



DECEMBER 1, 2022

# GREAT OAKS CLEANING SOLUTIONS

VANILLA SYSTEMS

TEAM 5

GEORGE MASON UNIVERSITY  
Professor Wade Feng Pan

## A. #3.1 Overview & introduction

### A.1 Overview

Our Client is 'Great Oak Cleaning Solutions' and is located at 6263 Alforth avenue, Alexandria, VA 22315. Our point of contact is Addis Kassie. Great Oak Cleaning Solutions is a cleaning company that specializes in Janitorial Services, Commercial Cleaning, Disinfecting Services and more. Great Oak's mission is to provide not only the best of service but a service at an affordable price. Great oak is also a growing business but one that requires a more efficient way of processing orders and minimizing wait-time for their clients to receive quotes.

### Work Breakdown Structure

- In assignment #3.2, Bezawit Tessema will be handling Business & Competition where she will analyze trends, competitors of the business and most importantly, getting to know our client. She will be our Point-Of-Contact for this project as well.
- In assignment #3.3, Tony Tortora will be managing any and all Activities & Augmentations in the project. What this means is Tony will be doing an in-depth analysis of current methods of business practice and any problems they're currently faced with, bringing this up to the team and seeing how we can alleviate these problems.
- In assignment #3.4, Ammar Waqar will be taking charge of Quantification, where he will be managing the financials probability of the project. Ultimately, Ammar will be covering revenue that the business is currently receiving vs how much they can be earning later once the project is completed. Ammar will be managing the logistics of the before and after for this business for the duration of the project.
- In assignment #3.5, Jesse Yanez-Garcia will be leading Requirements and Proposed solutions. Jesse will not only be responsible for what key components the project requires but will also be managing a list of solutions that's best feasible for the client.
- In assignment #3.6, Thushal Venkatesh is assigned to Implementation Challenges and 493 Planning. Thushal will be responsible for the list of solutions in the order of what's most feasible, from then he will provide the team both a Benefit Cost Analysis and a risk assessment of the selected solution. After this, he will also be in charge of the project plan for IT 493.



## B. #3.2 Great Oaks Business & Competition

### B.1 Overview

The Great Oaks cleaning solution is a company that provides cleaning and janitorial services. They specialize in cleaning commercial and government office buildings, post construction, and provide floor care and disinfecting services in the DMV area. Since it is a relatively new company, as of 2020–2021, it has continued to operate without experiencing a sizable loss or profit. The company has struggled with gaining new business, being competitive in the market, marketing its brand, and other issues. As a result, the company has a low employment rate. The company has three employees, and it hasn't let go of any employees so far. The company currently employs three people, and no employees have been let go. Competition for Great Oaks in the commercial cleaning sector in the DMV comes from local, regional, and national sources. The industry has continued to grow, in terms of operators and revenue, steadily since 2011.

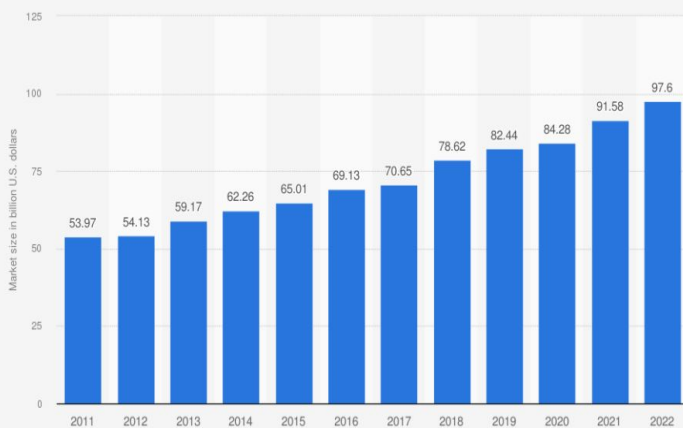
- Figure 1 shows the market size of janitorial services in the United States from 2011 to 2022. This demonstrates that the cleaning sector has been hiring more people and generating more revenue. This means that Great Oaks' main challenge is to stand out to have a foundation in the market from which to grow.

- Figure 2 shows the number of employees in cleaning occupation in the United States from 2020 to 2021. This shows the growth of commercial cleaning in terms of employment. This means once Great Oaks cleaning solution have will face no issue finding employees in the business, once they implement our solution and start gaining more revenue.

