Test Plan Document

For

No Kill Louisville

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Test Plan

# Introduction

The purpose of this document is to lay out the plan for testing the website and database that we are implementing for the No Kill Louisville organization. The No Kill Louisville food bank requires greater functionality than their current website service offers, specifically the ability to manage customer and donation data in one location rather than using multiple services. The new website we are building will allow the food bank customers to register, submit documentation, and schedule appointments online. The No Kill administrators and volunteers will be able to access customer information that is stored in the database, manage customer appointments, and record outgoing donations. The new system will also include a customer mobile check-in system which will send check-in information to a tablet located inside the distribution center. The tests that we plan to implement will focus on ensuring ease of use for the client and their customers, cross-browser and cross-device performance of the website, dependable navigation tools, and expected functionality of the website and database.

# Business Background

No Kill Louisville is a non-profit organization that was founded in 2010 by a group of volunteers. The Louisville Metro Animal Services shelter had been the victim of flooding the previous summer and many volunteers were needed to provide temporary foster homes for the animals which were evacuated. This brought to light the need for a long-term solution for homeless animals in the area. No Kill Louisville was started as an alternative to the traditional shelter model wherein many animals were killed due to lack of available shelter space. The “no kill” model is based on providing resources for foster homes and under-privileged pet owners to keep animals off the streets and out of shelters. An important resource to support the no kill model is the pet food bank, which provides monthly donations to pet families in need. As a non-profit organization, the pet food bank is required to carefully document all outgoing donations for tax records and in order to write grant requests.

# Test Objectives

A lot of our testing will focus on the user experience, both as a customer of the food bank and as an administrator. We will need to test whether the site works on all the most common web browsers, mobile devices, and tablets. We will need to test all links to ensure that they lead where expected. All forms will need to be tested for the correct fields and values available to match up with the database schema, and to test what happens when the user tries to input invalid data. We need to test all registration forms to be sure that when a prospective customer, volunteer, or adopter tries to register their information will be saved in the database and be sure that data is not saved if the registration is declined for some reason. All administrator privileges should be restricted to just a few accounts. We need to test that sensitive information is available only to those admin accounts. We will need to test that the admins can add, edit, and save customer data, including appointment scheduling. We need to test the check-in system to be sure that it will communicate with the tablet. We will need to test that events are displayed correctly on the event calendar, and that the calendar can be edited by the admins. We need to test the admin accounts to be sure that they will be able to edit the site, to ensure that upkeep can continue after we hand off the site to the volunteers.

# Scope

***Inclusions:***

* Unit testing
* Interface testing
* Security testing
* Performance testing
* Regression testing

***Exclusions:***

* Conversion testing
* Acceptance testing
* Beta testing

# Test types Identified

The functionality of the website components and the database integration will be tested. Most testing will be performed manually by the team members, though we may decide to implement automatic browser testing if it is deemed to be more efficient.

# Problems Perceived

A problem that could come up during testing would be neglecting to re-test after making changes. There are many small elements that comprise the complete website and making a change to one could result in errors being introduced. If the team commits to taking the time to test after each change, we will be more likely to create a stable product.

# Architecture

Each page of the website can be broken down into components which can be tested individually. Once the elements of each page have been tested, we can shift the focus of our testing to the functionality of the database. Testing can then continue with the check-in system. Regression testing will continue throughout the implementation process, until we have a deliverable product that meets the stated specifications of the client.

# Environment

Since much of our testing will focus on usability, most manual or automated testing will take place in the browser. We will need to conduct tests in several different browsers, as well as Android and iOS mobile devices. If automated testing is deemed necessary, we may make use of the Selenium IDE to write test scripts for the website.

# Assumptions

Our assumption is that testing will continue throughout development of the product and that each component will be thoroughly tested. We assume that any problems encountered during testing will be resolvable before date of delivery.

# Functionality

***Risk Identified & Mitigation Planned***

There is a risk that once our development process is complete and the team transfers ownership of the site to No Kill, the volunteers may not be able to properly maintain the functionality of the site. Our mitigation plan for this possibility is using WordPress to develop the site for the organization. Because we have secured hosting and developed using WordPress, No Kill will have access to online support if the volunteers are unable to perform regular upkeep on their own.

***Test Strategy***

Functionality is of utmost importance. We will thoroughly test each aspect of the site, with special focus given to the functionality of the client’s requested features. This means we will test the database functions, check-in, and registrations often between now and the day we deliver the product.

