

Ecodomus Construction

Final Report

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Executive Summary

Ecodomus is a medium-sized construction, renovation and design company. The organization was established in 1986 in Montreal, Quebec and is led by John Theodosopoulos, the current CEO. Ecodomus' main goal is to provide clients with accurate and quality construction work at cost-efficient pricing.

The organization had been using Microsoft Office Excel for their two main business processes: bid and subcontractor management. Due to the scale in which the company has grown, their current software has become a liability. Ecodomus is looking for a new software that can simplify the organization of project bid management, as well as automating the process of collecting contact information and simplifying communication with their subcontractors. After the initial assessment, it was determined that the best sourcing option for Ecodomus' needs would be to lease a SaaS (software as a service) which provides predictable subscription costs that includes updates and client support resources, easy scalability, remote access, flexible hardware, faster set-up and faster time-to-market.

In order to find a more appropriate software to fit Ecodomus' needs, a list of mandatory requirements was compiled according to the organization's preferences. The software needed to include remote access or multi-user capabilities, have a bilingual option of English and French to cater to all employees, and needed to be compatible with Windows OS. After establishing the criteria, research was done to determine five of the best possible software options: ProCore, Smartsheet, Autodesk Construction Cloud, SmartBid and BrickControl. Each option was evaluated against the conditions to ensure they aligned with the organization's needs.

Once the five options had been established, the next step was to decide which software would be the most advantageous for Ecodomus to adapt into their organization. To reach a conclusion, a list of desirable criteria was created. The contents of the criteria included the following: functionality and fit, TCO (total cost of ownership), easy to navigate interface, quick setup, availability of customer support, and scalability. Each of the five options were evaluated and were given individual scores based on how closely they attained each condition. The sum of those individual scores generated a final percentage, and an option was chosen based on the highest achieved score. Through this assessment, it was revealed that ProCore was the most optimal choice, receiving a final score of 86% compatibility to the criteria.

Ecodomus was made aware of ProCore's contract requirements and privacy plan. The final step was to include a detailed implementation plan for Ecodomus to abide by in order to ensure a smooth transition from their current software to their new more efficient software.

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Description of Client Company Background

Company's Ownership, Years of Existence and Mission

Ecodomus Construction is a Montreal-based construction and design company that was founded in 1986 by John Theodosopoulos. The business's primary focus is on new construction, renovation, and design projects. Ecodomus Construction's mission statement is to provide quality architectural expertise, deliver projects in a timely manner at the most cost-efficient pricing available, and preserve the architect's main intent.

Industry Structure

Ecodomus Construction's industry structure can be studied by applying Porter's 5 Forces: an economic model used to analyze the industrial competition and attractiveness through five business criteria.

1. The Threat of New Entrants:

According to IBISWorld, the barriers to entry in the commercial construction industry are low, making it easy for new competitors to enter the trade. However, it is also mentioned that it is difficult for new entrees to establish themselves. It is a necessity for competitors entering the industry to create a reputation for themselves in order to gain experience and traction as a company. This can prove to be a difficult task considering they are fighting for positions against existing organizations with significant experience.

2. Threat of Substitutes:

There is no real equivalent for commercial construction. Instances arise where substitutes appear within the industry such as mobile-caravan homes and holiday cabins. However, these are mostly short-term substitutions as there is no suitable replacement for large-scale civil construction projects (UK Essays, 2017).

3. Bargaining Power of Customers:

Commercial construction is made up of several markets: trade services and warehouses, hotels (restaurants and resorts), office buildings, entertainment, and recreational

buildings, and miscellaneous (Gonzales, 2020). All of these markets are directly impacted by consumer spending on goods and services making their bargaining power highly influential. It is important to note that consumer spending habits have been influenced by the COVID-19 pandemic. Currently, the trade services and warehouses category (which includes shopping malls, shopping centers, and general merchandising stores) is worth 41.5% of industry revenue (Gonzalez, 2020).

4. Bargaining Power of Suppliers:

The bargaining power of suppliers is high as outside suppliers have a heavy impact on the industry. The survival of commercial construction organizations relies on networking and creating connections with independent subcontractors to join them on projects. These connections are key to a construction company's success in the industry (Gonzales, 2020).

5. Competitive Rivalry:

IBISWorld states that there is a low market concentration in the commercial construction industry. There are only four major players in the trade that account for 20% of available industry revenue while the minor players make up 80% of the remaining revenue. Only one company (PCL Constructors Inc.) competes with regional as well as local contracting companies (Gonzales, 2020).

Business Strategy

At the time of its inception, Ecodomus Construction utilized a very unique business strategy. Unlike most companies that would employ the use of public advertising such as commercials or signboards, Ecodomus depended heavily on word-of-mouth and networking. As the company has gained so much success from these methods alone, this is currently the company's main method of advertising. Ecodomus stands out from its competitors by delivering cost-effective projects in the Greater Montreal Area and consistently meeting deadlines, making it a cost-focus business strategy. John also prides himself on being present in every project, ensuring a higher level of detail with the addition of his architectural expertise. The company is looking to expand their brand.

IT Strategy and Governance

IT Principles

IT principles refer to how IT is used within the business. Ecodomus Construction specifically utilizes an IT governance called a business monarchy. A business monarchy is achieved when a small group of business executives makes IT decisions that impact the entire company (Weill, 2004). In the case of the company, John (the CEO) makes all of the decisions regarding IT functionality for the entire organization.

IT Architecture

IT architecture is described as a set of rules and regulations that lay the groundwork for how IT functions will be implemented into the company. Ecodomus applies an IT monarchy to achieve this. An IT monarchy implies that IT professionals are tasked with making decisions in their line of expertise (Weill, 2004). Ecodomus has partnered with an IT company called DataDouble who is in charge of making those IT decisions and providing the necessary procedures.

IT Infrastructure Strategies

IT infrastructure strategies include strategies made for the foundation of IT functionality that come in the form of services such as shared data and network troubleshooting. The company enforces a federal decision model. A federal model involves multiple groups from different branches of expertise (i.e., sales and marketing branches) responsible for strategic decision making (Weill, 2004). John (who acts as the in-house technician) and a representative from DataDouble are both responsible for arrangements regarding the infrastructure strategies.

Business Application Needs

Business application needs are specific requests made by the business in regard to their in-house or purchased IT applications (Weill, 2004). John is responsible for compiling and requesting the company's requirements for their IT applications, making their process a business monarchy.

IT Investment and Prioritization

IT investment and prioritization are associated with the financial aspect of implementing IT functionality such as deciding which IT projects the company will divert funds towards (Weill, 2004). These decisions are made by John, his VP of Finance Helen Hiotis, and the representative from DataDouble. This decision-making process falls into the federal method.

Current IT Infrastructure, Personnel, and Business Users

IT infrastructure

In terms of hardware, Ecodomus Construction possesses one computer server that provides the backbone of their operations, nine stationary computers, and six laptops - all running on Windows OS. Their hardware is powered by Cisco Systems, which includes wired and wireless communications in their plan. Ecodomus has a set of procedures in place to follow on and off-site. There is also a disaster recovery plan on standby in case of any major incidents that could occur provided by DataDouble. DataDouble's primary business is backing up data through IT support and providing daily procedures to ensure the data is securely stored on the servers. Currently, there are three backup locations, two of which are physical, while the other is located on the SaaS.

In terms of software, Ecodomus has a subscription to Microsoft Office Suite that provides them with a variety of different software and frequent software updates. The company uses Microsoft Outlook and Microsoft Office Excel to store all of their contacts (i.e., suppliers and contractors). When working on projects with the selected subcontractors, they are entered in an accounting software, Sage Accounting Package, for the organization to issue the purchase orders. Subcontractors can access an FTP site: a service that provides remote access to files that are stored with the company. This specific service; however, is only used on very limited occasions. More often than not, suppliers are sent a link to a Dropbox folder where documents, plans, and other relevant files for projects are stored. The company's remote communication is achieved through the use of Zoom, Teams, and WebEx. Ecodomus provides training regularly to employees in order to familiarize themselves with the software.

An important software component that requires special consideration would be Ecodomus' subcontractor spreadsheet. This spreadsheet holds the contact information of every subcontractor that the company has been involved with. It is sorted by profession (i.e., masons are located in the masonry category). This spreadsheet is manually reviewed and updated daily by employees.

Lastly, to allocate for both the IT support, hardware, and software purchases, the company has allocated a budget between \$25,000 to \$40,000 a year.

IT Personnel

Regarding IT personnel, three people are involved in the decision-making process. John will make IT investment decisions based on the input of his in-house IT consultant and his VP Finance. The IT consultant's purpose is to make an informed decision as to what IT solutions need to be implemented: whether it be hardware or software. John, along with his consultant, will look into the pricing of proposed solutions and based on the return on investment, determine if the project is worth pursuing. All seven of the Ecodomus' employees are involved in data manipulation of the Excel sheet. There is one in-house technician that takes care of IT troubleshooting within the company, while the rest are assigned general tasks.

Another fundamental business user is the representative from Ecodomus' chosen IT company, DataDouble. The IT representative specializes in being an information system provider. The representative provides both internal and external IT support for the company. They not only oversee computer systems in the office but tend to the remote computer systems as well. The representative is reachable at any time should the company require his assistance.

Business Functions and Processes

On the note of the bidding process, projects can be acquired from either a previous client requesting a new project or by bidding on projects that have been publicly submitted. For this project, we are specifically analyzing the bidding process rather than personal requests. The process of placing a bid on a project begins with searching for available projects. Companies will submit their project proposals through a commercial construction website called SEAO (Système

Électronique d'Appel d'Offres) moderated by the Quebec government (Bayouk et al., 2020). Once a project is found to be within the field of expertise of the company, the legal documentation of the requirements for the project is requested from the service and analyzed (Bayouk et al., 2020). Subcontractors are then contacted with the details of the project and expected to provide a quote for their service. Ecodomus then compiles the subcontractor's quotes and prepares a bid on the project that is sent back through the website (Bayouk et al., 2020).

The process of contacting is done by navigating through Microsoft Excel spreadsheets and filtering by profession (i.e., if painters are needed, then Ecodomus will search through the subcontractors with the title "painter" assigned to their profile and retrieve their contact information). This information, along with the quote of the subcontractor's services (this is retrieved through email contact, in which they are asked to provide a quote of how much they will charge, and the subcontractor replies in any format they see fit) and project details are all stored within the Excel spreadsheets. This is where the root of the problem stems.

Once the bid is finalized, it is submitted to the requester and whether it is accepted or rejected, the information is stored (Bayouk et al., 2020). Accepted bids imply a new project to undergo, whereas rejected ones imply another bid must be placed.

Statement of Problems, Causes, and Consequences

Problems

Ecodomus has outgrown the use of Excel spreadsheets to organize and store their data. At the time of Ecodomus' founding, the company was able to satisfy their IT functions and processes with very simplistic software. As the company began to expand, they did not prioritize the enhancement of their IT procedures. The situation has now evolved to the point where the organizations' rudimentary processes can no longer satisfy its more complex IT needs.

Cause

The Excel spreadsheets are filled and updated manually by employees.

Consequences

Updating information manually within the Excel spreadsheets leads to repetition of information and data accessibility being inefficient, and having multiple, long-winded spreadsheets make it difficult for employees to navigate. It is very time-consuming and takes away from being able to search for additional projects. Furthermore, the contact information entered by the employees has a chance of being outdated and prone to error.

Client Needs and Requirements

Needs

Discussion and analysis with the client led us to conclude that a master data management (MDM) is needed in order to be more efficient when John or the rest of the employees are transferring data between departments or processes. Ecodomus requires software that will benefit the way they look for information in an efficient way and which has access to every datastore on the interface with a click. If employees are searching for a certain bit of information, they would be able to retrieve the information on the software. John requires a solution that will be easy to upload information throughout the bidding stage and offer an option that could modify any information through the process. John would like to simplify the process of contacting subcontractors and suppliers through the use of automated emails.

Mandatory Requirements

Ecodomus will require a remote access interface that allows many users to access the software at the same time. The software would need a bilingual interface to accommodate both English and French-speaking workers, as it is mandatory for companies to offer French services to French-speaking employees (Légis Québec, 2020). Since Ecodomus' infrastructure runs on Windows OS, the software needs to be compatible with the operating system. John's budget for annual IT expansion is \$25,000 with a maximum of \$40,000, of which \$15,000 is reserved for maintenance.

Desirable Requirements

As Ecodomus has openly expressed the inefficiency in their subcontractor management and bid management processes, the suggested software will need to offer those functionalities to be useful to Ecodomus. Additionally, as the company only has \$25,000 budgeted per year for IT expansion, it is required to make sure that the company will be able to afford the software throughout its lifetime with the use of total cost of ownership (TCO). Furthermore, the software should have an intuitive user interface that allows employees to grasp a vast majority of the software with a little training. The desired implementation would require the software to be installed and ready to use in one month's time, with additional training materials that can be referenced for current and new employees. Should there be issues with the software, the company requires that customer support be available during normal business hours (Monday to Friday from 9 am to 5 pm). Lastly, as the company is expanding and growing at a rate of 10% each year, Ecodomus estimates that their user base will be growing in the nearest future. To support the company's growth, the software will need to be scalable and be able to adapt to the firm's growing user base.

