



Technology Consulting in the Community

Spring 2018

**Yuanhan Liu
East End Cooperative Ministry
Final Consulting Report**

**Carnegie Mellon University
Pittsburgh, Pennsylvania
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Executive Summary

Student Consultant, Yuanhan Liu

Community Partner, Rev. Kellie Wild

I. About the Organization

East End Cooperative Ministry (EECM), founded in 1970, is a non-profit organization dedicated to helping vulnerable adults and at-risk children and youth throughout the Pittsburgh neighborhoods. The mission statement of EECM is

An interfaith ministry, EECM seeks to make a difference in the lives of the individuals and families it serves by tending to their needs for today as well as their hopes for tomorrow.

The community partner for this project is Rev. Kellie Wild, the director of the IMPACTS Program. Since 2013, she has been working with three student consultants to improve information management for IMPACTS by using technology. As the maturity of using Salesforce within IMPACTS, there came a time when EECM needed to expand the use of this system to other three major programs for the purpose of both improving work efficiency and accuracy and incorporating outcomes of different programs to produce reports to stakeholders.

II. Improve Technical Capacity for the Organization to Better Manage Clients' Information

While IMPACTS has built the capability of using Salesforce to facilitate the management of clients' information, the work processes in other programs are almost paper-based, making it hard to track information, evaluate the effectiveness of services and produce outcomes. By expanding the use of Salesforce system, not only will the organization create a standardized work process to improve work efficiency and data accuracy, but also the organization will have a clear overview of its services to achieve continual improvement. Moreover, it will be able to provide stakeholders with comprehensive reports generated from the system, which will create more value to the organization.

III. Outcomes

The major outcomes of this consulting engagement include:

1. Defined outcomes and identified problems for three programs (IMPACTS, CNS, WorkForce)

The outcomes of each program have been defined and will be used in Salesforce to produce outcomes reports. All the technical problems and system requirements have been recognized and

forwarded to external consultants Soliant to build up the system. The risk to the sustainability of this task is that the system features may need modification if outcomes of program change in the future.

2. Facilitated the implementation process

A package, including specification for development and other necessary files, was sent to Soliant. The development process has started and several meetings have been held to communicate the specific needs and requirements. The potential risk of this task is the misunderstanding of system requirements. This can be reduced by having frequent and deep conversations with Soliant. Moreover, In order to maintain the sustainability, a detailed plan for the next six months was also built to provide the organization with directions to assist the implementation process.

IV. Recommendations

The technological vision of EECM will be:

“To achieve continual service improvement and client satisfaction through the widespread and thorough adoption of technology”.

This will be realized in a way that the organization will maintain higher working performance due to less redundant manual work to do and be able to make strategic decisions by using data-driven tools.

To achieve this vision, the student consultant proposed two recommendation goals:

1. Collecting clients’ feedback from satisfaction surveys on Tablets to make data-driven decisions

By gaining insights from analytics using Tablets, EECM will have a better understanding of clients served and services provided, so that it can make wiser decisions and sustainable strategy.

2. Adopting technology in Children & Youth program to enhance work efficiency and produce outcomes

This will help CYS better track children’s information, reduce manual errors of data recording and produce outcomes reports from the system. By expanding the use of Salesforce to CYS, the whole organization can form standardized work processes, move closer to its vision and achieve continual service improvement.

Community Partner

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Final Consulting Report

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I. About the Organization

Organization

East End Cooperative Ministry (EECM), founded in 1970, is a non-profit organization dedicated to helping vulnerable adults and at-risk children and youth throughout the Pittsburgh neighborhoods. It seeks to make a difference in the lives of the individuals and families it serves by tending to their needs for today as well as their hopes for tomorrow¹.

It was born when the leaders of 18 local faith communities recognized that the troubles of the community were too great for any one of them to address alone².

The mission statement of EECM is

An interfaith ministry, EECM seeks to make a difference in the lives of the individuals and families it serves by tending to their needs for today as well as their hopes for tomorrow.

EECM Community House is located at 6140 Station Street in Pittsburgh. It has around 50 full-time employees working here. EECM runs three major programs, including Community Nutrition Services, IMPACTS and Children and Youth Services. It also runs one for-profit entity, WorkForce.

The community partner for this project was Rev. Kellie Wild, the director of the IMPACTS Program. Since 2013, she has been working with three student consultants to use technology to improve organizational work efficiency and accuracy. The implementation of Salesforce system for the IMPACTS Program turned out to be a successful attempt and created high value for both the program and the whole organization. As the use of Salesforce for one program had become more mature, Kellie and Michael, the president of EECM, believed that it was the time to expand the use of this case management system to other programs and this would benefit the future development of EECM.

