
Squirrel Systems

**The Thompson Project
Vision (Small Project)**

Version 2.0

The Thompson Project	Version: 2.0
Iteration 2	Date: 2/22/2022
Team: William Blevins, Alex Brooks, Alexis Bruszewski, Raveen Bryant, Minu Perera	

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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	4
3. Stakeholder and User Descriptions	5
3.1 Stakeholder Summary	5
3.2 User Summary	5
3.3 User Environment	5
3.4 Summary of Key Stakeholder or User Needs	5
3.5 Alternatives and Competition	6
4. Product Overview	6
4.1 Product Perspective	6
4.2 Assumptions and Dependencies	6
5. Product Features	6
6. Other Product Requirements	7
Appendices	
A Feasibility Analysis	8
A.1 Technical Feasibility	8
A.2 Operational Feasibility	8
A.3 Economic Feasibility	8
A.4 Net Present Value	9

The Thompson Project	Version: 2.0
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Vision (Small Project)

1. Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of The Thomson Project. It focuses on the capabilities needed by the stakeholders and target users, and why these needs exist.

1.1. References

Squirrel Systems. "Feasibility Analysis for The Thompson Project". *Appendix A*

Squirrel Systems. "Net Present Value for Proposed System". *Appendix A.4*

2. Positioning

2.1. Problem Statement

There are three main problems that arose. Those being Donations, Organization, and Information. Donations include two main factors, product donations, and income donations. Products contain food, clothes, and hygiene products. Income contains grants, fundraisers, and donations. Organization and Information go hand in hand. The Thompson Project needs a way to keep track of volunteer information, children's information, financial sheets, what's going in and out of the center, what donations came from who, who are the sponsors/partners, etc.

Since all three of these problems link together, the solution covers all. The Thompson project already has one digital backup and a paper copy of the paperwork. Well, they need other storage places like the cloud, making multiple paper copies, storing things in a backup hard drive, and a place to store the physical product.

2.2. Product Position Statement

By creating this site, it will allow users to help donate in many forms and to see what good they are doing for young kids inside the center. They show their support by providing donations/contributing to better hygiene products, clothes, education, and all-around support while they are going through these hard times. In turn, it might give the support the kid needs to do better for them.

The site we are creating will help bring more awareness to other children going through similar circumstances. It will help bring them together and work towards a better outcome for them. While providing more information and services that could help them even outside of the center.

The Thompson Project	Version: 2.0
Iteration 2	Date: 2/22/2022
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3. Stakeholder and User Descriptions

3.1. Stakeholder Summary

Name	Description	Responsibilities
<ul style="list-style-type: none"> CEO (Armond Thompson) Volunteers Donors 	<ul style="list-style-type: none"> Executive with most decision-making power. Provides unpaid labor. Provides monetary/non-monetary aid. 	<ul style="list-style-type: none"> The CEO is responsible for approving all business decisions as well as creating. Volunteers help facilitate distribution of donations and other events. Donors financially keep the project afloat as well as supporting necessary resources.

3.2. User Summary

Name	Description	Responsibilities	Stakeholder
<ul style="list-style-type: none"> Incarcerated youth CEO 	<ul style="list-style-type: none"> They are the sole reason for the creation and investment into the project. 	<ul style="list-style-type: none"> Youth have limited responsibilities outside of enrolling and disclosing necessary personal information. Armond is responsible for collecting and recording data as well as reporting any website bugs. 	<ul style="list-style-type: none"> Armond is responsible for getting feedback on necessary technological updates.

3.3. User Environment

The current system platform is non-existent and relies on a small set of electronics and a hard drive. Their main source of networking is social media. This makes the website implementation so much more feasible as there is no need for tedious software to integrate.