**Figure 1**

**Figure 2**

Market size of janitorial services in the United States from 2011 to 2022 (in billion U.S. dollars)

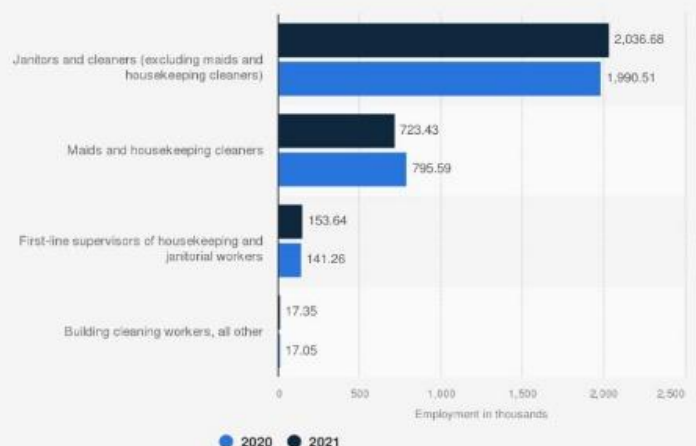


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Additional Information:  
United States; 2011 to 2022

statista

Number of employees in cleaning occupations in the United States from 2020 to 2021, by job type (in 1,000s)



Additional Information:  
United States; Bureau of Labor Statistics; May 2020 to May 2021

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## C. 3.3 Processes and What Can Be Improved

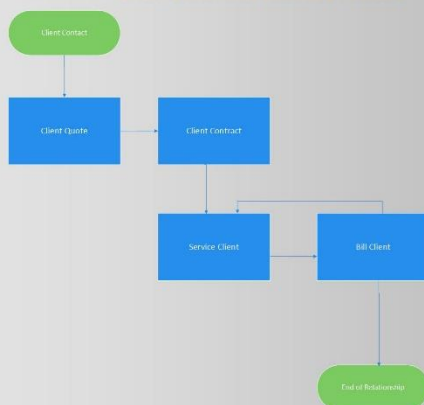
### C.1 Overview

Great Oaks, as previously discussed, faces a large amount of competition in the commercial cleaning industry. The major challenges Great Oaks faces client acquisition and onboarding, time spent on routine processes, and a lack of web presence that leads to a lack of discoverability and marketing options. These issues are rooted fundamentally in the current business process and the lack of technological integration to-date. With the changes we propose Vanilla Systems strongly believes that Great Oaks will be able to outcompete similarly sized local companies and can possibly achieve parity with larger regional and national competitors.

### C.2 As-Is, Issues and Challenges

As can be seen, the current business process for Great Oaks is fairly simple. Management initiates client recruitment via cold calls, clients who are interested in service then wait for a quote before moving into a contracting phase. Once terms have been agreed upon Great Oaks then moves into the service and billing phases until the relationship is terminated. Because of Great Oaks lack of any sort of web-based platform all of these phases are completed manually through phone calls and email with data being stored in spreadsheets.

Great Oaks As-Is Business Process



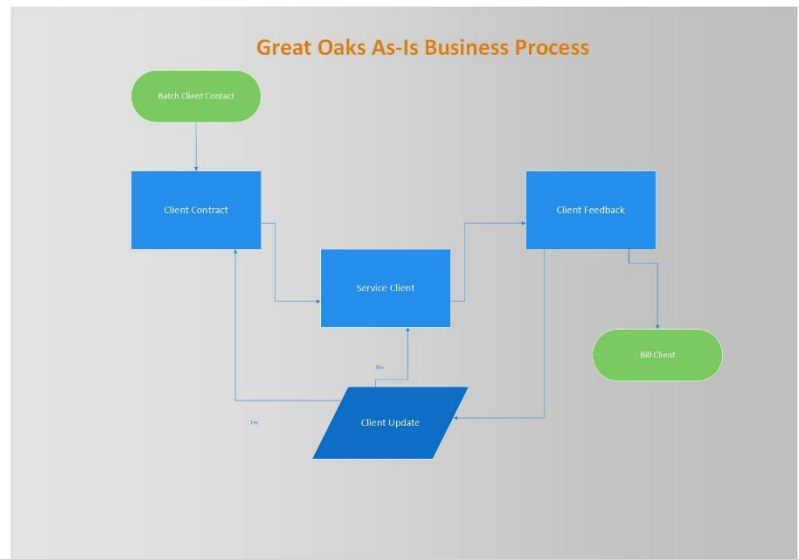
The issues with this current model is as follows:

- Limited and labor-intensive client outreach due to case-by-case cold calling
  - o This is solely in management's hands currently as Great Oaks has no discoverability currently
- Lengthy and labor-intensive client onboarding, including both quoting and contracting turnaround
- No client self-service options
  - o No external account visibility for service requests or changes
  - o No options for client feedback
  - o No options for client-based account origination

### C.3 To-Be, Course Correction

As we will quantify in detail later on, the results of these issues is significant cost in terms of man-hours spent on what are routine processes as well as lost potential revenue from a having a limited recruitment pool. Through the integration of our proposed technological solution the business process does not appear to significantly change as seen in B.3.1, practically however there will be a fundamental operational shift.

