**Hagley Museum and Library Fireworks Event System**

**Transition Plan**

**Team 3**

# Revision History

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| --- | --- | --- | --- |
| Date | Version | Author(s) | Notes |
| 04/17/2025 | 1.0 | Team 3: Andrew Rothwell, Palmer Johnson, Charles Norris, Sarah Smith, Alyssa Vasilica | Initial version |

# Introduction

Transition is an essential part of the project planning process. A Transition Plan is a comprehensive list of objectives, assignments, and itineraries needed to fulfill the delivery of a project solution. This document outlines the transition plan for the Hagley Museum and Library Fireworks Event System, which includes a ticket management system,   
offline ticket validation, and management dashboard for the Annual Fireworks event.

## Purpose

The purpose of the Hagley Museum and Library Fireworks Event System Transition Plan is to identify the constraints, dependencies, roles, and tasks involved in transition planning, implementation, and transition to operations. This plan will guide the deployment, installation, and transition of the system into Hagley Museum and Library's operations,   
ensuring a smooth handover from the development team to the operational staff.

## Constraints and Dependencies

The assumptions, constraints, and dependencies identified as potential impacts to the project are:

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| Type (Assumption, Constraint or Dependency) | Description |
| Constraint: System Resources | The system must operate within the limitations of the AWS virtual machine with either S3 Bucket Storage EC2 Compute or VPC Instances. |
| Dependency: SSH Key Distribution | The system requires SSH keys to be properly distributed and configured for secure database access. |
| Assumption: Staff Technical Capability | Staff members will have basic technical skills to operate the ticket validation system after training. |

# Transition Planning

## Roles and Responsibilities for Planning and Transition

The following personnel will be members of the transition planning team with the listed roles and responsibilities.

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| Name/Title | Role | Implementation Planning Responsibility |
| Alyssa Vasilica | Project Lead | Oversee technical implementation, server configuration, and system integration |
| Palmer Johnson | Quality/Test Manager | Coordinate transition activities, manage timeline, and ensure deliverables are met |
| Charles Norris | Data Manager | Configure API environnement, deploy applications, and establish quantitative measures. |
| Sarah Smith | Database Administrator | Set up database schema, implement stored procedures, and ensure data integrity |
| Andrew Rothwell | Training Coordinator | Develop training materials, conduct training sessions, and document user procedures |

## Business Planning

The following business processes will be impacted by the transition and that impact will be addressed as follows:

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| Business Process | How Addressed |
| Ticket Data Entry | Transition from spreadsheet-based data entry to the new CSV Uploader tool. Staff will be trained on the new process, and parallel operation will be maintained during initial transition. |
| Ticket Validation at Event | Replace manual ticket checking with the WillCall application. Staff will receive hands-on training with the application before the event. |
| Management Reporting | Transition from manual reports to automated dashboard. Management will be trained on accessing and interpreting dashboard data. |

## Training Documentation

Training will be provided to the following groups:  
  
1. Ticket Office Staff: Training on the CSVUploader tool for importing ticket data  
2. Will Call Staff: Training on the WillCall application for ticket validation  
3. Dashboard: Training on accessing and using the dashboard for reporting  
4. IT Support Staff: Technical training on system maintenance and troubleshooting  
  
Training will be conducted in the following formats:  
- Hands-on workshops for each user group  
- Written documentation and user guides  
- Follow-up support sessions after initial implementation

## Documentation

The following documentation will be provided to support the transition and ongoing operations:  
  
1. User Manuals:  
 - CSVUploader User Guide  
 - WillCall Application User Guide  
 - Dashboard User Guide  
  
2. Technical Documentation:  
 - System Architecture Overview  
 - Database Schema Documentation  
 - Server Configuration Guide  
 - Backup and Recovery Procedures  
  
3. Standard Operating Procedures (SOPs):  
 - Ticket Data Import Process  
 - Event Day Ticket Validation Process  
 - Troubleshooting Common Issues  
 - Data Backup and Security Protocols

## Hardware, Software, Equipment

The following hardware, software, and equipment are required to support the system:  
  
1. Server Infrastructure:  
 - Digital Ocean virtual machine with Ubuntu 24.04.1  
 - 24.05G storage capacity  
 - x86-64 architecture  
 - LAMP stack (Linux, Apache, MySQL, PHP)  
  
