



# Using Data at Park and Recreation Agencies

## **Using Data at Park & Recreation Agencies: A Summary of Key Findings from an NRPA Research Survey**

Park and recreation agencies are sources of both significant opportunity and challenge for their communities. That is, park and recreation agencies provide valuable, high-impact services that improve the lives of the people they serve. At the same time, these agencies operate under tight fiscal constraints that force them to make difficult decisions on how to optimally serve their constituents with finite resources.

In recent years, park and recreation professionals increasingly have been turning toward data analysis to help them make these decisions. The insights gleaned from data analysis help agencies make informed programming decisions for their facilities, help optimize capital expenditure budgets and support master planning. At the same time, many park and recreation agencies face the daunting challenge of identifying how to best take advantage of the great promise data can bring to their agencies.

The NRPA research team developed a 13-question survey to gain an understanding of how park and recreation agencies are embracing data today and to identify the barriers that inhibit greater use of analysis. Fifty-eight directors from urban park and recreation agencies participated in the survey, resulting in a 35 percent response rate. The key findings from the survey are the basis of this report, a preview from which was presented at the May 2016 NRPA Innovation Lab in Boston.

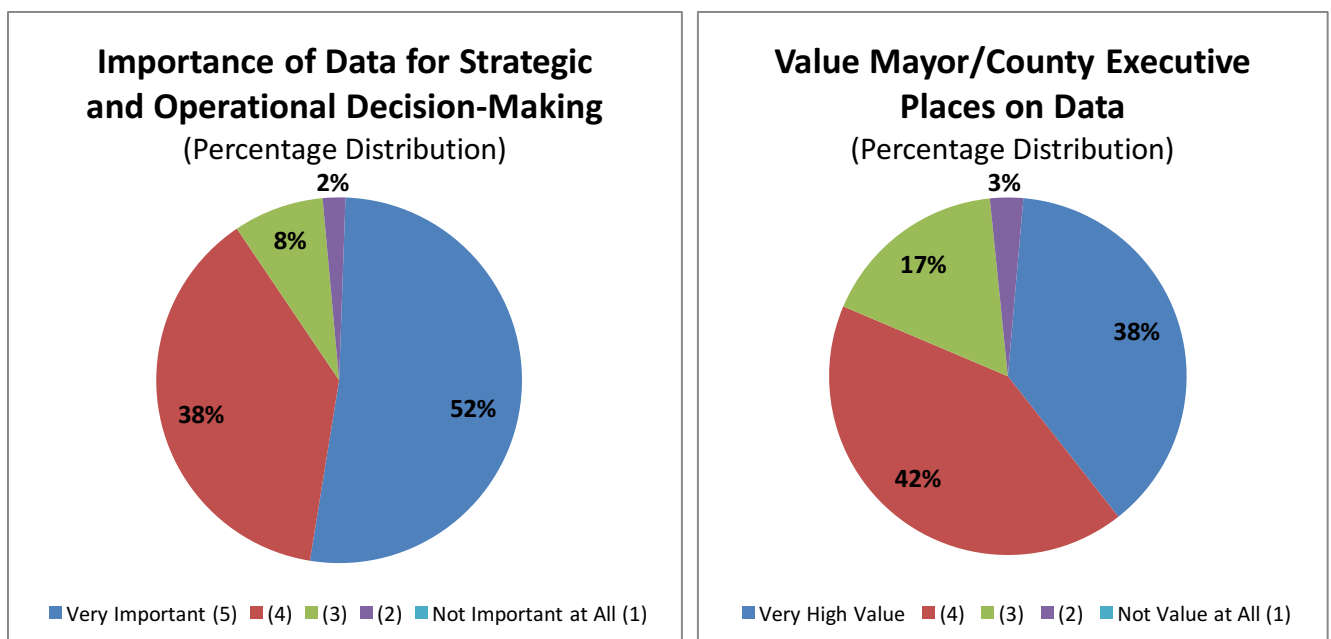
Key survey highlights include:

- Park and recreation agencies are using data to support a number of key areas, including master planning, to measure facility usage, to inform programming decisions and to support current/increased funding.
- Park and recreation agencies are using a mix of internally collected data and information from other agencies and other third-party resources.
- Much of the data analysis is performed by department/program managers, frequently with Excel as the primary analysis tool.
- Two in five park and recreation agencies currently use dashboards to share key performance metrics and other insights with stakeholders.
- Park and recreation agencies lack time, resources and internal analytical skills to conduct proper analysis and are overwhelmed by the amount of data available to them today.

