

Business Requirements Specification (BRS)

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1. Introduction

1.1 Business Purpose

Ecological Laboratories Incorporated is a biotechnology company that develops and manufactures novel, proprietary, liquid microbial formulations in order to solve the many challenging environmental issues that the world faces today. The company focuses its growing teams of microbiologist and chemists to provide advancing, cost-effective, sustainable solutions to the twin challenges posed by water and the need to improve crop productivity. My proposed system will contribute to how smoothly a day operates in the human resources department of the two-acre manufacturing facility in Cape Coral, Florida.

1.2 Business Scope

The human resource department of the biotechnology company Ecological Laboratories Inc manages the employee payroll, their timecards, employee benefits, on boarding and off boarding of employees, team building, supervises safety in the work environment and handles policy recommendations. The system that is to be developed will improve upon the existing software that is used to currently to manage things such as employee payroll and managing the timecards. Currently, the human resource director is not able to make the necessary reports such as a benefit time report for example, without using spreadsheets and other third-party software. This functionality could be included in such a software to increase work productivity in the office. There is much room for improvement on the user interface of the software as well as the way the functionalities of the software is presented to the user can be made simpler for use.

1.3 Business Overview

Since the human resource director needs to interact with all employees' payrolls, benefits, and time stamps, all the divisions except sales are involved in the everyday business process. The dry and liquid production department, Consumer relations, the shipping department, the plant engineer, maintenance, and housekeeper all fall under the range of divisions that are interrelated to the Human Resources department.

1.4 Definitions

Attrition - Refers to the voluntary/involuntary terminations, deaths, and employee retirements that result in a reduction to the businesses workforce.

Bench-marking - A process of measuring the performances of an organization or team using metrics such as customer satisfaction rate, or sales.

Benefit Time Report - A report that outlines an employee's hire date, the current amount of paid time off (PTO), the total amount of PTO earned, and the total amount of PTO taken.

Confidentiality agreement - An agreement between the employer and employee in which the employee cannot disclose company information.

Grievance - A complaint brought forward by an employee about a violation of law or dissatisfaction with work conditions.

Gross Misconduct -If you perform certain actions that are unacceptable and lead to immediate firing, it is defined as gross misconduct.

1.5 Major Stakeholders

The major stakeholder for this project is the head of the Human Resources department, the director whose name is Abby Richter. Abby Richter is also the daughter of the CEO of the company, Michael Richter. Abby influences the organization by being in charge of the payroll of all employees, handles the overseeing of all Safety regulations that need to be adhered to in the work environment, and is heavily involved in the hiring and off boarding process of employees along with training. Abby will be the user interacting with the software that is to be developed to help improve work productivity. Other stakeholders include the product & compliance manager whose name is Gayle Richter, the president Barry Richter, and the CEO Michael Richter. Abby will be the one directly using the software the most however the others stated will also have access to the product.

2. References

- 29148-2018 8.2
- 29148-2018 9.3
- 29148-2018 6.3
- Ecological Laboratories Inc Final Employee Handbook
- Prof. Vanselow CEN 3073 Software Specifications Website: <https://sites.google.com/site/profvanselow/course/cen-3073?authuser=0>

3. Business Management Requirements

3.1 Business Environment

The system that is to be developed must ensure that no confidential information of any individual employee can be accessed by anyone other than the director of the human resource department and the other stakeholders if necessary. The different divisions within the company must be taken into consideration when creating the software as well, since meshing different divisions may cause problems to arise.

3.2 Mission, Goals, and Objectives

Using the proposed system will increase the work productivity of the Human Resource Department of Ecological labs. Furthermore, it will simplify the process of managing employee pay roll, time and attendances, and benefits as it will automatically display the necessary information to the user. The information stored on the system will be secure for data management, will assist in overseeing employees and in monitoring leaves and absences.

3.3 Business Model

To achieve the business mission, a variety of methods will be used. First, the requirements will be elicited from the stakeholder to ensure that the right product is built. After obtaining the requirements, use case diagrams will be used to have a visual representation of the system and how it will interact with the user. Next, a product backlog containing the requirements will be used to create sprints that will give time constraints so that the product is issued on time for deployment. CRC cards will be used to create the necessary classes and methods that will be used in the system as well. After all these processes, development on the system will begin until it is finished and the product is ready to be tested a final time for released shortly after.

