Chapter 3
Customer Relationship Management as an Imperative for Academic Libraries: A Conceptual Model–121 E–Agent Framework

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ABSTRACT
This chapter proposes a conceptual model, the 121 e-Agent Framework, for Customer Relationship Management (CRM) in academic libraries. Linked data and Semantic Web are the core components of this model. The implementation of the Framework will enable the participating U.S. academic libraries to reach out to their user communities through systematic customer group identification, differentiation, and interaction. The main contributions of the chapter are 1) applying Semantic Web technologies for CRM in academic libraries using the 121 e-Agent Framework, 2) defining the relevance challenges of CRM for academic libraries, 3) adding trust management to the linked data layer with a touch of tagging, categorizing, query log analysis, and social ranking as part of the underlying structure for distributed customer data filtering on the Web in CRM applications, and 4) making the approach extensible to address the challenges of CRM in other fields.

INTRODUCTION
Customer relationship management (CRM) is defined as “the business processes and supporting technologies that support the key activities of targeting, acquiring, retaining, understanding and collaborating with customers” (Band, 2013). CRM is also regarded as a business model that uses proven methodologies and e-business technologies to help companies identify, select, acquire, develop, and retain profitable customers, building the lasting relationships that are key to long-term
financial success. Simply put, “It is a strategy used to learn more about customers’ needs and behaviors in order to develop stronger relationships with them. Good customer relationships are at the heart of business success” (Wailgum, 2014). When applied to the library profession, it is about developing a strategy or model that uses a combination of methodologies, computer programs, and Internet capabilities to build good relationships with patrons.

In the past CRM has received little attention in the library community. While librarians are more focused on collection-related issues of the digital age, the business world is obsessed with customers and a new era called the age of the customer (Forrester Research, Inc., 2014). Eventually, “Libraries are slowly becoming interested in CRM, as they look for ways to market their services and attract ‘customers’” (Arnold, 2013). The benefits of CRM for academic libraries include the ease of sharing information, ability of raising funds, reaching new users via social media, and obtaining details on usage (Cambellini, 2012). Like business organizations, libraries also need customer loyalty and support.

The library CRM strategy involves identifying and retaining patrons, including supporters from a library learning community, knowing their backgrounds, best matching their research expertise, interests and needs with relevant resources and services, measuring user satisfaction, developing long-term friends of the library, and more. The adoption of best practice and deployment of appropriate technologies such as the 121 e-Agent Framework is the key component in successful CRM implementation. In the last decade, academic libraries began to view their patrons as customers (Wilson, 2008). Therefore, the terms “patrons” and “customers” are used interchangeably in this paper as they both refer to the library clientele.

### Relevance Challenges of U.S. Academic Libraries Defined

Relevance challenges can be paraphrased as the challenges of remaining relevant. “The biggest challenge facing the library profession in the twenty-first century is staying relevant to its users” (Jennings, 2013). Libraries, like other organizations, have to show value to solve relevance challenges. CRM can help academic libraries to meet relevance challenges. Thus, academic libraries are increasingly concerned with CRM, especially in meeting patrons’ information needs. In a report from OCLC Research, Michalko et al. surveyed 15 directors from the member libraries of the Association of Research Libraries (the ARL) in the United States, and identified 26 risks in 5 categories. “Reducing sense of library relevance from below, above, and within” is the primary risk chosen by the directors (Michalko, Malpas, & Arcolio, 2010).

American Libraries Association (ALA) also echoed the similar concern about the relevance challenges in one of its official publications when addressing community value. It states that “Academic libraries must prove the value they provide to the academic enterprise” (American Library Association, 2013). Simply put, academic libraries must prove their relevance to their users and parent institutions.

This is largely due to the fact that academic libraries are no longer the sole provider of free information resources on college campuses in the U.S. Other factors contributing to library relevance challenges are:

- Users who assume that the availability of online alternatives and other resources provided by Google and other Internet sources would satisfy their research needs;