Recommended Improvements to Business Before Implementation

Centralized Database

With the centralized datastore, the information would be provided throughout the bidding process and will lead to a more efficient workforce. The central datastore will have access to the subcontractors' details, passed contracts, and bids that have been accepted or declined. Having this data centralized throughout the system will lead to easy retrieval of contractor details and would help Ecodomus transfer data within the system. By consolidating the data from various data storage (the majority being excel spreadsheets) would have more clarity as employees will not have to scatter between local files to acquire relative information through the bidding process. This will enable employees to be able to convert all the visible datastores into one major data structure that links each job and its specifications to all the stored information. Ecodomus should eliminate process 5 "Send plans to sub-c" as this becomes redundant information that could be done by Process 4, "Sub-c qualification and details" as the information exchanged can be

obtained collectively, which will then be able to send Project description details to the subcontractor. Consolidating the data in one central location would benefit Ecodomus through the bidding process for constant references (See Appendix 1).

Repetitiveness

Throughout the bidding phase, employees' inputs and retrieval of the same data is inefficient and prone to human error. The constant data retrieval during the bidding processes is tedious as the data from the Excel sheet is constantly referred to throughout each step, which leaves room for error and loss of productivity. As the Excel files are shared documents and every employee has access to the same information, the repetitive steps taken are not efficient as they still make references to each excel sheet. Modifying process 3 "order contract plans" once this process has begun and once "contract purchase details" has gone to the SEAO, the approval of the bidding details should follow within an order process that will link all the subcontractors needed and project specification. All data associated with this step would be available from the shared datastore (See Appendix 1).

Description and Analysis of Various Sourcing Options

Ecodomus has been storing subcontractors' contact information and bids on Microsoft Office Excel sheets. This had led to the complete manual process of contacting the right professional for the job and updating the contact sheet: both actions being extremely tedious and prone to human error. In order to maximize efficiency and simplify the contact process, Ecodomus should consider a dedicated software to streamline the process.

Ecodomus' budget for IT expansion ranges from \$20,000 to \$25,000 per year (which excludes the \$15,000 IT maintenance), and the company does not have in-house software developers. In-house development, as well as outsourced development, are not feasible due to substantially higher up-front and the added maintenance costs for these options. Additionally, as there is an abundance of contact management software on the market, Ecodomus will be more successful in terms of finding a solution that fits the needs of the company at a more cost-effective price.

The two sourcing options available to Ecodomus are buying off-the-shelf (Buying Off-The-Shelf) or leasing a software as a service (SaaS).

Buying Off-The-Shelf

When buying software off-the-shelf, Ecodomus will be acquiring the software through a license to be deployed on the company's servers. This license gives Ecodomus the permission to use the software with a fixed number of seats for their seven employees, meaning that it can only be installed on a certain number of devices. With the growth of the company, this initial license is not expandable, hence should Ecodomus expand their employee base the company will need to purchase additional licenses to accommodate the installation of the software on more devices. Additionally, off-the-shelf software is not customizable. Ecodomus is able to configure the software to a certain extent; however, the features included in the software are largely in the control of the vendor.

With off-the-shelf softwares updates will come at an additional fee. Ecodomus will need to opt-in to the licensing fee, where the software will be updated on the devices it is already installed whenever the vendor releases an update. The licensing fee can range anywhere from 15-20% per year of the initial cost of the license, leading to the accumulated cost up to four times the cost of the initial purchase over the ownership time of the software (Maximizer CRM, 2019).

The platform deployed off-the-shelf can be considered a capital investment, where Ecodomus owns the right to use the software but is also responsible for set-up and maintenance. The maintenance costs include supporting the infrastructure, as hardware and database software need to be periodically refreshed to prevent database corruption. Additionally, Ecodomus will need to regularly update the software at an additional fee, make sure the software and network are secure, and set up network connections to be able to access the database remotely (Maximizer CRM, 2019).

Many off-the-shelf software come with supporting documentation to get users on-board. The software will come with user manuals, written by the software developers and may even include training materials to help users adopt the software. Additionally, there is an abundance of support available through online forums and articles, where Ecodomus can find the information to solve

issues the company may encounter. However, the vendor support may also come at an additional fee, often included in the maintenance contract. There is also a risk of vendors not providing support for older versions of the software. In this scenario, Ecodomus is required to have access to software updates that come at an additional fee as discussed above in order to get access to vendor support (Swords, 2019).

Leasing SaaS

Contrary to buying the software off-the-shelf, Ecodomus does not own the right to use the software when it is leased as a service. The software is leased on a subscription basis either monthly or yearly. Additionally, with SaaS solutions, the application is hosted at the vendor's premises with data processing being done on the vendor's servers as well. SaaS solutions are accessed through the Internet. Ecodomus' data will most likely be hosted on the provider's data center. The provider is also responsible for IT management, such as data processing, maintenance, updates, patches and fixes, network access, backups, security, and more, according to the service agreement. Contrary to buying software off-the-shelf where Ecodomus would be purchasing a fixed-seat license, SaaS software is paid for per account. This structure allows for flexibility, in the event that Ecodomus will expand and require more user seats, the company can change the subscription to have access to more seats. Additionally, as the software is deployed on the web, given the availability of Internet access, employees will be able to access the database from any location at any time and help Ecodomus quickly adapt the access in unforeseen circumstances (Maximizer CRM, 2019).

As payment for leasing SaaS comes at a subscription rate, the upfront costs are lower than buying the software off-the-shelf. The set-up and deployment time is also shorter, since the software does not need to be downloaded and is already installed and configured on the cloud. As discussed earlier, the subscription cost for leasing SaaS includes updates and vendor support, Ecodomus will not incur additional maintenance fees apart from the monthly or yearly costs of the subscription (NIBusinessInfo, n.d.). However, as Ecodomus does not own the software, but is leasing it under the contractual agreement with the vendor, there is less commitment with the software. At the end of the contractual term, Ecodomus will have the option to continue the subscription, or cancel the services overall.

Some downfalls of SaaS would include lesser control possessed by Ecodomus. As the updates are done under the vendor's discretion, employees will always be using the latest version of the software without the ability to defer the updates. There are also security and data concerns involved with SaaS, as the information is processed on provider's premises. SaaS is also dependent on Ecodomus' connectivity. As the software is deployed on the cloud, should Ecodomus lose access to the Internet, the employees will not be able to access the software overall. Additionally, Ecodomus does not have control over the performance of the software. SaaS may run at a slower speed than the off-the-shelf counterpart depending on the Internet speed as well as the vendor's servers processing power (NIBusinessInfo, n.d.). Furthermore, although vendors are required to adhere to service level agreements (SLA) in regard to uptime of the software, as the processing is done on their premises Ecodomus cannot control when the updates or maintenance of the software will take place, resulting in temporary loss of access to the application.

Justified Sourcing Recommendation

Based on Ecodomus' requirements and budget, leasing SaaS would be a more optimal solution. Since SaaS comes with predictable subscription costs, the cost for the initial investment is lower and Ecodomus can better forecast their monthly and yearly expenses. Additionally, the subscription rate includes automatic updates and customer support Ecodomus will not incur additional fees.

As the company is planning to grow in the future, SaaS structure allows for easier scalability and can also adapt to sudden employee lay-offs during unprecedeted times such as COVID-19. The subscription plan that indicates the number of accounts available to Ecodomus can be changed should the firm's user base fluctuate in the future.

Additionally, as software off-the-shelf is tied to the devices it is installed on, in the future when Ecodomus upgrades its servers and hardware, the company will no longer have access to the software. With SaaS, such future problems are mitigated. As the application is deployed on the web and is accessed online, no matter the change in hardware, the employees will be able to access the software. Furthermore, with data being processed on the vendor's servers, Ecodomus

will not need to modify the infrastructure to accommodate future software updates. During unprecedented times such as COVID-19, Ecodomus will also benefit from remote access to information and easier data retrieval when employees are working from home, given the Internet access. Additionally, with SaaS, employees can access the software online from their own accounts at the same time.

Ecodomus has limited in-house technical support - only one member of the staff dedicated to IT troubleshooting. As the vendor is required to adhere to the uptime as indicated by the SLA, any technical issues will be resolved by the vendor without straining the IT human resources of the company.

Lastly, with the application already being installed and deployed on the cloud, Ecodomus will benefit from faster set-up and quicker time-to-market of the software.

Mandatory Requirements & Budget

Needs

Ecodomus requires software that will allow them to look for information and retrieve it in an efficient way and that has access to every datastore on the interface with a click. John requires a solution that allows to upload information throughout the bidding stage and offers an option that could modify any information through the process. John would like to simplify the process of contacting subcontractors and suppliers through the use of automated emails. John's annual budget is \$25,000 for the IT expansion with a maximum of \$40,000, of which \$15,000 is reserved for maintenance.

Mandatory Requirements

- **Remote access interface/multiuser:** Ecodomus requires that a remote access interface is necessary as it will allow all seven users to access the software from anywhere. It is also needed for managers and IT personnel to take control of the software if any issue arises. The multiuser platform will provide employees a shared working environment as

all seven staff members can work on the interface at the same time, giving employees access to any documents/data stored on the same terminal from any computer.

- **Bilingual (English & French):** The software would need a bilingual interface to accommodate both English and French-speaking employees and subcontractors, as it is mandatory for companies to offer French services to French-speaking workers (Légis Québec, 2020). It is necessary for the functionality of Ecodomus as they work closely with the Government of Quebec on the majority of their projects.
- **Run on Windows OS:** Since Ecodomus' infrastructure runs on Windows OS, the software needs to be compatible with the operating system.

Potential Solutions

Procore

Procore was founded in 2002 by Tooey Courtemanche, who is the current President and CEO of the company, and is headquartered in Carpinteria, California, United States. The cloud-based platform was created to centralize all phases of construction, including preconstruction, project management, resource management, and financial management. The award-winning suite of project management tools currently has over a million registered users across more than 125 countries and manages all types of construction projects. With a wide variety of product offerings supporting construction projects from planning to execution, Procore's target market and user base consists of project owners, general contractors, specialty contractors, and other project stakeholders in the construction industry (Procore, 2021). According to Procore's Access Terms, the software is available twenty-four hours a day, seven days a week, 365 days a year with a service level agreement of 99.9% (Procore Technologies Inc., 2015).

The two products of Procore that Ecodomus can benefit from are Prequalification and Bid Management. Prequalification allows the company to store the subcontractors contact information and create, send, review, and approve customized qualification forms. Bid Management will streamline the bidding project for Ecodomus, including creating bid packages, finding the strongest possible bids, and converting bids to subcontracts (Procore, 2021).

All Procore products can be accessed through the web browser. Ecodomus' employees can access the software remotely at the same time. Additionally, Procore has free to download

Windows applications that can be deployed on Windows 7 and higher. The software interface supports multiple languages, including English and French.

The Procore contract includes access for unlimited users, vendor support, unlimited data storage, and product enhancements, at no additional cost. Procore charges an upfront annual fee by product, with the project management and financial management starting at CAD\$699/month (Procore, 2021). The software will cost Ecodomus \$8,388 for a year.

Smartsheet

Smartsheet is a work execution program aimed at easing communication among teams and documenting each step of the project. It was founded in 2005 in Bellevue, Washington, United States and is headed by Mark Mader, the current CEO (Smartsheet, 2021). This cloud-based platform has been made available in 190 countries and has been met with an abundance of praise from critics. According to their website, 92% of Smartsheet's customers say that the platform is easy to deploy and interact with, and that 96% of customers would recommend it to their colleagues. Smartsheet also mentions that 75% of Fortune 500 companies use the platform. Smartsheet offers solutions to companies in various industries, one of them being Construction and Engineering. In regard to Smartsheet's customer support program, the company provides 24/7 availability through their website. They also provide a help desk, email, phone and chat support. Smartsheet guarantees to their clients a service level agreement of 99% (Smartsheet, 2021).

Similar to Procore, key features provided by the platform that Ecodomus can benefit from would be bid management, document storage and subcontractor management (Capterra, 2021). The bid management feature will help Ecodomus in simplifying the bidding process and making it more efficient to place bids for different projects. Adding the document storage feature will greatly improve the way in which data is shared amongst employees. It will allow faster access to all the company information and would be easily retrievable. Ecodomus could benefit considerably from a subcontractor management tool to organize and keep track of subcontractor's contact information and field (Capterra, 2021).

Smartsheet is a web-based cloud system, meaning it can be accessed on any OS platform including Windows 7 and above. Smartsheet also provides the option of working remotely, adding

more flexibility for employees. The platform is available in multiple languages, such as German, Italian, English and French (Smartsheet, 2021).

As they are a leasing SaaS (software as a service) platform, Smartsheet charges a base monthly fee of US\$14.00, or CAN\$17.56 (rate of 1.25 as of March 23rd) per user for their software. This would total to CAN\$1,475.04 for all seven employees for a full year (Capterra, 2021).

Autodesk Construction Cloud

Autodesk Construction Cloud is a cloud construction management software for field execution and project management encompassing collaboration between users, budgeting and project status tracking to allow for timely deliverables (Capterra, 2021). Autodesk Construction Cloud is a subsidiary of Autodesk and was introduced at the Autodesk University 2019 event in Las Vegas, Nevada, United States. Autodesk Construction Cloud's main target market is supporting construction project teams including general contractors, construction managers, project managers, and other construction stakeholders (Autodesk, 2021). Autodesk offers extended support hours 24 hours a day, 5 days a week during the applicable workweek (Autodesk, 2018).