3.4 Information Environment

Project Portfolio

The system will have the capability to interact with other programs such as excel in case a spreadsheet or something of that nature needs to be uploaded for any reason.

Long term system plan

The system will be checked on periodically to ensure that no new bugs are within the system. The sensitive information that a human resource director is in charge of should never be at risk, so it will be the developer's responsibility to ensure that any sorts of bugs will be dealt with before the deployment of the software.

Database Configuration

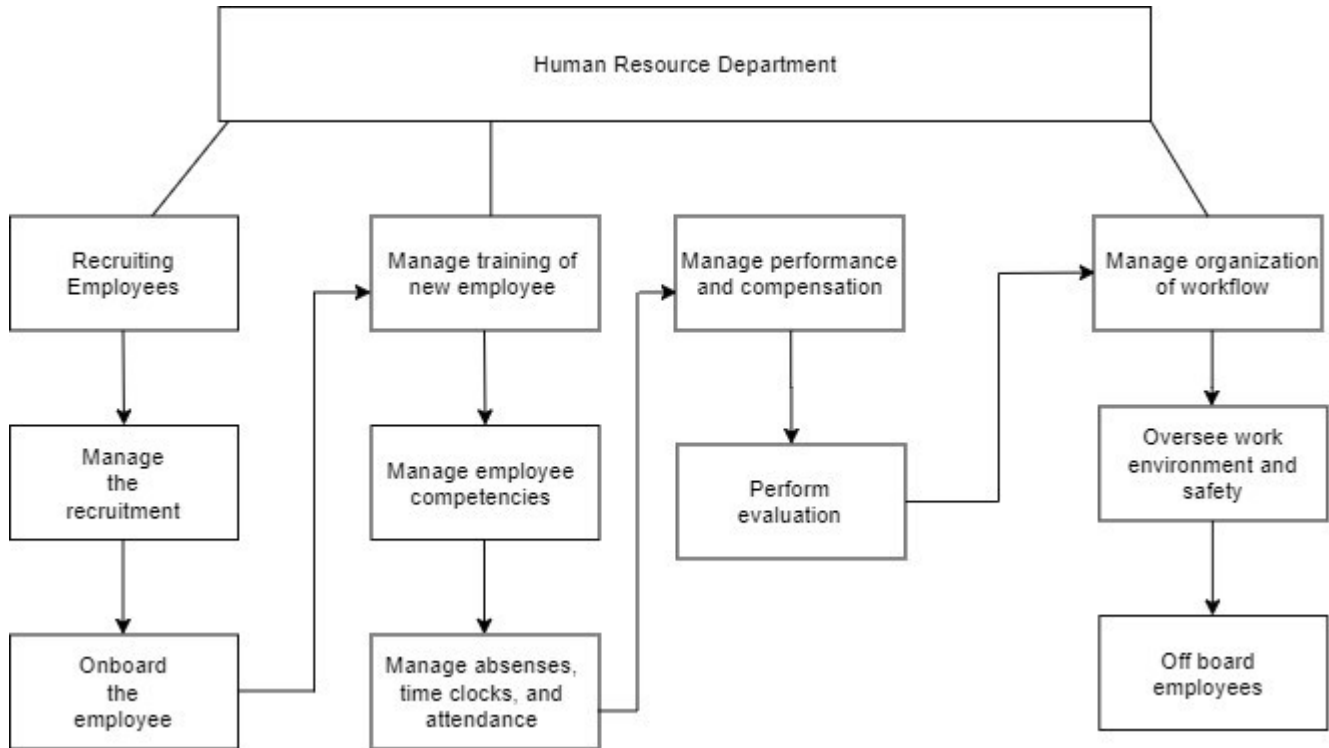
The database involved with this system will contain all of the required information of all employees that fall under payroll such as names, date of hire, the amount of benefits available to the employee, and when they clock in and out.

