several months later, reflected everything the organization had learned. It was tighter, its demands were more specific, and Watson was confident in the rubric he had designed for an internal committee to score and rank the responses. Several vendors were invited to make presentations, and two were clear favorites. While an external group of grantees tested both systems and provided feedback, the Trust negotiated a final offer price with both companies. One of the lessons of this process, said Watson, was that "having multiple vendors competing under a formal negotiation process made a big difference."

For more information, contact Keith Watson at Kairos Management at www.KairosMgt.com.

CITY EXAMPLE:

OMAHA BRINGS EVERYBODY TO THE TABLE

Citywide afterschool systems-building in Omaha began in 2007 as a partnership between Mayor Mike Fahey, the Omaha Public Schools, the Sherwood Foundation and Building Bright Futures, a public-private partnership that seeks to improve academic performance of students in the Omaha metropolitan area. A thorough survey conducted by the University of Nebraska at Omaha in 2006 provided a foundation for understanding the city's existing afterschool landscape and led the partners to focus on providing high-quality programs as part of a new Middle School Learning Center Initiative (MSLCI).

A new and relatively small organization, Collective for Youth (CFY), was created as an intermediary to oversee these programs, with the Omaha Community Foundation serving as its fiscal agent. Though CFY worked very closely with the mayor, the partners decided that the initiative had a better chance of being sustained over time if it was embedded within the community.

Mayor Jim Suttle succeeded Mayor Fahey in 2009 and, shortly after taking office, Mayor Suttle issued a proclamation recognizing afterschool programming as a city priority. With his office's support and the support of the Omaha Public Schools, CFY began negotiations in 2011 to expand beyond MSLCI to manage 18 of the school district's 21st Century Community Learning Centers for elementary students, with a goal of eventually managing all of the district's afterschool youth development programming. In mid-2011, CFY received its nonprofit designation from the IRS. Concurrently, Building Bright Futures, in partnership with the Sherwood Foundation, Avenue Scholars, and the local United Way, started to explore options for a management information system that could support this expanded scope of work and to replace the Microsoft Excel spreadsheets that would soon be insufficient.

Building Bright Futures led an inclusive MIS selection process with a "data collaborative" consisting of representatives from United Way of the Midlands, major afterschool providers such as the Boys & Girls Club, community-based organizations, and nonprofits operating mentoring programs that extend beyond traditional afterschool. As described by CFY's executive director, Megan Addison, the collaborative "looked at all of the data that we needed to collect and created a data dictionary so that all of us would be entering the same information consistently. For example, if we need to create reports for evaluation or reporting purposes, one group isn't defining race in a way that's incompatible with the way another group is doing it – so that was all figured out."

Four MIS companies presented their products to stakeholders in early 2011, and members of the collaborative ranked each of the applications individually, ultimately selecting the proposal from nFocus Solutions. By August 2011, several MSLCI afterschool sites were actively using KidTrax, the nFocus data management tool

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for tracking individual program participation. Building Bright Futures began helping additional partners implement the KidTrax system. An "attendance collaborative" and an academic support and reengagement program are currently using the MI system's case management features. A mentoring group and a teen and young parent program will begin using KidTrax in early 2012. In addition to KidTrax, a vitally important aspect of Omaha's collaborative is the eventual ability to aggregate attendance and outcomes information from different providers using the nFocus Solutions Community Server platform.

"One key to the relatively smooth rollout," says Addison, "was Omaha's good fortune in having a person familiar with the nFocus MIS within our community. Boys & Girls Clubs also used nFocus, and Building Bright Futures and CFY were able to borrow their system administrator for nearly a year to get each of the pilot sites up and running. Each site's interface was customized to accommodate their unique application, but with attention paid to ensuring that all sites tracked the fundamental data elements required by the partnership to allow comparison of outcomes across programs."

Not all of the work has been this straightforward. Using an MIS to store student academic data raised new privacy concerns for the Omaha Public Schools. It required more than a year of negotiation to establish a new memorandum of understanding with the district that allows selected student records to be matched against youth development outcomes. Said Addison, laughing, "It was a long, drawn out process! But in the end, it got us the buy-in before the system was even purchased, which I think was key."

DESIGN THE NETWORK ARCHITECTURE AND NEGOTIATE INFORMATION SHARING AGREEMENTS

Cities can build management information systems in a number of ways, depending on their requirements and the resources available to them. Choosing a design requires answering several key questions (and options for addressing each question are illustrated by the city examples that follow):

Who Owns the Information?

An early and important action for city leaders, having brought the right people around the table, is to begin discussing the conditions under which these partners may be willing to share their data. As the Urban Institute's National Neighborhood Indicators Partnership describes in detail in their online guide to data sharing, patience, respect, organization, and knowledge of the relevant state and federal regulations are all crucial to a successful negotiation.

For most cities, establishing an information sharing relationship with the public schools is the most difficult challenge – in many cases taking more than a year. Section Three of this report describes the Family Educational Rights and Privacy Act (FERPA), the federal

law most often cited as a barrier to sharing information between schools and afterschool providers, and the main components of a memorandum of understanding. Several excellent resources are additionally available to city leaders:

- The Master Data Sharing Agreement (MDSA) developed between the Grand Rapids Public Schools, the Community Research Institute at Grand Valley State University, the Doug and Maria DeVos Foundation and Calvin College's Center for Social Research is available by request through an online form at http://www.cridata.org/b2bmdsa/.
- An article describing the development of Grand Rapids' MDSA was published in November 2011 by the Johnson Center for Philanthropy at Grand Valley State University in Volume 3, Number 4 of The Foundation Review (see pp. 14-33).
- The Urban Institute's National Neighborhood Indicators Partnership online guide to data sharing is available at http://www.neighborhoodindicators.org/library/guides/nnip-lessons-local-data-sharing.

Who Will Administer the MI System Database?

In some cities, such as Nashville, Tenn., the afterschool enrollment and participation database is an extension of the school district's student record system and is hosted by the district. In other cases, as in Denver, Colo., afterschool enrollment and attendance information is recorded in an independent database purchased and managed by a coordinating entity such as the United Way or a municipal office. In at least one case (Grand Rapids, Mich.), a university research center administers the MI system.

Where and How is the Link between Academic Records and Afterschool Enrollment and Attendance Made?

Students' afterschool participation and academic outcomes are most often tracked in at least two separate databases by two or more separate institutions. To allow these multiple systems to communicate with one another, each student's record must be linked against its corresponding record in the other database(s). Two strategies are available:

- **Common ID:** If the databases share a unique identification code for each student, such as a student identification number, records can be easily matched and transferred between them. In the case of the Nashville After Zones, for example, the school district creates every afterschool provider's roster, which includes a code so that each student's information can be easily matched with academic outcomes stored in the district's data warehouse.
- **Probabilistic matching:** Often, however, MI systems must use information such as student first and last name, date of birth, and family address to make an educated guess about which records in two or more databases correspond to the same youth. This algorithm-driven process, which is never 100 percent accurate, is known as a making a "probabilistic" match.

Again, this match can be made in real-time within an MIS hosted by a school or coordinating entity, it can be made in a data warehouse, or in other cases the information may be linked offline by an external university evaluator who receives separate files of academic information from the schools and afterschool participation from the coordinating entity.

What Organization is Responsible for Analyzing the Information?

Very often, schools are the ideal place to analyze afterschool data, as they have much of the relevant data and are not constrained by FERPA when analyzing data internally. In Bridgeport, Conn., for example, the city's Lighthouse program provides its afterschool participation information to the public schools for analysis, and the Mayor's Office of Education and Youth Services receives back aggregate reports organized by a predefined list of demographic and program characteristics. On the other hand, says Boston Beyond's Chris Smith, "Districts – and especially their research offices – tend to be overwhelmed with data requests. So that's not always the best way to go." Nor does it provide great flexibility to afterschool staff to run more complex analyses if they find themselves on the wrong side of the FERPA "firewall" (see Section Three for several possible strategies). Instead, coordinating entities may negotiate the resources and access to do the work themselves or designate a third party researcher.

BUILDING TRUST WITH A QUALIFIED EVALUATOR

Leaders in cities such as Bridgeport, Conn., Fort Worth, Texas, and Jacksonville, Fla., made a special effort to describe how important it is for afterschool program coordinators to have access to an evaluator who "really understands the work," and has evaluated afterschool programs over a long period of time.

To Miguel Garcia at Fort Worth After School (FWAS), which has a longstanding relationship with faculty at Texas A&M University, it is valuable to have a partner that is scientific minded and that can be honest about the evidence – "what correlations are real, which are spurious" and how FWAS ought to talk about its impact.

Jacksonville's evaluator has been working with the Jacksonville Children's Commission for a decade, and also works closely with the school system. Said Dolly Dillin, director of grants administration for the commission, "she's just an expert. Not everyone can understand this information." So strongly did the commission feel about its evaluator's expertise that it continued to rely on her even after she relocated to Boston. "She understands Jacksonville, and that's important because each community is just so different," said Dillin.

What this comes down to, according to Bridgeport, Conn., Lighthouse Program Director Tammy Papa, is trust. The 2011-12 evaluation of Lighthouse conducted by its evaluator, MRM, will be the company's tenth.

City leaders must be aware that choosing a single company or software platform to serve several agencies and programs does not, by itself, guarantee that each of those agencies' systems will be able to communicate with one another. It is not unusual for the same product to support multiple agencies independently within the same city or for the same product to

be used by both the state department of education and a local citywide system. In these cases, program providers may find themselves entering information more than once into two or more versions of the same software package for different funders. **Having the city's providers use the same product for managing their information is not the same as coordinating the city's providers through one system.** The difference is in the design of the network.

CITY EXAMPLE:

A FEDERATED MIS IN DENVER

Denver's Lights on After School (LOAS) initiative was created in 2003 and has directed more than $7 million to serve more than 10,000 students annually. LOAS has also offered professional development to more than 100 staff each year. The Mayor's Office of Education and Children, the Denver Public Schools (DPS) Department of Extended Learning and Community Schools, the Denver Public Schools Foundation, and the Mile High United Way are all close partners in a new citywide effort, the Denver Out of School Time (OST) Alliance, which is being supported by a new round of investments in citywide afterschool systems-building by The Wallace Foundation. The technology partner to this group is CiviCore, a company formed in 2000 with close ties to Denver's Piton Foundation and a large footprint in the city's nonprofit community.

