

“Using Customer Data for Improved Strategic Marketing Planning and Decisionmaking”

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Introduction

Awareness of and access to geographic data is complex and new to many professions, including librarianship. Geographic data is best described as information such as the geographic boundaries of the neighborhood the library serves, characteristics of the people who live there (age, language spoken, level of income and education), and how far library users and potential library users live from the library. Library research indicates all these factors which are geographic in nature, affect library use. Which materials and services are consumed is called library use data. Collectively, these data are often called ‘customer data’ in the business world.

This paper introduces: 1) the four-step marketing model; 2) the critical nature of geographic/customer data relevant for strategic marketing planning and decision making in public libraries (although other types of libraries may also benefit); and 3) new technologies that facilitate use of geographic data such as GIS (geographic information system software) and the US Public Library Geographic Database developed by the GeoLib Program, Florida State University, Tallahassee, FL, USA, www.geolib.org/PLGDB.cfm .

Why Do Libraries Need Customer Data?

During the past century librarians identify people who use libraries, as patrons or users. Most recently some in the profession are calling users—‘customers.’ This new use of the word customer signifies that more and more librarians are aware of today’s competitive environment. Librarians who acknowledge competition concede that today’s libraries are only one of a myriad of information sources people can choose. Competitive organizations strive to know who their customers are, what product choices they may make, and where they live. In the past, libraries

often consider that they serve the whole of the public, and lack incentive to gather customer data. This may create a less competitive edge for the library. By contrast, collection of this data provides strategic insight into exactly who chooses to use the library, for what, how far they will travel, and how much time they will spend procuring library offerings, which ultimately affects type and level of library services.

Systematic Marketing Requires Customer Data

Marketing is the process of identifying and fulfilling customer needs within the mission and resources of the organization. Marketing is the driving force of any successful business or library. Effective marketing requires systematic data gathering regarding actual and potential customers. Without knowledge of customers it is impossible to optimize customer satisfaction which is the ultimate goal of marketing.

All kinds of organizations (including libraries) require customer information to effectively deliver services. Simple questions regarding the who, what, and where of customers, and the how and why of their behavior, must continually be answered. The answers to these questions not only identify customers' needs and desires, but how these change over time. This up-to-date customer data allows managers to provide the best product at the best price at the best place with the best communication to promote products. This provision of the 'best' is the essence of marketing including: market research (step one); market segmentation (step two); marketing mix strategy (step three); and marketing evaluation (step four). See Figure 1 for a depiction of the model. The following discussion describes the steps and inter-relationships, and verifies customer data is critical to the four step process.

Marketing Research: Step 1

The continuous acquisition and analysis of customer-related data is customarily called marketing research. Successful private and public sector agencies devote whole departments to this activity, and may even hire environmental scanners who gather customer-related data on a daily basis. Yet daily, librarians collect, organize and select data of every kind to solve every kind of problem for customers. So why don't librarians conduct these same activities for better library management? And why should they? (Koontz 2001.)

The Answer....Competition

Libraries are facing market competition like never before. Customers are eliminating actual library visits and accessing library databases via their desktop. Avid readers are logging onto Amazon.com rather waiting for interlibrary loan. A plethora of information resources continue to burgeon via broadcast, print and online. Customers



Figure 1. *The Four Step Marketing Model*

face many choices. The library is no longer the premiere community information provider. Parallel—libraries are vying with other public agencies for same public dollars. And the greatest competitor for any group is simple acceptance of the status quo. This attitude, which overlooks customers' changing expectations, leaves many a business with a 'closed' sign swinging from the front door.

Any agency facing competition must prioritize gleaning and gaining cutting edge customer data. For libraries—it is more important than ever to identify *changing* customer characteristics and information needs. This is necessary for libraries to viably compete, and offer the most desired and effective services and materials possible. Simply, there is less and less margin for wasted effort of staff or funds.

In today's increasingly heterogeneous and technologic society, dynamic and ongoing customer research is crucial to provide library services and materials that meet complex needs in ever-changing communities. Also, available research regarding customer use of public libraries indicates that for certain groups such as the elderly, juveniles, lower income or minority or immigrant groups—libraries must be placed within 'stumbling distance,' (this also includes easy computer access)—for these groups to have the opportunity to develop the skills associated with library use, including the reading habit. Not only can something as obvious as distance or lack of transportation be a prohibitive factor to library use, but also

more subtle cultural barriers can be identified, such as the beginning or the end of a perceived neighborhood. Some groups do not and will not travel beyond that invisible line. Library managers must be cognizant of what changing factors increase and decrease the customer base. Other public sector agencies successfully adopted marketing research practices to identify competitors and better address the unique needs of customer markets. Why not public libraries?

Critical Library Customer Data

One of the most important external customer-related data collected by libraries is a demographic description (population characteristics) of the people in the market area. The *market area* is the actual geographic area that customers and potential customers are drawn from.

Demographics relevant to public library use may include categories such as, income, age, family life cycle status, ethnicity or race, and education levels. Other important factors gleaned from environmental scanning, include topographical and cultural features that extend or delimit library use, proximity of library customers to transportation and schools, distance between libraries, and location of competitors (Koontz 1997.)

