

DATA MANAGEMENT FOR NONPROFIT ORGANIZATIONS

A project completed for African Community Education Inc. in collaboration with Worcester Polytechnic Institute

> Christopher Berthelette Samara Garcia Antoinette Pacifico Brianna Vaughan



Abstract

This project evaluated the data management system of African Community Education Inc. (ACE) and recommended a new strategy to integrate their information and improve efficiency. To accomplish this, ACE began collaboration with WPI to identify issues in their current systems and determine a prioritized list of the agency's wants and needs. The project team analyzed results from this process and provided recommendations to the agency. In addition, the team assisted ACE through the decision making process, began the implementation of the new system, and delivered an implementation plan that included a third party to finish the implementation process and provided training resources. These resources were compiled to help the organization become self-reliant in training new staff/volunteers, maintaining, and troubleshooting the system.

Executive Summary

Introduction

African Community Education Inc. (ACE) is a volunteer based non-profit organization in Worcester that provides tutoring and homework assistance to children who are refugees or immigrants from many African countries. The organization had been rapidly expanding since its founding in 2006. One major hindrance was that the organization's current data management system was incapable of accommodating the growth of information needed to keep track of volunteers, employees, students, grants, and donors. ACE had been unable to update and recondition their data management system due to the lack of resources and time. Addressing this problem was critical for continuing the organization's quality services to the community. Our team worked with ACE to improve their data management system. Our primary goal was to evaluate and establish a more suitable data management system at ACE that fit their specific needs.



Figure 1 - Students studying at ACE (photo credit: ACE, 2014).

Literature Review

Through our research, we learned how non-profit organizations could benefit from implementing better processes and data management systems. These systems can improve internal dynamics, making the organization more efficient as a whole.

We discovered that ACE uses their data management systems to track the information on approximately 350 volunteers and staff members, 400 students, 350 donors, and all of their grants. We also learned that the agency faced a number of challenges; their data was stored and shared in multiple locations including Dropbox, Google Drive, Excel Spreadsheets, and basic

Microsoft Access databases. With information in multiple locations, it was difficult to keep track of updates and the data were more susceptible to errors.

There are five major types of databases: file system, hierarchical, network, relational, and object-oriented. We concluded that ACE needed a relational database management system since their organization is based on relationships with all of their constituents. We investigated constituent relationship management (CRM) systems and how they are ideal for organizations like ACE. A CRM would be able to manage the relationships of all of their constituents in one system.

We also researched the most effective ways to train people to use new technology. Before training can begin, it is important help the agency understand the benefits they will gain from switching from previous processes. Preparing employees for such a change helps smooth over the transition period, making educating the agency easier and reducing potential negativity towards changes to come. After this step is complete, educating staff through the use of training sessions has been shown to provide a solid foundation for employees. Supplementing sessions with handouts, visuals, and access to training manuals also dramatically increases the effectiveness of these sessions. When these materials are not enough, having a strong relationship with IT staff affiliated with the new system is a must for ensuring sustainability once our team is no longer working with the agency.



Figure 2 - Students from ACE (photo credit: ACE, 2014).

Methodology

Initially, we assessed ACE's database to understand the systems that were currently in use and the specific features that needed to be changed or updated. Our team began by conducting an inventory of their hardware and software to determine the capabilities of their computers. This allowed us to determine whether certain databases would be compatible or not. One-on-one system reviews were conducted with staff members to learn more about each database. In these reviews, problems were identified with the current system and staff members discussed capabilities that they wanted to see in a new database.

To discuss some of the more important topics, a focus group was arranged consisting of all staff members that would be working with the database. During this meeting, the possibility of implementing a CRM was introduced. As a result of the positive feedback from the agency, we tailored our search to systems with this feature. We also discussed system security, and the idea of switching from their local-access system to a database that was online. Some of the employees expressed concerns about having their information on an online cloud. Their concern emphasized the importance of finding a system with an excellent backup feature as well as high security. Additional consideration was given to specific features that the staff members wanted to see in a new database. We provided them with a list of the most popular features mentioned in the one-on-one reviews, and gave them the opportunity to discuss these options in a focus group. We found that there was a great need for the employees to be able to track students by different programs, by student attendance, to schedule events easier, to keep track of retention rates, to track partners of the agency, and to add more information to constituent profiles. Overall, it was determined that the database at ACE should be an affordable, secure CRM that was able to manage all constituents.

Recommendations and Discussion

After the focus group, we developed a list of important features that ACE desired in a database and compiled a decision matrix. For each database reviewed by the team, number grades (0-5) were assigned, corresponding with a rubric. Percentage weights were assigned to each feature based on feedback provided by the agency. This matrix allowed us to determine which databases most closely fit ACE's needs. We presented approximately eleven databases to ACE, and identified the top four choices according to the results from the decision matrix (Little Green Light, Neon CRM, Salesforce, and GiftWorks). Our overall recommendations included short-term goals for the upcoming year as well as a long-term plan of action that could be implemented over several years.

After the staff members at ACE discussed their options, Salesforce was determined to be the best option. Since this database was designed specifically designed for non-profit organizations, we helped ACE to apply for The Power of Us Program, which allowed them to have ten free enterprise license accounts for their database. Salesforce is also a system comprised of applications, each responsible for a different constituent group within the database. As a team, we recommended appropriate applications for the staff members and helped them decide which would be the most useful for managing their data. The end of our project involved creating a sustainable plan for data migration, as well as training. A document was created that detailed the process of data migration, including pictures and step-by-step instructions. We also reached out

to multiple technical consulting companies and compiled a list so that ACE had resources available if they needed help transferring their data from their old to new system. Finally, we compiled a document containing links to online training materials that could be used when learning to use Salesforce and training others to use it.

Conclusion and Deliverables

Our project helped ACE to make an informed and unified decision when choosing a new database. By the end of our project, the staff members had a database that was set up and ready for data migration. They also had a plan to transfer the data, maintain the system, and a list of resources if they wanted technical support during the system transfer. Additionally, they came away from this experience with training materials for continued maintenance and future learning for new staff members.

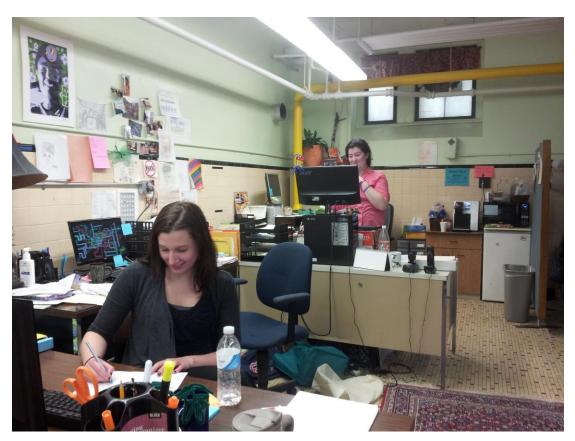


Figure 3 - ACE staff in the office.

Acknowledgments

This project would not have been possible without the support of many people. First, we wish to express our sincerest thanks to our sponsors African Community Education Inc. and all of the members of the organization who helped us along the way. We like to thank Amy Connery, our liaison with ACE, for her enthusiasm and assistance over the course of the past fourteen weeks. We are grateful for her help on both our project and in establishing relationships with the many other staff members and volunteers who made this project a success. Finally, we would like to thank our advisors Chickery Kasouf and Ingrid Shockey for their invaluable input and guidance throughout this project. We greatly appreciate their hours spent working with us and can say without a doubt that this project would not be what it is without them.

Table of Contents

Abstract	i
Executive Summary	ii
Introduction	ii
Literature Review	ii
Methodology	iv
Recommendations and Discussion	iv
Conclusion and Deliverables	V
Acknowledgments	vi
Table of Contents	vii
List of Figures	ix
List of Tables	X
Chapter 1: Introduction	
Chapter 2: Literature Review	3
2.1 Site Description	3
2.2 Database Fundamentals	4
2.3 Comparing Database Structures	4
2.4 Relational Database Systems	9
2.5 Long-term Training and System Support	10
2.6 Summary	
Chapter 3: Methodology	
3.1 Assess and evaluate current system	
3.2 Identify Needs at ACE	14
3.3 Analyzing Findings and Developing an Action Plan	
3.4 Create a Sustainable Plan	16
3.5 Data	17
Chapter 4: Findings and Analysis	18
4.1 Assessment and Evaluation of the Current System	
Participants	
Analysis	
4.2 Identifying Needs at ACE	23
Analysis	
4.3 Analyze Findings and Develop an Action Plan	35
4.4 Create a Sustainable Plan	
Chapter 5: Conclusion	40
Recommendations	40
Conclusion	40
References	
Appendices	
Appendix A	
Appendix B	
Appendix C	
Training Materials and Resources	47

Appendix D	49
Third-Party Resources	
Appendix E	
Tutorials	

List of Figures

Figure 1 - Students studying at ACE (photo credit: ACE, 2014).	. i
Figure 2 - Students from ACE (photo credit: ACE, 2014).	
Figure 3 - ACE staff in the office	٠,
Figure 4 - File System Structure	
Figure 5 - Hierarchical System Structure	
Figure 6 - Network System Structure	

List of Tables

Table 1 - Comparison of Types of Databases	8
Table 2 - Criteria Scoring Rubric	
Table 3 - Complete information from one-on-one reviews with ACE staff members	20
Table 4 - Chart analyzing similar and unique concerns from one-on-one reviews with staff	23

Chapter 1: Introduction

Non-profit organizations often have large amounts of valuable information that need to be compiled in an effective data management system. These data might include details regarding client, volunteers/staff, donor, and grant profiles. By implementing a well-designed system, an agency can save time when searching for files and increase their professionalism with all constituents. However, many smaller non-profits have limited resources and funding, and are therefore not able to make this type of addition. This project aimed to address these potential problems at African Community Education Inc.

African Community Education Inc. (ACE) is a volunteer based non-profit organization in Worcester that provides tutoring and homework assistance to children who are refugees or immigrants from many countries in Africa. ACE aims to enable their students to become active, aware, and responsible members both in the community and in the greater society. Non-profit organizations like ACE are essential in Worcester because of the diverse cultural backgrounds of new immigrants and the need for support with assimilation into the community. Helping their clients to become better integrated helps the city become a better place as a whole. As new Worcester residents, they are future leaders and workers who have the ability to improve the lives of themselves and others.

ACE was initially started as a tutoring service offered by students from the University of Massachusetts Medical School for refugee children from Liberia. Tutors met with the students occasionally, however these limited sessions were not sufficient since many of the children had never received formal schooling. As more children sought help from these tutors, the need to expand became evident. To accomplish this, the medical students running the service began collaborating with members of the Worcester African community. Although this program was initially created to aid Liberian refugees in the Worcester community, it grew to include students from many other African countries.

Today, ACE works in collaboration with the Worcester Public School System to supplement the curriculum that students follow in their classes. Apart from assistance with academic subjects, ACE provides other activities, such as dance, arts, and sports to ensure that

students have a balanced learning environment. Their mission is to help students reach their educational and social potential, and to support them as they become well-rounded citizens of the Worcester and the greater community. All programs are created with diversity in mind in order to overcome barriers like language and cultural differences.

The organization had been rapidly expanding since its founding in 2006. One major setback to this growth was that the organization's current data management system was unable to accommodate the growth in information needed to keep track of volunteers and employees, students, and donors. Due to limited access to resources (i.e. a dedicated IT staff), ACE had been unable to update and recondition their data management system. Addressing this problem was beneficial to continuing the organization's quality services to the community.

Databases can be a helpful tool for any organization's data management needs. A successful database keeps track of information and maintains unification, which in turn, allows organizations to operate more efficiently and effectively. This can save the staff and volunteers both time and frustration so that they can better serve their agency through more productive tasks.

Our team worked with ACE to improve their data management system. Our primary goal was to evaluate and establish a more suitable data management system at ACE that fits their specific needs. Furthermore, this system was designed to be sustainable and easy to use for future users. Providing this organization with an efficient system has allowed them to continue to offer their educational development services with ease. This helped the organization to continue to thrive and expand within the Worcester community.

Chapter 2: Literature Review

In this chapter, we discuss background information regarding the challenges and benefits of data management. First, we present the characteristics of a database, explain why databases are important to non-profit organizations, and discuss the proper way to train staff members how to use the new system and leave documentation for future employees.

2.1 Site Description

The ACE organization includes many people who make the program successful. There are four full-time employees and several part-time workers. Over 100 volunteers are registered to tutor students during the after-school and Saturday programs. Additionally, there are donors who contribute money and supplies to the program. In order to manage information regarding all of these constituents, ACE was in need of a secure and organized database that houses profile information for all levels of involvement.

The agency faced a number of challenges; their data was stored and shared in multiple locations including Dropbox, Google Drive, Excel Spreadsheets, and basic Microsoft Access databases. With information in multiple locations, it was difficult to keep track of updates and the data were more susceptible to errors. There were only four computers in the office and no remote access to any of the information. There was a need for database systems that organized data categories that include: students, volunteers and employees, donors, and grants. Each database needed to serve a specific purpose. The profile databases compiled information about everyone who was involved in the organization. The donor and grant databases allowed ACE to keep track of their interactions with people who were giving them money and supplies to advance their programs. The staff members who were trained on the new databases did not come from a technical background, so their training had to include complete and thorough explanations. Consolidating information into these databases helped to increase productivity at ACE and made them function as a more professional organization ("African Community Education Inc.," 2013).

2.2 Database Fundamentals

Good databases provide a consistent and reliable interface that allows users to input and extract information quickly and in an organized fashion. As stated by Rod Stephens, expert in programming and database applications, in his book, "A **database** is a tool that stores data, and lets you create, read, update, and delete the data in some manner" (Stephens, 2009, p. 5). Simply put, the more information a database manages, the more useful it becomes.