Rather than build a ground-up application to track youth afterschool enrollment and attendance, CiviCore and the Denver OST Alliance are focusing on two areas of particularly high value to the partnership:

1. **Online program directory:** Denver has no complete inventory of the city's afterschool providers, and CiviCore is developing a platform where community programs can self-populate with information on the scope of their services. This platform will include information about program locations, with which schools programs are partnering, the number of students they serve and high-level program outcomes – all arranged within a "taxonomy" of program types that include academics, arts/culture, leadership, life skills, recreation and technology.

2. **Common data tracking:** Developing a shared school-afterschool database is crucial for Denver's partnership. Currently, DPS is overwhelmed with requests from community providers for academic data, and no unique ID exists to track youth participants between programs or over time. CiviCore is working closely with school officials to develop a protocol whereby afterschool programs are likely to use the DPS student ID for each of their participants and will use Civicore's Community Partnership System to share participation data and retrieve academic information.

Through this "federated" model of afterschool information sharing, providers will continue to use the systems they prefer to track enrollment and participation – whether

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spreadsheets or other software applications. The citywide system is coordinating this at a high level, so that policymakers have as complete and accurate an inventory of afterschool programs as possible, have unduplicated counts of participation across the city, and can pool data to begin to draw conclusions about the scope and effectiveness of these services. In the process, the Community Partnership System is addressing two "pain points": the need for DPS to reduce the overwhelming number of individual requests for student information, and the need for community organizations to have a straightforward protocol for receiving academic outcome information on the youth they serve.

CITY EXAMPLE:

THE BELIEVE 2 BECOME INITIATIVE IN GRAND RAPIDS

The "Believe 2 Become" (B2B) initiative is designed to provide real-time management information to afterschool providers, including nightly data transfers from the Grand Rapids Public Schools (GRPS) into the initiative's afterschool MI system. From a systems-design standpoint, it has several interesting features. A university partner, the Community Research Institute (CRI) at Grand Valley State University, hosts the MI system. CRI is designated as an Agent of GRPS for the purposes of FERPA compliance, and as such is permitted to receive identified student information. CRI makes the link between student academic records and participation information sent to them through an nFocus KidTrax MI system. KidTrax assigns B2B participants their own internal unique ID, and CRI maintains a crosswalk file to match these identifiers GRPS student IDs. Using this system, CRI collects the following information:

- **Management information:** When parent permission has been granted, CRI sends individual student academic information into the MI system, where it can be accessed by designated afterschool staff.
- **Evaluation information:** CRI staff send the DeVos Foundation, which is funding the initiative, and evaluators at CRI, Calvin College, and Basis Policy Research complete but de-identified information for comparing the outcomes of afterschool participants to nonparticipants.

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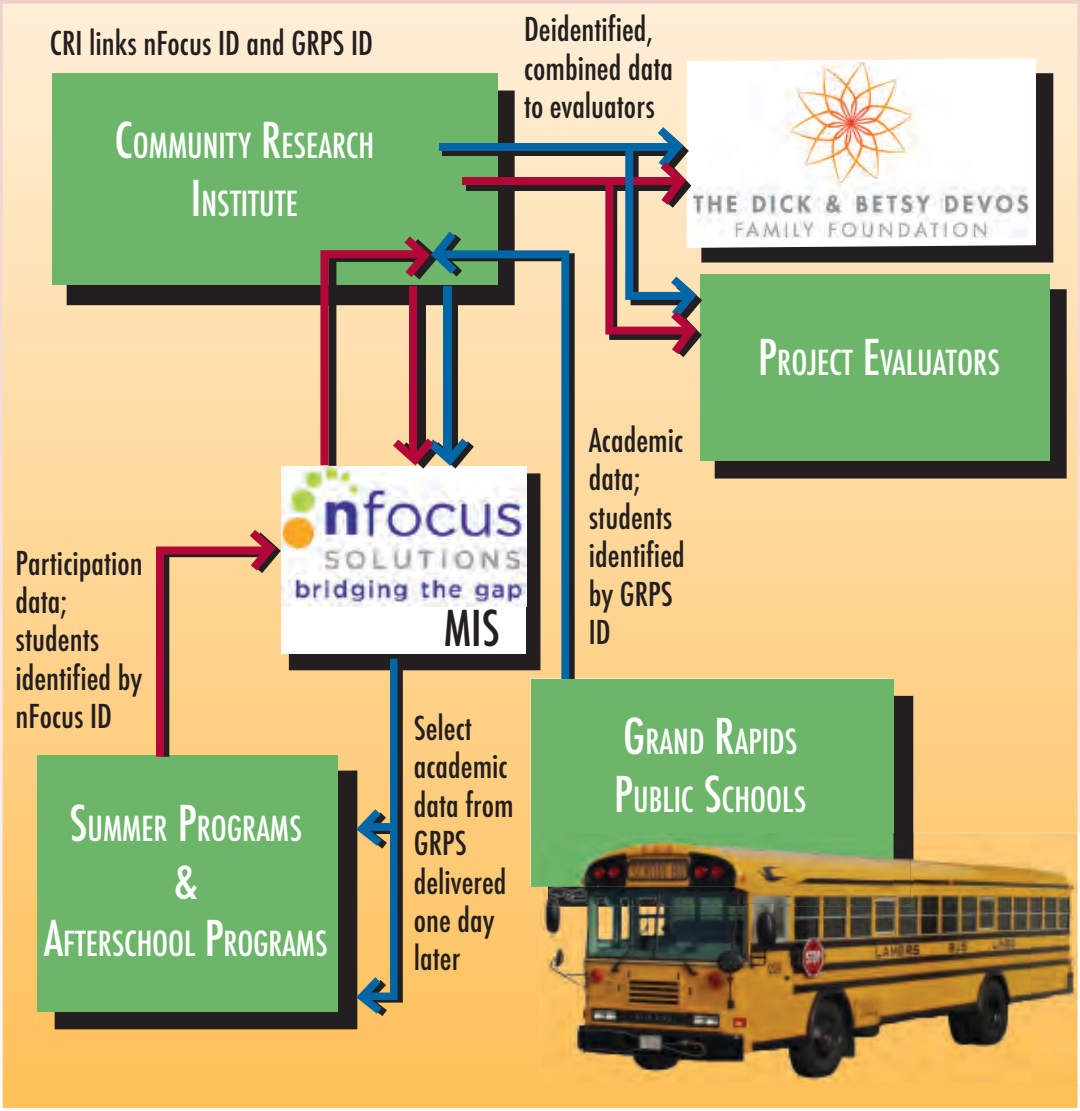
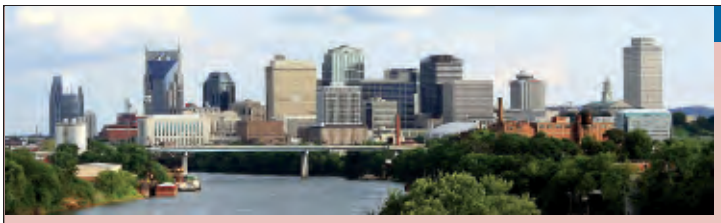
To assist the schools in this partnership, the DeVos Foundation funds a full-time position at GPRS. Local leaders in Nashville are also considering this strategy as they expand the city's afterschool system beyond school-based providers. The progress of Grand Rapids' B2B initiative is the result of collaboration and support by a very active foundation, DeVos, two academic institutions as research partners, CRI as the data management partner, GRPS, and the company nFocus as a technology provider and consultant.

More information on the development of this partnership and its ongoing governance is provided on page 52, with a link to a journal article written by CRI and DeVos Foundation staff that describes the process on page 30.





CITY EXAMPLE:

CONNECTING SCHOOL DISTRICT AND AFTER ZONE DATABASES IN NASHVILLE

The Nashville After Zone Alliance (NAZA) is a partnership among the school district, city agencies and youth-serving organizations modeled on the Providence (R.I.) After School Alliance's (PASA) "AfterZones." The first two of six planned zones were launched in 2010 and 2011, each with its own oversight agency, which contracts with local programs to offer a mix of academic and youth development activities for several hours after each school day.

NAZA's management information system is built from three elements, two of them hosted by the Metro Nashville Public School District (MNPS) and the third developed by the Information Technology Services Department of the Metropolitan Government of Nashville (Metro ITS). These elements include:

1. **The MNPS student unit record system:** The school district's core student database is used to generate rosters for each afterschool program offered through an After Zone. District staff who have access to the school database carry out this work in collaboration with NAZA, which helps to oversee program enrollment.

2. **The NAZA database:** MNPS exports these rosters nightly and sends them outside of the district's firewall and into NAZA's database, which is developed and maintained by Metro ITS. Only FERPA-compliant directory information on each student – student contact information, grade level, and a unique district student identification number – is made available to afterschool programs. The NAZA database has a simple, web-based interface for tracking program attendance and an administrative screen that allows NAZA leaders and coordinators to monitor the attendance taking process, manage user passwords, and do basic reporting on student program participation rates.

3. **MNPS data warehouse:** The school district's fast-developing data warehouse receives these two streams of information separately – one from the student unit record system and one from the NAZA database – and uses the student identification number present in both sets of records to link the information for reporting and analysis.

Nashville's Mayor, Karl Dean, and the superintendent of the Metro Nashville Public Schools, Jesse Register, have both committed significant resources to this systems-building effort. Concrete results of the partnership include:

- **The reporting and compliance burden on NAZA's afterschool programs has been greatly reduced.** The MNPS data warehouse provides all of the attendance, behavioral and academic information necessary for most evaluation reports. Site managers no longer have to ask students for their report cards to get information on grades and attendance.

