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Recreation Management

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EBOOK

Guide to Data Analysis for Parks and Recreation

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Introduction

In today's data-driven world, park and recreation departments have access to a wealth of information that can be used to improve decision-making, enhance programs, and better serve their communities.

The guide provides a foundation for incorporating data analysis into strategic planning for park and recreation operations. It is designed to empower park and recreation professionals to harness the power of data and transform it into actionable insights.

In the forthcoming chapters, we'll explore the types of data available to you as a parks and recreation professional, different methods for data analysis, and proven strategies for using data-driven insights to make informed decisions that benefit your department and community.

The Data-Driven Parks and Recreation Department

With data-driven insights, park and recreation departments can optimize operations, cut waste, strengthen services, and control costs through improved resource allocation, enhanced program planning, and increased community engagement.

Each data type can be analyzed to assess and forecast key aspects of your department's community impact. However, doing so successfully requires paying close attention to data hygiene and integrity.

There are various data sources available to park and recreation departments, such as:

- Program registration data
- Facility usage data
- Resident feedback (e.g., reviews, surveys, questionnaires, interviews, focus groups)
- Demographic data
- Website analytics
- Social media data
- Environmental data
- Financial data

Top 10 Best Practices for Data Hygiene and Integrity

Collecting and analyzing accurate, reliable data helps ensure your insights drive strategically sound decision-making. **At a minimum, follow these 10 best practices:**

1. **Utilize Informed Consent:** Explain data usage clearly and obtain voluntary participation
2. **Maintain Confidentiality:** Anonymize data and secure personal information
3. **Promote Transparency:** Be open about collection methods and allow participants to withdraw
4. **Eliminate Bias:** Use neutral questions and ensure diverse representation
5. **Validate Data:** Use required form fields and range, consistency, and completeness checks to catch and correct errors at entry
6. **Secure Storage:** Implement encryption and access controls to prevent unauthorized access
7. **Clean Data Regularly:** Remove duplicates, correct inaccuracies, and address missing values for accurate analysis
8. **Standardize Entry:** Apply consistent formats and form field names to minimize errors and improve comparability
9. **Back-Up Data:** Create and store copies in separate locations to prevent data loss
10. **Leverage Purpose-Built Technology:** Provide convenient access via online forms and technology solutions designed specifically for local government agencies and the communities they serve

Data Analysis Fundamentals

Understanding basic statistical concepts — including mean, median, mode, standard deviation, and correlation — is crucial because it allows you to summarize, analyze, and interpret data using mathematical tools to draw meaningful conclusions.

Mean: The mean, or average, is found by adding up all the values and dividing by the total number of values. While some data points may be higher or lower, the mean often provides a good estimate for predicting future values.

Median: The median is the middle value in a data set. If there's an odd number of values, it's the one in the center. If there's an even number, it's the average of the two middle values. The median is useful for splitting data into two equal halves.

Mode: The mode is the value that occurs most frequently in a set of data.

Standard Deviation: The standard deviation shows how spread out the data is from the mean. A small standard deviation means the values are close together, while a large one means they vary widely.

Correlation: The correlation expresses how two values move together. If they change at a consistent rate, they have a linear relationship. Remember: Correlation shows connection but does not prove causation.

The Importance of Data Visualization

In addition to mathematical tools, visualization solutions should be leveraged to present data in clear and compelling ways, such as charts, graphs, and maps. Visual communication aids in comprehension, thus reinforcing your ability to draw meaningful conclusions from any given data set.

Spreadsheets, statistical software, and artificial intelligence (AI)-enabled platforms like ChatGPT can turn data sets into impactful visuals. Just be wary of the potential security risks when using open-source solutions.

Analyzing Program Data

Your parks and recreation department's program data can unsheathe valuable insights you can wield to increase community engagement and participation.