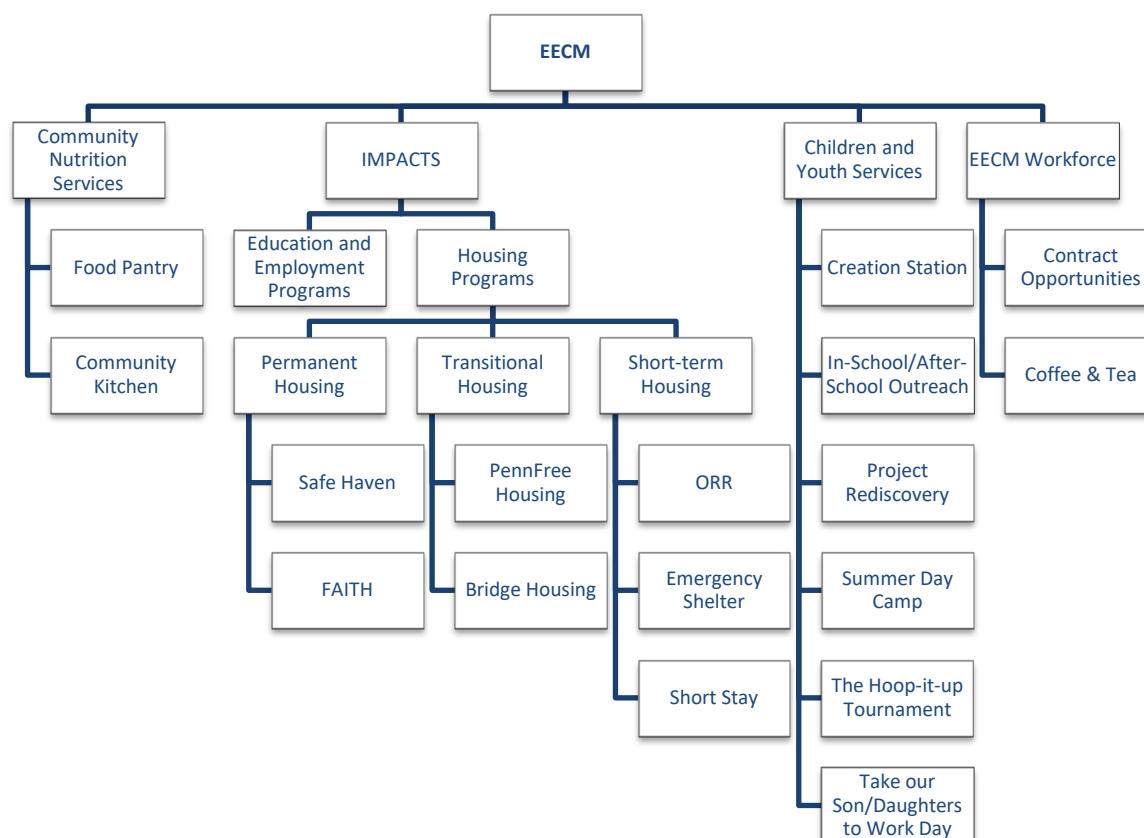
Facilities

EECM Community House is a 56000 Square-foot building, which was built at a cost of \$15 million in 2013. The building has computer labs for education programs and dedicated server rooms. There is also a big conference room with smartboards where executive meetings take place. Each door of the building has its digital lock with unique password which is only known by internal staff. Staff is required to take identity cards when entering the building.

Currently, EECM Community House is the primary work place for all programs and most services are provided in this building. However, some services of Children & Youth programs are provided onsite at the local schools.

Programs

EECM runs three major programs, including Community Nutrition Services, IMPACTS and Children and Youth Services. Each of them has many sub-programs. Also, it runs one for-profit entity EECM WorkForce. Following is a diagrammatic representation of these programs:



1. Community Nutrition Services

Community Nutrition Services provides services and reaches out to those experiencing the desperation of hunger. The **COMMUNITY KITCHEN** serves hot lunches free of charge to all who are in need. The **FOOD PANTRY** is an assistance program for those in immediate need of food. In addition to providing emergency groceries and supplies, it also offers information on assistance programs, and access to social service agencies and other appropriate programs.

For Community Nutrition Services program, staff currently uses Salesforce to record clients' basic information. However, some information is messy and redundant, which cannot be used to analyze and create valuable reports. The program does not have a clear definition of measurable outcomes to better track clients' information and produce effective evaluation on their services.

2. IMPACTS

IMPACTS program (Individuals Making Progress and Change towards Self-Sufficiency) helps to provide safety, comfort, and a sense of security from shelter for the night to transitional services. The programs of IMPACTS are divided into two major categories: Education and Employment (E & E) Programs and Housing Programs

Currently, clients' information of I.M.P.A.C.T.S programs is stored and tracked in Salesforce system. Case managers are responsible for data entry and updates. They also need to feed client's information into HMIS (Homeless Management Information System) for government's requirement.

The most important information stored in Salesforce is clients' initial status, their goals and discharge status. Case managers evaluate the progress of each client throughout the programs and Salesforce produces aggregated reports for each program by comparing the above three types of information. The Director of I.M.P.A.C.T.S Kellie uses Salesforce to customize various reports, which allows the organization to have a better understanding of outcomes of services provided. There is also another student consultant to help Kellie analyze all the data collected from reports generated by Salesforce and reach instruvtive conclusions.

3. Children and Youth Services

Children and Youth Services program reaches out to young people to help them discover and work toward a more promising future. It has fifteen programs, designed to help young people work towards a brighter future. A variety of programs help children and youth succeed in school, make healthy decisions, explore new interests, set personal goals, and most importantly, learn to value themselves.

Children and Youth Services program currently does not apply any technology tool to help its management process. Staff does add the number of children they serve into ATOD systems required by government, but they do not have their own system to effectively track clients' information and efficiently extract data when needed.

4. EECM WorkForce

EECM WorkForce offers work opportunities in the entire Pittsburgh community for individuals who are usually overlooked for jobs³. EECM recognizes the lack of opportunity as one of the most prominent causes of poverty. They seek to be the solution to that problem not only in the East End, but in the entire Pittsburgh community. The WorkForce program is split into two parts: contract opportunities and its own brand of coffee & tea, which creates a community of opportunity in Pittsburgh.

Currently, staff of WorkForce does not use system to track employees' information. The records are stored in Excel.

Staff

EECM currently has about 50 full-time staff including 8 administrators. Employees have their own computer to get access to organizational files and send or receive emails.