3.4. Summary of Key Stakeholder or User Needs

The first problem is the project lacks a reliable database software to collect student information as well as organizational logistics. This is due to low staff and limited access to IT development. Currently all files are stored on an external hard drive. This can be significantly improved by transferring all data involving youth, staff, and donations into a chosen database application. The next problem is a lack of consistent volunteer and donor members. Currently the Thompson project uses social media as their primary source of networking and collects funds through individual fundraising events. The stakeholder currently wants to create a website with donations and volunteer as a key business process that are easily accessible to users. These two issues take priority as they directly affect the capabilities of the programs and its ability to provide service.

The Thompson Project	Version: 2.0
Iteration 2	Date: 2/22/2022
Team: William Blevins, Alex Brooks, Alexis Bruszewski, Raveen Bryant, Minu Perera	

3.5. Alternatives and Competition

The first option Armond could consider is simply leaving his project in the current technological and business environment it is in. He has been able to deliver some positivity to youth and has not experienced any escalated security concerns. The advantage to this is there is no increased future cost, no website maintenance, and less responsibilities due to the small scale of the project. A disadvantage is the project will not advance under the current system and is at risk for permanently ending in the future. Another option is to invest in an IT team. The advantages allow for seamless system upgrades, continued maintenance, and cohesive data organization. The disadvantages are various costs; the organization may not have the funds to sustain this long term.

4. Product Overview

The website will include information about the Thompson project, contact information and social media links, a way to accept online monetary donations, provide information to collect physical donation products, track volunteer registration and information, and list sponsors/partners.

4.1. Product Perspective

The website will be the main component of the system. There will be webpages for general information, contact information, donation information, volunteer information, and sponsor/partner information.

The donation form will incorporate functionality from the donation system Stripe.

The volunteer information page will incorporate information stored in the project volunteer database.

4.2. Assumptions and Dependencies

- 1) There is a financial project account to accept online monetary donations.
- 2) There is an address to send physical donation items to.
- 3) The project computer can access Google Drive or a site like Dropbox for data storage.
- 4) The project computer/laptop has access to Microsoft office (Excel or Access) or Google Sheets for database purposes.

5. Product Features

- 1) Donations
 - a) They need a section that will explain what needs to be donated and how they can donate. Whether that is through delivering/sending materials or just donating online through the site. Which users need an address to send products to.
- 2) Company information
 - a) Users need a way to get into contact with the Project. By putting the project's email, phone number, and other forms of contact.
- 3) About Us
 - a) Users coming into the site need to know what the Thompson project is and what they are doing. They need a way to see your statement and what good has been done/doing.
- 4) Information
 - a) Managers/higher up need to have access and keep track of volunteers' information, their vetting

The Thompson Project	Version: 2.0
Iteration 2	Date: 2/22/2022
Team: William Blevins, Alex Brooks, Alexis Bruszewski, Raveen Bryant, Minu Perera	

process, children's contact information, what donations are coming in and out, bills due, and the sponsors/partners' information. This helps manage products, funds, and personnel coming in and out of the program.

- 5) Backup
 - a) There needs to be another way to store backups. With only having two places, it brings potential security and information loss risk. Including: getting a file system that locks in paper copies and storing the information in other external spaces/drives.
- 6) Security
 - a) Keeping the information on the site safe is a priority but also when bringing in electronics or for volunteers to use, limiting what they can access/see. Marking where they are going and blocking sites/internet access to limit the risk. Also getting VPNs.
- 7) Social Media
 - a) By sharing the links to the Thompson Projects' own social media pages, users can see pictures and activities that have been done for the children. It can also benefit from donations. Donors can see where the money is going to and receive more information about the program.
- 8) Media Carousel
 - a) Appears on the main page of the website. Showcases the Project's outreach and outcomes to new website visitors.
- 9) Events Calendar
 - a) Will display upcoming events for Project outreach. Serves as a point of information for current volunteers and as evidence of continued outreach for potential donors or grant-issuing personnel.
- 10) Tracking of Students taught at Detention Centers
- 11) Tracking of current Inventory of supplies
- 12) Tracking of future, current, and past Classes held at Detention Centers
- 13) Volunteer Sign up
- 14) Tracking of current Volunteers, classes worked, and hours worked

6. Other Product Requirements

Other infrastructure needed includes internet domain rights for the website and server hosting.

