

UNIVERSIDAD PARA LA COOPERACIÓN INTERNACIONAL
(UCI)

PROJECT MANAGEMENT PLAN FOR THE COMPANY-WIDE UPGRADE OF
COMPUTERS AND MICROSOFT OFFICE AT AVEANNA HEALTHCARE

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For Grandpa

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ABBREVIATIONS AND ACRONYMS

- AMA – American Medical Association
- APA – American Psychological Association
- FGP – Final Graduation Project
- HIPAA – Health Insurance Portability and Accountability Act
- IT – Information technology
- MPM – Master in Project Management
- OS – Operating system
- PMBOK® Guide – Guide to the Project Management Body of Knowledge
- PMI – Project Management Institute
- UCI – Universidad para la Cooperación Internacional
- WBS – Work Breakdown Structure

DISCLAIMERS

Citations in this FGP use the American Medical Association (AMA) format rather than the American Psychological Association (APA) format. This change was approved by the FGP tutor and was made in the interest of concision and readability. As can be seen from the bibliography, there are many online sources that do not have a named author (the author is cited as a company), do not have a publication date, or both. Some citations are different pages from the same source. Using APA format would require long parenthetical citations containing excess information for such sources in order to make it clear which source is being referenced, resulting in disruptions to the text. AMA format, however, uses superscript numbers to refer unquestionably to a specific source without using unwieldy parenthetical citations.

The topic of this FGP is a project that necessitates interstate air travel. It was chosen, and work was started on it, prior to widespread COVID-19 infections and quarantines. Therefore, for the sake of consistency and straightforwardness, the impacts of the pandemic are not reflected in the project plans for scheduling and communications. Nevertheless, it was recognized that the pandemic could affect FGP research with regards to cost management, as travel costs at the time of project completion have been significantly reduced. In section 4.3 (Project Cost Management), estimates for travel-related costs are consequently calculated using carefully-researched averages and data from previous years rather than real-time prices of airplane tickets, hotel rooms, etc.

Though the project management plan contained herein is not for a healthcare-related project, Aveanna Healthcare's being a medical care and medical supply company prevents the publication of any official documentation from within the organization, including that which is not protected by HIPAA. All content provided within this project is therefore already public information or is self-created based on the actual project and the authentic project management practices of the company.

EXECUTIVE SUMMARY

This Final Graduation Project (FGP) was completed in partial fulfillment of the graduation requirements set forth by the MPM program at UCI. Its contents were created in the context of United States company Aveanna Healthcare. Aveanna provides home medical care services for medically fragile children and adults in 23 US states. These services include in-home nursing care, in-home aide services, respite care, school nurse services, therapies, rehabilitation, and medical supply services. The company maintains an in-house IT department for all technical support.

Aveanna Healthcare's IT department undertook a project to upgrade the computer and Microsoft Office suite of every company employee. Such upgrades were necessary to ensure file compatibility and data security throughout the company. To facilitate the efficient and successful resolution of this project, a comprehensive project management plan was created.

The creation of this project management plan served three purposes. First, it provided the IT project team with a basis to complete their project in a way that would satisfy all stakeholders. Second, it contributed to the field of project management by providing an example of project management best practices. Third, it developed the project manager's own skills and knowledge related to project management and IT projects.

The general objective of this FGP was to develop a project management plan framed within the standards of the Project Management Institute to upgrade employee computers to Windows 10 and employee Microsoft Office suites to Office 365 at all Aveanna Healthcare branches across the United States of America. The specific objectives were to prepare a project charter and plan for the execution of the Final Graduation Project (FGP), to develop a Scope Management Plan to specify what work the project will cover, to develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame, to develop a Cost Management Plan to control the project budget, to develop a Quality Management Plan to ensure the adequacy of the project outcome, to develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied, to develop a Communications Management Plan to control how project information is shared, to develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events, to develop a Procurement Management Plan to decide how project resources should be acquired, and to develop a Stakeholder Management Plan to identify key project stakeholders and their needs.

This FGP was developed using definitions and project management best practices described in the sixth edition of the PMBOK® Guide. Research was conducted through both qualitative and quantitative methods depending on the information required. The tools used for each section of the FGP also varied depending on what was needed, but they included interviews, expert judgement, alternatives analysis, and various types of matrices as appropriate.

In order to first plan an appropriate approach to the FGP, a project charter and Work Breakdown Structure (WBS) were developed. These informed the FGP process by helping the project manager to identify assumptions, constraints, and

risks and to plan each necessary step toward FGP completion. This structure helped to move the project forward.

The project management plan developed in this FGP included a management plan for the knowledge areas of scope, schedule, cost, quality, resource, communication, risk, procurement, and stakeholder management. The Scope Management Plan specified the project work and deliverables through a Project Scope Statement and a WBS. The Schedule Management Plan established the project's time frame via a Gantt Chart. The Cost Management Plan featured a budget created using averages and historical values. The Quality Management Plan ensured that the project's outcomes will meet the needs of its stakeholders, outlining the responsibilities of each stakeholder and defining quality factors and metrics were defined. The Resource Management Plan analyzed the human and physical resources needed for the project and assigned roles to human resources via a RACI matrix. The Communications Management Plan outlined what project information should be shared how, when, and with whom. The Risk Management Plan identified possible categories of risk with a Risk Breakdown Structure (RBS) then listed and prioritized specific risks. The Procurement Management Plan defined how goods and services should be acquired from outside the project team. Finally, the Stakeholder Management Plan identified and analyzed stakeholders' roles and expectations.

The development of this FGP led to a number of recommendations for project managers both in general and specifically in the healthcare sector. First, all project managers should be familiar with the background of the project and sure of the appropriate planning approach before beginning to constructing a project management plan. Next, project managers should be sure to always list the project exclusions and elaborate a WBS when planning scope management. Third, travel-heavy projects require project managers to familiarize themselves with project locations on a map. Fourth, project managers may need to research creatively when creating a Cost Management Plan. Fifth, project managers must be mindful of how they assign responsibility and accountability on a RACI matrix. Sixth, project managers should think beyond the project to the company as a whole when planning risk management. Additionally, when planning procurements management, project managers should be aware that not all items require a contract to be procured. It is also important that project managers make overlapping management plans, such as the stakeholder, communication, and risk management plans, compliment each other. Finally, all project managers must be prepared to take on a leadership role and use critical thinking in project planning.

With regards to healthcare sector project managers, quality and communications management should be planned bearing in mind that certain stakeholders, particularly patients, benefit more the less they are involved in the project. Project managers should therefore use pre-existing communication channels to monitor these stakeholders and refrain from assigning them any roles or responsibilities.

1 INTRODUCTION

1.1. Background

Headquartered in Atlanta, Georgia, USA, Aveanna Healthcare was founded in 2017 through the merger of Epic Health Services and PSA Healthcare. Aveanna's primary focus is pediatric healthcare; however, the company has also recently been expanding its adult home care services.¹ Aveanna Healthcare's mission "is to revolutionize the way pediatric healthcare is delivered, one patient at a time."² The company's core values include compassion, team integrity, accountability, trust, innovation, compliance, and fun.²

Aveanna has over 200 branches that serve medically fragile patients in 23 states. Its services include in-home nursing care, in-home aide services, respite care, school nurse services, therapies, and rehabilitation.¹ The company accepts most private and government insurance, as well as certain waivers, for its services. To make the insurance process easier for families, Aveanna helps its clients through all paperwork and requirements.³

In order to support such a large network of branches and wide range of services, Aveanna Healthcare maintains an in-house information technology (IT) department. This department is responsible for monitoring, repairing, and updating all of the company's computer hardware and software.

1.2. Statement of the Problem

As a healthcare services company, it is imperative that Aveanna maintain reasonably updated computer hardware and software. Patient information must be readily available to caregivers, yet secure against potential privacy violations such as hacking. Any use of out-of-date technology leaves Aveanna's computer systems and data vulnerable to crashes, incompatibility errors, and various other threats. Therefore, Aveanna Healthcare's IT department has undertaken a project to upgrade the computer and Microsoft Office suite of every company employee at

each of the company's 203 branches. By the end of the project, every Aveanna employee will be using a computer running the Windows 10 operating system (OS) and the Microsoft Office 365 program.

To facilitate the efficient and successful resolution of the above-described problem, a comprehensive project management plan is to be created for the related project.

1.3. Purpose

The project management plan for this project will consist of a scope management plan, schedule management plan, cost management plan, quality management plan, resource management plan, communications management plan, risk management plan, procurement management plan, and stakeholder management plan. The best practices for IT project management will be thoroughly researched and appropriately applied to these plans. Such research will accomplish three tasks: First, it will allow the project team to complete the project in a way that is satisfactory to all stakeholders. Second, it will contribute to the field of project management by providing an example of project management best practices. Third, it will develop the project manager's own skills and knowledge related to project management and IT projects.

As indicated in the problem statement, this project is to be performed in order to ensure the functionality and security of Aveanna Healthcare's computer systems and patient data. The project is to be a time-bound endeavor to upgrade technology at all of the company's 203 branches at one time. It will produce the unique result of getting all branches on the same page with technological compatibility and data security, including any branches recently acquired from other organizations. The project's expected benefits include:

- Compatibility of software and documents across the company, through providing every employee with the same operating system and Office suite
- Improved security and reliability of computer operating systems, through upgrading from the unsupported Windows 7 OS to the actively supported

Windows 10 OS

- Streamlined, simplified updates to Microsoft Office, through the use of Office 365 subscriptions
- Increased employee productivity, through providing new computers with a clean OS and the most up-to-date Office suite

1.4. General Objective

To develop a project management plan framed within the standards of the Project Management Institute to upgrade employee computers to Windows 10 and employee Microsoft Office suites to Office 365 at all Aveanna Healthcare branches across the United States of America.

1.5. Specific Objectives

1. To prepare a project charter and plan for the execution of the Final Graduation Project (FGP)
2. To develop a Scope Management Plan to specify what work the project will cover
3. To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame
4. To develop a Cost Management Plan to control the project budget
5. To develop a Quality Management Plan to ensure the adequacy of the project outcome
6. To develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied
7. To develop a Communications Management Plan to control how project information is shared
8. To develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events
9. To develop a Procurement Management Plan to decide how project resources should be acquired
10. To develop a Stakeholder Management Plan to identify key project stakeholders and their needs

2 THEORETICAL FRAMEWORK

2.1 Company Framework

2.1.1 Company Background

In 2017, Epic Health Services and PSA Healthcare joined together under the umbrella of Aveanna Healthcare. These companies are two of the United States' largest pediatric healthcare providers.¹ Epic Health Services was founded in 2001 with its headquarters in Dallas, Texas.⁴ It serves more than 46,640 patients in 21 different states.⁵ Meanwhile, PSA Healthcare is headquartered in Atlanta, Georgia. The company brings to Aveanna 30 years of home medical care experience in 16 states.⁶ With the experience and resources of the two companies that form it, Aveanna Healthcare provides a variety of medical care and supply services to medically fragile children and adults around the United States.

2.1.2 Mission and Vision Statements

Our Mission is to revolutionize the way pediatric healthcare is delivered, one patient at a time.²

Our vision is to make the best in-home healthcare accessible and comfortable for every patient who needs it.

Although this project is not directly related to healthcare, it will still contribute to Aveanna Healthcare's mission and vision. As described in Sections 1.1 and 2.1.4, Aveanna provides a wide variety of medical services to patients and families in nearly half of the 50 states. The company also provides extensive support to patients regarding insurance and payments. For this reason, efficient coordination and quick access to the most recent patient records are vital for Aveanna employees both in the office and in the field. What's more, these records must be appropriately secured to ensure patient privacy and regulatory compliance.

Through this project, every Aveanna employee will have their Windows 7 work

computer exchanged for a Windows 10 computer. They will also have their edition of Microsoft Office updated to Office 365. These upgrades will improve the speed, security, and compatibility of systems and documents throughout the company. In this way, Aveanna can keep moving ahead in its endeavor to bring revolutionary healthcare directly to patients' homes.

2.1.3 Organizational Structure

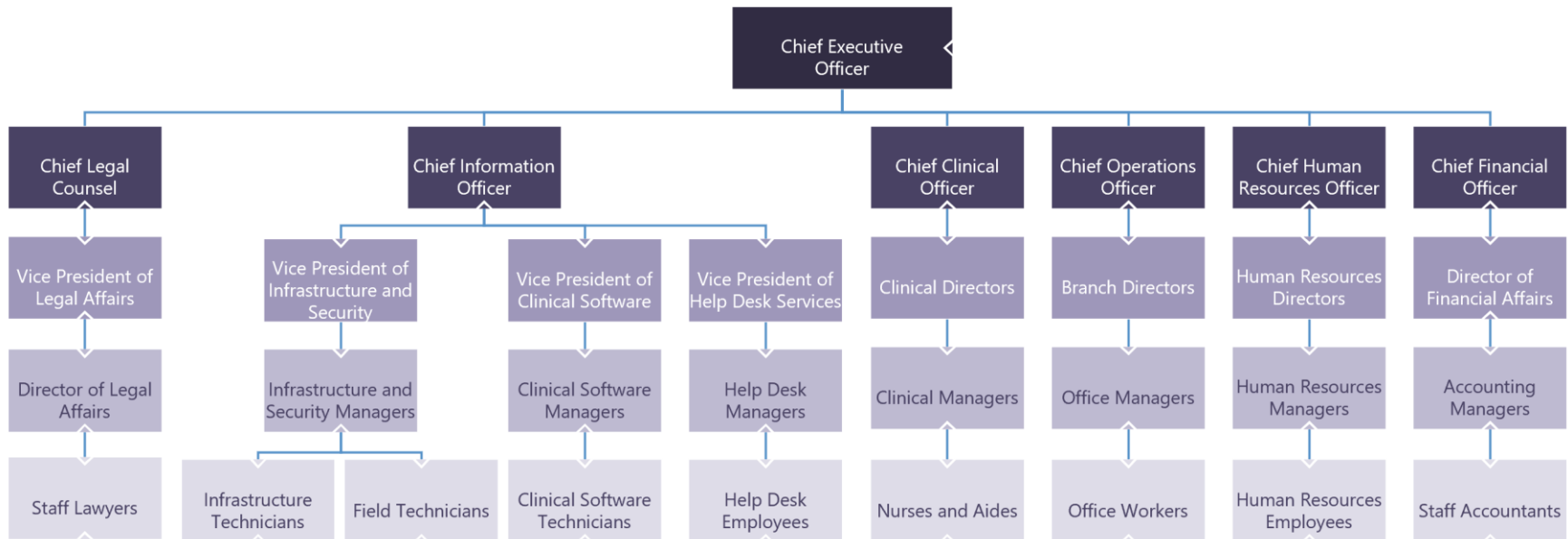


Figure 1 Organizational Structure (Source: Michael Yerkey, oral communication, March 14, 2020)

For the context of this project, there must be coordination between multiple branches of this organizational structure. First, the Information Technology Department, under the Chief Information Officer, determines the scope and monetary resources needed for the project being initiated in their department. Next, the various branch offices, the Chief Clinical Officer, and the Chief Operations Officer must verify that those resources are appropriate to the needs of the branches. Finally, the Chief Financial Officer confirms that the company has sufficient funding and cash flow to assign those resources to the project.

2.1.4 Products Offered

Aveanna Healthcare offers a wide range of healthcare services that can be divided into five categories: pediatric private duty nursing and services, pediatric therapy, Applied Behavior Analysis (ABA) therapy, medical solutions, and adult skilled hourly nursing services.⁷

The category of pediatric private duty nursing includes five types of services. The first is private duty nursing, in which a registered nurse, licensed practical nurse, or aide provides hourly in-home or in-school care to medically fragile children. Second, Aveanna offers skilled nursing visits and respite care. This service brings a nurse to the patient's home a few times a day or a few times a week only to perform certain procedures (such as administering medication), rather than for an hourly shift. Third is Aveanna's Pediatric Day Health Care Centers, which provide day care services designed for children with complex medical needs. These centers provide transportation, safe play areas, therapy gyms, and care by medical professionals. Fourth, Aveanna offers school nurse services, in which they can help schools set up or manage a nursing program or send a nurse to work with one or multiple students at the school. Finally, this category includes personal patient care services. These are non-medical services that can include feeding, bathing, laundry, and other help around the home to relieve some of the burden on families that have a medically fragile child.⁷

In the category of pediatric therapy, Aveanna offers physical, occupational, and speech language therapy. Physical therapy helps children improve their motor skills through exercises focused on strength, endurance, and mobility. Occupational therapy also includes help with movement, but it addresses more skill-based tasks. These tasks may range from playing with toys for young children to dressing and feeding oneself for older children. Speech language therapy assists patients with various speech, communication, and swallowing disorders.⁷

Applied Behavior Analysis (ABA) therapy is a category of its own. This service helps children with behavioral or developmental disorders, such as Autism and attention deficit hyperactivity disorder (ADHD), improve certain skills and behaviors. Such therapy may be provided at home, at school, or at a special center. It may focus on the child's communication, daily living skills, or general behavior.⁷

Aveanna's fourth category of services is medical solutions. The first of these is enteral nutrition for both children and adults.⁷ Enteral nutrition is also known as tube feeding. Patients that require enteral nutrition may have a tube inserted through their nose to their stomach or directly into their stomach or small intestine.⁸ Aveanna provides such patients with a wide range of nutritional formula options and other supplies such as tubes and pumps. For children, they also offer cute, customized backpacks to hide portable feeding pumps. The second medical solutions service is the provision of medical supplies. Through Aveanna, patients can receive monthly or as-needed deliveries of supplies for diabetes, incontinence, and other medical conditions. Finally, this category includes respiratory therapy. This service provides patients with supplies for respiratory disorders, including ventilators, C-PAP machines, and oxygen.⁷

The fifth service category is adult skilled hourly nursing services. Similarly to pediatric private duty nursing, this category also includes hourly in-home nursing; nursing visits and respite care; and physical, occupational, and speech therapy. Additionally, Aveanna offers personal care and companionship services, in which caregivers help with daily needs when family members have time or geographic restrictions. Third, habilitation services are offered to provide non-medical care and companionship to adults with intellectual and developmental disabilities. Finally, Aveanna provides home healthcare services targeted at helping patients manage a chronic illness or recover from a hospitalization or surgery.⁷

2.2 Project Management Concepts

2.2.1 Project

Aveanna Healthcare uses the definition of *project* put forth by the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide)⁹: “A project is a temporary endeavor undertaken to create a unique product, service, or result”. A project being a temporary endeavor means that it has a definite beginning and end; this makes projects different from operations, which are the normal, everyday functions of an organization. The unique product, service, or result can include both tangible and intangible deliverables, such as a new item, a new component of an item, a document, or the capability to perform a new service.⁹

Furthermore, projects drive change within an organization and enable business value creation. These factors also differentiate projects from operations. An organization’s operations maintain the status quo, while projects facilitate the achievement of a desired future state or result. Operations work with the current business value, while projects can add value to a business through both tangible and intangible factors.⁹

2.2.2 Project Management

Aveanna Healthcare uses the definition of *project management* put forth by the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide)⁹: “Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements”. The benefits of effective project management include satisfaction of stakeholder expectations, timely response to risks, and optimized use of organizational resources.⁹

2.2.3 Project Life Cycle

There are several types of project life cycles that can be applied in project management. The first of these is a predictive life cycle, also known as a waterfall life cycle. In predictive life cycle projects, the project scope, time, and cost are determined in the project's early stages, and scope changes are carefully managed. Second is an iterative life cycle. In this type, the scope is still determined early on, but time and cost estimates are modified over time. Third is an incremental life cycle, in which the final deliverable is produced through a series of iterations. Each iteration adds new functionality until the complete product with all the necessary capabilities is finished. Fourth, adaptive life cycles, also called agile or change-driven life cycles, can include elements of both the iterative and incremental life cycles. In this type, each iteration requires approval of the detailed scope before production or execution begins. Finally, hybrid life cycles include some elements of predictive and adaptive life cycles. This accommodates projects that have some fixed or well-known elements as well as some uncertain or evolving elements.⁹

Aveanna Healthcare uses all of these different life cycles at different times, applying the one that is most appropriate to the project at hand. For example, all software development projects are done using agile (adaptive) life cycles; meanwhile, the project for which a project management plan is to be created in this document will use a waterfall (predictive) life cycle (Michael Yerkey, oral communication, March 14, 2020).

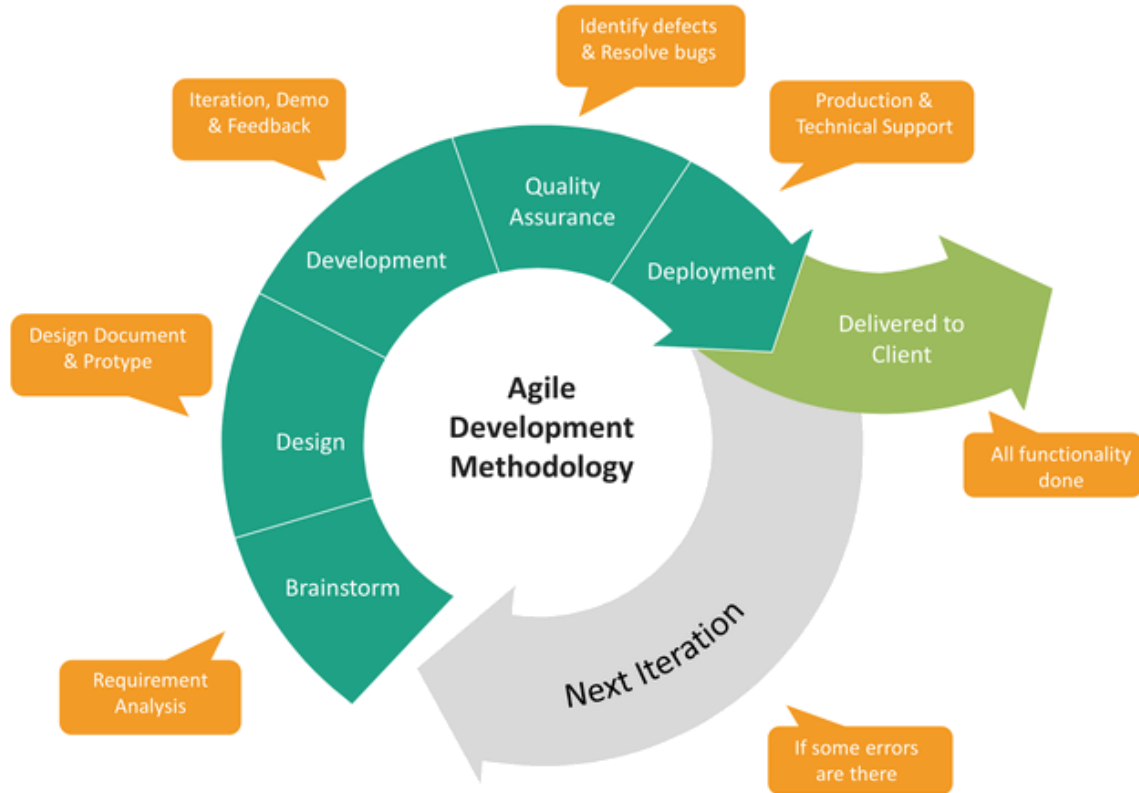


Figure 2 Agile Project Life Cycle (Source: Chercher.tech¹⁰)

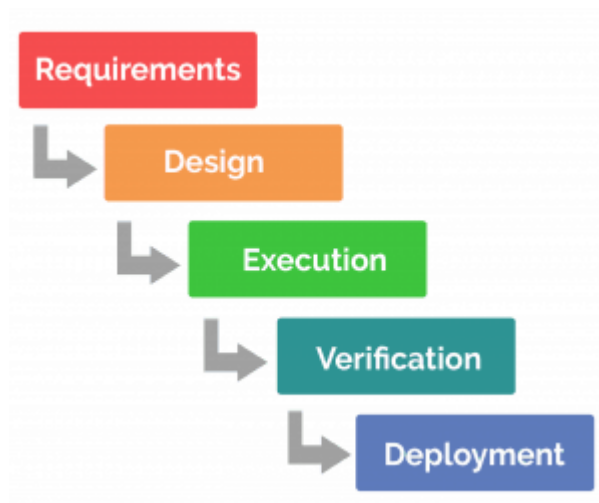


Figure 3 Waterfall Project Life Cycle (Source: datascience-pm.com¹¹)

2.2.4 Project Management Processes

Every project life cycle is made up of various processes. A process “produces one or more outputs from one or more inputs by using appropriate project management tools and techniques.”⁹ Depending on the process and the type of life cycle, these processes may be performed once or at predefined points in the project, periodically as needed, or continuously throughout the project.⁹

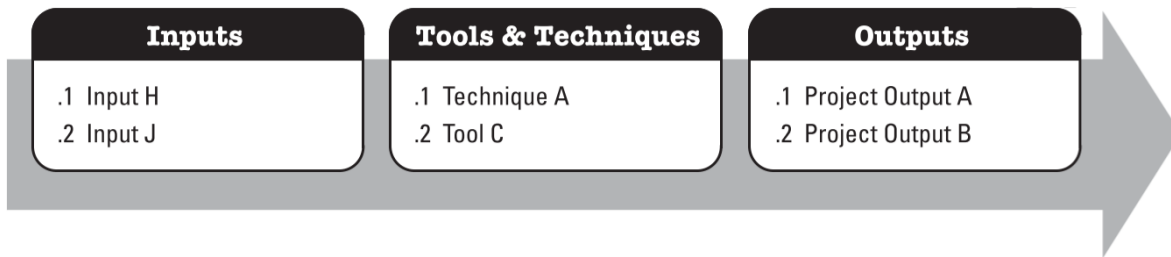


Figure 4 Example Process (Source: PMBOK® Guide⁹)

The processes of project management are categorized into five Process Groups. These are the Initiating, Planning, Executing, Monitoring and Controlling, and Closing Process Groups. Initiating includes processes that define and approve a new project or project phase. Planning processes determine the project or phase scope, objectives, and course of action. Executing processes carry out the planned project work. Monitoring and Controlling keeps track of project performance and necessary changes. Closing processes formally complete the project or phase.⁹ Aveanna Healthcare includes each of these process groups in its projects to ensure effectiveness and thoroughness.



