

Team Alexandria

Deliverable 1 - Systems Request

IS436 - Structured Systems Analysis and Design

Prepared for 26 Feb 2018

Team Members

- Amit Dsouza (Business Analyst) - Information systems major with minor in computer science. Primary field of employment is security. Currently residing in Baltimore Maryland but originally from India. (adsouza1@umbc.edu, 410-900-0504)
- Alexander Cha (Scrum Master) - Information systems major and network administration certificate program. Currently residing in Ellicott City Maryland. (acha1@umbc.edu, 410-979-4762)
- Omar Chaudhry (Business Analyst) - Information systems major.
- Jason Spriggs (Product Owner) - Information Systems major with Minor in Entrepreneurial Studies. Part-time UMBC student and full-time Systems Administrator for Cloud Access Control provider, Brivo. Resides in Rockville, Maryland. (jsprig1@umbc.edu, 240-543-6206)
- Mehak Chadha (Business Analyst) - Information Systems major with minor in Entrepreneurship and Innovations. Enrolled in Cyber security certificate program. Resides in Rosedale, Maryland. (mchadha1@umbc.edu, 667-212-7252)

Time Spent - Meeting for an hour prior to class to discuss presentation along with constant communication using GroupMe.

Project Sponsor: Alexander Cha, Scrum Master

Business Need: The project has been initiated in order to provide library employees an electronic medium of managing daily activities. The current system of logging in books is,

- Inefficient as it requires multiple employees to keep track of inventory
- Does not allow users to have access to library resources outside of the library.

Business Requirements: Employees can use this system to update, keep track and search inventory. Customers will be able to look up books they are interested in without having to physically search for them at the library. Some things that the system should enable are:

- Customers and employees can search for books, audio, newspapers and videos through website and in store system.
- Employees can add new forms of media to the system.
- Allow interlibrary rental of media
- Provide online access to pdfs and database stored newspaper articles.

Business Value: We believe that the new Management system will increase daily productivity of employees significantly. It will also increase in usage of library media as there will be a new avenue for potential customers to access resources. We expect revenue to increase significantly due to online rental capabilities and ease of access.

Following are conservative estimates of tangible value to the company:

- \$25,000 in rental of online videos.
- \$10,000 in rental of pdfs and ebooks.
- \$5,000 in increase of store rental.
- \$90,000 in downsizing.

Special Issues and Constraints: The team believes that updating to this system is far overdue and to appeal to a bigger audience we should develop and implement this system as soon as possible.

Systems Request - Library Management System

Business Reasons:

The team believes that this new system will provide new avenue of revenue as it will allow online access to some of the library resources. It will enable interlibrary loaning of books as the system will be a common one used at all branches. Library staff can be reduced as the management system will reduce amount labor required.

Improved Quality of Life:

Adding the ability to search for items from the comfort of a person's home will improve quality of life both employees as well as customers. Employees will not have to spend time physically searching for books that might not be logged correctly.

Technical Feasibility:

Hardware Requirements

4TB SSD, 2TB Hard Drive, Processor, Colored Monitor, Keyboard, and Mouse

Software Requirements

Windows, MacOS, GitHub and SQL Developer

The proposed system will be developed under a higher hardware platform. Thus, there is no question that the project will face any technical problems during coding and testing phases. Considering hardware and software availability it could be considered that the proposed system is technical feasible for development.

Economical Feasibility:

Costs

Development Costs: Development team salaries, Training, Hardware, and Software.

Operational Costs: Software upgrades, Cloud storage fees, Operational team salaries, and User training.

Benefits

Tangible Benefits: Increased Sales, and Reductions in Staff.

Intangible Benefits: Brand recognition, Higher quality system, Improved customer service, and supplier relations.

After a careful analysis of the economic feasibility it could be concluded that treating the project is “Economic Feasible” for development.

Cost - Benefit Analysis

| A | B | C | D | E | F | |
|---|---|---------------|---------------|---------------|---------------|--|
| | | 2018 | 2019 | 2020 | Total | |
| Benefits | | | | | | |
| Increased sales | | 80000 | 96000 | 115200 | 291200 | |
| Reduction Staff costs | | 90000 | 90000 | 90000 | 270000 | |
| Reduced inventory costs | | 20000 | 20000 | 20000 | 60000 | |
| Total Benefits | | 190000 | 206000 | 225200 | 621200 | |
| | | | | | | |
| Development Costs | | | | | | |
| Hardware costs | | 100000 | | | | |
| Software Licenses | | 20000 | | | | |
| Development Labor | | 120000 | | | | |
| Total Development Costs | | 240000 | | | | |
| | | | | | | |
| Operational Costs | | | | | | |
| Hardware | | 20000 | 20000 | 20000 | 60000 | |
| Software | | 20000 | 20000 | 20000 | 60000 | |
| Operational Labor | | 60000 | 60000 | 60000 | 180000 | |
| Total Operational Costs | | 100000 | 100000 | 100000 | 300000 | |
| Total Costs | | 340000 | 100000 | 100000 | 540000 | |
| NPV(Total Benefit - Total Costs) | | | | | 81200 | |

Operational Feasibility:

Library Management System will provides “better and efficient” service to members.

Data Security

Provide faculty for proper monitoring reduce paper work.

Reduce redundancy in the information required from the customers in order for them to find media, create user accounts.

The project is well suited to overcome organizational restrictions. Thus, considering the operational feasibility the development of the proposed system considered as operationally feasible for development.

Project Work Plan:

| Task Name | Start Date | End Date | Duration (Days) | Days Complete | Days Remaining | Percent Complete | Assigned To |
|---|------------|-----------|-----------------|---------------|----------------|------------------|----------------------------|
| Initiating & Planning | 2/25/2018 | 3/5/2018 | 8 | 6.00 | 2.00 | 75% | Alexander Cha |
| Gather Information and do Analysis | 3/2/2018 | 3/12/2018 | 10 | 0.00 | 10.00 | 0% | Omar Chaudhry |
| Identify & Plan System Engineering (Design) | 3/15/2018 | 3/23/2018 | 8 | 0.00 | 8.00 | 0% | Amit Dsouza,Jason Springs |
| Acquire Hardware & Software | 3/15/2018 | 3/30/2018 | 15 | 0.00 | 15.00 | 0% | Jason Spriggs, Mehak Ch. |
| Installation (Hardware & Software) | 3/30/2018 | 4/9/2018 | 10 | 0.00 | 10.00 | 0% | Amit Dsouza, Alexander Ch. |
| Implementation | 4/9/2018 | 4/19/2018 | 10 | 0.00 | 10.00 | 0% | Omar Chaudhry,Mehak Ch. |
| Prepare and Provide Training | 4/19/2018 | 4/24/2018 | 5 | 0.00 | 5.00 | 0% | Alexander Cha |
| Provide Support and Monitor Data | 4/24/2018 | 5/1/2018 | 7 | 0.00 | 7.00 | 0% | Omar Chaudhry |
| Test and Document the System | 4/24/2018 | 5/4/2018 | 10 | 0.00 | 10.00 | 0% | Amit Dsouza |
| Continuous resolving of any issues | 5/4/2018 | 6/3/2018 | 30 | 0.00 | 30.00 | 0% | All |

Project Methodology

For this project, the team will be organized as an Agile Scrum team. This allows us to get a Minimum Viable Product (MVP) out quickly and iterate on designs and any unforeseen technical deficiencies in an orderly and consistent manner. Our Scrum Master, Alex, will be in charge of making tasks are ticketed for appropriately, while our Product Owner, Jason, will be in charge of keeping the team focused on the larger picture and making any necessary managerial calls.