Following is EECM's administrators involved in decision-making process in the organization:

Name	Positions
Michael J. Mingrone	CEO/President
Rev. Kellie Wild	IMPACTS Program Director

Rev. LaWana Butler	Chief Financial Officer
Bret Cogis	Community Nutrition Service Director
Rev. Darnell O. Leonard	Associate Director & Children & Youth Services Director
Tony Cortese	EECM WorkForce and Business Development Director
Sandy Laux	Operations and Human Resources Director
Jason Flowers	Director of Development and Public Relations

Michael, President and CEO, is supportive of using technology to help manage the organization's information. Kellie has been using Salesforce for more than three years and is the person who is responsible for the expansion of the use of Salesforce. All staff at IMPACTS uses Salesforce to manage clients' information. LaWana is expected to collect information provided by each program to generate outcome reports for stakeholders, but now the outcomes from Community Nutrition Services, Children & Youth Services and WorkForce are not available from Salesforce. Bret and some staff at Community Nutrition Services add clients' basic information in Salesforce, but do not use other functionality to produce outcomes. The Director of Children & Youth Services Darnell is used to using paper to manage the program, while Isaac and Terry from this program are tech-savvy and are willing to use technology in their work. Tony has some previous experience in using Salesforce. Sandy, though having the license of Salesforce, rarely uses or checks Salesforce system.

Additionally, EECM also recruits many volunteers to help provide services. There has been 33950 hours served by volunteers this year. There are also some students working as part-time interns at EECM.

Technology Infrastructure

Technology infrastructure at EECM is as follows:

Infrastructure Description	
Website	Website is developed using WordPress and is updated in-house
Social media presence	Have Facebook, Twitter, YouTube and google+ presence. Development and PR team updates the information
Servers and Storage	In-house with restricted access
VOIP telephones	IP telephonic system is in place
Wi-fi	Have about 9 Wi-Fi access points. Access is restricted. Respective program directors or IT in-charge (Sandy) has authority to provide access
IT hardware (laptops and desktops)	IT hardware is grant funded. As explained by Community Partner, there are 3 tiers of hardware users. Level 3 - receptionist who is provided desktop for email purpose Level 2 - case managers who also use desktop for Salesforce and other business needs (with exception of FAITH case managers whose clients are off-site) Level 1- includes program directors and Executive director who use desktops or are provided laptop (if requested) to for work from home
Backup	Server backup is done from Datto Alto 2 (image based backup)

IT support	Outsourced to Midnight Blue Tech
Antivirus	Trend Micro Worry-Free Business Security Services. Anti-virus definition updating is taken care by IT consultants Midnight Blue Tech.
Email	Available @eecm.org domain for both full-time and part-time staff
Web Access	EarthLink webmail is used. Web access is available to full-time staff with few sites restricted.
Operating system	Machines are running on windows 7
Conference room	With Smartboards

*This chart is based on previous student consultant's work and is updated according to recent changes in the organization⁴.

Technology Management

There is no technical committee or IT department at EECM. It is Sandy who oversees all the IT issues. If there are some technical issues in any department, the director directly reports to Sandy and communicate their demands with her. Then Sandy would contact Midnight Blue Tech, the outsourcing company cooperating with EECM, and the dedicated consultants would come to help solve those problems or they may use remote control if needed. Consultants at Midnight Blue Tech would visit monthly to check technology things. Apart from that, no specific professional is responsible for IT issues onsite.

Technology Planning

No technology plan or budget has been made at EECM. The demands for technology (eg. purchase of new computers, implementation of systems) are usually proposed by directors and then are reported to Michael and Sandy. Also, when external IT consultants propose some recommendations or feedback of IT issues, Sandy would first consider it and inform other executives. However, the decisions regarding technology would be discussed and determined in the regular executive meetings.

Internal and External Communication

All staff has emails with @eecm.org domain to communicate internally and externally. Staff also uses a Shared Drive to share files within the organization and there are access restrictions for some specific files. Also, those internal documents are stored in the in-house server in order to maintain information security. In addition, directors can use VPN service to get access to organizational files when they are outside the building. Currently, nobody is responsible for cleaning up duplicated and useless files on the shared drive.

EECM has wifi connections in every area of the building. The organization has its official website developed using WordPress and it is updated by one staff regularly in-house. The organization also uses Facebook, Twitter, You Tube and google+ for external communications.

Information Management

The critical information for EECM is clients, donors and volunteers information. EECM uses different systems to keep different information. Salesforce system currently is used for tracking clients' information of IMPACTS programs. Community Nutrition Services also uses the system, but just to keep clients' basic information. The system functionality of this program still needs to be re-

designed and optimized in order to generate reports directly from the system. All records of Children and Youth Services are paper-based and there is no aggregated report with data analysis results. EECM WorkForce currently tracks employees' information through paper and Excel. Donors and donation information are stored in cloud-based Raiser's Edge software. Volunteer information is stored in Volgistics systems using in-house server. Current databases are built and still supported by Midnight Blue Tech.

Business Systems

EECM now is in the process of moving its accounting systems from ABILA to QuickBooks, which will make their accounting data cloud-based in the future.

II. Consulting Task: Improve Technical Capacity for the Organization to Better Manage Clients' Information by expanding the Use of Salesforce System

Motivation

The development and implementation of Salesforce system at IMPACTS turned out to be a successful attempt for the program to manage clients' information digitally and generate outcomes reports automatically. It was launched through 3 phases of consulting partnerships between student consultants and Community Partner Rev. Kellie, who has successfully acquired the capability to proficiently use and customize Salesforce system.

As the maturity of using Salesforce within IMPACTS, there came a time when EECM needed to expand the use of this system to other three major programs for the purpose of both improving working efficiency and accuracy and incorporating outcomes of different programs to produce reports to stakeholders.

IMPACTS program was able to make full use of Salesforce system, but there was still some room to optimize system functionality so that it could produce more effective reports. However, work of other programs was almost paper-based, making it hard to track clients' information and evaluate the effectiveness of services. Moreover, the absence of consistent tracking records led to very limited reports being generated from those programs.

The expansion of Salesforce system would result in two potential benefits for the organization. First, it would create a standardized work process and reduce data redundancy and inaccuracy by using the same case management system in all programs. Second, it would facilitate the process of generating outcomes reports by directly extracting data from one place. With these solid and timely reports, the organization could better provide a clear overview of its achievement and meet the requirement of different stakeholders.

