Healthy Body Wellness Center

Business Requirements Document

Healthy Body Wellness Center/Initiative

March 2023

Version X.XX

*Company Information*

# Document Revisions *(Not required for performance assessment)*

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| --- | --- | --- |
| **Date** | **Version Number** | **Document Changes** |
| 05/02/20xx | 0.1 | Initial Draft |
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# Approvals *(Not required for performance assessment)*

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| --- | --- | --- | --- | --- |
| **Role** | **Name** | **Title** | **Signature** | **Date** |
| Project Sponsor |  |  |  |  |
| Business Owner |  |  |  |  |
| Project Manager |  |  |  |  |
| System Architect |  |  |  |  |
| Development Lead |  |  |  |  |
| User Experience Lead |  |  |  |  |
| Quality Lead |  |  |  |  |
| Content Lead |  |  |  |  |

# Introduction

## Project Summary

### Objectives

The Health Body Wellness Center (HBWC) is an organization aims to assist patients in taking responsibility of their overall wellbeing and to educate local community members in the practice of wellness. Their overall mission is to promote improvements in the effective utilization of medical grants to help research and promote health and wellness. HBWC’s Office of Grants Giveaway (OGG) is responsible for accepting and dispersing applications for financial assistance, with the majority of grants disbursed to small hospitals. HBWC utilizes the Small Hospital Grant Tracking System (SHGTS) as the primary application used to manage this grant funding data. In order to meet federal security regulations and remain within compliance, improve services to partner organizations, and modernize the department’s current infrastructure the organization has contracted Endothon Security Consulting to conduct a security assessment report (SAR) to assess the OGG’s security posture, infrastructure, and business processes (Coleman & MacLeod, 2023).

### Background

HBWC’s current LAN administrator and security manager is set to retire next month, and as the replacement Network Security Manager I am requesting a current security assessment report of the company. The SAR will focus on a detailed analysis of the company’s infrastructure and will focus on:

* Identifying which hardware and software elements can still be utilized or no longer supported (EOSL).
* Reviewing current business, technical, security, and regulatory requirements to ensure federal compliance.
* Completion of a comprehensive network threat analysis to discuss and understand network and application security needs.
* Designing a new network to replace the current LAN that can provide adequate support for secure remote access by employees, secure ACH data transmission, secure handling of NPI and patient data according to the required industry standards and facilitate connections with external third-party networks accessing cloud-based SaaS services for the OGG.

#### Business Drivers

There are several factors contributing to HBWC’s need for the proposed changes from an onsite system to an IaaS utilizing Microsoft Azure with more modern Microsoft SQL system. Some of these factors include issues with productivity, customer satisfaction, finances, and potential negative effects on company stakeholders.

## Project Scope

The project will focus on the update/upgrade of HBWC’s SHGTS to a cloud-based operation. The project will include upgrading the Microsoft Server environment and update their database from Microsoft Access 2010 to Microsoft SQL Server utilizing the proposed Microsoft Azure cloud Infrastructure (IaaS) (Coleman & MacLeod, 2023).

### In-Scope Functionality

In-Scope functionality refers to specific features and capabilities of a a software system that have been agreed upon and/or considered imperative for the system to meet its intended goals and requirements as defined my federal regulations and compliance. There are two main features and several secondary features that will assist in the modernization of HBWC’s network infrastructure.

The primary features of the IN-Scope Functionality:

* Establishment of a Microsoft Windows Server 2019 environment hosted by Microsoft Azure datacenter. After the upgrade HBWC will verify functionality and retire Microsoft Windows Server 2008 R2 application server.
* Migrating MS Access 2010 to Microsoft SQL system, and once functionality has been verified, HBWC will retire, MS Access 2020. Configuration of Microsoft SQL server from Microsoft Azure is required.