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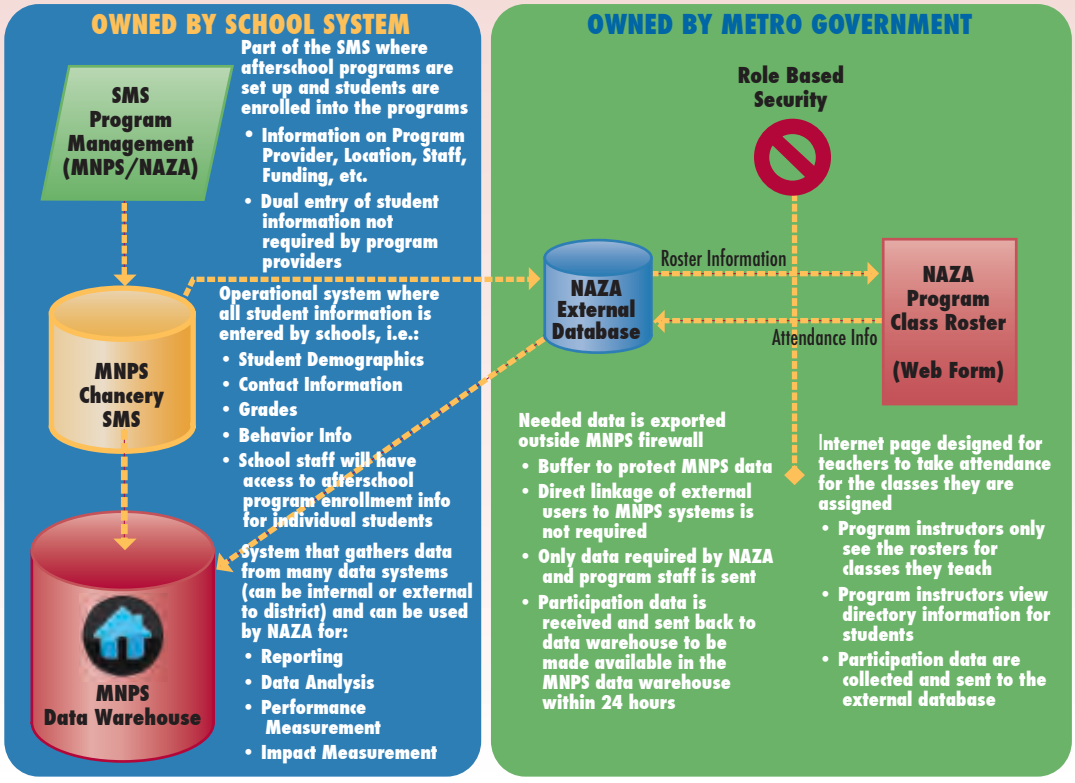
- **Providers receive a program "dashboard."** This dashboard allows site managers to track their performance against key benchmarks and to identify participants who may need additional assistance due to school behavioral issues, absences, or academic challenges.
- **NAZA will be able to evaluate system-wide outcomes,** comparing afterschool participation against a full range of performance benchmarks from MNPS, year-over-year for the same cohort of students.

The district's sponsorship of this information system means that the informational "link" between participants at MNPS and the NAZA afterschool programs is seamless. Analysis and reports on system-wide outcomes can be produced by the data warehouse and the district's Research Assessment and Evaluation Department without fear of violating FERPA restrictions.

Conversely, the district's role in managing afterschool program rosters from the student information system imposes a possible limit on the scalability of the MI system to include afterschool providers in Nashville who are not affiliated with NAZA. According to Hansen, "The real limit is setting up the program rosters in the school's student management system, because that is behind the firewall – so program providers can't create those rosters directly. They have to have a school liaison." One possible solution being investigated is to use a common external data system to manage their programs and link that single system to the MNPS data warehouse. This method will be piloted in the Nashville Promise Neighborhood, which will use Social Solutions' Efforts to Outcomes platform as the service provider system.



BUILD OR BUY?

Approximately one-third of the cities surveyed by NLC in 2011 elected to build their own afterschool MI systems rather than purchase a commercial product. Cost was a motivating factor in many of these decisions. As Laura Hansen, who assisted with the creation of the MI system for Nashville's "After Zones," describes her decision-making process:

> We really wanted to maximize the funds that were going toward programming (as opposed to administrative costs) and we didn't have large sums of money to do this. It fit with the approach of the Mayor's Office of Children and Youth to look at resources we already had available to use, and encourage collaboration. Both the city and the district technology departments agreed that there was value in working together and using our existing technology and talent rather than investing in another external information system."

In other cases, the availability of local information technology resources encouraged city leaders to keep the work in-house. Miguel Garcia, the director of Fort Worth After School, had already developed a preliminary afterschool tracking application when he recognized an opportunity to partner with the Fort Worth Independent School District to create something much more sophisticated:

> When we talked to our technology department, they said, "Look – we've got the man hours. If you've got the money in your budget, we have individuals that are capable of creating a reliable, multi-faceted data gathering system." It's not a purchase order to an outside organization.

The school district's new chief of technology had recently bought new servers, brought on a couple of new programmers, and was willing to support the application "for as long as Fort Worth After School is around." The application they developed together now serves as one of the templates for the system utilized by the 21st Century Community Learning Center program at the Texas Department of Education.

There are, however, risks associated with this approach:

- **Self-developed systems may be less flexible than commercial products** and therefore more difficult to bring to scale. Cities that opt to build an MI system as an extension to a school district's student record database, for example, may find themselves very closely tied to that district's students and programs. It may be difficult to provide access to programs serving students in other districts or to community-based organizations that lack a formal relationship to the district. Local agencies that opt to build an afterschool MI system as an extension of a much bigger product – such as a city's Homeless Management Information System or social services platform – may find that they have little influence over the product's development path, and that updates regularly interfere with its usefulness to afterschool providers.
- **The MI system may be "orphaned" by its developer(s).** Several cities have found that product features developed by city staff or local volunteers, at some point, ceased to function. The online program directory crashed or the

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software bridge that linked afterschool program data to school records broke. In such cases, the programmer who wrote (but did not document) the application has frequently moved on. In several cases, cities endured prolonged down time while they decided whether to rewrite the application from scratch or contract for services with a commercial MI system vendor.

- **Unique MI systems evolve slowly.** In most cases, the relatively large installation base of commercial MI system providers allows them to benefit from these economies of scale to innovate more quickly and provide more comprehensive customer support. Larger user groups mean that solutions to many challenges – such as the integration of a new youth assessment or a niche need like biometric identification – have already been developed and can be more easily adapted for local use.

Cities that have developed MI systems that successfully meet the needs of their afterschool coordinating entities and their networks' providers usually exhibit most, if not all, of the following characteristics:

- **Strong internal IT capacity:** This capacity may be provided by the city, the school district, or a third entity, but having IT capacity within the partnership – as opposed to available on contract – is crucial to both making smart design decisions and then supporting the application over time.
- **Dedicated funding:** MI systems require ongoing development and customization to accommodate new needs and new partners. Dedicated funding allows the partnership to plan ahead for these needs and to adapt. For example, the Jacksonville Children's Commission is one of seven Children's Services Councils in Florida that partnered with each other to build their own MIS, the Services and Activities Management Information System (SAMIS), in 1999. Between 2005 and 2008, these councils used SAMIS to allocate more than $1 billion in funding to afterschool programs and other social services. Each council contributes an annual fee to the maintenance and development of the system, which amounted to approximately $125,000 in 2011.
- **Close partnership between the city and/or its intermediary and the school district:** Most self-built afterschool MI systems leverage schools' investment and expertise in student data systems. Nashville city leaders developed this relationship incrementally, including the school district as a partner from the very beginning of the city's exploration of an afterschool MI system. According to Laura Hansen, "Having someone on the outside, or an intermediary, do that visioning independently and then arriving at the schools to say 'all we need you to do is give us this' is not a great way to do it, in my experience."
- **Clear system specification:** Even if self-built MI systems are not as flexible as their commercial alternatives, they can be tailored effectively to the needs and technologies present in the community. Where the coordinating entity has a very clear sense of the network's needs and can define these needs without the benefit of consultation with a commercial provider, they are often successful.

PILOT

Many cities opt to pilot their new MI system before deploying it more widely. They may reach out to volunteers identified in the "self-inventory" phase of work, and screen for organizations that seem to have the capacity and enthusiasm to be active thought partners. For example, Saint Paul's Sprockets network – which provides no funding – solicited interest from the city's nonprofit providers in participating in a pilot of the city's new Cityspan data system. The network selected only 11 of the 16 organizations that volunteered.

This phase of work is important. Major features of the software, such as its integration with other systems and the usefulness of its reports, will need to be customized and trouble-shot. The overriding goal here is simplicity, as Juan Ruiz, the SAMIS senior administrator in Jacksonville, explains:

> All the time we are spending on administration is time we are not spending with the kids. Our programs do not have money to hire a bunch of additional administrators. So our job (as system designers) is to make this as simple as possible.

Jacksonville went as far as to create a stripped-down, simplified desktop application outside of the normal SAMIS interface for some of its providers to enter attendance information. To get accurate data from staff, ease of use was more important than total uniformity of the interface.

Boston After School & Beyond's pilot included just five of the city's largest providers, all of which were interested in learning how to contribute to and receive the benefits from a shared afterschool data system. Over 18 months, they identified and fixed problems with individual programs not collecting student IDs, developed an initial set of common data definitions, and settled on an information architecture that looks more like Denver's "federated" MI system than a soup-to-nuts unified enrollment and tracking system. The pilot established a foundation for expanding the system and inviting a greater number of Boston's estimated 700 afterschool providers to participate.

Finally, a pilot phase allows cities to estimate more accurately the amount of initial and ongoing training the MIS is likely to require. The amount and type of training needed varies across communities. One city provides training every week, year-round. Other cities have implemented similar "train the trainer" models and negotiated with commercial MI system providers to take advantage of periodic online webinars and customer support. Even so, several cities noted that there is a limit to what managers can expect of some afterschool organizations, with particular frustration expressed about underequipped and skeptical city agencies. Overcoming this resistance is easier if the coordinating entity is not stretched by commitments to too many sites.

EXPAND AND REGULARIZE

Even a successful pilot will tend to multiply, rather than diminish, the number of questions facing MI system managers from providers and policymakers. Success breeds more enthusiasm to do more with the available resources. It also tends to bring to the foreground several

challenges that have been outlined in this report already, including the ongoing, iterative process of identifying common measures and updating the "dictionary" of data definitions.

In addition, city leaders often exit the pilot with a mandate to "think big" about improving their program evaluation and integrating a more diverse set of youth support programs into the system.

Improve Reporting and Evaluation

Ideally, an MI system is flexible enough to create management reports that are responsive to provider needs and the questions of policymakers. Structuring queries and running reports is an ongoing process of inquiry.

All commercial MI systems offer "canned" reports that will meet a variety of city needs, and most companies include in their initial consultation an opportunity to customize and create new reports that are better targeted to individual needs. Over time, these needs tend to expand, and software packages vary in their ability to provide administrators with flexible "report building" tools to meet these demands. (See Section Four for a comparison of commercial MI systems.)