Both domain rights and server hosting require periodic fees to maintain. Domain rights will need to be renewed on a yearly or multi-yearly basis. Server hosting will need to be renewed monthly.

Domain rights must have 100% uptime. Server hosting must have as close to 100% uptime as possible.

Staff must be trained and able to access server hosting to update the website and work with the database.

Both domain rights and server hosting are mission-critical to system implementation. Both need to be obtained before the system can be deployed.

The Thompson Project	Version: 2.0
Iteration 2	Date: 2/22/2022
Team: William Blevins, Alex Brooks, Alexis Bruszewski, Raveen Bryant, Minu Perera	

Appendix A

A Feasibility Analysis

A.1 Technical Feasibility

The new system we propose can be successfully built. Since we are starting at technical zero, a solution can be built from the ground up to address all identified problems.

The system will be composed of two high-level parts: a front-end public-facing website and a back-end database. Both components are easily capable of being developed and implemented through remote server hosting.

A.2 Operational Feasibility

The new system will be adoptable by the Thompson Project. At present, there is only one organization-affiliated user: the Project's founder Armond Thompson. Mr. Thompson expresses ability and willingness to be trained on the proposed system.

Other future organizational users will be volunteers to the Project. There are no currently affiliated volunteers, so all volunteers moving forward will be starting with the newly implemented system. The proposed system will be conscious of the new volunteer experience during design to ensure usability by those new to the system.

A.3 Economic Feasibility

Implementation of this system will dramatically increase revenue potential with minimal economic costs. Given that there is no current system to replace, the only initial economic costs expected for implementation are purchasing domain rights, beginning server hosting, and development labor. Future system administration costs will be similar, consisting of periodic renewal of both domain rights, server hosting, and maintenance labor. Domain rights both to start and to continue are \$10 per year. Server hosting for the website and database is anticipated to be \$30 per month. Approximate maintenance labor will cost \$100 per year. The Thompson Project can project a yearly economic cost of \$140 per year before inflation to operate the proposed system.

The Thompson Project can expect three major streams of revenue: donations, fundraising, and grants. The proposed system will greatly support all three streams for increased revenue.

Online giving made up 13% of small non-profit's total revenue in 2020, according to the Blackbaud Institute's Charitable Giving Report (institute.blackbaud.com/charitable-giving-report/). The website will showcase the Thompson Project's work to potential donors, both individual and organizational. With a form allowing for immediate monetary donations, we will capitalize on spur-of-the-moment giving by individuals, as well as make donating money as easy as possible for those interested organizations. According to data collected by the group Nonprofits Source, non-profit organizations raised \$1.13 for each website visitor in 2017 (nonprofitssource.com/online-giving-statistics/online-fundraising/). The Blackbaud report states that online giving for non-profits grew 32% in the three years before 2020, increasing this amount to \$1.49 per website visitor.

Assuming 450 website visitors per month for five years, the Project can anticipate online donations of \$6000 per year. If a conservative outlook is taken, assuming 100 website visitors but also assuming linear growth, the Project can anticipate \$2000 in year 1 and \$3500 in year 5. Assuming the outcome is between the two at 225 visitors a

The Thompson Project	Version: 2.0
Iteration 2	Date: 2/22/2022
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month and linear growth for five years, the Project can anticipate \$4000 in year 1 and \$6000 in year 5. This is an increase from current online donations totaling \$0.

