Youth Development and Education Programs Reporting Effectiveness

Version <1.1>

Revision History

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Table of Contents

1. Introduction 4

1.1 References 4

2. Positioning 4

2.1 Problem Statement 4

2.2 Product Position Statement 5

3. Stakeholder and User Descriptions 5

3.1 Stakeholder Summary 5

3.2 User Summary 6

3.3 User Environment 6

3.4 Summary of Key Stakeholder or User Needs 6

3.5 Alternatives and Competition 7

4. Product Overview 7

4.1 Product Perspective 7

4.2 Assumptions and Dependencies 8

5. Product Features 8

6. Other Product Requirements 8-9

7. Feasibility Analysis 10

# Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of the Youth Development and Education Program at Louisville Urban League. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the Youth Development and Education Program at Louisville Urban League (LUL) fulfills these needs are detailed in the use-case and supplementary specifications.

## References

Fields, Sr., Kevin. Personal Interview. 28 January 2011.

Muhammad, Imani. Personal Interview. 28 January 2011.

# TechSoup.com. (2009). SQL Server 2008 R2 Standard Edition. Retrieved from techsoup.com

# Positioning

## Problem Statement

|  |  |
| --- | --- |
| The problem of | Creating and implementing a system that generates efficient and consistent reports for donors and potential donors. |
| Affects | Louisville Urban League as well as the donors to the program. |
| the impact of which is | Louisville Urban League’s inability to generate timely and efficient reports that will gain revenue from grants and donors. |
| a successful solution would be | A more centralized system that will allow LUL to collect data and produce reports instantaneously upon user’s request. |

## Product Position Statement

|  |  |
| --- | --- |
| For | Louisville Urban League’s Youth Development and Education Program |
| Who | Needs a system for centralized reporting, as well as provide additional information needed by users. |
| The | Undefined central repository for user data. |
| That | Stores all of the user data in one place; generate efficient and consistent reports, allowing the non-profit to gain additional revenue from donors and grants.  The centralized repository system should contain all student and program related data, reducing redundancy. The system will track enrollment, program attendance rate, participant satisfaction, benchmarks achieved, and lastly outcomes achieved. It will also be able to generate user tailored reports at the user’s request.  There should be support for the new system that will further enhance customization. |
| Unlike | The current decentralized system. |
| Our product | Appears to provide more efficiency for a non-profit organization and will allow for further economic opportunities. |

# Stakeholder and User Descriptions

The main stakeholders involved in this process will include the Youth Development and Education Program Sr. Director, Kevin Fields, his assistant, Imani Muhammad, the Program Directors and the decision makers involved in the funding approval process. Currently, the perceived main issues include inefficiency in reporting the data and ineffective use of time. The stakeholders would like these issues addressed in the solution that is provided.

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Benjamin K. Richmond | President/CEO | Main decision maker for LUL |
| Artie N. Robertson, CPA | Senior Vice President & COO | Approves funding |
| Board of Directors | Oversee the general direction of LUL | Other decision makers for LUL; conduct monthly meetings |
| Accountants | Employees of LUL |  |
| Donors | People that donate money to the cause of LUL | Fund LUL programs |
| National Urban League | Provides guidance and standards for LUL | Oversee local Urban Leagues’ |
| Volunteers | Provide their time and efforts helping LUL reach their goals. | Program Directors |

## User Summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| Instructors and coordinators | Youth development and education employees | Capture attendance records Look at success rates Review student grades and records from school Responsible for keeping up with their excel worksheet | Kevin E. Fields, Sr.  Imani Muhammad |
| Kevin E. Fields, Sr. | Senior Director of Youth Development and Education | Generates reports for donors and for the National Urban League. Generates additional donations and funding | Donors |
| Imani Muhammad | Assistant to Senior Director of Youth Development and Education | Update and generate reports for the Senior Director as well as for potential donors. | Kevin E. Fields, Sr.  Donors |

## User Environment

Currently there are 7-8 Program Directors that have to input figures for approximately twelve active programs. This can take a Program Director anywhere from 30-45 minutes to input these figures. There is no current timeline for a change in this process. Once these reports are produced they must be emailed to Imani Muhammad in order for her to update the reports stored on the server. This is taking up approximately three hours of her time. Kevin Fields, Sr. also spends three hours of his time doing the same. There is a current desire for change and we are working with both Imani and Kevin on a solution to this time issue.