Apart from solely storing information, databases can be intuitively set up to automatically extract and input data into a system. Streamlining this process saves administrators from having to input and manage data manually. Often, this is done through the use of online forms including applications and registrations. Any website that requires a user to register with a username and password is a good example.

Furthermore, databases provide a foundation for users to analyze and output data. This is accomplished through the use of queries. A **query** is essentially an information request to a database. All databases include a "query language", and while there are many query languages that can be used, one of the most widely used is SQL (Structured Query Language).

Queries can be used in a number of ways to retrieve information from a database. On an individual scale, they allow the user to extract specific information from the system, such as returning information on a single entry. On a much larger scale, they can be constructed to generate reports, which initially had to be compiled by the administrator one entry at a time. These features are extremely useful to organizations that need to keep track of a large flow of information (Microsoft Corporation, 2007).

2.3 Comparing Database Structures

When developing a database there are certain questions that should be asked, such as "Why is this database needed?", "Who will be using this database?", "What types of questions should the database be able to answer?", and "Is there a type of database management system whose structure best mirrors that of the underlying data?" (Porter, 1997). To start addressing these questions, we researched in detail five main types of Database Management Systems

(DBMS). These include file systems, hierarchical databases, network databases, object-oriented databases, and relational databases.

A **file system** is a collection of programs that perform services for the users wishing to access information. Each program within a file system defines and manages its own data. While file system databases have a fairly simple architecture and are easy to set up (illustrated in Figure 4), they are also inefficient with many limitations (Porter, 1997). One such limitation is a high risk for redundancy when implementing this system. For example, assume two files contain the same information about a person's contact profile. If the person changes his address and only one of these files is updated, the two files are now conflicting.

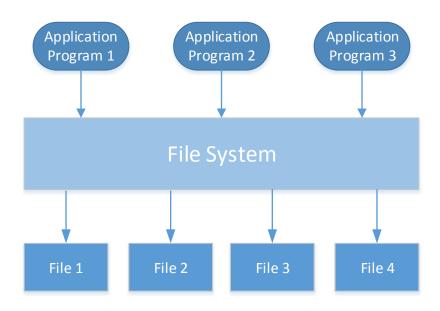


Figure 4 - File System Structure

A hierarchical system is structured like a family tree. A single entity is defined at the root of the tree and branches off as information is added. This structure can only deal with what are known as "one-to-many relationships" and not "many-to-many relationships" (Healey, 1991, p. 255), meaning that each "child" entity can only belong to one "parent" entity. The hierarchical approach is very efficient for searching if all access paths in the system follow parent-child linkages. For certain applications, a hierarchical system can be very useful, however once

created, it is almost impossible to redefine relationships making it highly inflexible. This model is illustrated below in Figure 5.

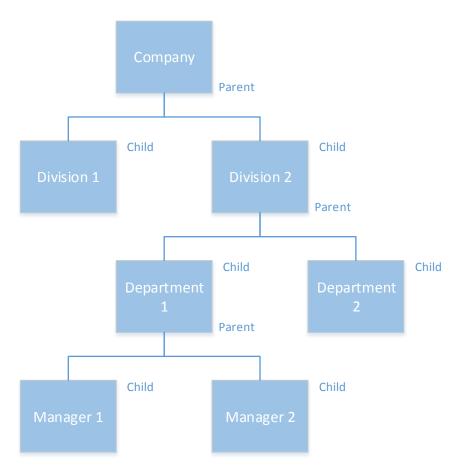


Figure 5 - Hierarchical System Structure

A **network** DBMS uses a structure that is similar to hierarchical DBMS, however, this structure can deal with "many-to-many relationships", meaning that the "children" can have multiple "parents". These relationships are illustrated in Figure 6. This system is much more flexible than a hierarchical system. Despite this advantage, it may be comparatively difficult to set up correctly because the query language may be complex and confusing for inexperienced users. As a result, network DBMS are not widely used (Healey, 1991, p. 257).

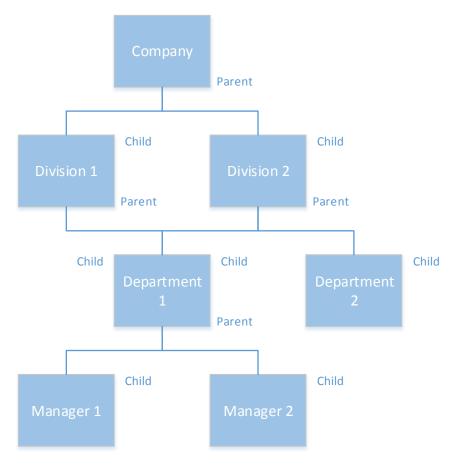


Figure 6 - Network System Structure

Object-oriented systems store their contents as objects and support the modeling and creation of data as objects. This type of database is able to handle types of objects including graphics, photographs, audio, and video. Objects consist of attributes and methods that define the behavior or function of an object. Object-oriented databases have two disadvantages. First, they are more costly to develop. Second, since object-oriented data management systems are fairly new, most organizations are reluctant to convert from their current databases because they are comfortable and are already stable using the system they have in place (Heberling, 2001).

A **relational** database is table-oriented. A table represents each entity set, while each row in the table represents the data for an individual entity. Each column holds data on one of the attributes of the entity set. The two main features of relational databases are the primary key and relational joins. The relational structure is firmly rooted in the mathematical theory of relational

algebra (Ullman, 1983). Since a set, as mathematically defined, cannot have duplicate values, neither can a table or relation. This property allows for minimal redundancy. "As each row must be different to every other, it follows that a value in a single column, or multiple columns, can be used to define a primary key for the table, which allows each row to be uniquely identified" (Healey, 1991, p. 257). The primary key uniquely defines the characteristics of each row. A relational join is the mechanism for linking matching data in different tables. A certain amount of necessary data redundancy is implicit in the relational model because the join mechanism matches column values between tables. Without careful table design it is very easy to introduce further unnecessary redundancy into the database. There are many advantages to using this database structure. For example, it is very easy to use and modify. Some popular programs that provide a relational data management system include Microsoft Access and MySQL. Access is a much more user-friendly program than MySQL, but MySQL is a much better program for larger DBMS (Heberling, 2001). Table 1 below shows a comparison between the five discussed types of data management systems.

Table 1 - Comparison of Types of Databases

	Structure	Advantages	Disadvantages
File System	Different files that manage separate data	Simple to use	High risk for redundancy
Hierarchical	Family Tree with one- to many relationships	Efficient for data in a hierarchical format	Nearly impossible to modify
Network	Family tree with many- to-many relationship	Flexible	Difficult to implement
Relational	Table-oriented	Flexible, low risk of redundancy, easy to modify	Can be costly, cannot handle complex data such as object-oriented systems
Object- Orientated	Holds various forms of multimedia	Flexible, easy to use	Costly

While all of these databases are advantageous for specific applications, relational databases are the most practical for the types of systems we discuss throughout this report. In the section below, we go into greater detail regarding how relational databases are used in commercial applications for non-profit organizations.

2.4 Relational Database Systems

A constituent relationship management (CRM) system is not just a database, but also a tool for managing the various relationships of an organization (Tech Impact, 2013). An effective CRM application can be a fundamental part of a nonprofit organization's success and is much more than just an elaborate contact management system. CRM software consolidates information about constituent donations or participation history so that a nonprofit can leverage the strength of their relationships with students, donors, volunteers, members, staff, corporate sponsors, alumni, and others. An affordable CRM is ideal for most nonprofits, providing powerful reporting and communication tools. These help in measuring the effectiveness of marketing, outreach, and fundraising campaigns (Bennett, 2013). In the context of fundraising, CRM may be employed to target those individuals most likely to respond to a particular appeal, either for donations or volunteering (Polonsky & Sargenat, 2007).

In the nonprofit sector, clients, staff, volunteers, and donors are all important stakeholders. Of these, donors are by far the single most important assets to their organizations. In order for a non-profit to survive and be able to accomplish its mission, it must create and maintain good relationships with its donors. According to one researcher, "To do this, it needs donor information, and it needs to use that information effectively" (Clemenson, 1999).

Often, small nonprofit organizations start off storing their donor information in spreadsheets before implementing a formal system. With this method however, files may become very large and increasingly difficult to manage; especially when keeping track of all the details necessary to continuing successful relationships with donors. To overcome this, donor management systems can be used. There are a number of donor management systems on the market, each with different capabilities and price ranges. It is important to look at the

organization's needs and requirements before selecting one of the prepackaged systems or creating a custom database (Pope, Berry, Quinn, & Andrei, 2013).

Volunteer and student-based organizations also have to keep track of a lot of data. These include profiles, activity tracking, scheduling, emailing, reporting and exporting. For most organizations it may make sense to track volunteer and student information in the same system as other constituents, especially donors. It is typical that volunteers and students tend to be good prospects for donors. Thus, some organizations find it useful to have all of their constituents in one place and combine their donor, volunteer, and student database systems together. This can help alleviate issues encountered when syncing profiles between systems. However, combining all of the management systems may not work well with organizations that have a larger number of volunteers and students. If this is the case, it may be more useful to have standalone volunteer and student systems (Andrei, Bernard, Leslie, & Quinn, 2011; Idealware, 2011).

Grants management systems share some of the same basic features as donor and volunteer systems; however, there are many more benefits to using this software. Databases are more reliable for grant tracking because they provide additional features not found in simple spreadsheets. These can include tracking conversations with contacts, grant requirements and evaluations, relationship management, internal tracking, previous submissions and even accounting services (Pope, Andrei, & Quinn, 2013).

2.5 Long-term Training and System Support

When teaching people to use any new technology, it is important to help them understand the benefits they will gain from switching from previous processes. Emphasizing the benefits of these changes will capture attention and relay the importance of any changes. Sharing this information with staff members encourages them to learn how to use new systems because it helps to visualize the success that their organization will achieve (Intuit, 2013). Often, an organization may feel nervous about switching to a new system because they are familiar with their current one. The success of any database implementation starts with the idea of helping staff members to "let go" of their old ways of working, and empowering them to use new technology, despite the learning curve they may encounter.

Once staff members have understood the value of switching to a new system, they must be trained. For example, in this project, we wanted to train the staff members at ACE to become self-sufficient learners who are able to pass on the information to future employees who will use their database. When training, it is important to help people understand how to solve problems that can arise when using the system, in addition to reviewing the data to make sure it is accurate (Aebi-Moyo, 2006). There are many methods of training staff members, however, one particularly effective method is having all employees attend a training session. This will allow all staff members to start at the same level of understanding and hear the answers to a variety of questions from their colleagues. Using handouts and visuals during a training session will also help to simplify explanations about features that may otherwise be confusing to explain (Feffer, 2012). Once a classroom training session has been completed, it is essential to allow staff members to practice using the new technology. Providing a sample template is helpful because people will feel more comfortable exploring the technology without worrying about creating an error in the actual system. This will help the staff to gain confidence and allow them to demonstrate their understanding of the technology. Additionally, it is important to provide an agency with a training manual so that future staff members have a way to train themselves. Successful manuals include paper documentation of training, in addition to video tutorials that provide visual explanation. A combination of these resources will provide a variety of options for employees to train themselves and others (Weiner, 2012).

It was also important for us to ensure that ACE had a good relationship with the IT staff affiliated with their new system. A major component of this project was to ensure the sustainability of the database once our team was no longer working with the agency. It was necessary for us to consider the possibility of including some of the IT staff in the initial database training to establish a good relationship early on in the process. Providing this resource for the ACE employees would also make them more comfortable with the new system by knowing they have resources available to answer questions and troubleshoot errors (OSIG Group, 2013).

2.6 Summary

Through our research, we learned how non-profit organizations benefit from implementing better processes and data management systems. When used correctly, these systems can improve on internal dynamics making the organization more efficient as a whole. By managing information on students, staff, volunteers, donors and grants, these systems can help organizations create and maintain more meaningful relationships with all stakeholders.

Chapter 3: Methodology

As we have noted, the goal of our project was to evaluate current data management systems utilized by ACE and update it to meet their current needs. To meet this goal, our objectives were to:

- 1. Assess and evaluate the agency's current data management systems
- 2. Identify the agency's needs pertaining to donor management, staff/volunteer management, grants management, and student management
- 3. Using the "Best-Practices" checklist as a guide, design and present short term and long term solutions
- 4. Implement the new system

3.1 Assess and evaluate current system

In order to assess and evaluate the agency's current database management systems, we began by conducting a site assessment to familiarize ourselves with the dynamics of the organization. We took an inventory of their hardware and software, conducted one-on-one system reviews with each of the agency's staff members who regularly use these systems and analyzed the results from each of these reviews. To accomplish this, we began our project by observing ACE's normal operations and processes. We recorded observations on how the employees operate as a team, which helped us gain a better understanding of their internal dynamics.

Once we became sufficiently acquainted with the dynamics of the agency, we evaluated their database management systems by taking an inventory of their applicable hardware and software. We recorded what kind of computers the agency used, the networks that the computers were on, and the computer's functional capabilities. This helped us to determine the limitations of their systems and how this would affect any potential upgrades. This also allowed us to learn where and how the agency's data was previously stored and if there was enough space for expansion. When compiling reports to evaluate the software at ACE, we made a list of the systems currently being used to keep track of information (i.e. Microsoft Access, Excel, Dropbox, and Google Drive). By itemizing what they had and how they were using it, we

identified software limitations. The collection of these data allowed us to compare their current software implementations to other commercially available data management systems for non-profit organizations.