## Using Data

Park and recreation professionals embrace using data for strategic and day-to-day operational decision-making at their agencies. Ninety percent of park and recreation professionals give either a 4 or 5 on a five-point scale on the level of importance of data in their agency's strategic and day-to-day operational decision-making. Conversely, only two percent indicate data is not an important contributor to their park and recreation agency's decision-making.

Data is not only highly valued at park and recreation agencies, but also by the leaders of the cities and counties where the agencies operate. Four out of five park and recreation professionals agree that the leaders of their jurisdiction place a "high" or "very high" value on using data in strategic and day-to-day operational decision-making. A mere three percent of survey respondents report that the mayor, county executive or other jurisdictional leader has little use for data in decision-making.



Park and recreation agencies turn to data analysis to support many of their key functions. Virtually all agencies currently are using data to support master planning (95 percent), while just short of nine in ten agencies use data to inform capital investment decisions (88 percent) and/or to measure usage of facilities and participation in programming (88 percent).

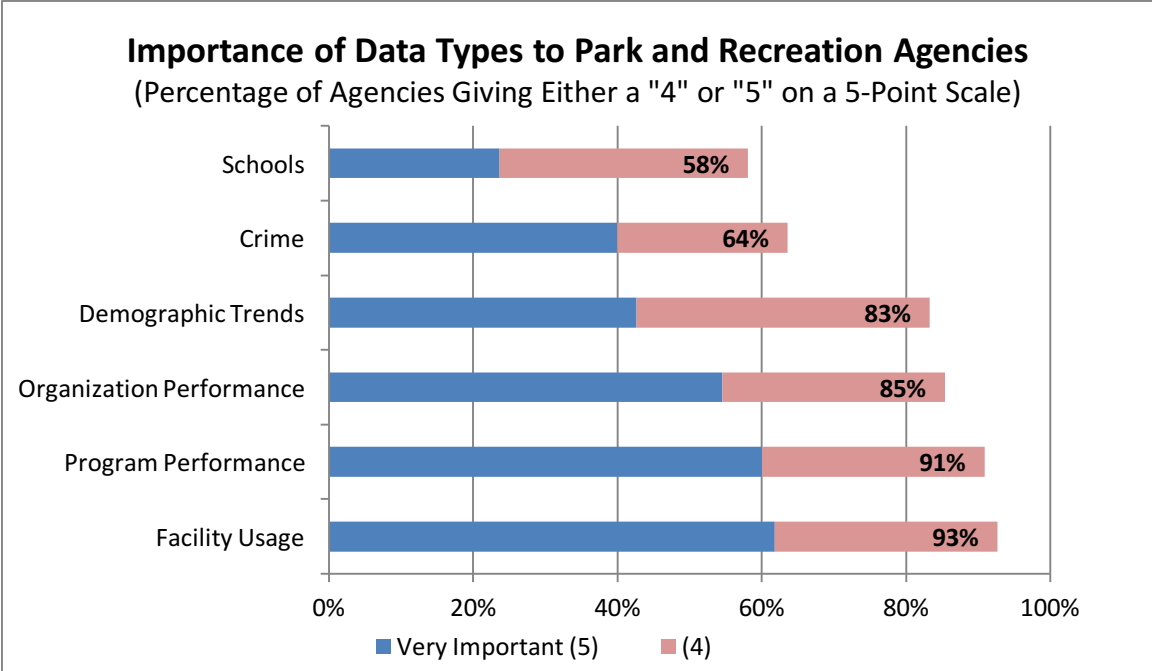
Further, four in five agencies use data to justify current/increased agency funding (82 percent) and to inform programming decisions for facilities (80 percent). Fewer agencies, albeit still significant majorities, turn to data to help with better understanding their customers and

constituents (73 percent), to highlight the positive impact their agency has on the community (71 percent) and to support human resources activities (57 percent).