During discussions with the community partner, the student consultant realized that there were two major organizational issues needed to be solved in order to expand the use of Salesforce. One was to build IT awareness of executive team members and make them accountable, especially three directors who would be supposed to cooperate and promote the system expansion. Currently, there were different views among executives on implementing the case management system in all programs, which might be the potential risks for this expansion process.

The other issue was that all three programs had to define their actual outcomes of services clearly and to structure the work flow so that the measurement could be identified and incorporated into system. Currently, only outputs (eg. the number of people the program services) were recorded and there was no clear definition of outcomes.

The approach the student consultant intended to use was as follows:

- 1) Build a bridge and encouraged communication and cooperation among programs

The biggest difference between this consulting process and previous ones was that the expansion work was no longer the business of only one program, but it required attentions and efforts from all programs and their staff. Thus, the communication and cooperation among different programs were vitally important.

- 2) Conducted investigations with directors of each program and helped define outcomes

While executive team was highly responsible for the definition of outcomes, the student consultant managed to familiarize with work process of each program and made sure that the outcomes were measurable and valuable.

- 3) Identified potential problems and requirements of developing the system

The student consultant worked with the community partner to identify current issues in using Salesforce and determined the detailed requirements of developing the system based on defined outcomes and previous experience during the implementation of system at IMPACTS.

- 4) Contacted Soliant to develop the system

After the information gathering process, the student consultant and the community partner contacted Soliant consultants for several times, so that they could completely understand the context and requirements in order to build up the system.

- 5) Developed a sustainable technology plan for the current and future IT management

A complete technology plan serves as a catalyst in the sustainable development of an organization in such a digital world. It was even more important to EECM at this point. Due to the complexity of expanding the system into other programs, the development work might last for a period of time and there were other detailed tasks needed to be dealt with. Thus, this whole implementation work was unlikely to be accomplished during this stage of consulting process and a technology plan was necessary to maintain a consistent strategy to use technology within the organization. The student consultant made the future technology plan based on the information collected throughout the whole consulting engagement and discussed this plan with the community partner.

Outcomes

Outcomes 1: Developing Technology Awareness

The idea of expanding the use of Salesforce came from the demands for reporting outcomes to stakeholders, and the successful attempt of IMPACTS program created a benchmark in the organization. While CEO Michael, Rev. Kellie and Rev. LaWana were supportive to use technology to help management, other executives were not highly motivated and engaged. However, since the success of expansion relied heavily on directors' involvements to better define the objectives of programs, it was important to develop accountability within the executive team.

Therefore, one executive meeting was held to emphasize the necessity of using Salesforce within the other three programs and to discuss the potential outcomes of CNS and Workforce programs. This was followed by several meetings with each director to identify current problems and technology opportunities. From then on, technology issues were considered to be one of the major topics on weekly executive meetings.

Outcomes 2: Improving the Management of Clients information

Step 1: Defining Outcomes and Identifying Problems of Each Program

Community Nutrition Services

Though CNS had been using Salesforce to manage client data for a while, only some basic information was stored and there was some data redundancy and inconsistency. The community partner and the student consultant examined objects and fields in the current system carefully and discussed about how to adjust the system. Understanding the objectives of Community Nutrition Program, we, together with the director of CNS, defined the outcomes of both Community Kitchen and Food Pantry programs and determined the specific information to be tracked in the system. After careful consideration, we decided that only Food Pantry program would be put into Salesforce, since outcomes of Community Kitchen would be tracked anonymously using satisfaction surveys and be stored using Excel.

Since there was no process from which the director could know client feedback on services provided, the student consultant believed that it was necessary to design both panel and satisfaction surveys to collect this information and quantify the measurement. The student consultant mentioned that using a panel survey could better know the trend from the same person's perspective and to reflect the effectiveness of services. On the other hand, the satisfaction survey which would be random and anonymous could encourage clients to express their true feelings. Based on some survey samples and the real situation of CNS, the director made a panel survey for Food Pantry program. Satisfaction surveys of both two programs would be designed in the next several months. The overall information structure of CNS is presented in the chart below.

Programs	Information Types	Information Collection	Tools
Food Pantry	Clients demographic information	Family Level	Salesforce
	Responses of the panel survey		Salesforce
	Responses of the satisfaction survey	Anonymously	Excel
Community Kitchen	Responses of the satisfaction survey	Anonymously	Excel

Considering the current use of the system, the director also addressed that it was inconvenient to extract data from different modules into a final report and there could be many manual mistakes. The student consultant realized that it was because of a lack of data checking function in Salesforce, or an even better option would be to have the system generate the final report automatically. Moreover, after having deep conversations with the director and staff members, the student consultant realized that some work processes, such as letting clients sign in and fill out the basic information for several times, were actually unnecessary and could be replaced by using Salesforce, which would greatly optimize the data collecting and entering process and improve work efficiency. These two problems were forwarded to Soliant consultants' before they started the system development process.

WorkForce

Currently, the WorkForce program has not used Salesforce or other technology to help management. This program offers employment opportunities for individuals, and thus the information to be tracked is actually employees' information, which is special and requires careful attention due to government policy. In order to structure the issue, the community partner, the director of WorkForce and the student consultant streamlined the work flow, defined the outcomes and discussed the system features.

Since some of clients from IMPACT might become employees of WorkForce, their information had been stored in Salesforce and could be cloned easily to WorkForce program. We also found WorkForce's data tracking process would be similar to IMPACTS. Thus, we could use similar objects and fields to define its system functionality as well as the measurement, which could assess the level of self-sufficiency of employees. This greatly simplified the system developing process.

IMPACTS

The need for modifying system for IMPACTS, which has been using Salesforce for several years, was to optimize its system functions so that it could produce reports with accurate data based on the requirements. The major reports included: percentage of residents who will achieve the minimum score, clients' discharge status compared with minimum score, clients' discharge status compared with initial status.