The current system platform in use is Windows 2007. There is no plan to change this platform going forward. Other applications in use include Excel, KidTrax, JCPS, and Internet Explorer. We are in the process of analyzing the current system to understand any potential integration issues we may encounter.

## Summary of Key Stakeholder or User Needs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Centralized Reporting | High | Inability to provide timely, consistent reports to users | Employees email reports to Kevin and he compiles them into a donor reports. | | A centralized repository, to host all reports making it easier to obtain current figures |
| Software Communication | High | Lack of efficiency, data redundancy | Reports are emailed individually to Kevin and then numbers are updated manually | | Individual reporting automatically updates the Program Services Report |
| Software Tool | High | Efficient and consistent reporting techniques | Kevin reviews individual reports and compiles them into a larger report. | | A tool that integrates individual reporting numbers into Program Services Report |
| Consistent Reporting | Medium | Individual style of reporting increases potential for errors in reporting; time efficiency | Individual reporting emailed to Kevin. He has to search for the numbers he needs for the Program Services Report | | All of the reports are similar in design and style; ability to upload numbers into centralized repository |
| Tracking Attendance Consistently | Low | Data redundancy; Inaccurate results | Sign-in sheet; KidTrax; Counting students individually | | Every program uses the same sign in method |

## Alternatives and Competition

An alternative solution to what we are trying to accomplish is going to be any software that accomplishes the same solution we want to provide to the Louisville Urban League.

# Product Overview

• Product perspective

* Simplicity in tracking data
* Good support
* Ability for continuous development, if needed

• Assumptions and dependencies

* We assume 2008 SQL Server will do what it states.
* It is assumed that the Youth Development and Education division of LUL will use 2008 SQL Server for the purpose of tracking their reported numbers.

## Product Perspective

Microsoft SQL Server 2008 R2 Standard Edition is an entire data storage, management, analysis and reporting software for medium-sized organizations. It could be used as a back-end database server for internal applications if need be. The software will allow for tracking of attendance, as well as success rates, per program. SQL Server will also allow for the creation of reports, which is a main driver for LUL when trying to generate additional grants. The software also offers development tools. These development tools are integrated with the Microsoft.NET framework and Visual Studio to provide end-to-end application development capabilities. SQL Server has the ability to upload Excel documents, which is an optimal option for the current state of the Youth Development and Education reporting.

## Assumptions and Dependencies

Assuming the Youth Development and Education division utilizes SQL Server to its’ full extent, it will save considerable time (approximately two hours per day) and will allow the Senior Director and his/her assistant to focus on the aspects that drive the organization, donations. From a conservative standpoints, it is assumed that $15,000 in grants is being lost currently.

# Product Features

**General Features**

* Ability to produce easy to read reports
* Reduction in misreporting numbers
* Benefit of having all information stored in a centralized location
* Provides a smooth transition from input of data to output of data
* Ability to produce just-in-time reports upon users’ request
* Integrated with Excel to allow simple transfer of data
* Microsoft Word rendering which allows users to view reports directly from Word
* Allow for better tracking of Youth Development and Education Programs

**Support Features**

* Simple out of the box DVD-ROM installation
* Software Assurance allows for free online installation of any new release of products covered in agreement during term of your coverage
* Online forums on SQLTeam.com to answer all issues
* Microsoft E-Learning courses to teach new users or strengthen current users skills
* Phone support through Microsoft
* Easy to uninstall, if needed

# Other Product Requirements

**Hardware**

 For the x64 edition:

* 1.4-GHz (or higher) processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, or Intel Pentium 4 with EM64T support; 2-GHz recommended
* 1 GB RAM; 4 GB recommended (supports maximum of 64 GB)
* 3.6 GB available hard-disk space
* DVD drive
* 800x600-pixel (or higher) display

**Software**

 For the x64 edition:

* Operating systems:
  + Windows XP Professional x64 with SP2
  + Windows Server 2003 with SP2 Standard x64, Datacenter x64, Enterprise x64
  + Windows Server 2003 R2 with SP2 Standard x64, Datacenter x64, Enterprise x64
  + Windows Vista with SP2 Ultimate x64, Enterprise x64, Business x64
  + Windows Server 2008 with SP2 Web x64, Standard x64, Standard x64 without Hyper-V, Datacenter x64, Datacenter x64 without Hyper-V, Enterprise x64, Enterprise x64 without Hyper-V, Foundation x64, Essential Server Solutions x64
  + Windows Server 2008 R2 Web, Standard, Datacenter, Enterprise, Foundation, Essential Server Solutions
  + Windows 7 Ultimate x64, Enterprise x64, Professional x64
* Internet Explorer 6.0 with SP1 or later

# Feasibility Analysis

**Technical:**

The Louisville Urban League project is technically feasible, although with any project there is always some risks.