With data, program planning moves beyond guesswork, leading to better decisions and greater community satisfaction. For example, tracking your program successes can help you plan future activities that resonate with your community. **Focus on:**

- **Program Participation:** Monitoring enrollment trends, identifying popular programs, and understanding participant demographics
- **Program Evaluation:** Using data on participant satisfaction, outcomes, and return on investment to ensure programs effectively meet your residents' needs

Analyzing participants' demographic data (e.g., age, location) can uncover trends and gaps in your programming and outreach. If certain groups are underrepresented, your department can make modifications to be more inclusive.

Regarding outreach, your department's efforts should be assessed regularly via website traffic, social media engagement metrics, resident inquiries, and program registrations. Continual review allows for timely refinement of your marketing and communication strategies so you can reach residents more effectively.

Analyzing Facility and Equipment Usage

Managing staff, facilities, equipment, and budgets efficiently is paramount. Data analytics can reveal insights that enable you to allocate resources wisely, ensuring services are available when and where they're needed.

With data, park and recreation departments can forecast demand and adjust staffing, monitor facility and equipment usage and maintenance to prevent costly repairs, and compare expenses to real-world usage for cost-effective decision-making. **Consider:**

- **Utilization:** Understanding how equipment and facilities are used, noting peak times, and identifying underutilized gear and spaces
- **Scheduling:** Using data to create efficient schedules and minimize conflicts
- **Maintenance:** Using data to inform preventative maintenance schedules and prioritize repairs

Ensuring Accountability and Transparency

Data analytics can help demonstrate the impact of your parks and recreation department's services. By aligning facility and equipment use with financial data, you can show taxpayers how funds are being spent and the benefits provided.

Sharing this data fosters public trust. When residents can see usage and budget allocations, they feel more engaged and confident in their local government's community management efforts.

Analyzing Resident Feedback

Raw data alone isn't useful — it gains value when collected, organized, analyzed, and interpreted to answer specific questions. Simply gathering data doesn't guarantee insights; it must be structured to drive meaningful action.

Here are four key steps for turning resident feedback data into impactful stories:

1 Establish Benchmarks

Start by gathering reliable data from sources like the United States Census Bureau, local government agency databases, past surveys, prior community engagement events, online reviews, and social media mentions.

For example, if a parks and recreation department wants to improve services for residents with disabilities, they might collect:

- Existing data on the number of residents with disabilities and current service utilization
- Existing reviews, mentions, and survey feedback on preferred services and unmet needs

Organizing data into categories or tables makes analysis easier. In this case, data might be split into spreadsheets by service type, utilization, and resident preferences.

2 Embrace Consistency

Consistency makes comparing old and new data simpler. Any inconsistencies in survey question wording, response scales, formatting, sampling methods, or administration practices can significantly distort the results and make accurate interpretation difficult.

3 Interpret and Compare

Data alone has no meaning until patterns and relationships are identified. Using the example above, an analysis could reveal:

- The most popular programs and facilities by age group and disability type
- Gaps between available services and resident preferences
- Trends in preferences and unmet needs over time

These insights could indicate where improvements are needed.

4 Translate Insights into Action

Insights alone don't always drive change — they must be framed in compelling ways. To advocate for improved services, departments can:

- Compare findings to state averages, peer agencies, and industry best practices
- Use storytelling, qualitative data, and visuals to make a stronger case

When data-backed narratives highlight real community needs, they inspire action from stakeholders and decision-makers.