After collecting these data and compiling reports about ACE's hardware and software, we conducted one-on-one system reviews with relevant staff members to gain further insight about how the agency uses their current Student, Donor, Volunteer/Staff, and Grants Management System. In these reviews, we asked the staff the following questions:

- What problems are you facing with your current database system?
- What are the pros and cons of your current database system?
- What specific capabilities would you like the new database to have?

We used these system reviews as an opportunity for the staff members to give openended feedback about the purpose of their systems and what could be improved within each database. This discussion format allowed the staff to bring specific items to our attention that we may not have previously considered, expanding our outlook on the scope of the problem.

Finally, as a result of our preliminary research, we synthesized a "Best-Practices" checklist that compared commercially available Student, Donor, Staff/Volunteer, and Grants Management Systems for nonprofits and summarized software capabilities and functionality. We used this checklist as a guide to assess the capabilities of the existing system and presented our findings in an in-depth report. The "Best-Practices" checklist can be found in Appendix A.

3.2 Identify Needs at ACE

After making our own assessments, we conducted a focus group that included staff members that would be directly affected by any changes to the database systems. Based on our experiences working with the agency and the results from the one-on-one reviews, we created several topics of discussion that needed to be addressed during the focus group (see section 4.1 for specific questions and topics/why each was chosen). We conducted a focus group because it allowed the employees to react to each other's ideas and challenge each other's opinions (Doyle, n.d.). We did this to inspire further discussion and insights with regard to the agency's wants and needs. The focus group format also allowed for additional ideas to come up in conversation that

otherwise may not have been taken into consideration. We felt that this was the most appropriate and effective method to clearly define the line between the agency's needs and wants regarding student, donor, staff/volunteer, and grants management systems. We expected these needs to vary based on the different systems under review. In addition to taking notes during this focus group, we also recorded the conversation. This allowed us to go back and listen to avoid missing potential observations from the focus group.

3.3 Analyzing Findings and Developing an Action Plan

After meeting with the focus group, we analyzed the major challenges that the agency faced with regard to their database systems. We researched and tested a number of potential software applications to develop recommendations. In order to accomplish this, a decision matrix was created. This tool allowed us to objectively look at systems based on five parts: general requirements and specific requirements for student, donor, staff/volunteer, and grants management systems. The criteria in each part were determined using the research compiled in the "Best Practices" checklist and the results from the focus group and one-on-one reviews.

Each criterion was assigned a number grade (0-5). We reached an agreement on the grades using the scoring rubric in Table 2, where the values for "ease of use" and "meets needs" were combined. The scores of the criteria for this part were then added together and multiplied by a factor to base the score on a scale of 100. For example, if one part of the matrix had 10 criteria that were scored then the highest score possible for this part would be 50. Thus, we multiplied the total score by 2 in order to have the final score of this part to be on a scale of 100. Lastly, combined metrics of all the five parts of the scoring process were displayed at the bottom of the matrix. These numbers were the average scores of the totals (both weighted and unweighted) of all five sections.

Table 2 - Criteria Scoring Rubric

Criteria Scoring Rubric

Criteria Scoring Rustic	
Ease of Use	
0 - Difficult to Use	
1 - Somewhat Easy to Use	
2 - Easy to Use	
Meets Needs	
0 - Does not meet agency's needs	
1 - Meets some of agency's needs	
2 - Meets all of agency's needs	
3 - Exceeds agency's needs	
Total:	

When calculating the results for each system, we prioritized the importance of all features. Percentage weights were assigned to these features based on feedback provided by the agency. The decision matrix (Appendix B) calculates both weighted and un-weighted results for individual parts and as a whole system. These scores were presented to allow the observer understand the importance how the criteria were weighted. The software products that scored the highest using our decision matrix were our top recommendations. Our recommendations included identifying and proposing short-term goals to be carried out over the upcoming year as well as a long-term plan of action that considered changes to be made over several years

3.4 Create a Sustainable Plan

After working through the decision-making process with ACE, we developed a plan for implementation. Using sample data as a team, we created a report that detailed how the employees could transfer information from their old to new system on their own. However, our team also compiled a list of companies that help non-profit agencies to implement data for free, or at a relatively low cost. We provided this list to give ACE the opportunity to hire a team of technical specialists to implement the system or provide assistance to the employees while implementing it on their own. In addition, our team developed a training manual that included online resources to help current and future users to maintain and use the software.

3.5 Data

All data was stored in a password protected computer and destroyed upon completion of the project.

Chapter 4: Findings and Analysis

In this chapter, we discuss the results that were extracted from the collaboration process with ACE. We then go on to interpret these findings in order to determine what the staff members at ACE want and need in a database.

4.1 Assessment and Evaluation of the Current System

Of the thirteen computers in the ACE office, three used the Windows 7 operating system while the others ran on Windows XP. These computers contained a shared folder that could be accessed throughout the ACE office and contained all the information for each password-protected database. Here, we describe the essential systems that were in use for students, donors, and volunteers.

The student database was organized on a Microsoft Access template and contained demographics and contact information. Additional information the agency needed to track that the Access databases were not able to include, such as attendance, was compiled in separate Microsoft Excel spreadsheets. The volunteer/employee database was similar to the student database in that each constituent was organized in a Microsoft Access template. The donor database also used a template in Microsoft Access where information like campaigns, contributors, donations, and events were all stored in tables. The Access template also had the ability to create lists for donations and contributions, and reports for campaigns, contributors, and fundraising.

In addition, we made notes about the general work environment at ACE, and the use of the databases. Each staff member had individual tasks and used specific databases that helped them accomplish their work. Although some of the staff members only used one or two of the databases on a regular basis, collaboration occurred when working on major events and developing monthly reports.

In order to gain feedback on the quality of each database, we conducted one-on-one interviews with five staff members. Each staff member explained which databases they used

most frequently, in addition to advantages, disadvantages, and features they wanted to see improved or added to a new database. Highlights from these interviews are summarized here:

Participants

Participant 1 works most closely with the student database. The template itself was originally capable of generating reports; however, due to an incident while attempting to modify the system to better suit the agency's needs, all of the macros needed for reporting were deleted. This hindered her ability to use the database to its full potential. This database did not have the ability to generate additional fields, causing her to store information in the wrong fields. Also, she was unable to generate reports, and there was only one table used to organize student information. Participant 1 was generally the go-to staff member for IT needs but admitted that she had little experience with the software and did not have a complete understanding of the databases.

Participant 2 is a part-time staff member at ACE, mainly working with the grant system. In her review, she showed us that grant information was not stored in a database, but was compiled in a Google Doc and Excel Spreadsheet. She stated that these files were not updated regularly and did not contain search features that allowed for each information look-up. Participant 2 told us that there was a grant template on Access, but had never used it because she was unfamiliar with the system.

Participant 3 is the most experienced staff member using Microsoft Access, and was able to operate all of the databases with efficiency. Participant 3, who worked mainly with the staff/volunteer database, expressed that there was a need for more identification fields (i.e. alumni, gender, and ethnicity) in order to complete monthly reporting. She also showed us the other databases, articulating that the formatting features needed to be improved.

Participant 4, who also works mainly on the staff/volunteer database, acts as the sole human resources coordinator at ACE. Organizing contact information, staff/volunteer positions, and contributions of time at the agency were her main reasons for using this database. She explained that because of the few full-time staff members, lack of training, and limited resources, it was difficult to keep the databases updated. Also, the generation of reports using the staff/volunteer database was extremely complicated. In order to accomplish this, she had to look

through multiple spreadsheets of staff and volunteer information and search manually for the information that was desired in the reports.

Participant 5 primarily works with the student and donor databases. She mentioned many of the same problems that the other participants mentioned during their interviews. She noted that these databases contained many unused fields that should be removed to reduce confusion. There were also fields that could be added to the student database, such as the ability to track students (currently being stored on a separate spreadsheet). In the donor database, there was a large amount of redundant information and events and campaigns were not easily distinguished. Additionally, Participant 5 recommended that the layout among all the databases should be consistent to make the system easier to use and understand.

Below, Table 3 contains the information from each one-on-one review in order to compare all of the results. This table displays the system each participant used as well as the participants answers to our question.

Table 3 - Complete information from one-on-one reviews with ACE staff members

	Participant 1 (student)	Participant 2 (grant)	Participant 3 (volunteer/staff, donors, grants)	Participant 4 (volunteer/ staff)	Participant 5 (students, donors)
What problems are you facing with your current database system?	Database does not save changes; database is corrupted because all the macros have been deleted; back-up version is used to store information but is not updated; unable to add or delete fields because she does not know how; not user friendly; system is not used for report generating; cannot track attendance	No grant database; used Google spreadsheet that was not updated; Information scattered in different places with some in Excel spreadsheet and some in Google; unable to search for specific grantor; disorganized	Volunteer/Staff: Some fields are unused; importing applications does not work Donors: Not user- friendly or visually appealing	Does not use all the fields in the database, but the fields would be helpful when reporting education and training; database is not set up to properly generate reports; does not know how to track how long volunteers and staff members have been working with ACE	Student: Many of unused fields Donors: Not user-friendly; disorganized; many of redundancies; needs to make an obvious differentiation between a campaign and an event; donor database needs to be separate from grant database

What do you currently like about the database system?	All information in the database is correct; if properly trained and if the database was properly set up, then the database would be more useful	None stated	The format is usable; the contact information is decently set up; reporting feature is good for writing grants and asking for grants	None stated	None stated
What specific capabilities would you like the new database to have?	Would like the system to show relationships among family members; easier means of generating reports	Storage of information in one place; possible Access system for grants; desired "potential grantors" category in database for prospective grants new to ACE	Staff: Automatic notifications desired when fields are left blank; new fields: languages spoken, length of employment, ethnicities; better reporting capabilities Donors: Remove many unused fields email function; easier way to communicate with donors. Grants: Storage of information in an actual database; keep information current	Would like the application information to update automatically; capability to sync email to database; improved report generation capabilities	Student: Easier means of using all the information; only have necessary fields; better way to track attendance Donor: A better way to use the contact information and get in contact with donors
Additional Comments	ACE has an account with Techsoup (which offers discounted software to nonprofits); cloud-based system could be used if secure	None	In favor of cloud- based system if secure	System needs to report the breakdown of positions, whether active, employee/ volunteer how long has been involved, diversity (race, language, gender), and tracking hours; cloud based would be okay as long as there is proper security	Cloud would be okay as long as security protects all the information

Analysis

A major factor to be considered when finding potential software solutions is whether the software will work with what the agency already has in place. To ensure this would not be a problem, we conducted a detailed inventory of all relevant hardware and software in the agency's office. Fortunately, all of the systems considered were compatible with ACE's hardware with the exception of CiviCRM, which required a dedicated server to host the database.

Furthermore, using a shared folder to store databases did not include a secure method of backing files up. Because the database was locally stored on the office computers, an external hard drive had to be updated regularly in order to ensure security of the files. However, this was inconvenient for the employees and wasted time that could be better used on other tasks.

Additionally, since the files were only stored in the office and were not accessible from any other location, the information was susceptible to permanent loss (i.e. water damage, fire, computer malfunction).

The feedback from the one-on-one reviews proved that the software used to organize the agency's information was inefficient and time consuming. The lack of training on Microsoft Access (the only "real" database software used by ACE) caused the employees to use applications such as Google Docs and Microsoft Excel spreadsheets, programs that the employees already knew how to use. Despite these difficulties, it was noted that the collaboration between the employees at ACE helped them to remain successful. The addition of a better database would make it easier for tasks to be completed, allowing the organization to grow.

Upon analysis of the one-on-one interviews with each of the participants, we came to several conclusions about ACE's database needs that would allow them to have a more efficient system. Table 4 was organized to compare requirements identified by the employees. These concerns were addressed throughout the remainder of our project, specifically when we conducted our focus group (see Section 4.2) and were used to compile our decision matrix (see Appendix B) when researching and evaluating database options.

Table 4 - Chart analyzing similar and unique concerns from one-on-one reviews with staff

Wants/needs for all data management	Wants/needs for specific data management
Database should be "user friendly"	Grants information is not stored in a database
Database fields should be customizable	Format of donor database works well for employees
Server is one computer, backed up on an external hard drive	Volunteer information is hard to extract for reporting
Computers run on XP and Windows 7	Contact information of employees should be included in database
Secure, cloud-based database is a good option	
Maintaining a database is difficult and time consuming	
Majority of ACE's databases are Microsoft Access	
New database ideas are desired	
Databases should be kept current	
Databases should have the ability to export contact information	

4.2 Identifying Needs at ACE

In order to identify the specific database needs at ACE, we conducted a focus group that was structured around the wants and needs derived from the one-on-one system reviews. The turnout for participation was excellent, although we originally had five people registered, we ended up with eight participants in total. The first topic of discussion resulted in a lengthy conversation. The participants were concerned with the amount of time it may take to implement a completely new system. On the other hand, the group as a whole felt that it might be easier to start out fresh with a new database. One of the participants felt very strongly about this, stating that he was not even using the current system and that he would use a new database if it was easier to use (Participant 1, January 28, 2014). Another point concerned the possibility of updating the current systems in Microsoft Access as a short-term plan, and in the meantime put together a plan for the implementation of a new system as a long-term goal.

We introduced the topic of a CRM system. No one in the group had heard of a CRM, but after learning about its capabilities, many of the participants agreed that it could be ideal for managing their data. The idea of having all of their constituents managed in one system was exciting for all of the participants. The program director stated interest in systems that would be used by schools or afterschool programs (Participant 2, January 28, 2014).