Ecodomus can benefit from Autodesk Construction Cloud through the subcontractor management feature which will allow Ecodomus to keep track of every subcontractor that has worked for them and manage all the subcontractor costs in a centralized platform (Autodesk, 2021).

Autodesk Construction Cloud supports many remote users at any given time and has the capability of adding more users as needed (Autodesk, 2021). The software is available through remote access and is also deployable on Windows OS with support of both an English and French interface (Capterra, 2021).

All of Autodesk's plans do not have a limit on the number of users, but rather a limit on the number of sheets. Autodesk's pricing plan starts at CAD\$51/month for the basic 550 sheets plan, \$90/month for 5,000 sheets and \$168/month for an unlimited number of sheets which totals to no more than \$2,016 per year which is the most appropriate plan for Ecodomus. All of these subscription plans include all product features including the access to Autodesk Docs and the PlanGrid mobile application. The sheet count refers to the total number of files that one subscriber can access in the Sheets tool of the software (Autodesk, 2021).

SmartBid

SmartBid was founded by JBKnowledge in 2006 in Bryan, Texas, United States. In 2018, the company was acquired by ConstructConnect - a construction management solution provider based in Cincinnati, Ohio, United States. JBKnowledge continues to be involved in the management of SmartBid with James Benham being the CEO of JBKnowledge and Trent Miskelly the General Manager of SmartBid. SmartBid is the leading construction bid management software for general contractors worldwide. General contractors are able to access a web-based and mobile platform to streamline their bid project data, documents and subcontractor communications during preconstruction. The company promises to use commercially reasonable efforts to provide services to all subscribers during the normal business hours with no material disruptions (ConstructConnect, 2019).

SmartBid aims to support the processes involved in pre-construction, including bid management and subcontractor management. Through the platform, Ecodus can send invitations to bids, share project documents, manage subcontractor's data, streamline qualifications, compare subcontractors' bids and track their compliance (ConstructConnect, 2019).

As SmartBid is a cloud-based platform, Ecodus' employees can access the solution remotely from a web-browser. This allows the software to work on all operating systems, including Windows OS. The software is also available as an app that is compatible with iOS and Android mobile operating systems. Starting from the twelfth version of the software, SmartBid interface is available in multiple languages, including English, French and Spanish (ConstructConnect, 2019).

SmartBid plans start at US\$600/year, converting to approximately CAD\$750/year at the exchange rate of 1.25 as of March 23rd 2021 (Lavi, 2020). The annual standard license includes access to aforementioned features of the software along with integration of the company website, full API access, personalized user interface, initial setup and online user training, as well as live call support for users and subcontractors (ConstructConnect, 2019).

BrickControl

BrickControl is a construction management platform geared towards small and mid-sized companies whose main goal is to assist in managing their construction projects as simply and

efficiently as possible. The software was created in 1997 by SHM, BrickControl's parent company located in Madrid, Spain and founded in 1981 (BrickControl, 2021). The platform is headed by the current CEO David Jimenez. As a web application, BrickControl has about 24 years of experience in the construction industry while its parent company has an additional 40 years of experience creating and running software. The platform's terms of service advertise 24/7 customer service and support (BrickControl, 2021). Capterra (2021) advertises extremely positive reviews on the platform, rating it 4.6 out of 5 stars on their website.

BrickControl is a platform created to provide specialized tools that pertain solely to the construction, architectural and engineering industry. As such, there are a plethora of features that Ecodomus can use from the platform to meet all of its business needs. The most important features that should be highlighted for Ecodomus' use is that the software includes a fully realised construction bid management tool, data storage tool and subcontractor management tool (Capterra, 2021).

BrickControl demonstrates its versatility as a platform by being an easily accessible cloud-based (SaaS) web application while making their software available on Windows, Android and Apple iOS. The platform can also be accessed remotely through third party applications such as Microsoft Remote Desktop (BrickControl, 2021). The software is offered in multiple languages including English and French (BrickControl, 2021).

BrickControl's monthly payment plan offers three tiers of membership based on the size of the company. The plan that best suits Ecodomus and their seven employees is the business plan starting at US\$59 or CAD\$73.98 per month and a yearly cost of CAD\$887.76 (at the exchange rate of 1.25 as of March 23, 2021) (Capterra, 2021).

Desirable Criteria

The following is a list of desirable criteria that Ecodomus requires from the service and how each criterion will be measured.

Functionality and Fit: It is vital that Ecodomus acquire a service whose functionality and fit are proficient in bid management and subcontractor management as these are the key facets in

whether they will make the investment in the service or not. Therefore, the service must be capable of quickly and automatically sending out invitations to the necessary subcontractors involved in the current project and that any current or future projects along with any potential bids be managed, easily traceable and stored in a convenient manner.

TCO: The total cost of ownership over the next five years should respect Ecodomus' \$25,000 yearly budget for any IT related upgrades. This implies that the TCO should be at most \$125,000.

Easy to Navigate Interface: Any new application will likely intimidate Ecodomus' employees as they have grown accustomed to the interface of Microsoft Office. Therefore, it is important for the employees to be able to use the newly acquired service as efficiently as the current softwares in use.

Quick Setup (<1 month): The service would need to be capable of being fully deployed within a month's time as Ecodomus relies on computers and softwares for the proper functioning of their business operations (Bayouk, 2021).

Availability of Training Tools: The associated training tools for the company should be easy to understand for all audiences and available in plenty of different formats (examples include live lectures, videos and books) for smoother adaption and to accommodate for different learning styles.

Availability of Customer Support: Follow-up to the training tools, the availability of said training tools and other means of customer service support is important for Ecodomus. Customer support should therefore be available during normal operating hours, which are 9:00AM to 5:00PM EST from Monday to Friday excluding civic holidays.

Scalability: The scalability refers to the long term impact this service will have on Ecodomus. This factors in the future costs and any limitations in the service based on the number of employees and the service's ability to handle more data respectively. The company expects to grow by 10 percent year over year.

Alternatives Assessment

Before elaborating further on the decision grid and analyzing the alternatives, the aforementioned desirable criteria will be given weights reflective of their importance.

Functionality and Fit: The purpose of the recommendation is to aid in finding the best suited service to solve Ecodomus' current IT issues. It is crucial for the service to be able to provide Ecodomus with the ability to effectively and efficiently manage their bids and contact the subcontractors along with any other procedures involved in doing these acts, such as storing the subcontractors contact information. Due to the importance of this criterion, it has been given the highest weight of thirty-five percent of the total weighted score in the decision grid.

TCO: As the associated costs are fairly important, it has been given a weight of twenty percent of the weighted score as the costs should respect the budget.

Note that in order to calculate the total cost of ownership, assumptions had to be made for each of the five sourcing options. To begin, acquisition cost for the leasing service is zero for all of the companies as Ecodomus already has the hardware for all of their employees, therefore, no additional purchases would need to be made unless otherwise specified. Additionally, calculating training costs were difficult as not all of the solutions had services one must pay for in order to utilize. Therefore, to set a precedent on calculations, the company ProCore is referred to. More specifically, their YouTube playlist of training videos that are free to view. The total time in minutes of their videos was 134.79 minutes, but for the sake of simplicity and to account for human error or misunderstandings, this number was rounded to 150 minutes (ProCore, 2018). Calculating the cost applied was also difficult as the hourly wages for the seven employees are private information that could not be disclosed, therefore, a dollar value of \$20 will be applied (as it is highly likely the employees make more than the \$13.10 minimum wage) (Nethris, 2021). Training is also applied each month for every year to reflect updates changing certain aspects of the software that would require additional training and time to adapt. For scalability, regardless of which company is chosen, new users would need the hardware to access this service. This would be a company-wide variable expense based on the number of additional employees that Ecodomus would be equipping with new hardware. This cost would also be the same regardless of which company is chosen. Therefore, it is omitted from the scalability (example, a new employee would need a new

laptop in order to have access to the service, therefore, in terms of scalability, this cost for the laptop is ignored as it applies to all companies). When calculating the TCO over five years, inflation was assumed to remain a steady two percent (Plecher, 2020). Any additional assumptions made will be elaborated further with regards to the specific companies they were applied to (see Appendix 2).

- **ProCore:** ProCore's subscription fee is inclusive of the entire company, regardless of the number of employees. Therefore, scalability is set exclusively to the training fee as any new employees hired would need to be trained.
- **SmartSheet:** SmartSheet charges a subscription fee based on the number of users (hence the \$17.56 multiplied by the seven employees). For training costs, SmartSheet offers their own inclusive plan for a yearly fee of \$248.75 which, when divided by twelve for the number of months in a year becomes roughly \$20.73 (SmartSheet, 2021).
- **Autodesk Construction Cloud:** Autodesk Construction Cloud does not specify an additional cost for training, but training is offered through them (Autodesk, 2021). As such, a training fee of \$50 was applied for the time it would take to learn the software.
- **SmartBid:** SmartBid offers their training services through their subscription, therefore, the additional cost of training is omitted (ConstructConnect, 2019). Scalability is also left at zero because the subscription fee is company-wide, and not limited by the number of users.
- **BrickControl:** BrickControl (2021) charges a unique fee for subscription per month as the first three users are included in the \$73.98 but the fee for additional users is undefined without having a contract with them. As such, the \$73.98 will first be divided by the three users (in order to get a per user cost) and that \$24.66 will be applied per user for the sake of calculations. BrickControl (2021) also offers a training video and on-demand customer support for any technical issues. For the training fee, the 45.19-minute long video will instead be multiplied by the hourly fee (after the conversion is done to hours) rather than the 150 minute precedent stated earlier.

Quick Setup: By extension of the functionality of the software and its importance, the implementation time for the service would need to be quick and thus be given a score of fifteen percent of the weighted score as the service is the backbone of the company, as mentioned by

John, and the sooner the service is implemented the faster Ecodomus can maximize efficiency through the use of the bid and subcontractor management service (Bayouk, 2021).

Easy to Navigate Interface: The importance of how easy the software is to navigate is not as critical as the aforementioned attributes since John had placed more of an emphasis on the budget and functionality of the service in the interview rather than the difficulty of use (Bayouk, 2021). As such, the associated weight is less than the one's above and is therefore awarded ten percent of the weighted score.

Scalability: One reason as to why John inquired about a potential service that could meet these needs was because their current IT structure (being that of Microsoft Excel Worksheets) has grown past the point of efficiency. With this in mind, the scalability of this investment is important to note but not as important as the functionality of the service. For this reason, scalability is given ten percent of the weighted score on the decision grid and is measured based on the future costs and any limitations in the service.

Availability of Training Tools: The training tools should be easily understood and cover a wide array of different issues that could arise while navigating the software. If these necessities are met, then the tools would have served their purpose. By extension, the weight of the training tools in the decision grid will therefore be five percent of the weighted score.

Availability of Customer Support: Following up on the training tools, the customer support ties it together complimenting the training of new employees perfectly due to the fact that if Ecodomus fails to completely understand the software or encounters a technical issue, they can fall on customer service for aid in resolving the issue. As such, the weight assigned to this criterion will also be five percent on the decision grid.

Procore

With the weights and assumptions set, each solution will be examined and given respective weights in the decision grid based on these analyses beginning with ProCore. ProCore (2021) offers several distinct yet in depth services across all devices which are exactly what Ecodomus needs. Notably, the service of subcontractor management, where ProCore can automatically send

invitations to subcontractors, store the subcontractor's information and provide other key features surrounding the subcontractor management service. In addition, ProCore (2021) provides a bid management platform capable of storing bids, calculating the best project to bid on and filtering which subcontractors will be needed for the accepted bids. As such, it is marginally better than the other alternatives. In contrast, the total cost of ownership for ProCore is the highest among the five alternatives. Despite this, it still respects Ecodomus' budget as its TCO equals around \$69,490.85 (see Appendix 2 for more information). In terms of the difficulty of the software, the reviews posted on GetApp (2021a) were referred to. These reviews concluded that the software is rated between easy to medium difficulty, signifying one would need to be more competent with computers to be able to utilize ProCore's services to the highest degree of efficiency (GetApp, 2021a). The transition from Ecodomus' current IT infrastructure to that which ProCore would offer would be quick as the application can import data directly from Microsoft Excel (GetApp, 2021a). ProCore offers several different ways to learn their system. For instance, the software offers a dedicated YouTube channel strictly for teaching new users how to use its systems (ProCore, 2018). Additionally, ProCore offers videos on their own website for more information (ProCore, 2021). Another method in which ProCore helps its employees is through their customer support team that promises an around-the-clock service every day of the year that are capable of answering the phone to respond to any technical issues that could arise. ProCore is not limited to a given number of users, sheets or any other measure as they cater their service to the company as a whole, regardless of the number of employees using it at any given time (ProCore, 2021).