- The proposed solution will enable Great Oaks to combine client contact and quoting into a single phase
- The client feedback and update phases entail self-service through the proposed solution
  - o This has the added benefit of being a point of account and quote origination if customers self-enroll due to enhanced discoverability



### C.4 Process Comparisons

As stated, on a purely surface level there does not appear to be a significant difference between the current and proposed business processes for Great Oaks however, when viewed in conjunction with Vanilla Systems' proposed technology-based updates the results impactful.

- Less time spent by management for routine tasks
  - o Client contact and initial quotes can be completed in batches, leveraging results from data entry sessions
  - o Less time spent manually generating invoices
  - o Options for client self-service results on less time spent by management directly managing accounts
- Greater discoverability through web-based platform leads to a larger potential client pool

These changes result in a large increase in quality of life for Great Oaks management and clients alike. Time from initial contact to first service can be dramatically reduced, client data will be easier to update, and the added benefits of greater visibility when added to a larger potential client pool means that Great Oaks could reasonably expect to enjoy the year over year growth that is typical of the commercial cleaning industry at this point.

## D. #3.4. Quantification

### D.1: Overview of Quantification

The purpose of quantification is to show the difference between Great Oaks current endeavors through the "As is" and to show how Vanilla System's "To be" Model would help the company increase profits.

### D.2: Quantification Metrics

Vanilla Systems realized Great Oaks was heavily reliant on cold calls for their services. Great Oaks spends 4 hours weekly talking to potential clients and receives between 0 to 1 request for services per week. Employee wages are 21 dollars an hour.

### D.4: Forecasted Financial Analysis results of "TO BE" process

#### D.4.1: "TO BE"

The time spent on the initial setup of email contact forms which include initial contact, basic quote formulation and follow-up contact firms is between 5 to 10 hours per year and costs \$105 to \$210 per year. In Vanilla Systems "TO BE" process, cold calls are replaced with weekly email sessions. That would be one hour per week to send out emails which equates to \$1092 per year. Data entry and lead generation is still 50 cents an hour per potential client, but if Great Oaks doubles max contact per session, that's 6 potential clients at 3 hours per week, which is \$3276 for 312 clients contacted. Vanilla Systems added setup costs, email costs and data costs which equates to \$4,578 yearly.

#### D.4.2: Cost Analysis

Vanilla Systems established the setup costs of \$210, the email costs of \$1092, and data costs of \$3276 equate to the yearly contact costs of \$4578. With this new process, Great Oaks saves \$336 to \$1428 yearly and reserves 16 to 68 hours that may be applied and invested to the rest of the business. Hypothetically, if 3 clients are currently contacted every session as-is, that's a call to final contract ratio of about 31 to 1. Assuming that is a stable ratio, then at 312 contacts per year, Great Oaks could potentially add another 10 clients over the course of the next year.

### D.3: Financial Analysis results of "AS IS" process

#### D.3.1 Current "AS IS" Process

This is Great Oaks current business process. Starting with Client Order received, this is Great Oaks CEO making cold calls and spending most of his time contacting companies and creating a quote. Once the customer is interested and Contract is created, the client can be serviced. Once the service is completed the contracted is ended and the Client is invoiced for the service

#### D.3.2: Results

Vanilla Systems sees clear issues with this model. The business is dependent on the CEO's outreach to function. Great Oaks spends 4 hours weekly and is only able to receive between 0 to 1 daily requests for services per week. Employees work 10 hours a week at 21 dollars per hour. Essentially the CEO spends too much time hunting down clients Also, there is no way for clients to reach Great Oaks due to lack of web presence. The CEO must individually reach out to his clients.