Ultimately, however, most sites develop a limited set of reports and dashboard utilities that are aligned with common benchmarks such as program attendance and certain youth outcomes and that become the touchstones of ongoing performance management. Though these may change modestly as citywide priorities for afterschool are realigned, the standard for good reporting remains relevance, concision, and timeliness.

Formal program evaluation, on the other hand, is a more complex undertaking. Once an MI system is online, providers are trained, and information is being shared between afterschool programs and other youth-serving agencies, data will accumulate at an astonishing rate. The distinction between "data" and "knowledge" becomes crucial here, as several city leaders interviewed by NLC admitted they had five or even 10 years of longitudinal data that were parked on a server, unanalyzed. "We're sitting on a ton of information," said one city representative, "and we just don't have the dollars to do anything with it."

This state of affairs is more the rule than the exception. While we know from longitudinal studies of programs like After School Matters in Chicago that high-quality afterschool is effective, relatively few local studies can demonstrate this impact with any rigor. Ideally, city leaders would prefer to be able to report to their funders, their mayor, and their public that their afterschool system is effective. The Public/Private Ventures report on Providence's PASA initiative is an excellent recent example of such a report.

Several cities are creating the capacity to conduct at least limited evaluation studies within their afterschool coordinating entity. Boston After School & Beyond recently hired a data manager, for example, and Chicago Allies for Youth Success has a senior systems analyst. More often, cities find external partners:

- The Providence After School Alliance is negotiating with the city's major data intermediary, the Providence Plan, to link afterschool outcomes with the K-12, postsecondary and health data already hosted by the intermediary's integrated data system.

- Fort Worth uses a Texas A&M University-based evaluator with a decade-long relationship with Fort Worth After School to write their annual outcomes report.
- Bridgeport, Conn., contracts with a private evaluator, MRM, Inc., to track the academic progress and social and emotional well-being of students who participate in afterschool programs. Bridgeport associates afterschool participation data with reductions in crime rates and examines reading, writing, and math scores by ethnicity in an annual evaluation of afterschool program impact.
- Jacksonville's private evaluator provides simple, consistent outcome measures for a host of local programs including "TEAM UP" afterschool and special needs programs, case management, mental health and mentoring programs, and other social services (all tracked in the city's MI system, SAMIS).

Cities are exceptionally careful about making extravagant claims about the value of afterschool programs. As Miguel Garcia, director of Fort Worth After School, reported:

> Of course being down here, you have a lot of people who will say the reason for a kid's success is four-fold: school, family, community programs, and church…When we look at the data we think, "Man we've got to be careful about how we lay this argument out." A lot of these [successful kids] had good parental support. It can be hard to control for all of the factors that we know, intuitively, that we ought to.

This concern is well-founded: A decrease in neighborhood crime that occurs simultaneously with the expansion of local afterschool programs may be suggestive, but it is not close to a causal relationship. What MI systems allow cities to do is track individual student activities, characteristics, and outcomes. To a degree much greater than has been taken advantage of, to date, this enhanced data capacity will allow skilled evaluators to control for many of the environmental factors mentioned by Mr. Garcia and to make a much stronger claim for afterschool's value to youth.

Integrate More Data

A growing number of cities are beginning to merge information from multiple agencies and service systems outside of education and youth services, and to use the insights gained from the analysis of this linked information to create more effective program interventions, make smarter policy, and improve the care provided by educators and social workers.

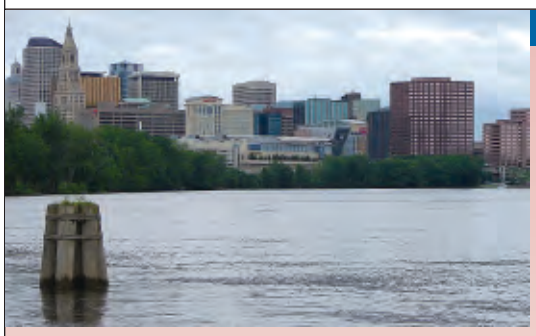
These so-called "integrated data systems" directly support the mandate for public managers to provide more coordinated care by including information from health and human services departments, workforce investment boards, and juvenile courts when making decisions about young people.

- In Philadelphia, a majority of city-funded afterschool providers use a self-built MIS, the Provider Contract Attendance and Performance System (PCAPS), operated by the city's afterschool administrative entity, currently the Philadelphia Health Management Corporation. The potential exists to link both PCAPS and data from the School District

of Philadelphia with the city's developing data warehouse, CARES, which includes youth and family case management information from Philadelphia's social service agencies.

- In Antioch, Calif., the Youth Intervention Network partnered with AJW, Inc., and the city to conduct a study of youth ages 13-18 using cross-agency data to identify at-risk students and provide a variety of wraparound services. Youth truancy and student disengagement were the top two indicators of likelihood to commit or become victims of violence. Among the results of this initiative was a 79 percent reduction in truancy.

NLC will provide a number of resources on integrated data systems throughout 2012 and through our website at www.nlc.org/iyef. For a useful overview of this topic, see the publication, *Connecting the Dots: The Promise of Integrated Data Systems for Policy Analysis and Systems Reform*, developed in 2010 by the Intelligence for Social Policy initiative at the University of Pennsylvania at www.ispc.upenn.edu.



CITY EXAMPLE:

HARTFORD CONNECTS AT-RISK YOUTH WITH SUMMER EMPLOYMENT

The Hartford Peacebuilders initiative is a "boots on the ground" violence intervention program that uses a risk assessment to identify young people who are likely to either perpetrate or be a victim of violence. These youth are, as closely as the programs that work in Hartford's neighborhoods can determine, the ones who are most likely to be catalysts for trouble – the "shot callers."

Increasing the number of these youth who apply for and receive summer employment through the Capital Workforce Partners (the local workforce investment board) has been a multi-year priority for the city's Office of Youth Services. Both Capital Workforce Partners and the Peacebuilders are members of Hartford Connects, the city's multi-agency integrated data system.

In 2010, the Office of Youth Services sent 400 applications for summer employment to the Peacebuilders to be distributed to the youth with whom they worked. That fall, city staff used the Hartford Connects database to match the Peacebuilders case files against the city's summer employment program records and estimate what percentage received a job. This was "great information to have," said Rachel Botts, the city's former program performance manager, and led to a focused conversation. "We need to improve this figure next year. We really need you guys to make a push. What are the barriers to your kids getting a job?" Botts asked her partners at Peacebuilders.

There were some barriers, it turned out. In early 2011, the Office of Youth Services hosted an "employability day" where they opened up city hall to local youth seeking work. Youth services staff negotiated with the Hartford Public Schools to have district staff present to print out transcripts. The Hartford Bureau of Vital Records modified its requirements so that as long as youth could bring a photocopy of their parent's ID with

(Continued)

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their parent's signature on an application, they could receive a birth certificate and Social Security card. The youth on file with the Peacebuilders received a flash drive with these applications and résumé templates months in advance, along with access to the summer jobs application several days in advance of the rest of the community.

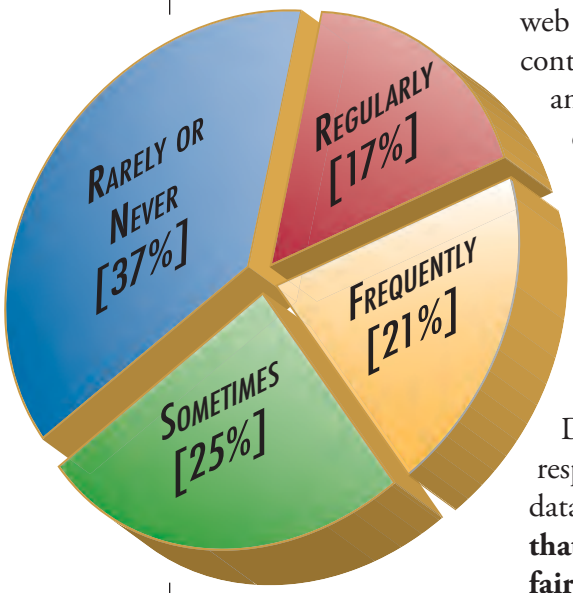
That fall, the Office of Youth Services again debriefed the Peacebuilders. This time, they used Hartford Connects to gather information on the success of each individual Peacebuilders case to analyze how many of the initiative's youth were eligible for summer employment, how many applied, and how many of the applications were complete – by name and by case worker. The information helped them answer questions about what challenges affecting those specific youth made it so difficult to get them a summer job and how next year could be different.

Moving forward, the Office of Youth Services, now integrated into Hartford's Department of Families, Children, Youth, and Recreation, is working with Capital Workforce Partners to go even a step further: to notify Peacebuilders every time one of the youth on their case files submits an incomplete job application, while there is still time to fix the problem.

SECTION 3:
DATA STEWARDSHIP: HOW TO PROTECT AND SHARE INFORMATION

Afterschool management information systems process and store a tremendous amount of information on youth participants. Among the crucial responsibilities of an MI administrator is to assure students, parents, and each of the project partners that he or she is a responsible steward of this sensitive information. In practice, this means providing guarantees that the data in the system are "fit for purpose" and that every reasonable precaution has been taken to prevent their misuse.

Chart 5. Information sharing between city coordinating entities and schools



Among the cities surveyed by NLC in 2011, two-thirds of city coordinating entities share information with public schools.

The specific permissions and prohibitions governing the collection and use of data by an MI system are defined by an overlapping web of federal and state laws, the most prominent of which in the context of afterschool programs is the Family Educational Rights and Privacy Act (FERPA).[1] Untangling the specific application of these laws is not always straightforward.[2]

However, city leaders undertaking this effort should be encouraged by the success of their peers: 67 percent of the cities surveyed by NLC in 2011 have established a framework for sharing information among youth service organizations and schools. Local officials may also be encouraged by the recent FERPA rules issued by the U.S. Department of Education (described on page 45), which responded to some of the most common objections to expanding data sharing relationships with local education agencies. **Cities that can demonstrate a commitment to the principles of fair information practices, that are familiar with how these practices have been embedded in federal law, and that are committed to building trust with school and other information partners can expect to be successful in negotiating access to the data necessary to support their work.**

[1] Depending on the type of youth information being shared and how it would be used, other federal laws such as the Health Insurance Portability and Accountability Act (HIPAA) may apply. For a much more detailed description of the interaction of state and federal privacy laws, see the review by Professor John Petrila referenced on page 48 and available through the Intelligence for Social Policy website at www.ispc.upenn.edu.