SmartSheet

SmartSheet offers every functional feature Ecodomus is interested in across all devices except for being able to automatically contact subcontractors. With regards to the TCO, SmartSheet ranks the second cheapest option, costing around \$17,755.22 (see Appendix 2 for more information). Through the reviews posted on GetApp (2021b), one can conclude that the difficulty in learning SmartSheet is nearly non-existent and is reflected in the decision grid. SmartSheet will likely be capable of extracting the information from Excel, as it is said that SmartSheet is capable of linking to other softwares, however these softwares do not specify if Excel is included as an option (Smartsheet, 2021). Alternatively, to the standard videos for teaching, SmartSheet offers to train any company's employees for an additional fee. The training sessions are extensive and

teach employees to be fully capable of using the service (Smartsheet, 2021). For customer service, SmartSheet is stated to have above average customer support as they will help solve any issues encountered with call centers stationed in different time zones in order to be available at all times (GetApp, 2021b). For scalability, SmartSheet is only limited by the number of employees in the sense that each additional employee costs Ecodomus more capital, but apart from the cost, the service itself will not be slowed down by any additional employees (see Appendix 2).

Autodesk Construction Cloud

Autodesk Construction Cloud is a service across all devices that focuses exclusively on subcontractor management and does not offer any form of bid management, making it less appealing than those that offer both (Autodesk, 2021). Autodesk's TCO respects Ecodomus' five-year budget but is less cost-efficient, totalling close to \$34,314.83 (see Appendix 2). GetApp's (2021c) reviews state that the difficulty in using this service also varies from simple to incomprehensible and challenging, meaning Autodesk is likely not the most user-friendly service for everyone. GetApp (2021c) also loosely states Autodesk is compatible with other platforms and services, but the degree to which is not fully mentioned. Therefore, it is unclear as to how quickly Autodesk will be fully deployed for Ecodomus since the integration of data could take time. In order to train users, Autodesk (2021) offers free ebooks to its subscribers which serve to teach the many ways of using the service and offers a training regimen tied into the subscription fee. However, there is no YouTube channel or videos made available for the software. The training regimen is also only made available to premium subscribers of over five hundred employees. Note that TCO calculated a training fee based on the assumption of time, but for the sake of the decision grid, the limitation of training only being available to companies with over 500 employees will be reflected. For customer support, Autodesk takes a unique approach allowing customers to fill out forms explaining their issues and following up at a later date with detailed responses (within the twenty-four-hour period, five days a week). Additionally, there are forums where Ecodomus can speak with other customers and assist each other (Autodesk, 2021). For scalability, under the premium option (which offers unlimited sheets), Ecodomus would not be limited by any measure apart from the additional cost of training new employees.

SmartBid

Across all devices, SmartBid provides a service focusing more on bid management but also offering features related to subcontractor management. The trade-off for Smartbid is that it offers more features with regards to managing bids and projects but not being able to automatically contact subcontractors for quotes of their services for new projects. In terms of TCO, SmartBid is easily the least expensive option of the five potential solutions sitting at \$4,140.30 (see Appendix 2 for more information). In terms of difficulty, GetApp (2021d) states that the service is fairly easy to use. SmartBid confirms that there is in fact data integration but does not specify which services it would extract this information from (ConstructConnect, 2018). The cost of training is offered through the subscription of the service and if any other questions were to arise, the instructors in the live lectures would be more than capable of addressing them. If anything were to happen after the training is completed, SmartBid's 7:00AM to 7:00PM (CST) customer service team would be called on to resolve the issue (ConstructConnect, 2018). SmartBid's scalability is unrivaled as it offers no consequences to additional users, access to non-subscribers through their "ConstructConnect Network Public Plan Room" and an unlimited number of worksheets (ConstructConnect, 2021).

BrickControl

BrickControl offers the subcontractor management and bid management services that would store, manage and filter through the data across only mobile and computer devices (Brickcontrol, 2021). Relative to TCO, BrickControl is the third least expensive option as it costs only around \$18,418.72 over the five-year period (see Appendix 2). GetApp (2021e) clearly praises the application for its ease of use and non-existent learning curve, making it one of the more appealing software options. BrickControl is stated to be capable of synchronizing with applications like Google Drive and, by extension, is likely to also have synchronization capabilities with Microsoft Excel, allowing for a quick setup (GetApp, 2021e). BrickControl has a video posted on their website for the purposes of training that is catered to all audiences and free for anyone to watch, but if more assistance is required, BrickControl would charge for each employee needing to be trained under them. BrickControl's customer support is on the weaker side as it is nearly exclusively digitally based with very little interactions available, but it is available over twenty-four

hours seven days a week. All technical issues are done through forms where a BrickControl representative would address the issue and reply through email. Lastly, on the note of scalability, BrickControl would charge Ecodomus an additional fee for each new employee added to the service but does not have a limit on the number of employees that can join.

Table 1: Decision Grid

	Weight	ProCore	SmartSheet	Autodesk Construction Cloud	SmartBid	BrickControl
Mandatory Criteria						
Remote Access Interface and Multiuser	Yes/No	Yes	Yes	Yes	Yes	Yes
Bilingual	Yes/No	Yes	Yes	Yes	Yes	Yes
Run on Windows OS	Yes/No	Yes	Yes	Yes	Yes	Yes
Desirable Criteria						
Functionality and Fit	35%	1 (35)	0.8 (28)	0.2 (7)	0.6 (21)	0.7 (24.5)
TCO (< \$125,000 over 5 years)	20%	0.6 (12)	0.9 (18)	0.7 (14)	1 (20)	0.8 (16)
Quick Setup (< 1 month)	15%	1 (15)	0.8 (12)	0.2 (3)	0.4 (6)	0.6 (9)
Easy to navigate Interface	10%	0.6 (6)	0.9 (9)	0.4 (4)	0.8 (8)	1 (10)
Scalability	10%	0.8 (8)	0.5 (5)	0.7 (7)	1 (10)	0.6 (6)
Training Tools	5%	1 (5)	0.8 (4)	0.2 (1)	0.6 (3)	0.4 (2)

Customer Support	5%	1 (5)	0.8 (4)	0.2 (1)	0.6 (3)	0.4 (2)
Total	...	86/100	80/100	37/100	71/100	69.5/100
Weighted Score	100%	86%	80%	37%	71%	69.5%

Recommendation

As specified in the assessment grid and further explained in the justification of the alternative scores, ProCore demonstrated to be the highest scoring software solution when placed across all requirements set out by Ecodomus Construction. Since ProCore best demonstrated all the criteria of Ecodomus needs, it is the most suitable solution for Ecodomus Construction as it supports every aspect of Ecodomus' daily activity. The software provides easy communication between Ecodomus and their subcontractors and it is able to store data related to subcontractors, bid management and contract information. Due to Ecodomus' emphasis on the ability to easily communicate with subcontractors in an efficient manner, ProCore stands out for offering the option to provide them with the ability to contact various subcontractors directly while storing any related information and important features related to the subcontractor and their related project. This is why the functionality and fit option was weighed heavily on the decision grid ([Table 1: Decision Grid](#)). ProCore demonstrated that it was the optimal software to provide Ecodomus with all important solutions that satisfy Ecodomus' requirements. ProCore satisfies their needs as the company offers a remote network for the employees to connect to allowing the workers to operate as sufficient as possible. It also provides a key feature as it makes an easy transition for the IT solution, avoiding any delays as the company can transfer all of Ecodomus' data from Microsoft Excel to the new IT solution. An additional feature that is also important is that ProCore also offers training services remotely with training material that are all available online for companies to access. If Ecodomus were to ever grow through acquiring more projects and employees, then ProCore would not be hindered in this growth as it is not limited by any number of employees utilizing the service at the same time. Furthermore, ProCore is a yearly contract with a monthly subscription fee that provides a solution to scale their business at no additional cost. ProCore has

no setup or acquisition costs and ranks among the most expensive options out of the five suggested solutions but still falls under Ecodomus budget. The total yearly subscription is \$8,988 CAD which includes training. Even with ProCore's price tag being the highest, it is still considered the best option as this is only software out of the five solutions that emphasize on three important factors that make up seventy percent of the decision grid: Functionality and Fit, Cost and Set up ([Table 1: Decision Grid](#)). Lastly, it is important to consider that the ProCore software is specifically designed for construction companies as opposed to the second highest ranked solution, SmartSheet, which is generic for every other industry.

Procore is considerably one of the best options as it satisfies all of Ecodomus specific needs. The construction management platform offers services to roughly one million construction projects over 125 countries with roughly 15,000 testimonies proving the software's reliability. ProCore is known for its great success in the construction industry that it has been awarded JBKnowledge's Annual ConTech Report. Not only does the software provide excellent services and features, but it proves to be a perfect match for Ecodomus (Procore 2021).

Contract Discussion

A copy of the ProCore's Subscription Terms and Service Access Terms can be found in [Appendix 3: Master Service Agreement](#). As previously mentioned, ProCore has emphasized the importance of being operational during working hours 9:00AM to 5:00PM EST. As stated in ProCore's Service Terms, their service level agreement states a guaranteed performance of 99.9% activity rate, twenty-four hours a day, 365 days a year. In the master subscription agreement (MSA), ProCore stated that any downtime relating to problems caused outside ProCore reasonable control and frequent software maintenance is not their responsibility. For any support relating to issues that may occur during the day, ProCore offers assistance between the hours of 8:00AM-8:00PM EST, Monday to Friday excluding holidays and offers unlimited access to various support platforms such as online chats and tutorials. Furthermore, ProCore does not mention any timeframe relating to any major issue that may cause major downtime: “[ProCore] will begin working on a resolution to the problem and will work diligently and in a commercially reasonable manner on the problem until it is resolved” (ProCore MSA, 2016). Ecodomus should therefore request to add a penalty if Ecodomus is not operational within 48-hour period of being notified. As Ecodomus switches to

cloud-based software, data protection will become an even more important business initiative. ProCore stated that it would make “*commercially reasonable effort to protect the security of Customer data*” (ProCore MSA, 2016). ProCore has stated that the third-party data facility is restricted from the public for security reasons. They also stated that in a time of power failure at the data center, they will still provide daily backups. Ecodomus must also request that in the event that the data is not backed up or there is a breach in Ecodomus’ data (that has been entrusted with ProCore and the third party data center), ProCore should be held legally accountable as they are being entrusted with protecting the safety of Ecodomus’ clients, and by association - their reputation (ProCore MSA, 2016).

Regarding the cost of ProCore’s software, ProCore indicated that there would be no upfront costs and no additional costs regarding the transfer of data from Ecodomus IT infrastructure to ProCore software. ProCore currently falls into Ecodomus budget but does not mention anything regarding potential increase in service fees, this can affect the total cost of ProCore and could potentially surpass Ecodomus’ budget. Ecodomus should suggest implementing a grace period of 60 days from the date when the fees, before any price fluctuation, may take effect. ProCore also requires its customer to provide the right to audit on the Customer Construction volume to see if they are paying the suggested price. This may lead to monthly price increases and any unaccounted payment during the inspected timeframe of the audit will require payments to be made to ProCore with an interest rate of 1.5%. Based on this information Ecodomus should review this clause and consider negotiating any potential alternatives (ProCore MSA 2016). Under the payment section of the MSA:

“Payment 4.3

Procore shall have the right to audit Customer's Construction Volume (as specified in the Order Form) to ensure compliance with agreed upon terms and pricing. Procore will give Customer at least ten (10) days advance notice of any such audit and will conduct the same during normal business hours in a manner that does not unreasonably interfere with Customer's normal operations. Such audit shall be at Procore's expense, provided however that if any such audit should disclose any underpayment by Customer, Customer shall immediately pay Procore such underpaid amount, together with interest thereon at the rate specified in Section 4.1, and

Customer shall also pay Procore for Procore's expenses associated with such audit" (ProCore MSA 2016).

Lastly, regarding the ProCore master subscription agreement, it is suggested that Ecodomus will need to address certain terms in the agreement before moving forward with the software. Modification and implementation stated above will need to be addressed in order to best suit Ecodomus as an organization.

Privacy Plan

A privacy plan is a legally obligatory document created by organizations to describe their methods involving the protection of personal information of its clients. The privacy plan presents its policies and demonstrates its compliance with the rules and regulations established by the region. It is imperative that the organization follow the privacy and security laws within the region (TechTarget, 2013). Organizations operating within Québec, Canada must adhere to the laws set by the *Digital Privacy Act*, namely the *Personal Information Protection and Electronic Documents Act* (PIPEDA) passed by the Government of Canada (2015) as well as the *Act Respecting the Personal Information in the Private Sector* passed by the Provincial Government (Légis Québec, 2020).

Though privacy plans are a legal requirement, there are other reasons as to why it is in an organization's best interest to present one to its customers. Firstly, it is a possibility a company's software may be associated with a third-party service such as Google Analytics or other plug-ins. Third-party services require the software to have a privacy plan as the plug-in collects personal data from a user's PC. Therefore, it is essential to include a privacy plan which discusses the nature of the software's connection to the third-party service (TermsFeed, 2020). Another reason for the importance of including a privacy plan is that clients are very interested in their personal privacy. Users want to be reassured by companies that their personal data will be protected before making any associations. Making a privacy plan available to clients increases the trust between the client and the company (TermsFeed, 2020).