Fundraisers for the Thompson Project can utilize their website presence as evidence for the quality of their outreach. Give For Good Louisville, a yearly community-wide fundraising day, shows us the earning potential of similar non-profit organizations through fundraising events. Freedom 101, providing education outreach for incarcerated individuals, raised \$450 with four donors. Mission Behind Bars and Beyond, providing support for transition out of incarceration, raised \$1765 with 26 donors. Freed From Within, also offering transition services, raised \$3640 with 13 donors.

Using these numbers as a baseline and considering the size and infancy of the Project, we can anticipate \$2000 in year 1 from fundraising activities. If a conservative outlook is taken while assuming linear growth, the Project can anticipate \$1000 in year 1 and \$2000 in year 5. This is an increase from current online donations totaling \$0.

Grants will be a major source of revenue for the Thompson Project. The proposed system will provide a strong web presence to highlight the Project's work, and the data collected in the database will be persuasive evidence to grant-giving organizations that the Project is worthy of support. According to GrantStation's 2021 report on Grantseeking: out of organizations surveyed that submitted between three to five grant applications, 91% were awarded at least one grant, and 70% received two to five grants (grantstation.com/sites/default/files/2021-05/The_2021_State_of_Grantseeking_Report.pdf).

Given the current size of the Thompson Project and its activities, and that grants typically require projected costs of planned activities, the Thompson Project should focus on small grant requests of about \$4000. If we assume the Project is awarded two of five grant applications submitted for \$4000 each, the Project can expect \$8000 in grants per year. If a conservative outlook is taken, assuming two accepted grant proposals of \$1000 each but also assuming linear growth, the Project can anticipate \$2000 in year 1 and \$6000 in year 5. Assuming the outcome is between the two at two accepted grant proposals of \$2000 each and linear growth for five years, the Project can anticipate \$4000 in year 1 and \$8000 in year 5. This is an increase from current online donations totaling \$0.

Benefit Stream	Year 1 Revenue	Year 5 Revenue
Donations	4000	6000
Fundraising	1000	2000
Grants	4000	8000
Totals	<u>\$9,000</u>	<u>\$16,000</u>

○ **A.4 Net Present Value**

Net Present Value calculations were performed on the revenue totals for each benefit stream identified in A.3. Additionally, initial development costs were calculated for year 0 as well as annual operating costs for years 1 through 5. The proposed system has a NPV of \$14,822, resulting in a total Return on Investment of 124.51% and a breakeven point of three years. See Table 1 for Net Present Value calculation.

The Thompson Project	Version: 2.0
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Table 1: Net Present Value Calculation

Net Present Value for Proposed System Compiled by Squirrel Systems for The Thompson Project								
Cost of Capital	Year 0	7%	1	2	3	4	5	Total
Benefits (Revenue)								
-Donations	4,000	4,815	5,725	6,738	7,865			
-Fundraisers	1,000	1,070	1,717	1,838	2,622			
-Grants	4,000	5,350	6,869	8,575	10,486			
Total of Benefits	9,000	11,235	14,311	17,151	20,973			72,670
Developmental Costs								
-Project Manager (per hour)			35					
-Developer (per hour)			45					
-DB Admin (per hour)			48					
-Systems Analyst x2 (per hour)			82					
-Labor Total (10h per week per position for 15 weeks)			31,523					
-CMS (WordPress)			0					
-Database Software (MariaDB)			0					
-Cloud Hosting (BlueHost)			30					
-Domain Registration			10					
Total Dev. Costs			31,563					
Annual Operating Costs								
-CMS			0	0	0	0	0	0
-Database Software			0	0	0	0	0	0
-Cloud Hosting			30	32	34	37	39	39
-Domain Registration			10	11	11	12	13	13
-Maintenance			100	107	114	123	131	131
Total Annual Op. Costs			140	150	160	172	184	184
Total Annual Costs			31,703	22,852	11,778	2,705	184	32,368
Net Annual Revenue			(22,703)	(11,617)	2,534	14,445	20,789	
Net Present Value								\$ 14,822
Return of Investment Break Even Point								124.51% Year 3