[2] Though the legal framework for information privacy is complex and changing, it is grounded in a set of international principles that have remained fairly consistent for 40 years and which provide the foundation of privacy law in the United States. These principles are included in Appendix A.

The Family Educational Rights and Privacy Act (FERPA), section 444 of the federal General Education Provisions Act (GEPA), governs the confidentiality and permitted uses of educational records. In the absence of a more restrictive state statute, this law's provisions determine whether and with whom schools can share student information. FERPA applies to any recipient of funds from the U.S. Department of Education, including local and state education agencies but generally excluding private and parochial schools.

Afterschool providers, city coordinating entities, and third-party program evaluators all fall outside of the list of organizations generally permitted access to student records by FERPA.[3] At least three strategies are available to cities seeking to work within or around this prohibition, however, depending on how the partners intend to use student information:

1. partnering with schools to conduct afterschool evaluations;
2. negotiating designation as an "agent" of the schools to access student information; and
3. requesting prior written permission from each student's parent or guardian to share academic information with providers.

The first two strategies – school-based evaluation and designation as a FERPA-defined "agent" of the schools – are most useful for evaluating programs and overall youth outcomes. These strategies may, for example, allow for a comparison of youth participating in afterschool programs to the general student population and cohorts of non-participating youth.

On the other hand, if the afterschool partnership would like to allow providers access to individual student data for purposes of case management on a day-to-day basis, prior written consent from each student's parent or guardian is required. These three strategies are not mutually exclusive, and each is described in more detail below.

1. Have Schools Analyze Student Data (School-Based Evaluation)

Schools may share information on youth outcomes if it is reported in such a way that no individual student's performance can be determined (see page 48 for a list of information that can be shared). This stipulation permits schools to share data on the performance of their students by cohort, including by school, class, demographic characteristic, or – if they so choose – by participation in afterschool programming. Several citywide afterschool systems, including those in Grand Rapids, Mich., and Nashville, Tenn., are either funding or considering whether to fund a research position within the public schools to serve as a liaison to citywide afterschool partners and conduct this kind of analysis "from inside the FERPA firewall." While this strategy can be very effective, it may not be feasible in cases where afterschool program participants attend multiple school districts or where those school districts are themselves resource-constrained.

[3] Individuals and organizations permitted by default to access student records include students, parents, school officials with a legitimate educational interest, schools to which a student is transferring, parties such as banks connected to student financial aid, accrediting organizations, and state and local authorities pursuant to state law or as related to a health emergency or judicial order.

2. Designate a City Coordinating Entity as an Agent of the Schools (Access to Student Records Without Consent)

Federal regulations (CFR Title 34 § 99.31) define the conditions under which schools may release student records without the prior consent of parents or students, including for purposes of "audit, evaluation, or enforcement or compliance activity" related to education programs, including afterschool programs with an educational focus (see page 48). To quality for this exemption from FERPA, the recipient must qualify as an "authorized representative" of the schools, enter into a written agreement that governs the protection and use of the student data, and identify the local, state or federal law that calls for the audit, evaluation, or compliance activity.[4]

Authorized representatives can include independent consultants, university centers, or city coordinating entities, provided they have executed a written agreement with the agency that addresses the elements described below. **Until recently, FERPA was interpreted as requiring the education agency to have "direct control" over those it authorized to have access to individual student information, and this interpretation limited researchers to being employees or contractors working onsite. A December 2011 rule issued by the U.S. Department of Education eliminated this requirement.**

The written agreement between the schools and their representatives must include, at a minimum:

- Clear designation of the individual or entity being authorized;
- A catalog of specific personally identifiable information (PII) to be disclosed;
- Identification of the purpose for the which the FERPA exemption is being claimed and a description of the activities in sufficient detail to confirm that it is legitimate and could not be accomplished without the disclosure of PII;
- A description of the purpose, scope, and duration of the study;
- The terms under which PII will eventually be returned to the agency or destroyed by the representative, including a timeframe according to which this will be accomplished; and
- Policies and procedures to ensure that PII is not intentionally or accidentally redisclosed or used for any purpose not explicitly permitted in this written agreement.

3. Obtain Permission from Parents (Prior Written Consent)

To inform day-to-day decision making and to share academic information with afterschool providers about individual students, most citywide afterschool systems ask parents and guardians to provide written consent for schools to share information with afterschool

[4] Under this exception, FERPA does not forbid the sharing of student information without consent, but the local or state education agency will have to determine whether it has reason to undertake one of those activities.

providers. Cities generally renew this consent annually, though there are no general prohibitions against requesting consent to share information for two or more years.

Parents' permission can be collected by providers during enrollment or by schools during student registration, and most MI systems will provide a "flag" for each individual student that indicates whether or not this permission has been granted. The consent form provided to parents and guardians should include a list of the specific PII that may be disclosed, should state the purpose of the disclosure, and should clearly identify the organizations (or class of organization) to whom the disclosure may be made.

NEW FERPA RULEMAKING

In December 2011, the U.S. Department of Education amended the regulations governing the implementation of FERPA, primarily to reduce perceived barriers to the appropriate sharing of information for educational purposes. Two changes are of significant interest to afterschool providers:

1. The term "Education Program" is now explicitly defined to include most afterschool programs. This change removes the possible objection that afterschool programs would not qualify for an Evaluation Exemption (using strategy #2 on page 46).

The fine print: Education Programs are defined as any programs that are principally engaged in the provision of education, including, but not limited to, early childhood education, elementary and secondary education, postsecondary education, special education, job training, career and technical education, and adult education, regardless of whether the program is administered by an educational authority. The rulemaking explicitly includes educational programs conducted by correctional and juvenile justice facilitates, dropout prevention and recovery programs, afterschool programs dedicated to enhancing academic achievement, and high school equivalency programs, "regardless of where or by whom they are administered." However, the rulemaking excludes programs that are principally engaged in recreation and entertainment (so-called "gym and swim").[5]

2. Authorized Representatives no longer need to be under the "direct control" (and supervision) of the schools.

The fine print: Authorized Representatives are defined generally as any entities or individuals designated by a state or local educational authority or an agency headed by an official listed in CFR Title 34 § 99.31(a)(3) – the Secretary of Education, the Comptroller General of the United States, or the Attorney General of the United States – to conduct, with respect to federal or state-supported education programs, any audit, evaluation, or compliance or enforcement activity in connection with federal legal requirements related to those programs. The incorrect interpretation by many education agency legal counsels that this representative must be under the "direct control" of the authorizing agency and therefore limited to agency staff and direct contractors has been clarified by the recent FERPA rulemaking; there is no such requirement.

[5] Page 75614 of the Federal Register, Vol. 76, no. 232 issued Friday, December 2, 2011. http://www.gpo.gov/fdsys/pkg/FR-2011-12-02/pdf/2011-30683.pdf

FREQUENTLY ASKED QUESTIONS AND FEDERAL PRIVACY RESOURCES

FAQ: What is "directory information?"

FERPA permits very general information – so-called "directory information" – about students to be shared without student consent. This information includes their name, address, phone number and email address, dates of attendance, degrees awarded, enrollment status and major field of study. Institutions must notify students that the release of this information is permitted and provide them with an opportunity to opt out of having their directory information shared. This directory information does not include information on student behavior or academic outcomes, however, and may be of little or no use in evaluating the effectiveness of afterschool programs.

FAQ: What are "reasonable methods" to protect educational data?

FERPA requires that education agencies take all "reasonable methods" to ensure that student information is protected and used by its agents only for specifically authorized purposes. The U.S. Department of Education declined to define these purposes exactly, but provided a list of best practices in Appendix A of the December 2011 rulemaking. These practices include obtaining assurances against redisclosure, setting clear expectations around data destruction, maintaining a right to audit, verifying the existence of a data security plan, and ensuring the existence of a data stewardship plan (clear internal policies and procedures).

Further Privacy Resources:

- **Privacy and Technical Assistance Center (PTAC)**

  In April 2011, the U.S. Department of Education hired its first chief privacy officer (CPO), Kathleen Styles. The CPO heads PTAC, which offers a growing selection of technical papers and webinars on data privacy and security matters at http://www2.ed.gov/ptac.

- **Basic Concepts and Definitions for Privacy and Confidentiality in Student Education Records**

  This technical brief from PTAC describes the basic concepts and legal framework governing the release of student information. Several model memoranda of understanding are available through the U.S. Department of Education website at http://www2.ed.gov/about/offices/list/ovae/pi/cte/uiferpa.html.

- **Legal Issues in the Use of Electronic Data Systems for Social Science Research**

  Professor John Petrila of the University of South Florida provides an excellent overview of the laws and legal issues involved in sharing and using individual information, with an emphasis on research uses. Further information is available through the Intelligence for Social Policy project underway at the University of Pennsylvania at http://www.ispc.upenn.edu/.

SECURITY

Security is the enforcement of a privacy agreement. The assurances made to students, parents, and data partners that their confidentiality will be protected are only as credible as the ability of the coordinating entity to enforce them, and the trust between local partners can be permanently broken by negligence, malfeasance or the unauthorized redisclosure of private information. Management information systems present a new set of risks, in this regard, but also provide a set of tools for managing these risks.

Negligence is at the root of most security breaches. For example, in late 2011, the Wakulla County School District in Florida accidentally published the FCAT scores and Social Security numbers of 2,400 students to an open web server. Parents discovered the problem when one of them used Google to search for their child's name. In another recent incident, boxes filled with student information, including applications for free and reduced price school meals that contained financial information, were left in the garbage by a cleaning crew at an elementary schools in Santa Maria, Calif. It is not uncommon for laptop computers and thumb drives filled with unencrypted student files to go missing.

Malfeasance and the deliberate redisclosure of private information present further risks for a coordinating entity to manage. Website and network hacking attempts are frequently opportunistic attempts to exploit badly maintained technology, but MI systems may also be deliberately targeted. Last year, students hacked a school district's administrative record system in Blairsville, Pa., and downloaded teachers' addresses, salaries and Social Security numbers. Furthermore, deliberate redisclosure of student information by staff or any "authorized representative" of an education agency is a serious breach of the law that will be investigated by the U.S. Department of Education's Family Policy Compliance Office (FPCO). A finding by FPCO that a researcher or city coordinating entity working with the schools redisclosed student information in violation of FERPA carries at least a five-year ban on the receipt of any further private student data. If a compliance manager with access to the MI system were to share individual student academic information with providers without having received permission from parents, for example, the resulting FPCO enforcement could forbid the schools from sharing information with the coordinating entity for half a decade.

