



# Geographic Information Systems in Philanthropy

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# Geographic Information Systems in Philanthropy

## An ESRI White Paper

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# Geographic Information Systems in Philanthropy

**Introduction** The use of geographic information system (GIS) technology in philanthropy represents an important new tool for both the fund developer and the grant maker. While many nonprofit organizations such as universities, churches, and foundations have developed proven "high touch" techniques for both raising and distributing philanthropic capital, the community of professionals who work in this field have not fully availed themselves of the tremendous power that GIS can add to the process.

The dynamics of the geography of philanthropy is a combination of two powerful factors: the accumulation of wealth and the documentation of need for philanthropic capital. We already have excellent data on charitable demographics such as the types of organizations who raise and distribute money; we also know a great deal about the types of causes that attract the greatest amount of this capital.

## Dynamics of the Philanthropic Marketplace

In 2000, more than \$203 billion\* was raised and distributed.

Sector	Distribution* (in billion \$)
Religious	\$74.31 (36.5%)
Educational	\$28.18 (13.8%)
Health	\$18.82 (9.3%)
Human Services	\$17.99 (8.8%)
Arts, Culture	\$11.50 (5.7%)
Public/Society Benefit	\$11.59 (5.7%)
Environmental	\$6.16 (3.0%)
International Affairs	\$2.71 (1.3%)
Other	\$32.19 (15.8%)

These dollars represent the dollars that fund developers seek.

Where do philanthropic dollars come from? In 2000, the source of the philanthropic dollar was as follows:

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\* American Association of Fundraising Counsel, Inc. (AAFRC), Indianapolis, Indiana.

Source	Contributions* (in billion \$)
Individuals	\$152.07 (75.0%)
Foundations	\$24.50 (12.0%)
Bequests	\$16.02 (7.8%)
Corporations	\$10.86 (5.3%)

These statistics suggest that fund development and grant making are complicated. While most grant makers have clear objectives driven by a combination of geographic, social, and private leanings of their benefactor(s), the fund developer must focus on attempting to raise charitable gifts from individuals who are geographically widespread and perhaps psychographically diverse. This geographical and socioeconomic diversity suggests that a clear understanding of the ultimate "giver" is essential. Because the majority of dollars raised is from individuals, geographic psychodemographic analysis becomes imperative. It is also clear that while foundations have much higher visibility than an individual contribution, they provide less than \$20 billion in grants, or only 10 percent of the philanthropic dollar.

**Why GIS Is Important to Philanthropic Endeavors**

In recent years, those who work in the field of fund development and grant making recognize the need to better understand their constituents (donors, grant recipients). The growing number of worthy causes, along with aggressive competition for the personal, corporate, and societal economies, bring a new sense of urgency to the practitioners of philanthropy.

As an example of these trends, consider, if you will, the work of one of the world's most generous foundations, the Bill & Melinda Gates Foundation. The Gates Foundation distributed more than 24 billion dollars of philanthropic capital in 2000 to a limited number of targeted charities and causes, primarily those that affect the lives of children around the world. The decisions the foundation made were largely based on evidence of the plights of children. The foundation relied on information provided from the World Health Organization as well as various research organizations that study the growing problems of children. One of the foundation's basic interests is to fill the digital divide for children who do not have ready access to computers. The foundation developed a program that provides selected libraries across the United States with computers and trainers to improve access to technology. The foundation uses a sophisticated approach for both selecting and prioritizing grantees using GIS. It relies on a set of geodemographic indicators to identify neighborhood libraries that meet certain socioeconomic characteristics and then uses the data to prioritize grantee awards.

Or consider the work of the University of Redlands in generating philanthropic capital from its alumni. In the past, the university fund development officers relied on word of mouth and a certain "feel" about who was capable of charitable giving and a "sense" about the geography from which this giving would most likely occur. They began with geographically analyzing historical donations from alumni and discovered a geographical pattern in their givers. They also identified potential givers that their traditional approach

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\* American Association of Fundraising Counsel, Inc. (AAFRC), Indianapolis, Indiana.

to fund development overlooked. Much like researchers in the health field have discovered, geography is destiny. By learning more about the geography of philanthropy, the more likely we will learn how to become more effective and efficient in our fund development efforts.

## **How GIS Works in Philanthropy**

GIS simply means a computer-aided process of geographically identifying the location of an event, behavior, asset, feature, or characteristic that, together with other information, can be analyzed in an integrated way. The use of GIS essentially helps people understand complex relationships that otherwise would not be immediately discernible. In the field of philanthropy, the nature (characteristics, behaviors, features) of charitable behavior is just such a complex set of circumstances. Equally complex is the manner in which grant making is carried out. Given a limited supply of resources that can be devoted to any one cause, mission, institution, or endeavor, the grant makers must decide who receives the gifts and how to geographically allocate their scarce resources.