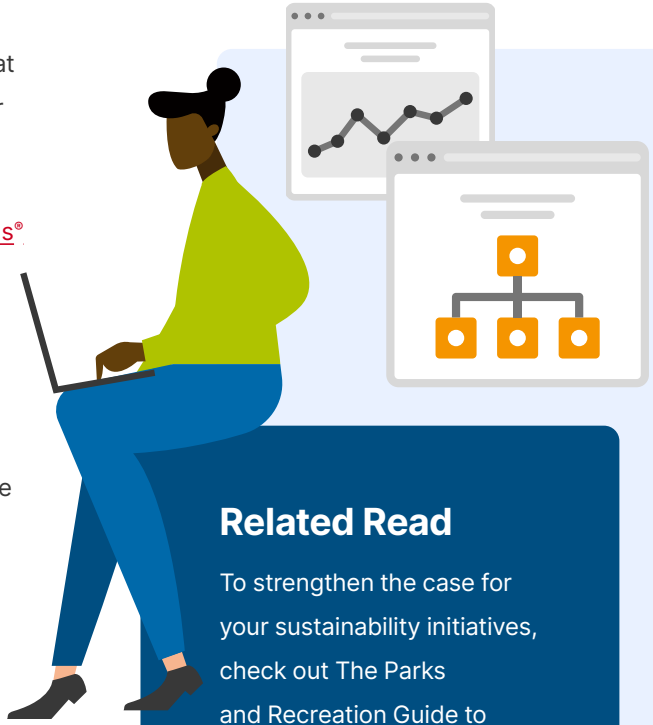
Using Data for Strategic Planning

To effectively use data for strategic planning, you must first lay the groundwork by investing in staff training and development on data analysis. **Utilize the tips in this guide and focus on:**

- **Data-Driven Culture:** Promote data sharing and collaboration to drive continuous improvement
- **Needs Assessment:** Use data to identify community needs and inform strategic planning
- **Goal Setting:** Set measurable goals based on data insights
- **Resource Planning:** Use data to inform budget planning and resource allocation
- **Performance Measurement:** Track progress toward goals and use data to demonstrate the impact of programs and services

Next, you should embrace technology solutions that support data collection and analysis related to your department's strategic goals. **For example:**

- **Asset Management Software** like the CivicPlus® Recreation Management Equipment Rentals module can assist you in tracking recreational assets and associated rental revenue
- **Reservation Systems** like the CivicPlus Recreation Management system can streamline everything from facility reservations and program scheduling to financial reporting
- **Social Media Management Platforms** like the CivicPlus Social Media Archiving solution can help you monitor public sentiments related to your department's services
- **Geographic Information Systems (GIS)** like Esri's ArcGIS can help you visualize spatial data, map trails and facilities, and monitor environmental changes



Related Read

To strengthen the case for your sustainability initiatives, check out The Parks and Recreation Guide to Sustainability Best Practices for a list of recommended key performance indicators to track.

Read Now

Data-Driven Decision Making in Action

Park and recreation departments across the U.S. use data analysis to improve decision-making and achieve positive outcomes for their communities. **For example:**

Seattle, Washington: Data-Driven Park Planning with "ParkScore"

Seattle uses a ParkScore methodology to evaluate parks based on accessibility, acreage, amenities, and investment:

- **Accessibility:** Focuses on ensuring every resident is within a 10-minute walk of a park, prioritizing underserved areas
- **Acreage and Amenities:** Data helps identify overcrowded parks and gaps in facilities like playgrounds and sports fields
- **Investment:** Analyzing past funding allocation allows the city to address disparities and direct resources where needed most

