



SAS® Solutions for Departments of Natural Resources

Transform existing data into predictive insights that drive success



“We view our customers as our most important asset. As such, we need the capability to develop a comprehensive picture of customer behavior. SAS provides the critical solution that allows us to do that.”

Greg L. Summers

Supervisor, Oklahoma Fishery Research Laboratory,
Oklahoma Department of Wildlife Conservation

Overview

Safeguarding our natural resources to create a more sustainable quality of life has always been the core mission of department of natural resources (DNR) organizations. But today's DNR organizations must also overcome fiscal constraints to achieve their goals. DNR organizations are asked to deliver enhanced customer services more effectively and efficiently, offer more diverse environmental and recreational benefits to the public, and make optimal decisions about natural resources management. New requirements also demand increased transparency and accountability.

Although DNR organizations collect plentiful amounts of data, it is often unorganized and not readily accessible because it is scattered in multiple silos across the enterprise. To answer strategic management questions and improve public programs and services, DNR organizations must organize, integrate and analyze their data. Only then can they achieve the insight needed to make value-added decisions, achieve sustainability measures and transform organizational cultures.

Challenges

- **Scattered citizen data.** Organizations need a holistic view of citizens and their outdoor recreation behaviors rather than one that is fragmented and incomplete.
- **Funding issues.** Organizations have trouble proving program performance when it is so difficult to accurately measure time and costs of projects.
- **Having to do more with less.** Budget shortfalls and the uncertain economy are restraining resources and affecting program success.
- **High churn and unstable revenues.** Organizations lack the accurate, timely information necessary to proactively address declining participation rates and revenue forecasts.



Obtain a comprehensive view of citizens, natural resources and operations

Key Benefits

- **Increase license sales and reduce lost revenue** through accurate, customized marketing and a 360-degree citizen view.
- **Meet budget reporting requirements** by integrating financial data from cost information systems with budget data for a comprehensive view.
- **Improve operational performance** using key metrics to make informed, strategic decisions.
- **Ensure transparency and increase accountability** with integrated, high-quality information linking initiatives to a common sustainability framework.
- **Predict future outcomes** by identifying meaningful trends related to customers, wildlife, harvesting and more.

How SAS® Can Help

Analytic capabilities from SAS can enhance success in four key areas of DNR business functions: resource management; information, education and citizen relationship management; operations; and performance management.

Utilizing comprehensive data related to natural resources, citizen behaviors and internal processes, our approach helps you become more proactive in decision making. Our predictive analytics, modeling and optimization capabilities allow you to examine what happened in the past, why it happened, what is likely to happen next, and what the optimal future outcomes could be for a particular situation.

Capabilities

SAS solutions for DNR organizations unite information from disparate systems to provide an accurate, comprehensive view of citizens, land, animal populations and internal operations. By recognizing what patterns reveal about the future, you can schedule services, programs and maintenance at the right time and place, with the right resources.

Target marketing to increase sales

Marketing works best when it's aimed at the right audience. With SAS solutions for DNR, you can achieve a 360-degree view of your citizens based on their actual recreation and purchasing behaviors. When you know which individuals are interested in specific

programs and services, it's possible to increase recreational licenses sales, determine effectiveness of marketing programs and spot success factors.

Nurture relationships to minimize lost revenue

With declines in outdoor recreation, revenue drops. Minimize lost revenue using SAS churn models to identify at-risk customers like hunters, anglers, trappers, campers and boaters who appear likely to lapse or abandon the sport. As you determine the causes of declining participation, you'll be able to target the right citizens with the right messages at the right time. In turn, you can educate, recruit, retain and maximize the value of each citizen relationship.

Meet budget reporting requirements

To address budget reporting requirements for projects that receive state and federal funds, you need to be able to review budget data and drill into that information to a specific project level. By integrating financial data from your cost information system, you can measure program performance more accurately and address project reporting requirements.

Improve strategy and organizational performance

With powerful optimization, forecasting and data mining tools, you can analyze scenarios and run simulations to improve response and performance. By identifying key metrics, you can make more informed, strategic decisions

and explore alternative management strategies. Assessing performance from individual programs to the whole organization clarifies where changes need to be made to achieve strategic goals and address legislative and executive mandates.

Improve transparency and increase accountability

Establish an integrated, consistent source of quality information using technologies that bind initiatives to a common sustainability framework, across all lines of business. Taking this approach can help you comply with regulatory organizations and become more transparent to key stakeholders.