After discussions with the community partner and another student working on analyzing data of IMPACTS to produce outcomes, the student consultant identified the major problem: current system was not able to link the third object (Discharge) to Contact and Outcomes objects. This made it impossible to select clients whose length of stay was more than 30 days. By linking the third object, filtering by length of stay would be possible. The other approach to achieve this is to replace Discharge object with a Discharge checkbox under Contact object, although the previous data under Discharge object would need to be migrated in order to keep data consistency. The community partner and student consultant eventually chose to adopt the second approach because Discharge object was unnecessary and even made work process more complicated.

Children & Youth Services

There was no technology adopted in CYS programs and all work processes were paper-based. The community partner and the student consultant held a meeting with the director and one manager of CYS and streamlined the work flow. Realizing that there were 15 sub-programs of CYS with a substantial amount of paper work, the student consultant stated the importance of the active engagement of the director in this system expansion process. After Community Partner communicated with the director of CYS, it was revealed that implementing Salesforce within CYS program at this point was not a wise decision due to its complexity and director's hesitation. Therefore, the community partner and the student consultant decided not to include CYS in this consulting phase, but it would be considered in the future, as discussed in Recommendation part of this report.

Step 2: Contacting Soliant for Development

After structuring the problems for all three programs (CNS, IMPACTS, WorKorce) and collecting sufficient information, the student consultant created the "Specification for Development" file which contained a list of tasks and requirements from each program.(See Appendix A) Subsequently, the

community partner and the student consultant contacted Soliant and talked about the scope of work of the implementation process. The files sent to Soliant included:

Programs	Files	Use
Overall Summary	Specification for Development	Illustrates the tasks for development of each program in details
CNS	Food Pantry Card	Would be replaced by the function in Salesforce
	PCSI 2017 Monthly Report	Should be produced by system automatically using information already stored in the system
	Food Pantry Outcome Questions	Should be put into system as an outcome field
IMPACTS	Quality Management Work Plan Performance Indicators	Would be referred to create outcome reports for IMPACTS
Workforce	Items needed for WorkForce	The form was pulled out from IMPACTS with highlight of fields needed by WorkForce

In addition to above work, the community partner and the student consultant determined the permission levels for all system users within the organization and Soliant consultants would be responsible for setting up both permissions as well as firewalls. The student consultant also helped the community partner figure out an effective way to clear unused fields in Salesforce by using Field Trip, a free software to analyze fields in the system^{5 6}. The community partner successfully cleared a great number of unused fields, which made the system layout more clear and created enough room for Soliant to upgrade the system.

Step 3: Building a Plan for Future Tasks

During this phase of consulting engagement, the student consultant helped organize the technology issues that the organization was encountering and made sure that the system development for the other programs had been started. Since the development work would last for several months, a detailed plan (see Appendix B) was proposed for the organization to have a sustainable capability to guarantee the successful implementation of the system expansion.

Another concern discussed during the consulting engagement was that only the community partner had the capability of administrating the system, setting access levels and customizing the reports, ect.. Therefore, it was necessary that the community partner trains other staff in the organization so that the organization can have technical sustainability even if the community partner is out of office. The following chart shows the core technical skills and the major staff who is supposed to acquire them. The community partner will help them build the necessary capacity face to face and make sure that they can use the system right.

Core technical skills of using Salesforce	Staff supposed to acquire the skill
Administration (creating new users, setting access and other administrating activities)	The person responsible for IT stuff (Sandy)
Major business activities (adding/editing/deleting objects and fields, customizing layouts, producing reports, etc.)	Director of CNS (Bret)
Outcomes (customizing reports, export/print reports, filter data from reports)	The person responsible for outcomes (LaWana)

Summary

After these phase of consulting work, outcomes from these three programs would all be pulled out from Salesforce and be incorporated into final reports. With this instructive conclusion and enough data support, the organization could better improve their services to serve the community. The reports would also be sent to funders and donors. Once having known the positive feedback of their investments, they would be more likely to fund the organization, which would create more value to the organization and improve their quality of services in the future.

The organization will be able to maintain the sustainability of the outcomes in the following aspects. First, the system will be maintained by Soliant consultants and they will help fix the technical issues if necessary. Second, the community partner is the person who has the capability to administrate and customize the system. If there is any specific problem that is not illustrated well in the prepared documents, the staff can ask her to help figure it out. She will also help other staff in the organization build the capacity in the future. Third, every document produced in this phase will be archived. Therefore, when EECM expands Salesforce to CYS, they will have all files and detailed processes to refer to. As all four programs establish standard work processes by adopting technology, the organization will be able to provide better services and improve people's lives in the community.

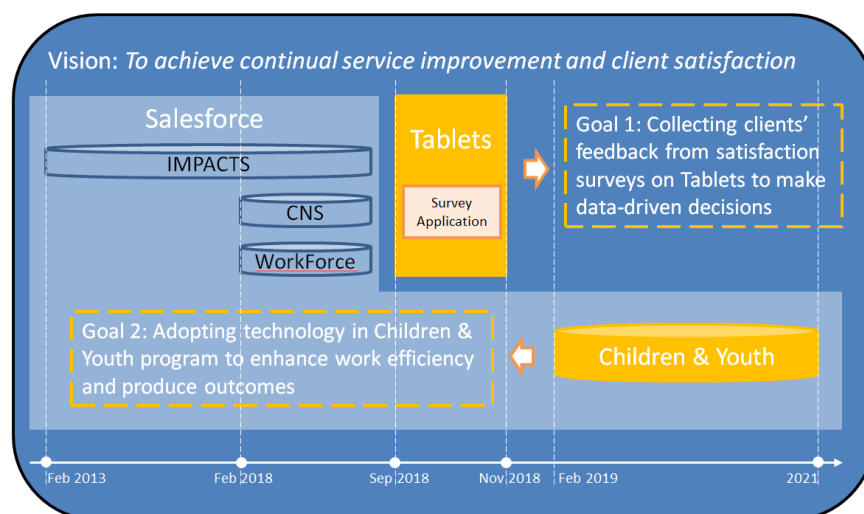
III. Recommendations

A. Vision

The technological vision of EECM will be *“To achieve continual service improvement and client satisfaction through the widespread and thorough adoption of technology”*. This will be realized in a way that the organization will maintain higher working performance due to less redundant manual work to do and be able to make strategic decisions by using data-driven tools. As the maturity of using technology, EECM will provide better services to individuals and families in the community, and it will also improve its responsiveness to stakeholders with comprehensive reports automatically generated from the system.