GIS allows people to become more knowledgeable about the social, economic, and geographic environment within which philanthropy is carried out.

## **GIS in Fund Development**

People who raise money for nonprofit organizations face a tireless task. Some organizations receive an additional endowment from one or more benefactors. Examples are the Casey Foundation, The Pew Charitable Trusts, the John D. Rockford Foundation, and the Bill & Melinda Gates Foundation. These foundations typically do not engage in fund development; instead they focus on giving grants to other organizations to encourage, enable, or otherwise seed a series of initiatives that serve a noble purpose.

The focus here, however, is the nonprofit organization that principally relies on seeking or raising charitable gifts from individuals who desire to see the mission or the goals of the nonprofit entity succeed. Examples of these types of organizations include colleges and universities, hospitals, social improvement organizations, human relief, animal protection, and cultural arts programs. Most of these organizations raise money to fund a permanent endowment that generates income through investing, or they administer an ongoing or annual fund drive to offset operational costs and special activities germane to the work of the organization. In addition, many nonprofit organizations conduct capital giving campaigns that seek to construct a permanent facility and/or create or enlarge an existing endowment program. It is not uncommon in recent years to see large universities and colleges establish fund-raising campaigns for permanent endowments that exceed one billion dollars.

In this type of fund-raising activity, the goals of the fund developer are to (1) identify individuals capable of a charitable gift, (2) qualify an individual's charitable intent in relationship to the needs and mission of the organization, and (3) maintain and continue a history of charitable giving to the organization. Depending on the type of campaign an organization is carrying out, the identification, qualification, and maintenance efforts differ dramatically as do the methods employed to reach specified goals.

After the nonprofit organization develops the case statement of the why and the amount, the hard work begins. Potential donors are identified, ranked by the likelihood of making a charitable gift, and finally asked for the gift. A great deal of money has been raised over several decades approaching the charitable giver in this fashion. It appears

productive, efficient, and cost-effective. Candidates for charitable giving are approached pretty much like peeling an onion. Most fund development consultants recommend an approach that does not publicly announce a campaign until the majority of the goal is raised "privately." This approach, according to the consultants, builds confidence along with the appearance of a goal that can be met. It also helps protect the organization from embarrassment by reporting results that might be short of the goal. After the majority has been secured, a more generalized and targeted campaign is attempted to raise the remainder. According to the AAFRC, more than 80 percent of the money raised in a fund-raising campaign comes from 10 percent of the donors.

An interesting note is that most organizations attempt to raise large sums of money from the same individuals year after year. It is certain that when *Fortune* publishes the top 100 billionaires in the world, every fund-raising group on the globe takes note and tries to discover a connection that would allow them to approach the billionaire's foundation to acquire a charitable gift.

Yet there is something interesting about this. In *The Millionaire Next Door*<sup>\*</sup>, a different profile is drawn. The picture is far less clear and is, in fact, counter to what most organizations do in their prospecting efforts. Typically, fund-raisers look for neighborhoods that appear wealthy, professionals who appear successful, or seniors who appear well off. While this interesting work helps us redefine our stereotypes of who would make a good donor to a charitable organization, it offers little in the way of technology that could streamline the current handmade process and produce larger results. So what would some of this technology be?

### **The Role of the Donor Database**

Every nonprofit organization that raises funds has a donor base. Most are initially generated from a select list of individuals sharing a common interest or affiliation with the organization. Databases of donors usually begin as interested persons or friends of the organization. The information the database contains, beyond name and address, may include historical giving, annual giving, special giving, and other demographic information such as age and sex.

It is not uncommon to receive very large gifts from individuals with little or no prior giving history. Professional fund-raisers tell stories of receiving large gifts out of the blue from people they did not even have in their databases. While these windfall gifts happen from time to time, they are typically not a common occurrence.

Information systems that have been used for fund development essentially include fund management and reporting that track gifts. In a limited number of organizations, donor tracking programs will use this data for serious geodemographic modeling or psychographic profiling. Psychographic profiling involves identification of consumer behavioral characteristics that add value to the understanding of the donor.

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<sup>\*</sup> Thomas J. Stanley, Ph.D., and William D. Danko, Ph.D., *The Millionaire Next Door: The Surprising Secrets of America's Wealthy*.

### **Geographically Enabling a Donor Database**

Geographically enabling a donor database is accomplished by software that authenticates and geocodes the donor's address. Additional information related to that geography is then appended to that record. For example, the United States Postal Service identifies 1409 Community Way, Louisville, Kentucky 40222, as a discrete place with a precise latitude and longitude. Software matches the donor's address to a master file of all acceptable and known postal delivery addresses and assigns the correct latitude and longitude. In addition, the software will also append additional items such as county, census tract, block group, metropolitan area, and area code.