Predict future outcomes

With SAS predictive analytics technologies you can distinguish meaningful trends from “noise” – to clarify why events occurred, identify significant factors that would lead to repeatable success, and accurately predict future outcomes. Use these predictions to meet wildlife population goals, set harvest regulations and forecast impacts of stressors on native populations. Insight into trends can also boost license-derived revenues, customer service and operational efficiencies.

Components

SAS® Customer Intelligence

Automated systems – like the Internet and point-of-sale licensing and permit systems – create resource-focused repositories containing a wealth of data. Clearly, organizations can no longer view recreational customers with a single perspective or at a single point in time. With SAS, you gain a customer-centric vision so you can appeal to citizens as individuals or households with known preferences and habits.

SAS Customer Intelligence solutions help you to fully understand diverse audience segments, assess and maximize the lifetime value of each household, model what-if scenarios, predict behaviors, and optimize marketing campaigns and education communications. In turn, you can lower expenses while increasing response rates and revenues – reducing dependency on state funds.

Churn analysis

With the SAS churn model for DNR organizations you can ensure your best customers remain loyal customers. Customer loyalty or churn analysis identifies your most avid consumers – and tells you which individuals are likely to abandon outdoor-related activities, when they may leave, and what factors influence their decisions. The model includes four key components:

- Demand forecasting assures that services, programs and policies meet or exceed citizen expectations.

More than 80 countries' public sector organizations are SAS customers.

All 15 major US federal departments are SAS customers.

Approximately 85 percent of independent US government organizations and commissions use SAS.

SAS has more than 115 local government customers.

- Market basket analysis assesses links and patterns in customers' behaviors, choices and responses – to enhance cross-sell/up-sell opportunities, improve program and service introduction, maximize website usage and increase retention via loyalty promotions.
- Segmentation analysis supports manageable, accurate, time-based market response propensity models.
- Event-trigger analysis reveals correlations between events – such as demographic changes or holidays – and the implications of those events.

SAS® for Performance Management

SAS for Performance Management relies on methodologies – including a business scorecard with DNR-specific key performance indicators – to align diverse business processes toward shared goals, communicate those goals across the organization and measure progress. Applying analytics to performance management quickly identifies areas where one program, site placement or marketing activity might be eroding others, or

where special license retention successes do not contribute to overall success. When organizations understand how internal processes are performing and where there may be trouble, they can align investments, people, infrastructure and capital with overall strategic goals and drive program results.

SAS® Activity-Based Management

With SAS Activity-Based Management you can drill deeply into budget data – down to a specific project level. By integrating financial data from your cost information systems, you can measure program performance more accurately to achieve strategic goals and address state and federal project reporting requirements.

SAS® Business Analytics Framework

By providing data management, analytics and reporting enhanced with DNR-specific models, the SAS Business Analytics Framework shows DNR organizations what is happening and what could happen – with quantified accuracy across programs, divisions, offices, bureaus and the entire organization – so you can make strategic

decisions to optimize performance. For better flexibility and rapid results, your organization can evolve to improve performance and solve more business problems by growing the SAS Business Analytics Framework over time, gradually building a platform tailored to your needs.

The SAS® Difference

Real-time, powerful data integration

With data scattered across siloed systems, it's hard to obtain a single, accurate version of the truth. Only SAS offers a powerful, configurable and comprehensive solution that can access virtually all data sources – coupled with advanced analytics – to transform data into meaningful, forward-looking insights that can dramatically increase effectiveness, efficiency and revenue.

Methodical resource management

SAS analytical solutions for resource management apply a rigorous, objective methodology that highlights biotic and abiotic relationships affecting the resources you manage and protect.

Early-warning alerts

SAS is the only vendor that lets you establish retention triggers to send early-warning alerts automatically when a key customer's behavior is about to change – so you can intervene early enough to make a difference.

An unmatched enterprise approach

True organizational insight is about more than making smart investments in individual technologies. It's about what happens when those individual technology areas come together in a synergistic system. SAS offers an integrated suite of data management, analytic and reporting software delivered in a single environment to create a common data foundation that yields a unified perspective and generates a consistent advantage.

About SAS

SAS is the leader in **business analytics** software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions delivered within an integrated framework, SAS helps customers at more than 45,000 sites improve performance and deliver value by making better decisions faster. Since 1976 SAS has been giving customers around the world THE POWER TO KNOW.®



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