**Uses of Data at Park and Recreation Agencies**  
(Percent of Agencies)

	<b>Currently use</b>	<b>Do not currently use, but plan to do so in the future</b>
To support master planning	95%	5%
To inform capital investment decisions	88	11
To measure usage of facilities and participation in programming	88	11
To justify current/increased agency funding	82	16
To inform programming decisions for our facilities	80	13
To increase understanding of customer/constituents	73	23
To highlight the positive impact the agency has on community	71	27
To support human resources on employee feedback and performance	57	30

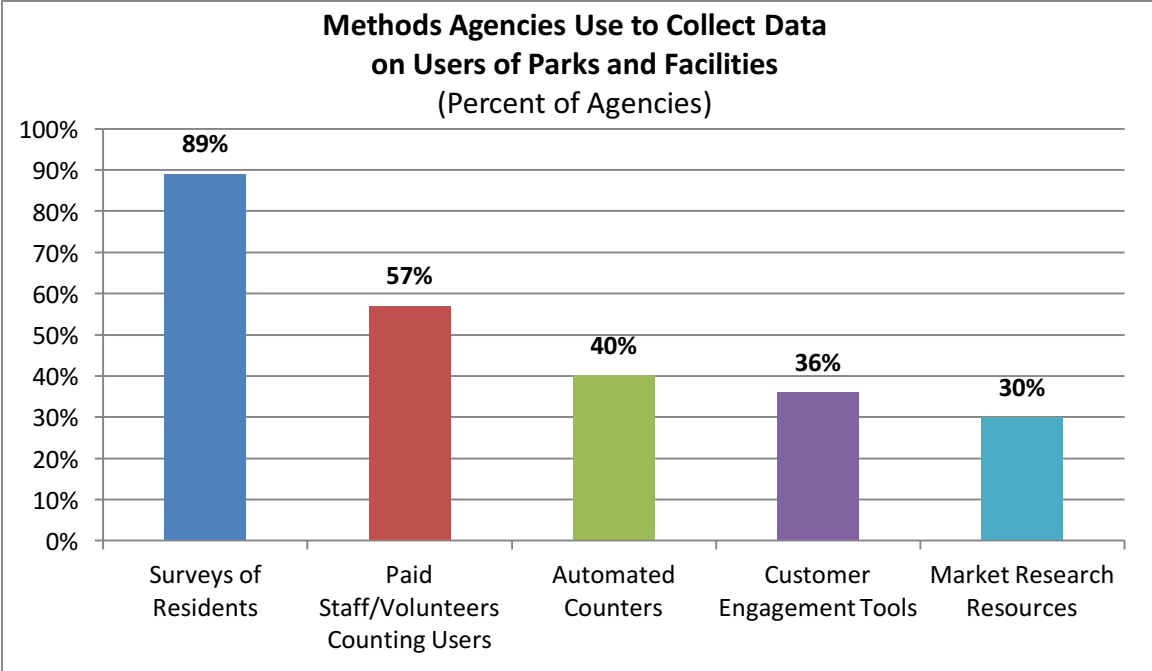
Park and recreation agencies draw data from a number of sources to inform critical decision-making. Data on facility usage and program performance both play an essential role for agencies, with 93 percent and 91 percent, respectively, of survey respondents indicating that these data are important to their agency. Furthermore, organization performance (85 percent) and demographic trends of local residents (83 percent) are either important or very important data to six of seven agencies. In addition, crime and school data are important to 64 percent and 58 percent of agencies, respectively, although one of six survey respondents say that crime and schools data are not areas that their agencies are currently tracking.



**Internal Data Collection**

Better understanding the users (and potential users) of one’s parks and facilities is an invaluable resource that leads to the most robust decision-making and enables agencies to optimize where they place their finite resources. This includes understanding who their constituents are and what are their areas of interests and their pressing needs. Examining this information informs the best opportunities for programming at current and future park facilities and helps provide a basis for decisions on where to direct future capital spending.