*LUL’s risks regarding familiarity with technology are low.*

* The employees at the Louisville Urban League are familiar with Microsoft Office products, Internet Explorer, and Windows 7.

*The project size is considered to be low risk as well.*

* The project team will include five people.
* Business user involvement will be required.
* The timeframe for the project cannot exceed May 2011.

*The compatibility with Louisville Urban League’s existing technical infrastructure should be good.*

* They currently have the proper infrastructure needed to be compatible with SQL.

**Economic:**

A cost benefit analysis was performed (see appendix A). A conservative and liberal approach was taken and it shows that this new system has a great chance of adding significant revenue to the company.

* The new system may be able to save the program directors and coordinators time, which will in turn mean generating more revenue. Conservatively, they could save twelve hours per month. If the grants take six hours to find and apply for, this will mean they can apply for an additional two grants per month. From a liberal perspective if they save sixteen hours per month and each grant takes six hours to find and complete, they will be able to apply for an additional 2-3 grants per month.
* Looking at benefit from a conservation approach, the non-profit organization may be able to apply for an additional twenty-four grants a year. If their success rate is 20% and each grant is worth a minimum of $5,000 they could gain $24,000 of revenue each year.
* From a liberal approach, the LUL may be able to apply for an additional 32 grants per year. If their success is increased to 40% and each grant is worth an average of $5,000 they may increase their revenue by $64,000 each year.

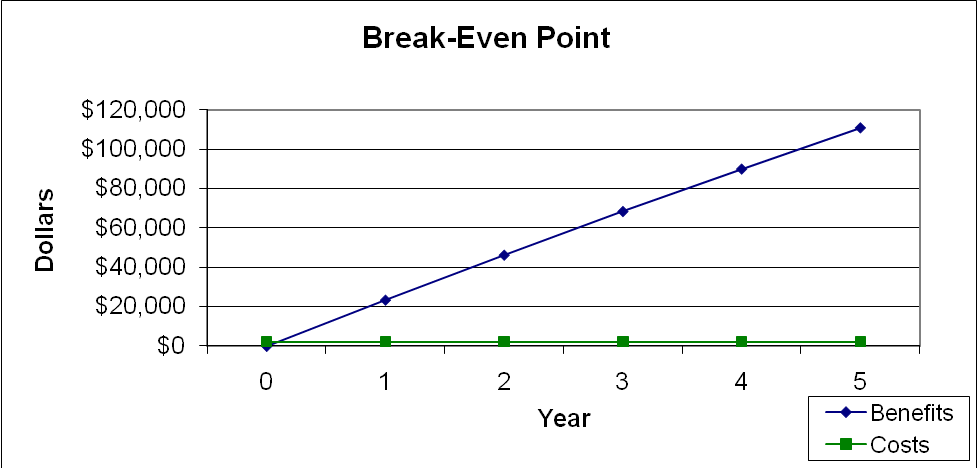
**Organizational:**

From an organizational perspective, this project has low risk. The objective of the system, to increase revenue, is aligned with the Louisville Urban League’s goal.