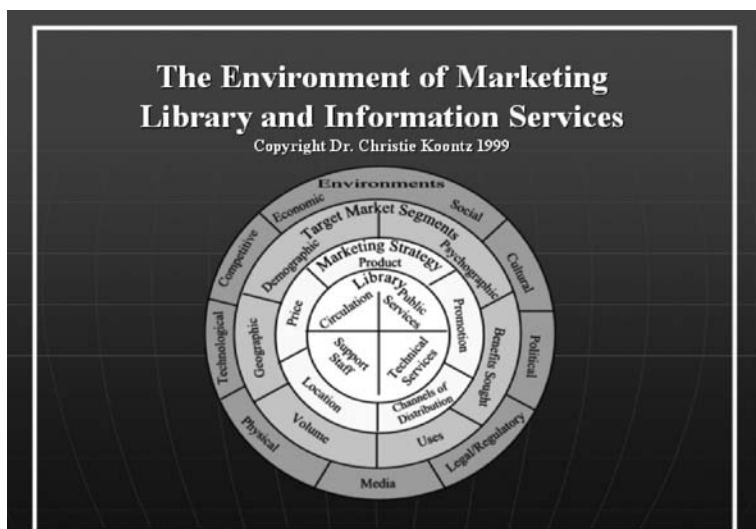


Figure 2. External Environment of Library and Information Services. This graphic is based upon Koontz's work with Persis Rockwood, Professor Emeritus of Marketing, Florida State University. Similar visuals are used in marketing texts to communicate external environmental factors.

This market data is external to the library – or extracted from external environments outside of the library’s immediate control. Interestingly enough, most libraries collect this type of data for customer use. See figure 2 for an example of a library and its external environment.

It is important to remember people choose to spend their time traveling from their home to places to purchase or access services. It matters to customers how far they have to travel – and therefore, it must matter to library professionals where customers live and the possible distance they will be required to travel. People primarily travel by foot, bus, subway, or car. Without a geographic market area determination the characteristics of the people that live there can not be described. For libraries serving changing populations with changing information needs, this user information is critical. While libraries rarely map customer data, they have in the past needed to ascribe service areas to branches to assess the presumed extent of library services geographically. This presumption is often inaccurate and not based upon true customer dispersion.

Background of the US Public Library Geographic Database

It is said that 80% of all governmental data has a geographic component to it. Some geographic data such as street addresses have a more precise location than other geographic data such as land use zoning or school districts but all geographic data can be displayed on a map relative to other geographic data (e.g., how far away is the public library from the elementary school?) In today’s computerized environments, geographic data sets are often maintained in a geographic information system (GIS) environment. A GIS is simply a computer system with the associated software for collecting, storing, manipulating, analyzing and presenting geographic data about things that can be represented in a map form. The GIS is what brings the digital map on the computer screen to life—allowing additional geographic features to be turned on to zoom closer into a map, to view schools within two miles of the library, and utilized for geographic analyses questions (e.g., what percentage of current library users reside within one mile of the newly-relocated library outlet if it is moved?)

In the US, during the past few years, digital inventories of accurately-mapped public agency locations and associated critical information were developed by agencies such as hospitals, fire and police, and schools, oftentimes in a GIS environment. Some of these datasets may even be available through a library’s catalog. These databases are regularly utilized by policy and decision makers at all levels for administration and management, long and short range planning, regulatory decision making, and, most recently, for national security and emergency preparation (Koontz et al 2004.)

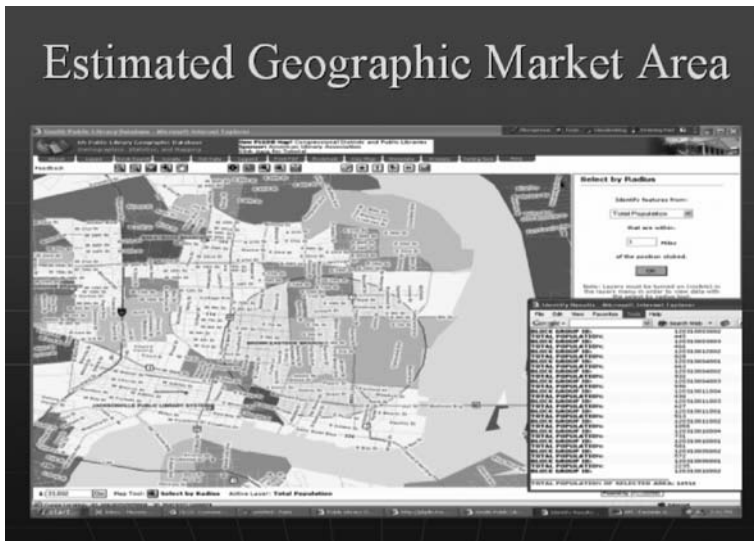


Figure 3. Estimated Geographic Market Area Using a Radius and Subsequent Population Totals.