Figure 5 Process Group Distribution (Source: Sarah Benzuly¹²)

2.2.5 Project Management Knowledge Areas

Knowledge Areas are another way of categorizing project management processes. There are ten Knowledge Areas: Project Integration Management, Project Scope Management, Project Schedule Management, Project Cost Management, Project Quality Management, Project Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management, and Project Stakeholder Management.⁹ At Aveanna Healthcare, each of these Knowledge Areas corresponds to a section of each project management plan.

These Knowledge Areas include processes related to the following⁹:

- **Integration Management:** identification and coordination of processes and activities for the project
- **Scope Management:** definition of work required for the project
- **Schedule Management:** planning and managing the amount of time required for the project
- **Cost Management:** estimating, budgeting, and controlling project costs

- **Quality Management:** integrating quality requirements and meeting stakeholder expectations
- **Resource Management:** identification and management of project resources
- **Communications Management:** collection, management, and distribution of project-related information
- **Risk Management:** preparation for uncertain or unexpected events in the course of the project
- **Procurement Management:** acquisition of project resources
- **Stakeholder Management:** identification of people and groups the impact or are impacted by the project, planning effective engagement in the project for these stakeholders

2.3 Enterprise Environmental Factors

As defined by the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide),⁹ “Enterprise environmental factors (EEFs) refer to conditions, not under the control of the project team, that influence, constrain, or direct the project”. There are several of these factors that Aveanna Healthcare must consider when planning and carrying out projects.

One such EEF is organizational culture, structure, and governance. For example, it is important to take Aveanna’s structure and hierarchy into account for project planning and approval. Communication between multiple branches of this structure is necessary to ensure compliance and the availability of funding (see description in Section 2.1.3). Another EEF that Aveanna must consider is the geographic distribution of its facilities and resources. Aveanna has over 200 branches in 23 US states; thus, the company’s facilities and employees are distributed over a large geographical area. Therefore, company-wide projects may need to account for time zones and/or travel expenses associated with sending employees between branches. Finally, two essential EEFs for Aveanna as a healthcare company are

legal restrictions and government and industry standards. The company must make sure that all of their projects (as well as their regular operations) are compliant with various regulations such as privacy laws and medical safety standards.

3 METHODOLOGICAL FRAMEWORK

3.1 Information Sources

In the context of this document, information sources are any book, document, website, person, or other resource through which the knowledge, data, and material necessary to successfully complete each chapter and specific objective is obtained.

3.1.1 Primary Sources

Primary information sources are those that provide a first-hand account or first-hand knowledge of a topic.¹³ The primary sources to be cited in this FGP are:

- The sixth edition of PMI's Guide to the Project Management Body of Knowledge (PMBOK® Guide)
- Michael Yerkey, an employee of Aveanna Healthcare
- The Aveanna Healthcare website and associated sources, including:
 - Aveanna Healthcare's company LinkedIn page
 - The websites and LinkedIn pages of Epic Health Services and PSA Healthcare
- Other websites that provide background information on non-project management topics, for example:
 - www.nutritioncare.org
 - www.library.unsw.edu.au
 - libguides.newcastle.edu.au

3.1.2 Secondary Sources

Secondary information sources are those that provide an explanation, description, or analysis of primary sources.¹³ The secondary sources to be cited in this FGP are websites that explain or expand on topics covered in the PMBOK® Guide:

- Websites/blogs
- Books
- Articles (journals, conference papers, etc.)

Chart 1 Information Sources (Source: Own elaboration)

Objectives	Information Sources	
	Primary	Secondary
To prepare a project charter and plan for the execution of the FGP	PMBOK® Guide Michael Yerkey Aveanna Healthcare website www.nutritioncare.org www.library.unsw.edu.au libguides.newcastle.edu.au	Websites/blogs
To develop a Scope Management Plan to specify what work the project will cover	PMBOK® Guide Michael Yerkey	Websites/blogs Articles
To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame	PMBOK® Guide Michael Yerkey	Websites/blogs Articles
To develop a Cost Management Plan to control the project budget	PMBOK® Guide Michael Yerkey	Websites/blogs Articles
To develop a Quality Management Plan to ensure the adequacy of the project outcome	PMBOK® Guide Michael Yerkey	Websites/blogs Books Articles
To develop a Resource Management Plan to identify what human	PMBOK® Guide Michael Yerkey	Websites/blogs Articles

and physical resources are necessary and how they will be applied		
To develop a Communications Management Plan to control how project information is shared	PMBOK® Guide Michael Yerkey	Websites/blogs Articles
To develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events	PMBOK® Guide Michael Yerkey	Websites/blogs Books Articles
To develop a Procurement Management Plan to decide how project resources should be acquired	PMBOK® Guide Michael Yerkey	Websites/blogs Articles
To develop a Stakeholder Management Plan to identify key project stakeholders and their needs	PMBOK® Guide Michael Yerkey	Websites/blogs Articles

3.2 Research Methods

Though different types of research methods are applied in different fields, they can be generally defined as “the strategies, processes or techniques utilized in the collection of data or evidence for analysis in order to uncover new information or create better understanding of a topic”.¹⁴ For the purposes of this FGP, there is

research that must be done into three different types of areas. First, there must be research into project management topics. This will facilitate correct and efficient completion of each of the FGP's specific objectives. Second, there must be research into Aveanna Healthcare. This includes topics ranging from company operations and structure to the specific project being planned in the project management plan. Finally, there must be research into other related topics. Extra background information, although not directly required for FGP execution, is sometimes needed to further reader understanding. For example, in Section 2.1.4, additional information about enteral nutrition is included to help readers better understand exactly what services Aveanna provides. This research will be carried out through both qualitative and quantitative research methods.

3.2.1 Qualitative Research Methods

Qualitative research methods are frequently defined in terms of social research, but they can also be applied to this FGP. In this context, they will be used "to gain a better understanding of complex concepts" and to investigate how or why a certain topic or process works.¹⁴ Two techniques in particular will be used to carry out qualitative research. The first of these is document analysis. Documents and written sources such as the PMBOK® Guide and various online articles will be read, searched, and analyzed for information relevant to the FGP. The second technique is interviews. Some of the general information about Aveanna Healthcare and most of the specific information for the project in the project management plan will be gathered through interviews with Michael Yerkey, who works in Aveanna's IT department.

3.2.2 Quantitative Research Methods

Quantitative research methods gather "numerical data which can be ranked, measured or categorised through statistical analysis... This type of research is useful for finding out how many, how much, how often, or to what extent".¹⁴ Quantitative research will be used in this FGP to obtain and assess information related to costs and quantities.

Chart 2 Research Methods (Source: Own elaboration)

Objectives	Research Methods		
	Qualitative (Document Analysis)	Qualitative (Interviews)	Quantitative
To prepare a project charter and plan for the execution of the FGP	PMBOK® Guide and online sources consulted for background information	Michael Yerkey consulted for information regarding Aveanna Healthcare and IT projects	n/a
To develop a Scope Management Plan to specify what work the project will cover	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	Used to take number of branches and employees into account
To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	Used to determine the amount of time needed for each activity and the project's critical path
To develop a Cost Management Plan to control the project budget	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	Used to estimate and analyze project costs
To develop a Quality Management Plan to ensure the adequacy of	PMBOK® Guide consulted for instructional	Michael Yerkey consulted for project	n/a

the project outcome	information	information	
To develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	Used to determine the amounts of resources needed for each activity
To develop a Communications Management Plan to control how project information is shared	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	n/a
To develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	n/a
To develop a Procurement Management Plan to decide how project resources should be acquired	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	Used to determine quantities and costs of resources that must be acquired from outside the project team
To develop a Stakeholder Management Plan to identify key project stakeholders and their needs	PMBOK® Guide consulted for instructional information	Michael Yerkey consulted for project information	n/a

3.3 Tools

In project management, tools are “aids to assist an individual or team to effectively organize work and manage projects and tasks”.¹⁵ The tools used in this FGP are indicated in the chart below:

Chart 3 Tools (Source: Own elaboration)

Objectives	Tools
To prepare a project charter and plan for the execution of the FGP	Interviews, expert judgement, information gathering
To develop a Scope Management Plan to specify what work the project will cover	Interviews, expert judgement, alternatives analysis
To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame	Interviews, expert judgement
To develop a Cost Management Plan to control the project budget	Interviews, expert judgement, alternatives analysis
To develop a Quality Management Plan to ensure the adequacy of the project outcome	Interviews, expert judgement
To develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied	Interviews, expert judgement, responsibility assignment matrix
To develop a Communications Management Plan to control how project information is shared	Interviews, expert judgement, communications requirements analysis, communication methods

To develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events	Interviews, expert judgement, qualitative risk analysis, risk matrices
To develop a Procurement Management Plan to decide how project resources should be acquired	Interviews, expert judgement, source selection analysis
To develop a Stakeholder Management Plan to identify key project stakeholders and their needs	Interviews, expert judgement, stakeholder matrices

3.4 Assumptions and Constraints

As defined by the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide),⁹ assumptions are “factors expected to be in place or to be in evidence” during a project. Furthermore, constraints are “any restriction[s] that [define] a project's limitations”.¹⁶ The assumptions and constraints for this FGP are described in the following table:

Chart 4 Assumptions and Constraints (Source: Own elaboration)

Objectives	Assumptions	Constraints
To prepare a project charter and plan for the execution of the FGP	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p> <p>The MPM course platform will be available and functional for deliverable submissions and access to resources.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p> <p>The first five deliverables have only</p>

Objectives	Assumptions	Constraints
		a short time available for their completion.
To develop a Scope Management Plan to specify what work the project will cover	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Cost Management Plan to control the project budget	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>

Objectives	Assumptions	Constraints
To develop a Quality Management Plan to ensure the adequacy of the project outcome	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Communications Management Plan to control how project information is shared	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Risk Management Plan to prepare for uncontrollable	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and</p>

Objectives	Assumptions	Constraints
and/or unexpected events	<p>Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Procurement Management Plan to decide how project resources should be acquired	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>
To develop a Stakeholder Management Plan to identify key project stakeholders and their needs	<p>Timely and constructive responses will be provided by professors and tutors.</p> <p>Timely and relevant information will be provided by the Aveanna Healthcare representative.</p> <p>Electricity and an internet connection will be readily available throughout the lifespan of the project.</p>	<p>The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.</p> <p>The student/PM has other work and obligations outside of but simultaneously with this project.</p> <p>The student/PM is the sole member of the project team.</p> <p>The student/PM does not have prior experience in IT or IT projects.</p>

3.5 Deliverables

According to the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide),⁹ “A deliverable is defined as any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or

project. Deliverables may be tangible or intangible.” Each specific objective of this FGP has a corresponding deliverable, as described in the table below:

Chart 5 Deliverables (Source: Own elaboration)

Objectives	Deliverables
To prepare a project charter and plan for the execution of the FGP	Project charter, to initiate the project; Introduction, to describe background information about the project; Theoretical framework, to explain the circumstances under which the project will be carried out; Methodological framework, to explain how the project will be carried out
To develop a Scope Management Plan to specify what work the project will cover	Scope Management Plan, which will set the limits for what work needs to be performed and through what activities in the project to be planned
To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame	Schedule Management Plan, which will lay out the timeline for the work described in the Scope Management Plan, as well as control strategies for that timeline
To develop a Cost Management Plan to control the project budget	Cost Management Plan, which will put in place a budget estimate and control measures for that budget
To develop a Quality Management Plan to ensure the adequacy of the project outcome	Quality Management Plan, which will cover how to keep the work in the Scope Management Plan in line with company standards

To develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied	Resource Management Plan, which will identify, describe, and allocate resources and responsibilities needed for project work
To develop a Communications Management Plan to control how project information is shared	Communications Management Plan, which will lay out how project information is to be collected, controlled, and shared
To develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events	Risk Management Plan, which will put in place response plans for threats and opportunities that may arise during the project
To develop a Procurement Management Plan to decide how project resources should be acquired	Procurement Management Plan, which will analyze and describe the ways in which the products and services needed for the project are to be acquired
To develop a Stakeholder Management Plan to identify key project stakeholders and their needs	Stakeholder Management Plan, which will identify and describe stakeholder priorities and expectations and how to respond to them

4 RESULTS

4.1 FGP Preparation

Specific objective 1 is to prepare a project charter and plan for the execution of the Final Graduation Project (FGP). The relevant deliverables for this objective can be found in the Appendices beginning on page 95. They are not part of the project management plan developed for the Aveanna Healthcare project.

4.2 Project Scope Management

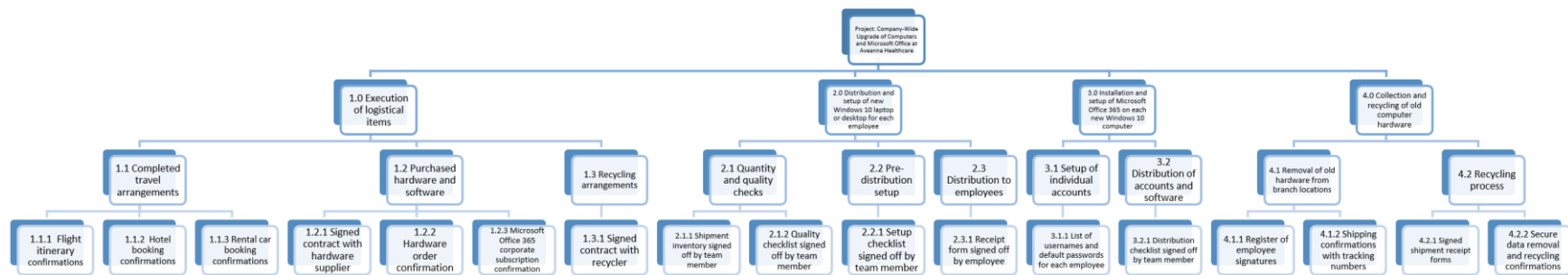
4.2.1 Project Scope Statement

Project Scope Statement	
Project Scope Description	Aveanna Healthcare's IT department has undertaken a project to upgrade the computer and Microsoft Office suite of every company employee at each of the company's 203 branches. By the end of the project, every Aveanna employee will be using a computer running the Windows 10 OS and the Microsoft Office 365 program. Through this project, every Aveanna employee will have their Windows 7 work computer exchanged for a Windows 10 computer and the edition of Microsoft Office on that computer updated to Office 365. The scope of this project includes distributing and setting up new computer hardware; distributing and installing new Microsoft Office software; and collecting old computer hardware for recycling.
Project Deliverables	<ol style="list-style-type: none"> 1. New Windows 10 laptop or desktop distributed to each Aveanna Healthcare employee 2. New Windows 10 laptop or desktop set up for each Aveanna Healthcare employee: data transfer, software installation, and external hardware (printers, scanners) setup 3. Microsoft Office 365 installed and set up on each new Windows 10 desktop or laptop 4. Employees' old computer hardware collected and recycled
Acceptance Criteria	<ol style="list-style-type: none"> 1. Each Aveanna Healthcare employee at each branch location has a new Windows 10 desktop or laptop in his/her possession; No new computer hardware is defective 2. Each new computer is fully functional and set up according to the needs of the employee who

	<p>possesses it</p> <ol style="list-style-type: none">3. Microsoft Office 365 is successfully installed on each new computer and set up according to the needs of the employee using it4. No old computer hardware is still retained by company employees; Computer hard drives are securely wiped and recycled separately
Project Exclusions	<p>This project does not include:</p> <ul style="list-style-type: none">• Technical support beyond what is reasonably necessary for successful setup of new hardware and software• Distribution or setup of any new hardware besides new Windows 10 laptops and desktops• Distribution or setup of any new software besides Microsoft Office 365• Monitoring of or checks for appropriate usage of work computers by employees• Any activities that fall outside the realm of information technology

4.2.2 Work Breakdown Structure

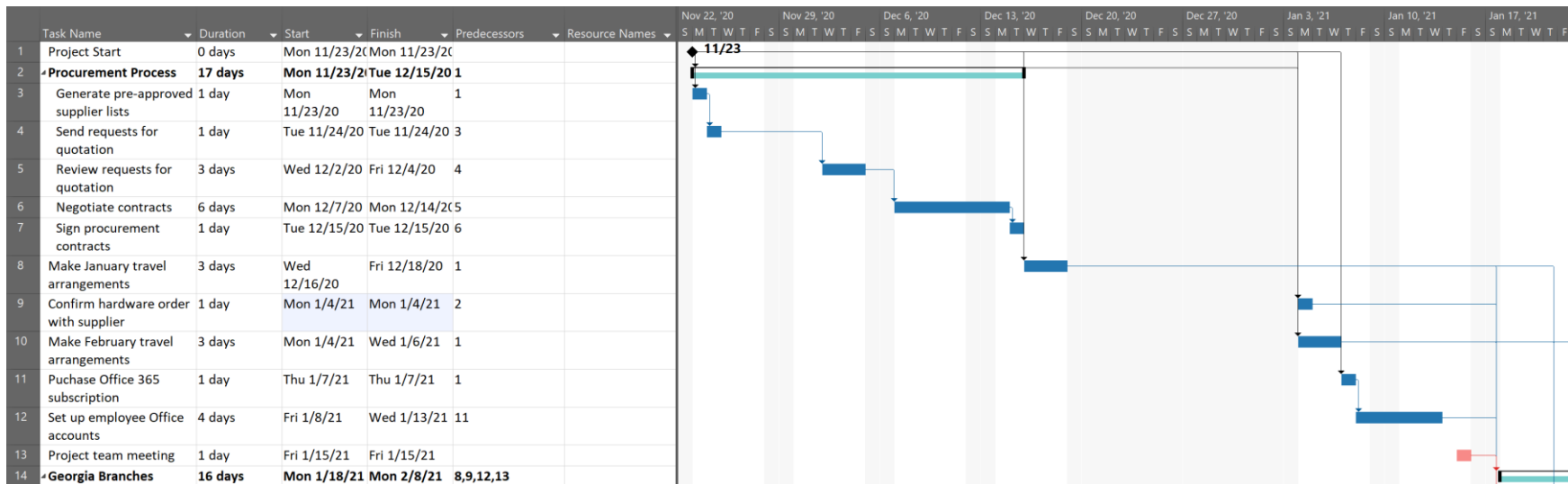
The work breakdown structure (WBS) for this project is shown below. Each item at the lowest level of the hierarchy is a tangible project deliverable, such as an order confirmation or signed contract.