To avoid these problems and protect the city's and coordinating entity's reputations, city leaders often provide the following safeguards:

Create a Security Policy and Implement Internal Controls

City coordinating entities often begin by taking an inventory of all of the sensitive and private information that is, or will be, stored and processed by the organization. Providing ongoing training to staff will make them aware of what can and cannot be shared with whom and under what circumstances. Cities must also implement policies to reduce or eliminate negligence, such as ensuring that any student data emailed or kept on personal computers is encrypted. Finally, it is important to develop a protocol for handling breaches. This protocol should include clear guidance on how to identify the problem, who to inform,

and what information to share. This security policy should be periodically reviewed by the organization's board or data governance committee.

Further resources on data security include:

- *Data Stewardship: Managing Personally Identifiable Information in Electronic Student Education Records*, a publication of the National Center for Education Statistics that is available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2011602
- The Data Security Policy of the United Way of Greater Rochester (N.Y.), which is available online at www.nlc.org/afterschoolmis

SECURE EMAIL AND FILE TRANSFER

System administrators often need to download, manipulate and distribute participant information for a variety of reasons: at the request of a program manager, to verify the completeness and accuracy of provider information, to develop grant proposals, or to report to funders. These spreadsheets – which may contain sensitive or confidential information – are sent in the clear (i.e., not encrypted) to colleagues and forwarded according to the discretion of the recipient(s).

There are at least two solutions to this problem:

- First, consider using secure email. Elizabeth Ramsay Marchese, manager of quality assurance for the United Way of Greater Rochester, suggests using a security tool that encrypts the entire email message and any attachments and prevents any third party from intercepting or later accessing the contents of the email.
- Encrypt the data file before transferring it. When the Jacksonville Children's Commission requests student information from Duval County Public Schools, SAMIS Senior Manager Juan Ruiz encrypts and emails a spreadsheet of all of the student participants for which the commission is seeking information to his colleagues at the district. The document returned by the district is also encrypted. One freely available file encryption tool is the PGP algorithm available through www.openpgp.org.

Youth information is much more secure in a management information system than it is on a computer desktop, on a flash drive, or attached to an email. Encrypting these data when it is away from "home" is a best practice.

Require Security Assurances from all MI System Vendors

The first threshold for any MI system is whether it can provide different levels of access to information to different system users: administrators, agency heads, program managers, and site staff. The configuration of these "role-based" permissions will be slightly different in every organization. However, it is crucial that the permission levels are carefully defined and that the vendor can accommodate them. Vendors should provide evidence that their system is secure from electronic attack, including information on the facility that hosts their servers and

the most recent audit of their security systems. Ideally, all data hosted by the MIS would be encrypted not only in transit – between the web server and the web browser – but also when it is "at rest" on disk. Finally, the vendor should provide a disaster recovery policy that outlines its procedures with regard to data breaches, application failures, and natural disasters.

Audit

Schools and other organizations that agree to provide information to a citywide afterschool system may request that one or both of the coordinating entity and its MIS vendor undergo a security audit. If not, the city or the coordinating entity should consider contracting for this service anyway. The audit should include a review of the organization's internal controls (its security policy). It should also, ideally, include two types of penetration testing: one attempt to hack the database from outside of the network and a second attempt using a guest account to "escalate privileges" and access information outside the scope of that user role. Reputable MI system providers are extremely security conscious and they should welcome this scrutiny.

Chambers of commerce and local nonprofits such as the United Way may be able to provide a recommendation for a good network security firm, many of which are regional. Credentials are not a guarantee of quality, but the number and proportion of the firm's employees certified as Information Systems Security Professionals can be an indicator of quality. More important is the standard the firm will use to evaluate an organization's security precautions and whether they have expertise in the privacy and security laws relevant to your data (such as FERPA). The Privacy and Technical Assistance Center's (PTAC) Data Security Checklist can be a helpful resource for developing a data security plan and is available at http://www2.ed.gov/policy/gen/guid/ptac/checklist.html.

"A tremendous amount of protected student information changes hands now, passed directly between teachers, principals and program officers informally, and stored in a variety of electronic and physical settings without much thought to security."

In a final analysis, the growth of student data systems – and out-of-school time MI systems among them – is likely to protect student privacy more than endanger it. A tremendous amount of protected student information changes hands now, passed directly between teachers, principals and program officers informally, and stored in a variety of electronic and physical settings without much thought to security. Teachers and afterschool program managers have every reason to share information on the youth they both serve. Data security is a major concern to schools, however, as many districts ratchet down their control over student information and replace these "ad hoc" teacher-provider relationships with formal agreements that meet the standard of federal and state privacy laws.

CITY EXAMPLE:

GOVERNING AND USING DATA IN GRAND RAPIDS

Believe2Become (B2B) is a place-based strategy in Grand Rapids, Mich., to close the achievement gap for 15,000 young people that live in four relatively disadvantaged areas of the city, dubbed "hope zones" (for more information, visit http://www.believe2become.org/).

Two years ago, the DeVos Foundation piloted a management information system provided by nFocus to support the initiative's summer learning programs. nFocus' KidTrax system helps to facilitate information exchange between the schools and community-based providers and provides a rich set of data on program participation and academic outcomes for evaluators (see page 32 for information on the B2B initiative's systems architecture).

To keep the providers, the MIS vendor, the local data partner, public schools and the third-party evaluators on the same page, the DeVos Foundation's research director, Edwin Hernandez, oversees no fewer than three working groups, which meet weekly or bi-weekly:

- A school-based committee that includes representatives from the Grand Rapids Public Schools (GPRS) and the Community Research Institute (CRI), the local data partner that links and de-identifies GPRS data for use by the B2B initiative and members of the evaluation team.
- An evaluation committee that includes CRI and the initiative's third-party evaluators.
- A management information committee that includes foundation staff, the MIS vendor (nFocus), and CRI, and that troubleshoots technical and provider issues. The DeVos Foundation is also encouraging the development of an MIS users peer group.

The number, structure and composition of data governance groups will vary according to the partners at the table in each community and the specific goals of the afterschool initiative. The example of Grand Rapids provides what Dr. Hernandez understatedly describes as a "robust" approach to managing these informational tasks.

6 Security standards include the National Institute of Standards and Technology (NIST) guidelines, the International Standards Organization's (ISO) 27001 framework on Information Security Management, and the National Security Agency's (NSA) Information Assurance Directorate.

SECTION 4: SELECTING A COMMERCIAL MIS

While a few notable citywide afterschool systems are supported by self-developed software, the majority of afterschool management information systems are built by a handful of commercial vendors. Most of these companies were incorporated in the 1990s, and they vary in size from having less than two dozen employees to more than 100. The smallest company serves several hundred thousand children while the larger ones manage several million youth records.

In January 2012, NLC issued a request for information (RFI) to eight MI system vendors asking for detailed product specifications in each of the approximately 10 domains listed below in the "MI System Feature Comparison" section. City leaders are encouraged to download the edited version of this RFI from www.nlc.org/afterschoolmis and adapt it as part of their own RFI/RFP process.

In some respects, the products developed by these companies are similar to one another. Each is sold using a Software as a Service (Saas) model, with the software and data hosted offsite and made available to cities, providers, and programs through the Internet. This model frees clients from managing desktop software and servers, and it is scalable within the complex environment of a citywide afterschool system. Most of these products provide similar functionality around enrolling youth, tracking program attendance, and executing surveys, assessments, and reports.

The companies surveyed by NLC for this report compete with one another not only on price, but also on the sophistication of the consultation, project management, and customer service they are able to offer to cities and other clients. The scope of their services differs, with some companies tailoring their product to an afterschool environment while others more easily incorporate information and work routines from other youth-serving agencies such as social services and workforce development. Some have domains in which they are particularly experienced, such as the transition from early education to school-aged afterschool, while others provide advanced functionality around grant management, systems integration, case work, reporting, or mobile applications.

Disclaimer

While the author has taken every effort to ensure this information is accurate as of early 2012, these products are complex and fast-developing. NLC strongly encourages city leaders to contact these companies directly to discuss their specific needs and to verify the information presented in this report. NLC does not endorse any of these software applications. The "best fit" for a city or youth-serving agency depends on its specific business case, its budget, and the local expertise available to it.

CITYSPAN TECHNOLOGIES, INC.

Web: www.cityspan.com
Located: Berkeley, Calif.
Founded: 1994

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Cityspan Technologies provides products tailored to the requirements of 21st Century Community Learning Centers, Supplemental Educational Services (SES), and Gear Up programs, as well as more general citywide and longitudinal data systems. The company's software is often known under the product name Youthservices.net.

Cityspan's depth of experience with city leaders and school information systems is invaluable. The company is an accomplished back-end systems integrator and data warehouse manager. These features and Cityspan's competitive price have led to its adoption by several of the country's largest cities and school districts.

Cities with sophisticated needs for control over the front-end interface and for complex in-line reporting flexibility should carefully evaluate whether and how Cityspan can meet these needs.

COMET INFORMATICS

Web: www.comet4children.com
Located: Pittsford, N.Y.
Founded: 2011

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serge@sophitec.com

COMET is a more recent entrant to the market, having grown out of a partnership between the Children's Institute in Rochester, N.Y., and the technology company SophiTEC. Despite its youth, COMET is a fairly comprehensive platform that supports longitudinal data warehousing and real-time information sharing at approximately 1,000 sites managed by government agencies, community-based organizations and school districts.

The Rochester Children's Institute has contributed its professional expertise to the development of COMET, particularly around the software's use by programs serving pre-kindergarten and younger, school-aged children. COMET features a strong set of youth assessments, intelligently integrated into the MI system's reporting routines, as well as some thoughtful approaches to tasks such as soliciting feedback from external stakeholders and sharing data with student information systems.

COMET may not have the same depth or breadth of options for case management, roster of add-ons such as provider directories and advanced reporting features, or sufficient scale to provide the training options offered by several of the leading MI system providers. It may, however, be an innovative and competitive option for many applications.

COMMUNITY TECHKNOWLEGE

"CTK" manages two hosted services: Apricot and the Community Impact Online Data Manager (CI-ODM). In 2013, the two will be merged into a single platform.

Apricot is a flexible client and case management package for smaller organizations that includes a set of volunteer management, outcomes tracking, and donor management tools.