B. Goals

The recommended goals are stated below.



Goal 1: Collecting clients’ feedback from satisfaction surveys on Tablets to make data-driven decisions

Goal 2: Adopting technology in Children & Youth program to enhance work efficiency and produce outcomes

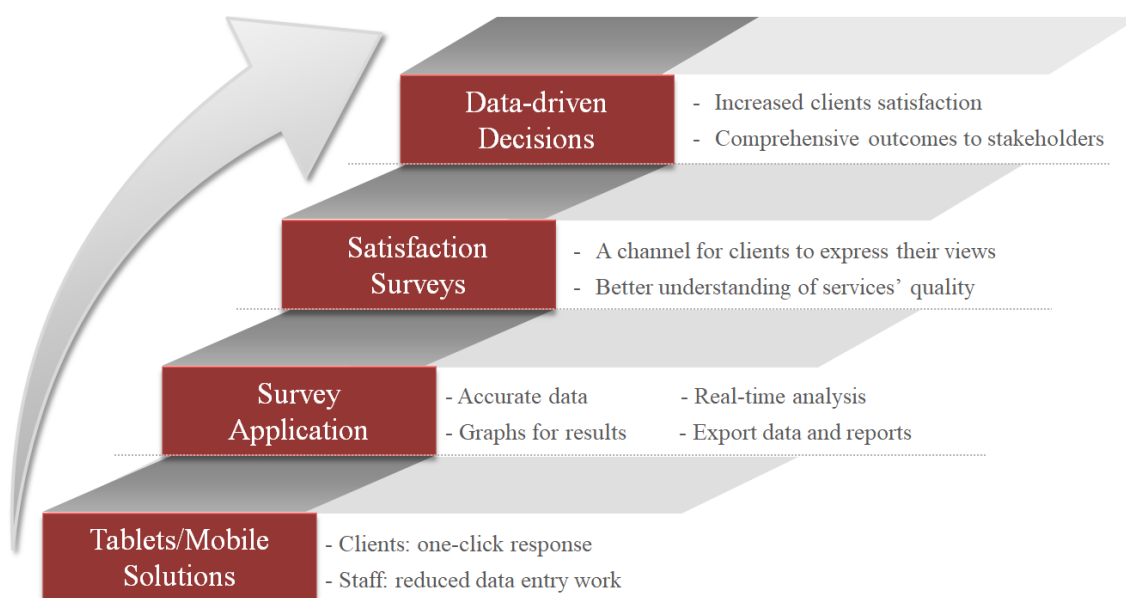
C. Strategies

Goal 1: Collecting clients’ feedback from satisfaction surveys on Tablets to make data-driven decisions

a. Background

After this phase of consulting engagement, the organization has been able to track and produce outcomes of Community Nutrition Services, IMPACTS and WorkForce three programs by using technology. However, in order to further improve service quality, it is necessary to make satisfaction surveys and collect clients’ feedback. Since there are hundreds of clients per month, it is suggested to have Tablets and encourage clients to use them to give feedback of the services provided. By gaining insights from analytics, EECM will have a better understanding of clients served and services provided, so that it can make wiser decisions and sustainable strategy.

b. Justification



EECM will be able to make data-driven and strategic decisions by using two parts of outcomes: “Aggregate Outcomes” pulled out from Salesforce and “Satisfaction Outcomes” produced by satisfaction surveys. Aggregate outcomes demonstrate the progress each client makes throughout EECM programs, which will be assessed regularly by case managers. Satisfaction surveys, on the other hand, offer the opportunities for clients to express their views and let the organization know how well the services meet clients need. The information in satisfaction surveys also provides the organization with valuable suggestions to achieve continual improvement. In this way, the

organization will be able to produce comprehensive reports to stakeholders and increase its fundraising.

To facilitate the information collecting process of satisfaction surveys, using Tablets with a selected survey application is considered to be an effective approach. Clients coming to the organization can simply response survey questions through one-click buttons. This will greatly simplify the data entry process and save a lot of time for both clients and staff compared with using paper-based surveys. The responses will be stored and analyzed by the selected application and it will be able to display real-time analysis and graphs for results, which can be easily exported to spreadsheets or reports.

c. Strategies

To achieve this goal, the major steps as well as resources and expected time are stated below.