4. Business Operational Requirements

4.1 Business processes

There are many processes within the human resources department of Ecological Labs that are vital to the overall workflow of the company on a daily basis. The human resource director is responsible for managing recruitment, training, performances, the work environment, absences, and payroll for all employees that work under the director. First of all, all employees that are hired must be seen by the director of human resources as part of the recruitment process. After the employee passes all the required phases to be hired, the director then proceeds to manage the training of the new employee. This is followed by the management of the employee's competency in the work environment. The director must then manage the time clocks of all employees, this includes when they clock in and out at the beginning of the shift, for lunch, and at the end of a shift. This is followed by the management of performance and compensation of the employees. A performance evaluation is then performed in the

case of a recently hired worker. Next, the director manages the overall workflow of the business by overseeing the work environment to ensure the that all rules and policies are being followed. If necessary, the director also handles off boarding employees.



4.2 Business operational policies and rules

1. Social Media Policy - Do not disclose any confidential information belonging to the Company on your personal social media page. Further, do not upload, post or share any photographs of other employees, guests, invitees, members or vendors of the Company or any photographs of any Company sponsored functions without the permission of those individuals whose photograph will be uploaded onto your social media page.
1. Drug and Alcohol Policy - If an employee reports for duty and it is suspected that he or she is under the influence of any drug, alcoholic beverage, intoxicant or other substance (including legally prescribe drugs and medicines), the employee will be sent home and suspended. Employees taking prescribed medication which may affect their ability to perform the job duties of a specific position are required to notify their managers. If an employee is denied work, statements may be obtained from any employees witnessing the suspected behavior by the manager to the employee in question. Employees may be required to be tested for unlawful drugs at the discretion of management. Failure to take and pass a requested drug test when scheduled is grounds for termination.
1. Workplace Violence Policy - Acts or threats of physical violence, including intimidation harassment, and/or coercion, that involve or affect the Company or that occur on Company property, including using the Company's computers and e-mail, or while conducting Company business off of the Company premises, will not be tolerated. This prohibition against threats and acts of violence applies to all persons involved in the Company's operations, including, but not limited to, the Company's personnel, contract workers, temporary employees and anyone else on the Company's property or conducting the Company's business off of the Company's property. Violations of this policy, by any individual, may lead to disciplinary and/or legal action as appropriate.
1. Electronic Communication System Policy - Employees are prohibited from deleting any data (including emails) from the Electronic Communication Systems of the Company without prior approval from management.
1. Ethical Conduct - The Company is committed to complying with applicable law and honest dealings with its customers, employees, suppliers and vendors. The Company expects its employees to do the same and prohibits the following:
 1. Accepting bribes, kickbacks, or other illegal payments;
 2. Making false, misleading, or artificial entries in Company books and records;
 3. Participating in actions involving fraud and dishonesty;
 4. Disclosing trade secrets or Company confidential information, to the extent permitted by law; and
 5. Altering Company records, including time sheets.

4.3 Business operational constraints

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- Every occurrence of a new hire, the Human resource director shall update the employee database within a day of getting the position. The Human resource director shall make daily production reports that calculate the time it takes to do a task before the business day is over.
- The Human resource director shall update the benefits time reported for each employee accordingly when time is taken off by an individual employee within a day of absence.
- The Human resource director shall create safety training reports weekly to ensure that all safety rules and policies are being adhered to.

4.4 Business operational modes

In the event of the system ever being slowed down or not working properly for whatever reason, the Human resource director will be able to use an offline version of the same software with limited capabilities that are usually available so that work productivity is not ceased completely. Furthermore, the director will need to revert to using handwritten methods of carrying out business procedures such as recording an employees timestamps or creating a report.