ZIP Codes are probably the least reliable geographic reference used today since ZIP Code areas change through expansion, subdividing, and delivery metrics of the postal service. On the contrary, the physical location of a street address will likely never change. Geocoding from the street address and state is by far a more accurate and reliable way to ensure correct geographical identification.

### **Psychographics and Philanthropy: Birds of a Feather**

A multitude of additional characteristics can be attributed to a donor address. In most demographic market research conducted today, there is an underlying assumption that where you live makes a difference in what you purchase, what you own, how you make and spend money, and what your preferences may be regarding food, wine, cars, amusements, vacations, and charitable giving.

### **How Do Geopsychodemo- graphics Work?**

Many large retailer and service organizations that sell merchandise capture the customer's street address. Bills get sent, deliveries get made. Each transaction creates a digital trail of consumer behavior. The basic unit of data is typically at the household level, meaning that the actual person doing the buying or holding that preference is not as important as knowing the geographical location of that household.

In the course of a year most households that pay any bill by check, debit card, or charge card will have laid down a trail of hundreds of consumer data bytes that will help marketers distinguish the difference among households based on geography.

While any one single piece of consumer behavior data may not in itself make a huge contribution to better understanding the likelihood of a person giving to charity, the accumulation of consumer data over time begins to identify "birds of a feather." Thus one of the values of using geodemographic technology in fund development is to identify the birds and where they congregate.

Another important value of using GIS in fund development is that it can identify geographic areas where asset accumulation is greatest. Often a donor list will provide little insight as to the geographical location of the donor especially within a large urban area. For example, we all know of little wealthy suburbs that exist within the metropolitan area of a large city. If we are unfamiliar with the area, we might exclude the donor unintentionally. Being able to correctly place an address within, for example, a 25-mile radius of a city could influence the selection of the city for a fund development meeting or fund-raising campaign.



### **The Goal of Geopsychodemographic Research Using GIS**

One of the goals of a fund development organization should be to create a dependable information system that does the following:

- Captures correct address information using an address management system.
- Geocodes every address at the most refined level possible and stores that information as part of the donor's permanent record. This data would only change if and when the donor's address changes.
- Appends a series of standard geographical codes to every record that allows more relevant geographical queries to be asked of the data.
- Creates donor or nondonor profiles from secondary data linked to the geography from which the donor comes.
- Tests the statistical relationship between various known philanthropic metrics (known donors).
- Identifies geography that contains individuals similar to those who match your donor profile. Typically these areas would not have any existing donors or prospects.

### **The Grant-Making Philanthropic Organization**

The grant maker, on the other hand, has the same challenges as the fund developer but it is usually in reverse. Instead of wanting to identify and prioritize accumulated assets and high incomes and home values, grant makers typically want to identify or confirm the geographical location of grantees and to confirm the extent of the undesirable conditions that exist to which resources are intended or proposed that need to be addressed. For example, the Bill & Melinda Gates Foundation identifies U.S. public library grantees by determining a service area population in poverty indicator to determine each library's eligibility for grant funding and a service area population indicator to determine the amount of equipment for which each library is eligible to apply. Organizations that are not grant makers and fund developers could easily begin to build profiles of charitable donors who respond to certain grant maker initiatives. Knowing and understanding these relationships is what powers "smart" philanthropic organizations.

### **How Do I Begin?**

Learning how to use GIS within your organization is fairly simple. It requires three important commitments.

1. Implementation of computerized processes for data creation (donor tracking).
2. Adoption of a research culture. Building profiles and developing models require staff with interest and skill in data creation and analysis.
3. Securing GIS software and training.

If you already have a computerized donor tracking system, then you only need to purchase the GIS software and receive some training or self-education. Here are the steps you would follow.

1. Create or access the donor tracking file and geocode the street addresses. With address management and geocoding software, you can also append additional geographic information to each record in a single pass. The end result is a geographically enabled database that is ready for analysis.
2. Import your geographically enabled donor database into your GIS (either ArcView® Business Analyst, ArcView, or BusinessMAP®).
3. Begin to analyze your data geographically based on important and relevant donor history data that is in your database.

Here are five questions you could ask of your geographically enabled donor database.

1. What percentage of your donors live within a Metropolitan Statistical Area (MSA)?
2. What is the average distance of a donor from the organization? Does the amount of the gift diminish with distance?
3. What is the average household net worth in the neighborhood in which non donor resides?
4. What is a realistic expectation of the amount of a charitable gift to an endowment from an individual with no giving history?
5. What would be the best city to hold a fund-raiser for an annual fund appeal?