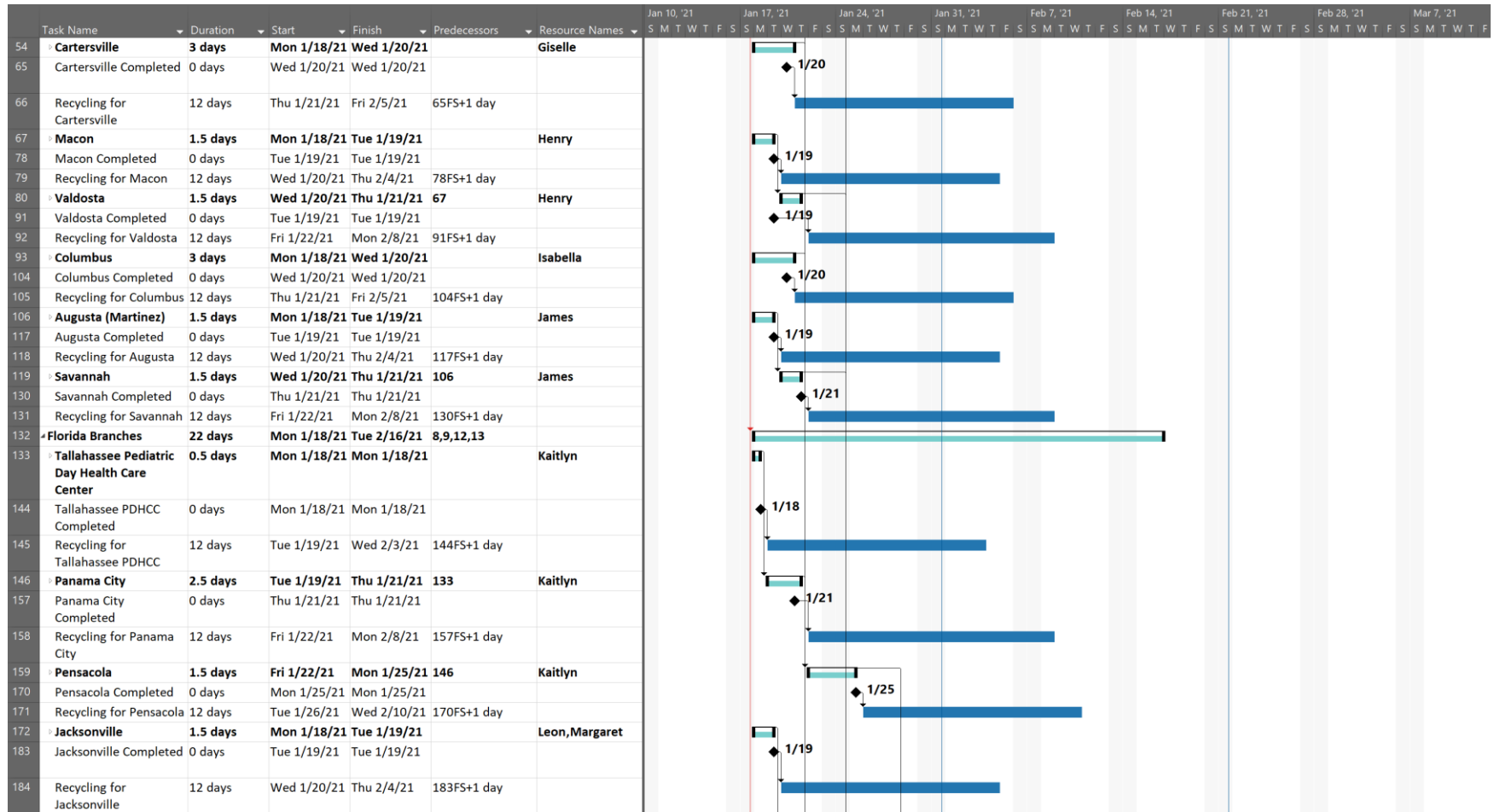
4.3 Project Schedule Management

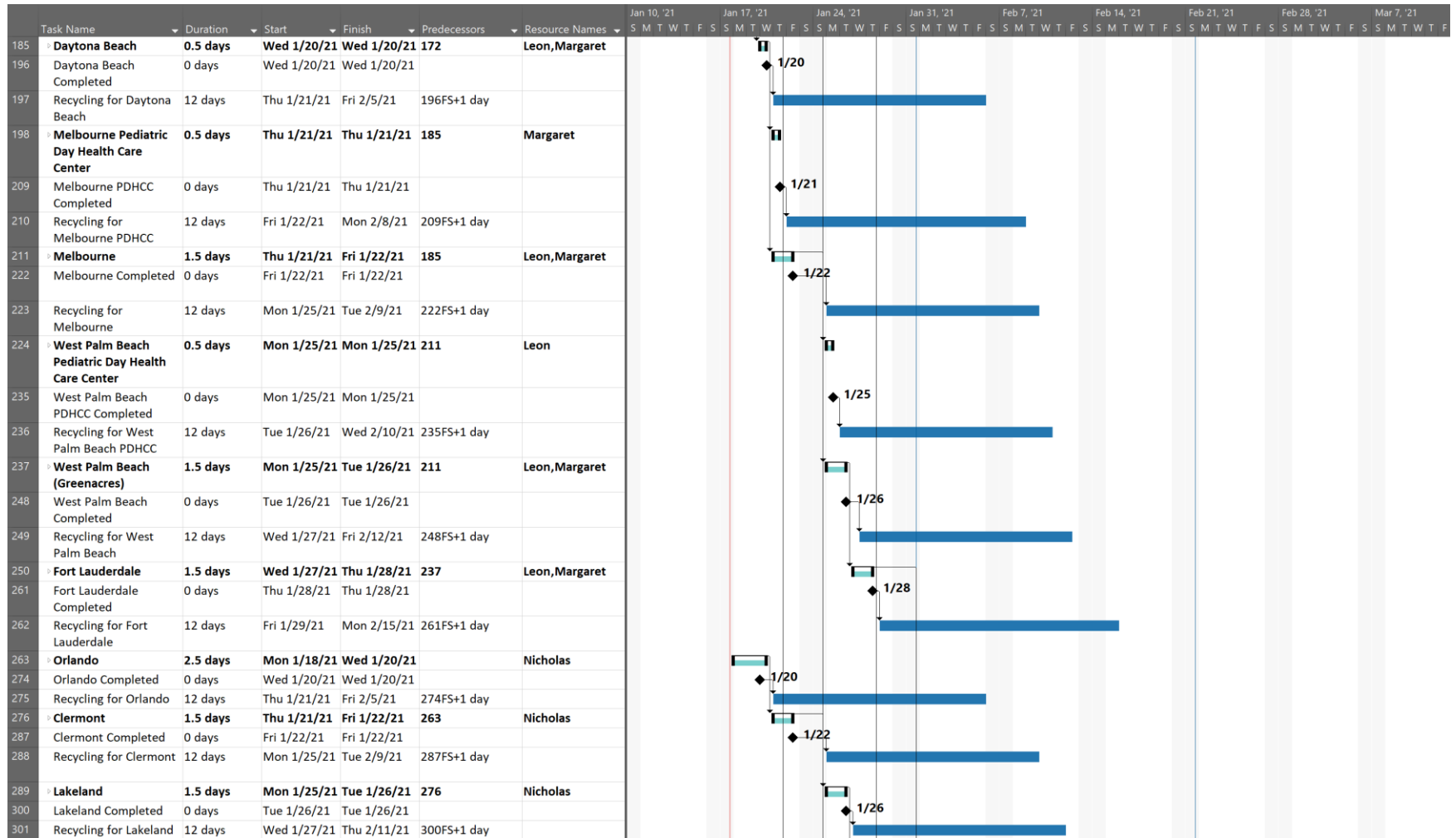
4.3.1 Gantt Chart

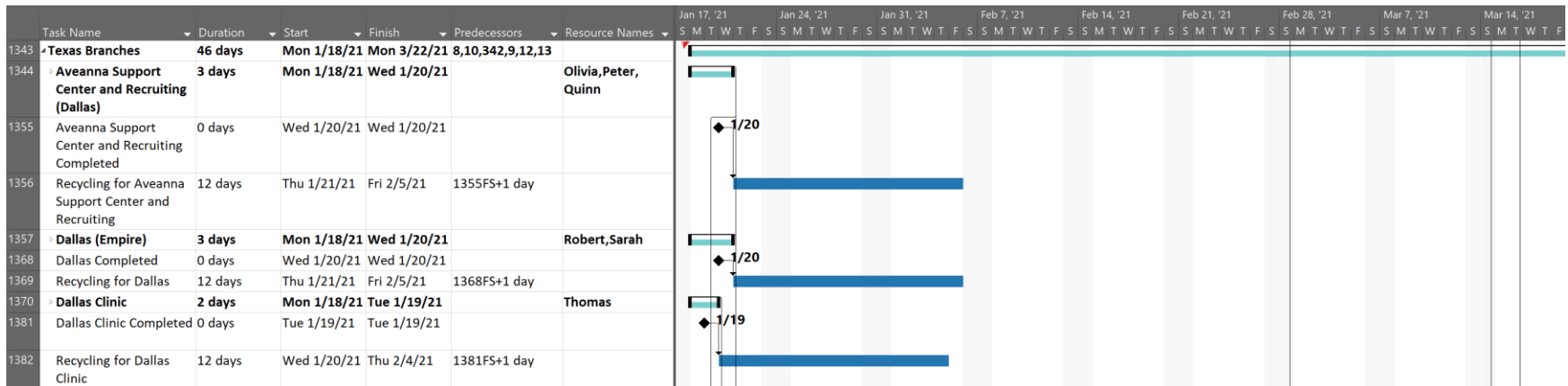
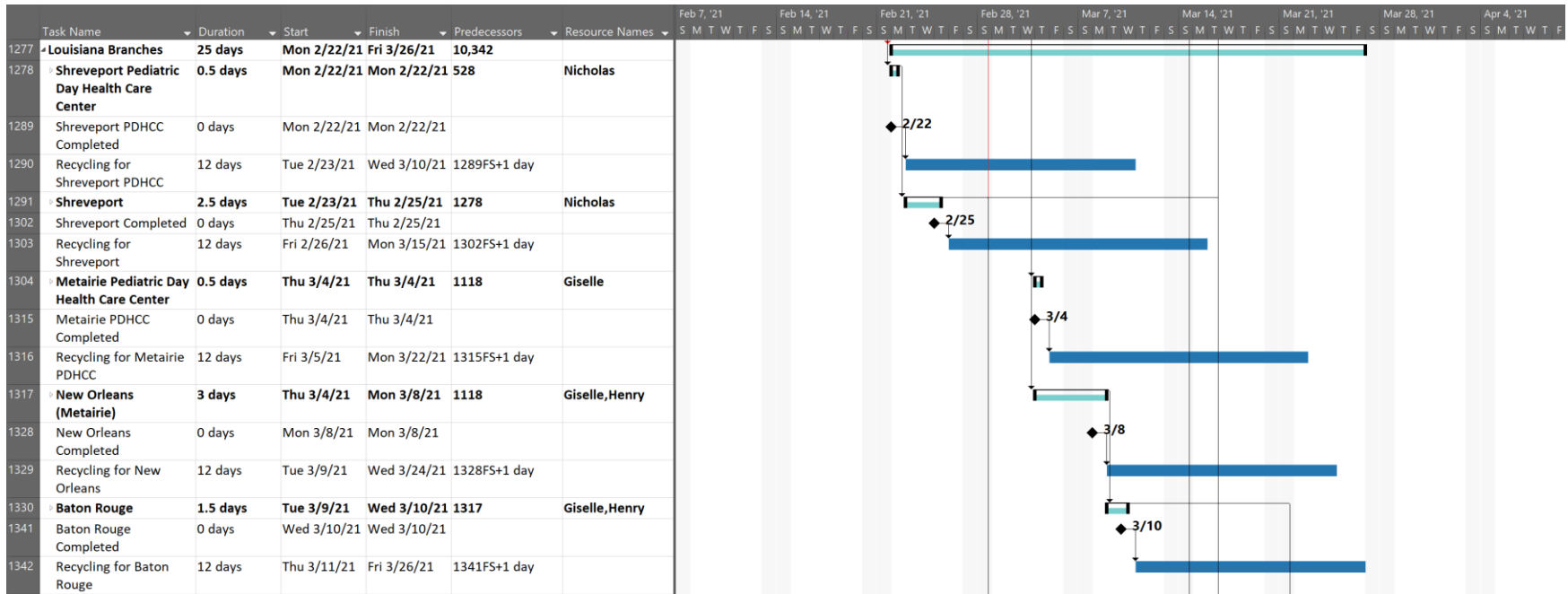
Below is the Gantt chart depicting the project timeline and critical path (shown in red). This Gantt chart includes procurement and logistical activities and the work to be done at each individual branch. The same set of subtasks occurs at each branch in the same order; therefore, each branch’s summary task has been collapsed for the sake of space and readability, excluding the first one, which remains open to serve as an example. The inclusion of the hidden subtasks remains reflected in the task numbers. Following the Gantt chart in section 4.3.2 is an additional flowchart that explores the branches’ subtasks in greater detail.

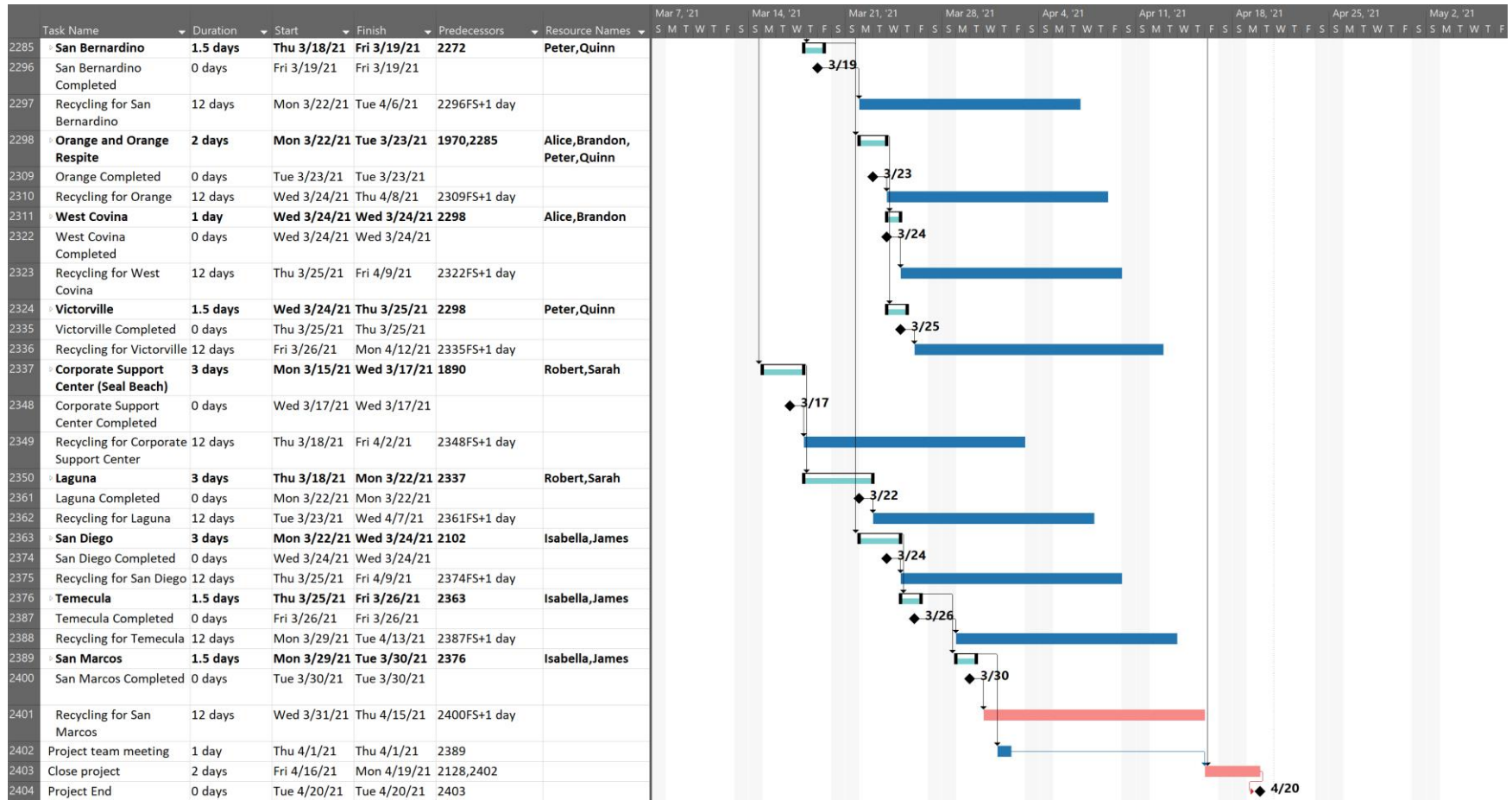




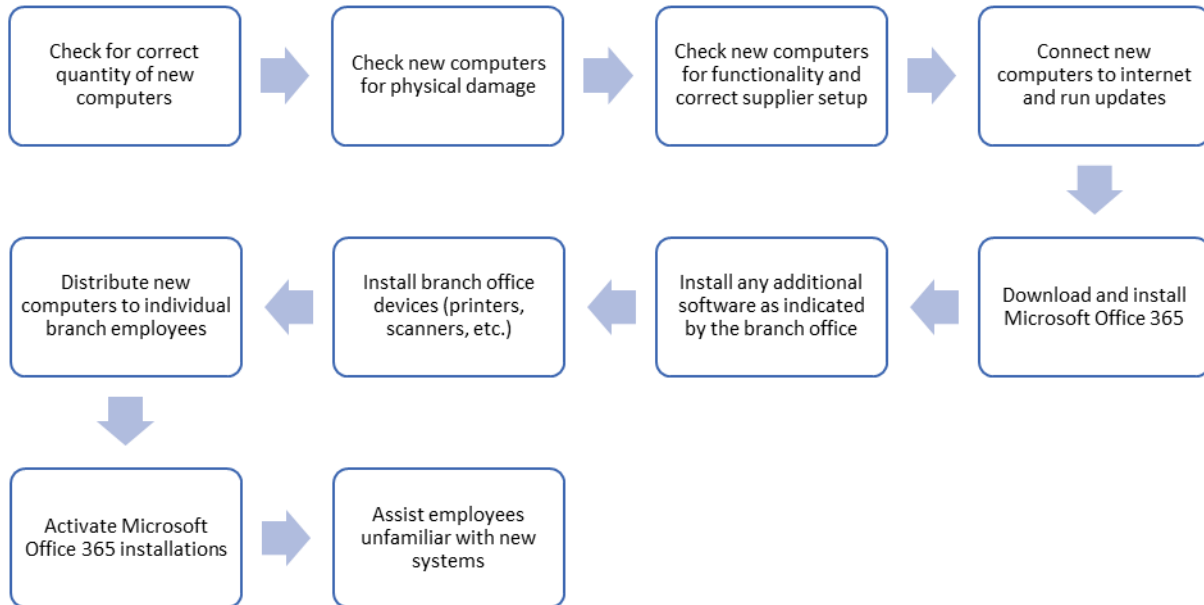








4.3.2 Branch Sub-tasks



The flowchart above displays the sub-tasks that must be completed at each branch and the basic order in which they must be completed. The project team members assigned to the branches, as indicated in both the Gantt chart in section 4.3.1 and the table in section 4.3.3, are the resources responsible for carrying out all of these tasks. Each branch has exactly the same set of sub-tasks in the same order, regardless of the amount of time for which the branch is scheduled. Once the tasks indicated in this flowchart are completed, the on-site work for the branch is completed, and recycling can begin.

4.3.3 On-site Work and Team Member Travel

The following table shows the schedule for team members' visits to each branch location. Aveanna Healthcare has 203 branches, some of which have been combined into a single row due to their being located at the same address. The branch visits are divided among 20 team members, 14 of whom are based in Atlanta, Georgia and 6 of whom are based in Dallas, Texas (Michael Yerkey, oral communication, June 16, 2020). For this reason, even though the Texas section is quite far down the list, both Georgia and Texas begin on Day 1 of on-site work to allow the team members to start work in their respective home locations and then proceed in different directions as geographically appropriate. The start dates highlighted in yellow indicate the first day of on-site work. Dates colored in red indicate the date all on-site work is to be finished in a given state.

Some locations have a half day included in their schedule to allow team members adequate time to complete all work at the branch while also allowing for time to travel to the next location or check in to accommodations. This is not necessary when some or all of the branches in a set are located in the same city; however, some sets do require the team member(s) to drive to and stay in multiple different cities. Leaving a half day clear between branches allows those team members time for hotel check-out and check-in, travel, meals, and rest before starting work in the next city.

Atlanta Team (14): Alice, Brandon, Catherine, Daniel, Emily, Frank, Giselle, Henry, Isabella, James, Kaitlyn, Leon, Margaret, Nicholas
 Dallas Team (6): Olivia, Peter, Quinn, Robert, Sarah, Thomas

Location	Duration	Start Date	End Date	Assigned To	Travel
GEORGIA					
Support Center HQ	3 days	Jan. 18, 2021	Jan. 20, 2021	Alice, Brandon	Home
Atlanta North (Peachtree Corners)	3 days	Jan. 18, 2021	Jan. 20, 2021	Catherine, Daniel	Home
Atlanta South (College Park)	3 days	Jan. 18, 2021	Jan. 20, 2021	Emily, Frank	Home
Cartersville	3 days	Jan. 18, 2021	Jan. 20, 2021	Giselle	Home
Macon	1.5 days	Jan. 18, 2021	Jan. 19, 2021	Henry	Driving, depart 1/18,
Valdosta	1.5 days	Jan. 20, 2021	Jan. 21, 2021	Henry	return 1/21
Columbus	3 days	Jan. 18, 2021	Jan. 20, 2021	Isabella	Driving, depart 1/18,

					return 1/20
Augusta (Martinez)	1.5 days	Jan. 18, 2021	Jan. 19, 2021	James	Driving, depart 1/18, return 1/21
Savannah	1.5 days	Jan. 20, 2021	Jan. 21, 2021	James	
FLORIDA					
Tallahassee Pediatric Day Healthcare Center	0.5 days	Jan. 18, 2021	Jan. 18, 2021	Kaitlyn	Flight departs Atlanta to Tallahassee 1/18, returns Pensacola to Atlanta 1/25
Panama City	2.5 days	Jan. 19, 2021	Jan. 21, 2021	Kaitlyn	
Pensacola	1.5 days	Jan. 22, 2021	Jan. 25, 2021	Kaitlyn	
Jacksonville	1.5 days	Jan. 18, 2021	Jan. 19, 2021	Leon, Margaret	Flight departs Atlanta to Jacksonville 1/18, returns Fort Lauderdale to Atlanta 1/28
Daytona Beach	0.5 days	Jan. 20, 2021	Jan. 20, 2021	Leon, Margaret	
Melbourne Pediatric Day Health Care Center	0.5 days	Jan. 21, 2021	Jan. 21, 2021	Margaret	
Melbourne	1.5 days	Jan. 21, 2021	Jan. 22, 2021	Leon, Margaret	
West Palm Beach Pediatric Day Healthcare Center	0.5 days	Jan. 25, 2021	Jan. 25, 2021	Leon	
West Palm Beach (Greenacres)	1.5 days	Jan. 25, 2021	Jan. 26, 2021	Leon, Margaret	
Fort Lauderdale	1.5 days	Jan. 27, 2021	Jan. 28, 2021	Leon, Margaret	
Orlando	2.5 days	Jan. 18, 2021	Jan. 20, 2021	Nicholas	Flight departs Atlanta to Orlando 1/18, returns Fort Meyers to Atlanta 1/29
Clermont	1.5 days	Jan. 21, 2021	Jan. 22, 2021	Nicholas	
Lakeland	1.5 days	Jan. 25, 2021	Jan. 26, 2021	Nicholas	
Brandon Pediatric Day Healthcare Center	0.5 days	Jan. 27, 2021	Jan. 27, 2021	Nicholas	
Fort Meyers	1.5 days	Jan. 28, 2021	Jan. 29, 2021	Nicholas	

SOUTH CAROLINA					
Greenville (Piedmont)	3 days	Jan. 25, 2021	Jan. 27, 2021	Alice	Driving, depart 1/24, return 1/27
NORTH CAROLINA					
Charlotte	2 days	Jan. 22, 2021	Jan. 25, 2021	Brandon, Catherine	Flight departs Atlanta to Charlotte 1/21, returns Raleigh-Durham to Atlanta 2/4
Newton	1 day	Jan. 26, 2021	Jan. 26, 2021	Brandon, Catherine	
Winston Salem	2.5 days	Jan. 27, 2021	Jan. 29, 2021	Brandon, Catherine	
Raleigh (Cary)	1.5 days	Feb. 1, 2021	Feb. 2, 2021	Brandon, Catherine	
Greenville	1.5 days	Feb. 3, 2021	Feb. 4, 2021	Brandon	
Fayetteville	1.5 days	Feb. 3, 2021	Feb. 4, 2021	Catherine	
VIRGINIA					
Richmond	3 days	Jan. 22, 2021	Jan. 26, 2021	Emily, Frank	Flight departs Atlanta to Richmond 1/21, returns 2/5
Hampton	2 days	Jan. 27, 2021	Jan. 28, 2021	Emily, Frank	
Norfolk	2 days	Jan. 29, 2021	Feb. 1, 2021	Emily, Frank	
Virginia Beach	3 days	Feb. 2, 2021	Feb. 4, 2021	Emily, Frank	
Northern Virginia (Burke)	2.5 days	Jan. 22, 2021	Jan. 26, 2021	Daniel	Flight departs Atlanta to Washington Dulles 1/22, returns 2/1
Falls Church & Falls Church ABA	4 days	Jan. 27, 2021	Feb. 1, 2021	Daniel	
MARYLAND					
Towson ABA	4 days	Feb. 1, 2021	Feb. 4, 2021	Nicholas	Flight departs Atlanta to Baltimore 1/31
DELAWARE					
Newark and Newark ABA	2 days	Feb. 5, 2021	Feb. 8, 2021	Nicholas	Flight returns Baltimore to Atlanta 2/10
Georgetown	1.5 days	Feb. 9, 2021	Feb. 10, 2021	Nicholas	
PENNSYLVANIA					
Bala Cynwyd,	3.5 days	Jan. 22,	Jan. 27,	Giselle,	Flight