CI-ODM is designed for funders such as United Way or city agencies, and includes the functionality of Apricot as well as a built-in grant management module that manages the application, review and reporting life cycle.

Unlike the other five companies reviewed in this report, Community TechKnowledge prices CI-ODM according to the budget of the organization/initiative purchasing it, rather than the number of agencies and sites.

CTK Community TechKnowledge
Technology with a Heart™

Web: www.communitytech.net
Located: Austin, Texas
Founded: 1999

For more information:
Patrick Wicker
Director of Sales & Marketing
(o) 512.345.9090 x120
pwicker@communitytech.net

NFOCUS SOLUTIONS

The company nFocus recently changed the second word in its name from "Software" to "Solutions" to reflect the broad role it has taken in helping public sector organizations integrate and use data to drive better results. Its Community Server and Community Compass products have expanded nFocus' capacity to support multi-agency sharing and online public directories, respectively, while the "Trax" software remains the company's core product for managing enrollment and attendance at afterschool and other out-of-school time programs.

nFocus SOLUTIONS bridging the gap

Web: www.nfocus.com
Located: Austin, Texas
Founded: 1994

For more information:
Richard Wells
Business Development Manager
(o) 512.276.2070 x103
rwells@nFocus.com

nFocus is especially experienced and innovative around the mechanics of tracking program attendance: the software license includes a bar code scanner, and mobile apps and scanners are available for remote or under-resourced sites. nFocus is also experienced with negotiating data sharing arrangements with K-12 schools, and it is developing a growing range of solutions for payment, case management, and grant management.

As with Social Solutions' ETO platform (see below), cities are likely to pay a premium for this flexibility – especially in "up front" costs. Cities with sophisticated needs around case and grant management across an array of public agencies will need to assess nFocus' capabilities in this area more carefully, while youth-serving organizations will appreciate the company's very strong offerings in these areas.

SOCIAL SOLUTIONS (EFFORTS TO OUTCOMES)

Social Solutions
transforming human services

Web: www.socialsolutions.com
Located: Baltimore, Md.
Founded: 1999

For more information:
Adrian Bordone
Co-Founder
o: 443.460.3383
adrian@socialsolutions.com

Social Solutions is the largest of the companies reviewed in this report and its products serve the broadest range of agencies. The "Efforts to Outcomes (ETO)" platform supports youth-serving programs, workforce agencies, as well as public and private organizations in the areas of housing, health, and education.

ETO includes case management tools as a central feature of the software's approach to linking program activities to results, part of Social Solutions' implementation of the "Results-Based Accountability (RBA)" framework. The software's very well-developed reporting framework features an option to use the new RBA Scorecard product, business intelligence tools, and to integrate ETO data into Microsoft Live Office documents. ETO is a flexible product, and it includes a great number of template tools and resources made available through its PerformWell partnership as well as configurability to support tiered citywide partnerships across agencies.

As might be expected, all of this functionality does not come cheap. Cities with narrower needs may find that a system that does less is a more appropriate and easily implemented match, while those developing broad multi-agency partnerships will appreciate ETO's extensibility.

THOMASKELLY SOFTWARE

ThomasKelly Software provides a suite of web-based solutions to manage registration, attendance, evaluation and reporting for afterschool and extended care programs. Their afterschool solution meets the requirements for grant-funded programs, including the 21st Century Community Learning Centers. The extended care solution includes billing and payment features for summer camps and extended care. These two solutions can be bridged to offer a comprehensive solution for a city that has grant-funded as well as fee-based programs.

EZReports
Web-based After School Reporting System

Web: www.thomaskelly.com
Located: Houston, Texas
Founded: 1996

For more information:
Felix Thomas
President
(o) 281.565.1460
sales@thomaskelly.com

The company's leading product, EZReports, has a workflow that is very well-tailored to the grant management and evaluation tasks associated with these programs, with a clean interface and well-customized reports. While ThomasKelly Software has adapted this workflow to support several municipal customers, city leaders may wish to carefully evaluate whether the workflow meets their needs as ably as it does those of state clients.

Other MI Systems

Of the commercial MI systems in use by cities surveyed by NLC for this report, two opted not to submit a full response to our request for information.

Cayen Systems www.cayen.net	**CiviCore** www.civicore.com
Cayen is among the larger commercial providers of online data management solutions for schools and nonprofit organizations. As with several of the other vendors surveyed by NLC, it offers specific products aimed at 21st Century Community Learning Centers, SES programs, and Gear Up. The company has extensive experience building data sharing relationships with schools and working with city leaders to implement community-wide information systems.	CiviCore's products include community mapping applications, a giving platform, and client relationship management packages for national volunteer and mentorship programs. Though it is not strictly an afterschool MI system provider, CiviCore is developing the software for Denver's citywide Community Partnership System, and it has both the platform and evaluation and systems integration experience to build custom solutions for other cities with specific needs.

MI SYSTEM FEATURE COMPARISON

City leaders should, of course, consult their own requirements when soliciting proposals and exercise due diligence in verifying the accuracy of each product's claims. This report provides a high-level starting point for that comparison, but it does not describe the nuances of each MI system's features and implementation – and those nuances are important.

Enrollment, Attendance and Participation

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Take attendance using rosters, PCs and mobile devices	√	√	√	√	√	√
Track youth participation by activity	√	√	√	√	√	√
Group students, guardians together as "households"	√	√	√	√	√	√
Integrate with card readers and scanners	√	√	√	CUSTOM	√	√
Allow batch import from spreadsheets/ other applications	√	√	√	√	√	NO

All of these products have similar "basic" attendance functions: they can print attendance rosters, accept input from personal computers and mobile devices, and can track student attendance by activity so that cities can conduct more detailed analyses of youth participation. Each of them can also group students together with parents and guardians to form households for communications and reporting purposes.

The functionality of these MI systems varies when it comes to how closely they integrate with scanners and swipe card systems and to what degree they allow the batch import from

spreadsheets and other software solutions. Several support only selected web browsers and operating systems, generally requiring later versions of Internet Explorer on Windows platforms.

Advanced features available from some MI systems include the support of electronic signatures (for logging participation in billable activities), custom-built apps for smartphones and tablets, and mobile hand-held scanners for remote or computer-free facilities.

Case Management

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Record individual youth service plans and set milestones	√	CUSTOM	√	√	√	√
Track interactions between staff and youth/ clients	√	√	√	√	√	√
Facilitate referrals among organizations that use MIS	√	NO	√	√	√	NO
Facilitate referrals to external organizations	√	NO	√	√	√	NO

For MI systems that offer case management functionality, the ability to track youth-staff interactions, file notes on individual youth, and create youth service plans and milestones are standard issue, though the sophistication of how these functions are implemented can vary greatly. Cityspan charges a nominal setup and project management fee to enable case management, while nFocus charges a per-site license and maintenance service agreement (MSA) fee. ETO's "Point of Service" attendance and case management tool is included in the cost of the product.

While all of the systems that support case management include a "referral" function, only three support referrals to organizations outside of the MI system, generally by email. These referral routines vary in sophistication, particularly in how they "close the loop" on whether youth referred for service are accepted and treated. In some cases, companies can build in a "ticketing" system for issuing and tracking referrals to external organizations.

Agency, Site and Staff Management

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Record organizational characteristics (e.g., location, quality)	√	√	√	√	√	√
Track staff credentials	√	√	√	√	√	√
Associate staff with specific classes and program activities	√	√	√	√	√	√
Can publish online (public) provider directory	CUSTOM	NO	CUSTOM	NO	√	NO

All of the systems can be configured to record organizational characteristics (such as program quality, location, services, and languages spoken), to track detailed information on staff qualifications, and to associate staff with specific classes and program activities. Again, there is wide diversity in how each of these functions is accomplished that will serve some city applications better than others. Measuring staff efforts toward outcomes is central to Social Solutions' approach and workflow; these functions are built into ETO and into Cityspan, COMET, CI ODM and EZReports to varying degrees. nFocus offers a full-featured module, StaffTrax, for an additional per-site license fee and MSA.

Three of the six providers can publish online program directories. Of these, the nFocus Community Compass is the most developed product. All three companies charge an additional fee for this service.

Survey and Assessment Instruments

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Administer surveys and outcome assessments	√	√	√	√	√	√
Online distribution to non-participants (parents, teachers)	NO	√	√	√	√	NO
Responses keyed to specific recipients	NO	√	NO	√	√	NO
Administrators can create custom surveys and assessments	√	√	√	√	√	NO

Surveys and assessments are important for estimating youth development outcomes and program quality over time. For example, one set of instruments is closely associated with the requirements of the 21st Century Community Learning Centers and SES funding sources, and every afterschool MI system surveyed by NLC offers tools that meet these federal reporting requirements. Extensive libraries of additional assessments are available free of charge or for a nominal fee from many of these vendors, though some instruments must be licensed from their owner (such as the Developmental Assets Profile from the Search Institute). The size of these libraries and the type of instruments they contain vary significantly between vendors and may be an important consideration for some cities as their use will likely speed implementation, reduce startup costs, align collective effort, and leverage field-based best practices.

nFocus, COMET, CI ODM and ETO each allow administrators to build their own instruments, though sometimes complex validation requirements and data interdependencies will obligate the customer to pay for additional help. In most cases, surveys can be distributed electronically. COMET, for example, provides a simple routine to send surveys to batches of parents or teachers to solicit feedback. These surveys can be anonymous or keyed to individual recipients, and each response is entered automatically into the database.

Reporting

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Administrators can modify existing reports with new filters, elements	√	√	√	√	√	√
System administrators can create and layout new reports	√	√	√	√	√	√
Integrate with business intelligence applications (e.g., SAP)	√	CUSTOM	√	CUSTOM	CUSTOM	√
Advanced reporting features	CUSTOM	NO	√	NO	CUSTOM	NO

Reporting capabilities clearly distinguish several of these MI systems from one another. Cities may wish to consider several factors when evaluating their options, including:

- **The relevance and ease-of-use of built-in report templates and filters:** Though all of these packages are at least modestly configurable, some are weighted toward reporting on attendance, others toward youth development outcome measures relevant to federal programs, and still others toward agency performance management tasks. Cities may

find that they are best served by companies whose orientation is similar to their own. All of these companies will create additional stock reports for an hourly fee that varies between approximately $125 and $250.

