Business Requirement Specifications

1. Introduction

1.1 Business purpose

The purpose of FGCU Housing and Residence Life is to provide livable arrangements on a college campus. To provide a safe and nurturing environment for our students to live on campus as they navigate through living away from home (for the majority of our students) for the first time. The overall purpose is to provide a holistic residential experience that encompasses the continued development, support and resources for a student's academic success. Additionally, students also further develop on a social and emotional level from the community aspect of where they live.The Office of Housing and Residence Life will provide students with an exceptional residential experience. FGCU Housing is dedicated to providing housing accommodations for a community of learners in the pursuit of an academic degree. They are committed to offering a seamless transition that provides support and resources.

1.2 Business scope

The stakeholders use several different software programs throughout a typical work day that give them the ability to get their work done. For example, the use of Mercury to garner information on the occupancy management of our current residents. It is also used to charge resident for services such as "lock-outs," lost room and mailbox keys, damaged equipment and temporary swipe cards not returned. As well as, using this software when packages or mail that require further research when the mail management software "Eagle Post" doesn't provide information for a non-resident. They use "School Dude" to place maintenance work orders for their residents and the overall buildings that they oversee. Using Microsoft Suite is a daily part of the work routine albeit; Word, Excel, Outlook and Team for documents, budget spreadsheets, schedule and communicating with the staff from shift to shift. They use "S2" for the management of key card access. They also use another software program called "Ocularis" which is for the security camera systems. These software programs are to name a few. The business needs software systems to be reliable as they are the forefront of dealing with the day to day actions of the business.

1.3 Business overview

The company primarily focuses on resident to staff interaction and utilizes software programs to be able to support residents through systems like package sorting or equipment loaning. The business runs on Weekdays, Monday thru Friday, from 8 a.m. to 2 a.m. of the next day. Weekends are similarly covered, except with only one personnel instead of the usual two on duty. They take their core values as the source of their business plan. FGCU Housing is focused on delivering a student-centered business operation to support residents and give them comfort with the new living arrangements. Overall, OHRL considers itself a major stakeholder in the lives of the students that attend FGCU.

1.4 Definitions

There are many words used throughout OHRL. The consistent theme I would say is "meeting the needs of the students;" "care," "concern," "accountability," "constructive feedback," "positive feedback," "understanding," "communication," "consistency" and "confidence." As a housing specialist, I would say "expectations," "showing support," "guidance," "respectful," "building relationships," "being there for my staff," "feeling safe and comfortable in work environment," and "learning from each other."

These are the common phrases in our department at FGCU Housing, but for software related lingo, there is none that is used by my sponsor. The business is heavily focused on customer service to the residents.

1.5 Major stakeholders

There are no major stakeholders for FGCU Housing. The most noticeable things I could make out is that the university itself is the main stakeholder of the Housing and Residence Life working and providing great customer service while using the software systems with high levels of security. However, there would be stakeholders when it comes to the improvement of software systems and more often than not, it includes the IT department of FGCU Housing.

2. References

FGCU Mission Statements and Values

Dennis Reffler, IT Specialist

Regina Trabucco, Housing Specialist

3. Business management requirements

3.1 Business environment

The business environment at FGCU absolutely upholds federal and state laws. There is consistent implementation of policies, rules and regulations that we as members (student body, faculty and staff) of FGCU must uphold. There are several different departments and units within these departments which provide yet the expectation of these laws always remain the same. The consistent mission of the university is one that supports diversity and inclusion, civility and responsibility for and toward our members. As it applies to software that is used for example "Banner," we as employees of the university MUST adhere to FERPA laws, there is no negotiating this. FERPA as you know is a protective law and we as employees must take these laws very seriously as they are in place to protect you, the student and employees. When using this software, we have access to a student's complete profile which consists of personal and sensitive information such as financial aid, academic and conduct statuses. A violation of these laws are taking very seriously and there are hefty legal consequences.

3.2 Mission, goals, and objectives

Managers are tasked with upholding and supporting the mission of OHRL. There are specific rules, regulations and policies specific to Housing and Residence Life that they are to enforce, support and utilize to benefit the residents and staff. As a supervisor, they are responsible for a variety of tasks to further develop and enhance each of the staff member's professional and social skill-set. This in turn also further develops the manager's professional and social skill-sets which they believe to be an invaluable learning exchange for everyone. One of my most important daily goals is to try to make a difference to those they work or interact with even in the small ways that rules, regulations and policies do not mandate.

Housing's mission is to utilize the software at our hands to support, help, and serve the residents. Housing always wants to do better than the last semester as the University takes a look at what is going on and how well leadership and software is working.