The next topic began with a discussion about storing information on a remote, cloudbased system. Most of the participants were hesitant about having their system stored online because they were concerned about the security of their data. However, they liked the idea of being able to access their database outside of the office and that their data would automatically be backed-up. The last topic allowed us to gather a list of desired features in a new database. We gave everyone an opportunity to express further questions, comments, or concerns. We found that there was a great need for the employees to be able to track students by different programs, student attendance, schedule events easier, keep track of retention rates, track partners of the agency, and add more information to constituent profiles. In sum, the focus group participants wanted an affordable, secure CRM that was able to manage all constituents.

Analysis

We assessed the results of the focus group by developing a list of the agency's wants and needs for each database management system. We addressed the individual concerns identified in the one-on-one reviews and determined which features were priorities for the agency. By doing so, we were able to gain a better understanding of what kind of system would best fit ACE when researching different systems.

These criteria became the foundation for the decision matrix. There were 32 specific features that were assessed when evaluating each database. Weights were placed on each feature, representing the priority given by the staff members at ACE. For each section of the matrix, features were assigned weights relative to others in that section so that the total would equal 100%. Sections included requirements for General, Donor, Student, Staff/Volunteer, and Grants databases. For each feature, a grade was assigned based on the Criteria Scoring Rubric (see Table 2). The feature was rated on a scale from 0-2 in regards to how easy it was, and was also rated on a scale from 0-3 in regards to how well it met the agency's needs. The total rating was a combination of both scores, resulting in a maximum of 5 points per criteria. Any score between 0-4 was the result of a combination of partial scores from both categories. Examples for the total scores of 1, 3, and 5 with descriptions are cited below each feature in the following section. A combined score of 0 indicates that the feature was not present in the system at all.

General Requirements

Within the general requirements section of the matrix, there were ten features that staff members wanted in every section of their database (i.e. student, staff/volunteer, grant, and donor). The weighting between these features varied according to how their importance was prioritized by staff members.

Ease of Use: Ease of use was given a weight of 15% because it was a higher priority than most of the other criteria. Staff members wanted a system that was easy to use so they would not encounter the same problems as with their previous system.

Rubric examples for scores 1, 3, and 5:

- 1: User Interface is complex, disorganized, and relatively difficult to learn/use.
- 3: User Interface is fairly complex but moderately easy to learn/use.
- 5: User Interface is simple, clear, and easy to learn/use.

Security: Security was given a weight of 10%, because it was a necessary component of the database. ACE stressed that security was important because all constituent information needed to remain confidential.

Rubric examples for scores 1, 3, and 5:

- 1: There contains minimal security features, but no password protection or online cloud to protect or backup information stored by ACE.
- 3: Database contains several security features with either password protection or an online cloud for storage protection or back up of information.
- 5. Database contains a plethora of security features with password protection and an online cloud for storage protection and information back up.

Permissions: The permissions requirement was given a weight of 10%. Permissions represented the capability of allowing or restricting users from accessing certain parts of the database. Rubric examples for scores 1, 3, and 5:

- 1. System has minimal permissions settings (Standard User/Administrator)
- 3. System has basic permissions settings (read/write permissions for different capabilities/types of users)
- 5. System is capable of customizing all permissions for various types of users.

Customization: Customization was given a weight of 10%. ACE needed their database to be highly customizable to manage their changing constituents and information.

Rubric examples for scores 1, 3, and 5:

- 1. It is difficult to customize layout, user accounts, and data fields.
- 3. Limited customization capabilities are available for layout, accounts/information, and data fields.
- 5. Layout, accounts/information, and data fields can be easily created, modified, or used to suit needs

Visually Appealing: Visual appeal had a weight of 10%. The agency wanted a database that looked organized and professional.

Rubric examples for scores 1, 3, and 5:

- 1. User interface is cluttered, unappealing, and non-customizable.
- 3. User interface is somewhat clean and visually appealing and but can be customized/personalized.
- 5. User interface is clean, simple, visually appealing, and customizable.

Reporting: Reporting criteria had a weight of 10%. This is a requirement for any database because ACE is required to give monthly reports regarding their donors, grants, volunteers, and students to their board of directors and other agencies to remain a nonprofit organization. Rubric examples for scores 1, 3, and 5:

- 1. Limited reporting tools are available and are moderately difficult to learn/use.
- 3. Reporting tools are available, customizable, and somewhat easy to learn/use.

5. Reporting tools are easy to learn and use and can be customized and saved to meet needs.

Data Backup: Built in data backup received a weight of 10%. ACE needed this capability because if anything were to happen to the data or computers, the information would be in a secure location.

Rubric examples for scores 1, 3, and 5:

- 1. Backup tools are limited and moderately difficult to use.
- 3. Backup tools are manual but easy to use
- 5. System supports automatic backups

Technical Support: IT support scored a weight of 5%. It was not as important of a feature for a database because IT support can be found elsewhere (i.e. companies around the area or technical support online). However, it was still important for the database company to offer some support so that staff members could reach out if they encountered problems.

Rubric examples for scores 1, 3, and 5:

- 1. Minimal technical support is available for free. Other support is available at a cost.
- 3. Limited technical support is free/available.
- 5. Unlimited technical support is available.

Cost: Cost was given a weight 15%. Because ACE is a non-profit and has a limited budget, this requirement was ranked as an important feature. In order for a database to score a 5, the database had to be affordable (i.e. less than a thousand dollars a year).

Rubric examples for scores 1, 3, and 5:

- 1. Cost is greater than \$5,000/year.
- 3. Cost is between \$1,000 and \$5,000/year.
- 5. Cost is less than \$1,000/year.

Email: Email capability received a 5% weight because ACE wanted to have a way to email groups of constituents at once.

Rubric examples for scores 1, 3, and 5:

- 1. Minimal email integration is supported but may be moderately difficult to setup/use.
- 3. Email/mass email is supported but somewhat difficult to setup/use.
- 5. Email/mass email is fully supported and is easy to setup and learn/use.

Database Specific Requirements

Donor Database

For the donor portion of the database, there were five criteria that were each weighted at 20% because staff members prioritized all criteria equally.

Communication: The communication with donors' criteria was important because communication between staff and donors is essential (i.e. sending invitations for events or expressing thanks for donations).

Rubric examples for scores 1, 3, and 5:

- 1: There is a means of communication but has minimal features or is hard to use.
- 3: Database contains a means of communication and has several communication features (sending invitations or messaging donors) and was fairly easy to use.
- 5: Database contains an easy to use communications with donors and has all useful communication methods for contacting them.

Donor Profile: The donor profile criteria are important to allow the agency to add or delete donors and create full profiles (name, location, amount of donation, etc.).

Rubric examples for scores 1, 3, and 5:

- 1: Donor profiles can be created, but are hard to add and delete and don't have all the customized profile fields (name, location, donation, etc.) that were specified by ACE.
- 3: Donor profiles are fairly easy to add, delete, and customize, but don't contain all the donor fields that were specified by ACE.

5: Database has an easy to use donor profile setup where the user can add, delete and customize all the fields that were specified by ACE.

Campaigns: The campaigns section is important because ACE needs a way to organize and schedule these events.

Rubric examples for scores 1, 3, and 5:

- 1: There is a campaign setup tool, but it is hard to organize and schedule events.
- 3: Database has campaign setup up tool with a means of organization and events scheduling.
- 5: Database has an easy to use campaign set up with the ability to schedule and organize events and campaigns.

Financials: Financial capability was an important feature needed for ACE to manage their finances with donors.

Rubric examples for scores 1, 3, and 5:

- 1: There is a financial capability feature, but is hard to use and no accounting tool or program integration.
- 3: There is a relatively easy to use financial capability feature with an accounting tool, but no program integration.
- 5: Database has a straightforward financial capability feature with an accounting tool and integration to a finances program such as Quickbooks.

Ease of Use: Our team also evaluated the ease of use for the specific donor section of the database. To accomplish this, the layout, number of steps taken to access each part of the database, and overall subjective understanding of the system were taken into consideration. Rubric examples for scores 1, 3, and 5:

- 1: Donor section of the database is difficult to navigate, understand, customize, and use.
- 3: The database's donor section is simple in regards to navigation, general understanding, customization, and use, with some flaws in said criteria.

5: The database's donor sections are easy to navigate, understand, customize, and use, which was an overall consensus between all group members.

Student Database

In the student database, there were four criteria that were weighted equally at 25% because they were all of the same priority to staff members.

Student Profiles: The student profiles were essential because ACE needed a way to record the information from each student that attended the programs there (i.e. name, school information). Rubric examples for scores 1, 3, and 5:

- 1: Student profiles can be created, but are hard to add and delete and don't have all the customized profile fields (name, ethnicity, age, etc.) that were specified by ACE.
- 3: Student profiles are fairly easy to add, delete, and customize, but don't contain all the student fields that were specified by ACE.
- 5: Database has an easy to use student profile setup where the user can add, delete and customize all the fields regarding student information that were specified by ACE.

Relationships: Relationships within the database (i.e. sibling, parent) were an important feature for staff members at ACE when generating reports.

Rubric examples for scores 1, 3, and 5:

- 1: Relationship feature is hard to use and/or has a minimal ability of linking family profiles.
- 3: Database contains a usable relationship feature with the ability to link some family members' profiles.
- 5: Database contains an easy to use relationship feature with the ability to link all family members' profiles.

Automatic Notifications: The automatic notifications were an important feature in the student constituent database because the agency wanted to be notified when a field was left blank while adding information in the student profiles.

Rubric examples for scores 1, 3, and 5:

- 1: Database has automatic notifications for required fields feature, but feature is either not customizable for the specified fields (that were clearly identified by ACE) or is difficult to use.
- 3: Database has automatic notifications feature that is usable and customizable for some specified fields (identified by ACE) but not others.
- 5: Automatic notifications feature is easy to use and customize for all the specified fields that were identified by ACE.

Behavior and Attendance: Behavior and attendance were two features that staff members want to be able to track in their database, since they already record them every day during the after school programs. These features are helpful when evaluating a student's progress.

Rubric examples for scores 1, 3, and 5:

- 1: Tracking behavior and attendance feature is complicated to use and/or does not have the ability to record data on a daily basis or generate report about the information.
- 3: Database has a usable tracking behavior and attendance feature and has the ability to either record the data on a daily basis or to generate reports on the information.
- 5: Database has an easy to use tracking behavior and attendance feature with the capabilities of recording the data on a daily basis and to generate reports about the information.

Staff/Volunteers Database

In the staff/volunteer portion of the database, there were seven specific criteria that received equal weights of 10% because they were of the same priority to staff members.

Staff/Volunteer Profiles: Staff/volunteer profiles were an important feature because information regarding these constituents needed to be recorded (i.e. name, position, languages spoken, ethnicity, etc.).

Rubric examples for scores 1, 3, and 5:

- 1: Profiles are present but information could not be organized logically or modified.
- 3: Profiles are organized and information could be modified.
- 5: Profiles are able to be modified to contain all credentials and are well organized.

Notification of Blank Fields: The notification of blank fields is a feature that is helpful for staff members to be notified when a field is left blank to avoid crucial information from being forgotten.

Rubric examples for scores 1, 3, and 5:

- 1: Only certain fields are pre-set to send notifications if left blank.
- 3: Notifications can be customized but are challenging to set up.
- 5: Notifications can easily be set up for any field that is left blank.

Annual Update Notifications: Update notifications are used to ensure that certain constituent criteria (i.e. contact info, CORI forms) are updated on a regular or annual basis.

Rubric examples for scores 1, 3, and 5:

- 1: Only certain fields are pre-set to send annual notifications.
- 3: Notifications can be customized but are challenging to set up.
- 5: Notifications can easily be set up for any field that requires an annual update.

Demographics: It was important to have a feature in the database that tracked demographics of students, volunteers, and employees, since diversity is an essential component to ACE's programs.

Rubric examples for scores 1, 3, and 5:

- 1: Demographic fields are limited and cannot be customized.
- 3: Demographic fields are present but not customizable.

5: Demographic fields are present and easy to customize.

Volunteer Tracking: Volunteer tracking was needed by ACE to track the hours that were logged by each volunteer.

Rubric examples for scores 1, 3, and 5:

- 1: Volunteer hours/schedules cannot be tracked in one location within the database.
- 3: Volunteer hours/schedules can be tracked in one location within the database.
- 5: Volunteer hours/schedules can be tracked in an organized table or chart within the database.

Positions: Identification of positions of volunteers and staff members was an important feature in order to track what each member of ACE is doing at the agency (for example: intern, tutor, staff member, etc.).

Rubric examples for scores 1, 3, and 5:

- 1: Positions are pre-set and cannot be customized.
- 3: Positions are able to be customized.
- 5: Positions are able to be customized and constituents can be linked to others with the same position.

Automatic Notifications: It is important to be able to send automatic notifications in regards to reminders and memos for staff members and volunteers.

Rubric examples for scores 1, 3, and 5:

- 1: Notifications cannot be customized and are difficult to set up.
- 3: Notifications can be customized for reminders with some difficulty.
- 5: Notifications can be customized for all reminders with ease.

There were also two features that were weighted at 15% because they were prioritized higher by staff members.

Import Applications: Importation of documents was a very important feature because ACE stressed the importance of having the ability to store job applications of potential volunteers and staff members in the database.

Rubric examples for scores 1, 3, and 5:

- 1: Importation of documents is confusing and time consuming.
- 3: Importation of documents is comprehendible and does not consume much time.
- 5: Importation of documents is fast and easy to understand.

Custom Fields: Adding custom fields was also essential because the agency preferred the fields in the staff and volunteer profiles to be added, subtracted, and customizable to have information that they want in the profiles (i.e. languages spoken, country of origin, gender, etc.). To receive a score of 5, the staff and volunteer profiles had to have highly customizable fields.