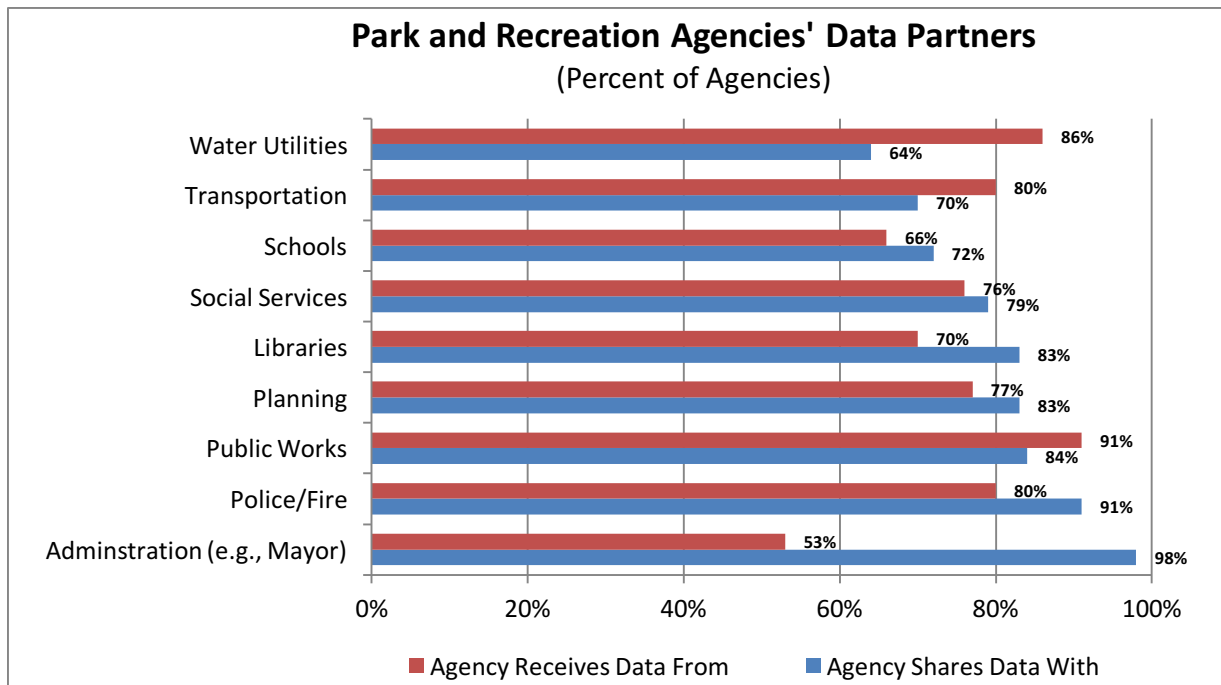
Park and recreation agencies collect data about their constituents through a variety of methods. A vast majority of agencies conduct surveys of their residents, whether collected in-house or through a third party (89 percent). In addition, agencies track the number of users of their facilities through manual processes (57 percent have staff that count users) and automated methods (40 percent). Beyond counting, park and recreation agencies use customer engagement tools that collect insights shared by their customers and tap market research data resources to better understand the demographic trends of their populace.



**Sharing with and Receiving Data from Partners**

Of all of the places from which to collect data that informs agency-wide decision-making, gaining access to data collected and maintained at other agencies within one’s own jurisdiction can be a tremendous resource for insights. At the same time, park and recreation agencies are a robust source of data that can support the mission and activities of other agencies within their city, town or county, too. Developing strong relationships with other jurisdiction agencies (e.g., public works, schools, public safety), especially when championed by the jurisdiction’s leadership, can help break down silos and defeat other challenges that can keep data from flowing from agency to agency.