Below is a representation of data that ProCore collects from its users and possible safeguards that can be put in place to protect said data (ProCore, 2021):

Table 2: Personal Information Data Collection

Information Type	Personal Information Collected by ProCore	Physical Safeguards	Conceptual Safeguards
Client Data	Name	Store in Restricted Area	Firewall
	Address	Lock Restricted Area	VPN
	Date of Birth	Lock in Safe/Cabinet	Encrypted Data
	Phone Number	Include Alarm System	Constant Changing Passwords
	Place of Employment	Lock Server Room	
	Business Address		
	Email Address		
Account Information	Email Address	Store in Restricted Area	Firewall
	Business Address	Lock Restricted Area	VPN
	Password	Lock in Safe/Cabinet	Encrypted Data
	Domain	Include Alarm System	Constant Changing Passwords
	Credit Card Information	Lock Server Room	
	Financial Account Information		

Implementation Plan

Deployment Plan

Component to be implemented:

Component Name	Description of Function	Source
Procore	Procore is a cloud-based platform created to centralize all phases of construction, including preconstruction, project management, resource management, and financial management	Procore.com

Purpose

The purpose of this plan is to implement the Procore cloud-based solution.

System Overview

Procore is intended to support all business processes of Ecodomus Construction including the bidding and subcontractor management.

Assumptions and Constraints

Budget: the implementation plan is to respect Ecodomus Construction' yearly budget of \$25,000.

Resources Available

Procore support including 24/7 live representative and training documentation (Capterra, 2021).

Schedule

System is to be implemented during the month of January where the business is slower and thus safer to implement.

Conversion Strategy

Ecodomus Construction will follow the phased conversion method which replaces the old system in stages. Although this conversion strategy will take time to implement, it is ideal for Ecodomus Construction as it is budget friendly and because the system is tested at every stage which minimizes the chances of error.

Implementation Schedule

Table 3: Implementation Schedule

Task #	Implementation on Task	Description	Person Responsible	Task Dependencies	Criteria for successful implementation
1	Acquisition of Procore License	Purchase licensing from Procore	Owner (John)	N/A	Confirmation email that license has been purchased
2	Configure License Accounts	Set up permissions and number of users	Owner (John)	1	N/A
3	Data Preparation	Gather/clean all necessary information for migration (pricing, contracts etc.)	Owner (John)	N/A	N/A
4	Training	Preliminary training of new software (only selected staff)	Owner (John) and In house technician	2	Refer to training plan
5	Testing	Perform tests to ensure stability of new system	Owner (John) and In house technician	4	Ensure all user stories are met adequately
6	Data Migration	Begin to migrate data using phased method conversion	Owner (John) and In house technician	4	Compare current system database with new system
7	Set Date for Termination of Old System	Set final date of using current system	Owner (John)	N/A	Only new system remains after termination date is set
8	Complete Data Migration	Complete transfer of all information from current to new system	Owner (John) and In house technician	6	Compare new system data with current data
9	End-User Training	Train all remaining staff on how to use software.	All staff members	4	Refer to training plan
10	Communication Strategy	Implement communication plan between stakeholders and employees.	BTM 496 Team	N/A	Ensure every staff member is up to date and that no questions remain
11	Set up Backups	Back up information of current system	Owner (John) and In house technician	4	Ensure backup of dataDouble is identical to current backup
12	Performance feedback	Gather feedback from staff to ensure new system's performance	All staff members	4	Set up meetings to discuss feedback
13	Updates and Ongoing Training	Maintain system up to date and deliver continuous training to staff to ensure familiarity of new system	Owner (John) and In house technician	4	Refer to training plan

Table 4: Implementation Schedule (Gantt Chart)

		December 2021					January 2022				
		Week 1 (Dec 1 to Dec 3)	Week 2 (Dec 6 to Dec 10)	Week 3 (Dec 13 to Dec 17)	Week 4 (Dec 20 to Dec 24)	Week 5 (Dec 27 to Dec 31)	Week 1 (Jan 3 to Jan 7)	Week 2 (Jan 10 to Jan 14)	Week 3 (Jan 17 to Jan 21)	Week 4 (Jan 24 to Jan 28)	Week 5 (Jan 31)
Task #	Implementation on Task										
1	Acquisition of Procore License										
2	Configure License Accounts										
3	Data Preparation										
4	Training										
5	Testing										
6	Data Migration										
7	Set Date for Termination of Old System										
8	Complete Data Migration										
9	End-User Training										
10	Communication Strategy	Approved on April 13 2021 by BTM 496 Team									
11	Set up Backups										
12	Performance feedback										
13	Updates and Ongoing Training	ON-GOING									

RACI Matrix

Project Deliverable	Project Sponsor (John)	In-house Technician	Other Staff Members
Task 1	R	I	I
Task 2	R	I	I
Task 3	R	I	I
Task 4	R	R, A	I

Task 5	R	R, A	I
Task 6	R	R, A	I
Task 7	R	I	I
Task 8	R	R, I	I
Task 9	I	I	R
Task 10	I	I	I
Task 11	R	R, A	I
Task 12	A, I	A, I	A, I
Task 13	R	R, A	A, I

R-Responsible

A-Accountable

C-Consulted

I-Informed

Communication Plan

Purpose

The purpose of this communication plan is to effectively deliver information to appropriate stakeholders all through the implementation process.

Target Audience and Communication Channels:

Target Audience	Title	Contact Information	Communication Channel
John	Owner	john@ecodomusconstruction.com	Phone/Email
In-house technician	In-house technician	itsupport@ecodomusconstruction.com	Phone/Email
Procore Support	Software Provider	1-866-477-6267	Chat/Phone/Email

Communication Plan:

Communication	Method	Frequency	Objective	Owner	Audience
Project status report	Email	Weekly	Review project status and discuss potential issues or delays	Project manager	Project team + project sponsor
Daily Check-in	Meeting	Daily	Share daily progress made on project tasks	Project manager	Project Team
Weekly Check-In	Meeting	Weekly	Allows for stakeholders to understand whether the	Project manager	Project Team

			project is on track		
Milestone Review	Meeting	At milestones	Present project deliverables, gather feedback and discuss next steps	Project manager	Project team + project sponsor
Project closure report	Meeting	At end of project	Assess what worked and what did not work and discuss actionable takeaways	Project manager	Project team

(Source: BTM 496 Course Slides)

Training Plan

According to Procore's website, a "Getting Started" support section is offered where new users can consult resources to start the on-boarding process. New users also have the option of consulting the "Resource Center" where frequently asked questions are answered, and other popular resources described. The "What's New" section is where the newest features to the Procore platform are discussed. For any other inquiry or extended training, Ecodomus Construction can contact help support through their chat or email a representative.

Criteria to Successful Training

The following are guidelines to help ensure a successful training process:

1. Have clear outcomes and performance objectives
Employees need to know what the end result of a training entails.
2. Gather feedback
Ensure employees are able to provide input to the training process.
3. Ensure Staff Collaboration
Collaboration between staff member helps staff solve problems together
4. Practice
The more employees practice using the new software, the more comfortable they will be.

The following table describes a detailed training plan for Ecodomus Construction to follow for a successful training experience.

Table 5: Training Plan

Section	Training Task	Training Audience	Date	Duration
Getting Started	Getting Started with Procore	Owner + Staff	Week 1 (Dec 1 to Dec 3)	2 days
	Live Training Webinars	Owner + Staff	Week 2 (Dec 6 to 10)	2 days
	Procore Learning Paths	Owner + Staff	Week 2 (Dec 6 to 10)	2 days
	Get Procore Certified	Owner + Staff	Week 3 (Dec 13 to 17)	5 days
What's New?	What's New In Procore	Owner + Staff	Week 4 (Dec 20 to 24)	2 days

	Product Releases	Owner + Staff	Week 4 (Dec 20 to 24)	2 days
	Monthly Product Releases	Owner + Staff	N/A	Monthly
	Advanced Training	Owner + Staff	Week 5 (Dec 27 to 31)	5 days
Resource Center	User Permissions Matrix	Owner + Staff	Week 1 (Jan 3 to 7)	2 days
	Interactive Workflow Diagrams	Owner + Staff	Week 1 (Jan 3 to 7)	2 days
	FAQs	Owner + Staff	N/A	On-Going
	Procore Custom Solutions	Owner + Staff	Week 2 (Jan 10 to 14)	2 days
	Construction Basics	Owner + Staff	Week 2 (Jan 10 to 14)	1 day
	COVID-19: Procore Best Practices	Owner + Staff	Week 2 (Jan 10 to 14)	1 day

Change Management Plan

The change management plan for Ecodomus Construction will be composed of four steps: initial contact, awareness, understanding and classification.

Initial Contact

Ecodomus Construction will ask its employees, through the use of surveys, to provide input on the problems they face on a day-to-day basis. The goal of this survey is to make the employees feel the need for a change.

Awareness

In order for the employees to feel valued in the organization, Ecodomus Construction will inform its employees of the changes through meetings by the project sponsor.

Understanding

This is where Ecodomus Construction will conduct meetings to carefully convey the benefits of implementing the new cloud-based software solution. Furthermore, Ecodomus Construction will demonstrate how other companies are successful by using Procore and relate the aforementioned anecdotes to adopting the new software solution to remain competitive within the construction industry.

Classification

After the employees experience the new system, Ecodomus Construction will arrange a meeting of which the employees will share their experience with regards to the new system. Moreover, Ecodomus Construction will select and offer a certificate of recognition for the first month of training to one employee who has the best performance with regards to using the new system and reward him/her with half a day of vacation.

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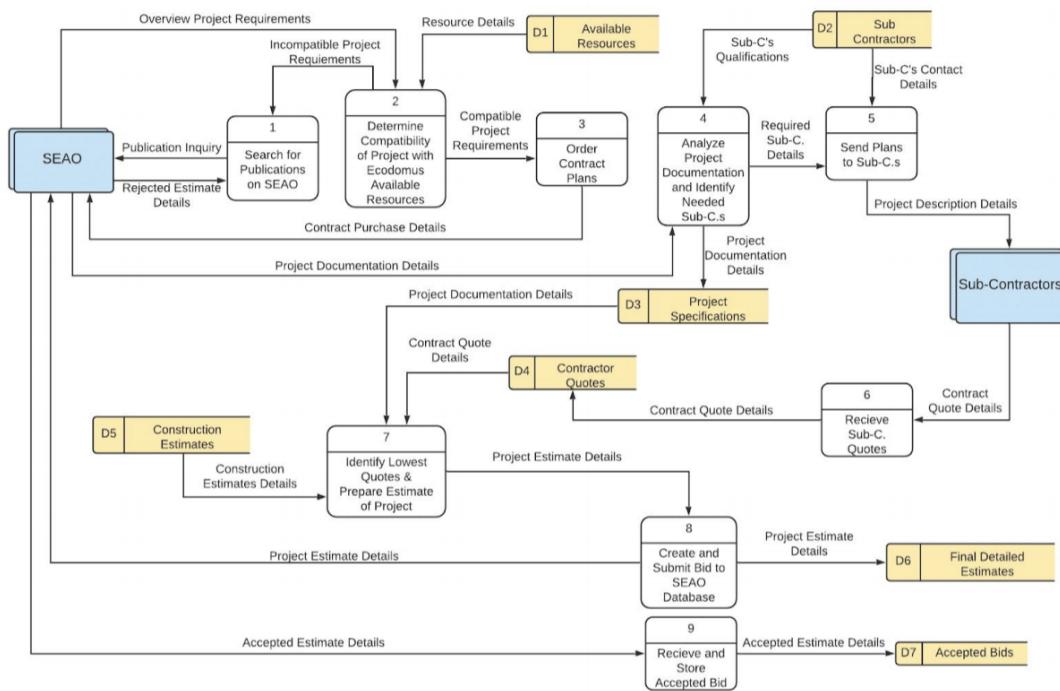
Appendices

Appendix 1: Level 1 Bidding DFD

(Bayouk et al., 2020)

Level 1 Bidding

Bidding DFD



Appendix 2: TCO Calculations

Calculating Alternatives: TCO	ProCore	SmartSheet	Autodesk Construction Cloud	SmartBid	BrickControl
Acquisition Cost	-	-	-	-	-
Subscription fee (for 7 users for one month)	\$699	\$17.56 x 7 = \$122.92	\$168	\$750 (annually) / 12(months) = \$62.50	\$73.98 / 3 x 7 = \$172.62
Training Fee (per user)	150 (minutes) / 60 (for the hourly conversion) x \$20 (applied hourly wage) = \$50	\$248.75 / 12 $\cong \$20.73$	\$50	-	45.19 / 60 x \$20 $\cong \$15.06$
Subtotal (for the first month)	\$699 + (\$50 x 7 employees) = \$1049	\$122.92 + (\$20.73 x 7) = \$268.03	\$168 + 50 = \$218	\$62.50	\$172.62 + (\$15.06 x 7) = \$278.04
Scalability (per additional employee)	\$50	\$17.56 + \$20.73 = \$38.29	\$50	-	\$24.66 + \$15.06 = \$39.72
Total Cost of Ownership (for 7 employees over 5 years with an inflation rate of 2%)	\$1049 x 12 (months in a year) x 5 (over the five years) x 1.02^5 (inflation) $\cong \$69,490.85$	[(\$17.56 x 12) + \$248.75] x 7 x 5 x 1.02^5 $\cong \$17,755.22$	[168 + (50 x 7)] x 12 x 5 x 1.02^5 $\cong \$34,314.83$	\$750 x 5 x 1.02^5 = \$4,140.30	\$278.04 x 12 x 5 x 1.02^5 $\cong \$18,418.72$

Appendix 3: Master Service Agreement



PROCORE SUBSCRIPTION TERMS

These terms, including the attached Exhibit(s) (collectively, "**Terms**") are entered into as of the effective date listed on the attached Order Form ("**Effective Date**") between **PROCORE TECHNOLOGIES, INC.**, a Delaware corporation, having its principal place of business at 6309 Carpinteria Avenue, Carpinteria, CA 93013 ("**Procore**" or "**Party**") and the customer identified on the attached Order Form ("**Customer**" or "**Party**") (collectively the "**Parties**").