The secondary features that should be addressed within the In-Scope Functionality are:

* The HBWC’s IT Department must create a remote environment via a VPN for users requiring remote access to the SHGTS.
* Migration and configuration of QuickBooks database for employee payroll for new location on the MS Windows 2019 server.
* Creation of security polies to secure remote environment that include, but are not limited to multi-factor authentication (MFA), remote access governance, strong encryption (SSL/TLS), etc.
* A new disaster recovery plan created by HBWC’s IT Department and managed by Microsoft (e.g., Azure Backup). HBWC’s new network infrastructure will be cloud-based site security and DRP will be responsibility of the Microsoft datacenter.

### Out-of-Scope Functionality

Out-of-Scope functionality refers to features or capabilities beyond the intended and/or agreed-upon scope of a project or system (or presumably out-of-budget). The SAR performed by Endothon Security Consulting references several areas where HBWC and their OGG need improvement. Some of the areas include a more ACH transaction process for grant distribution, improvements in the payroll process, and mainly LAN changes. Although, the above out-of-scope functionalities will not be addressed in this project, it is recommended to revisit them when considering the complete modernization of those systems and processes.

## System Perspective

In this specific project we are inclined to face potential hurdles. This” Cloud-lift procedure” and migration can be challenging when making the several upgrades noted per the documentation.

**Potential Impediments:**

Budgetary Issues: If the project receives full backing from HBWC’s Board of Directors there should be no foreseen budgetary issues. If the IT department/Development Team run into any issues during or post-system migration, it may be required to contract Microsoft or other third-party vendor. This may concur additional costs.

Employee Training: The modernization of our system and its efficiency requires that all users undergo training for proper usage of the new system This requirement may cause a significant delay in completion of the project or may accelerate the project, this is contingent on the familiarity and experience users may have.

### Assumptions

Once this project has been completed, it is safe to assume the following:

* A modernized system
* Reducing the need for in-house hardware and infrastructure, therefore significantly decreasing maintenance costs by moving system to the cloud.
* More secured server environment once upgraded to Microsoft Windows 2019 Server (Windows Server 2008 associated with EOSL).

### Constraints

With full support of the HBWC’s Board of Directors and Information Technology Department I do not foresee any constraints that could affect the implementation of a cloud-based server.

### Risks

Risk should be minimal, but the following should be considered/monitored:

* There may be a compatibility issue with the migration of the current database to a modernized SQL environment, due to the 10-year divergence between the current server and database environment compared to the proposed environment.

### Issues

Please refer to SAR Table 4.1 “Security Assessment Results” for a list of system issues/weaknesses and their corresponding IDs. Below are some of the outlined issues/weaknesses:

1. PIC-01: No policy for patch management.
2. PICA-01: Improper system access for users.
3. P-Crypt-01: No cryptographic controls or systems in place.
4. EDNS-01: DNS not secure.
5. EDC-03: Environmental controls are not tracked or monitored.

# Business Process Overview

Small hospitals in the US request grant money through HBWC’s SHGTS, which is located at the Healthy Body Wellness Center and distributed by the Office of Grants Giveaways. The Executive Staff of the Healthy Body Wellness Center decides whether to approve or deny grant applications, using information from the NHI as a basis for their decision. Approved grants are paid out by ACH via check and must be used by the recipient organization within 30 days. If a portion of the grant remains unused after this period, it is returned to the SHGTS. Leftover funds are added back to HBWC’s grant funding and given to the next approved hospital applicant.

## Current Business Process (As-Is)

Currently, SHGTS is a single user system meaning that only one user (employee, small hospital applicants, partners, stakeholders, etc.) can access the system at a time. This delays the grant approval process; applicants can be locked out of the SHGTS if another applicant is utilizing the system. Thus, this inconveniences the executive OGG staff’s ability to schedule reviews and approvals of applications. See below flow chart for the proposed (more efficient) business process (Coleman & MacLeod, 2023):

Currently, HBWC’s payroll is managed on premise utilizing QuickBooks with disbursements via ACH (paper checks) like grant application disbursements. Payday checks must be picked up by employees in person from the office manager or sent via mail. Direct deposit has yet to be implemented. The current employee payroll and benefits management process lacks certain secure channels in its processing and disbursement (on-hand storage in payroll office).