Staff using GIS can answer these types of questions confidently. The results can be presented in ways that clearly depict differences, illustrate potential, and teach board and staff members about the psychodemographics of their donors, prospects, and the various markets they serve.

For example, a membership organization whose mission is to protect or promote a cause that is important to the environment might use GIS in the following way:

- Use ArcView to geographically enable the donor database.
- Purchase a prospect list from a list broker that targets environmentally aware donors and geographically enable this list as well.
- Use address management software to append a variety of geographic codes, such as MSA, Census Tract, and County, to the files.

- Compare its own donor list to the purchased list and create a profile of each donor listed. Compare and contrast the results to see what new relationships can be discovered.
- Use a specialized extension to ArcView to create donor scores for each donor based on a statistical modeling system.
- Use maps to depict the donors with the highest gift score.
- Use ArcView maps to illustrate geographical areas that have similar scores from which no donors in the database reside.
- Use the results to decide where to hold different seminars in different geographical locations and to alter the promotional materials and the refreshments to better match the profile of the most desirable areas.

## **Conclusion**

The field of philanthropy is growing both in terms of the magnitude of resources dedicated to raising charitable gifts and of objectively evaluating and deciding how the gifts will be distributed. Until recently, the application of geographical psychodemographic analysis was typically beyond the reach of both the fund developer and the grant maker. Since not everybody is equally charitable nor is every organization's cause equally worthy of a gift, the need to develop more productive and predictive methods to allocate scarce resources for both finding the charitable donor and allocating the gifts is imperative. Charitable donors and grant recipients both have behavioral and demographic characteristics that make geographical analysis not only useful but necessary to their respective missions. For the fund developer, the donor database is essential. Creating donor profiles that are grounded in geographical analysis has much to contribute to understanding and finding charitable donors. For the grant maker, objective matching of the need to the organization's mission is paramount, and geographical analysis of the benefactors or populations to be served is a critical aspect of fiduciary accountability.

Geographic information system software can fill an important role in equipping the modern philanthropic organization to carry out its important work. The availability of donor and prospect databases is relatively commonplace in most nonprofit organizations as are government and commercially available databases that provide sociodemographic and psychographic information on neighborhoods and other relatively small geographic areas. Using GIS to develop profiles of likely donors or recipients from existing data and then applying it to the best donor or recipient geography clearly provides an advantage over traditional methods.



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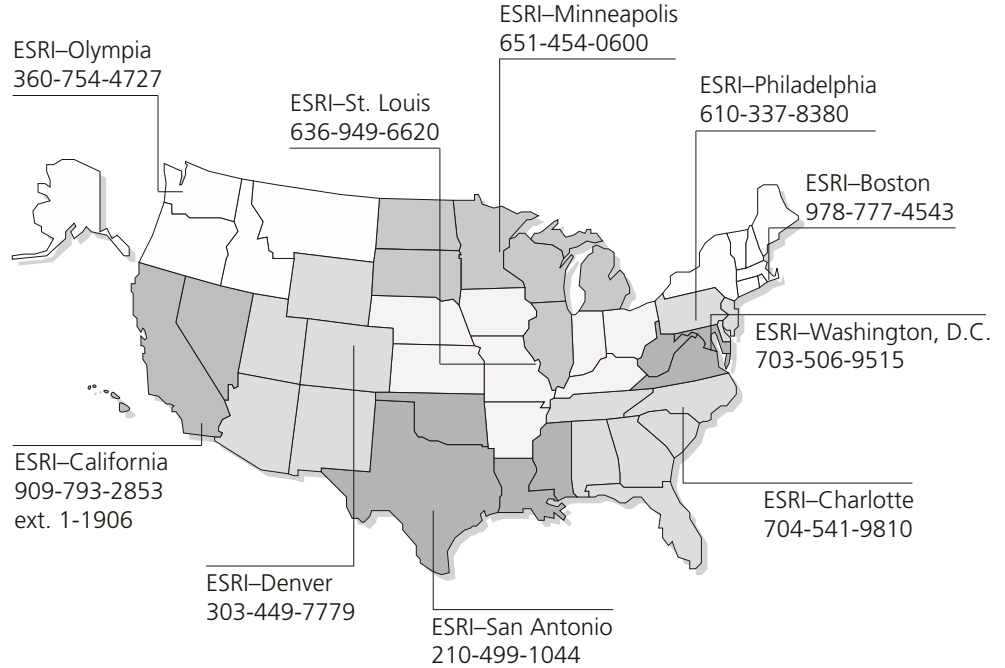
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