Rubric examples for scores 1, 3, and 5:

- 1: The ability to add custom fields or modify existing fields is limited and confusing.
- 3: Custom fields can be added and existing fields can be modified.
- 5: Custom fields cab be added and existing fields can be modified easily and quickly.

Grants

For the grants database there were four specific features reviewed. These requirements all received the same weight of 25% because they were of the same priority to the agency.

Grants Profile: The grants profiles were also chosen as an important feature to compile all information regarding grants and grantors.

Rubric examples for scores 1, 3, and 5:

- 1: Not customizable and profile is not very detailed
- 3: Not customizable, but the grant profile within the system is detailed
- 5: Highly customizable and have the ability to add and change fields

Search by Name: The first requirement was the ability to search grants by name. The agency felt that this feature would make it easier to identify which grants they were applying for.

Rubric examples for scores 1, 3, and 5:

- 1: Feature is present but is not easy to use/learn.
- 3. Feature is present and moderately easy to use/learn.
- 5: Feature is present and easy to use/learn.

Search by Purpose: There was also the feature of searching for grants by purpose. This was similar to searching by name so ACE would know what the purpose was for each grant (afterschool program, Saturday program, school supplies, etc.).

Rubric examples for scores 1, 3, and 5:

- 1: Feature is present but is not easy to use/learn.
- 3. Feature is present and moderately easy to use/learn.
- 5: Feature is present and easy to use/learn.

Attach Files: The ability to attach files was important because when adding grants to the database, it would be helpful to add other documents.

Rubric examples for scores 1, 3, and 5:

- 1: System offers limited capability of attaching files and is difficult to use/learn.
- 3: System has the ability to attach files, but is moderately difficult to use/learn.
- 5: System is fully capable of attaching files to grants profile and is easy to use.

4.3 Analyze Findings and Develop an Action Plan

The team identified eleven databases that were evaluated on five topic dimensions -using thirty-two criteria. These included general, donor, staff/volunteer, student, and grant specific requirements. After analyzing our research using a decision matrix, we brought the top four ranking systems to the agency for a decision. The four systems selected were Little Green Light, Neon CRM, GiftWorks, and Salesforce.

After researching the eleven databases and piloting all available trial versions, each software system was scored based on the predefined criteria. Using a decision matrix, systems were ranked on their functionality and capabilities. Grades were converted to a scale 0%-100% for comparison with the other software. In addition to calculating the average score of each

system, the team was also able to give priority to different features by weighting each criterion. This allowed us to tailor our metrics to the agency's needs. Amongst the solutions, the four that averaged the highest scores for all categories were considered the "most viable" solutions.

Little Green Light (LGL) was an excellent system for a small nonprofit organization in need of a very basic data management system. It was the least expensive system we found on the market, for a minimum cost of \$421 per year for up to 2500 constituents. This cloud-based system was geared towards nonprofits in need of constituent management and reporting capabilities. It had a large majority of the features that ACE was looking for in a database (see Appendix B for a detailed description of feature rankings). Some of the most prominent features of LGL were its ability to be customized, quality IT support, and excellent reporting capabilities. However, it was noted that the software was not capable of tracking students and had no integration with financial programs, such as QuickBooks.

Neon CRM was similar to LGL, but had more advanced features. Some of these included integration with email, website, and smart-phone applications. This system was ideal for larger nonprofit organizations that have a large group of members who often pay dues, donate, and attend events. Neon CRM was only slightly more expensive than LGL, at \$588 per user per year. This database scored well on our decision matrix because of its powerful security, reporting and financial capabilities, and donation tracking features. However, our team felt that this system would not be the best fit for ACE because it was challenging to use and has many features that were not applicable. Neon CRM also did not have the capability to track the attendance, behavior, and other important aspects of student profiles that were desired by the staff members.

Another top database was GiftWorks. This software was an easy-to-use desktop-installed program, but was geared towards grant and donor management. Additional constituents (i.e. volunteers or students) could be added but would appear as a "donor" in the system. We saw that this feature may cause confusion and frustration for the employees. Upon testing the GiftWorks software, we determined that the system would be more appropriate for managing donors and grants than for volunteers and students. With the desktop GiftWorks package, there were powerful security features and IT support which both score well on the decision matrix,

reinforcing the software's capabilities. Additionally, there was an annual fee and start-up fee (\$499 startup, \$1080 annually), both within ACE's budget, making it an affordable option.

Our top recommendation was the Salesforce CRM database. The "Power of Us" program was a main reason why this system was extremely appealing. This program makes Salesforce free for qualifying nonprofit organizations and donates ten free "Enterprise Edition" licenses. This program also offers discounts on additional licenses, training, salesforce.com events, and certain free apps. We worked with staff members to submit an application for the program, and found out that ACE was eligible for the Power of Us program. This essentially made the entire CRM free for ACE, simply because they qualified for the program.

In addition to the fact that the database was free, the customizable features made this software appealing. Salesforce is a database comprised of applications that can be added and modified to fit the wants and needs that the staff members had discussed. For example, the Schoolforce app can be used to track the students that attend ACE, such as grades, schedule, behavior, attendance, and family relations. The Nonprofit Starter Pack can manage donors, donations, and memberships. The Volunteers for Salesforce app can manage jobs, volunteers, events, shifts, and hours. Salesforce is also a cloud-based system, so the staff members can access the database from any location with Internet access. The cloud component also provides strong security to protect the information stored in the software.

4.4 Create a Sustainable Plan

After considering all options, ACE decided to proceed with Salesforce because it was the only system that could be customized to fit the majority of their needs and was ultimately the best option. Through Salesforce's "Power of Us" Program, we were able to secure 10 donated enterprise licenses for the agency, making it the most affordable solution. Our team recommended and helped the staff members select five apps from Salesforce's AppExchange in order to complete their database. Although the user accounts for the database were free, some of the apps did require a monthly or annual fee. Our team compiled a list of apps that we felt would be the most affordable and appropriate for the agency, and presented these recommendations to the staff members. After reviewing our recommendations, ACE decided upon the Schoolforce

app with Intervention for the student database, the Volunteers for Salesforce app for the volunteer/staff databases, and the Nonprofit Starter pack for the donor database. ACE also plans to look into an accounting app that can help with their finances, an app with email capability so all emails to constituents can be sent through the database for easy communication, and a human resources app. ACE will implement these apps in the future with a consulting firm or independently, and can switch to others as their agency continues to grow.

We worked through the implementation process as a team and created tutorials that detailed the process so that the employees can add information to the database on their own (see Appendix E). These tutorials will give them the information needed for migration, and be helpful if staff members at ACE choose to bring in a third party to help with the system transfer. These materials were created specifically for ACE's system as a way to simplify the process for whoever is transferring the information between databases. Some of the processes include exporting data from the existing database, preparing and formatting the data for import, and importing data into Salesforce. Due to the differences in tools and capabilities between standard user accounts and administrator accounts, similar topics have been documented for both (i.e. admins have the capability of importing 50,000 constituents in a single upload whereas standard users may only upload 500 constituents at a time).

Our team also compiled a list of companies that help non-profits to implement data at a relatively low cost (see Appendix D). We provided this list to give ACE the opportunity to have a team of technical specialists help with data migration or provide assistance to the employees. The companies we consulted all offered database implementation and data migration services, and were willing to offer continued technical support to the staff members at ACE. 501 Partners is a company located in Medford, MA that offers technical services to non-profit organizations using Salesforce. They offer training sessions for a reasonable price (approximately \$200 per session) in addition to consulting, data migration, and a variety of other services at negotiable costs. Cloud4Good is another company that works exclusively with organizations using Salesforce. This company offers a large variety of services, ranging from database need discovery, to data migration and training. They offer rates of approximately \$150 an hour, but are willing to negotiate pricing with non-profits. DomITek is a company located in Worcester,

MA that also offers technical support to non-profits. They provide consulting and technical services at the price of about \$95 an hour, and are willing to help with data migration and system implementation. 180 Advance is an IT consulting company that provides similar services to the other third parties mentioned above, and is willing to negotiate pricing with non-profit organizations. They are extremely willing to offer over-the-phone support and act as a contact for any technical questions that may arise.

We also developed a manual with links to tutorials and videos that could be used when troubleshooting and training future staff members to use the system (see Appendix C). These resources are meant to help ACE implement their database and ensure its sustainability for the future.

Chapter 5: Conclusion

Recommendations

After working through the decision-making process, ACE chose to move forward with Salesforce because it is a highly customizable platform that can be designed to meet the majority of their needs at little or no cost. In order to ensure that the system was sustainable, we created a plan for implementation and data migration. We have created step-by-step tutorials for data migration (See Appendix E) and identified third-party consulting companies who would be willing to assist with this process (See Appendix D). This way, if the staff at the agency did not feel comfortable completing the data migration or had any trouble along the way, they could reach out to one of these consulting companies. In addition, our team provided a document listing numerous training resources to assist ACE with training new staff/volunteers and maintaining the system (See Appendix C).

Conclusion

Through this project, we evaluated the current data management systems at ACE and recommended a more effective database to store their information. Non-profits like ACE can greatly benefit from the implementation of an efficient database due to the large amount of information they track regarding all of their constituents. The new database was implemented with the intention of reinvigorating ACE so that they are able to continue to carry out their services to members of the community. Time that was previously spent inefficiently with their previous systems can now be used towards more productive tasks.

Improving ACE's data management system was a crucial step towards helping the agency to grow. With a more efficient system in place, ACE will be able to function more productively and will be able to maintain better relationships with all donors. The agency and their staff will have more advanced tools to manage their constituents more efficiently, in addition to being able to generate reports with ease. This will also provide them with a better way to keep track of the grants that they apply for and receive. Our work with ACE allowed staff

members to make an informed, group decision to establish an appropriate database that will serve them well in the coming years.

The methods we used throughout this project can also be used as a sample for other non-profits that are facing similar challenges. One of the main obstacles for these organizations is their limited budget, which was something that we had to be mindful of when providing recommendations. Despite this, there are always people who are willing to provide their services at a reduced cost, and understand the importance of helping those in the community who are providing exceptional services. This project was completed with the intention of leaving ACE with a sustainable and more efficient way to manage their data, in addition to demonstrating that there are amazing resources available for non-profits that will help an organization to flourish.

References

- Aebi-Moyo, N. (2006). Using your database. from http://www.ictknowledgebase.org.uk/usingyourdatabase?type=98
- African Community Education Inc. (2013). from http://www.acechildren.org/
- Andrei, K., Bernard, C., Leslie, J., & Quinn, L. (2011). A Consumers Guide to Software for Volunteer Management: idealware.
- Bennett, S. (2013). The 3 Best CRM Software Solutions for Nonprofits. Retrieved November 20, 2013, 2013, from http://www.reviews.com/crm-software/nonprofits/
- Clemenson, B. (1999). Donor management database use and evaluation. *Fund Raising Management*, 29(11), 28-33.
- Corporation, M. (2007). Database Basics. http://office.microsoft.com/en-us/access-help/database-basics-HA010064450.aspx
- Doyle, J. K. (n.d.). Handbook for IQP Advisors and Students. *Chapter 11: Introduction to Interviewing Techniques*.
- Feffer, M. (2012). Training Colleagues to Use the Database Correctly. http://news.dice.com/2012/10/17/training-employees-company-database-correctly/
- Group, O. (2013). IT support survey: How important is IT support for business, really? *OISG Group*. Retrieved April 9, 2014, from http://www.oisg.com/articles/news/i/it-support-survey-how-important-is-it-support-for-business-really/
- Healey, R. (1991). Database Management Systems (First ed., Vol. 1): John Wiley & Sons.
- Heberling, G. (2001). Database Fundamentals. Retrieved 11/12/2013, 2013, from http://www.personal.psu.edu/glh10/ist110/topic/topic07/topic07_06.html
- Idealware. (2011). A Consumers Guide to Software for Volunteer Management. Retrieved December 4, 2013, 2013, from http://www.idealware.org/sites/idealware.org/files/volunteer_management_v5.pdf
- Impact, T. (2013). 7 Tips for Building Nonprofit Supporter Profiles. Retrieved November 21, 2013, 2013, from http://blog.techimpact.org/7-tips-for-building-supporter-profiles/#!prettyPhoto
- Intuit. (2013). Motivating People To Use Your Web Database Application Solution. Retrieved from Quickbase Articles website: http://quickbase.intuit.com/resources/articles/motivating-use-of-online-database-solution

- Polonsky, M. J., & Sargenat, A. (2007). Managing the Donation Service Experience. *Nonprofit Management and Leadership*, 17(4), 459-476.
- Pope, E., Andrei, K., & Quinn, L. (2013). A Consumers Guide to Grants Management Systems: idealware.
- Pope, E., Berry, A., Quinn, L., & Andrei, K. (2013). A Consumers Guide to Donor Management Systems (pp. 161): idealware.
- Porter, J. (1997). Scientific Databases. Retrieved November 13, 2013, from http://www.vcrlter.virginia.edu/dimes/presentations/PORTER/SCIDB97/index.htm
- Stephens, R. (2009). Beginning Database Design Solutions. Hoboken, NJ, USA: Wiley.
- Ullman, J. D. (1983). *Principles of database systems* (2nd ed.). Rockville, Md: Computer Science Press.
- Weiner, R. (2012). Training on your new database. *Strategic Technology Advisors to NonProfits* and Educational Institutions. http://www.rlweiner.com/training-on-your-new-database

Appendices

Appendix A

The following table was synthesized to outline all major functionality of the three major database management systems referenced in this report. It includes information on Student Management Systems, Donor Management Systems, Staff/Volunteer Management Systems, and Grants Management Systems.