Task		Resources	Time
Design satisfaction surveys for all three programs	CNS	<ul style="list-style-type: none"> - Accountability: Bret (Internal) - Useful links: <ol style="list-style-type: none"> 1. Nutrition Program Recipient Satisfaction Survey: www.psa2.org/documents/CongregateMEALSURV.doc 2. UC Food Pantries Program Evaluation: https://chesc.org/wp-content/uploads/Tues_0400_Burk236_Rouse_CHESC2015.pdf 	2 weeks
	IMPACTS	<ul style="list-style-type: none"> - Accountability: Kellie (Internal) - Useful links: <p>Resident Satisfaction Survey: http://www.aids-ct.org/pdf/goodworks/sectionf/resident_satisfaction_survey.pdf</p> <p>One Outcome Reports with Survey Questions: https://www.seattlehousing.org/sites/default/files/Resident_Satisfaction_Survey_Results.pdf</p> 	3 weeks
	WorkForce	<ul style="list-style-type: none"> - Accountability: Tony (Internal) - Useful links: <p>Community Jobs Outcomes Assessment & Program Evaluation: https://wdr.doleta.gov/conference/pdf/case.pdf</p> <p>(This will be considered only when the program expands and has at least one manager)</p> 	2 weeks
Compare and determine the survey application tended to use		<ul style="list-style-type: none"> - Kellie, Bret (Internal) - Software supplier (External) - Solutions: QuestionPro or SurveyMonkey - Useful links <p>Comparison between QuestionPro and SurveyMonkey:</p> <ol style="list-style-type: none"> 1) https://comparisons.financesonline.com/questionpro-vs-surveymonkey 2) https://www.getapp.com/customer-management-software/a/surveymonkey/compare/questionpro/ 	1 week
Identify potential features of the Tablets		<ul style="list-style-type: none"> - Kellie, Bret (Internal) - Potential features of Tablets could include: Wireless Connectivity; Strong battery life; High durability; Cheap price 	
Compare existing Tablets solution in the markets		<ul style="list-style-type: none"> - Kellie, Bret, Sandy (Internal) - Useful links <p>Comparison of Tablets:</p> <ol style="list-style-type: none"> 1) https://www.techradar.com/news/mobile-computing/tablets/best-cheap-tablets-top-budget-options-967277 2) https://www.techradar.com/news/mobile-computing/tablets/10-best-tablet- 	

	pcs-in-the-world-today-1079603	
Purchase and configure Tablets	- Kellie, LaWana, Sandy (Internal)	1 week
Build capability for staff to use Tablets	- Online tutorial according to selected Tablets	1 week
Encourage and teach clients to use Tablets to fill in satisfaction surveys	- Staff and volunteers	quarterly

d. Expected Outcomes

By using Tablets, staff will spend less time in entering data. Instead, they will have more time offer valuable services to clients. With data analysis results of satisfaction surveys, the organization will improve its services according to the feedback from clients. Clients will be able to enjoy the services they really need and maintain a higher satisfaction with the organization. After seeing outcomes brought by the investments, donors will be more likely to fund the organization.

e. Resources

• Survey Application

The important survey application features to the organization include:

- a) Unlimited number of responses
- b) Recurring surveys
- c) Real time results
- d) Data trends
- e) Filter & cross tabulate responses
- f) Generate and export custom charts & reports

Considering the above factors, the Advantage plan of Survey monkey could be a good match, which costs \$408 with 25% off for non-profit organization annually. Thus, the annual cost is \$306 if choosing SurveyMonkey.

On the other hand, QuestionPro, which also meets the needs of all required features, offers non-profits organization free use of online survey service, as long as the organization cites and acknowledges QuestionPro as the technology provider. Therefore, using QuestionPro will be a better choice to the organization due to a lower cost.

• Tablets

Since the main purpose of using Tablets is data collection, simple Tablets that can meet the basic needs will be good enough. Thus, the major factor of choosing Tablets is the cost. Student consultant believes that the maximum budget for one tablet can be \$500 (Apple iPad Pro 9.7 costs \$499). Considering CNS and IMPACTS programs have a great demand for using Tablets to do satisfaction surveys, it is suggested that the organization purchase at least two Tablets. During the busy month when one Tablet cannot meet the demand of one program, it can use the second one temporarily from the other program to facilitate data entry work.

Goal 2: Adopting technology in Children & Youth program to enhance work efficiency and produce outcomes

a. Background

During this consulting engagement, the director of CYS hesitated to implement the Salesforce system and therefore the expansion of Salesforce to Children & Youth Services was not able to progress. However, adopting technology in CYS will still be an essential task for the future development of the whole organization and is supposed to be accomplished in the following three years. Student consultant believes that after seeing the advantages of using Salesforce in other programs and having the standard work process of using technology, the CYS program will gradually be motivated and be likely to use Salesforce system.

b. Justification

Based on the information student consultant has already collected, Children & Youth Services has not used technology to help work process. The director knows the outputs, such as the number of children they serve, but there is no specific data tracking process. Transferring all paper work to the system will create great benefits to the program. First, it will help better track children's information, reduce manual errors of data recording and let staff quickly know children's progress through the program. Second, the director can easily pull out outcomes reports from system without checking and synthesizing data pieces repeatedly. Third, it is also possible to gain visionary insights from dashboards and make strategic plan utilizing data analysis and integration. The value of using technology in CYS will be much higher due to substantial children and youth data involved in 15 sub-programs. By incorporating data analytics into decision-making processes, the organization will move closer to its vision and achieve continual service improvement.

c. Strategies

The major steps the organization can follow to adopt technology in CYS is stated in the chart below.

Phase	Tasks	Time
Promotion	Promote the CYS program to use Salesforce system	10 months
Implementation	Streamline work processes and program logic	4 weeks
	Determine outcomes and its measurements for each program	2 weeks
	Gathering all paper files and forms used by CYS	1 week
	Identify features and detailed requirements of the system	2 weeks
	Contact Soliant, estimate schedule and costs to implement the project	1 week
	Continue to communicate with Soliant during the developing process	3 months
	Continually optimize system functions	3 months
Capacity Building	Train staff to use Salesforce	2 months

d. Expected Outcomes

The expected outcomes are shown below:

Areas of Impacts	Effects
Organization	<ul style="list-style-type: none">- Standard work processes in all programs- Comprehensive and timely reports to stakeholders- Improved technical knowledge of the whole organization
Programs	<ul style="list-style-type: none">- Far-sighted program strategies- Better services quality- High clients satisfactions
Staff	<ul style="list-style-type: none">- Less redundant work- High work performance- Improved technical skills
Technology	<p>The system is developed successfully with the following major functions:</p> <ul style="list-style-type: none">- Tracking clients information- Exporting reports- Providing data analytics

e. Resources

When CYS program is well-prepared for adopting technology, the organization can work with another student consultant to expand the use of Salesforce into CYS. The information gathering and requirements analysis processes require the active involvement of the community partner, the student consultant and the director of CYS. The organization will also contact Soliant for development of the system. Since the development for CYS is more complicated than the other three programs, it may require more time and budget. Considering the cost of building the system for IMPACTS was about \$25,000, the budget for CYS could be about \$30000.