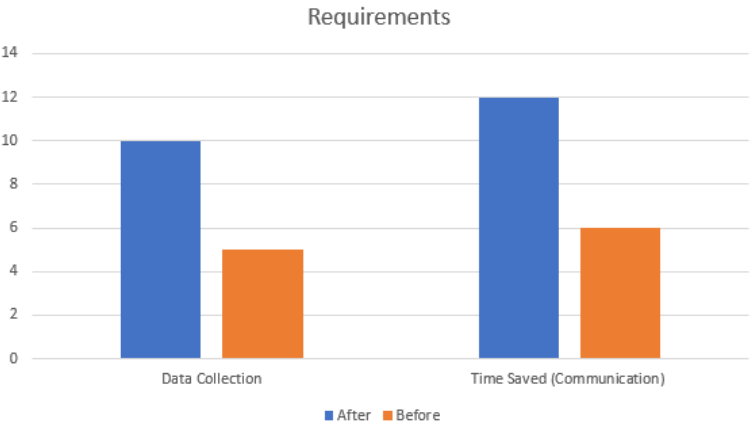
E. Assignment #3.5 Overview & introduction

E.1 Overview

Great Oaks cleaning Solutions is lacking behind its competition in terms of technology. This makes communication between clients difficult and time consuming. It also makes collecting data cumbersome. Vanilla Systems aims to revamp the way Great Oaks Cleaning Solutions incorporates a new solution to Great Oak’s technology Issue.

E.2 Requirements

Figure 1



Great Oaks requires for data collection to improve by 50% and improve the time used for communication between clients by 50%. The new system will have to be easily accessible through multiple devices across different platforms. The new system will also have to be user friendly so clients and the business will have an easier time adapting to the new system.  
(Figure 1 shows the difference before implementation of the new system and after)

E.3 Proposed Solutions

Figure 2

Mobile App	Web Portal
<p><u>Pros:</u> Convince, Communication will be easier</p> <p><u>Cons:</u> Expensive for scalability, Complex, Needs constant updates dependent on OS.</p>	<p><u>Pros:</u> Ability to add more features, more control over users.</p> <p><u>Cons:</u> Overly Complex for what the business wants, expensive, requires more development time</p>

Vanilla System’s proposed solutions included a mobile app and web portal. Both seemed like good options, but both did not meet what the client requires. (Figure 2 shows the pros/cons Vanilla Systems made to untimely remove these solutions)

E.4 Final Solution Selected

Vanilla System’s concluded that the best solution for the client was to create a web app. The web app will have the ability to be customizable to satisfy our client’s needs. It will provide order tracking, and effective communication.

Figure 3

The Great Oaks Cleaning Service

Welcome to The Great Oaks Cleaning Service please enter your details below to request a quote.

Client Name:

Business type:

Square Footage:

Client Email:

Description Box:

Challenges implementing a new system may be:

- Scalability
- Ease of use
- Consistency
- Data Collection

### F. Assignment #3.6 Implementation Challenges & 493 Planning

#### F.1 Implementation Challenge

##### -Figure 1 Implementation challenges

The major challenge to implementing our solution is our lack of experience with the technologies that we wish to use. This issue is manifested into several points that we have identified as areas of concerns:

##### Data Collection/Security

Because we want to take external users entering information to build accounts, we will need to be conscious of how data is handled on submission.

##### Scalability

We are aware that given the projected improvements to the current process our solution will need to be scalable to allow the new system to grow with the business

##### Ease of use/Consistency

The current system while, while primitive and slow, is easy to use. If the proposed solution does not offer a marked improvement in client yield, quote turnaround, and general profitability we risk the client rejecting or otherwise failing to adopt the end product.

Additionally our lack of familiarity with the project management tools and techniques we want to adopt presents another pain point.

This lack of experience has a compounding effect of also potentially creating a major issue with being able to maintain our planned sprint scheduling in 493.

#### **493 Planning**

Our main goal or focus for 493 planning is to be using what we have learned from our GMU courses to create a solution for Great Oaks Cleaning. This will be using a combination of php, HTML, and database technology to upgrade and create the improvements and functionalities proposed. We will be using the Agile/Scrum methodologies to carry out our tasks and meet our deadlines for the solution.



## Notebook

This document includes sketches, information from books, discussions, meetings, and personal thoughts. It also includes the project's entirety up to this point, the phases from which we began to the conclusion.

Unlike a formal report, a project notebook is more informal.

Team Leader = TL

09/05/2022 - First Group Meeting through Zoom ~ 45 Minutes

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Discuss key topics we're interested in pursuing, introduce one another, and exchanged contact information.