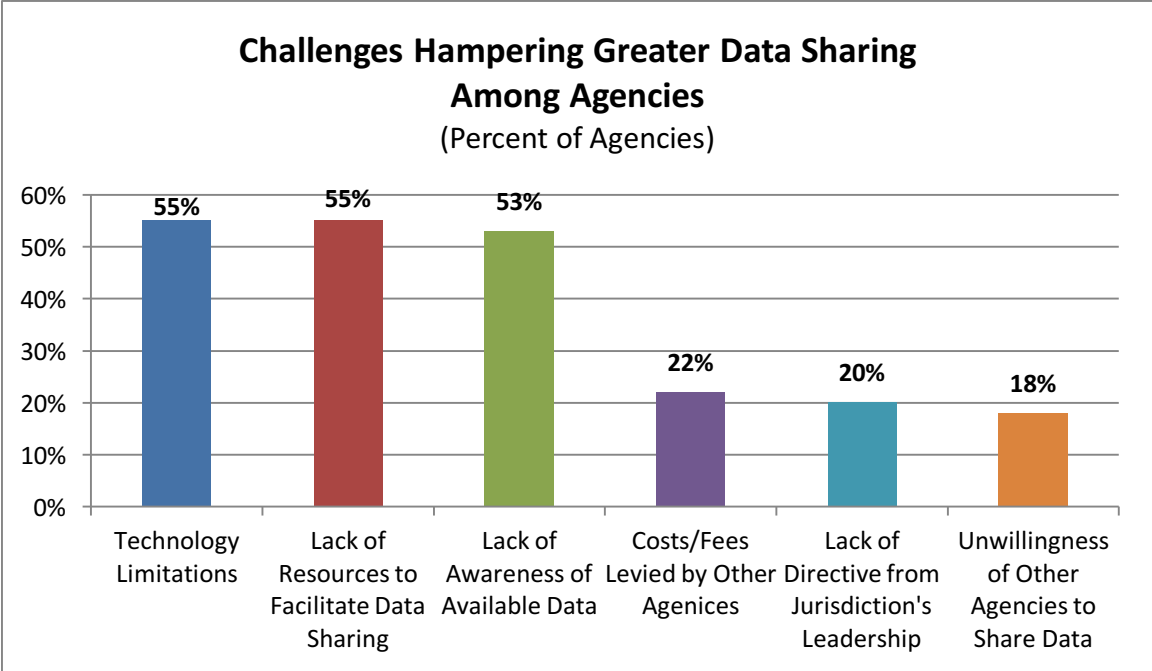
Agencies are most likely to receive data from public works (91 percent), water utilities (86 percent), police/fire (80 percent) and transportation (80 percent). Virtually all park and recreation agencies share key metrics with their jurisdiction’s administration (e.g., mayor, county executive) (98 percent). In addition, the most widely cited consumers of park and recreation agency data are police/fire (91 percent), public works (84 percent), planning (83 percent) and libraries (83 percent).



But even with the best intentions, park and recreation agencies face a number of challenges that prevent greater data sharing with other agencies and departments within their jurisdiction. Some of these are technological challenges. Fifty-five percent of park and recreation professionals indicate their agency and their jurisdiction lack sufficient resources that could enable the sharing of datasets. Further, 55 percent of agencies also face technological limitations that hamper greater data sharing, which includes incompatible data formats and systems across agencies that do not talk to each other. Another major challenge in terms of sharing data with other agencies is a general lack of awareness of the information that other agencies are already collecting that would be of interest to the park and recreation agencies (53 percent).

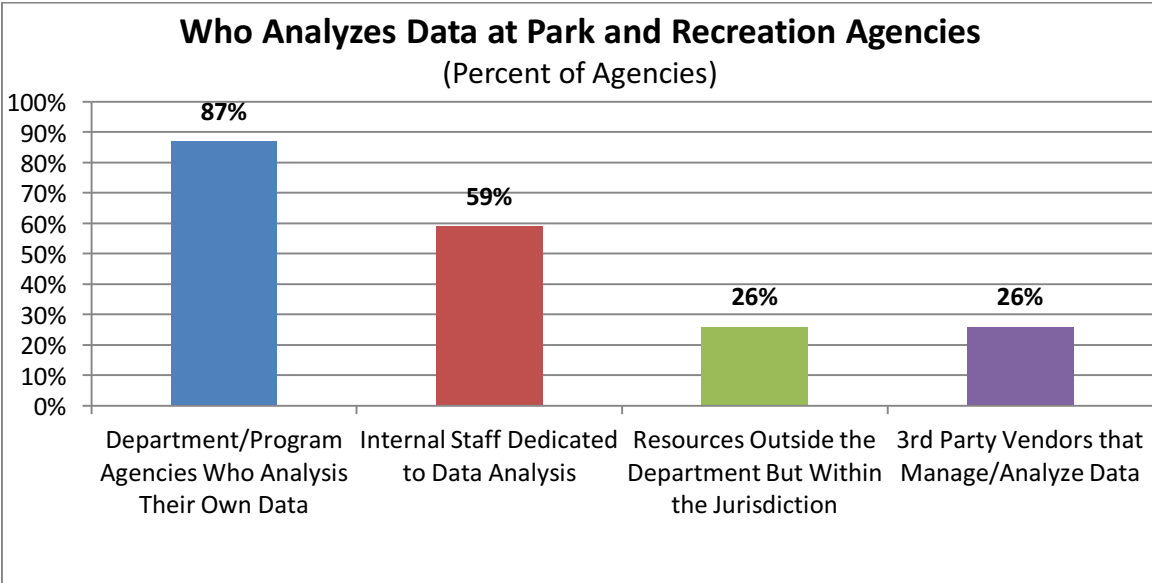
Some park and recreation professionals report other difficulties that prevent greater data sharing with their peers at other agencies within their jurisdiction. These include:

- Costs/fees charged by other agencies to share data (22 percent)
- Lack of directive from the jurisdiction's top leadership to encourage greater data sharing (20 percent)
- A lack of willingness among the jurisdiction's agencies to share data (18 percent).



**Data Analysis Staff and Tools**

Today, most park and recreation agencies are conducting their data analysis in-house, frequently by agency staff that is closest to the programming being studied. Close to nine out of ten department/program managers perform analysis on their own agency’s data while more than half of respondents indicate having dedicated internal staff within the park and recreation agency to do data analysis. A quarter of agencies indicate that data analysis is performed outside their own department, either with data analysts who analyze data for all agencies within the jurisdiction or by a third-party vendor that specializes in data management/analysis.

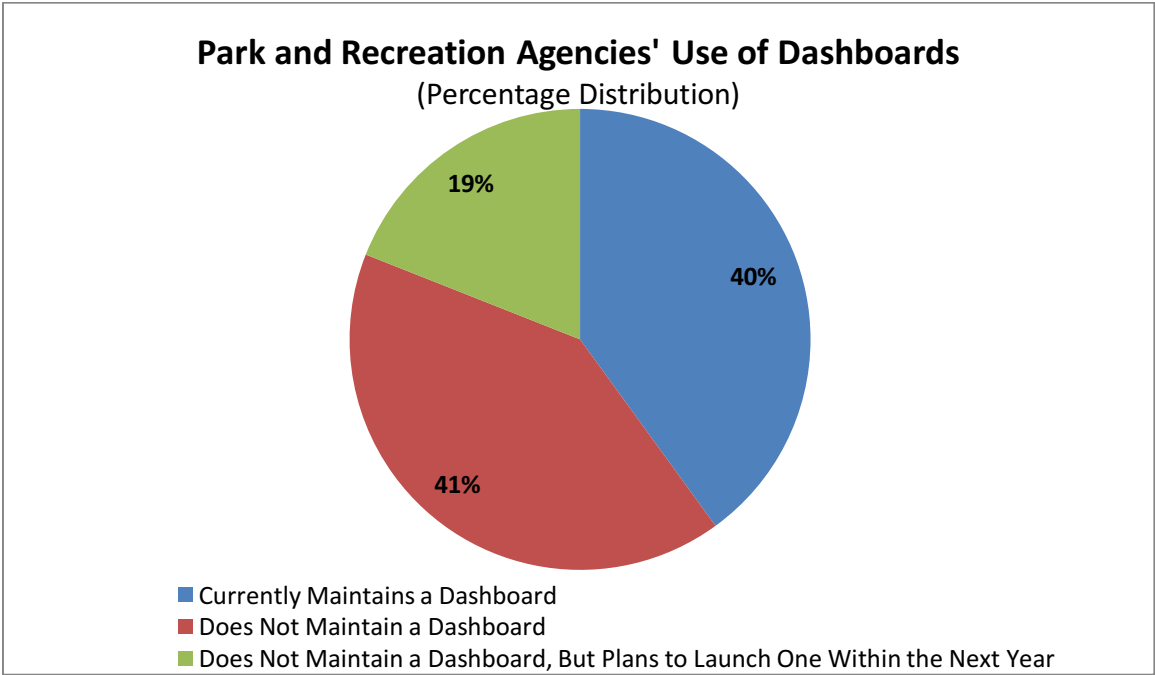




Even with the complexity of some of the data, most agencies conduct their data analysis with software that is nearly universally available. Spreadsheets (e.g., Excel) are the dominant tool used by 98 percent of park and recreation agencies to analyze the data. At the same time, a smaller percentage of agencies are utilizing other software packages to analyze and display data and their insights. A quarter of park and recreation agencies (25 percent) are using data visualization tools (e.g., Tableau) while 23 percent of agencies turn to statistical analysis packages (e.g., SAS, R, SPSS) to assist with data analysis.