References

- [1] EECM website (EECM - How We Help)<http://www.eecm.org/eecm-services/>
- [2] EECM website (About us) <http://www.eecm.org/about-eecm/>
- [3] EECM website (About us) <http://www.eecm.org/about-eecm/by-the-numbers/>
- [4] Prior consulting report https://www.cmu.edu/tcinc/reports/EECM_Mutreja.pdf
- [5] The website to download the free Field Trip
<https://appexchange.salesforce.com/appxListingDetail?listingId=a0N30000003HSXEEA4>
- [6] How to clear unused fields by using Field Trip
<https://cloud4good.com/announcements/using-field-trip-app-tp-clean-up-your-salesforce-instance/>

About the Consultant

Yuanhan Liu is a graduate student in the Master of Information Systems Management program at Heinz College, Carnegie Mellon University. She shows a strong enthusiasm in using technology to make a difference in the community. She will be taking part in the Technology Consulting in the Global Community internship over the summer and keep creating value for the thriving society.

Appendix A

The document of specification for development

Specification for Development	
<p>[Community Nutrition Services]</p> <p>1. Generating PCSI monthly report automatically</p> <ul style="list-style-type: none">➤ The system should be able to generate PCSI monthly report(Appendix 1) automatically by extracting data from current objects with validation rules needed as well <p>OR</p> <ul style="list-style-type: none">➤ Adding data checking functions to avoid data inconsistency of PCSI monthly report – validation rules. <p>2. Creating outcomes objects for Food Pantry survey - quarterly</p> <ul style="list-style-type: none">➤ Every time users create a new record, four survey questions(Appendix 2) should be chosen as well as record's date and time <p>3. Create outcomes reports based on Food Pantry survey</p> <ul style="list-style-type: none">- Raw data reports- Change over time reports individual and aggregate- Percentage of total showing improvement / declining etc... <p>4. Track monthly visits / eliminate use of Food Pantry Card (Appendix 3)</p> <p>5. Updating records issue</p> <p>Problems:</p> <ul style="list-style-type: none">- When cloning a record, the other members in the household do not come over with the new record. They must be added manually.- We put the current year at the end of each household name to differentiate the current record from older records.- May not need to clone a record at all. Need to talk through the logic / process flow of information from one year to another. <p>[WorkForce]</p> <p>1. Track information and outcomes of WorkForce</p> <ul style="list-style-type: none">➤ The same objects and fields from IMPACTS can be used in WorkForce➤ Delete/add some fields based on specific needs (Appendix 4)➤ Contact information in IMPACTS can be cloned to WorkForce <p>2. Create outcomes reports – using same outcomes as IMPACTS</p> <ol style="list-style-type: none">1) Raw data reports<ul style="list-style-type: none">- Initial to Goal- Initial to Discharge	<ul style="list-style-type: none">- Goal to Discharge2) Percentage reports<ul style="list-style-type: none">- Percentage of clients who keep their job for three/six months- Percentage of clients who transit to other employers when they leave EECM <p>[IMPACTS]</p> <p>1. Filter data in current reports</p> <p>Problem: Current reports are not able to select clients whose length of stay is more than 30 days.</p> <p>Requirements:</p> <ul style="list-style-type: none">➤ Replace the Discharge object to a Discharge field under Contact object➤ Migrate previous data in object to the new field➤ Also include a column to show clients' length of stay <p>2. Create outcomes reports</p> <p>Requirement:</p> <ul style="list-style-type: none">➤ The report should be able to compute the percentage of residents who achieve the minimum score by using data extracted from a "Discharge to minimum" report➤ Need to add in the minimum levels for each program. <p>*note: Exclude "not applicable" when computing percentage</p> <p>3. Current issues that I need fixed or added</p> <ol style="list-style-type: none">a. Recovery house does not allow us to add beds directly. There is a glitch when you do the admission with assigning a bed. Should work like emergency shelter, bridge etc...b. Move discharge record from object to fields and migrate data (See #1 above)c. Need to add corrective action object to the EE Participant record typed. Send email with action steps that have your name on it.e. Add outcomes tracking information for Recovery House into SF Appendix 5f. Show full open case note and not just a small piece of it. <p>[Others]</p> <ol style="list-style-type: none">1. Setting permission levels for different users2. Setting firewall3. Linking 3 objects in reports types

Appendix B

A plan for tasks in the next six months.

Tasks	Explanation	Accountability	Time
Keep communicating with Soliant	The organization has to have frequent conversations with Soliant during the development process, so that the demands and requirements can be understood and implemented accurately.	Community Partner, other directors	May, June
Purchase Salesforce Licenses	At least five more licenses are needed for current or future staff to use Salesforce	Community Partner	After Soliant finishes system development (Expected: in the early June)
Set permission levels	Program directors' access: add fields, customize reports, etc. Outcome director's access: export reports Other staff: add/modify records	Community Partner	
Add missing Discharge outcome data	Some discharge outcome data of IMPACTS is missing and needs to be added	Community Partner, staff	June
Make User Manuals	IMPACTS: completes current user manual; CNS, WorkForce: make new detailed user manuals about how to use Salesforce	Program directors; student interns;	July, August
Data Quality Checking	The data quality of Housing Program Record Review needs to be checked	Community Partner, student interns	July, August
Clear Old Useless reports	The current system has some old useless reports needed to be cleared so that more storage can be used for other programs	Community Partner	September
Update Dashboard	The data analytics of dashboard can create aggregate outcomes for programs, but it has not been updated for years, while the fields of some objects have been modified.	Community Partner	September, October