Bala Cynwyd Unskilled, and Bala Cynwyd ABA		2021	2021	Isabella	departs Atlanta to Philadelphia 1/22, returns 2/11
Jenkintown	1.5 days	Jan. 28, 2021	Jan. 29, 2021	Giselle, Isabella	
Wyncote Pediatric Day Health Care Center	0.5 days	Feb. 1, 2021	Feb. 1, 2021	Giselle, Isabella	
Blue Bell	1 day	Feb. 2, 2021	Feb. 2, 2021	Giselle, Isabella	
Trevoze and Trevoze ABA	1.5 days	Feb. 3, 2021	Feb. 4, 2021	Giselle, Isabella	
Allentown and Allentown ABA	2.5 days	Feb. 5, 2021	Feb. 9, 2021	Giselle, Isabella	
Bartonsville	1 day	Feb. 10, 2021	Feb. 10, 2021	Giselle, Isabella	
Media	2 days	Jan. 25, 2021	Jan. 26, 2021	Henry, James	Flight departs Atlanta to Philadelphia 1/24, returns Baltimore to Atlanta 2/9
Exton	1.5 days	Jan. 27, 2021	Jan. 28, 2021	Henry, James	
Reading	1 day	Jan. 29, 2021	Jan. 29, 2021	Henry, James	
Lancaster	1 day	Feb. 1, 2021	Feb. 1, 2021	Henry, James	
York	1.5 days	Feb. 2, 2021	Feb. 3, 2021	Henry, James	
Harrisburg Pediatric Day Health Care Center	0.5 days	Feb. 4, 2021	Feb. 4, 2021	Henry	
Harrisburg	1.5 days	Feb. 4, 2021	Feb. 5, 2021	Henry, James	
Chambersburg	1 day	Feb. 8, 2021	Feb. 8, 2021	Henry, James	
Scranton (S. Abington) and Scranton ODP	1 day	Feb. 1, 2021	Feb. 1, 2021	Leon, Margaret	Flight departs Atlanta to Wilkes-Barre Scranton 1/31, returns 2/6
Wilkes-Barre Pediatric Day Healthcare Center	0.5 days	Feb. 2, 2021	Feb. 2, 2021	Leon	
Wilkes-Barre	1.5 days	Feb. 2, 2021	Feb. 3, 2021	Leon, Margaret	

Williamsport	1 day	Feb. 4, 2021	Feb. 4, 2021	Leon, Margaret	Flight departs Atlanta to Pittsburgh 1/29, returns Buffalo to Atlanta 2/10
State College	1 day	Feb. 5, 2021	Feb. 5, 2021	Leon, Margaret	
Pittsburgh (Reedsdale Street)	1.5 days	Jan. 29, 2021	Feb. 1, 2021	Alice, Kaitlyn	
Pittsburgh (Penn Center Blvd)	2.5 days	Feb. 1, 2021	Feb. 3, 2021	Alice, Kaitlyn	
North Versailles Pediatric Day Health Care Center	0.5 days	Feb. 4, 2021	Feb. 4, 2021	Alice, Kaitlyn	
DuBois	1 day	Feb. 5, 2021	Feb. 5, 2021	Alice, Kaitlyn	
Port Allegany (Smethport)	1.5 days	Feb. 8, 2021	Feb. 9, 2021	Alice, Kaitlyn	
Wexford	2.5 days	Feb. 4, 2021	Feb. 8, 2021	Daniel	Flight departs Atlanta to Pittsburgh 2/4, returns Erie to Atlanta 2/12
Erie Pediatric Day Health Care Center	0.5 days	Feb. 9, 2021	Feb. 9, 2021	Daniel	
Erie	2.5 days	Feb. 10, 2021	Feb. 12, 2021	Daniel	
NEW JERSEY					
Aveanna Support Center - Northeast	2.5 days	Feb. 22, 2021	Feb. 24, 2021	Alice, Brandon	Flight departs Atlanta to Philadelphia 2/22, returns 3/3
Concierge Services – South Jersey	1.5 days	Feb. 24, 2021	Feb. 25, 2021	Alice, Brandon	
Mt. Laurel	1.5 days	Feb. 25, 2021	Feb. 26, 2021	Alice, Brandon	
Toms River	2 days	March 1, 2021	March 2, 2021	Alice, Brandon	
Hamilton	2.5 days	Feb. 22, 2021	Feb. 24, 2021	Catherine, Daniel	Flight departs Atlanta to Trenton 2/22, returns Newark Liberty to Atlanta 3/5
North Brunswick ABA	1 day	Feb. 25, 2021	Feb. 25, 2021	Catherine, Daniel	
Clark	1.5 days	Feb. 26, 2021	March 1, 2021	Catherine, Daniel	
Concierge Services – North Jersey	1.5 days	March 2, 2021	March 3, 2021	Catherine, Daniel	

Hackensack	1.5 days	March 4, 2021	March 5, 2021	Catherine, Daniel	
NEW YORK					
Buffalo (Williamsville)	1.5 days	Feb. 22, 2021	Feb. 23, 2021	Emily	Flight departs Atlanta to Buffalo 2/21, returns 2/23
CONNECTICUT					
Hartford (Plainville)	1.5 days	Feb. 22, 2021	Feb. 23, 2021	Frank	Flight departs Atlanta to Hartford 2/22, returns 3/2
Norwich	2.5 days	Feb. 24, 2021	Feb. 26, 2021	Frank	
Stratford	1.5 days	March 1, 2021	March 2, 2021	Frank	
MASSACHUSETTS					
Waltham	1 day	Feb. 22, 2021	Feb. 22, 2021	Giselle, Henry	Flight departs Atlanta to Boston 2/21, returns 3/1
Brookline	1 day	Feb. 23, 2021	Feb. 23, 2021	Giselle, Henry	
Boston (Brockton)	2.5 days	Feb. 24, 2021	Feb. 26, 2021	Giselle, Henry	
Plymouth (Branch of Boston)	1 day	March 1, 2021	March 1, 2021	Giselle, Henry	
Aveanna Support Services (Westford)	2.5 days	Feb. 22, 2021	Feb. 24, 2021	Isabella, James	Flight departs Atlanta to Boston 2/21, returns Bradley International to Atlanta 3/5
Shrewsbury	1 day	Feb. 25, 2021	Feb. 25, 2021	Isabella, James	
Worcester	1.5 days	Feb. 26, 2021	March 1, 2021	Isabella, James	
Springfield	2.5 days	March 2, 2021	March 4, 2021	Isabella, James	
West Springfield	1 day	March 5, 2021	March 5, 2021	Isabella, James	
MICHIGAN					
Farmington Hills	3 days	Feb. 22, 2021	Feb. 24, 2021	Kaitlyn	Flight departs Atlanta to Detroit 2/21, returns 2/24
INDIANA					
Indianapolis	2.5 days	Feb. 22,	Feb. 24,	Leon,	Flight

		2021	2021	Margaret	departs Atlanta to Indianapolis 2/22, returns Fort Wayne to Atlanta 3/2
Valparaiso	1 day	Feb. 25, 2021	Feb. 25, 2021	Leon, Margaret	
Fort Wayne	2.5 days	Feb. 26, 2021	March 2, 2021	Leon, Margaret	
ILLINOIS					
Chicago North (Elgin)	2.5 days	March 1, 2021	March 3, 2021	Emily, Kaitlyn	Flight departs Atlanta to Chicago O'Hare 3/1, returns 3/5
Chicago South (Tinley Park)	1.5 days	March 4, 2021	March 5, 2021	Emily, Kaitlyn	
LOUISIANA					
Metairie Pediatric Day Health Care Center	0.5 days	March 4, 2021	March 4, 2021	Giselle	Flight departs Atlanta to New Orleans 3/3, returns 3/10
New Orleans (Metairie)	3 days	March 4, 2021	March 8, 2021	Giselle, Henry	
Baton Rouge	1.5 days	March 9, 2021	March 10, 2021	Giselle, Henry	
Shreveport Pediatric Day Health Care Center	0.5 days	Feb. 22, 2021	Feb. 22, 2021	Nicholas	Flight departs Atlanta to Shreveport 2/22, returns 2/24
Shreveport	2.5 days	Feb. 22, 2021	Feb. 24, 2021	Nicholas	
TEXAS					
Aveanna Support Center and Recruiting (Dallas)	3 days	Jan. 18, 2021	Jan. 20, 2021	Olivia, Peter, Quinn	Home
Dallas (Empire)	3 days	Jan. 18, 2021	Jan. 20, 2021	Robert, Sarah	
Dallas Clinic	2 days	Jan. 18, 2021	Jan. 19, 2021	Thomas	Home
Dallas Home Therapy	3 days	Jan. 20, 2021	Jan. 22, 2021	Thomas, Olivia	
Addison	3 days	Jan. 21, 2021	Jan. 25, 2021	Peter, Quinn	Home
Addison Therapy	2 days	Jan. 26, 2021	Jan. 27, 2021	Peter, Quinn	
Allen Clinic	2 days	Jan. 21,	Jan. 22,	Robert	Home

		2021	2021		
Mesquite	2 days	Jan. 25, 2021	Jan. 26, 2021	Robert	
Garland Clinic	2 days	Jan. 21, 2021	Jan. 22, 2021	Sarah	Home
Arlington Clinic	2 days	Jan. 25, 2021	Jan. 26, 2021	Sarah	
Fort Worth East and Fort Worth ABA	2 days	Jan. 25, 2021	Jan. 26, 2021	Thomas, Olivia	Home
Fort Worth Clinic	2 days	Jan. 27, 2021	Jan. 28, 2021	Thomas	
Fort Worth West	2 days	Jan. 27, 2021	Jan. 28, 2021	Olivia	
Mount Pleasant	1 day	Jan. 27, 2021	Jan. 27, 2021	Robert, Sarah	Home
Tyler	1 day	Jan. 28, 2021	Jan. 28, 2021	Robert, Sarah	Home
Tyler Clinic	1 day	Jan. 28, 2021	Jan. 28, 2021	Peter, Quinn	
Temple	1.5 days	Feb. 1, 2021	Feb. 2, 2021	Thomas, Olivia	Driving, depart 2/1, return 2/10
Austin North	2 days	Feb. 3, 2021	Feb. 4, 2021	Thomas, Olivia	
Austin North Clinic	1 day	Feb. 5, 2021	Feb. 5, 2021	Thomas, Olivia	
Austin South	2 days	Feb. 8, 2021	Feb. 9, 2021	Thomas, Olivia	
Austin South Clinic	1 day	Feb. 10, 2021	Feb. 10, 2021	Thomas, Olivia	
San Antonio East	2 days	Feb. 1, 2021	Feb. 2, 2021	Peter, Quinn	Flight departs Dallas to San Antonio 1/31, returns 2/5
San Antonio West	2 days	Feb. 3, 2021	Feb. 4, 2021	Peter, Quinn	
San Antonio Clinic	1 day	Feb. 5, 2021	Feb. 5, 2021	Peter, Quinn	
College Station and College Station Therapy	1.5 days	Feb. 1, 2021	Feb. 2, 2021	Robert, Sarah	Flight departs Dallas to Houston 2/1, returns 2/11
Houston Northwest	2.5 days	Feb. 3, 2021	Feb. 5, 2021	Robert, Sarah	
Houston North Clinic	1 day	Feb. 8, 2021	Feb. 8, 2021	Robert, Sarah	
Houston East	2 days	Feb. 9, 2021	Feb. 10, 2021	Robert, Sarah	

Beaumont and Beaumont Therapy	1 day	Feb. 11, 2021	Feb. 11, 2021	Robert, Sarah	
Houston North and Houston North Therapy	2.5 days	Feb. 8, 2021	Feb. 10, 2021	Peter, Quinn	Flight departs Dallas to Houston 2/8, returns 2/17
Katy and Katy Therapy	2 days	Feb. 11, 2021	Feb. 12, 2021	Peter, Quinn	
Houston South	3 days	Feb. 15, 2021	Feb. 17, 2021	Peter, Quinn	
Houston South Kirby Clinic	1 day	Feb. 18, 2021	Feb. 18, 2021	Peter, Quinn	
Pearland Clinic	1 day	Feb. 19, 2021	Feb. 19, 2021	Peter, Quinn	
Corpus Christi and Corpus Christi Therapy	2 days	Feb. 15, 2021	Feb. 16, 2021	Thomas, Olivia	Flight departs Dallas to Corpus Christi departs 2/14, returns 2/19
Laredo and Laredo Home Therapy	2 days	Feb. 17, 2021	Feb. 18, 2021	Thomas, Olivia	
McAllen	1.5 days	Feb. 15, 2021	Feb. 16, 2021	Robert, Sarah	Flight departs Dallas to McAllen 2/15, returns 2/22
Pharr (Weslaco) and Pharr Therapy	1.5 days	Feb. 17, 2021	Feb. 18, 2021	Robert, Sarah	
Olmito	1.5 days	Feb. 19, 2021	Feb. 22, 2021	Robert, Sarah	
Amarillo and Amarillo Therapy	3 days	Feb. 22, 2021	Feb. 24, 2021	Thomas, Olivia	Flight departs Dallas to Amarillo 2/21, returns 2/24
Lubbock and Lubbock Therapy	3 days	Feb. 22, 2021	Feb. 24, 2021	Peter, Quinn	Flight departs Dallas to Lubbock 2/21, returns 2/24
El Paso	2 days	March 1, 2021	March 2, 2021	Robert, Sarah	Flight departs Dallas to El Paso 2/28,
El Paso Clinic and El Paso	1.5 days	March 3, 2021	March 4, 2021	Robert, Sarah	

Therapy					returns 3/4
WASHINGTON					
Tacoma (Lakewood)	2.5 days	March 1, 2021	March 3, 2021	Thomas	Flight departs Dallas to Seattle 2/28, returns 3/3
Spokane	2.5 days	March 1, 2021	March 3, 2021	Olivia	Flight departs Dallas to Spokane 2/28, returns 3/3
Vancouver	2.5 days	March 1, 2021	March 3, 2021	Nicholas	Flight departs Atlanta to Portland 2/28
OREGON					
Keizer	1.5 days	March 4, 2021	March 5, 2021	Nicholas	Flight returns Portland to Atlanta 3/5
ARIZONA					
Phoenix	2.5 days	March 15, 2021	March 17, 2021	Alice, Brandon	Flight departs Atlanta to Phoenix 3/14, returns 3/19
Chandler	2 days	March 18, 2021	March 19, 2021	Alice, Brandon	
COLORADO					
Denver	1 day	March 15, 2021	March 15, 2021	Catherine, Daniel	Flight departs Atlanta to Denver 3/14, returns 3/25
Denver (Aurora)	3 days	March 16, 2021	March 18, 2021	Catherine, Daniel	
Aurora	3 days	March 19, 2021	March 23, 2021	Catherine, Daniel	
Loveland	1.5 days	March 24, 2021	March 25, 2021	Catherine, Daniel	
Englewood	2.5 days	March 15, 2021	March 17, 2021	Emily, Frank	Flight departs Atlanta to Denver 3/14, returns 3/25
Colorado Springs	1.5 days	March 18, 2021	March 19, 2021	Emily, Frank	
Colorado Springs ABA	1 day	March 22, 2021	March 22, 2021	Emily, Frank	

Pueblo	2 day	March 23, 2021	March 24, 2021	Emily, Frank	
NEVADA					
Las Vegas (E. Flamingo Road)	2.5 days	March 15, 2021	March 17, 2021	Isabella, James	Flight departs Atlanta to Las Vegas 3/14, returns 3/19
Las Vegas (West Hacienda Avenue)	1.5 days	March 18, 2021	March 19, 2021	Isabella, James	
Reno	1.5 days	March 15, 2021	March 16, 2021	Kaitlyn	Flight departs Atlanta to Reno 3/14, then flight departs Reno to Sacramento 3/16
CALIFORNIA					
Oakland	1.5 days	March 15, 2021	March 16, 2021	Leon, Margaret	Flight departs Atlanta to San Jose 3/14, returns 3/23
San Jose	2.5 days	March 17, 2021	March 19, 2021	Leon, Margaret	
San Jose Respite	1.5 days	March 22, 2021	March 23, 2021	Leon, Margaret	
Sacramento	2.5 days	March 17, 2021	March 19, 2021	Kaitlyn, Nicholas	Kaitlyn: Flight departs Reno to Sacramento 3/16 Nicholas: Flight departs Atlanta to Sacramento 3/16 Both: Flight returns Fresno to Atlanta 3/25
Modesto	1 day	March 22, 2021	March 22, 2021	Kaitlyn, Nicholas	
Fresno	2.5 days	March 23, 2021	March 25, 2021	Kaitlyn, Nicholas	
Torrance	3 days	March 15, 2021	March 17, 2021	Thomas, Olivia	Thomas & Olivia: Flight departs Dallas to Los Angeles
Santa Clarita	2 days	March 18, 2021	March 19, 2021	Thomas, Olivia	
Culver City and	2 days	March 22, 2021	March 23, 2021	Thomas,	

Culver City Respite		2021	2021	Olivia, Giselle, Henry	3/14, returns 3/25 Giselle & Henry: Flight departs Atlanta to Los Angeles 3/21, returns 3/26
Sherman Oaks	3 days	March 24, 2021	March 26, 2021	Giselle, Henry	
Palmdale	1.5 days	March 24, 2021	March 25, 2021	Thomas, Olivia	
Corona	3 days	March 15, 2021	March 17, 2021	Peter, Quinn	Peter & Quinn: Flight departs Dallas to Los Angeles 3/14, returns 3/25 Alice & Brandon: Flight departs Atlanta to Los Angeles 3/21, returns 3/24
San Bernardino	1.5 days	March 18, 2021	March 19, 2021	Peter, Quinn	
Orange and Orange Respite	2 days	March 22, 2021	March 23, 2021	Peter, Quinn, Alice, Brandon	
West Covina	1 day	March 24, 2021	March 24, 2021	Alice, Brandon	
Victorville	1.5 days	March 24, 2021	March 25, 2021	Peter, Quinn	
Corporate Support Center (Seal Beach)	3 days	March 15, 2021	March 17, 2021	Robert, Sarah	
Laguna	3 days	March 18, 2021	March 22, 2021	Robert, Sarah	
San Diego	3 days	March 22, 2021	March 24, 2021	Isabella, James	Flight departs Atlanta to San Diego 3/21, returns 3/30
Temecula	1.5 days	March 25, 2021	March 26, 2021	Isabella, James	
San Marcos	1.5 days	March 29, 2021	March 30, 2021	Isabella, James	

The summary of the above table is as follows:

State	Start Date	End Date
Georgia	January 18, 2021	January 21, 2021
Florida	January 18, 2021	January 29, 2021
South Carolina	January 25, 2021	January 27, 2021
North Carolina	January 22, 2021	February 4, 2021

Virginia	January 22, 2021	February 4, 2021
Maryland	February 1, 2021	February 4, 2021
Delaware	February 5, 2021	February 10, 2021
Pennsylvania	January 22, 2021	February 12, 2021
New Jersey	February 22, 2021	March 5, 2021
New York	February 22, 2021	February 23, 2021
Connecticut	February 22, 2021	March 2, 2021
Massachusetts	February 22, 2021	March 5, 2021
Michigan	February 22, 2021	February 24, 2021
Indiana	February 22, 2021	March 2, 2021
Illinois	March 1, 2021	March 5, 2021
Louisiana	February 22, 2021	March 10, 2021
Texas	January 18, 2021	March 4, 2021
Washington	March 1, 2021	March 3, 2021
Oregon	March 4, 2021	March 5, 2021
Arizona	March 15, 2021	March 19, 2021
Colorado	March 15, 2021	March 25, 2021
Nevada	March 15, 2021	March 19, 2021
California	March 15, 2021	March 30, 2021

4.4 Project Cost Management

Project cost management is more than just writing down a budget; it includes all of “the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs.”⁹ Therefore, when creating a cost management plan, it is necessary to include such information as the processes and tools to be used in calculating and expressing costs, the project’s methods for cost estimating, how various expenses are related to the work packages described in the WBS, and how project spending will be monitored.

4.4.1 Processes, Tools, and Techniques

The sixth edition of PMI’s Guide to the Project Management Body of Knowledge (PMBOK® Guide)⁹ describes several processes, tools, and techniques that may be relevant for project managers to include in their cost management plans. Three of those that apply to this project are described below, while the “rules of performance measurement” are described in section 4.4.4.

Units of Measure: As this project takes place within the United States of America, the currency used within this project management plan is United States Dollars (USD).

Level of Precision: Cost estimates in this project management plan are not rounded up or down except in cases where calculations resulted in a number with more than two decimal places.

Cost Estimation: This cost management plan uses the parametric estimating technique. This technique “uses a statistical relationship between relevant historical data and other variables... to calculate a cost estimate for project work”⁹ by establishing unit costs that can then be multiplied by the number of units necessary for the project.¹⁷

4.4.2 Project Cost Estimates

Cost estimates for this project were calculated using parametric estimating. Shown below are the sources and methods used to determine price per unit estimates for project expenses, as well as a table of the estimated project costs.

- Laptop and desktop computers – Dell.com¹⁸
- Microsoft Office 365 license – <https://www.microsoft.com/en-us/microsoft-365/business/compare-more-office-365-for-business-plans>¹⁹
- Airplane tickets – Cheapflights.com
 - Estimates use the average ticket cost for the appropriate month, multiplied by the number of team members making the trip. The site provides an average round-trip cost for each month and, typically, the overall lowest one-way price²⁰. Therefore, if a one-way estimate was needed for a month with higher prices, a corresponding percentage was calculated. For example, if the lowest round-trip price was \$100, and the lowest one-way price was \$80, the one-way estimate was calculated to be 80% of the appropriate month’s round-trip price. In the few cases where a one-way ticket price was not provided, the percentage used for the calculation was 75%.
 - Please note that the costs indicated are for the trips to each respective state, but that the airport(s) used may be located in a neighboring state. For example, some team members scheduled to work in New Jersey will fly into and out of Philadelphia, Pennsylvania. The cost of this trip is included in the estimate for New Jersey, not the estimate for Pennsylvania.
 - There is no airplane ticket cost estimate for South Carolina, as the only branch location in South Carolina is within reasonable driving distance of Atlanta, Georgia (the home location of the assigned team member).
 - Flights originating in Dallas, Texas did not have average prices shown on Cheapflights.com. For these estimates, Farecompare.com was used instead²¹. For the Reno, Nevada to Sacramento, California flight, Kayak.com was used²².
- Hotel accommodations - <https://www.statista.com/statistics/208133/us-hotel-revenue-per-available-room-by-month/>
 - Estimates use the 2019 average daily rate for the appropriate month²³.
- Rental cars - Kayak.com
 - The average cost per day of a rental car in a given state could be found in the FAQs on the car rentals page for that state under the

- question “How much does it cost to rent a car in [state]?”²².
- The per day cost of a rental car in Delaware is not shown because the team member assigned to work in Delaware will begin and end his trip in Maryland and does not need to rent a separate car in Delaware.
 - Gasoline - <https://www.cheatsheet.com/money-career/how-much-money-does-the-average-american-spend-a-year-what-the-typical-person-pays-for-food-gas-and-more.html/>
 - The average cost of gasoline per month in the United States in 2018 was \$164.00²⁴. This was divided by 4 to arrive at an average cost of \$41.00 per week. Any trip lasting fewer than 4 days has not received a gas budget (unless the team member is using his/her own car). Trips lasting 4 days or more are rounded up to the next highest number of weeks (4-7 days = 1 week, 8-14 days = 2 weeks, 15-21 days = 3 weeks).
 - Gas costs will be reimbursed to team members on a rolling basis based on receipts presented to the project manager by the project end date (April 20, 2021).
 - Meals - <https://www.budgetyourtrip.com/united-states-of-america#:~:text=While%20meal%20prices%20in%20the,cost%20around%20%2417%20per%20person.>
 - Cost estimates were calculated using the shown average of \$42.00 per person per day²⁵, with half that cost (\$21.00) being allocated for non-working travel days. Working days during which team members are able to stay in their own homes (those in the immediate areas of Atlanta, Georgia and Dallas, Texas) are not included in the calculations. Weekends during which team members are away from home *are* included in the calculations.
 - Meal costs will be reimbursed to team members on a rolling basis based on itemized receipts presented to the project manager by the project end date (April 20, 2021). Alcoholic beverages will not be considered for reimbursement.
 - Recycling Services - <https://www.pcsforpeople.org/recycling-frequently-asked-questions/> / <https://www.cnet.com/products/e772p-17-inch-crt-monitor/> / <https://www.mobilecomputerrepair.com/how-much-does-it-cost-to-ship-a-computer/>
 - Costs for recycling services are expected to come primarily from shipping and the costs of recycling certain outdated hardware such as cathode ray tube (CRT) monitors. Recycling costs are estimated at \$0.55 per pound²⁶ for each of 464 units, assuming that each unit weighs 33.51 pounds²⁷. Shipping costs are estimated at \$37.00 per computer²⁸ for each of 1,858 units.