In consideration of the mutual covenants and conditions contained herein, the Parties agree as follows:

1. BACKGROUND. Procore has developed certain construction project management Software (defined below), to which it provides access as part of its Services (defined below). Customer wishes to enter into this Agreement for a subscription to the Services identified in an Order Form. Procore desires to make those Services available to Customer subject to the terms of the Agreement.

2. DEFINITIONS. The capitalized terms listed below shall have the following meanings:

2.1 "Agreement" shall mean, collectively, the terms of the attached Order Form and these Terms.

2.2 "Authorized User" shall mean any individual who is authorized by virtue of such individual's relationship to, or permissions from, Customer, to access and use the Services pursuant to Customer's rights under the Agreement.

2.3 "Construction Volume" shall mean the aggregate dollar value of the construction work performed, planned or put in place by Customer for all Customer Projects during a given time period, most often a one-year period.

2.4 "Customer Content" means any content created by or on behalf of Customer or an Authorized User in connection with the Services and Customer Projects.

2.5 "Customer Data" means the data provided by Customer to Procore regarding Authorized Users.

2.6 "Customer Project" means each distinct construction project constrained by a specific scope, budget and schedule, as specified in a construction project agreement. The Project life cycle phases for typical construction projects may include initiation, planning, design, demolition, construction, commissioning, and closeout. Procore considers projects in the construction phase to be subject to restriction in number by "project caps" within an Order Form that specify how many simultaneous projects may be managed under the terms of a Procore subscription. The construction phase is considered to commence with the bid and award process, and is considered to be complete upon the project owner's written acknowledgement of substantial completion, or the award of a certificate of occupancy from the local regulatory or governmental authority responsible for determining substantial completion.

2.7 "Documentation" means the online screen-share demonstration materials, marketing collateral and other materials in written or electronic form provided to Customer by Procore in connection with Customer's subscription to the Service.

2.8 "Enhancements" shall mean the following: minor modifications, revisions and corresponding Documentation with respect to the Services, including the addition of enhancements or improved performance made available by Procore to the Services; however, Enhancements shall not include the addition of New Features not originally included as part of the Services described on a particular Order Form.

2.9 "Maintenance Modifications" means bug fixes, patches, modifications or revisions to the Services that correct errors therein and does not include New Features not originally included as part of the Services described on a particular Order Form.



2.10 "New Features" means those significant technological or service features and/or tools which Procore develops over time which shall be offered to Customers as additional features for a fee and shall be distinct from included Enhancements and Maintenance Modifications.

2.11 "Order Form" means the order form document signed by both Parties that is attached to these Terms, on which the Customer is identified and that specifies certain other agreed upon terms including Customer's specific subscription information pertaining to the Services.

2.12 "Service(s)" means Procore's distinct services purchased by Customer as specified on the Order Form.

2.13 "Site" means app.procore.com and all associated Procore mobile applications.

2.14 "Software" means Procore's software programs and any associated user interfaces and related technology that Procore uses to provide the Services and that Procore makes available pursuant to this Agreement, including any Enhancements and Maintenance Modifications thereto.

2.15 "Subscription Fee" means the agreed upon subscription fee for the Services as stated in the Order Form

3. PROVISION OF SERVICE/RESPONSIBILITIES.

3.1 Subscription Rights and Access. Procore grants Customer the nonexclusive limited-time subscription and right to use the Services in accordance with the Agreement. Further, Procore agrees that Customer may access and use, and to permit each Authorized User to access and use, the Service for its intended purpose, in accordance with the specifications set forth in any Documentation and subject to the terms of this Agreement and the limits on Construction Volume, Projects and/or other use restrictions specified on each Order Form. Subject to Customer's payment of the fees set forth in the Order Form, Procore shall provide to Customer the necessary passwords, security protocols and policies and network links or connections to allow Customer and its Authorized Users to access the Services. Procore shall provide the Customer and Authorized Users with (a) support for the Service as outlined in Exhibit A, and (b) access to Enhancements and Maintenance Modifications as they become available. Customer and its Authorized Users are solely responsible for ensuring that they have sufficient and compatible hardware, software, telecommunications equipment and Internet service necessary for the use of the Site and Services. ALL OTHER RIGHTS NOT EXPRESSLY GRANTED IN THIS AGREEMENT ARE RESERVED BY PROCORE.

3.2 Site Updates. Procore may, in its sole discretion, change, modify, upgrade or discontinue any aspect or feature of the Site in whole or in part. Such changes, upgrades, modifications, additions or deletions will be effective immediately upon notice thereof, which notice may be made by posting such changes to the Site. Notwithstanding the foregoing, in the event Procore modifies or discontinues any content or feature of the Site which results in reduction of functionality or degradation of the Site, Procore shall provide comparable functionality. Procore shall, from time to time develop New Features which shall be offered to Customers for additional fees.

3.3 Limitations. Customer shall not, and shall not authorize or permit any Authorized User to (a) rent, loan or re-license rights to access and/or use the Services or Software (except as specifically provided herein); (b) copy, modify, disassemble, decompile, or reverse engineer software included as part of the Services; (c) share identification or password codes with persons other than Authorized Users or permit Customer's account to be accessed by individuals who are not Authorized Users; (d) access, use, or permit a third party to access or use the Services or Software for purposes of competitive analysis, including the development, provision or use of a competing Software or Service or for any other purpose that may be to Procore's detriment or commercial disadvantage; or (e) use the Services in any way not expressly provided for in this Agreement. Customer shall be responsible for all activities that occur under Customer's account and for all actions of Customer or its Authorized Users and both Customer and Authorized Users shall agree to use the Services in accordance with the Website Terms of Service. Customer shall notify Procore of any unauthorized



use of Customer's passwords or account or any other breach of security that is known or suspected by Customer. Customer and its Authorized Users shall abide by all applicable local, state, national and foreign laws and regulations in connection with their use of the Services. Customer shall be responsible for any breach of this Agreement by its Authorized Users and agrees to enter into agreements with its Authorized Users which contain terms that impose no less restrictions in all material respects than those imposed on Customer herein, including without limitation the provisions regarding the use of the Services and protection of Procore's intellectual property, and that includes additional terms as reasonably requested by Procore.

3.4 Customer Content. Procore will process Customer Content as instructed by Customer in order to perform the Services. The Parties acknowledge and agree that the Customer is at all times the data controller and Procore is a data processor. Customer represents and warrants that it has all necessary rights in the Customer Content to grant Procore the right to use, and Customer hereby grants Procore a non-exclusive, worldwide, royalty-free and fully paid license to use, the Customer Content as necessary for Procore to provide the Services. All rights in and to the Customer Content not expressly granted to Procore in this Agreement are reserved by Customer. Customer represents and warrants that any Customer Content hosted by Procore as part of the Services shall not (a) infringe or violate the rights of any third party; (b) be deceptive, defamatory, obscene or unlawful; or (c) contain any viruses, worms or other malicious computer programming codes intended to damage Procore's system or data. Customer agrees that any use of the Services by Customer or Authorized Users contrary to or in violation of the representations and warranties of Customer in this section constitutes unauthorized and improper use of the Services. Customer shall have the sole responsibility for the accuracy, quality, integrity, legality, reliability, and appropriateness of all Customer Content. The Parties agree that Procore does not and cannot review all Customer Content and shall not be responsible for such content but that Procore shall have the right to delete, move or edit any Customer Content that Procore may determine, in its sole discretion, violates or may violate any applicable law or regulation, this Agreement or is otherwise unacceptable.

3.5 Customer Data. Procore will process Customer Data as instructed by Customer in order to perform the Services. The Parties acknowledge and agree that the Customer is at all times the data controller and Procore is a data processor. Customer represents and warrants that Customer shall only provide to Procore the minimum amount of personally identifiable information for each Authorized User to enable such Authorized User to enjoy the benefit of this Agreement. Customer represents and warrants that Customer is entitled to transfer relevant Customer Data to Procore so that Procore may lawfully use, process and transfer the Customer Data in accordance with this Agreement on the Customer's behalf and Customer shall ensure the same; Customer shall ensure that the relevant third parties including data subjects have been informed of, and have given their consent to, such use, processing, and transfer as required by all applicable data protection legislation; Customer acknowledges that Procore is reliant on the Customer for direction as to the extent to which Procore is entitled to use and process the Customer Data. Procore shall process the Customer Data only in accordance with the terms of this Agreement and any written instructions given by the Customer from time to time. Customer acknowledges and agrees that the Customer Data may be transferred or stored in the United States of America in order to carry out the Services and Procore's other obligations under this Agreement. Procore will not be liable for any claim brought by an Authorized User arising from any action or omission by Procore, to the extent that such action or omission resulted from the Customer's instructions.

3.6 Customer Acknowledgement. As of the Effective Date, Customer acknowledges and agrees that an authorized representative of Customer has evaluated the features and functionality of the Services in a means satisfactory to Customer and accepts that the Services have been demonstrably shown to have all of the features and functionality that have been represented to Customer.

3.7 Non-Procore Applications. Procore or third parties may make available third-party products or services ("**Non-Procore Applications**"). Any use by Customer and any exchange of data between Customer and the provider of Non-Procore Applications is solely between Customer and the applicable provider. Procore does not warrant or support Non-Procore Applications or other non-Procore products or services. If Customer installs or enables a Non-Procore Application for use with the Services, Customer hereby grants Procore permission to allow the provider of that Non-Procore Application to access Customer's data as required for the interoperation of that Non-Procore Application with the Services. Procore is not responsible for any disclosure, modification or deletion of any Customer's data resulting from access by a Non-Procore



Application. The Services may contain features designed to interoperate with Non-Procore Applications. To use such features, Customer may be required to obtain access to Non-Procore Applications from their providers, and may be required to grant Procore access to Customer's account(s) on the Non-Procore Applications. If the provider of a Non-Procore Application ceases to make the Non-Procore Application available for interoperation with the corresponding Service features on reasonable terms, Procore may cease providing those Service features without entitling Customer to any refund, credit, or other compensation.

3.8 Beta Services. From time to time, Procore may invite Customer to try certain beta services, including pilot, limited release, developer preview, non-production or evaluation services ("Beta Services") at no charge. Customer, in its sole discretion, may accept or decline any such trial. Beta Services will be clearly designated as such by Procore. Beta Services are for evaluation purposes and not for production use, are not considered "Services" under this Agreement, are not supported, and may be subject to additional terms. Unless otherwise stated, any Beta Services trial period will expire upon the earlier of one year from the trial start date or the date that a version of the Beta Services becomes generally available. Procore may discontinue Beta Services at any time in Procore's sole discretion and may never make them generally available. Procore will have no liability for, and Customer hereby releases Procore from, any liability or damage arising out of or in connection with any Beta Service.

4. PAYMENT.

4.1 Customer shall pay Procore the amounts specified on the Order Form. Unless otherwise specified, all payments shall be due thirty (30) days from the date of invoice. Overdue payments shall be subject to a late fee of one and one-half percent (1.5%) for each month or fraction thereof that the payment is overdue, or the highest interest rate permitted by applicable law, whichever is lower. In addition to any other remedies available to Procore, Procore shall be entitled to discontinue provision of the Services until all overdue amounts due are paid in full. Except for any failure to provide the Services as provided herein, all payments to Procore are non-refundable. Specifically, Customer's loss of construction business or Customer's failure to use the Services shall not be cause for any refund to Customer from Procore. Procore shall be entitled to be reimbursed by Customer for its collection costs incurred in attempting to collect any late payments, including reasonable attorney's fees.

4.2 The prices stated in Procore's quotations are exclusive of any federal, state, or other governmental taxes, duties, fees, or tariffs now or hereafter imposed on the Services. Customer shall be responsible for, and if necessary reimburse, Procore for all such taxes, duties, fees, excises, or tariffs on any amounts payable by Customer hereunder, except for taxes imposed on Procore's net income.

4.3 Procore shall have the right to audit Customer's Construction Volume (as specified in the Order Form) to ensure compliance with agreed upon terms and pricing. Procore will give Customer at least ten (10) days advance notice of any such audit and will conduct the same during normal business hours in a manner that does not unreasonably interfere with Customer's normal operations. Such audit shall be at Procore's expense, provided however that if any such audit should disclose any underpayment by Customer, Customer shall immediately pay Procore such underpaid amount, together with interest thereon at the rate specified in Section 4.1, and Customer shall also pay Procore for Procore's expenses associated with such audit.