2. Client Hardware:  
 - Desktop/laptop computers for ticket office staff  
 - Laptop computer for Will Call station  
  
3. Software Requirements:  
 - Python 3.x with required libraries (pymysql, sshtunnel, tkinter)  
 - MySQL database  
 - SSH key management system  
 - Web browser for dashboard access  
  
4. Network Requirements:  
 - Internet connectivity for server access  
 - Local network for event day operations

## System/Solution Integration

The system consists of the following integrated components:  
  
1. MySQL Database: Central repository for all ticket data  
 - Integrates with CSVUploader for data import  
 - Provides data for WillCall application  
 - Supplies data to dashboard through stored procedures  
  
2. CSVUploader Application: Tool for importing ticket data  
 - Connects to MySQL database via SSH tunnel  
 - Processes CSV files from ticket sales system  
  
3. WillCall Application: Tool for ticket validation  
 - Retrieves data from MySQL database  
 - Creates local copy for offline operation  
 - Validates tickets based on order number and date

4. Dashboard: Web interface for management reporting  
 - Displays aggregated data from stored procedures  
 - Provides real-time visibility into ticket sales and usage  
  
Integration is achieved through secure database connections, standardized data formats, and consistent business logic across components.

## Commercial Software & Customization

The Solutions based around the CSV Parser doesn’t include any form of commercial software manipulation, these solutions are built around Open-Source Software which are freely available and easily maintained due to their large adoption. However, our API based solution which was scrapped by the sponsor involved the manipulation of the Blackbaud SKY API, and due to the lack of testing, we are not able to derive clear limitations on the software operability except from the Request/sec limits which was set to 10000 req due to their usage of the FASTAPI infrastructure.

## Transition Milestones

The following milestones will be monitored, measured, and will indicate a successful solution transition:

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| --- | --- |
| # | Milestone |
| 1 | Server environment setup and database configuration completed |
| 2 | Applications deployed and tested in sandbox environment |
| 3 | Staff training completed and competency verified |
| 4 | Data migration from existing systems completed and validated |
| 5 | System goes live and successfully processes ticket data for event |

## Transition Communications

Communication during the transition period will follow these guidelines:  
  
1. Stakeholder Communication:  
 - Weekly status updates to Hagley Museum management  
 - Bi-weekly team meetings to review progress and address issues  
 - Email notifications for major milestones and changes  
  
2. End User Communication:  
 - Training session announcements with clear schedules  
 - System change notifications with impact assessments  
 - Quick reference guides for new procedures  
  
3. Support Communication:  
 - Clear escalation paths for issues during transition  
 - Help desk contact information distributed to all users  
 - Feedback mechanism for reporting problems and suggestions  
  
All communications will be documented and tracked to ensure complete coverage of stakeholders.

## Contact List

Alyssa Vasilica - [avasilic@gmu.edu](mailto:avasilic@gmu.edu)

Charles Norris – [cnorris7@gmu.edu](mailto:cnorris7@gmu.edu)

* AWS Technical Support

https://console.aws.amazon.com/support/home#/case/create?issueType=technical

## Maintenance Documentation

1. Reviewing Open Issues

Regularly check for issues reported by event manager

Prioritize Bugs and Issues impacting Data consistency and Operability

1. Code Cleanup

Review the version of external libraries included in the project.

For the website: ‘NPM Update’

For the CSV Parser, WillCall Software: ‘PIP LIST –OUTDATED, PIP INSTALL –UPGRADE’

1. Documentation Updates

Add comments to the existing documentation where necessary changes are required to improve the maintainability

1. System Updates

Keep the underlying server up to date, including Hosting Platform.