Before the US Public Library Geographic Database, there was no comparable integrated national database of map-able U.S. public library locations and other library-related information. While a nationwide inventory of public library outlets and administrative entities has existed for several years the inventory was not maintained in a GIS environment nor was the inventory developed into a more-accurate base map.¹

What Information is in US Public Library Geographic Database?: Customer Data

In the current version, completed in 2004, there are two key nationwide data sets in addition to the base map of libraries. One is the US Census 2000 data set. While many librarians have access to 2000 census data, the PLGDB has pre-selected the census variables that most succinctly identify those individuals who are or are not library users. The selection of these specific census data is based upon years of library research. These pre-selected census data include such broad categories as age, income, education, race and ethnicity, number of children under 18 in a household, and what language is spoken at home (Koontz 1997.)

1. A base map is a map that has a known acceptable level of accuracy that is accurate enough for the geometric control of other positional information (i.e., one can accurately “overlay” with other geographically-referenced data to this base map.)

The other key data set is annual library use data for public library entities collected by a federal agency. These data are linked to the digital base map of approximately 9,000 library entity locations throughout the US.

US Public Library Geographic Database: A Tool for Marketing Research

Today, more than ever, public librarians are asked to address an ever-growing number of decisions and issues at the local, regional and national levels. Examples of questions that library managers and policy makers might face include:

- 1) Is the library providing the right balance of library services in light of changing populations and changing information needs? How should funding levels of local library service adjust to these changes?
- 2) How can public libraries help bridge the digital divide through provision of equitable access to the Internet?
- 3) What is the relationship between distance (i.e., to a facility, user travel time), and library use?

The answers to these and many other public library questions can often be best addressed (or even only answerable) by a database containing nationwide public library data linked to a geographic information system (GIS) base map. In such an environment, there can be linkages among different data sets to one another and each can be referenced to the appropriate geographic location on the earth's surface relative to each other. This was the reason the US PLGDB was created, and support by GeoLib developers continues to be sought from key stakeholders in the US public library field.

Without this type of data, the public library community can find itself in reactive situations much more often than proactive situations. The required information may not be available in a timely manner. As a result, surrogate data sets that may only be of marginal relevance to public libraries are used instead to make important decisions directly affecting public libraries. THE PLGDB facilitates the marketing research step, but is not in itself absolutely essential. Only the good customer data the PLGDB contains is essential to marketing research.

Marketing Segmentation: Step 2

With market research (step one) accomplished, a broad array of demographic and library use (customer) data is available. Managers can then conduct step two, market segmentation, the process of grouping customers with like needs, and then prioritizing segments for efficient and effective resource delivery. Librarians have been segmenting for years (i.e. juvenile, adult, mystery writers.) Again, this step is not possible without the customer data from the first step. See Figure 4 for an example

The screenshot displays the ArcView GIS software interface. The main map window shows a grayscale map of an urban area with various census tracts outlined. A legend in the bottom-left corner identifies the selected area as 'Black or African American Household'. The 'Layers' window on the right side of the screen lists the selected areas, including 'Black or African American Household' and 'Total Population of Selected Area: 1946'. The 'Layers' window also includes a search bar and a list of selected areas with their corresponding map IDs.

Figure 4. Customer Segmentation

of a customer segment mapped on the US PLGDB. This type of map display, and subsequent extraction of data from within the radius selected, provides quick review and data for managers asking ‘what if’ and ‘how many’ questions. For example, ‘what if’ the library closed—how far is it to the next facility, and how many people are possibly affected by the closure? Or ‘how many’ people live within two miles of the library?

Marketing Mix Strategy: Step 3

With in-depth knowledge of actual and potential customers, step three is now plausible. The marketing mix strategy is comprised of developing the product (a service or offer); setting a price (from a marketing point of view this is the sum of customer costs); delivering it (through place such as a library facility); and promoting it (publicity and other communication.) The marketing mix strategy is often mistakenly conducted as step one, instead of the preliminary and necessary steps one and two, market research and market segmentation. This is a considerable flaw in the marketing process for many organizations, as they proceed to develop an offer based upon company profits or goals that are not customer driven. Primarily, awareness of systematic marketing, and secondarily availability of technologies and tools such as GIS and the PLGDB – can facilitate library managers successfully implementing true marketing. Only after steps 1-3 are accomplished, can Step 4

(marketing evaluation) be completed, which identifies whether or not the offer is a success.

References

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Summary

The purpose of this paper is three fold to: 1) introduce the four steps of systematic marketing; 2) identify the critical nature of customer data required for successful marketing; and 3) introduce a new tool for strategic marketing planning and decision-making at www.geolib.org/PLGDB.cfm.

Yet this contribution in an international forum, within countries' varying levels of availability of population data and technologies, is offered more importantly to acknowledge the critical nature of library customer data for effective planning and decisionmaking. A manager does not need an Internet-based map of customer data to be effective. A manager needs first-hand knowledge of customer market areas and the needs and desires of the actual and potential customers who live there. Technologies only facilitate effective planning—yet can not now or in the future create critical customer data, or strategic use of same. Only a library manager's acumen and willingness to implement systematic marketing can effectively accomplish this.