4.5 Business operational quality

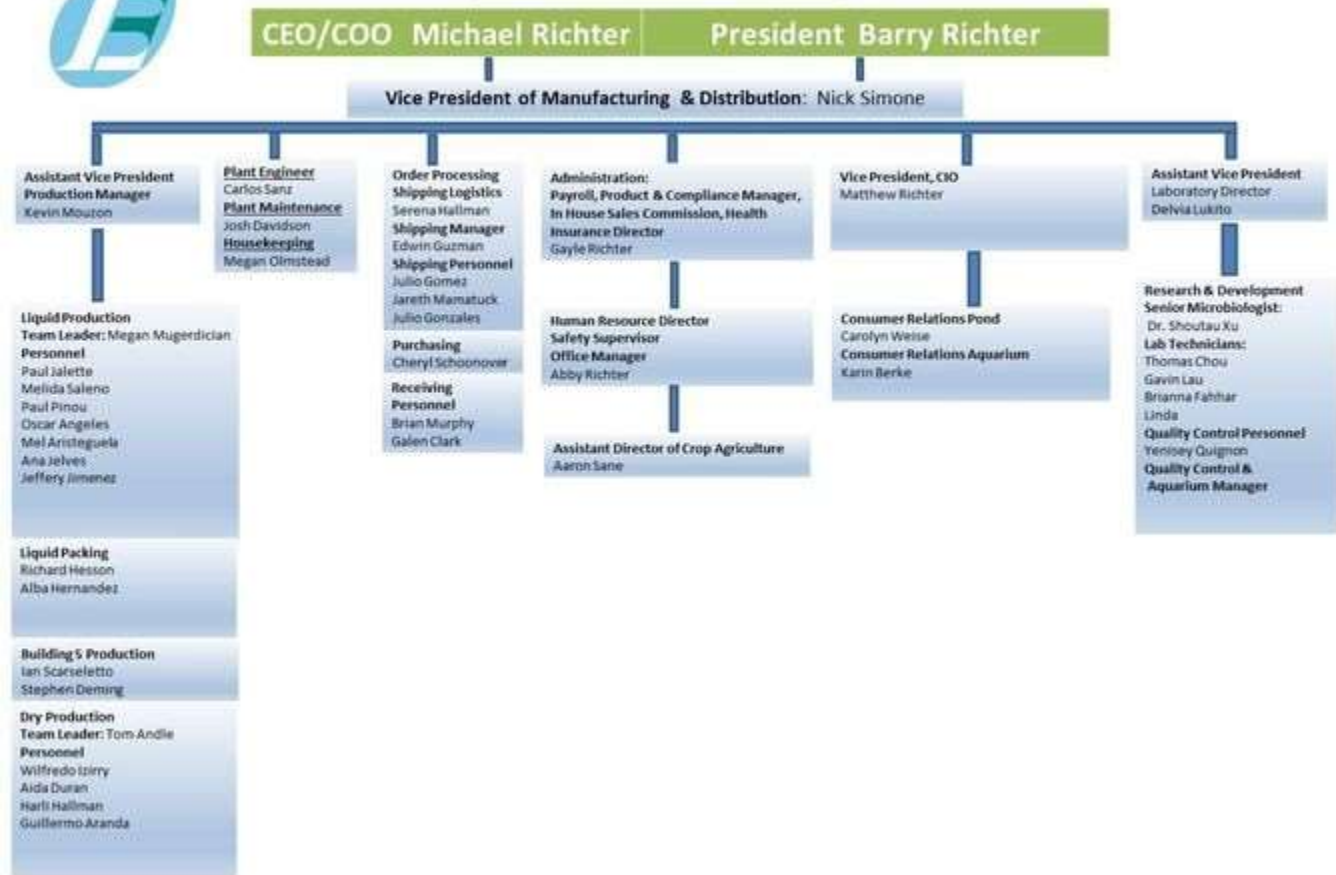
A secure internet connection is required for the everyday business operations in the human resource department as important emails are constantly sent and received for information on things such as new training's that are to be given to the employees. Without a secure internet connection, important information that relates to the business day might be missed, and it could affect the overall work flow of other divisions within the company as well.

4.6 Business structure

There are many internal divisions within Ecological Laboratories Inc that are relevant to the system that is to be developed for the human resources department. The dry/liquid production division both consist of a team leader and personnel. These divisions are both responsible for handling the dry and liquid products that are shipped in to be distributed for sale. The shipping department which consists of logistics, the manager, shipping personnel, the purchaser, and receiving personnel all are responsible for overseeing the products shipments to the facility and making sure they are receiving and ordering the necessary amount of products. The plant engineer is responsible for lowering costs and increasing profitability of the manufacturing facility, while the Plant Maintenance and Housekeeper maintain the building in which the business operations are conducted in. Consumer relations works to create and maintain a positive relationship with the companies customers. Finally, the research & development department consist of a senior microbiologist who studies microorganisms involved with the bio technologies created in the labs, lab technicians, and quality control personnel. Below is the organizational chart of the company.