**Current Business Process (As-Is)**

1. Grant Tracking System
2. Grant application is submitted my applicant/hospital to SHGTS database (database locked).
3. NIH conducts reconnaissance; research evaluation, etc. of application (database locked).
4. NIH transmits application data to SHGTS (database locked).
5. Executive Staff Reviews application and approves application.
6. Grant application status is updated to “approved.”
7. Accounting Department disburses funds via ACH check (database locked).
8. Hospital/applicant receives grant money.
9. 30 days later unused grant funds are returned to SHGTS, and Accounting Department receives unused funds (database locked).

Diagram

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1. Payroll System
2. Employee is hired and HR enters employee’s PII and employee benefits into QuickBooks.
3. QuickBooks records and monitors employee hours, and hours approved by manager.
4. Hours reviewed/verified by Payroll Department and check is disbursed via ACH.
5. Employee picks up check in person from office manager on designated payday.

Timeline

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**Proposed Business Process (To-Be)**

1. Grant Tracking System
2. Grant application is submitted my applicant/hospital to SHGTS database (database unlocked).
3. NIH conducts reconnaissance; research evaluation, etc. of application (application happens concurrently with NIH transmission).
4. NIH transmits application data to SHGTS (database unlocked).
5. Executive Staff Reviews application and approves application.
6. Grant application status is updated to “approved.”
7. Accounting Department receives approval and disburses funds via ACH check (database unlocked).
8. Hospital/applicant receives grant money.
9. 30 days later unused grant funds are returned to SHGTS, Accounting Department receives unused funds (database unlocked).

Diagram

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1. Payroll System
2. Employee is hired and HR enters employee’s PII and employee benefits into Workday.
3. Workday records and monitors employee hours, and hours approved by manager.
4. Hours reviewed/verified by Payroll Department and check is disbursed via direct deposit.
5. Employee receives direct deposit in bank account on designated pay day.

Diagram

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# Business Requirements

The requirements in this document are prioritized as follows:

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| **Value** | **Rating** | **Description** |
| 1 | Critical | This requirement is critical to the success of the project. The project will not be possible without this requirement. |
| 2 | High | This requirement is high priority, but the project can be implemented at a bare minimum without this requirement. |
| 3 | Medium | This requirement is somewhat important, as it provides some value, but the project can proceed without it. |
| 4 | Low | This is a low priority requirement, or a “nice to have” feature, if time and cost allow it. |
| 5 | Future | This requirement is out of scope for this project and has been included here for a possible future release. |