Item	Price per Unit	Total Cost
Laptop Computers x1,394	\$650.00	\$906,100.00

Desktop Computers x464	\$1000.00	\$464,000.00
Microsoft Office 365 Corporate License	\$35.00 per user per month	\$780,360.00
Airplane Tickets	(Georgia n/a) \$1,124.73 Florida (S. Carolina n/a) \$758.00 N. Carolina \$755.00 Virginia \$155.00 Maryland/Delaware \$1,971.24 Pennsylvania \$560.00 New Jersey \$261.00 New York \$285.00 Connecticut \$588.68 Massachusetts \$136.00 Michigan \$513.00 Indiana \$310.00 Illinois \$665.00 Louisiana \$4,264.00 Texas \$907.00 Washington/Oregon \$690.00 Arizona \$820.00 Colorado \$702.28 Nevada \$4,280.15 California	\$19,746.08
Hotel Accommodations	\$995.12 Georgia \$4,229.26 Florida \$373.17 S. Carolina \$3,234.14 N. Carolina \$4,975.60 Virginia \$1,289.40 Maryland/Delaware \$15,266.00 Pennsylvania \$5,157.60 New Jersey \$257.88 New York \$1,031.52 Connecticut \$4,899.72 Massachusetts \$386.82 Michigan \$2,063.04 Indiana \$1,061.28 Illinois \$2,115.12 Louisiana \$14,213.16 Texas \$1,459.26 Washington/Oregon \$1,326.60 Arizona \$5,837.04 Colorado \$1,591.92 Nevada \$17,245.80 California	\$89,009.45

Rental Cars	(Georgia n/a) \$930.00 Florida (\$30/day) (S. Carolina n/a) \$645.00 N. Carolina (\$43/day) \$1,269.00 Virginia (\$47/day) \$594.00 Maryland (\$54/day)/Delaware \$3,819.00 Pennsylvania (\$57/day) \$1,364.00 New Jersey (\$62/day) \$183.00 New York (\$61/day) \$729.00 Connecticut (\$81/day) \$1,232.00 Massachusetts (\$56/day) \$176.00 Michigan (\$44/day) \$468.00 Indiana (\$52/day) \$235.00 Illinois (\$47/day) \$528.00 Louisiana (\$48/day) \$1,998.00 Texas (\$37/day) \$566.00 Washington (\$37/day)/Oregon (\$45/day) \$258.00 Arizona (\$43/day) \$1,152.00 Colorado (\$48/day) \$306.00 Nevada (\$34/day) \$2,555.00 California (\$35/day)	\$19,007.00
Gasoline	\$287.00 Georgia \$246.00 Florida \$41.00 S. Carolina \$123.00 N. Carolina \$205.00 Virginia \$82.00 Maryland/Delaware \$451.00 Pennsylvania \$164.00 New Jersey \$0.00 New York \$82.00 Connecticut \$164.00 Massachusetts \$41.00 Michigan \$82.00 Indiana \$41.00 Illinois \$82.00 Louisiana \$902.00 Texas \$41.00 Washington/Oregon \$41.00 Arizona \$164.00 Colorado \$0.00 Nevada \$574.00 California	\$3,813.00
Meals	\$462.00 Georgia \$1,764.00 Florida \$147.00 S. Carolina	\$30,261.00

	\$1,218.00 N. Carolina \$1,596.00 Virginia \$441.00 Maryland/Delaware \$4,998.00 Pennsylvania \$1,806.00 New Jersey \$105.00 New York \$378.00 Connecticut \$1,764.00 Massachusetts \$147.00 Michigan \$756.00 Indiana \$420.00 Illinois \$756.00 Louisiana \$4,284.00 Texas \$525.00 Washington/Oregon \$462.00 Arizona \$1,890.00 Colorado \$567.00 Nevada \$5,775.00 California	
Recycling Services	\$0.55 per pound x 33.51 pounds (for 464 computers)	\$8,551.75
Shipping for Recycling	\$37.00 per computer x 1,858	\$68,746.00

4.4.3 Project Budget

WORK PACKAGE	ASSOCIATED COST
1.1.1 Flight itinerary confirmations	\$19,746.08
1.1.2 Hotel booking confirmations	\$89,009.45
1.1.3 Rental car booking confirmations	\$19,007.00
1.2.1 Signed contract with hardware supplier	\$0.00
1.2.2 Hardware order confirmation	\$1,370,100.00
1.2.3 Microsoft Office 365 corporate subscription confirmation	\$780,360.00
1.3.1 Signed contract with recycler	\$0.00
2.1.1 Shipment inventory signed off by team member	\$0.00
2.1.2 Quality checklist signed off by team member	\$0.00
2.2.1 Setup checklist signed off by team member	\$0.00
2.3.1 Receipt form signed off by employee	\$0.00
3.1.1 List of usernames and default passwords for each employee	\$0.00
3.2.1 Distribution checklist signed off by team member	\$34,074.00
4.1.1 Register of employee signatures	\$0.00
4.1.2 Shipping confirmations with tracking numbers	\$68,746.00
4.2.1 Signed shipment receipt forms	\$0.00
4.2.2 Secure data removal and recycling	\$8,551.75

confirmations	
Total before contingency reserve	\$2,389,594.28
Contingency reserve	\$481,788.05
Cost baseline	\$2,871,382.33
Management reserve (8%)	\$229,710.59
TOTAL BUDGET	\$3,101,092.92

4.4.4 Controlling Costs

Project spending will be assessed using earned value analysis (EVA). This technique compares the project's actual cost performance to the cost baseline by calculating and tracking planned value (PV), earned value (EV), and actual cost (AC).⁹ EVA will be applied at various points throughout the project in order to monitor trends and changes. These points should be after the purchase of the Microsoft Office 365 subscription (January 2021), after the confirmation of March travel arrangements (February 2021), and during the project closing process (April 2021).

4.5 Project Quality Management

As defined by both the International Organization for Standardization (ISO) and the Project Management Institute (PMI), quality is "the degree to which a set of inherent characteristics fulfill requirements".²⁹ Therefore, project quality management is essential to ensuring that time and resources are not wasted on the production of deliverables that do not meet the relevant project requirements.

4.5.1 Roles and Responsibilities

The following chart describes the responsibilities of each stakeholder with regards to the quality management of this project:

Roles	Responsibilities
Chief Information Officer (CIO)	Approves project plans and budget; evaluates outcome after project completion to collect and apply lessons learned
Chief Financial Officer (CFO)	Approves project plans and budget; evaluates outcome after project completion to collect and apply lessons learned
Chief Clinical Officer	Approves project plans and budget; evaluates outcome after project completion to collect and apply lessons learned
Chief Operations Officer	Approves project plans and budget; evaluates outcome after project

	completion to collect and apply lessons learned
Aveanna IT Department	Lends expertise to project planning and to evaluation of the project after completion; reviews prospective project team candidates to ensure that the most appropriate people are assigned to the team; sets requirements for the technology to be purchased to ensure that it suits the needs of the company
Project Team	Checks all technology for out-of-the-box defects prior to setting it up; works closely with the employees for whom they are setting up the new technology to ensure their needs are met
Aveanna Staff and Office Workers	Communicate needs, questions, and concerns to the project team so they can be addressed while the team is on-site; participate in feedback survey after project completion
Aveanna Clients and Patients	n/a
Technology Suppliers	Adhere to their own quality standards; adhere to contract terms and product requirements

Aveanna's clients and patients are not considered to have any responsibilities pertaining to quality management due to the types of services the company provides. The patients are medically fragile children, and the clients are their parents and guardians; it would not be appropriate to trouble them with surveys or other direct questions related to a purely internal project. As shown in section 4.9 (Project Stakeholder Management), it is ideal that this group of stakeholders remain unaware of the project.

4.5.2 Quality Factors and Objectives

The following chart defines the key factors related to quality for this project:

Factor	Factor Definition	Quality Objectives
Technology Appropriateness	In general terms, that the new technology is appropriately suited to the day-to-day work of the company. More specifically: -work efficiency stays the same or improves and is not hindered -hardware and software are not missing any	To purchase to purchase hardware with the following specifications: -Windows 10 OS -500GB hard drive -8GB RAM -Intel i3 processor -No touchscreen To arrange as part of procurement contracts the

	<p>functions necessary to employees</p> <ul style="list-style-type: none"> -hardware and software do not have more functions than necessary (in such a way that they create extra costs for something that will not be used) 	<p>pre-installation and set-up of company standard software and settings</p> <p>To select a Microsoft Office 365 plan that includes standard Office apps and information security</p>
Hardware Functionality	<p>That the new computer hardware functions as intended (no glitches, bugs, physical damage, etc.)</p>	<p>To thoroughly investigate supplier options as part of the procurement process to identify the most trusted hardware supplier</p> <p>To check each unit of hardware for problems prior to and during installation</p> <p>To include in procurement contracts a course of action for exchanging faulty or damaged products</p>
Project Team Expertise	<p>That the project team members are all knowledgeable and skilled at working with the new hardware and software, as well as appropriately skilled at working with people and explaining the new technology to them when necessary</p>	<p>To assign to the project team IT department employees who have been with Aveanna Healthcare for at least one (1) year and who have demonstrated positive team and interpersonal skills</p>
Funding	<p>That adequate funding is secured to provide:</p> <ul style="list-style-type: none"> -new hardware and software of the appropriate caliber in the appropriate quantities -travel arrangements and safe, comfortable lodging for team members who need to travel -reasonable 	<p>To secure funding in the amount of \$2,312,296.53 to cover the aforementioned expenses</p>

	reimbursement for team members' meal and gasoline costs during travel	
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4.5.3 Quality Baseline

The following chart describes the metrics and quality baseline for this project:

Factor	Metric	Metric Definition	Expected Outcome	Measurement Frequency	Responsible
Technology Appropriateness	Customer Satisfaction	The satisfaction of Aveanna clients and patients with the care and customer service they receive during the project and after its completion.	It is expected that Aveanna clients and patients will either not notice any change in their service or will notice an improvement – in any case, that they will not notice any lapse in service or decrease in efficiency.	Monthly – Regardless of the project, nursing supervisors perform site visits each month to ensure quality care and service. In the context of the project, feedback received during these visits will be reviewed to ensure that the project work and results have not negatively impacted clients and patients.	Chief Operations Officer, project manager
Technology Appropriateness Project Team Expertise Funding	Employee Satisfaction	The satisfaction of Aveanna employees and office workers with the new technology they received and with the help received from the team member(s) who performed the on-site work at their branch location.	It is expected that Aveanna employees and office workers will find the new technology useful and adequate and that they will positively rate the work done by and interactions had with project team members.	Once – A survey will be sent out to all employees after project completion.	Chief Clinical Officer, Chief Operations Officer, Chief Information Officer, project manager

Hardware Functionality	Rate of Problems	The ratio of faulty or damaged hardware to the total amount of hardware purchased	Though it is expected that there may be some bad units of hardware due to external factors (such as manufacturer error or poor handling during shipping), the ratio of such units will not be so high as to significantly delay the project.	Once per branch location – The team members working at each location will be responsible for checking the new hardware for problems as part of the installation process and reporting any issues to the project manager.	Project team
Funding	Project Team Satisfaction	The satisfaction of project team members with the travel arrangements and reimbursement provided by Aveanna.	It is expected that the funding secured for the project will be enough to cover reasonable travel accommodation and reimbursement for all team members.	Weekly – Team members will have the opportunity to express any comments or concerns at weekly team meetings.	Project manager

4.6 Project Resource Management

According to the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide),⁹ “Project Resource Management includes the processes to identify, acquire, and manage the resources needed for successful completion of the project. These processes ensure that the right resources will be available to the project manager and project team at the right time and place.” The resources referred to in this section are both physical and team/human resources.

4.6.1 Resource Allocation

The table below describes the allocation and source of each resource. The allocation for project team members is shown as both their total number of days on the project (work, travel, and weekends away from home) and their number of pure

working days. Total number of days for an individual may be greater than the number of days allocated on the schedule in section 4.2 for on-site work (52 days), as the schedule does not count weekends.

Resources	Allocation	Source (Internal or External)
<p>Project Team:</p> <p><u>Atlanta Team (14):</u> Alice, Brandon, Catherine, Daniel, Emily, Frank, Giselle, Henry, Isabella, James, Kaitlyn, Leon, Margaret, Nicholas</p> <p><u>Dallas Team (6):</u> Olivia, Peter, Quinn, Robert, Sarah, Thomas</p>	<p>Alice: 40 days total, 28 working days Brandon: 38 days total, 28 working days Catherine: 42 days total, 28 working days Daniel: 47 days total, 31.5 working days Emily: 39 days total, 24.5 working days Frank: 40 days total, 24.5 working days Giselle: 47 days total, 29.5 working days Henry: 45 days total, 27.5 working days Isabella: 53 days total, 33 working days James: 47 days total, 31 working days Kaitlyn: 42 days total, 26 working days Leon: 37 days total, 22.5 working days Margaret: 37 days total, 22.5 working days Nicholas: 42 days total, 27.5 working days Olivia: 43 days total, 35.5 working days Peter: 41 days total, 34.5 working days Quinn: 41 days total, 34.5 working days Robert: 42 days total, 31 working days Sarah: 42 days total, 31 working days Thomas: 45 days total, 34.5 working days</p>	<p>Internal (IT department employees who have already worked at Aveanna Healthcare for at least one (1) year)</p>
<p>Facilities:</p>	<p>0.5-4 days of on-site work</p>	<p>Internal (Pre-existing)</p>

Aveanna Healthcare Branch Locations	per location	company branch offices and clinics)
Computer Hardware (Windows 10 desktops and laptops)	n/a	External (technology supplier)
Computer Software (Microsoft Office 365)	n/a	External (Microsoft)

4.6.2 Resource Analysis

Resource	Skill Level or Material Quantity	Associated Task	Duration Required	Available Time Period	Cost	Unit Cost
Project Team	High	on-site work	37-53 days per team member	January 18, 2021 – March 30, 2021	Project team member salaries are included in operational costs rather than project costs	Project team member salaries are included in operational costs rather than project costs
Facilities	203	on-site work	0.5-4 days per location	January 18, 2021 – March 30, 2021	Rent varies by location and is included in operational costs rather than project costs	Rent varies by location and is included in operational costs rather than project costs
Computer Hardware - laptops	1,394	on-site work	n/a	First deliveries on or before January 15, 2021; deliveries completed on or before March 12, 2021	\$906,100.00	\$650.00
Computer Hardware - desktops	464	on-site work	n/a	First deliveries on or before January 15, 2021; deliveries completed on or before March 12, 2021	\$464,000.00	\$1000.00

Computer Software	1,858 licenses	on-site work	n/a	Purchase on January 4, 2021; complete individual login setups by January 18, 2021	\$780,360.00	\$35.00 per user per month
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4.6.3 RACI Matrix

Below is the RACI matrix for this project's human resources. The RACI definitions are as follows:

Responsible – person or role responsible for doing or completing the item

Accountable – person or role responsible for ensuring that the item is completed

Consulted – person or role whose subject matter expertise is required in order to complete the item

Informed – person or role that needs to be kept informed of the status of item completion³⁰

	CIO	CFO	Chief Clinical Officer	Chief Operations Officer	Branch Directors & Office Managers	Project Manager	Aveanna IT Department	Project Team
PLAN PHASE ACTIVITIES								
Create Project Management Plan	A	C	C	C	I	R	C	
Organize Project Team						A	R	I
EXECUTE PHASE ACTIVITIES								
Purchase Hardware and Software	I	C				A	R	
On-site Work				I	I	A	C	R
Ensure Appropriate Return of Old Hardware				A	R	I	C	
CONTROL PHASE ACTIVITIES								
Monitoring and Evaluation	A	I	I	I		R	I	I
CLOSE PHASE ACTIVITIES								
Prepare Documentation and Lessons Learned	A	I	I	I	C	R	C	C

4.7 Project Communications Management

According to the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide)⁹, “Project Communications Management includes the processes necessary to ensure that the information needs of the project and its stakeholders are met”. These processes include planning determining the type of communication to be used with each stakeholder, the frequency of communication, and the person responsible for carrying out the communication.

4.7.1 Communications Matrix

Communication Item/Event	Audience	Objective(s)	Communication Vehicle	Frequency	Assigned Responsibility
Project Announcement (Internal)	Branch directors, office managers, staff, office workers	To inform those who will be directly impacted by the project work and results of the initiation, expectations, and general timeline of the project	Email memorandum	Once (before the project)	Chief Operations Officer, project manager
Project Evaluation (Internal)	Branch directors, office managers, staff, office workers	To evaluate the satisfaction of Aveanna employees and office workers with the new technology they received and with the help received from the team member(s) who performed the on-site work at their branch location	Survey (distributed by email)	Once (after the project)	Chief Clinical Officer, Chief Operations Officer, Chief Information Officer, project manager
Project Evaluation (External)	Clients and patients	To evaluate the satisfaction of Aveanna clients and patients with the care and customer service they receive after the project is completed	Nursing supervisor site visits (These are ongoing regardless of the project but will be reviewed in the context of the project to ensure that the project work and results have not	Monthly	Chief Clinical Officer

		To monitor any change in service or customer satisfaction before and after the project	negatively impacted clients and patients.)		
Initial Team Building and Project Overview	Project team	To provide team members with a chance to meet each other and find out the project plans and their own roles, responsibilities, and schedules	Face-to-face meeting (hybrid – Atlanta team in-person + Dallas team in-person with a virtual connection between the two)	Once (before the project)	Project manager
Project Updates (Management)	CIO, CFO, Chief Clinical Officer, Chief Operations Officer, IT Department Management	To keep the company's upper management informed about the project's progress	Face-to-face meetings (in-person)	Weekly throughout the lifespan of the project	Project manager
Project Updates (project team)	Project team, project manager	To keep the project manager informed about the project's progress To give project team members a chance to raise questions, concerns, and suggestions about the project	Face-to-face meetings (may be in-person, virtual, or hybrid depending on when and where team members are traveling) Emails	Meetings weekly throughout the lifespan of the project Emails as needed	Project team, project manager
Project Scheduling	Branch directors, office managers, staff, office workers	To inform each branch of when they should expect hardware deliveries and the arrival of project team members To include instructions regarding how to safely handle/store	Email memorandums	As needed per branch office based on scheduling (no less than 2 weeks' notice)	Project manager

		delivered hardware and how to prepare for team members' arrival To include instructions on how to properly return old hardware for recycling after work is completed			
Procurement Check-ups	Technology suppliers	To keep up-to-date on the status of hardware setup and delivery	Emails	Weekly	Project manager

4.7.2 Communications Monitoring

The table below outlines how the communications planned above will be monitored throughout the project. Monitoring communications helps the project manager to “[determine] if the planned communications artifacts and activities have had the desired effect of increasing or maintaining stakeholders’ support for the project’s deliverables and expected outcomes.”⁹ Communication must be monitored so that adjustments can be made if the planned communication activities are not having the intended effects or adequately meeting their objectives. For the purpose of concision in the following matrix, “branch employees” refers collectively to branch directors, office managers, staff, and office workers, while “officers” refers to the CIO, CFO, Chief Clinical Officer, and Chief Operations Officer.

Communication Vehicle	Output	Indicator
Electronic	Email messages, memos, and newsletters	Open rate (clients, branch employees, officers); ratio of messages sent to messages received (project team, technology suppliers)
	Surveys	Response rate
Meetings	Minutes of in-person meetings (officers)	Attendance; issue logs; change requests
	Minutes of virtual/hybrid meetings (project team)	

4.8 Project Risk Management

In project management, risks are any source of uncertainty in a project; this means that there are both positive risks, or opportunities, and negative risks, or threats.⁹ Planning risk management is crucial in projects to ensure that opportunities can be seized and threats avoided or mitigated.

4.8.1 Risk Strategy

This project faces risks that must be dealt with in a variety of ways. Several risks fall outside the control of the project manager and project team, for example, travel delays caused by weather conditions. Threats of this type cannot be purposefully avoided and therefore require careful observation and contingency plans that can be implemented in case of occurrence. Meanwhile, the project must also be monitored for uncontrollable opportunities, and plans must be prepared ahead of time to take advantage of these should they arise. Risks that can be controlled by the project manager and project team have precautions planned to address them specifically. To cover all types of risks, a contingency reserve (calculated in section 4.8.4) has been accounted for. The full budget details are listed in section 4.4. Additional plans for both controllable and uncontrollable risks are described in more detail later in this chapter.

It must be noted which types of risks are more and less common in this project. First, there are few schedule-related opportunities because plane tickets, hotel rooms, and rental cars must be booked several weeks ahead of time, reducing the chance to advance project work ahead of schedule. The only opportunities in scheduling are those that provide the chance to make up for time lost to other risks (such as delayed flights). There are, however, many schedule-related threats. This project takes place during winter months and includes work in regions that typically experience heavy snowfall, increasing the chance of delays in travel and resource delivery. Second, a large portion of the risks on this project lie in the hardware and software technology, as this is at the heart of the project's scope, activities, and goals. Third, Aveanna being a healthcare company, there is a significant human component to many of the project risks. It is vital to note that some risks can impact Aveanna's clients and patients, even if they may not greatly impact the project work or outcomes. Finally, a few risks have little direct impact on the project but have potential consequences for the company in the future. These insights inform the risk response planning in this chapter.

4.8.2 Risk Breakdown Structure

The risk breakdown structure (RBS) below “is a hierarchical representation of potential sources of risk”⁹ in the project.