Ecological Laboratories, Inc.
South Division: Cape Coral, Florida
ORGANIZATIONAL CHART 2018



5. Preliminary Operational Concept of Proposed System

5.1 Preliminary Operational Concept

Operational Policies and Constraints

The proposed software will only be accessible for the Human Resource Director and the other stakeholders as well, since there is confidential company information that cannot be leaked to other employees or anyone else.

Description of the proposed system

The system layout will be simple and easy to use for the director and anyone above that position. It will consist of a side bar dashboard that contains all of the necessary components to fit the needs of the director who will be using the software. There will be a home screen button on that dashboard that will show the user important information such as a hours/wages overview of all the employees and a section that shows who is in and out for the business day. Also, there will be a time cards section on that side dashboard that will lead the user to a more detailed version of the in/out board which will outline the times that employees clock in and out for whatever reason. A reports section will also be available on the dashboard that will allow the user to create the necessary reports such as a benefits time report, missing punches report, time off requests, and production requests to name a few. There will also be a scheduling section on the sidebar dashboard that will allow the user to see a calendar view of the month to plan any upcoming events. Finally, there will be an employees section that will allow the user to manage, add, or edit any employee information. The user will also be able to export employee details if needed. The system will be able to monitor who needs to complete training should the need ever arise.

Modes of system operation

The system will have the ability to function without internet in case there are ever any issues with connectivity.

User classes and other involved personnel

The director of human resource will be the one directly using the software; In addition to the director, the vice president, product and compliance manager, vice president of manufacturing & distribution, the president, and the CEO will all have access to the software as they are involved in decision making above the director of human resources.

Support environment

In the event of any unplanned circumstances where the system does not function as it is supposed to, the contact information of the software developer will be made available in the interface for the user to reach out to.

5.2 Preliminary operational scenarios

Operational Scenario 1: The director will be able to add and remove any employee for on boarding and off boarding respectively by navigating to the Employee button on the side dashboard.

Operational Scenario 2: The director will be able to produce the necessary reports such as a benefits time report by navigating to its respective Report button the side dashboard. On this screen, the user will be able to search for whatever report that is to be accessed for use.

Operational Scenario 3: The director will be able to navigate to a time cards section that will display the time cards of all employees.

Operational Scenario 4: A scheduling button will be on the side dashboard for the user to see a calendar view to plan/view upcoming important events for the business.

Operational Scenario 5: The software will have a home screen where the user will be able to view which employees are in or out for the day along with an hour and wages overview.

Operational Scenario 6: The software will allow for the exporting of employee hire details for company use.

6. Other Preliminary Life-Cycle Concepts

6.1 Preliminary Acquisition Concept

The software will be acquired by the director of human resources first, which will then be shown to the president and the CEO to verify that the product can be used for business use in the office. Furthermore, as the software development life cycle moves along in the process, the progress in sprints will be shown to the major stakeholder to ensure that the right product is being constructed. This is also where any wanted changes will be made known to the developer.

6.2 Preliminary Deployment Concept

The system will be validated by constantly showing the major stakeholder progress on the prototype until it is ready to be deployed, at which point a final view of the product will be shown again to determine the validity of the product. Also, the software will be shown to the president and CEO to get the approval of use in the work environment.

6.3 Preliminary Support Concept

After deployment of the product, the developer will show the user how to maneuver the program efficiently. Should any problems arise within the software or if there are any questions, there will be a button available to contact the developer for support.

6.4 Preliminary Retirement Concept

For this system, there is no hazardous material that needs to be taken in account. If the database that is to be used is ever compromised, the software will be retired from use until further notice to prevent confidential information from leaking.

7. Project Constraints

Since the human resource department is already using an existing software that works but does not meet the needs of the user completely, there is more time to complete the product. The major stakeholder stated however, that ideally, the product would like to be seen completed by the end of the year.

8. Appendix

8.1 Acronyms and Abbreviations

Director: The Human Resource Director, Abby Richter.

System: The Software Product that is to be developed.

Major Stakeholder: Abby Richter.

CRC: Class, Responsibilities, Collaborator.