## Functional Requirements

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| **Req#** | **Priority** | **Description** | **Rationale** | **Use Case Reference** | **Impacted Stakeholders** |
| **General / Base Functionality** | | | | | |
| FR-G-01 | 1 | Install and Configure Microsoft Azure cloud-based data system | The IaaS access will be purchased from Microsoft. This is the backbone of the upgrade project for the SHGTS. | The purpose of this is to modernize the company’s IT infrastructure by implementing cloud-based data system. | Development teams/I.T. Department  Infrastructure engineers |
| FR-G-02 | 1 | Setup environment for the Access 2010 to Microsoft SQL migration | A requirement for this proposed project. Without the upgraded Microsoft SQL server, we cannot update the SHGTS database or support multiple concurrent sessions for our company partners. | Must be updated to allow multiple concurrent sessions within SHGTS. Without Microsoft SQL we cannot support an improved access experience and efficient application process. | Development teams/I.T. Department  OGG Executive Staff (access to all reports and controls assignment of grants) |
| FR-G-03 | 1 | Curation of a new DRP by the HBWC and designated DRP team and **Microsoft.** | Currently there are no disaster recovery controls, no effective backups/critical systems, or disaster communication plan. Because HBWC’s new server infrastructure will be cloud-based, this will be the responsibility of the Microsoft Azure datacenter. | The purpose of this requirement is necessary as there are currently no DRP controls in place. | Infrastructure engineers  **Microsoft** |
| FR-G-04 | 2 | Policies to secure the remote environment/revised access policies | Establishing system access rules; least privilege, monitoring, and logging/reporting of all activity performed in the remote environment as well as remote access governance will properly secure the remote environment. | The purpose of this is to help manage remote security, this is a secondary goal of HBWC’s security posture, and can be addressed in a future project. | Development teams/I.T. Department |
| FR-G-05 | 2 | Implementation of a more secure ACH data transmission process | Direct deposit has not been implemented, and grant money is provided by paper check through the mail or HBWC’s office manager. | Continue utilizing current ACH transfer processes, but address upgrades/modernization in a future project. Would further secure the disbursement process. | Accounting Department |
| **Security Requirements** | | | | | |
| FR-S-01 | 1 | Setup Cryptographic controls:   * Encrypt data using AES to ensure only authorized users can access the data. * Digital signatures to authenticate identity of users and verify integrity of data in all applications. | The lack of cryptographic control is impeding the growth of HBWC. Currently web servers and web-based services lack cryptographic controls; each grant is processed as a text file, and this is unsuited for the current grant process developed by the U.S. federal government and MUST be updated) (Coleman, 2023). | Prioritization of cryptographic controls is to help the ability for HBWC to compete in the block grant process from NIH (Coleman, 2023). | OGG Executive Staff  Development teams/I.T. Department |
| **Reporting Requirements** | | | | | |
| FR-R-01 | 2 | Grant view-only access to hospital applicants so they may view their own records and track the status of their grant applications. | This will provide real-time status updates to applicants about their grant applications. | This will provide a necessary level of customer satisfaction for applicants; promotes transparency, efficiency, data integrity, etc.). | Applicants |
| **Usability Requirements** | | | | | |
| FR-UR-01 | 1 | Allow Remote Access via VPN to Microsoft Azure Web Portal | Assist in allowing designated users with appropriate permissions access to our system via secured connection/tunnel. | This is to ensure that access to SHGTS is more efficient and secured. | OGG Executive Staff  Development teams/I.T. Department |
| **Audit Requirements** | | | | | |
| FR-AR-01 | 1 | Create a change management report after migration of the old database to the new database has been confirmed, and proper destruction of the retired server (e.g., degaussing). | Ensure no sensitive or confidential company data is exposed. | Assure stakeholders that no confidential or sensitive information is subject to a data breach. | Partner organizations  Development teams/I.T. Department  HBWC Board of Directors |

## Nonfunctional Requirements

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| **ID** | **Requirement** |
| NFR-01 | Update grant application processing time to coincide with new streamlined process (this processing time will be significantly shorter than previous). |
| NFR-02 | User training for new cloud-based system/ database |
| NFR-03 | IT Department/ DRP team training for backup procedures after cloud migration |
| NFR-04 | Security training for new MFA |
| NFR-05 | Disbursement of user login information to access all systems using an encryption method (HTTPS, SSL, or TLS) via a secured email service. |

# Appendices *(Not required for performance assessment)*

## List of Acronyms

*[If needed, create a list of acronyms used throughout the BRD document to aid in comprehension.]*

## Glossary of Terms

*[If needed, identify and define any terms that may be unfamiliar to readers, including terms that are unique to the organization, the technology to be employed, or the standards in use.]*

## Related Documents

*[Provide a list of documents or web pages, including links, which are referenced in the BRD.]*

**Work Cited**

*Coleman, M., & MacLeod, H. (2023). Healthy Body Wellness Center Case Study.*

*Coleman, M. (2023). Security Assessment Report for Healthy Body Wellness Center (HBWC).*