Risk Breakdown Structure			
0. All sources of project risk	1. Technology	1.1 New hardware	1.1.1 Unit functionality
			1.1.2 Shipping from suppliers
			1.1.3 Storage by branch offices
			1.1.4 Setup by supplier
		1.2 New Software (Microsoft Office)	1.2.1 Functionality of individual employee licenses
			1.2.2 Software download and installation
		1.3 User errors and learning curve	1.3.1 Employee familiarity with new operating system
			1.3.2 Employee familiarity with new software
		2. Travel	2.1 Air travel
	2.1.2 Airport conditions (check-in lines, security lines, etc.)		
	2.1.3 Time zones		
	2.1.4 Airline		

0. All sources of project risk	2. Travel		handling of checked luggage
		2.2 Driving	2.2.1 Road conditions
			2.2.2 Vehicle performance
		2.3 Budget	2.3.1 Cost of transportation
			2.3.2 Cost of accommodations
			2.3.3 Cost of meals
	3. Operations	3.1 Efficiency	3.1.1 Employee availability to respond to client enquiries
			3.1.2 Efficiency/progress in day-to-day work
		3.2 Scheduling	3.2.1 Threats
			3.2.2 Opportunities
	4. Old hardware recycling	4.1 Return from branches	4.1.1 Following directions for packing and shipping
			4.1.2 Ensuring no retainment of old hardware by employees
		4.2 Handling by recyclers	4.2.1 Removal of data from hard drives
			4.2.2

0. All sources of project risk	5. Project team	4.3 Budget	Environmental responsibility
			4.3.1 Cost of recycling
		4.3.2 Cost of shipping	
	5.1 Availability	5.1.1 Personal health	
		5.1.2 Emergent family occurrences	
	5.2 Team cohesion	5.2.1 Long periods of time together for certain team members	
		5.2.2 Team members from two different locations	

4.8.3 Risk Prioritization

In order to determine appropriate measures for avoiding and mitigating risks, the priority of both threats and opportunities must be evaluated. This can be achieved by first defining the probability and impact metrics relevant to the project (see Chart 6 below) and then assigning values to the various risks based on how they match those metrics. Each risk's probability value should be multiplied by its impact value to produce a probability-impact score (see Chart 7 below).⁹ Risks with the highest scores should be thoroughly addressed prior to starting the project, while risks with lower scores should be carefully monitored but may not require immediate action.

Chart 6 Definitions for Likelihood and Consequence (Source: Own elaboration)

Likelihood	
Almost certain	>70%
Likely	51-70%
Possible	31-50%
Unlikely	11-30%
Rare	≤10%

	Consequence		
	Time	Cost	Quality
Catastrophic*	>3 months	>\$1 million	Very significant impact on overall outcome
Major	2 – 3 months	\$751k – \$1mil	Significant impact on overall outcome
Moderate	1 – 2 months	\$251k – \$750k	Some impact on key aspects
Minor	1 – 4 weeks	\$50k – \$250k	Minor impact on overall outcome
Negligible	≤1 week	<\$50k	Minor impact on secondary aspects

*The word *favorable* will be used in place of *catastrophic* when referring to opportunities.

Consequence, sometimes also called impact, is to be assessed based on the aspects of time, cost, and quality in the context of this project. These three factors are not only the ones used in the PMBOK Guide,⁹ but they are also one of project management’s “triple constraints”, indicating a directly proportional relationship between them.³¹ It is vital to assess risk consequences based on more than just one factor in order to achieve a thorough analysis. This is because certain risks could appear to be more or less extreme when examined through different lenses. For example, this project’s risk “airplane ticket prices rise” would not cause any change to the project’s schedule were it to occur. It would, however impact costs. Therefore, to gain a well-rounded view of a risk and plan appropriate response strategies, it is important to examine project risks from multiple angles.

Chart 7 Risk Analysis Scoring Matrix (Source: Ian Needs³²)

Consequence	Likelihood				
	1	2	3	4	5
	Rare	Unlikely	Possible	Likely	Almost certain
5 Catastrophic	5	10	15	20	25
4 Major	4	8	12	16	20
3 Moderate	3	6	9	12	15
2 Minor	2	4	6	8	10
1 Negligible	1	2	3	4	5

	1-3	Low Risk
	4-6	Moderate Risk
	8-12	High Risk
	15-25	Extreme Risk

The chart below shows the probability-impact score and priority of individual project risks. Risks are numbered corresponding to a category in the RBS. Impact (consequence) scores are determined by assigning a score 1-6 for each factor (time, cost, and quality) and then taking the average. If the average was a decimal, it was rounded up or down to the nearest whole number.

Risk	Probability (Likelihood)	Impact (Consequence)	P x I	Risk Category
1.1.1 Hardware units defective or non-functional	1 – Rare	<u>Time:</u> 2 – Minor <u>Cost:</u> 2 – Minor <u>Quality:</u> 5 – Catastrophic Average: 3	3	Low Risk
1.1.2 Hardware units damaged in transit	2 – Unlikely	<u>Time:</u> 2 – Minor <u>Cost:</u> 2 – Minor <u>Quality:</u> 5 – Catastrophic Average: 3	6	Moderate Risk
1.1.2 Delays in delivery (due to weather, traffic, etc.)	3 – Possible	<u>Time:</u> 2 – Minor <u>Cost:</u> 2 – Minor <u>Quality:</u> 5 – Catastrophic Average: 3	9	High Risk
1.1.3 Hardware units stored improperly upon arrival at branch locations (leading to loss or damage)	1 – Rare	<u>Time:</u> 2 – Minor <u>Cost:</u> 5 Catastrophic <u>Quality:</u> 5 – Catastrophic Average: 4	4	Low Risk
1.1.4 Hardware units not properly set up by supplier	1 – Rare	<u>Time:</u> 2 – Minor <u>Cost:</u> 1 – Negligible <u>Quality:</u> 5 – Catastrophic Average: 3	3	Low Risk
1.2.1 Individual employee accounts unable to log in	2 – Unlikely	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 2 – Minor Average: 1	2	Low Risk
1.2.2 Office software not downloading or installing properly	1 – Rare	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 2 – Minor Average: 1	1	Low Risk
1.3.1 Employees not familiar with Windows 10	3 – Possible	<u>Time:</u> 1 - Negligible <u>Cost:</u> 1 - Negligible <u>Quality:</u> 1 - Negligible Average: 1	3	Low Risk
1.3.2 Employees not familiar with Office 365	3 – Possible	<u>Time:</u> 1 - Negligible <u>Cost:</u> 1 - Negligible	3	Low Risk

		<u>Quality</u> : 1 - Negligible Average: 1		
2.1.1 Flights delayed	4 – Likely	<u>Time</u> : 3 – Moderate <u>Cost</u> : 2 – Minor <u>Quality</u> : 3 – Moderate Average: 3	12	High Risk
2.1.1 Flights cancelled	2 – Unlikely	<u>Time</u> : 3 – Moderate <u>Cost</u> : 2 – Minor <u>Quality</u> : 3 – Moderate Average: 3	6	Moderate Risk
2.1.2 Long airport lines cause project team to miss flights	1 – Rare	<u>Time</u> : 3 – Moderate <u>Cost</u> : 2 – Minor <u>Quality</u> : 3 – Moderate Average: 3	3	Low Risk
2.1.3 Traveling between time zones gives team members jet lag	5 – Almost certain	<u>Time</u> : 1 – Negligible <u>Cost</u> : 1 – Negligible <u>Quality</u> : 1 – Negligible Average: 1	5	Moderate Risk
2.1.4 Team members' checked luggage damaged	1 – Rare	<u>Time</u> : 1 – Negligible <u>Cost</u> : 1 – Negligible <u>Quality</u> : 1 – Negligible Average: 1	1	Low Risk
2.1.4 Team members' checked luggage delayed or lost	1 – Rare	<u>Time</u> : 1 – Negligible <u>Cost</u> : 1 – Negligible <u>Quality</u> : 1 – Negligible Average: 1	1	Low Risk
2.2.1 Traffic or bad weather delays team member travel	4 – Likely	<u>Time</u> : 3 – Moderate <u>Cost</u> : 2 – Minor <u>Quality</u> : 3 – Moderate Average: 3	12	High Risk
2.2.2 Car trouble delays team member travel	1 - Rare	<u>Time</u> : 3 – Moderate <u>Cost</u> : 2 – Minor <u>Quality</u> : 3 – Moderate Average: 3	3	Low Risk

2.3.1 Airplane ticket prices rise	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk
2.3.1 Airplane ticket prices fall	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk (Opportunity)
2.3.1 Rental car prices rise	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk
2.3.1 Rental car prices fall	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk (Opportunity)
2.3.1 Gas prices rise	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk
2.3.1 Gas prices fall	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk (Opportunity)
2.3.2 Hotel room prices rise	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 2 - Minor <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk
2.3.2 Hotel room prices fall	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible	3	Low Risk (Opportunity)

		Average: 1		
2.3.3 Meals more expensive than expected	3 – Possible	Time: 1 – Negligible Cost: 1 – Negligible Quality: 1 – Negligible Average: 1	3	Low Risk
2.3.3 Meals less expensive than expected	3 – Possible	Time: 1 – Negligible Cost: 1 – Negligible Quality: 1 – Negligible Average: 1	3	Low Risk (Opportunity)
3.1.1 Too many employees without available computers at one time	3 – Possible	Time: 1 – Negligible Cost: 1 – Negligible Quality: 4 – Major Average: 2	6	Moderate Risk
3.1.1 Too many employees busy working with project team at one time	1 – Rare	Time: 1 – Negligible Cost: 1 – Negligible Quality: 4 – Major Average: 2	2	Low Risk
3.1.2 Work delayed during technology changeover	5 – Almost certain	Time: 1 – Negligible Cost: 1 – Negligible Quality: 4 – Major Average: 2	10	High Risk
3.2.1 On-site work takes longer than expected	3 – Possible	Time: 4 – Major Cost: 2 – Minor Quality: 4 – Major Average: 3	9	High Risk
3.2.2 On-site work takes less time than expected	3 – Possible	Time: 2 – Minor Cost: 1 – Negligible Quality: 4 – Major Average: 2	6	Moderate Risk
3.2.2 In the event of delays, project team able to work past branch closing or on weekends	4 – Likely	Time: 4 – Major Cost: 2 – Minor Quality: 4 – Major Average: 3	12	High Risk (Opportunity)
4.1.1 Old hardware packed	1 – Rare	Time: 1 – Negligible	1	Low Risk

improperly for return shipping		<u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1		
4.1.2 Old hardware accidentally or purposefully retained by employees	2 – Unlikely	<u>Time:</u> 2 – Minor <u>Cost:</u> 2 – Minor <u>Quality:</u> 2 – Minor Average: 2	4	Moderate Risk
4.2.1 Data not removed securely from old hard drives	1 – Rare	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 3 – Moderate Average: 2	2	Low Risk
4.2.2 Old hardware not recycled in an environmentally friendly way	1 – Rare	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 3 – Moderate Average: 2	2	Low Risk
4.3.1 Recycling more expensive than expected	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk
4.3.1 Recycling less expensive than expected	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk (Opportunity)
4.3.2 Shipping more expensive than expected	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 2 – Minor <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk
4.3.2 Shipping less expensive than expected	3 – Possible	<u>Time:</u> 1 – Negligible <u>Cost:</u> 1 – Negligible <u>Quality:</u> 1 – Negligible Average: 1	3	Low Risk (Opportunity)
5.1.1 Project team members become sick or injured	3 – Possible	<u>Time:</u> 3 – Moderate <u>Cost:</u> 2 – Minor	9	High Risk

		Quality: 4 – Major Average: 3		
5.1.2 Project team members have a family emergency	3 – Possible	Time: 3 – Moderate Cost: 2 – Minor Quality: 4 – Major Average: 3	9	High Risk
5.2.1 Project team members develop negative relationships after so much time together	3 – Possible	Time: 1 – Negligible Cost: 1 – Negligible Quality: 2 – Minor Average: 1	3	Low Risk
5.2.1 Project team members develop positive relationships after so much time together	3 – Possible	Time: 1 – Negligible Cost: 1 – Negligible Quality: 2 – Minor Average: 1	3	Low Risk
5.2.2 Project team members do not work well together	1 – Rare	Time: 1 – Negligible Cost: 1 – Negligible Quality: 2 – Minor Average: 1	2	Low Risk

Overall Project Risk Value, calculated as the average of all above (P x I) values: 4

With an overall risk value of 4, this project can be categorized as moderate risk.

4.8.4 Expected Monetary Value Analysis

Expected monetary value (EMV) is a risk analysis tool that allows for the calculation of a contingency reserve. A risk's EMV is determined by multiplying its probability by its cost impact. The total of all EMVs is the amount of the project's contingency reserve.³³

Risk	Probability	Cost Impact	EMV
1.1.1 Hardware units defective or non-functional	1%	\$161,836.53	\$1,618.37
1.1.2 Hardware units damaged in transit	11%	\$161,836.53	\$17,802.02
1.1.2 Delays in delivery (due to weather, traffic, etc.)	50%	\$161,836.53	\$80,918.27
1.1.3 Hardware units stored improperly upon arrival at	2%	\$1,531,936.53	\$30,638.73

branch locations (leading to loss or damage)			
1.1.4 Hardware units not properly set up by supplier	2%	\$161,836.53	\$3,236.73
1.2.1 Individual employee accounts unable to log in	15%	\$0	\$0
1.2.2 Office software not downloading or installing properly	5%	\$0	\$0
1.3.1 Employees not familiar with Windows 10	50%	\$0	\$0
1.3.2 Employees not familiar with Office 365	50%	\$0	\$0
2.1.1 Flights delayed	60%	\$142,090.45	\$85,254.27
2.1.1 Flights cancelled	20%	\$142,090.45	\$28,418.09
2.1.2 Long airport lines cause project team to miss flights	2%	\$161,836.53	\$3,236.73
2.1.3 Traveling between time zones gives team members jet lag	99%	\$0	\$0
2.1.4 Team members' checked luggage damaged	3%	\$0	\$0
2.1.4 Team members' checked luggage delayed or lost	1%	\$0	\$0
2.2.1 Traffic or bad weather delays team member travel	75%	\$161,836.53	\$121,377.40
2.2.2 Car trouble delays team member travel	1%	\$161,836.53	\$1,618.37
2.3.1 Airplane ticket prices rise	33%	\$19,746.08	\$6,516.21
2.3.1 Airplane ticket prices fall	33%	\$9,873.04	(\$3,258.10)
2.3.1 Rental car prices rise	33%	\$19,007.00	\$6,272.31
2.3.1 Rental car prices fall	33%	\$9,503.50	(\$3,136.16)
2.3.1 Gas prices rise	33%	\$3,813.00	\$1,258.29
2.3.1 Gas prices fall	33%	\$1,906.50	(\$629.15)
2.3.2 Hotel room prices rise	33%	\$89,009.45	\$29,373.12
2.3.2 Hotel room prices fall	33%	\$44,504.73	(\$14,686.56)
2.3.3 Meals more expensive than expected	33%	\$30,261.00	\$9,986.13
2.3.3 Meals less expensive than expected	33%	\$15,130.50	(\$4,993.07)
3.1.1 Too many employees without available computers	33%	\$0	\$0

at one time			
3.1.1 Too many employees busy working with project team at one time	10%	\$0	\$0
3.1.2 Work delayed during technology changeover	75%	\$0	\$0
3.2.1 On-site work takes longer than expected	33%	\$161,836.53	\$53,406.05
3.2.2 On-site work takes less time than expected	33%	\$17,037.00	(\$5,622.21)
3.2.2 In the event of delays, project team able to work past branch closing or on weekends	60%	\$161,836.53	(\$97,101.92)
4.1.1 Old hardware packed improperly for return shipping	2%	\$20,300	\$406.00
4.1.2 Old hardware accidentally or purposefully retained by employees	15%	\$68,746.00	\$10,311.90
4.2.1 Data not removed securely from old hard drives	1%	Cost: 1 – Negligible	\$0
4.2.2 Old hardware not recycled in an environmentally friendly way	1%	Cost: 1 – Negligible	\$0
4.3.1 Recycling more expensive than expected	33%	\$8,551.75	\$2,822.08
4.3.1 Recycling less expensive than expected	33%	\$4,275.88	(\$1,411.04)
4.3.2 Shipping more expensive than expected	33%	\$68,746.00	\$22,686.18
4.3.2 Shipping less expensive than expected	33%	\$34,373.00	(\$11,343.09)
5.1.1 Project team members become sick or injured	33%	\$161,836.53	\$53,406.05
5.1.2 Project team members have a family emergency	33%	\$161,836.53	\$53,406.05
5.2.1 Project team members develop negative relationships after so much time together	50%	\$0	\$0
5.2.1 Project team members develop positive relationships after so much time together	50%	\$0	(\$0)

5.2.2 Project team members do not work well together	4%	\$0	\$0
TOTAL (Contingency Reserve)			\$481,788.05

4.8.5 Risk Register

The risk register below identifies the owner(s) and the precautions and responses planned for each identified risk.

Risk	Category	Owner(s)	Strategy	Precautions and Responses	Trigger(s)
1.1.1 Hardware units defective or non-functional	Low Risk	Project manager, technology supplier	Mitigate Mitigate Accept	Choose reputable supplier (project manager) Check each unit before shipping (supplier) Follow plans for obtaining replacement units agreed upon in procurement contract	Manufacturer error
1.1.2 Hardware units damaged in transit	Moderate Risk	Project manager, technology supplier	Transfer Accept	Purchase shipping insurance Follow plans for obtaining replacement units agreed upon in procurement contract	Inadequate packaging Packages not labeled "fragile" Shipping company error
1.1.2 Delays in delivery (due to weather, traffic, etc.)	High Risk	Project manager	Accept	Weather and traffic are outside the control of the project manager and	Changes in environmental factors

				team. Monitor weather and shipment tracking and work with project team, branch directors, and office managers to make up for lost time. Apply contingency funds to reschedule travel if needed.	
1.1.3 Hardware units stored improperly upon arrival at branch locations (leading to loss or damage)	Low Risk	Project manager, branch directors and office managers	Mitigate	Provide clear directions to branch directors and office managers for safe storage	Unclear storage instructions Insufficient storage space
			Accept	Follow plans for obtaining replacement units agreed upon in procurement contract	
1.1.4 Hardware units not properly set up by supplier	Low Risk	Project manager, technology supplier	Mitigate	Choose reputable supplier (project manager)	Supplier error
			Mitigate	Check each unit before shipping (supplier)	
			Accept	Follow plans for obtaining replacement	

				units agreed upon in procurement contract	
1.2.1 Individual employee accounts unable to log in	Low Risk	Project team	Accept	Work with Microsoft support to fix the problem	IT Department error Incorrect usernames or passwords
1.2.2 Office software not downloading or installing properly	Low Risk	Project team	Accept	Work with Microsoft support to fix the problem	Internet connectivity issues
1.3.1 Employees not familiar with Windows 10	Low Risk	Project team	Accept	Identify links to videos and online guides to share with employees, and provide one-on-one attention where the schedule allows	Older employees who are uncomfortable with new technology Employees who have never used Windows 10 before
			Accept	Refer employees to IT support where necessary	
1.3.2 Employees not familiar with Office 365	Low Risk	Project team	Accept	Identify links to videos and online guides to share with employees, and provide one-on-one attention where the schedule allows	Older employees who are uncomfortable with new technology Employees who have never used Office 365 before
			Accept	Refer employees to	

				IT support where necessary	
2.1.1 Flights delayed	High Risk	Project manager	Accept	Flight delays and cancellations are outside the control of the project manager and team. Monitor weather and flight statuses and work with project team, branch directors, and office managers to make up for lost time. Apply contingency funds to reschedule travel if needed.	Changes in environmental factors
2.1.1 Flights cancelled	Moderate Risk	Project manager	Accept	Flight delays and cancellations are outside the control of the project manager and team. Monitor weather and flight statuses and work with project team, branch directors, and office managers to make up for lost time. Apply contingency funds to reschedule travel if needed.	Changes in environmental factors
2.1.2 Long airport lines cause project team to miss flights	Low Risk	Project manager, project team	Mitigate	Include extra overnight stays in the schedule and budget to offset long drives to the airport (project manager)	Flights booked from large, busy airports Flights booked for particularly busy travel days or times
			Mitigate	Plan to arrive at airport at least 2 hours early (project team)	Changes in environmental factors
			Mitigate	Use only carry-on luggage	

				when possible (project team)	
2.1.3 Traveling between time zones gives team members jet lag	Moderate Risk	Project manager, project team	Mitigate	Ensure project team members are briefed ahead of time on their full travel schedule (project manager)	Long-distance travel
			Mitigate	Make necessary personal preparations (getting a good night's sleep, packing Dramamine, etc.) before flights to other time zones (project team)	
2.1.4 Team members' checked luggage damaged	Low Risk	Project team	Mitigate	Use only carry-on luggage when possible (project team)	Airline or airport error
2.1.4 Team members' checked luggage delayed or lost	Low Risk	Project team	Mitigate	Use only carry-on luggage when possible (project team)	Airline or airport error
2.2.1 Traffic or bad weather delays team member travel	High Risk	Project manager, project team	Accept	Weather and traffic are outside the control of the project manager and team. Monitor	Changes in environmental factors

				weather and work with project team, branch directors, and office managers to make up for lost time. Apply contingency funds to reschedule travel if needed.	
2.2.2 Car trouble delays team member travel	Low Risk	Project manager, project team	Accept	Work with project team, branch directors, and office managers to make up for lost time. Apply contingency funds to reschedule travel if necessary.	Road and weather conditions Rental car company error
			Accept	Project team members who are AAA members should consider calling for roadside assistance.	
2.3.1 Airplane ticket prices rise	Low Risk	CFO, project manager	Accept	Monitor flight prices and book tickets when low	Changes in environmental factors
2.3.1 Airplane ticket prices fall	Low Risk (Opportunity)	CFO, project manager	Accept	Apply contingency funds (if	Changes in environmental factors

				prices rise)	
2.3.1 Rental car prices rise	Low Risk	CFO, project manager	Accept	Monitor rental car prices and reserve when low	Changes in environmental factors
2.3.1 Rental car prices fall	Low Risk (Opportunity)	CFO, project manager	Accept	Apply contingency funds (if prices rise)	Changes in environmental factors
2.3.1 Gas prices rise	Low Risk	CFO, project manager	Accept	Reserve fuel-efficient rental cars where possible	Changes in environmental factors
2.3.1 Gas prices fall	Low Risk (Opportunity)	CFO, project manager	Accept	Apply contingency funds (if prices rise)	Changes in environmental factors
2.3.2 Hotel room prices rise	Low Risk	CFO, project manager	Accept	Monitor hotel prices and book rooms when low	Changes in environmental factors
2.3.2 Hotel room prices fall	Low Risk (Opportunity)	CFO, project manager	Accept	Apply contingency funds (if prices rise)	Changes in environmental factors
2.3.3 Meals more expensive than expected	Low Risk	CFO, project manager	Mitigate	Do not reimburse alcohol purchases	Changes in environmental factors
			Mitigate	Brief project team on meal budget to set appropriate expectations	
			Mitigate	Book hotels with breakfast included	
			Accept	Apply contingency	

2.3.3 Meals less expensive than expected	Low Risk (Opportunity)	CFO, project manager	Accept	funds (if more expensive)	Changes in environmental factors
3.1.1 Too many employees without available computers at one time	Moderate Risk	Branch directors and office managers	Mitigate	Plan to set aside office space for the project team to set up computers as much as possible before distributing them to employees.	Small branch size
3.1.1 Too many employees busy working with project team at one time	Low Risk	Branch directors and office managers	Mitigate	Plan for a certain number of employees (proportionate to branch size) to be available to answer phone calls and emails at all times. Have employees rotate as needed.	Small branch size Project team behind schedule

			Mitigate	Plan for a certain number of employees (proportionate to branch size) to be available to answer phone calls and emails at all times. Have employees rotate as needed.	
3.1.2 Work delayed during technology changeover	High Risk	Chief Operations Officer, branch directors and office managers	Mitigate	Communicate work schedule to branch directors and office managers to allow for planning ahead	Technical difficulties Small branch size Branch has work that cannot be diverted elsewhere
			Mitigate	Temporarily divert work and/or inquiries to other branches where necessary and possible	
3.2.1 On-site work takes longer than expected	High Risk	Project manager, project team	Accept	Work with branch directors and office managers to arrange after-hours and/or weekend work where possible	Technical difficulties Inadequate time estimates Changes in environmental factors