5. TERM/TERMINATION.

5.1 Term. This Agreement shall commence on the Effective Date and shall remain in effect for the initial term specified in the Order Form ("Initial Term"), unless earlier terminated as provided herein. Upon the expiration of the Initial Term, this Agreement shall automatically be renewed for the same period (each a "Renewal Term") at a price to be agreed upon billed thirty (30) days in advance of the renewal date unless otherwise elected by either Party by providing written notice to the other received at least sixty (60) days prior to the expiration of the Term as then in effect. The Initial Term and any Renewal Terms are collectively referred to as the "Term".



5.2 Termination. Either Party may terminate this Agreement upon (1) any material breach of this Agreement by the other Party that is not cured within thirty (30) days (ten (10) days in case of failure to pay) following written notice thereof; (2) the other Party becomes insolvent or bankrupt, liquidated or is dissolved, or ceases substantially all of its business; or (3) in the event of a breach of Section 12.3. Upon expiration or termination of the Agreement or Services authorized in an Order Form, Customer will immediately discontinue all access and use of the Services. In the event Customer terminates the Agreement for a material and uncured breach by Procore, Procore shall, as Customer's sole and exclusive remedy, refund to Customer any prepaid but unused Subscription Fees calculated on a straight-line prorated basis for the remainder of the then current Term. Those Sections of the Agreement, which by their nature should survive, shall survive, including but not limited to a Party's obligations governing indemnification, Confidentiality, Privacy and Customer's obligation to pay outstanding Subscription Fees. In addition to any other remedies available to Procore, Procore may suspend Customer's or any Authorized Users' access to the Services, at Procore's sole option, in the event of any violation of this Agreement. Upon termination of this Agreement, Procore shall follow the data return procedures outlined in Exhibit A.

6. Proprietary Rights.

Procore shall retain all worldwide rights in the intellectual property in and on the Site, the look and feel of the Site and all copyrights in and to its content. The Site is copyrighted, trademarked or otherwise protected, and owned or licensed by Procore. Nothing in this Agreement grants Customer or any Authorized User an express or implied right to use any Procore intellectual property except as set forth in Section 3.1 above. All proprietary rights in the Services, including the Software as well as any aggregate usage statistics, traffic patterns, and other non-personally identifiable data collected by Procore in connection with use of the Service, will remain in and be the sole and exclusive property of Procore. Procore shall have the royalty-free right to use any suggestions, ideas, feedback or other recommendations provided by Customer or Authorized Users relating to the Service. Procore may use Customer's name and/or its logo on Procore's website and in its marketing materials to indicate that Customer is a client of Procore. Customer hereby grants Procore the right to contact Customer and Authorized Users in connection with their use of the Services unless otherwise stated in the Order Form.

7. WARRANTIES AND LIABILITY

7.1 Limited Warranty. Each Party warrants to the other Party that it has all necessary authority to enter into and perform its obligations under this Agreement. Procore represents and warrants that (1) the Services will perform in accordance with the Documentation under normal circumstances, and (2) the Services provided hereunder will be performed in a professional manner in accordance with prevailing industry Standards. Provided that Customer notifies Procore of any breach of the foregoing warranty during the Term, Procore shall, as Customer's sole and exclusive remedy, provide the support services set forth in Exhibit A to this Agreement. The Services may contain links to sites on the Internet that are owned and operated by third parties. Customer acknowledges and agrees that Procore is not responsible for the availability of, or the content located on or through, any such external site.

7.2 DISCLAIMER. EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, PROCORE DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED. PROCORE EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. PROCORE DOES NOT WARRANT THAT THE OPERATION OF THE SERVICES SHALL BE UNINTERRUPTED OR ERROR-FREE.

7.3 LIABILITY. PROCORE SHALL NOT BE LIABLE TO CUSTOMER FOR ANY SPECIAL, INDIRECT, EXEMPLARY, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE. IN ANY EVENT, ASIDE FROM ITS OBLIGATIONS IN SECTION 8, PROCORE'S TOTAL MAXIMUM LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED TO THIS AGREEMENT SHALL NOT EXCEED THE AMOUNT PAID TO PROCORE BY CUSTOMER DURING THE TWELVE MONTH PERIOD IMMEDIATELY PRECEDING SUCH CLAIM. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR LIMITATION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHICH MEANS THAT SOME OF THE ABOVE LIMITATIONS MAY NOT APPLY. IN THESE JURISDICTIONS, PROCORE'S LIABILITY WILL BE LIMITED TO THE GREATEST EXTENT PERMITTED BY LAW. THE LIMITATIONS SET FORTH IN THIS SECTION 7 WILL SURVIVE AND APPLY EVEN IF ANY LIMITED REMEDY SPECIFIED IN



THIS AGREEMENT IS FOUND TO HAVE FAILED OF ITS ESSENTIAL PURPOSE. THE PARTIES ACKNOWLEDGE AND UNDERSTAND THAT THE DISCLAIMERS, EXCLUSIONS AND LIMITATIONS OF LIABILITY SET FORTH HEREIN FORM AN ESSENTIAL BASIS OF THE AGREEMENT BETWEEN THE PARTIES, THAT THE SAME REFLECT AN ALLOCATION OF RISK BETWEEN THE PARTIES AND THAT ABSENT SUCH DISCLAIMERS, EXCLUSIONS AND LIMITATIONS OF LIABILITY, THE TERMS AND CONDITIONS OF THIS AGREEMENT WOULD BE SUBSTANTIALLY DIFFERENT.

8. INDEMNITY.

8.1 During the Term, Procore will defend, indemnify and hold harmless Customer against any action claiming that the Services infringe any duly issued patent, copyright or trademark or misappropriate any trade secret. In addition, if the use of the Services infringes or is enjoined, or Procore believes it is likely to infringe or be enjoined, Procore may, at its sole option, (a) procure for Customer the right to continue use of the Services as furnished; (b) modify the Services to make them non-infringing, provided that they still substantially conform to the applicable Documentation; or (c) if Procore, after using all commercially reasonable efforts, is unable to accomplish the foregoing remedies, terminate the Agreement and refund to Customer any prepaid but unused Subscription Fees calculated on a straight-line prorated basis for the remainder of the then current Term. The intellectual property indemnity provided herein shall not apply to the extent the alleged infringement arises from any use of the Services not in accordance with this Agreement or as specified in the Documentation or any unauthorized modification of the Services. This section states Procore's sole and exclusive liability and Customer's sole remedies for any threatened or actual infringement of proprietary rights.

8.2 During the Term, Customer will defend, indemnify and hold harmless Procore and its officers, directors, employees, agents, successors and assigns from and against any claims, damages, liabilities, judgments, settlements, losses, costs, or expenses of any kind, including reasonable attorneys' fees, arising out of (a) Customer Data, including any processing of Customer Data by Procore in accordance with this Agreement; (b) Customer's misuse of the intellectual property rights of any third party; and (c) any Customer Content that may violate section 3.4 of this Agreement.

9. CONFIDENTIALITY.

Each Party agrees that during and after the existence of this Agreement it will hold in strictest confidence, and will not use for any purpose unrelated to its performance of this Agreement or disclose to any third party, any Confidential Information of the other Party. The term "**Confidential Information**" shall mean all non-public information, whether business or technical in nature, that the other Party designates as being confidential, or which under the circumstances of disclosure ought to be treated as confidential and shall include (but is not limited to) information concerning business methods, pricing, business plans, new product launches, customer and vendor information, internal policies and procedures and other financial information. Neither Party shall disclose the terms or conditions of this Agreement without the prior written consent of the other Party, except (i) as may be required by law or (ii) to its employees, contractors or agents who have a specific need to know such information and are under a written obligation of confidentiality at least as restrictive as that contained in this Section. Notwithstanding the foregoing, information will not be deemed confidential if it (i) was known to the receiving Party, and such information was acquired through proper methods, prior to its receipt from the disclosing Party, as evidenced by written records of the receiving Party; (ii) is now or (through no act or failure on the part of the receiving Party) later becomes generally known through no breach of this Agreement by the receiving Party; (iii) is supplied to the receiving Party by a third party that is free to make that disclosure without restriction; or (iv) is independently developed by the receiving Party without use of or reference to any Confidential Information provided by the disclosing Party. The restrictions on disclosure imposed by this Section shall not apply to information that is required by law or order of a court, administrative agency or other governmental body to be disclosed by the receiving Party, provided that in each such case the receiving Party provides the disclosing Party with prompt written notice of such order or requirement and reasonably assists the disclosing Party, at the disclosing Party's expense, in seeking a protective order or other appropriate relief. Upon termination of the Agreement, each Party will promptly cease all further use of Confidential Information, return to the other Party all physical materials containing Confidential Information, whether the materials were originally provided by the disclosing Party or copied or otherwise prepared by the receiving Party, and erase or otherwise destroy any Confidential Information kept by either Party in electronic or other non-physical form. The Parties acknowledge that the receiving Party shall not be required to return to



disclosing Party or destroy those copies of Confidential Information residing on receiving Party's backup or disaster recovery systems or which must be maintained for regulatory or policy purposes. Such termination by either Party will not affect each Party's continuing obligations under this Section.

10. Litigation Support.

Procore shall not disclose Confidential Information, Customer Content, or Customer Data to third parties, but the restrictions on disclosure imposed by this Section shall not apply to information that is required by law or order of a court, administrative agency or other governmental body to be disclosed by the receiving Party, provided that in each such case the receiving Party provides the disclosing Party with prompt written notice of such order or requirement and reasonably assists the disclosing Party, at the disclosing Party's expense, in seeking a protective order or other appropriate relief. In the event of any litigation or preparation for litigation related to Customer's use of the Services or related projects, if Customer or any agent or representative of Customer requires Procore to provide expert testimony on behalf of Customer or to gather data, research information, attend meetings, or perform other related services of any kind in support of Customer, Procore shall provide such services and Customer agrees to compensate Procore at the rate of \$300 per hour per individual providing the services, plus all reasonable out of pocket expenses, including but not limited to travel, lodging and meals where necessary

11. Privacy.

The Procore Privacy Policy is located at <http://www.procore.com/fine-print/privacy-policy.php> and may be amended from time to time. Any updates to the Privacy Policy will be posted to the Site and will be effective immediately upon posting on the Site. It is Customer's responsibility to review the Privacy Policy from time to time on the Site to ensure that Customer continues to agree with all of its terms. Customer's continued use of the Site following the posting of changes to the Privacy Policy will mean Customer accepts those changes.

12. GENERAL.

12.1 Waiver/Amendment. This Agreement may not be modified except by a written instrument signed by both Parties. Failure by either Party to enforce any provision of this Agreement will not be deemed a waiver of future enforcement of that or any other provision.

12.2 Assignment. Neither Party may assign, delegate or otherwise transfer this Agreement, in whole or in part, voluntarily, involuntarily, by operation of law or otherwise without the other Party's prior written consent; provided, however, that: (a) Procore may assign, delegate or otherwise transfer this Agreement without such consent in connection with any merger, consolidation, reorganization, or any sale of all or substantially all of such Party's assets or any other transaction in which more than fifty percent (50%) of its voting securities are transferred ("**Change in Control**"); and (b) Customer may assign, delegate or otherwise transfer this Agreement upon any Change in Control with Procore's prior written consent and subject to all of the terms of this Agreement. Any attempt to assign, delegate or otherwise transfer this Agreement other than in accordance with this provision shall be null and void

12.3 Compliance with Laws. Both Parties agree to comply with all applicable local, state, national and foreign laws, rules and regulations including all applicable export and import laws and regulation in connection with their performance, access and/or use of the Services under this Agreement. Customer shall comply with all legal duties applicable to Customer including obligations as data controller by virtue of Customer's role in determining Authorized Users. Specifically, Customer must provide relevant persons and/or participants with all information Customer is required by law to provide, and, if necessary, must obtain the consent of these persons. Notwithstanding any other provision in this Agreement, Procore shall have the right to terminate this Agreement upon its reasonable determination that Customer is not in compliance with any laws.

12.4 Governing Law/Attorneys' Fees. The rights of the Parties hereunder shall be governed by the laws of the State of California, without giving effect to principles of conflicts of laws. Any suits brought



hereunder shall be brought in the federal or state courts serving Santa Barbara County. In the event of any claim, action or judicial proceeding arising under this Agreement, the prevailing Party shall be entitled to recover reasonable attorney's fees and expenses incurred in resolving such claim, action or judicial proceeding.

12.5 Severability/Notice. If any provision of this Agreement shall be held by a court of competent jurisdiction to be contrary to law, the remaining provisions of this Agreement shall remain in full force and effect. Any notice, consent, or other communication hereunder shall be in writing, and shall be given personally, sent via overnight delivery or sent via email with confirmation of receipt to either Party at their respective addresses set forth in the Order Form (or such other address as provided by that Party). Notices shall be deemed given when delivered.

12.6 Independent Contractors. The relationship of the Parties is that of independent contractors and nothing contained in this Agreement shall be construed to make either Party an agent, partner, joint venturer, or representative of the other for any purpose. This agreement is for the sole benefit of the parties hereto and their respective permitted successors and assigns and nothing herein, express or implied, is intended to or shall confer upon any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

12.7 Force Majeure. Nonperformance of either Party shall be excused to the extent that performance is rendered impossible by any reason where failure to perform is beyond the reasonable control of the non-performing Party.