Chicago, Illinois: Using Data to Enhance Programming and Equity

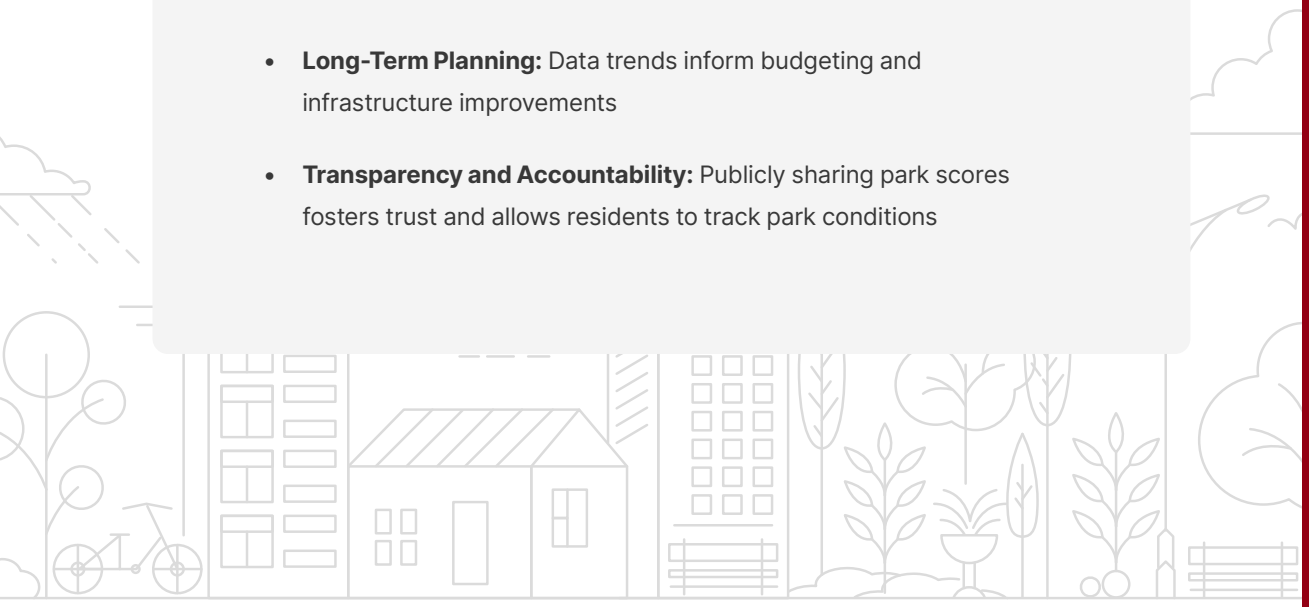
Chicago collects data on park usage, demographics, and community needs to guide programming and resource distribution:

- **Usage Data:** Helps identify underutilized parks and areas that could benefit from new amenities or events
- **Demographics:** Allows for targeted programming, especially for youth and underserved communities
- **Equity Initiatives:** Programs like "Night Out in the Parks" use data insights to bring arts and cultural events to areas with limited access, fostering inclusion

San Francisco, California: Smart Park Maintenance System

San Francisco developed a park maintenance scoring system to prioritize upkeep based on cleanliness, safety, and infrastructure conditions:

- **Regular Inspections:** Data collection through park assessments helps pinpoint urgent maintenance needs
- **Resource Allocation:** Parks with lower scores receive priority funding and maintenance efforts
- **Long-Term Planning:** Data trends inform budgeting and infrastructure improvements
- **Transparency and Accountability:** Publicly sharing park scores fosters trust and allows residents to track park conditions



Conclusion

Data analysis is a powerful tool to help park and recreation departments make informed decisions, enhance programs, and better serve their communities. By embracing a data-driven approach, you can create a more sustainable, efficient, and responsive parks and recreation system that meets the evolving needs of your community. The key is to start small, focus on specific questions, and build your data analysis capabilities over time. And remember:

Data-Driven Decisions = Thriving Parks and Recreation

About CivicPlus

Thousands of high-performing civic leaders rely on CivicPlus as their trusted partner for Impact-Led Government. With CivicPlus, leaders can finally overcome the perpetual tradeoff between the demand for better services and the realities of operational resources, leveraging the unique Civic Impact Platform to deliver both unmatched end-to-end automated efficiency and truly unified, delightful residence experiences.

Backed by over 25 years of experience and leveraging the insights of more than 900 team members, our solutions are chosen by over 10,000 organizations and are used daily by over 340 million people in the U.S. and Canada. For more information, please visit civicplus.com.

About the CivicPlus Recreation Management System

The CivicPlus Recreation Management system helps local governments enhance their data analysis strategies, build resident trust, and increase engagement. Learn more about the CivicPlus Recreation Management system by taking a self-guided tour.