One way park and recreation agencies communicate their data findings to stakeholders is through the use of dashboards, which can provide the viewer with a quick glance of key performance indicators or other closely tracked metrics. Forty percent of agencies currently maintain a dashboard that visualizes and communicates key metrics to agency leadership, employees and stakeholders. Another 19 percent of agencies intend to establish a dashboard within the next 12 months.

Park and recreation agencies make their dashboards accessible to many different stakeholders, including to agency leadership (95 percent), agency managers (86 percent), agency staff (67 percent), jurisdiction leadership (52 percent) and the general public (29 percent).



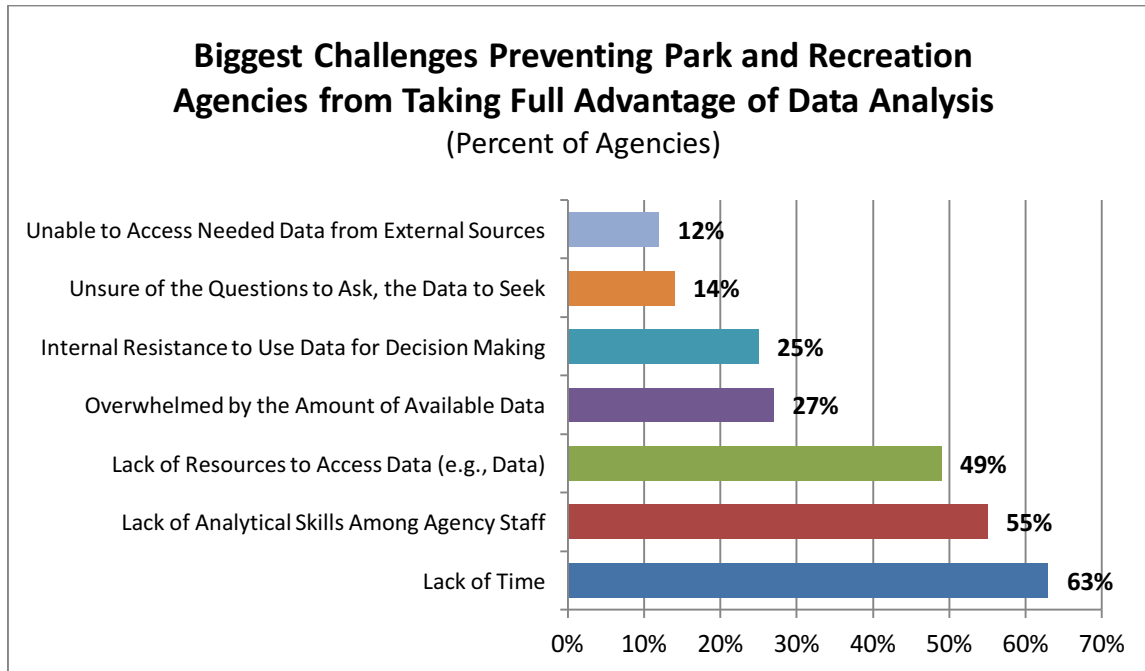
## Success and Challenges

The goal of collecting and analyzing data is to identify opportunities where the park and recreation agency can deliver services to its community more effectively and efficiently. Park and recreation professionals identify a number of examples where they use data to drive agency decision-making and performance. One agency is using data to show the benefits of implementing online summer camp registration (instead of paper registrations), resulting in a sharp rise in registrations after switching to an online application form. Another agency discovered that its water conservation plan, while successful in saving water, resulted in significant tree loss. As a result, it established an automated watering system that protected the trees while still meeting the agency's water conservation goals. Multiple agencies are using Census Bureau and GIS data to locate areas that would benefit the most from park acquisitions and capital investment.

