The Definitive Guide to Nonprofit Analytics

Introduction

The nonprofit analytics landscape consists of a wide array of capability. With vendors, agencies, and consultants approaching analytics differently, gaining a clear perspective on how to deploy an analytics-driven fundraising strategy can be challenging.

In simple terms, the nonprofit analytics landscape consists of:

(a) Reporting and software that allow you to retrieve information from a donor database

(b) Data and statistics-driven predictive modeling that enables donor segmentation and fundraising or engagement opportunity identification

Setting aside the latest buzzwords — such as big data, data mining, and donor intelligence — the following list describes the fundamental categories of analytic capability used by nonprofits. The relative importance and utility of each category are largely dependent on the sophistication level, budget, and size of the nonprofit fundraising enterprise. However, it is a universal maxim that some combination of performance management reporting and donor segmentation is required to effectively fundraise.

Accordingly, the following types of analytics are generally available and utilized by nonprofit organizations.

Top 10 Categories of Nonprofit Analytics

1. Standard Reports

Typically generated on a regular basis, standard reports describe what happened in a particular area. They answer the questions "What happened?" and "When did it happen?". They are not useful in making long-term decisions. Examples include monthly or quarterly financial reports.

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2. Ad Hoc Reports

Generally, ad hoc reports let you ask questions and request a custom report to find the answers. They answer the questions "How many?", "How often?", and "Where?". A custom report that describes direct marketing campaign performance is an example of this type of report.

3. Query Drilldown or On-Line Analytical Processing (OLAP)

Query drilldown allows for some discovery. OLAP lets you manipulate the data to find out how many, what geography, what class year, what gift level, etc. Query drilldown and OLAP answer the questions "What exactly is the problem?" and "How do I find the answers?". An example of this is sorting and exploring data about different types of donors and their annual giving behavior.

4. Alerts or Triggers

With alerts or triggers, you can learn when you have a problem or opportunity and be notified when something similar happens again in the future. Alerts can appear via email, as a flag within the software, or as red dials on a scorecard or dashboard. They answer the questions "When should I react?" and "What actions are needed now?". An example of an alert or trigger would be an email to a gift officer indicating that a donor prospect just received a windfall from the sale of his company.

5. Statistical Analysis

With statistical analysis, nonprofits use more complex analytics, like frequency models and regression analysis. We begin to look at why things are happening using donor behavior data and then begin to answer questions based on the data. Statistical analysis answers the questions "Why is this happening?" and "What opportunities am I missing?". A nonprofit discovering where upgrade opportunities exist in their active donor file is an example of an organization using statistical analysis.

6. Forecasting

Forecasting is one of the most useful analytical applications, as it enables effective resource and budget allocation. It answers the questions "What if these trends continue?", "How much is needed?", and "When will it be needed?". As an example, nonprofits can use forecasting to predict how declining acquisition response rates will affect their overall fundraising goals, enabling budget allocation and strategy refinement.

7. Segmentation or Descriptive Data

Descriptive data uses donor attributes to describe donor behavior or classify donors into groups. Generally, it uses historical behavior to classify individuals, enabling future treatment strategies. It answers the questions "What group or classification does this individual belong to?" and "What characteristics does this individual have?". Examples of segmentation or descriptive data include address, age, income, marital status, presence of children in household, and recent donation amount.

8. Predictive Modeling

Predictive modeling analyzes historical and comparative data about donors to predict a future behavior. It answers the questions "What will happen next?" and "How will it affect my business?". Examples of predictive modeling include likelihood to respond to a direct mail solicitation, likelihood to leave a bequest, and likelihood to give a principal gift.

9. Decision Support System (DSS) or Prescriptive Analytics

Prescriptive analytics synthesizes data to make predictions and then suggests options to take advantage of the prediction. It describes what you should do and prompts a specific action. Examples include suggesting a target ask amount and prompting a nonprofit to remove a deceased donor from the file.

10. Optimization

Optimization supports innovation. It takes your resources and needs into consideration and helps you find the best possible way to accomplish your goals, answering the questions "How do we do things better?" and "What is the best decision for a complex problem?". An example using optimization would be: Given business priorities, budget constraints and available technology, what is the best way to optimize our marketing spend to meet our annual fund objective?

Data Mining, Big Data, and Business Intelligence

The concept of analytics is not new. However, with the proliferation of applications with high volume transactional data and relatively inexpensive infrastructure to store and manage this data, more industries are harnessing more data for analytics purposes. This has led to an increasingly sophisticated means of managing and exploiting information.

Generally speaking, the needs of the nonprofit fundraising enterprise are relatively modest compared to other industries with greater volumes of data and more ample budgets.

The following terms are often mentioned by vendors, agencies, and consultants — and more often than not, they are being applied to far more simple concepts than their respective technical definitions.

Data Mining

What it is — Data mining is the computational process of discovering patterns in large data sets involving artificial intelligence, machine learning, statistics, and database systems.

How we misuse the term — Data mining is often misused to mean any form of large-scale data or information processing, for example: collection, extraction, warehousing, analysis, and statistics.

What we typically mean — Often, we mean the more general term "data analysis" or "analytics."

Implication for nonprofits — Generally speaking, you require predictive analytics generated by traditional statistical analysis. A statistician will typically deploy software that uses logistic regression or CHAID (goodness of fit) to create a predictive model, score/rating, or segmentation strategy for you. Realistically, sophisticated data mining will not occur on your data set.

Big Data

What it is — Big data is a collection of data sets so large and complex that it is too difficult to process using standard database management tools or traditional data processing applications. Big data typically requires massively parallel processing or supercomputing platforms consisting of thousands of servers.

How we misuse the term — Big data is often misused to mean any large customer data set or large database that aggregates data from multiple sources or clients.

What we typically mean —Often the more general terms "large data set" or "multi-sourced database" are more accurate.

Implication for nonprofits — Fortunately, you do not have big data. Instead, you have "a lot of data." The implication is that even if you have a significant amount of data, it can be effectively managed in a standard, cost effective Oracle® or SQL database, and accessed via standard query tools.

Business Intelligence Application

What it is — Business intelligence applications are a set of methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information. They are also often referred to as a "decision support system."

How we misuse the term — Business intelligence applications are often referring to an ad hoc query and reporting tool that extracts information from a data mart or data warehouse. While ad hoc query and reporting is technically a business intelligence application, it is the most primitive.

What we typically mean — Often the more general term of "ad hoc query and reporting tool" is the most accurate, using "business intelligence platform" to refer to a more sophisticated decision support system that incorporates rules-based decision logic and prescribes specific outcomes or actions.

Implication for nonprofits — Generally, your CRM, marketing database, or campaign management system comes with ad hoc query and reporting capability. More sophisticated CRM systems will often come with decision support capability.

Conclusion

Analytics-driven fundraising can be made extraordinarily easy. Too often, complication stems from buying analytics and then attempting to determine what to do with the information. Ultimately, if you are able to ask the right question, there is either a standard predictive or prescriptive analytic that will provide you the answer or a simple feature of your CRM that will enable you to query your database to obtain the answer.

For most nonprofits, Blackbaud CRM decision support and reporting and **Target Analytics®** predictive analytics offer a direct path to answering your most complicated fundraising challenges.

So, how do you get started? Craft a simple but high impact question like, "Who should I ask for a major gift and how much should I ask for?". With Target Analytics' fundraising essentials, you will receive a score for everyone in your database that enables you to identify those with the highest likelihood to give a major gift and a numeric value suggesting a target ask amount range. With this predictive and prescriptive analytics combination, you are well on your way to deploying a cost-effective analytics fundraising strategy.

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