Use the following code for Linux Based environments

‘SUDO APT UPDATE && SUDO APT UPGRADE -Y’

## Contingency Plans

The following contingency plans have been developed to address potential issues:  
  
1. System Failure Contingency:  
 - Plan: Restore from latest backup, deploy to alternate server if necessary  
  
2. Data Loss Contingency:  
 - Plan: Restore from backup, reconcile with source systems if needed  
  
3. Network Connectivity Failure  
 - Plan: Switch to offline operation mode, synchronize when connectivity restored  
  
4. Staff Unavailability:  
 - Plan: Cross-trained backup staff will be assigned to critical roles

# Transition

## Roles and Responsibilities for Operations

The following personnel are the post-transition operations team with the listed roles and responsibilities.

|  |  |  |
| --- | --- | --- |
| Name/Title | Role | Implementation Responsibility |
| IT Manager | System Owner | Overall responsibility for system operation and maintenance |
| Database Administrator | Database Management | Maintain database, perform backups, and ensure data integrity |
| System Administrator | System Maintenance | Server maintenance, security updates, and system monitoring |
| Ticket Office Manager | Business Process Owner | Oversee ticket data entry and management processes |
| Event Manager | Will Call Operations | Manage ticket validation process during events |

## Source Code Links

As part of our solution delivery plan, the solution source code has already been installed, and tested in the sponsor’s working environment, this include having the source code in the local machine of the stakeholder responsive for both the event team and the general IT manager. Additionally, we’ve added two other ways to access the source code. The first one consists of accessing the Administrator panel in the website database solution already hosted on their servers, and the second one consists of accessing a GitHub repository, that contains all the source code files, and as of April 21st the ownership of this repository will be transferred to the stakeholder responsible for the project management and maintenance.

Website Link to the Admin Portal: <https://fireworks.ecosmartresearch.com/>

GitHub Repository Link: <https://github.com/Charlesnorris509/Hagley-Fireworks>

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## Product Installation

The product installation phase can have two separate avenues, on one hand the sponsor can install the source code on their local machine by going to the dashboard page link, login with the admin credentials and download the source code as zip file that they would later extract and use on their local machines. This method would require them to start a MySQL Server on their local machine and the instructions on this procedure can be found on both the training documentation and on the GitHub repository. The Second installation vector, this more suited for situation where the admins would migrate from one hosting service to another would include cloning the source code from the GitHub repository, Pasting or moving these files to the server, as well as keeping a copy of the repository on their local computer. For additional information and Code snippet instructions refer to the GitHub repository:

<https://github.com/Charlesnorris509/Hagley-Fireworks>

## Transitional Operations

During the transition period, the following operational considerations will be implemented:  
  
1. Help Desk Support:  
 - Extended help desk hours during the first two weeks of implementation  
 - On-site technical support during the first event after implementation  
 - Dedicated email and phone line for urgent issues  
  
2. Parallel Operations:  
 - The existing spreadsheet-based system will be maintained in parallel for the first event  
 - Both systems will be reconciled to ensure data consistency  
 - Decision point after first event to discontinue parallel operations  
  
3. Enhanced Monitoring:  
 - Increased frequency of system health checks during transition  
 - Performance monitoring to identify potential bottlenecks  
 - User activity tracking to identify training needs  
  
4. Feedback Collection:  
 - Regular user surveys during transition period  
 - Debriefing sessions after key operational milestones  
 - Continuous improvement process for addressing feedback  
  
The transitional operations period is expected to last for approximately 30 days or through the first major event, whichever is longer.

# Approvals – Sign Off Page

The following section acknowledges the sponsor reviewal on the Transition Plan and agrees with the approach it presents. Changes to this Transition Plan will be coordinated with and approved by the undersigned or their designated representatives.

|  |  |  |
| --- | --- | --- |
| Name | Title | Date |
| Business Sponsor | Hagley Museum Director |  |
| Professor Therrien | IT Capstone Liaison Manager |  |

# Citations and Resources

* EcoSmart Research. (2025). Fireworks ticketing system. <https://fireworks.ecosmartresearch.com/>
* Hagley-Fireworks (2025) GitHub Repository.

<https://github.com/Charlesnorris509/Hagley-Fireworks>

* Smith, S. (2024). Team 3, Assignment 9, Sarah Smith.ppt (PowerPoint).
* Vasilica, A., Johnson, P., Norris, C., Smith, S., & Rothwell, A. (2024). Team 3, Final Presentation 1.ppt. (PowerPoint)
* Rothwell, A., Johnson, P., Norris, C., Smith, S., Vasilica, A. (2025, February 15). Team 3 Final Presentation1.
* Smith, S. (2025, February 23). A5, Team 3, Sarah Smith.
* Team 3. (2025, January). *Assignment 1, Team 3, Vasilica, Rothwell, Smith, Norris, Johnson.*
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