3.3 Business model

FGCU Housing focuses on funding from the government and private entities that invest into FGCU and its students. Housing is more of a contained system than an operating business, yet, it functions as a medium between residents and the college. The vast opportunities given by the people who work for Housing allow residents to feel like they are a part of a community, and this feeling, is the end goal for Housing. Housing needs the support of the school leaders to continue to operate.

3.4 Information environment

The information environment of Housing is based on a central database system that contains the information of residents and is how Housing does all that it does. With the DB, FGCU Housing can add or delete students and with other programs connected to the DB, can add, delete, and confirm packages for students.

4. Business operational requirements

4.1 Business processes

Equipment Loaning: The business allows for equipment to be loaned out to residents so they can utilize different utilities and amenities in the building. The current system interface uses spreadsheets to hold information and sign off on students, while the primary user is the Desk Assistant who interacts with the paperwork and student to fill out the paperwork. Look at Rules-EL1 for more information on equipment loaning. (EL-01)

Package Sorting: The business offers students the ability to have their packages sent to the building where it will be processed and placed in a mail room until the resident comes to pick it up. Package manifests are handled by the managers of the business and ensure that mail has came to the building for the residents. See Rules-PS1 for more on the package sorting system. (PS-01)

Key-card System: The key-card system allows for students to swipe into their dorm halls with their ID. It is the business's responsibility to ensure the system is functioning and to allow students to enter their dorms when there is an outage. See Rules-KCS01 for more information on the key-card system. (KCS-01)

4.2 Business operational policies and rules

Package sorting can only occur when mail is received. It is the main business process that is done by the Desk Assistants. The mail is sorted alphabetically by last last name and entered into the system. The system provides various package types to be entered and multiple packages in case there is more than 1 per delivery. (Rules-PS1)

Equipment loaning and package sorting are unavailable to non-residents. Equipment loaning is necessary only when a resident has come to the front desk of the business and declared they need equipment. The procedure requires that a resident provide all necessary information to be allowed to loan the item they need. All equipment items are to be returned, and all items different times they are allowed to be rented for. (Rules-EL1)

The key-card system is a necessary part of the business. When the system is down, the doors for the dorm halls must be unlocked. In any other case, the doors remain locked and is only accessible to the residents of the building. The system is maintained by IT department of the business. Should a resident need a card to swipe into the dorm halls, there is a way to get a temporary card through equipment loaning. Under no circumstances are non-residents allowed into the dorm halls without the permission or approval of the resident themselves. Law Enforcement is allowed into dorm halls when investigating or responding to an emergency.(Rules-KCS1)

4.3 Business operational constraints

Business processes PS1 and EL1 should be completed within 1 day and no later than 1 day. PS1 is a process that can understandably take from a couple minutes to an hour, depending on the package load received. Its variable time does not effect the speed or reliability of the logging system. EL1 is a process that must be finished no later than 1 day as that is the time limit for one of the items the business uses. The data for this process is on spreadsheets and are sometimes empty due to human error.

4.4 Business operational modes

If the business is in a busy state, the system will handle the package load and the equipment loaning paperwork can be filled out at the same time as the package sorting. For cases where the key-card system is down, then a busy state would mean a decrease in security as the doors will be unlocked and open, however, the system itself is under maintenance and will not lose security. When the package sorting system is down then a manual override is necessary for the system. This process is greatly slower than the system. The manual system is made to be able to act just like the online system however its speed is directly correlated to the end-user's ability to process the mail. The equipment loaning system is unaffected by an outage.

4.5 Business operational quality

PS-01 requires the upmost urgency as it is one of the main pivot points of Desk Operations and at the center of the package retrieval. The manual operational mode is made to handle this priority in case of an outage. This process must also be highly reliable as the business is liable to any and all packages that are confirmed to be received.

EL-01 requires that the operation be reliable, as there is only a set amount of equipment each building of the business has. Tractability of the data and usage of certain equipment is imperative for the success of the business when considering the limited funding there is for such equipment. Liability is placed onto the loaners and an incomplete form causes issues in tracking down problems and for the business.

KCS-01 requires that the system be extremely reliable. This system is what secures residents safely into their dorm halls and is used to access the entire building and other amenities. If the system is down, then a physical security breach is made more easily possible.