### Example Success Stories of Park and Recreation Agencies Using Data

After pressure from jurisdictional leaders to change the priority of our snow clearing operations along public trails and pathways, we were able to supply a summary of trail-use collected data from automatic trail counters to justify our current priority system and maintain operations to meet the highest use as indicated directly from our data.
An assessment of amenities throughout park system revealed deficiencies in playgrounds. Presentation of data resulted in city council authorization of \$2 million for replacement of outdated playground systems.
Data collected from surveys have shown we are the largest healthcare provider in the city.
Our GIS tool has greatly aided our agency in making decisions about park acquisition and capital investments by allowing us to focus on neighborhoods and communities that lack adequate park access and park acreage.
Data was helpful in our master planning and for the decision to add several dog parks.
Tree trimming statistics are now accurately accounted for, thus allowing staff to know what the clear metric is to achieve. This has allowed for a measurable level of communications to be conveyed to citizens regarding their respective inquiries on timing of services.
Using Census-level data, the agency is now a leader in identifying an area that was growing significantly in population of youth of lower income and did not have access to public services, including parks.
We analyzed community interest/data in reestablishing our municipal youth sports league. We are now in the second year of a three-year "experiment" and are seeing promising results.
We used a criteria-based park prioritization process to identify highest park development projects.
We used data from CLASS software to validate implementing online summer camp registration (e.g., methods of payment, when camps are filled and how many registrations we receive, etc.). On the first day of online registration, we received over 8,000 registrations. With the previous paper process, this would have taken us three weeks to accomplish.
We were mandated to save 36% water versus previous years. We found that we saved 52% of water use. Yet, however, we were losing trees. We are now able to increase water use, yet still maintain water conservation goals through use of automated watering systems.
When we completed our 20-year Capital Facilities Study, we included a citizens' needs assessment that provided data on household usage of county park facilities on unmet needs. Survey results were also plotted on maps, so we could visualize exactly where the gaps in service were. This was invaluable not only to staff, but also to the Park Board of Commissioners and County Commissioners, who make capital funding decisions.

Despite the success, significant hurdles remain for park and recreation agencies wanting to take full advantage of data analysis in their decision-making. Half or more of responding park and recreation professionals indicate a lack of time, analytical skills among agency staff and/or resources to access data (e.g., software) as major challenges inhibiting their agencies from taking greater advantage of data analysis. Twenty-seven percent of park and recreation professionals find the amount of data available to be daunting and are unsure where to start, while 25 percent say that there is internal resistance to the use of data for decision-making.



## Conclusion

Today, many park and recreation agencies are just scratching the surface on where data can help with critical decision-making. Already, many park and recreation professionals are embracing data for important operational and strategic decisions and are including both in-house and external data about park users to shape their future. Collecting, analyzing and presenting these data can create challenges to most agencies, but at the same time, the insights that are derived can be overwhelmingly valuable.

Park and recreation agencies have a number of resources they can use to better understand their constituents and how to deploy their finite resources to best serve their communities. This includes internally and externally collected data from surveys, other agencies in their jurisdiction and market research resources. In addition, the National Recreation and Park Association provides agencies with several valuable resources that help park and recreation professionals better serve their communities and help make the case of the valuable role parks play in supporting health and wellness, conservation and social equity. These resources include:

- [The NRPA Field Report/PRORAGIS](#): The most comprehensive resource of agency performance data and insights for park and recreation agencies in the United States, with data focused on park facilities, programming, agency responsibilities, staffing, budgets and agency funding.
- [NRPA Facility Market Report](#): Customized reports offer key census and marketing data and insights about the market served by your agency's facilities. Your agency will gain a greater understanding of the residents served by a park, aquatic center, recreation center or any other facility, with a particular focus on their habits and interests.
- The [Economic Impact of Local Parks](#): The first-ever nationwide economic impact study that found operations and capital spending at America's local and regional park agencies was responsible for approximately \$140 billion in annual economic activity and nearly 1 million jobs in 2013. The report also includes estimates of the economic impact of operations and capital spending at local and regional park agencies for all 50 states and the District of Columbia.
- [Americans' Broad-Based Support for Local Recreation and Park Services](#): This survey of more than 1,100 Americans affirms their passion for their local public parks. In fact, virtually all Americans agree that their communities benefit from their local public parks, even if they themselves are not regular park users. The support for local public parks crosses nearly every demographic segment of Americans and has gone unabated for the past 25 years, even as our nation and the ways we interact and entertain each other have dramatically evolved.

### **About the Survey**

In early May 2016, the NRPA research team sent a 13-question survey to the directors at 168 urban and large suburban park agencies on the use and the challenges with data at their agencies. The survey generated 58 responses, or a 35 percent response rate. The NRPA research team thanks Sasaki Associates for its feedback on the survey questionnaire and analysis of the results. NRPA is solely responsible for the final survey instrument and for the content in this report.