Donor Management System	Staff/Volunteer Management System	Grants Management System	Student Management System			
Donor Profile	Volunteer Profile	Grant Profile	Student Profile			
Querying	Querying	Querying	Querying			
Reporting	Reporting	Reporting	Reporting			
Email Functionality	Email Functionality	Email Functionality	Customization			
Customization	Customization	Customization	Ease of Use			
Ease of Use	Ease of Use	Ease of Use	Support and Training			
Support and Training	Support and Training	Support and Training	Support and Training			
Adding and Tracking Donations	Activity Tracking	Form design and flexibility	Attendance and Behavior Tracking			
Social Media Integration	Scheduling Interface	Relationship Management	Demographics			
Prospecting and Proposals	Online Features	Grants Requirements & Evaluation	Family Relationships			
Payment and Website Integration	Print Communication	Permissions & Workflow	Automatic Notifications			
Tracking Events	Manages Additional Constituent Info	Internal Tracking				
Tracking Other Built-in Interactions		501(c)(3) and OFAC Status				
Integration		Applications review				
Accounting Support		Data Access				
Installation and Maintenance		Accounting Support				
		Letters and Board Dockets				

Appendix B

The following is the decision matrix used to compare twelve systems based on general and specific requirements for student, donor, staff/volunteer, and grants management systems.

Decision Matrix	Weig	Civi CRM	Salesforce NPSP without apps	SalesForc e NPSP with apps	Orang eLeap	DonorP erfect	Microsoft Dynamic	Acc ess	Non- Profit EZ	eTap estry	Neon CRM	L G L	Gift Work s
Scale:(0-5) General Requirements	hts: 100 %												4
Ease of Use	15%	3	4	4	4		4	3	3	4	2	5	4
Security	10%	2	4	4	4	4	5	4	5	5	5	4	5
Permissions	10%	5	2	3	4		5	1	2	3	4	5	5
Customizable	10%	3	5	5	3	5	1	3	3	3	3	4	3
Visually Appealing	10%	2	3	4	3	4	3	0	2	4	3	4	4
Reporting	10%	3	3	3	4	5	2	3	5	3	4	4	5
Built in Data Backup	10%	0	4	4	4	5	5	0	4	5	5	5	4
IT Support	5%	0	3	3	2	4	5	0	5	3	5	5	5
Cost	15%	4	3	3	4	5	2	5	4	3	3	5	3
Email Capable	5%	3	3	4	0	4	2	0	4	4	4	4	5
Total:	2	50	68	74	64	72	68	38	74	74	76	9 0 9	86
Total (Weighted):	20	54	69	74	70	69	67	46	72	74	72	1	83
Specific Requirements													
Donor:	100 %												
Communication w/ Donors	20%	3	3	4	2	4	4	0	5	4	4	5	4
Donor Profiles Separate	20%	4	3	5	5	5	3	3	4	4	5	5	5
Events/Campaigns	20%	5	3	5	2	5	3	2	5	4	5	5	5
Easy Access Financial Capability	20%	5	3	5	4		4	2	4	5	3	5	4
(Quickbooks)	20%	0	2	2	0	2	3	0	5		5	2	5
Total:	4	68	56	84	52	64	68	28	92	68	88	8	92
Total (Weighted):	20	68	56	84	52	64	68	28	92	68	88	8 8	92
Student:	100 %												
Student Profiles Sibling/Parent	25%	4	2	5	4		3	4	4	3	3	4	3
Relationships Behavior/Attendanc	25%	1	3	4	5		3	0	4	3	5	5	4
e	25%	0	0	5	0	3	2	0	0	0	0	0	0

Automatic													
Notifications	25%	4	2	5	0		5	0	2	0	5	5 7	1
Total:	5	45	35	95	45	15	65	20	50	30	65	0 7	40
Total (Weighted):	20	45	35	95	45	15	65	20	50	30	65	0	40
	100												
Staff/Volunteers: Staff/Volunteer	%												
Profiles	10%	4	3	5	4	5	3	4	5	3	4	5	5
Import Applications Notification of Blank	15%	0			5		3	2	0	0	3	5	2
Fields Annual Update	10%	0	3	3	1		5	0	3	0	3	1	0
Notifications	10%	0	1	1	0		0	0	0	0	5		0
Add Custom Fields	15%	5	3	4	1	5	1	3	0	0	3	4	2
Demographics	10%	5	3	4	4	4	2	4	2	3	3	5	5
Volunteer Tracking	10%	0	1	3	4	5	3	3	4	0	5	5	5
Positions Automatic	10%	5	3	4	4		1	3	4	0	4	5	5
Notifications	10%	4	1	3	0		0	0 42.	4	3	5	6	0
Total:	2	51.1 111	40	60	51.111 1111	42.2222 2222	40	22 2	48.8888 8889	20	77.77 7778	6. 7	53.33 3333
												6	
Total (Weighted):	20	51	39	58	52	43	40	43	44	18	76	9	52
Grants:	100 %												
Search by name	25%	5	2	4	0	4	4	0	0	3	5	5	5
Search by purpose	25%	0	2	4	0	4	4	0	0	3	5	5	5
Attach Files	25%	5	2	4	0	5	4	0	5	3	5	5	5
Grants Profile	25%	4	2	4	0	5	3	0	5	3	4	5 1	4
Total:	5	70	40	80	0	90	75	0	50	60	95	0 0 1	95
Total (Weighted):	20	70	40	80	0	90	75	0	50	60	95	0	95
Combined Metrics:		57	48	79	42	57	63	26	63	50	80	8	73
Combined Metrics (weighted):		57.6	47.8	78.2	43.8	56.2	63	27. 4	61.6	50	79.2	8 3. 6	72.4

Appendix C

Training Materials and Resources

The following links provide various tutorial resources and guides on the use of Salesforce.com from various sources.

- This website has a library of salesforce.com video courses, where one can learn slaesforce.com skills and best practices. Membership is free, but a member can also sign up for courses with instructors for about \$300 a class.

 https://www.livesalesforcetraining.com
- This site contains links to a variety of tutorials provided by Salesforce http://www.salesforce.com/app/video/misc/help/Need Help Logging In.jsp
- Salesforcetutorial.com http://www.salesforcetutorial.com/
- This series of tutorials introduces one to dashboards and reports in Salesforce.
 http://www.salesforce.com/us/developer/docs/workbook_analytics/workbook_analytics.p
 df
- This book introduces one to the Force.com platform, salesforce.com's platform for building and running business applications in the cloud. http://www.salesforce.com/us/developer/docs/fundamentals/salesforce_creating_on_dem_and_apps.pdf
- This guide goes through the steps of getting up and running with SalesforceCRM. Along
 the way, one can find checklists and links to resources such as training segments, Best
 Practice documents, and tip sheets. Also be sure to take advantage of the associated
 workbook, which will help one come up with and track important decisions.
 http://www.tud.ttu.ee/material/enn/IDU0080_2010/Loeng14Clouds/25556612-Salesforce-Getting-Started-Guide.pdf
- This site has links to tip sheets and implementation guides. https://help.salesforce.com/HTViewHelpDoc?id=quicktour_tips.htm&language=en_US
- This site contains links to 32 Salesforce guides on getting started, implementation, and maintenance http://www.ecquire.com/blog/32-salesforce-guides/
- A simple Salesforce manual on the basics such as how to log in or how to create an
 account

http://salesforce.screensteps.com/

- Salesforce.com's Service Cloud Service for Dummies PDF http://www.mycustomer.com/files/siftmedia-mycustomer/SCforD.PDF
- Youtube playlist full of How To tutorials provided by Salesforce https://www.youtube.com/playlist?list=PLB39017CE69F42E50

Appendix D

Third-Party Resources

The following is a list of companies that offer database implementation and migration services.

501 Partners

- -located in Medford, MA
- -offers consulting, implementation, data migration, and training services
- -pricing can be negotiated
- -works exclusively with non-profits
- -works exclusively with Salesforce databases
- -training sessions available in Boston (\$199 early bird special, \$250 regular fee, \$149 for each additional attendee)
- http://501partners.com/
- (978)-232-9200

Cloud4Good

- -located in Memphis, TN
- -works exclusively with Salesforce databases
- -offers consulting, diagnostic, implementation, data migration, and training services
- -pricing can be negotiated
- -offer continued IT support
- -\$150/hour fee for consultation and labor
- http://cloud4good.com/
- 1-(855)-536-1251
- contact: Danny Rodriguez; danny@cloud4good.com

DomITek

- -located in Worcester, MA
- -local business excited to help other local organizations
- -offers consulting, implementation, and data migration services
- -pricing can be negotiated
- -\$95/hour fee for consulting and labor (this is the discounted rate for non-profits)
- http://www.domitek.net/
- (508)-755-6503
- -contact: Libis Bueno

180 Advance

- -available for continued IT support
- -offers consulting, implementation, and data migration services
- -has experience working with non-profit organizations
- -pricing can be negotiated
- -\$95/hour fee for consulting and labor
- http://www.180advance.com/
- (508)-340-0932
- -contact: David Jolly

Appendix E

Tutorials

In order to migrate all of ACE's data from their previous databases to Salesforce, several steps need to be taken.

Before any data can be imported, it must be prepared and formatted correctly. To use the Import Wizard in Salesforce, all constituent's information must be consolidated in a single Comma Delimited CSV file. This can be accomplished by exporting the data directly to this type of file or by using Microsoft Excel to help organize this information. To automate this process, a Query can be created to format all of the data correctly and then saved as a spreadsheet. Once in spreadsheet form, the file must then be saved as a Comma Delimited CSV file (.csv) in order to be recognized by the Salesforce Import Wizard. (Note: Each database- student, donor, staff/volunteer, and grants should be exported to its own CSV file.)

While most data will be transferrable, there is still some information that will not be able to be transferred. The majority of this information consists of relationships, which will have to be manually added later on in this process. Until that data is manually inputted, Salesforce will only be able to provide basic profiles for the agency's constituents.

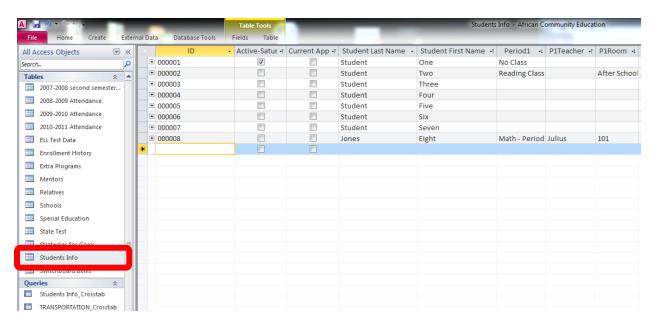
After this step, it is important to check spreadsheet for the correct formatting before moving forward in this process.

The Salesforce Import Wizard can be used to upload most data. Before doing so, Salesforce should be set up to accommodate all data being imported. In this step, the Administrator should go through the CSV files (one for each of ACE's databases: student, donor, staff/volunteers, and grants) and identify existing fields in Salesforce and fields that need to be created. The necessary fields that currently do not exist in Salesforce can then be added using the custom fields.

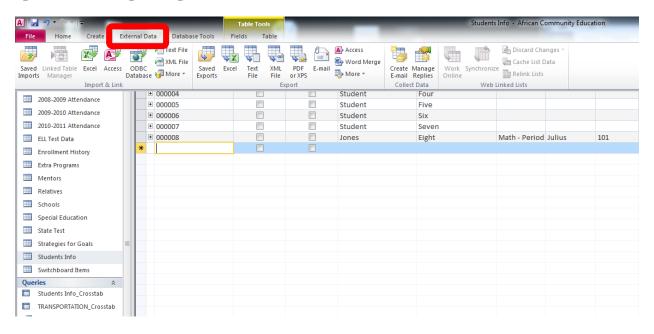
After all of the required fields are set up in Salesforce, CSV files can be easily imported into Salesforce. From here, it is simply a matter of assigning the appropriate field labels in Salesforce to their respective columns in the CSV file. After all of the information is accounted for, the data can be automatically imported into Salesforce.

Tutorial: Exporting and Preparing Data from Microsoft Access

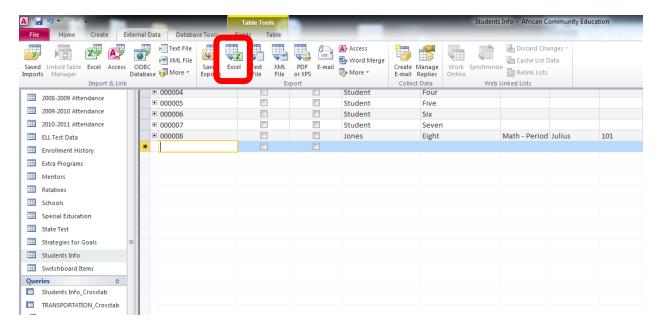
Step 1: With the appropriate database open, open a table from the left navigation bar to export. This table should contain the majority of information in the database to be transferred. (Note: There will be some data that will have to be input manually. This tutorial is set up to explain the process of transferring constituents.)