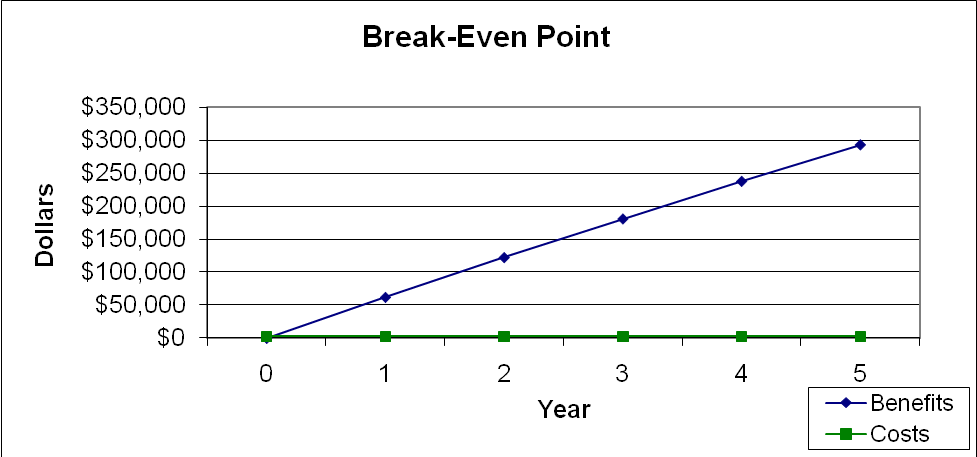
* The project has a project champion, Kevin Fields, SR, Senior Director of the Youth Development & Education. Kevin is positioned to sponsor this project and educate the program coordinators when necessary.
* The users of the system, program coordinators, Kevin Fields, and Imani Muhammad, are expected to appreciate the benefits of the potential new system.
* The users are technologically savvy and with a training course, they should be able to use SQL proficiently.

Appendix A

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Conservative Summary** | **Year 0** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| **Benefits** |  |  |  |  |  |  |  |
| Increased Revenues | $0 | $24,000 | $24,720 | $25,462 | $26,225 | $27,012 | $127,419 |
| Cost Avoidance | $0 | $856 | $882 | $908 | $935 | $963 | $4,544 |
| Total Benefits | $0 | $24,856 | $25,602 | $26,370 | $27,161 | $27,976 | $131,963 |
| NPV of Benefits | $0 | $23,449 | $22,785 | $22,140 | $21,514 | $20,905 | $110,793 |
| Cumulative NPV Benefits | $0 | $23,449 | $46,234 | $68,375 | $89,888 | $110,793 | $338,740 |
|  |  |  |  |  |  |  |  |
| **Development Costs** |  |  |  |  |  |  |  |
| Training | $1,800 | $0 | $0 | $0 | $0 | $0 | $1,800 |
| HW/SW/Supplies | $337 | $0 | $0 | $0 | $0 | $0 | $337 |
| Development Costs | $2,137 | $0 | $0 | $0 | $0 | $0 | $2,137 |
| NPV of Costs | $2,137 | $0 | $0 | $0 | $0 | $0 | $2,137 |
| Cumulative NPV of Costs | $2,137 | $2,137 | $2,137 | $2,137 | $2,137 | $2,137 |  |
|  |  |  |  |  |  |  |  |
| **Cash Flow** |  |  |  |  |  |  |  |
| Yearly NPV Cash Flow | -$2,137 | $23,449 | $22,785 | $22,140 | $21,514 | $20,905 | $108,656 |
| Overall NPV Cash Flow | -$2,137 | $21,312 | $44,097 | $66,238 | $87,751 | $108,656 |  |
|  |  |  |  |  |  |  |  |
| **Performance** |  |  |  |  |  |  |  |
| ROI |  |  |  |  |  |  | 5084.5% |
| Break Even Point |  |  |  |  |  |  | 1.09 |
| IRR |  |  |  |  |  |  | 1094.4% |
|  |  |  |  |  |  |  |  |
| **Assumptions** |  |  |  |  |  |  |  |
| Interest Rate | 0.06 |  |  |  |  |  |  |
| Discount Rate | 1.000 | 0.943 | 0.890 | 0.840 | 0.792 | 0.747 |  |