			Accept	Apply contingency funds to cover overtime pay where needed	
			Accept	Apply contingency funds to reschedule travel if needed	
3.2.2 On-site work takes less time than expected	Moderate Risk	Project manager, project team	Accept	Work with branch directors and office managers to allow project team members to move on to the next branch early where possible (trips that include more than one branch and where hotel reservations allow)	Avoidance of technical difficulties
3.2.2 In the event of delays, project team able to work past branch closing or on weekends	High Risk (Opportunity)	Project team, branch directors and office managers	Enhance	Monitor weather, flight statuses, and delivery tracking to immediately inform branch directors and office managers of delays	Branch directors and office managers with flexible schedules
			Accept		

				Apply contingency funds to cover overtime pay where needed	
4.1.1 Old hardware packed improperly for return shipping	Low Risk	Branch directors and office managers	Mitigate	Provide clear written instructions for packing and shipping of old hardware	Unclear packing instructions Insufficient packing material
4.1.2 Old hardware accidentally or purposefully retained by employees	Moderate Risk	Branch directors and office managers	Mitigate Accept	Provide clear written instructions for return of old hardware Apply contingency funds to cover extra shipping where needed	Unclear return instructions No thorough inventory taken prior to shipping
4.2.1 Data not removed securely from old hard drives	Low Risk	Project manager	Mitigate Accept	Ensure that recyclers adhere to HIPAA laws Follow HIPAA protocol for reporting in case of problems	Recycler not HIPAA-compliant Recycler error
4.2.2 Old hardware not recycled in an environmentally friendly way	Low Risk	Project manager	Mitigate Accept	Work with reputable recyclers Follow company reporting standards in case of	Recycler error

			Escalate	problems Change recyclers (either during this project or for future projects, depending on when problems are identified)	
4.3.1 Recycling more expensive than expected	Low Risk	CFO, project manager	Accept	Apply contingency funds	Changes in environmental factors
4.3.1 Recycling less expensive than expected	Low Risk (Opportunity)	CFO, project manager	Enhance	Choose the recycler with the best proposal	Changes in environmental factors
4.3.2 Shipping more expensive than expected	Low Risk	CFO, project manager	Accept	Apply contingency funds	Changes in environmental factors
4.3.2 Shipping less expensive than expected	Low Risk (Opportunity)	CFO, project manager	Enhance	Use available shipping materials (such as boxes the new computers arrived in) before purchasing new materials	Changes in environmental factors
5.1.1 Project team members become sick or injured	High Risk	Project manager, project team	Mitigate	Plan breaks in the travel schedule to promote team member rest	Long-distance travel Insufficient rest time

			Accept	and health Apply contingency funds to reschedule travel if needed	Cold weather Personal accidents or emergencies at home
5.1.2 Project team members have a family emergency	High Risk	Project manager, project team	Accept	Apply contingency funds to reschedule travel if needed	Changes in environmental factors
5.2.1 Project team members develop negative relationships after so much time together	Low Risk	Project manager, project team	Mitigate Mitigate	Promote team bonding at initial team meeting Plan breaks in the travel schedule	Long-distance travel Work setbacks
5.2.1 Project team members develop positive relationships after so much time together	Low Risk	Project manager, project team	Enhance	Promote team bonding at initial team meeting	Long-distance travel
5.2.2 Project team members do not work well together	Low Risk	Project manager, project team	Mitigate Mitigate	Promote team bonding at initial team meeting Minimize scheduling Atlanta and Dallas team members together	Differences in personality and work style Team members who do not know each other scheduled to work together

4.9 Project Procurement Management

Planning project procurement management is the process that “determines whether to acquire goods and services from outside the project and, if so, what to

acquire as well as how to acquire it. Goods and services may be procured from other parts of the performing organization or from external sources.”⁹ In other words, procurement allows the project team to secure resources and services that they cannot provide for themselves. Planning procurement ahead of time is crucial to ensuring that the most suitable providers are chosen and the requirements those providers must meet (technical specifications, contract terms, etc.) are clearly defined. This section describes these requirements, as well as the processes to be used for managing contracts and suppliers.

4.9.1 Specifications

The goods and services needed from outside the project team for this project are new computer hardware (both laptops and desktops), new computer software (Microsoft Office 365), and recycling of old computer hardware. Each of these must be procured according to the following specifications:

Good or Service	Specifications
New Computer Hardware	<ul style="list-style-type: none"> • 1,394 laptops and 464 all-in-one desktops • Dell brand • Windows 10 OS • 500GB hard drive • 8GB RAM • Intel i3 processor • No touchscreen • Preloaded with corporate settings and software
New Computer Software	<ul style="list-style-type: none"> • Corporate subscription of Microsoft Office 365 for 1,858 individual users <p>(Must be purchased directly from Microsoft)</p>
Old Hardware Recycling	<ul style="list-style-type: none"> • HIPAA-compliant data removal • Environmentally responsible recycling

4.9.2 Contract Terms

Contract terms for the procurement of new computer hardware must include:

- Supplier’s ability and willingness to meet the above specifications
- Plans for staggered delivery directly to branch locations
- Insured shipping and handling
- Privacy and appropriate use of any proprietary software from Aveanna
- Plans for replacement of defective, damaged, or lost units
 - Units that were set up improperly by the supplier or with manufacturer errors missed by the supplier should be replaced at the cost of the supplier.
 - Replacement of units damaged in transit should be covered by insurance.

- Units that were damaged or lost due to handling or storage issues at branch locations should be replaced at the cost of Aveanna Healthcare.
- Damaged units must be formally logged and returned to the supplier. Lost units must also be formally logged. Replacement units should be prepared for the end of the project (April 2021) due to scheduling and travel arrangements.
- Payments sent monthly
- Plans for resolving disputes
 - Claims must be formally documented and should be addressed through direct negotiation between the two contracting parties.
 - Unresolved, escalated claims should undergo mediation.
- Arrangements to perform a procurement audit

Microsoft Office 365 is an internet-based subscription that must be directly purchased from and renewed annually with Microsoft Corporation. There will be no third-party supplier or contract for this procurement.

Contract terms for the procurement of hardware recycling services must include:

- Supplier's ability and willingness to meet the above specifications
- Ability and willingness of the supplier to receive and process shipments over time
- Privacy and appropriate handling of any proprietary software installed on old units
- Payments sent monthly
- Plans for resolving disputes
 - Claims must be formally documented and should be addressed through direct negotiation between the two contracting parties.
 - Unresolved, escalated claims should undergo mediation.
- Arrangements to perform a procurement audit

4.9.3 Scheduling Needs

Hardware Supplier: Orders for hardware will be finalized with a supplier on January 4, 2021. The first deliveries are needed to branch locations in Georgia and Florida prior to January 18, 2021. Shipments from the supplier should be staggered based on when each branch is scheduled to receive service, both for the convenience of the supplier and minimization of risk from storing shipments until the project team arrives. The schedule of on-site work will be provided to the hardware supplier for the purpose of coordinating shipments. To preserve the integrity of the schedule, any necessary replacement units should be prepared and delivered after all originally-scheduled work is completed. The specific scheduling needs for these replacement units cannot be determined at this time and will be arranged with the supplier as they reveal themselves.

Software: The Microsoft Office 365 subscription must be purchased directly from Microsoft Corporation. This purchase must be finalized on January 7, 2021 to allow

adequate time to begin setting up employee accounts before on-site work begins on January 18, 2021.

Recycling Services: The earliest that any on-site work concludes at any branch location is January 18, 2021. Accounting for the time needed to pack and ship old hardware, the recycler should be prepared to begin receiving shipments of old hardware from branch locations as early as January 21, 2021. These shipments will continue over time as on-site work concludes at subsequent branches. The last shipments should arrive no later than April 7, 2021 based on deadlines set for the branch directors and office managers by project management.

4.9.4 Choosing Providers

Aveanna Healthcare will choose providers for this project from a list of pre-qualified providers with whom Aveanna has previously contracted for work on past projects. Requests for quotation (RFQs) will be sent to these providers to determine which are available to meet the needs of the project and how much their services would cost. RFQ responses will then be evaluated to choose the providers best suited to the project's goals, schedule, and budget.

4.9.5 Controlling Procurement

Inspection: Upon their arrival at the various branch locations, project team members will carefully review each unit of hardware for damage, malfunction, and incorrect setup prior to distributing the units to branch employees. Any issues will be formally documented and reported, and faulty units will be returned to the supplier to be replaced according to the guidelines set out in subsections 4.8.2 and 4.8.3.

Audits: As noted in subsection 4.8.2, arrangements will be made in procurement contracts to perform audits of the project's procurement processes. These audits should take place approximately halfway through the project to monitor progress and adherence to contracts and specifications. Inconsistencies and other issues will be formally documented by the auditor and reported to the project managers of both contracting parties.

4.10 Project Stakeholder Management

Stakeholder management planning is a vital basis for planning other areas of project management, including communication management and risk management. Stakeholders, as defined by the Project Management Institute (PMI) in the sixth edition of its Guide to the Project Management Body of Knowledge (PMBOK® Guide), are "the people, groups, or organizations that could impact or be impacted by the project."⁹ It is imperative that the stakeholders for any project be identified and their relationships to and expectations for the project analyzed so as to uphold their satisfaction and prevent potential problems.

4.10.1 Stakeholder Register

For this project, ten key stakeholders have been identified. The stakeholder register below lists these stakeholders and elaborates on their roles, responsibilities, expectations, and requirements:

Stakeholder Register					
ID	Stakeholder	Functional Area	Roles & Responsibilities	Main Expectations	Major Requirements
1	Chief Information Officer (CIO)	Project Sponsor, Project Direction	Make high-level decisions about project direction and budget	That the project will be a good investment for the company by improving security and efficiency	That the project will be completed on schedule and on budget so as not to waste time or resources
2	Chief Financial Officer (CFO)	Project Direction	Make high-level decisions about project budget	That the project will be a good investment for the company by improving security and efficiency	That the project will be completed on schedule and on budget so as not to waste time or resources
3	Chief Clinical Officer	Project Direction	Make high-level decisions about project direction	That the project will improve security of information and efficiency of work within the company	That the project will be completed on schedule and on budget so as not to waste time or resources
4	Chief Operations Officer	Project Direction	Make high-level decisions about project direction	That the project will be a good investment for the company by improving security and efficiency	That the project will be completed on schedule and on budget so as not to waste time or resources
5	Aveanna IT Department	Project Execution, End Users	Direct and manage project; use project end result and provide feedback	That the project will make IT work easier and more efficient by ensuring technological consistency across the company	That project work will not divert so many departmental resources as to become disruptive to operations
6	Project Team	Project Execution	Carry out project activities	That adequate resources and arrangements will be made for project work to be carried out	That adequate resources and arrangements will be made for project work to be carried out
7	Branch Directors and Office Managers	Project Execution, Beneficiaries, End Users	Carry out project activities, use project end result and provide feedback	That project work will not seriously disrupt operations, and that the end result will improve the quality and efficiency of work at their branch	That project work will not seriously disrupt operations
8	Aveanna	Beneficiaries,	Use project end	That project work	That project work

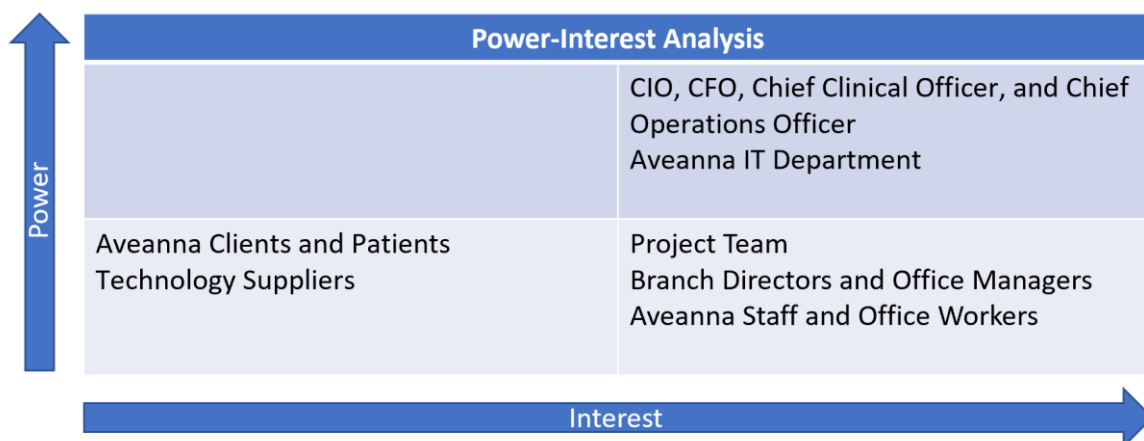
	Staff and Office Workers	End Users	result and provide feedback	will not seriously disrupt operations, and that the end result will improve the quality and efficiency of their work	will not seriously disrupt operations
9	Aveanna Clients and Patients	Beneficiaries	Will not directly use the end result but will benefit from Aveanna's improved technology	That project work will not disrupt the care and services they receive, and that the end result will improve the quality and efficiency of the care and services received	That project work will not disrupt the care and services they receive
10	Technology Suppliers	Project Execution	Provide new computers for Aveanna to purchase and use for the project	That requirements and specifications will be made clear and contract terms will be met	That contract terms are clear and are met by Aveanna, and that prompt and adequate payment is received

4.10.2 Stakeholder Analysis Matrices

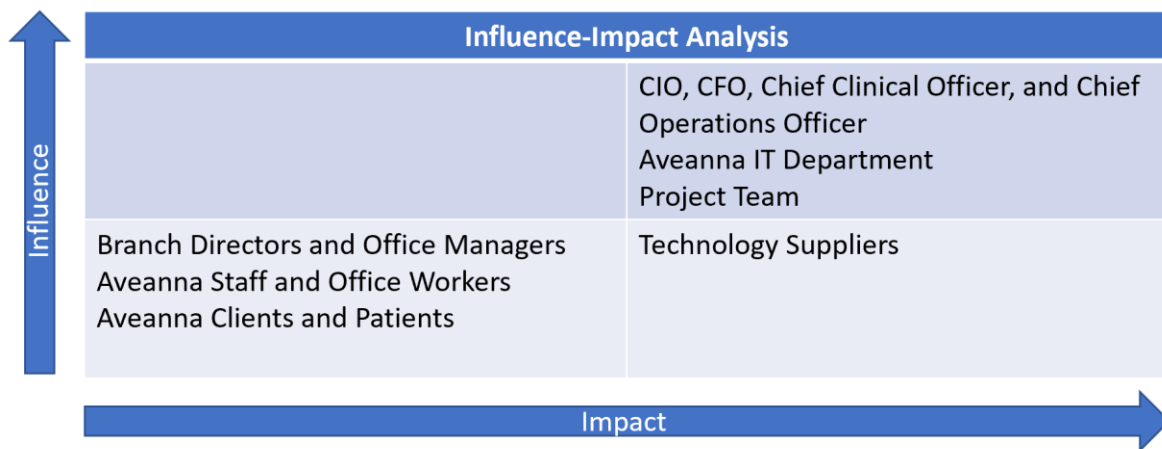
Part of analyzing stakeholders' relationships to the project is determining their power, interest, influence, and impact regarding project progress and results. In order to achieve this, it is necessary to first understand what each of these words means in relation to stakeholder management. Master of Project Academy provides the following definitions³⁴:

- Power – Authority over the project direction
- Interest – Concern about the project outcomes
- Influence – Involvement in the project
- Impact – “Ability to bring a change or result”

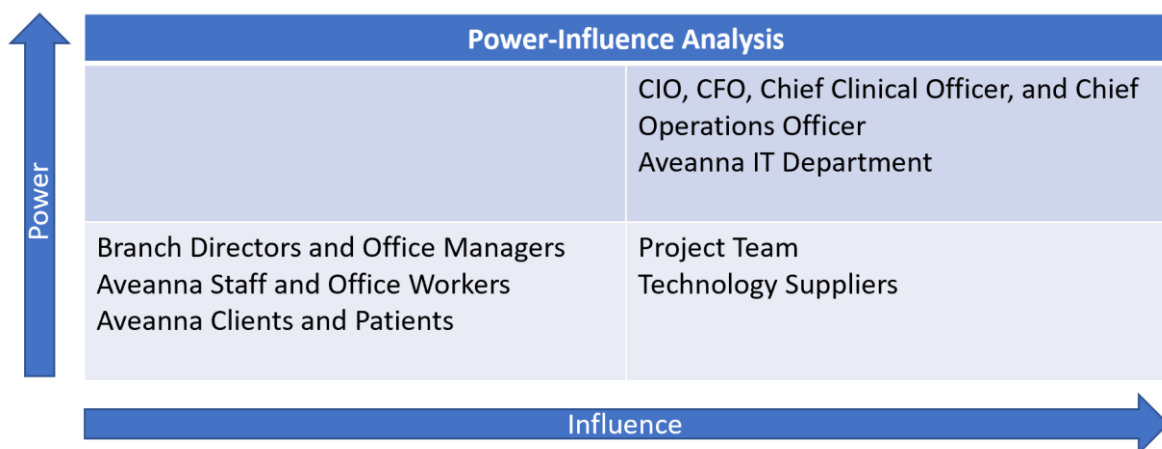
The analysis of these four stakeholder aspects is typically represented through matrices. Below are the relevant stakeholder analysis matrices for this project:



In this project, Aveanna Chief Information, Financial, Clinical, and Operations Officers and Aveanna’s IT department are classified as high-power, high-interest stakeholders. The CIO, as the project sponsor, has significant authority over decisions related to the project scope, schedule, and budget, as do the other high-level officers. The officers also are concerned with the project’s benefits to the company, namely that providing technological upgrades for each employee will result in improved work efficiency and information security. The IT department also has high power due to their being responsible for project execution and their expertise in the relevant subject area. Their high interest stems from the increased ease and efficiency that will be brought to their work by upgraded technological systems.



The high-influence, high-impact stakeholders for this project are again Aveanna’s high-level officers and Aveanna’s IT department, as well as the project team. The officers are highly involved in the project due to their roles in decision making, especially in the case of the CIO, who is the sponsor. These officers also have the ability to bring about a change in the project due to being high in the management hierarchy. Aveanna’s IT department and the project team have a high influence and impact both because they are directly responsible for project implementation.



Representing the intersection of the previous two matrices, the Power-Influence Analysis matrix shows Aveanna's high-level officers and Aveanna's IT department as the project's high-power, high-influence stakeholders.

4.10.3 Communication Plan

Another important part of stakeholder management is communication. It is necessary for all stakeholders to be informed about the project and for certain stakeholders to be involved directly in project decision making. Additionally, project managers must understand that stakeholders may communicate with one another. The number of possible communication channels among stakeholders can be determined using the equation $n*(n-1) / 2$.³⁵ For this project, the equation would be $10*(10-1) / 2$, which comes out to 45 communication channels. The chart below shows the basic outline of a communication plan for this project's stakeholders. For a more detailed communication plan, see section 4.7 (Project Communications Management).

Communication Plan				
Stakeholder	Engagement Action	Owner	Channel	Frequency
Chief Information Officer (CIO)	Manage closely	Project Manager	Meetings	Weekly
Chief Financial Officer (CFO)	Manage closely	Project Manager	Meetings	Weekly
Chief Clinical Officer	Manage closely	Project Manager	Meetings	Weekly
Chief Operations Officer	Manage closely	Project Manager	Meetings	Weekly
Aveanna IT Department	Manage closely	Project Manager	Meetings with management; email updates	Meetings weekly; emails as needed
Project Team	Manage closely	Project Manager	Team meetings; email updates	Meetings weekly; emails as needed
Branch Directors and Office Managers	Keep informed	Project Manager; Chief Operations Officer	Email memos	Once each at the beginning and end of project, plus as needed per branch office based on scheduling
Aveanna	Keep informed	Project	Email memos	Once each at

Staff and Office Workers		Manager; IT Department		the beginning and end of project, plus as needed per branch office based on scheduling
Aveanna Clients and Patients	Monitor	Chief Clinical Officer	Nursing supervisor site visits	Monthly
Technology Suppliers	Monitor	Project Manager	Initial meeting; phone calls; emails	Initial meeting after supplier is chosen; phone calls as needed; emails weekly throughout procurement process

Weekly meetings with the CIO, CFO, Chief Clinical Officer, and Chief Operations Officer fall under the responsibility of the project manager. The project team will provide the project manager with updates to share with the officers, including an assessment of the project schedule status as:

- Green – on target
- Yellow – needs attention
- Red – at risk of missing target

4.10.4 Risk Stakeholder Analysis

Finally, this Stakeholder Management Plan includes a risk stakeholder analysis. For a full, detailed risk analysis of the project overall, see section 4.8 (Project Risk Management).

The first step of the risk stakeholder analysis is to determine a stakeholder's level of engagement at the time of planning and the desirable level of engagement for that stakeholder.³⁵ This project's engagement assessment matrix is shown below, with C's representing the stakeholders' current levels of engagement and D's representing their desired levels:

Stakeholder Engagement Assessment Matrix					
Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Chief Information Officer (CIO)					C / D
Chief Financial					C / D

Officer (CFO)					
Chief Clinical Officer					C / D
Chief Operations Officer					C / D
Aveanna IT Department					C / D
Project Team				C / D	
Branch Directors and Office Managers	C			D	
Aveanna Staff and Office Workers	C			D	
Aveanna Clients and Patients	C / D				
Technology Suppliers	C			D	

As shown in the matrix above, it is ideal that Aveanna's clients and patients remain unaware that this project is occurring, despite their being listed as stakeholders and indirect beneficiaries. This is due to the types of services the company provides. Aveanna's patients are medically fragile children, and clients are their parents and guardians; it would be inappropriate to trouble them with a purely internal company project.

Following the engagement assessment matrix, a risk engagement plan is necessary. Such an engagement plan shows the priority of each stakeholder and the actions that should be taken to secure a particular stakeholder's support.³⁵ The following chart outlines the risk engagement plan for each stakeholder:

Stakeholder Risk Engagement Plan				
Stakeholder	Current Level of Engagement	Desired Level of Engagement	Priority	Action Points
Aveanna Healthcare	Leading	Leading	Critical	Present a clear supporting case for the project and a detailed budget and schedule, then conduct an audit

				during the project to ensure budget and schedule stay on track
Aveanna IT Department	Leading	Leading	Critical	Ensure fair compensation for project work and flexibility in other operations in case of short staffing due to project team travel
Project Team	Supportive	Supportive	High	Ensure fair compensation for work and coverage for travel expenses
Branch Directors and Office Managers	Unaware	Supportive	High	Ensure flexibility in operations in case of hold-ups due to project work
Aveanna Staff and Office Workers	Unaware	Supportive	Normal	Ensure flexibility in operations in case of hold-ups due to project work; arrange for the IT department to provide support for employees unfamiliar with the new OS and Office Suite
Aveanna Clients and Patients	Unaware	Unaware	Low	Arrange for support requests to one branch to be temporarily redirected to another so that clients can still receive timely help while their normal branch is undergoing project work
Technology Suppliers	Unaware	Supportive	Normal	Create a fair clear contract and enumerate clear and specific technical requirements

5 CONCLUSIONS

1. A project charter, complete with assumptions, constraints, risks, and budget, as well as a Work Breakdown Structure (WBS), were prepared to plan for the successful execution of the FGP. This provided a structure that guided project progress.
2. A Scope Management Plan was developed to specify the work and deliverables of the project covered in the FGP. This plan included a Project Scope Statement and a WBS that describe the project's inclusions, exclusions, deliverable acceptance criteria, and activities.
3. A Schedule Management Plan was laid out to show how long the project covered in the FGP would take and how best to complete it within that time frame. The Gantt Chart at the beginning of the section provides an overall view of the duration, predecessors, and successors of each WBS activity and the milestones of work completion in each state. The more detailed schedule follows, listing each branch location and assigning specific to team members.
4. A Cost Management Plan was created to estimate and control the project budget. Averages and historical values were used to carefully calculate the monetary needs of this project for technology, recycling, and travel. After these estimates were completed, a contingency fund of 10% was added.
5. A Quality Management Plan was developed to ensure that the project's outcomes would meet the needs of its stakeholders. The responsibilities of each stakeholder with regards to quality management were described and assigned, and quality factors and metrics were defined.
6. The Resource Management Plan identifies the human and physical resources needed for the project and how they will be applied, as well as some basic information about the costs and sources of these resources. This section also includes a RACI matrix for assigning project roles to various human resources.
7. The Communications Management Plan outlines what project information should be shared how, when, and with whom. It includes a communication

matrix that defines the communication items and their audiences, objectives, vehicles, frequencies, and owners. The ways in which communications and their success will be monitored were also described.