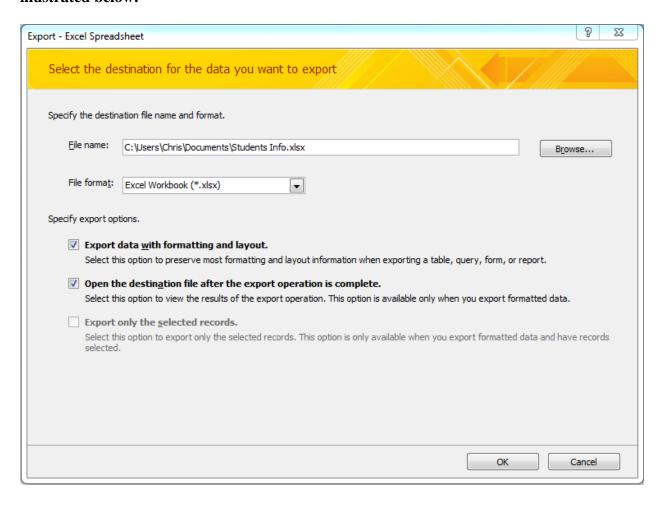
Step 2: Once the table is open, expand the tab "External Data" at the top of the page to open the data import/export menu.



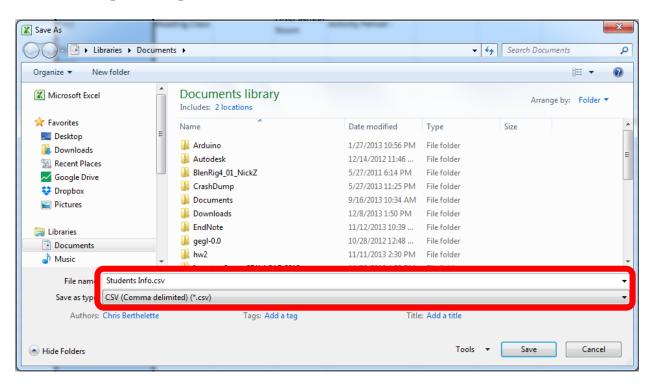
Step 3: Click on the "Excel" Link under the Export section of the External Data menu.



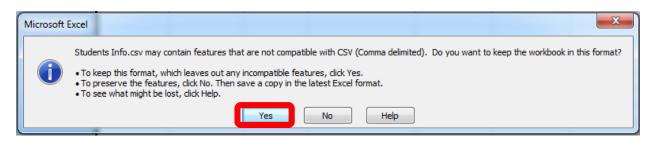
Step 4: Select a file name and location to save the file under and check off both boxes as illustrated below.



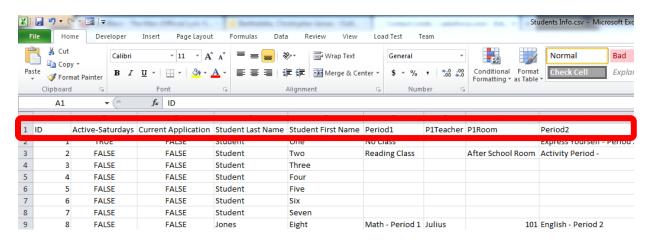
Step 5: Once in the new spreadsheet in Microsoft Excel, save the new file as a CSV (Comma delimited)(*.csv) file by clicking File→Save As. (This is the file type that will be used in the importation process.)



Step 6: When prompted, select "Yes" to finish saving the data as a CSV file.

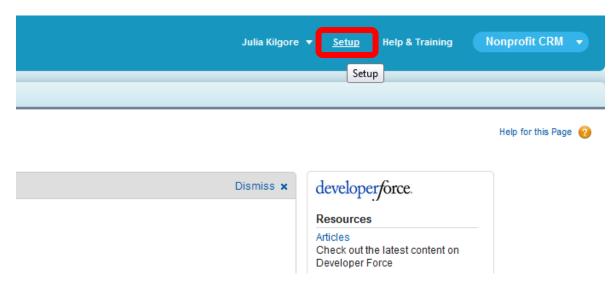


Step 7: Go through the new CSV file and check all of the data to make sure it exported properly. Every Column header in Microsoft Excel should correspond to a specific "Field" in Salesforce. For items that do not have a dedicated Field in Salesforce, a custom field may be created for it. To do this, please reference the next tutorial: "Adding Custom Fields into Salesforce". Once all data is accounted for, you may start the importation process. For importing data into Salesforce, please reference either "Importing CSV files into Salesforce for Standard Users" or "Importing CSV files into Salesforce for Administrators". Column Headers can be found in the first row of the table as shown below.

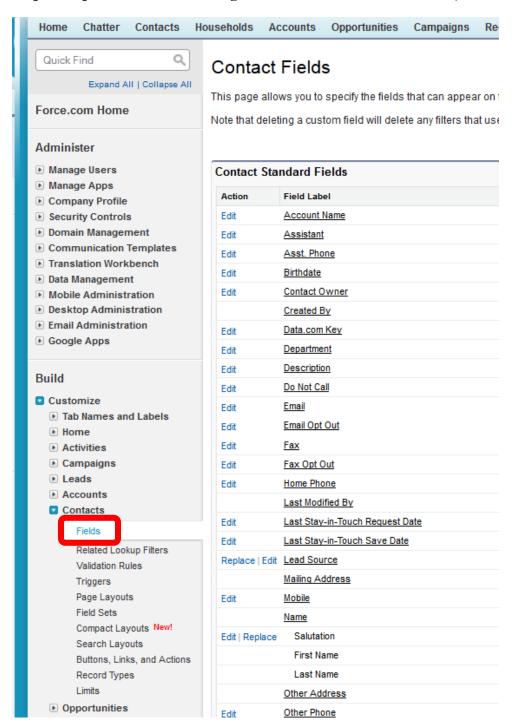


Tutorial: Creating Custom Contact Fields in Salesforce for Administrators

Step 1: Navigate to the Setup menu in Salesforce



Step 2: Expand tabs on left navigation bar and click on "Fields" (Build→Contacts→Fields)



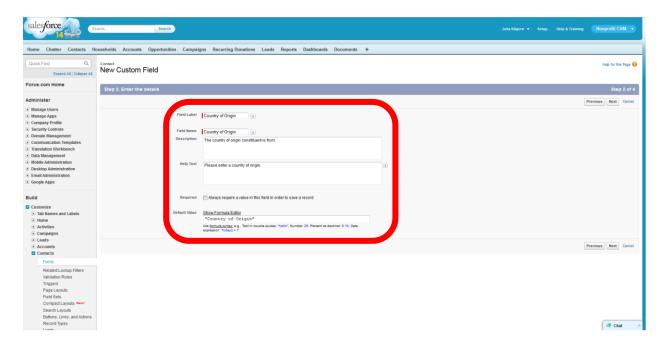
Step 3: Scroll down to section "Contact Custom Fields & Relationships" click the "New" Button

Contracts Solutions	Contact Custom Fields &	Relationships	New Field Dependencies
Products	Action Field Label	API Name	
Price Books		ACCOUNT PROCESSOR npe01 S	/stemAccountProcessor c
Partners	- Comprison -		-
Salesforce to Salesforce	Edit Replace 📥 _SYSTEM:	HOUSEHOLD PROCESSOR npo02_S	/stemHouseholdProcessorc
Work.com New!	Edit <u>SYSTEM:</u>	IsIndividual - DEPRECATED npe01_S	stemIsIndividualc
Chatter Answers	Edit Alternate Er	mail npe01A	ternateEmailc
Ideas	Edit Average Gi	ift npo02_A	verageAmount_c
Answers	Edit Batch	bde_Bato	h 6
Assets		_	
Users	Edit Best Gift Ye	ear npo02_B	est_Gift_Yearc
Agent Console	Edit <u>Best Gift Ye</u>	ear Total npo02_B	est_Gift_Year_Totalc
Salesforce CRM Content	Edit Del Country of	Origin Country_o	f_Originc
Tags	Edit First Gift Da	ate npo02Fi	stCloseDatec
Reports & Dashboards Search	Edit First Volunt	eer Date GW_Volun	teersFirst_Volunteer_Datec
Chatter	Edit Home Addr	ess npe01_H	ome_Addressc
Social Apps Integration	Edit Household	npo02H	ousehold_c
Topics New! User Interface	Edit Household	Mailing Address npo02Fo	rmula_HouseholdMailingAddressc
	Edit Household	Naming Order npo02_H	ousehold_Naming_Orderc
eate velop	Edit Household	Phone npo02_Fo	rmula_HouseholdPhonec
hema Builder	Edit Languages	- DEPRECATED npo02_La	nguagesc
nvas App Previewer	Edit Largest Gift	t npo02 Li	rgestAmount c

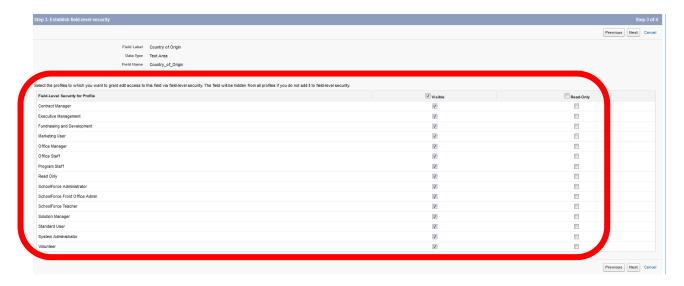
Step 4: Choose appropriate type of custom field:

Data Type
None Selected
O Auto Number
© Formula
Roll-Up Summary
C Lookup Relationship
Checkbox
Currency
O Date
O Date/Time
© Email
© Geolocation
Number
Percent
Phone
Picklist
Picklist (Multi-Select)
○ Text
Text Area
Text Area (Long)
Text Area (Rich)
Text (Encrypted)
URL

Step 5: Fill in information for New Custom Field. (Ex. In this case, we are creating a custom field for Country of Origin.)



Step 6: Set read-write permissions for User Profiles.



Step 7: Double check information and save new custom field.

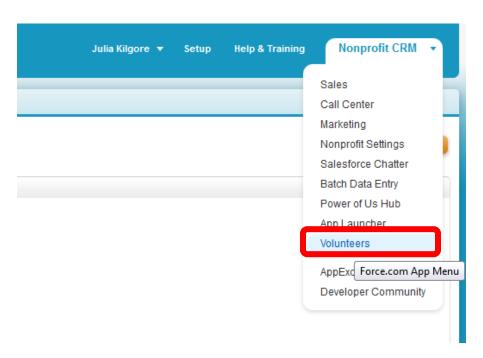


Tutorial: Importing CSV File into Salesforce for Standard Users

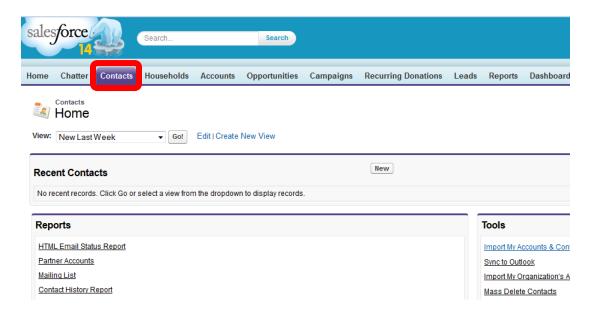
**Up to 500 Constituents at once.

Step 1: Navigate to the appropriate app in Salesforce (dropdown menu is in the top right corner)

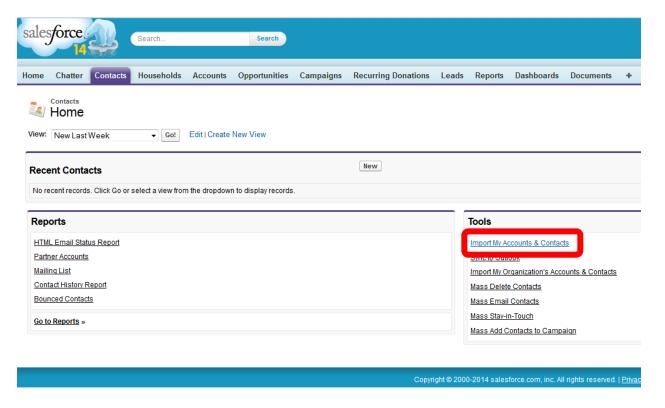
For Volunteers → Volunteers, Donors or Grants → Nonprofit CRM, Students → Schoolforce, etc.



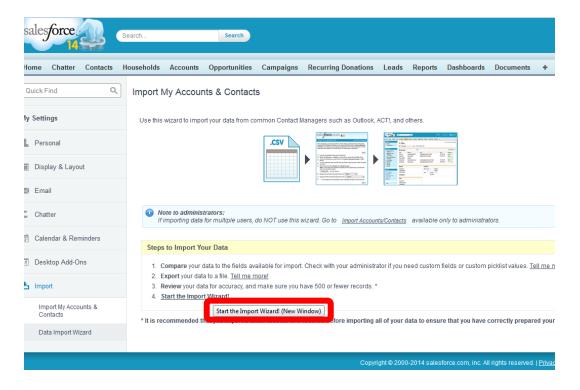
Step 2: Click on the "Contacts" tab on the main navigation bar



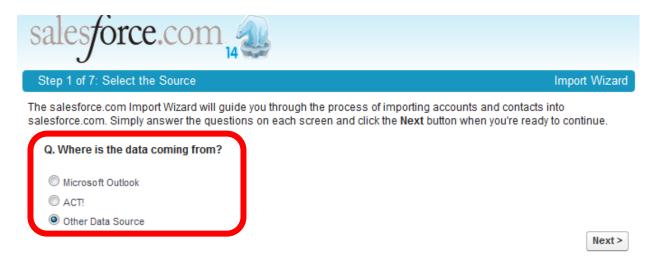
Step 3: Click on the link "Import My Accounts & Contacts" under the Tools section



Step 4: Once in the "Import My Accounts & Contacts" screen, click on "Start the Import Wizard!" link



Step 5: When importing CSV files, choose "Other Data Source", then click Next



Step 6: Browse for the appropriate file, and then click Next.