4.6 Business structure

There are multiple departments and divisions in the business:

- The Resident Halls:
    - Biscayne Hall,
    - Palmetto Hall, and
    - Everglades Hall (called the Triplets)
    - Osprey Hall, and
    - Eagle Hall (called the Twins)
- The IT Department
- The South Village Modules
- North Lake Village
    - Community Center
    - Residence Halls
- West Lake Village
    - Community Center
    - Residence Halls

5. Preliminary operational concept of proposed system

5.1 Preliminary operational concept

a) operational policies and constraints:

The system proposed will follow the state and national laws and will adhere to the business policies listed earlier. The system has an obligation to be secure as to protect private information of the residents. The system must also improve the current system(s) in place as to increase efficiency while keeping familiarity. The system must utilize the current systems we have and must not interfere with said systems.

b) description of the proposed system:

The proposed system will be an Equipment-Loan system that digitizes the paper spreadsheets into a online system that can record the necessary information and prevent data loss. The online system will follow a similar structure to the paper spreadsheets and will utilize a system similar to the package sorting system. This system will retain familiarity and add on to the efficiency of the 3 systems.

c) modes of system operation:

Normal Mode: The system will run in tandem with the package sorting system and provide a faster way of collecting the resident data and storing it. The normal mode will also allow the end-users to operate the equipment loan system while utilizing the package sorting system to allow for multi-tasking.

In a busy state, the system should allow the user to input the necessary actions to run the system. The system shall run similarly to the package sorting system. In case of a manual system, the equipment loan system will follow similar procedures as the package sorting system as to allow for familiarity and keep manual mode efficiency high.

d) user classes and other involved personnel:

The end-users of this system are primarily the Desk Assistants. Secondary users include the managers of the business. The tertiary users of this business would be the developer and the IT team who will work on the system and keep it running. Managers will have access to a back-end system to view the stored data to allow them to complete audit duties or check for missing equipment and allow for traceability.

e) support environment:

The system will utilize a database to store data on loaned equipment's similar to the spreadsheets. The back-end system will allow access to this database and allow the end-user to print out data tables as needed. The system will also utilize the private internet connection on the business computers to increase database safety and security.

5.2 Preliminary operational scenarios

- System is online and available, normal state;
    - The user will interact with the system on the business computers installed in each building of the Residence Halls and the Community Centers of NLV and WLV. The system will record information of the resident loaning out the equipment. The system will allow for this record to be accessed as to confirm when the resident has returned the loaned item. (ELS-Ns)
- System is not online and information must be inserted manually, manual state;
    - The user will interact with the system in a similar way to the package sorting system when it is in a manual state. The end-users can still create and access the records of the students loaning equipment. The system will hold these manual records the same way it would for when in its normal state. (ELS-Ms)

6. Other preliminary life-cycle concepts

6.1 Preliminary acquisition concept:

The system solution will be acquired through the stakeholder needs and requirements. The solution will be based on the spreadsheets as to provide familiarity. Requirements for the system shall be solicited from end-users and stakeholders. Design will mirror the paper spreadsheets in terms of the database implementation. Production will be by the developers employed by the business and they will verify system security and safety.

6.2 Preliminary deployment concept:

The system will be validated through stress testing for security and tested to hold test data. The system will be able to print out specific data tables and store data properly and be able to record when an item is loaned and returned. The system will be installed onto the computers of the business in a similar directory to the package sorting system. Updates for the system can then happen remotely and does not require physical installation. It will also be tested out by managers of the business to ensure it is properly working when it is first being utilized.

6.3 Preliminary support concept:

End-users will be trained once the the system is implemented. Training for the system should be simple and identical to how the process was ran before the system. Operating support for the system includes database connectivity and other dependencies provided by the IT department of the business. Engineering support for the system is available once the users submit a request to review and improve the system via the IT department. Maintenance support is required for the system as to remove old, unnecessary data and to ensure the system is running smoothly and as efficiently as possible.

6.4 Preliminary retirement concept:

The system shall be uninstalled from the computers of the business. The system is all digital thus would require no extra handling once it is deleted from the computer systems. If the business must throw out the computer hardware then those computers must be properly disposed of and the software systems should be deleted and uninstalled to ensure safety and security of information.

7. Project Constraints:

This system shall be constrained to only work at the business computers and inaccessible to users outside of the system network. The project cost will depend on the developers, however, the software system is based off the spreadsheets so the system design will be more able to follow schedule. The project is to be fully implemented in one year as requested by the stakeholders.

8. Appendix:

8.1 Acronyms and abbreviations:

EL-01: Equipment Loaning 1

PS-01: Package Sorting 1

KCS-01: Key-card System 1

Rules-EL1: Rules of Equipment Loaning

Rules-PS1: Rules of Package Sorting

Rules-KCS1: Rules of the Key-card System

ELS-Ns: Equipment Loaning System - Normal State

ELS-Ms: Equipment Loaning System - Manual State

FGCU: Florida Gulf Coast University

NLV: North Lake Village

WLV: West Lake Village

OHRL: Office of Housing and Residence Life

FERPA: Family Educational Rights and Privacy Act