8. A Risk Management Plan was developed to prepare for uncontrollable and unexpected events, both positive and negative. In this section, a Risk Breakdown Structure (RBS) was used to identify all the possible categories of risk within the project. Specific risks within each category were then listed and prioritized. Finally, each risk was assigned precautions and responses that would allow the project manager and team to prevent (or, in the case of opportunities, promote) and adequately deal with them.
9. The Procurement Management Plan defines how goods and services should be acquired from outside the project team. This includes the requirements for those goods and services needed and the contract terms and scheduling needs that suppliers must be able to meet. Methods for choosing suppliers and controlling procurements were also explained.
10. A Stakeholder Management Plan was created to identify key project stakeholders and their needs. Stakeholders' roles and expectations were organized into a table, then the stakeholders were analyzed and sorted in three different matrices according to their power, interest, influence, and impact within the project. Some general communication planning and risk analysis related directly to stakeholders were also included in this section.

6 RECOMMENDATIONS

1. Regardless of the nature of the project they are planning, project managers should not begin constructing a project management plan until they are thoroughly familiar with the background of the project and sure of the appropriate planning approach. Different projects have different needs, and both under- and overplanning can lead to wasted time and resources.
2. Project managers should be sure to always list the project exclusions when planning scope management. This helps to prevent scope creep, which can lead to schedule and cost overruns. Additionally, a WBS should always be elaborated, as it is invaluable for other areas of project planning such as schedule, cost, and risk management.
3. When developing a Schedule Management Plan for projects that involve team member travel to many different locations, project managers should be prepared to familiarize themselves with those locations on a map. This informs the scheduling aspect of travel time and the budgeting aspect of travel expenses, as well as the assignment of human resources – A trip that includes just one or two locations may require only one team member, while a trip with many locations may need two or more.
4. Creating a Cost Management Plan sometimes requires project managers to do creative research, as not everything needed for the project has a set price. It may be necessary to calculate the budget using averages and historical values and then account for possible fluctuations by adding a contingency fund.
5. Project managers working in the healthcare sector should be mindful that, in many projects, not every stakeholder will play a direct role in project quality management. In the project elaborated here, clients of the company are medically fragile children and their parents, making it inappropriate to trouble them with the details of an internal IT project. It is important that project managers consider the identities and needs of stakeholders prior to assigning them roles and responsibilities.

6. When elaborating a Resource Management Plan, project managers should be mindful of how they assign roles on a RACI matrix. It is not typically ideal for the same person or party to be both responsible and accountable for the same item. Someone separate should be available to check in with the accountable party.
7. Similar to the recommendation regarding project quality management, healthcare sector project managers should plan communications with the understanding that certain stakeholders may actually benefit more from not receiving information about company projects. If there are pre-existing communication channels with such stakeholders, these can be used to monitor them without unnecessarily involving them in the project.
8. Project managers must be able to think beyond the project when developing a Risk Management Plan. Though the primary goal of risk management planning is to identify and address risks that impact the project work and results, some risks may have a greater impact on clients or the company's reputation than on the project itself. Such risks should be acknowledged during the planning process.
9. Though project procurement management is often discussed in terms of bids and contracts, project managers should note that not all procurement items will require either of these. Such items should still be included in the Procurement Management Plan for control purposes, but they may need to be discussed in different terms from items that will require contracts.
10. A thorough Stakeholder Management Plan contains some elements of other knowledge areas such as communication and risk management. Project managers should be sure that the overlapping management plans compliment rather than contradict each other, especially if they are not created in succession.
11. In the development of this FGP, the project manager and project "team" were one in the same; however, in most project scenarios, there would be several people involved in the development of a project management plan. When this is the case, the project manager must apply effective leadership

and task delegation skills and group exercises such as brainstorming to complete a comprehensive project management plan.

12. Finally, project managers in all industries should be prepared to be flexible in their planning processes. There is a wide variety of tools, techniques, and best practices for project management, and not every one of them will be applicable to every project. Project managers must use their critical thinking skills and their best judgement to decide what to use or not, based on a variety of factors including but not limited to project scale and project complexity.

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8 APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Date	Project Name:
February 24, 2020	Project Management Plan for the Company-Wide Upgrade of Computers and Microsoft Office at Aveanna Healthcare
Knowledge Areas / Processes	Application Area (Sector / Activity)
<p><i>Knowledge Areas:</i></p> <ul style="list-style-type: none"> Project Integration Management Project Scope Management Project Schedule Management Project Cost Management Project Quality Management Project Resource Management Project Communications Management Project Risk Management Project Procurement Management Project Stakeholder Management <p><i>Process Groups:</i></p> <ul style="list-style-type: none"> Initiating Planning Executing Monitoring and Controlling Closing 	Information Technology (IT)
Start Date	Finish Date
February 24, 2020	October 13, 2020
Project Objectives (general and specific)	
<p><i>General objective:</i></p> <p>To develop a project management plan framed within the standards of the Project Management Institute to upgrade employee computers to Windows 10 and employee Microsoft Office suites to Office 365 at all Aveanna Healthcare branches across the United States of America.</p> <p><i>Specific objectives:</i></p> <ol style="list-style-type: none"> 1 To prepare a project charter and plan for the execution of the Final Graduation Project (FGP) 2 To develop a Scope Management Plan to specify what work the project will cover 3 To develop a Schedule Management Plan to understand how long the project will take and how to complete it within that time frame 4 To develop a Cost Management Plan to control the project budget 5 To develop a Quality Management Plan to ensure the adequacy of the project outcome 6 To develop a Resource Management Plan to identify what human and physical resources are necessary and how they will be applied 7 To develop a Communications Management Plan to control how project information is shared 8 To develop a Risk Management Plan to prepare for uncontrollable and/or unexpected events 9 To develop a Procurement Management Plan to decide how project resources should be acquired 10 To develop a Stakeholder Management Plan to identify key project stakeholders and their needs 	
Project Purpose or Justification (merit and expected results)	
This project is to be completed in order to fulfill the Final Graduation Project (FGP) requirement set forth by the MPM program	

at UCI. It is expected that the execution and completion of this project will strengthen the student's skills and knowledge as a project manager. Additionally, it is expected that this project, as a new body of work, will help to expand and advance the field of project management.

Specifically, this project addresses the field of IT project management. IT projects often have a widespread impact throughout an organization, not only within the IT department. Such projects can also provide excellent examples of large-scale coordination and project implementation. Therefore, it is beneficial for any project manager to understand how such projects are implemented, even if they do not expect to manage IT projects themselves.

Description of Product or Service to be Generated by the Project – Project Final Deliverables

The deliverables to be produced by this project are parts of a whole that will ultimately be combined into a single final product. These component deliverables include: (1) the FGP charter and plan; (2) the Scope Management Plan; (3) the Schedule Management Plan; (4) the Cost Management Plan; (5) the Quality Management Plan; (6) the Resource Management Plan; (7) the Communications Management Plan; (8) the Risk Management Plan; (9) the Procurement Management Plan; and (10) the Stakeholder Management Plan. The final product produced by the compilation of these deliverables will be a comprehensive plan and report to be submitted in partial fulfillment of the requirements for the Master in Project Management (MPM) degree at UCI. It will be presented to two reviewers and to a Board of Examiners for evaluation.

Assumptions

Timely and constructive responses will be provided by professors and tutors.

Timely and relevant information will be provided by the Aveanna Healthcare representative.

Electricity and an internet connection will be readily available throughout the lifespan of the project.

The MPM course platform will be available and functional for deliverable submissions and access to resources.

The cost of printing will not increase before the end of the project when printing will be needed.

Constraints

The Aveanna Healthcare representative is located in a different country and time zone than the student/PM.

The student/PM has other work and obligations outside of but simultaneously with this project.

The student/PM is the sole member of the project team.

The student/PM does not have prior experience in IT or IT projects.

The first five deliverables have only a short time available for their completion.

Preliminary Risks

If the internet connection in the workspace is slow or unavailable, it might slow down project progress, impacting time.

If more international phone calls than anticipated are required to obtain necessary information, it might surpass the budgeted estimate, impacting cost.

If insufficient funds are available at the end of the project, a cheaper printing option might need to be chosen, impacting quality.

If periodic deliverables contain too many mistakes or deficiencies, the problems might require more steps than expected to resolve, impacting scope and time.

Budget (USD)

Electricity \$2,367.00

Internet \$945.00

Phone \$48.00


Microsoft Office 365 \$100.00

Printing \$92.39

Labor \$9,600.00

Total \$13,152.39

Milestones and Dates

<i>Milestone</i>	<i>Start date</i>	<i>End date</i>
Delivery 1 (Charter and WBS)	February 24, 2020	March 1, 2020
Delivery 2 (Intro and Schedule)	March 2, 2020	March 8, 2020
Delivery 3 (Theoretical Framework)	March 9, 2020	March 15, 2020
Delivery 4 (Methodological Framework)	March 16, 2020	March 22, 2020
Delivery 5 (Executive Summary, Bibliography, Indexes, Signed Charter)	March 23, 2020	March 29, 2020
Tutoring Process	May 18, 2020	September 8, 2020
Reading by Reviewers	September 9, 2020	September 22, 2020
Adjustments	September 23, 2020	October 6, 2020
Presentation to Board of Examiners	October 7, 2020	October 13, 2020
Relevant Historical Information		
<p>Project Manager Evangelista Barylski is a degree candidate in the Master in Project Management program at la Universidad para la Cooperación Internacional in San José, Costa Rica. Her experience in the field of project management is limited to that accrued over the course of this program. Previous work similar to this project is limited to various essays, presentations, and other large-scale assignments completed as part of high school and undergraduate coursework.</p> <p>Aveanna Healthcare is a medical services company headquartered in Atlanta, Georgia, USA. It provides in-home nursing and aide services, as well as medical supplies, to medically fragile patients in 23 states. The company's primary focus is on pediatric healthcare, but it is also expanding its adult home care services. Aveanna's in-house IT department supports these various services through keeping the company's computer hardware and software up-to-date and functioning properly.</p>		
Stakeholders		
<p><i>Direct stakeholders:</i> Student/Project Manager (Evangelista Barylski) Aveanna Healthcare representative (Michael Yerkey) FGP seminar professor (Carlos Brenes) FGP tutor (Luis Diego Arguello Araya)</p> <p><i>Indirect stakeholders:</i> FGP reviewers Board of Examiners Universidad para la Cooperación Internacional PM's family and friends</p>		
Project Manager: Evangelista Barylski	Signature: 	
Authorized by: Luis Diego Arguello Araya	Signature:	

Appendix 2: FGP WBS

- WBS must include tasks from the complete FGP life cycle, starting from the graduation seminar and ending with the presentation to Board of Examiners.
- Must be created in WBS Chart pro tool or other layout approved on the WBS practice standard.

Work Breakdown Structure			
Project: Project Management Plan for the Company-Wide Upgrade of Computers and Microsoft Office at Aveanna Healthcare	1.0 Delivery 1	1.1 Project Charter	1.1.1 Describe Project
			1.1.2 Plan Dates and Milestones
			1.1.3 Identify Stakeholders
		1.2 Work Breakdown Structure	1.2.1 Identify Phases and Deliverables
			1.2.2 Break Phases into Deliverables and Tasks
			2.1 Introduction
	2.0 Delivery 2	2.1 Introduction	2.1.1 Background
			2.1.2 Statement of Problem
			2.1.3 Purpose
			2.1.4 Objectives
		2.2 Schedule	2.2.1 Identify Activities
			2.2.2 Plan Activity Dates and Durations
			2.2.3 Identify Activity Resources
	2.3 Adjustments	2.3.1 Make Changes Based on Feedback	

Project: Project Management Plan for the Company-Wide Upgrade of Computers and Microsoft Office at Aveanna Healthcare			2.3.2 Explain Reasoning for Any Disagreement with Feedback
	3.0 Delivery 3	3.1 Theoretical Framework	3.1.1 Company Description
			3.1.2 Project Management Concepts
		3.2 Adjustments	3.2.1 Make Changes Based on Feedback
			3.2.2 Explain Reasoning for Any Disagreement with Feedback
	4.0 Delivery 4	4.1 Methodological Framework	4.1.1 Information Sources
			4.1.2 Resource Methods
			4.1.3 Tools
			4.1.4 Assumptions and Constraints
			4.1.5 Deliverables
		4.2 Adjustments	4.2.1 Make Changes Based on Feedback
	4.2.2 Explain Reasoning for Any Disagreement with Feedback		
	5.0 Delivery 5	5.1 Executive Summary	5.1.1 Background
			5.1.2 Problem

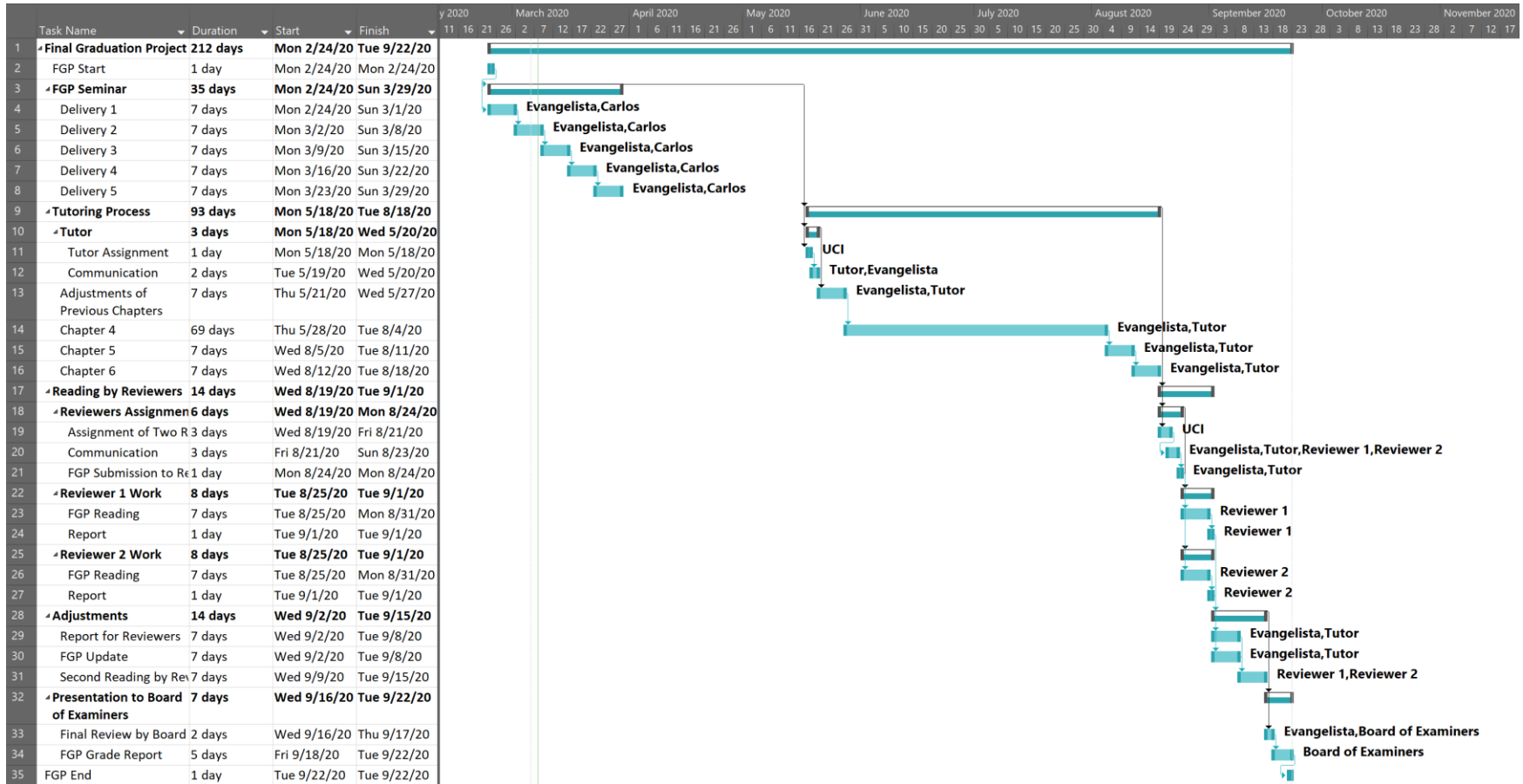
<p>Project: Project Management Plan for the Company-Wide Upgrade of Computers and Microsoft Office at Aveanna Healthcare</p>	5.0 Delivery 5	5.1 Executive Summary	5.1.3 Justification
			5.1.4 Objectives
			5.1.5 Methodology
		5.2 Bibliography	5.2.1 Cite All Sources in APA Format
			5.2.2 Verify In-text Citations
		5.3 Indexes	5.3.1 Index of Contents
			5.3.2 Index of Figures
			5.3.3 Index of Charts
		5.4 Signed Charter	5.4.1 PM Signature
			5.4.2 Approver Signature
		5.5 Adjustments	5.5.1 Make Changes Based on Feedback
			5.5.2 Explain Reasoning for Any Disagreement with Feedback
	6.0 Tutoring Process	6.1 Tutor	6.1.1 Tutor Assignment
			6.1.2 Communication
		6.2 Adjustments of Previous Chapters	6.2.1 Make Changes Based on Feedback
6.2.2 Explain Reasoning for Any Disagreement with			

<p>Project: Project Management Plan for the Company-Wide Upgrade of Computers and Microsoft Office at Aveanna Healthcare</p>	6.0 Tutoring Process	6.3 Chapter 4 (Development)	Feedback
			6.3.1 Gather Information from Aveanna Rep.
			6.3.2 Develop Integration Management Plan
			6.3.3 Develop Scope Management Plan
			6.3.4 Develop Schedule Management Plan
			6.3.5 Develop Cost Management Plan
			6.3.6 Develop Quality Management Plan
			6.3.7 Develop Resource Management Plan
			6.3.8 Develop Communications Management Plan
			6.3.9 Develop Risk Management Plan
			6.3.10 Develop Procurement Management Plan
			6.3.11 Develop Stakeholder Management Plan
			6.3.12 Make Adjustments Based on Tutor Feedback

Project: Project Management Plan for the Company-Wide Upgrade of Computers and Microsoft Office at Aveanna Healthcare	6.0 Tutoring Process	6.4 Chapter 5 (Conclusions)	6.4.1 Summarize and Evaluate Objectives
			6.4.2 Summarize and Evaluate Results
		6.5 Chapter 6 (Recommendations)	6.5.1 Based on Objectives/Results
			6.5.2 Areas not Developed
	7.0 Reading by Reviewers	7.1 Reviewers Assignment Request	7.1.1 Assignment of Two Reviewers
			7.1.2 Communication
			7.1.3 FGP Submission to Reviewers
		7.2 Reviewer 1 Work	7.2.1 FGP Reading
			7.2.2 Report
		7.3 Reviewer 2 Work	7.3.1 FGP Reading
	7.3.2 Report		
	8.0 Adjustments	8.1 Report for Reviewers	8.1.1 Explain Changes Made
			8.1.2 Explain Reasoning for Any Disagreement with Feedback
		8.2 FGP Update	8.2.1 Make Changes Based on Feedback
8.2.2 Proofread and Review			

		8.3 Second Reading by Reviewers	8.3.1 Reviewer 1 Work
			8.3.2 Reviewer 2 Work
	9.0 Presentation to Board of Examiners	9.1 Final Review by Board	9.1.1 Practice Presentation
			9.1.2 Official Presentation
		9.2 FGP Grade Report	9.2.1 Review Report
			9.2.2 Graduation

Appendix 3: FGP Schedule



Appendix 4: Revision Dictum

1364 Bexley Place NW

Kennesaw, GA. 30144

August 28, 2020

To Whom It May Concern:

I attest that I have personally reviewed, proofread and edited Evangelista Barylski's Final Graduation Project which included grammar, punctuation, sentence structure, spelling, sequencing, format, clarity, and the cited references.

Sincerely,

A handwritten signature in cursive script that reads "Loretta G. Weisberg".

Loretta G, Weisberg B.S.E.ED, MA.S.Ed

Loretta G. Weisberg

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Education

1979-1980 Duquesne University Pittsburgh, PA
 Masters of Science in Education

1954-1958 SUNY at Fredonia, NY
 Bachelor of Science in Elementary Education

1996-ESOL Endorsement-Miami Dade In-service Courses

**Professional
experience**

2007-2014- Georgia Highlands College, Rome, Georgia- Instructor- EDUC courses:
 Introduction to Education; Introduction to Exceptional Children; Critical and
 Contemporary Issues in Education; Diversity in Education

7/8 & 7/9, 2008-SUNY at Fredonia-Member of Alumni Leadership Conference:
 "What is Needed to Teach with Integrity in an Era of Accountability?"

1992-2004-Teacher-emotionally handicapped- Miami-Dade Public Schools, Miami,
 Florida

1970-1992- Teacher-special needs, remedial reading and math, LD, BD,
 ED, and Educable- New Jersey, Massachusetts, Missouri, Pennsylvania,
 Florida, and Georgia

1958-1970: 1st and 3rd grade teacher- New York and Massachusetts

Loretta G. Weisberg**Additional
professional
activities**

Language Arts Department Head for 8 years

Author: "So You Want to Be a Teacher: The Little Red Book of Teacher Attributes"

Author: Program Development for writing essays: "Writing is E-Z" (Created and developed a program for writing essays for all age groups.)

1998-1999 Teacher of the Year-Robert Renick Educational Center-Miami-Dade Public Schools

Member of school's leadership, curriculum, professional development, and transition from middle school to high school committees

Cadre member of Dade Academy for Excellence in Teaching, (DAET), a district approved reading program, which included conducting teacher workshops, monitoring implementation, and compiling data

Trained in Clinical Supervision of Interns and performed the duties of Supervising Teacher for four Florida International University Students

Trained in the Teacher Assessment and Development System, (TADS), Miami-Dade County's teacher evaluation instrument, which included conducting teacher workshops and performing the duties of a peer observer

Developed a Scope and Sequence for the 6th, 7th, and 8th grade Language Arts Curriculum with components for the FCAT reading and writing tests

Created an introductory writing program, "Writing is E-Z", which included writing for the FCAT and conducted teacher workshops and numerous workshops for the 8th grade students

Created a 9-week after-school tutorial program for the FCAT that included scheduling and daily lesson plans

Developed a course of study for beginning teachers, "So You Want to Be A Teacher", an introspective exploration of teacher qualities that support and advance teaching as a profession

Past facilitator of Georgia Council on Child Abuse/Parents Anonymous during teaching experience in Cobb County Public Schools in Marietta, Georgia. Conducted Parent Anonymous sessions, for three years, for court ordered parents in distress. Past member of Parents Anonymous Speakers Bureau.

Past employee of a residential drug and alcohol treatment center, Straight Incorporated, Marietta, GA.