Step 2 of 7: Upload the File

Import Wizard

Most applications (including Goldmine, Palm Desktop, Microsoft Excel, Microsoft Access and FileMaker) will allow you to export contact data into a **comma delimited text file** (.csv). Salesforce.com will import contacts from a .csv file. In addition, salesforce.com will create accounts for all the companies referenced by your contacts. The exact steps for each application are different but should follow the same general approach:

- 1. Launch the application and view the contact list
- 2. Select the Save As... or Export... menu option, usually from the File menu
- 3. Follow the directions to save the file in a Comma Separated Values or CSV format
- 4. You can optionally read the CSV File into Excel to edit the data or filter the contacts to import
- Now choose the file to import into salesforce.com:
 Note: It may take a few minutes to upload your file, depending on the file size and your connection speed
 Browse... No file selected.
- The selection below is set to a default value. Override this default value only if your import file has a different character encoding.
 ISO-8859-1 (General US & Western European, ISO-LATIN-1) ▼
- 7. Contact Matching Type i

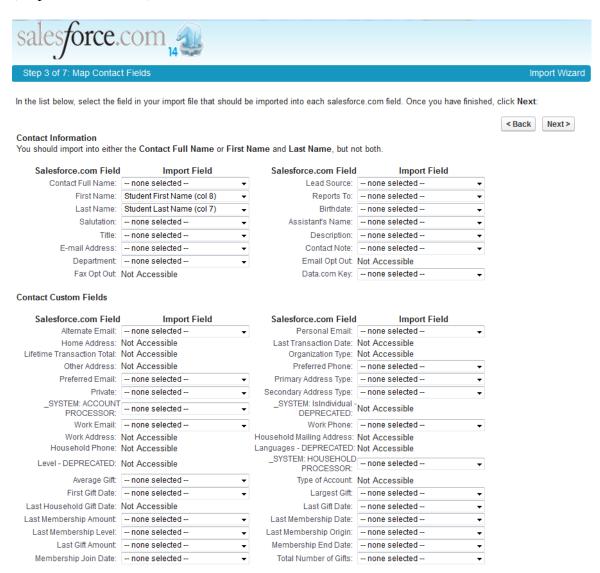
 Name (Recommended)

 Email

< Back Next >

Step 7: "Map Contact Fields". This is one of the most critical steps in this process. This step helps the user match Salesforce's Fields with the corresponding information in the CSV (spreadsheet) file. Make sure to double check both Salesforce's Fields and Custom Fields <u>AND</u> the column labels in the CSV file to ensure all data will be imported into the correct location. **Note: there are several images to illustrate this step.

(Step 7, illustration 1)



(Step 7, illustration 2)



State/Province: -- none selected -Postal Code: -- none selected --

Country: -- none selected --

In the list below, select the field in your import file that should be imported into each salesforce.com field. Once you have finished, click Next:

Contact Phone Information

Salesforce.com Field	Import Field		Salesforce.com Field	Import Field	
Business Phone:	NewaddPhone (col 0)	-	Business Phone Ext.:	none selected	-
Business Fax:	none selected	-	Business Fax Ext.:	none selected	-
Mobile Phone:	Mobile Phone (col 14)	•	Mobile Phone Ext.:	none selected	-
Home Phone:	Home Phone (col 13)	▼	Home Phone Ext.:	none selected	-
Other Phone:	none selected	-	Other Phone Ext.:	none selected	-
Asst. Phone:	none selected	•	Asst. Phone Ext.:	none selected	-
Do Not Call:	Not Accessible				

< Back Next >

(Step 7, illustration 3)



Step 5 of 7: Map Account Fields

In the list below, select the field in your import file that should be imported into each salesforce.com field. Make sure to select the checkbox below if you want existing account data in salesforce.com to be updated with data in your import file. Once you have finished, click Next:

< Back Next >

Overwrite existing account values

Account Information

Salesforce.com Field	Import Field
Account:	ID (col 1) 🔻
Parent Account:	none selected 🔻
Account Number:	ID (col 1)
Account Type:	none selected 🔻
Industry:	none selected 🔻
Revenue:	none selected 🔻
Account Rating:	none selected 🔻
Account Site:	none selected 🔻
Data.com Key:	none selected 🔻

Account Custom Fields

Salesforce.com Field	Import Field
_SYSTEM: IsIndividual:	none selected 🔻
Last Donation Date:	Not Accessible
Lifetime Donation History (Number):	Not Accessible
Average Gift:	none selected 🔻
Largest Gift:	none selected 🔻
Last Membership Amount:	none selected 🔻
Last Membership Level:	none selected 🔻
Last Gift Amount:	none selected 🔻
Membership Join Date:	none selected 🔻
Number of Memberships:	none selected 🔻
Total Gifts Last N Days:	none selected 🔻
Total Gifts This Year:	none selected 🔻
Number of Gifts Last N Days:	none selected 🔻
Number of Gifts This Year:	none selected •
Total Membership Amount:	none selected 🔻
Best Gift Year Total:	none selected 🔻

Salesforce.com Field	Import Field
Website:	none selected 🔻
Ticker Symbol:	none selected 🔻
Ownership:	none selected •
Employees:	none selected 🔻
SIC:	none selected 🔻
Account Note:	none selected 🔻
Description:	none selected 🔻
Parent Account Site:	none selected 🔻

Salesforce.com Field	Import Field
First Donation Date:	Not Accessible
Lifetime Donation History (Amount):	Not Accessible
_SYSTEM: AccountType:	none selected
First Gift Date:	none selected 🔻
Last Gift Date:	none selected 🔻
Last Membership Date:	none selected 🔻
Last Membership Origin:	none selected 🔻
Membership End Date:	none selected 🔻
Total Number of Gifts:	none selected 🔻
Total Gifts Two Years Ago:	none selected 🔻
Total Gifts Last Year:	none selected 🔻
Number of Gifts Two Years Ago:	none selected 🔻
Number of Gifts Last Year:	none selected 🔻
Smallest Gift:	none selected 🔻
Total Gifts:	none selected 🔻
Best Gift Year:	none selected 🔻

< Back	Next >

Close Wizard

(Step 7, illustration 4)



In the list below, select the field in your import file that should be imported into each salesforce.com field. You can map the same field multiple times if necessary. Once you have finished, click Next:

< Back Next >

Account Address Information

Note: The Contact address is not automatically populated into the Account. You must map the Account address below.

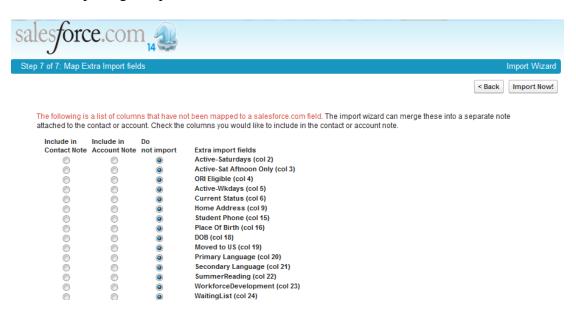
Salesforce.com Field	Import Field		Salesforce.com Field	Import Field	
Billing Address Line 1:	none selected	-	Shipping Address Line 1:	none selected	-
Line 2:	none selected	-	Line 2:	none selected	•
Line 3:	none selected	-	Line 3:	none selected	•
City:	none selected	•	City:	none selected	•
State/Province:	none selected	-	State/Province:	none selected	•
Postal Code:	none selected	•	Postal Code:	none selected	•
Country:	none selected	-	Country:	none selected	-

Account Phone Information

Salesforce.com Field	Import Field		Salesforce.com Field	Import Field		
Account Phone:	none selected	-	Account Phone Ext.:	none selected	•	
Account Fax:	none selected	_	Account Fax Ext.:	none selected	_	

< Back Next >

Step 8: "Map Extra Import fields" This step in the importation process accounts for information that is in the CSV file that was not imported into a specified field/location in Salesforce. This information can be included in the Contact Notes, Account Notes, or disregarded. Check all of the unaccounted for fields and backtrack if one was missed in previous steps. It is more beneficial to import data into fields than it is notes. This will be the final step before completing this process.



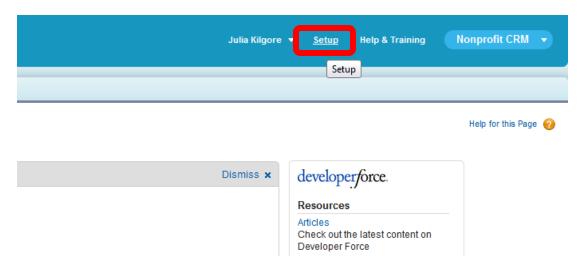
Step 9: Click "Import Now!" to complete process.

U I-3+ (UUI U+)	
FreeLunch (col 66)	
SpecialEducation (col 67)	
< Back Imp	ort Now

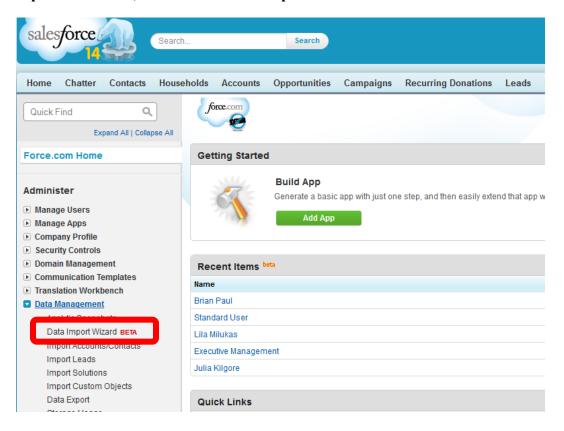
Tutorial: Importing CSV File into Salesforce for Administrators

**Up to 50,000 Constituents at once.

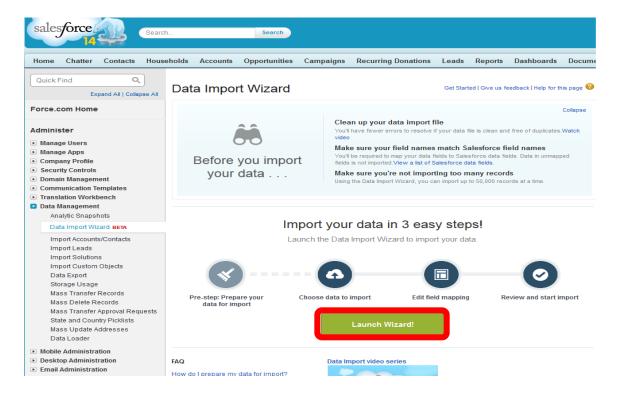
Step 1: Navigate to Setup menu in Salesforce



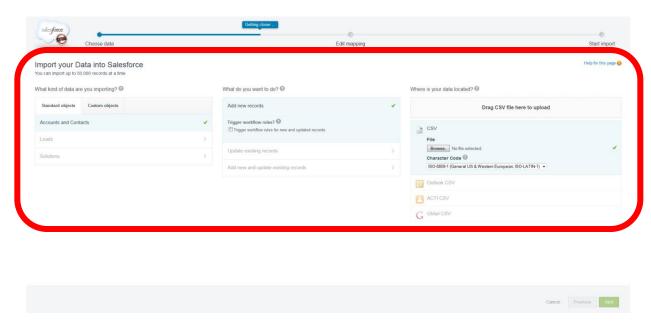
Step 2: In the left-navigation pane under Administer, click on "Data Management" to expand the menu, then select "Data Import Wizard"



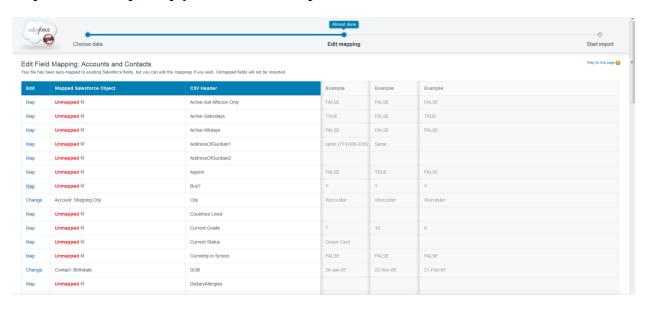
Step 3: Once in the "Data Import Wizard" menu, click on the green button that says "Launch Wizard!"



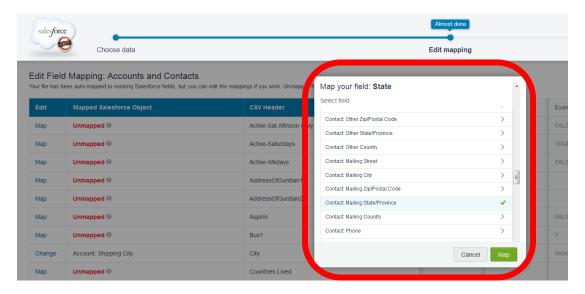
Step 4: Choose settings and select file to be imported (Accounts & Contacts \rightarrow Add new records \rightarrow CSV \rightarrow Browse...)



Step 5: "Edit Field Mapping" This part is one of the most critical in the data migration process. This illustration shows the interface where the user goes through the column headers in the CSV file and maps them to the appropriate Salesforce Object. This interface shows whether a header is mapped to an object or not. Some of the more obvious correlations are automatically mapped by Salesforce, but should be reviewed by the Administrator. Otherwise, the Administrator will need to manually go through and map all of the fields. Several illustrations below show the layout and screens for this process. To map or edit a map, simply click on the "Map" link to the left of the table.



(illustration showing "Map" menu)



Step 6: Review and Import. This screen will give additional information on what data is being mapped and what is being discarded. In this illustration, 10 fields are being mapped and 58 are being discarded. If done successfully, there should be a very small number of fields discarded and the majority should be mapped. Once the Mapping process is completed, the button to start the importation process will appear in the lower right corner of the screen.