- **Flexibility:** Some MI systems provide very limited ability to customize existing reports, such as selecting new filters or data elements, while others provide more sophisticated "report builders" that allow system administrators to design complicated queries and design print and web templates as they choose. Some firms allow clients live (ODBC - open database connectivity) access to their database to implement third-party business intelligence tools, while several require the client to download and transfer the data manually instead. A city's need for this flexibility may depend on how well suited the "canned" reports are for their purpose.

- **Advanced features:** Several MI systems can provide cities with a customizable "data dashboard" (an easy-to-read, graphic representation of key performance indicators), sometimes as part of a built-in business intelligence suite such as SAP BusinessObjects or Izenda. The new performance management-oriented "Results Scorecard" integrates with products from both Social Solutions and nFocus. Social Solutions can also embed its reporting within Microsoft Live Office, and its ETO Analytics package offers a variety of statistical tools for measuring the significance of youth interventions. These advanced features are a wonderful tool for city leaders who can use them, but their presence or absence is generally not among the most important reasons to select one MI system over another.

Integration with Other Data Systems

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Can import Excel, Access, XML, and text files	√	√	√	√	√	√
API allows integration with third-party applications	√	NO	√	√	√	NO
Experience negotiating access to data from K-12 schools	√	√	√	NO	√	√
Experience integrating health and human services data	NO	√	√	NO	√	NO

All of these applications can import and export data in one or more of the following formats: Microsoft Excel, Microsoft Access, XML and text files. Some can also export to PDF, Microsoft Word and HTML. Support for Excel, Access and XML is not uniform across products; city leaders may wish to check each product's functionality against their specific needs.

Several companies provide a public application programming interface (API) or "web service" that defines how other software packages can interact and share data with the MI system (without resorting to exporting and importing data files). Providing an API is a best practice and an important interoperability feature. Some products may, however, provide only one-way sharing. Clients of the nFocus Community Server, for example, can use its API to submit data to the MI system from other applications but cannot use the API to extract data.

With the exception of CI ODM, all of these companies have worked with K-12 school systems to develop data sharing arrangements. Some have negotiated just a few; others have

negotiated dozens. This breadth of experience is important because each project's purpose, set of partners, and information technology constraints is distinct, and MI system vendors provide a range of crucial consultation and problem solving services.

The cost of implementing school-afterschool data sharing can vary tremendously. Each of the companies surveyed by NLC charges a one-time setup fee that can range from several thousand dollars to several tens of thousands of dollars. Recurring charges are similarly variable. While some vendors may provide a more competitively priced service than others, in this regard, the larger determinants of cost are (a) the project's specific business case, including whether it is designed to provide real-time information sharing or periodic data warehousing; (b) the amount of consultation involved in winning the approval of city and school district leaders and their attorneys; and (c) the technological limitations of the school information system. Most companies will provide some free consulting while developing a service contract to better estimate these costs.

Among the six vendors, Social Solutions has the greatest experience integrating data from other administrative systems, including health, human services, and workforce development agencies, while the nFocus Community Server is a more recent market entrant with an impressive set of collaboration and data visualization features. Cityspan works with several of the country's largest school systems. All three of these products are currently being used to support one or more Promise Neighborhoods.

Training and Support

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Initial onsite training	√	√	√	√	√	CUSTOM
Phone support	√	√	√	√	√	√
24/7 customer service	NO	NO	CUSTOM	√	NO	NO
Live chat/ instant messaging	NO	NO	NO	√	√	NO
E-mail support	√	√	√	√	√	√
Online user discussion forums	√	NO	√	√	NO	NO
Online knowledge base/ FAQ	√	√	√	√	√	√
Free webinar series	NO	NO	√	√	√	NO

Most MI system vendors assume one or more days of on-site training will be necessary for the administrators, agency leads, and site users at the outset of a new project, charged at a daily rate. Some may substitute interactive online webinars for a lower fee.

All companies provide phone and email support during business hours, and CI ODM offers 24/7 customer service. Vendors may offer tickets for customers to track ongoing service issues and at least two, ETO and COMET, provide online portals for customers to track their service requests. Finally, all companies offer online help, several host an active user forum, and ETO, CI ODM and KidTrax provide an ongoing series of free webinars.

Additional Functionality

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Support all major web browsers	√	√	NO	NO	NO	√
Provide tools for detecting and resolving duplicates	√	√	√	√	√	√
Support longitudinal data tracking and reporting	√	√	√	√	√	√
Will allow city clients to host their own data	NO	NO	NO	NO	√	NO

Three companies require at least some system users to have specific browser/operating system combinations – usually a later version of Internet Explorer on a Windows platform. This requirement is an important consideration for cities planning to extend a system to providers with older or non-Windows personal computers.

Preventing, detecting, and merging duplicate entries is an important chore for every MI system manager, and city leaders should explore the tools that each of these companies offers to reduce the associated administrative burden. Several will use the student ID number from linked school systems, where available, to avoid this problem altogether. Most provide a configurable tool that flags possible duplicates during entry by staff. Several products also provide a "merge duplicate" function for site managers.

nFocus is the only company to permit cities to host their own data, though most of their clients follow what has become industry standard practice and opt to store their information offsite. In practice, it is usually less expensive and more secure for cities to contract with their MIS vendors to offload this responsibility and access the application "in the cloud."

Grant and Contract Management

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Can recieve grant proposals electronically	√	NO	√	√	CUSTOM	NO
Facilitate grant review process within the MIS	√	NO	√	√	CUSTOM	NO
Can build grant work plan and track progress toward outcomes	√	NO	√	√	CUSTOM	NO
Provide tools to manage communication with grantees	√	NO	√	√	CUSTOM	NO
Can load and share scanned/ electronic documents	√	√	√	√	√	NO

It is outside the scope of this report to review grant and contract management applications, which are often freestanding and provided separately from afterschool information systems. For some cities, however, the ability to integrate their review, funding, performance management and invoicing procedures is a significant priority. Three of these companies can provide this functionality, generally as an additional, linked product. For an excellent review of grant management systems, see Information Age Associates at http://www.iaa.com/resources.html.

Financial

	Cityspan	COMET	ETO	CI ODM	KidTrax	EZReports
Track fees, payment, and billing history by participant	√	NO	√	√	√	√
Generate invoices	√	NO	√	√	√	√
Integrate with a payment gateway for processing credit cards	NO	NO	NO	NO	√	√
Allow online registration by parents and youth	√	√	√	√	√	√
Integrate with accounting and billing software	NO	NO	CUSTOM	CUSTOM	CUSTOM	√

ETO, CI ODM, and nFocus can somewhat integrate with accounting packages through customizing data import and export routines. Several companies allow online registration for activities and, in the case of nFocus and EZReports, integration with merchant services for online payment. With the exception of COMET, all of these products can track customer payments and generate invoices.

COST CALCULATOR

The six companies that responded to NLC's January 2012 request for information each provided cost estimates for a generalized afterschool system, including "fixed" setup costs, training, customization, and recurring licensing costs. NLC used these estimates to provide an interactive cost calculator online at www.nlc.org/afterschoolmis.

Cities and other users can tailor their cost estimate according to the number of agencies and program sites their MIS is projected to serve, as well as by feature set. They may, for example, project the cost of sharing school data (grades, attendance and behavior) with providers through the MIS, creating a public program locator, tracking staff attendance and participation, or enabling case management and service referral functions through the MIS.

These cost estimates are in no way binding on the companies that participated, but they offer cities a reasonably good idea of the range of the fixed and recurring prices they might expect to pay for a citywide MI system, given certain parameters.

Some important factors to consider when negotiating a price with a commercial vendor include:

- **Most companies charge "per site."** Companies may base their licensure fee on their client's annual budget, number of partner agencies, afterschool sites, system users, or some combination of the four. Of these, the "per site" charge is the most common, and rates between the cheapest and most expensive varied nearly 200 percent.
- **The cost of sharing information with schools can vary tremendously.** The cost to negotiate and implement an information sharing relationship with schools is extremely difficult to predict and depends in large part on the cooperation and technical sophistication of the school district and its student information system. Under the best of circumstances, some sort of regular data exchange can be established for several thousand dollars. However, quotes of several tens of thousands of dollars to build and sustain this link were common.

- **Recurring costs matter more than startup costs.** Using NLC's model, MIS implementation, customization and training costs averaged less than 20 percent of the total five-year cost of one of these systems. While more complex systems will require a greater investment on the front end, the bulk of long-term costs to a city and its coordinating entity are a function of recurring licensure fees.

Cities should conduct an RFP process whenever feasible and to ask for detailed project budgets from applicants. The model used by NLC for this report is available online at www.nlc.org/afterschoolmis.

APPENDIX A: FAIR INFORMATION PRACTICE PRINCIPLES (FIPPS)

Information privacy is grounded in a set of international principles that have remained fairly consistent for 40 years and that provide the foundation of privacy law in the United States. As endorsed by the White House in 2011, they include:

Transparency: Organizations should be transparent and notify individuals regarding collection, use, dissemination, and maintenance of personally identifiable information (PII).

Individual Participation: Organizations should involve the individual in the process of using PII and, to the extent practicable, seek individual consent for the collection, use, dissemination, and maintenance of PII. Organizations should also provide mechanisms for appropriate access, correction, and redress regarding use of PII.

Purpose Specification: Organizations should specifically articulate the authority that permits the collection of PII and specifically articulate the purpose or purposes for which the PII is intended to be used.

Data Minimization: Organizations should only collect PII that is directly relevant and necessary to accomplish the specified purpose(s) and only retain PII for as long as is necessary to fulfill the specified purpose(s).

Use Limitation: Organizations should use PII solely for the purpose(s) specified in the notice. Sharing PII should be for a purpose compatible with the purpose for which the PII was collected.

Data Quality and Integrity: Organizations should, to the extent practicable, ensure that PII is accurate, relevant, timely, and complete.

Security: Organizations should protect PII (in all media) through appropriate security safeguards against risks such as loss, unauthorized access or use, destruction, modification, or unintended or inappropriate disclosure.

Accountability and Auditing: Organizations should be accountable for complying with these principles, providing training to all employees and contractors who use PII, and auditing the actual use of PII to demonstrate compliance with these principles and all applicable privacy protection requirements.

The FIPPs can be understood as an affirmative case for the protection of individual privacy and a description of the obligations of any organization that collects and stores this information. Federal and state privacy laws represent a minimum set of protections, not the limit of what city afterschool partners should do to protect student privacy.

For more information, see Robert Gellman's review, *Fair Information Practices: A Brief History*, at http://bobgellman.com/rg-docs/rg-FIPShistory.pdf.