1. Introduction

- Societal Problem
  - Lack of a modern means of communication
  - Complicated communication and coordination process
  - Wasted time due to outdated forms of communication
  - Lack of notifications/reminders
  - Lack of digital, automated forms of interaction with families, RSF staff, volunteers, and hospital staff

- Describe Customer
  - RSF Staff
  - RSF Volunteers
  - Families
  - Hospital Staff

- Needed Solution Characteristics
  - Mobile solution
  - Availability on both iOS and Android
  - User friendly
  - Increased communication
  - Increased coordination
  - Integration with NeonCRM
  - Collaborative approach for all involved parties
  - User-fillable forms and waivers
  - Push notifications based on user type

- Introduce “RocStar” as Solution
  - Removes tedious physical labor
  - Intuitive, relevant notifications
  - Helpful for multiple types of users
2. RocStar Product Description

- **Summary**
  - Provide waivers, forms, checklists, and documents for relevant parties
  - Convenience
  - Intuitive and easy to use
  - Available for iOS and Android
  - Pre-loaded on RSF’s distributed Android-based tablets
  - Integration with NeonCRM
  - Promote communication between RSF staff, families, hospital staff, and volunteers
  - Save time by eliminating outdated communication methods—e.g., fax

- **Goals**
  - Relevant, real-time data
  - Improve communication
  - Improve coordination
  - Provide support for families with children suffering from cancer
  - Ensure families are able to get Ready Bags as soon as their child is diagnosed
  - Allow for real-time checklists for build projects
  - Allow sign-ups for volunteers to work on build projects
  - Integrate with NeonCRM to reduce the response time of RSF

- **Objectives**
  - Increase the reach of RSF as an organization
  - Provide more convenience for families suffering
  - Improve ease of access for RSF volunteers

2.1 Major Components (Hardware/Software)

- **Hardware**
  - SQL database server
  - Web Server
  - iOS and Android wrapper applications

- **Software**
  - Linux
  - Apache
  - MySQL
  - PHP
  - Swift program
  - JavaScript program
3. Identification of Case Study

- Description of issue
  - Effects on RSF productivity
  - Effects on Volunteer productivity
  - Current solutions
    - VolunteerMark
    - GiveGab
    - YourVolunteers
- Problem evidence
  - Cited Problems
    - Lack of communication
    - Lack of coordination
    - Lack of online, integrated solution
    - Lack of integration with NeonCRM
- Prospective Users
  - RSF Staff
  - RSF Volunteers
  - Hospital Staff
  - Families

4. RocStar Product Prototype Description

- Proof of Concept
  - RSF Staff
    - Provide family waivers
    - Provide volunteer forms
    - Provide Ready Bag applications
  - RSF Volunteers
    - Provide build project checklists
    - Complete volunteer waivers
  - Hospital Staff
    - Family referrals
    - ReadyBag distribution
  - Families
    - Complete family waivers
    - Receive Ready Bags
    - Receive tablets with pre-loaded RocStar application
    - Communicate with RSF Staff
    - Communicate with other families
    - Access RSF online store
    - Play games
● Risk Mitigation
  ○ Agile development
  ○ Rapid prototyping with user input
  ○ Ensure user security
  ○ Ensure restricted levels of access
  ○ Ensure user permissions are enforced
  ○ Ensure compatibility with iOS and Android

● Simulation
  ○ Use of multiple devices to view RocStar during simulation
    ■ RSF Staff account
    ■ RSF Volunteer account
    ■ RSF Volunteer Coordinator Account
    ■ Hospital Staff account
    ■ Family account
    ■ Tester account
    ■ Outside user account
  ○ Can be simulated remotely and on-site

4.1 Prototype Architecture
● Prototype MFCD breakdown
● Hardware
  ○ CS Virtual Machine
● Software
  ○ Apache2 Server
  ○ MySQL Database
    ■ Simulated RSF information
  ○ PHP 7.0
  ○ Swift
  ○ JavaScript

4.2 Prototype Features and Capabilities
● Features
  ○ Customizable notifications
  ○ Build project creation
  ○ Family referral
  ○ Integration with NeonCRM
  ○ Volunteer checklists
  ○ Multiple user account permissions
  ○ Push notifications
  ○ Account creation
  ○ Update profile information
● Capabilities
○ NeonCRM integration
○ Database for storing user information
○ Event calendar

4.3 Prototype Development Challenges

● Integration with NeonCRM
● iOS development skill deficiencies
● Android development skill deficiencies
● Web application security
● Testing
● Deployment
Glossary

- NeonCRM: Roc Solid’s customer relationship management software
- PHP: Server scripting language
- Swift: iOS development language
- JavaScript: Android development language
- MySQL: Relational database management system
- Apache2: Web server
- RSF: Roc Solid Foundation