***Deliverables***

* Provides information to customers of the food bank
* Enables customers, volunteers, and adopters to register and submit applications
* Stores customer, volunteer, and adopter information
* Enables customers to check-in on their mobile device
* Enables volunteers to add, edit, and save customer data

# Security

***Risk Identified & Mitigation Planned***

In order to confirm a customer’s eligibility for assistance, No Kill requires customers to submit proof of income. This includes some of the most sensitive data and makes our site’s security highly important. The core WordPress software that is the basis of our site includes built-in security measures which are updated automatically. In addition, we are using a security plug-in that provides a Web Application Firewall and additional login security.

***Test Strategy***

We will be able to test the security of our system by utilizing the tools provided by WordPress for system scanning. This will alert us to any vulnerabilities that may be present in our site as we continue in development.

***Deliverables***

* Secure login
* No data leaks
* Regular automatic security updates

# Performance

***Risk Identified & Mitigation Planned***

The risk would be that the site is not responsive or too slow. All users expect websites to respond within milliseconds to their commands. In order for users to feel that the site is meeting their needs, the site must perform as expected. To mitigate the risk, we will need to use performance checks provided by WordPress to ensure that the site is not getting bogged down and remains fast and responsive.

***Test Strategy***

The test strategy to avoid performance problems is to run a check each week from now until the delivery date to ensure that any changes do not negatively affect the site’s speed or responsiveness.

***Deliverables***

* Fast, responsive site
* Pages that load quickly

# Usability

***Risk Identified & Mitigation Planned***

There is a risk with a new website that users may have problems adjusting to the changes and may not return to a site that is difficult to use. We want to ensure that the customers of the food bank will be comfortable using our site. We need to make the site as user-friendly as possible. To mitigate the risk, we will make every effort to keep the site interface simple and self-explanatory.

***Test Strategy***

In order to test usability, we will frequently manually test the site from the user’s perspective. We can also ask friends and family to use the site so that we can get fresh perspectives on how convenient the interface is for new users.

***Deliverables***

* An easy-to-use interface
* Clear and concise menu
* Good use of white space, uncluttered UI

***Compatibility***

***Risk Identified & Mitigation Planned***

The risk is that our site may not be compatible with all web browsers and mobile devices. The mitigation plan for this risk is to test on as many browsers and mobile devices as we can.

***Test Strategy***

The test strategy is to use the site on as many browsers and mobile devices as we have available to us. We expect that the most common browsers will be tested.

***Deliverables***

* A site that is compatible with most popular web browsers
* A site that is usable on most mobile devices and tablets

# Test Team Organization

The testing team will consist of all team members. Amanda, Jeff, and Jon will each contribute to testing each aspect of the project.

# Schedule

We expect to have core implementation complete in the coming weeks. Initial testing has already begun, but we should be ramping up and testing more functionality over the next two months.

# Defects Classification Mechanism

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Type of Defects | Functionality | Performance | Security | Usability | Compatibility |
| Critical | Data is not saved in database | Website will not load | Sensitive information is leaked | Menu items lead to dead links | Site is not usable on most browsers or mobile devices |
| Major | Check-ins are not sent to tablet | Logins time out | Users can access site admin controls | Links lead to incorrect pages | Site is not usable on mobile |
| Minor | Event calendar can’t be updated | Images load slowly | Users can register with a weak password | Colors of text and background make pages hard to read | Some features are not usable on mobile, but the site’s main functions work |
| Cosmetics | Uploaded images do not display properly | Switching to a new page takes an extra second | Users are allowed to keep the same password indefinitely | Pages are cluttered with too much text | Some images or text look odd in a mobile browser |

***Defects Logging and Status Changing Mechanism***

Error logging and status changes will be detected by an automatic mechanism managed in WordPress.

***Turn Around Time for defect fixes***

During the development process, we expect to be able to fix defects within a few days. After we hand off the finished product upkeep will primarily depend on the automatic updates and error fixes built into WordPress.

# Configuration Management

We plan to maintain consistency in our product by making incremental changes and testing rigorously whenever any new features are added.

# Release Criteria

Before release, we will ensure that all major components have been thoroughly tested. All requirements from the client will be met. We intend to train the client in the use of the new system so they can pass on the knowledge to all the volunteers and their customers.