9/09/2022 - Second Team Meeting, ~ 1 hr +

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Top 3 selection, Ideal solutions, team leader delegated assignments to all ranging from #3.1 to #3.6. Laid out expectations of meeting times and lecture attendance to all.

9/12/2022 - Contingent Meeting ~ 40 minutes

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Assignment #3.1 slide creation + feedback and input from team. Gathered resources from top 3 and selected a capstone project to work on.

9/16/2022 - Third Team Meeting ~ 30 minutes

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Assignment #3.2 slide creation, discussed about the lecture. Picked a date to have a sponsored meeting with client. TL handed out questions of interest from lecture to ask, mention that there are some business questions the owner can't answer and to expect it.

9/19/2022 - Sponsored Meeting #1 ~ 1 hr +

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Discussed about the nature of business, financial status, business rivals and trends. Got a good concept of where the business operator is struggling in, created some initial plans to give business OP basic foundations of how we're going to approach.

9/26/2022 - Sponsored Meeting #2 ~ 1 hr and 30 minutes

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Metrics and Logistics discussion with business operators. Discussed a As-is/To-Be flow chart, layed out the underlining issues of current operating process, figuring out ordering time and customer interaction methodology.

10/06/2022 - Team Meeting (493 Planning) - 45 minutes

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Discussed our overall grade in the class, collected notes from every team member and their feedback from Professor Pan to establish ground work for Project Notebook. Thushal was assigned #3.6 Implementation, Challenges & 493 Planning, team provided him the structure of the slide and the expectations of the mp4 file.

10/13/2022 - Contingent Meeting (3.6 planning and discussion - 1 hour 20

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Thushal asked the team the requirements for the slides, Tony provided examples of how we wanted the 493 Planning to have a Gantt chart for better view of what's ahead. I created the 493 Gantt chart to assist Thushal on his slides. Beza, Jesse and Ammar provided feedback on Thushal's current iteration of slides and what's missing + what to add.

10/20/2022 - Team Meeting (Storyboard Discussion) - 1 hour 30

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- I assigned what the storyboard presentation to the team members with a template that I created to follow. Team edited the template to a cleaner structure that has more information and graphs to discuss their slide. Powerpoint was created same night along with slides added from every team member. Final

task of the night was to send me a voice recording of their slide over the next few weeks to create a storyboard voice presentation. Due 11/10.

10/27/2022 - Team Meeting (3.6 Turn in and DevOPs) - 1 hour 20

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Tony volunteered to assist Thushal after lecture was over to discuss 3.6 submission, missed a few slides the team expected him to have accomplished over the few weeks. I reviewed Thushal's mp4 where Thushal's voice would not be recognized or picked up during presentation, Tony assisted on the mp4 submission. Final discussion on what to expect next week, I created DevOPS and AgileScrum for next week's lecture to present the following lecture.

11/03/2022 - Team Meeting (Project Notebook and Storyboard) - 45 minutes

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Team discussed how Project Notebook should be structured w/template provided. All agreed upon a PDF formatted structure with everyone providing their overview & summary of their assigned task with the Project Notebook at the end. Storyboard mp4 was all emailed to me, edited and submitted to Professor Pan for review before rehearsal. Discussed a pre-rehearsal for the rehearsal class before thanksgiving, doing the storyboard presentation but live, what to expect in the next sponsored meeting. No class next week.

11/10/2022 Sponsor Meeting #3 (What to expect) - 1 hour

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Showed our client the framework for the upcoming semester and our winter break that's arriving. Provided him assurance on the quality of work we'll be giving him for his online platform when January arrives. Showed Sponsored the platform we'll be working on (Azure) to create his vision. Sponsor brought him time of completion and when website can be up and running, I provided him a Gantt chart of what he can expect in spring along with our goals and task break down structure.

11/17/2022 – Pre-rehearsal meeting 2 hours

**- Team Members attendance:** Tony Tortora, Beza Tessema, Jesse Yanez-Garcia, Thushal Venkatesh, Ammar Waqar

- Vanilla System discussed and viewed the storyboard presentation throughout the meeting to find the weak points of our presentation. Tony and Beza pointed out my introduction were hasty and that it should be more paced to align with everyone else.
- Small adjustments to be made: 3.1 introduction, 3.6 (Thushal Venkatesh) 49 second clip of defining his assigned assignment.
- Jesse suggested the idea of going over the storyboard like it was a real rehearsal, I began first while everyone muted and slowly, we all took turns doing our part as it was an actual rehearsal.

## Gantt Chart for IT – 493 Spring