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Liberal Summary** | **Year 0** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| **Benefits** |  |  |  |  |  |  |  |
| Increased Revenues | $0 | $64,000 | $65,920 | $67,898 | $69,935 | $72,033 | $339,785 |
| Cost Avoidance | $0 | $1,712 | $1,763 | $1,816 | $1,870 | $1,927 | $9,088 |
| Total Benefits | $0 | $65,712 | $67,683 | $69,714 | $71,805 | $73,959 | $348,873 |
| NPV of Benefits | $0 | $61,992 | $60,238 | $58,533 | $56,876 | $55,267 | $292,906 |
| Cumulative NPV Benefits | $0 | $61,992 | $122,230 | $180,763 | $237,639 | $292,906 | $895,530 |
|  |  |  |  |  |  |  |  |
| **Development Costs** |  |  |  |  |  |  |  |
| Training | $1,800 | $0 | $0 | $0 | $0 | $0 | $1,800 |
| HW/SW/Supplies | $337 | $0 | $0 | $0 | $0 | $0 | $337 |
| Development Costs | $2,137 | $0 | $0 | $0 | $0 | $0 | $2,137 |
| NPV of Costs | $2,137 | $0 | $0 | $0 | $0 | $0 | $2,137 |
| Cumulative NPV of Costs | $2,137 | $2,137 | $2,137 | $2,137 | $2,137 | $2,137 |  |
|  |  |  |  |  |  |  |  |
| **Cash Flow** |  |  |  |  |  |  |  |
| Yearly NPV Cash Flow | -$2,137 | $61,992 | $60,238 | $58,533 | $56,876 | $55,267 | $290,769 |
| Overall NPV Cash Flow | -$2,137 | $59,855 | $120,093 | $178,626 | $235,502 | $290,769 |  |
|  |  |  |  |  |  |  |  |
| **Performance** |  |  |  |  |  |  |  |
| ROI |  |  |  |  |  |  | 13606.4% |
| Break Even Point |  |  |  |  |  |  | 1.03 |
| IRR |  |  |  |  |  |  | 2898.1% |
|  |  |  |  |  |  |  |  |
| **Assumptions** |  |  |  |  |  |  |  |
| Interest Rate | 0.06 |  |  |  |  |  |  |
| Discount Rate | 1.000 | 0.943 | 0.890 | 0.840 | 0.792 | 0.747 |  |



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--- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | CONSERVATIVE |  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** | | **Increased Revenues** |  |  |  |  |  |  |  | | Increase in Grant Funding |  | $24,000 | $24,720 | $25,462 | $26,225 | $27,012 | $127,419 | | Total Revenues |  | $24,000 | $24,720 | $25,462 | $26,225 | $27,012 | $127,419 | |  |  |  |  |  |  |  |  | | **Cost Avoidance** |  |  |  |  |  |  |  | | Cost savings calculated below |  | $856 | $882 | $908 | $935 | $963 | $4,544 | | Total Savings |  | $856 | $882 | $908 | $935 | $963 | $4,544 | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | | **Increased Revenues** |  |  |  |  |  |  |  | | Average Grant Amount (Minimum) | 5,000.00 |  | Time savings due to | |  |  |  | | Additional grants applied for | 24 |  | streamlined process | |  | 12 | hrs/month | | Success Rate | 20% |  | Grant Application time | |  | 6 | hrs/grant | | Total additional grant revenue | 24,000.00 |  | Additional applications per month | | | 2 |  | |  |  |  |  |  |  |  |  | | **Cost Avoidance Dictionary** |  |  |  |  |  |  |  | | Paper | 455.88 | (One box per month @ 37.99 per box) | | |  |  |  | | Ink/Toner | 400.00 | (Based on estimate of average toner price @ $100 per cartridge) | | | | |  | | Total Cost Avoidance | $ 855.88 |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | | LIBERAL |  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** | |  |  |  |  |  |  |  |  | | **Increased Revenues** |  |  |  |  |  |  |  | | Increase in Grant Funding |  | $64,000 | $65,920 | $67,898 | $69,935 | $72,033 | $339,785 | | Total Revenues |  | $64,000 | $65,920 | $67,898 | $69,935 | $72,033 | $339,785 | |  |  |  |  |  |  |  |  | | **Cost Avoidance** |  |  |  |  |  |  |  | | Cost savings calculated below |  | $1,712 | $1,763 | $1,816 | $1,870 | $1,927 | $9,088 | | Total Savings |  | $1,712 | $1,763 | $1,816 | $1,870 | $1,927 | $9,088 | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | | **Increased Revenues** |  |  |  |  |  |  |  | | Average Grant Amount (Minimum) | 5,000.00 |  | Time savings due to | |  |  |  | | Additional grants applied for | 32 |  | streamlined process | |  | 16 | hrs/month | | Success Rate | 40% |  | Grant Application time | |  | 6 | hrs/grant | | Total additional grant revenue | 64,000.00 |  | Additional applications per month | | | 2.67 |  | |  |  |  |  |  |  |  |  | | **Cost Avoidance Dictionary** |  |  |  |  |  |  |  | | Paper | 911.76 | (Two boxes per month @ 37.99 per box) | | |  |  |  | | Ink/Toner | 800.00 | (Two cartridges per month-Average toner price @ $100 per cartridge) | | | | | | | Total Cost Avoidance | 1,711.76 |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  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