12.8 Entire Agreement/Survival. This Agreement and any URLs contained herein, Exhibit(s) to the Agreement, and the Order Form(s) constitutes the entire agreement between the Parties with respect to the subject matter hereof and replaces any prior understandings, written or oral. Further, under no circumstances will the provisions of any document issued by Customer (including without limitation, any request for quotes or proposals, purchase orders, non-disclosure agreements, or Customer exhibits to the Agreement and/or vendor forms or registrations with terms that conflict with this Agreement) be deemed to modify, alter or expand the rights, duties or obligations of the Parties under this Agreement, regardless of any failure of Procore to object to such terms, provisions or conditions. If there is any conflict between the terms of this Agreement and the Order Form, the Order Form shall prevail. In addition to any rights that accrued prior to termination, the provisions of Sections 6-12 shall survive any termination of this Agreement.



EXHIBIT A

SUPPORT AND MAINTENANCE

1. SERVICE LEVEL AGREEMENT

Procore has a service level objective for the Services of 99.9% availability, twenty four hours a day, seven days a week, 365 days a year. Downtime does not include (i) problems caused by factors outside of Procore's reasonable control, and (ii) unavailability of the Services during scheduled maintenance.

2. SUPPORT

During the Term, Customer and Authorized Users shall have access to technical support via telephone, online chat, email, or self-paced online tutorials. Support hours will be 8:00 a.m. to 8:00 p.m. Eastern Time (ET), Monday through Friday, excluding holidays. Support does not include training sessions on the features and functionality of the Services or training in computer skills considered prerequisite to an individual's ability to use personal computers, the Internet/World Wide Web and online software.

Upon Procore's receipt of a support request, Procore will use commercially reasonable efforts to answer questions and provide standard error corrections to known problems. In the event of any problems or errors involving the Services that Procore cannot immediately resolve, Procore will begin working on a resolution to the problem and will work diligently and in a commercially reasonable manner on the problem until it is resolved.

3. DATA BACKUP AND RETURN

During the Term, Procore shall make commercially reasonable efforts to protect the security of Customer's data, and shall complete daily data backups of Customer's data to an archive format that shall be kept physically separate from the Procore database and web server hardware. The Services do not replace the need for Customer to maintain regular data backups or redundant data archives. Procore has no obligation or liability for any loss, alteration, destruction, damage, corruption or recovery of Customer Content or Customer Data.

Procore contracts with a third-party data center provider to provide essential technology services such as network connectivity to the Internet for the servers running the Services. Personnel access to the data center used by Procore for these Services is restricted, and all entrances and common areas are monitored 24x7 via closed-circuit cameras. Public access to the data center is forbidden. Fire-suppression systems are located in the data center, and power systems in the data center are designed to run uninterrupted even in the event of a total power outage. All servers are supplied with Uninterruptible Power Supply ("UPS") power sources that will continue to run if utility power fails. The UPS power subsystem is fully redundant, with instantaneous fail over in case the primary UPS fails. In the event of an extended power outage, on-site diesel generators can run indefinitely. Generators are regularly tested to ensure functionality in the event of an emergency.

All Customer Content is the property of the Customer. Upon restriction, suspension or termination of a Customer account, and assuming there has been no material breach of this Agreement by Customer, Procore will allow Customer, at no additional cost, to export all of Customer Content as well any additional data which may be readily exported from the Services to a standard electronic file format. At Procore's sole discretion, a Customer's area within the Services may be kept active as long as the Customer is provided with "read-only" access. This access shall be accepted by Customer as a full substitute for a complete file export of Customer's project data.

4. MAINTENANCE

4.1 Unplanned Outages. If a system failure should occur that creates an outage of the Services, Procore will utilize all reasonable means to end the outage as soon as possible. Outages due to the Internet, hosting providers and/or



Customer or Authorized User systems are outside the control of Procore and, in such event, Procore will assist the Customer or Authorized User in the diagnosis but may not be able to resolve the problem.

4.2 Preventative Maintenance. From time to time, Procore or its hosting providers will perform preventative maintenance, such as updating servers and routers with security patches, and software upgrades. Procore will provide notice prior to any interruption in the Services and will keep any resulting downtime reasonable. Procore shall use all reasonable efforts to perform such maintenance at hours convenient for the Customer and Authorized Users.

Appendix 4: RFP (Scott, 2013)

Request for Proposal

EC-RFP-001: Subcontractor Management Software Implementation

Issue Date:

March 28, 2021

Closing Time:

Proposal must be received before 2:00 PM Eastern Time on April 9, 2021

1.0 INSTRUCTION TO PROPONENTS

1.1 Introduction

This Request for Proposal (RFP) outlines Ecodomus Construction (EC) high-level requirements for the subcontractor management software solution. Interested Proponents are invited to respond to this RFP by April 9, 2021. Shortlisted Proponents will be invited to present a live system demonstration and present the essentials of their proposal to the EC Evaluation Team during the days of April 11 - 13, 2021. EC is extremely value conscious in making this acquisition and it is anticipated that the initiative must provide substantive benefits relative to the total lifecycle costs.

1.2 RFP Terminology

- **Evaluation Team:** The individuals who will evaluate the Proposals on behalf of EC.
- **EC:** Ecodomus Construction.
- **Optional:** A requirement not considered essential, but for which preference may be given.
- **Proponent:** A company or consortium that submits, or intends to submit, a Proposal in response to this RFP.
- **Request for Proposal (RFP):** This solicitation for Goods and Services, including attached appendices.
- **Services:** The contracted services as specified in the RFP, the Proposal, and any resulting Contract.
- **Should or Desirable:** A requirement having a significant degree of importance to the objectives of the RFP.

- **Validation:** The stage in the RFP process during which the EC may confirm that a Proponent's proposed solution complies with the requirements of the RFP.
- **Vendor:** A successful Proponent to this Request for proposal who enters into a Contract with EC relating to the subject matter of this RFP.

1.3 Confidentiality

The contents of this RFP and all information provided by EC are to be considered confidential information and remain the property of EC. We remind all vendors of the Mutual Non-Disclosure required. All Proponents should hold all information to any third party except to its employees, lawyers and consultants on a need-to-know basis.

Copies of the document may be reproduced by the proponents, only to the extent that it is required to allow the Proponent's party and its employees to respond to this RFP. Upon the request of EC, the Proponent agrees to destroy or return to EC all copies of this RFP.

Proposals submitted to EC will also be held in confidence and shall be considered the property of EC.

1.4 Participation

Participation in the RFP is at the sole risk and expense of the Proponent. The Proponent understands and acknowledges that EC makes no representation or guarantee as to the Proponent's chances of success. EC shall not be responsible for, nor shall EC reimburse the Proponent for any costs associated with responding to this RFP, including, but not limited to, any costs relating to goods and services provided for the purpose of demonstration.

1.5 RFP Availability

This RFP is open to Proponents who have been invited to submit a Proposal. Proposals from other Proponents will be considered as long as they are submitted as per this RFP.

1.6 Eligibility to Respond

Proposals will not be evaluated if the Proponent's current or past corporate or other interests may, in EC's sole opinion, give rise to a conflict of interest in connection with this RFP.

1.7 Changes to the RFP

In the event there are modifications or additions to the RFP, all Proponents who have returned the Receipt Confirmation Form will be notified.

1.8 Closing Date for Proposal Submissions

The Closing Date and Time for this Request for Proposal is April 9, 2021 at 14:00 EST. Late proposals will not be accepted and will be returned unopened to the Proponent.

If Proposals are sent by mail to EC, the Proponent shall be responsible for the actual delivery of the Proposal to EC before the advertised Closing Date and Time. If mail is delayed for any reason beyond the date and time set for the closing, delayed proposals will not be considered and will be returned unopened.

1.9 RFP Cancellation

EC has the right to cancel this RFP at any time at its sole discretion, without award or compensation to any party.

1.10 RFP Schedule of Events

Planning dates are subject to change at the discretion of EC. Any changes will be communicated as described in section 1.7 *Changes to the RFP* section.

Date	Event
March 28, 2021	RFP Issued to Proponents
March 31, 2021 10:00 - 11:30 AM EST	Proponents meeting conference call - open question and answer session
April 2, 2021, 14:00 EST	Proponents Receipt Confirmation Form due
April 9, 2021, 14:00 EST	RFP Closing date and time
April 9 - 10, 2021	RFP Evaluation period
April 10, 2021	Notification to short-listed Proponents for the scheduling of demonstrations
April 11 - 13, 2021	Short-listed Proponent presentation/system demonstration

April 16, 2021	Awarded/canceled by (target date)
May 15, 2021	Intended project start date
June 15, 2021	Intended project to go-live (if not sooner)

1.11 Proponent Questions

All communication should be directed in email to: Solution Evaluation Project Manager (Email: nguyenlina1589@outlook.com) with the following subject line: "EC-RFP-001".

EC will provide responses to all Proponents, unless the information is of a confidential nature. Any information that may be received from EC personnel other than the Solution Evaluation Project Manager is not to be relied on and should not be considered accurate.

1.12 Acknowledgement and Acceptance to Respond

Proponents shall complete and return the attached "Receipt Confirmation Form" on or before April 2, 2021 before 14:00 EST as indicated in *section 1.10 RFP Schedule of Events*.

1.13 Limitation of Damages

Although EC has devoted considerable efforts to ensure the accuracy of the information in this RFP, this information is supplied solely as a guideline for Proponents. The information is not guaranteed or warranted to be accurate by EC, nor is it necessarily comprehensive or exhaustive. Nothing in this RFP is intended to relieve Proponents from making investigations or forming their own opinions and conclusions with respect to the matters addressed in this RFP.

1.14 Limitation of Liability

EC shall in no event be responsible or held liable for damages, including without limitation, liability for costs of preparing the quotation, loss of profits or loss of property; however, the same may be caused, including the negligent acts or omissions of EC, and the Proponent hereby releases, indemnifies and agrees to hold EC harmless from any liability arising from the bidder's submission of a bid proposal in accordance with the bid documents.

1.15 Price Quotation

All prices quoted shall be in Canadian or US currency. Taxes or other charges such as estimated travel expenses, where applicable, must be indicated and shown separately.

Proponents' price quotation must be comprehensive and include all costs incidental to the successful delivery of the goods and services that are the subject of this RFp and are detailed herein. Proponents are responsible to determine, from careful examination, the methods, materials, labor, permits, insurance and time required for the successful delivery of the goods and services which are the subject of this RFP and are detailed herein and must reflect the same in the proposal and price quotation. Any costs not stated in the proposal will be borne by the Proponent, unless specifically agreed to by EC in writing.

Proposals shall be considered firm for at least 60 days from the closing date of the RFP and will be used as the bases for an agreement. EC reserves the right to incorporate all or part of your proposal into any resultant agreement. The Proponent's response shall be legally binding on the Proponent.

Prices quoted are to be firm for the duration of the proposed Agreement (with the exception of those prices which the bidder cannot control). Costs which the vendor does not have direct control of which would be passed on to EC should be stated in the bid.

1.16 Recommendations / Alternative Proposal

We are value oriented and price sensitive. You are encouraged to be innovative in your approach and proposed application solution.

EC will consider recommendations for alternative solutions and for best practices for managing and executing the work. If you feel that there are areas within the scope of this RFP, where costs could be reduced or value could be improved by performing the work differently or using alternative components of your solution with changes to requirements, please provide an alternative proposal in your proposal. The alternative must be clearly described as an alternative proposal.

1.17 Proposal Format

Proponents must at minimum provide an electronic copy of the Proposal via email including a note of the proponents authorized signatory. In addition, the Proponent can also submit four (4) copies of the Proposal, dated and signed with the signature of a person authorized to bind the Proponent.

1.18 RFP Evaluation Criteria

1. Functionality and Fit:

- 1.1. Evaluation of the software functionality against EC list of identified future needs.
- 1.2. An assessment of technical capabilities and fit of the Proponent's system against identified EC needs and requirements.

2. Total Cost of Ownership:

The overall cost of the Proponent's proposed solution, including total cost of ownership and vendor's time and material rates, of note: ongoing costs e.g. subscription fees and training fees. Preference will be given to proposals that offer a low ongoing cost.

3. Easy to Navigate Interface:

Evaluation of how user-friendly the interface is for EC's staff. An assessment of the average duration it takes for the employee to learn the software proficiently.

4. Quick Set-Up:

An assessment of the average duration of time to install and configure the software. The timeline for set-up should be less than one (1) month. Preference will be given to proposals that offer a faster set-up.

5. Availability of Training Tools:

- 5.1. Evaluation of the training material availability and completeness. The material should cover the majority (80%) of the software's functions.

5.2. An assessment of usability of the material. The material should be easy to navigate and intuitive to use.

6. Scalability:

Assessment of how well the system will be able to accommodate for the growing user-base of EC over the course of software ownership.

Proposals meeting all of the mandatory criteria will be further assessed against desirable criteria as outlined below:

Criteria	Weighting (%)
Functionality and Fit	35%
Total Cost of Ownership	20%
Easy to Navigate Interface	10%
Quick Setup	15%
Availability of Training Tools	10%
Scalability	10%
Total	100%

2.0 SUMMARY OF EC SUBCONTRACTOR MANAGEMENT SOFTWARE REQUIREMENTS

2.1 EC Company Overview

EC is a family-run business started by John Theodosopoulos in 1986. The business's primary focus is on new construction, renovation, and design projects. EC's mission statement is to provide quality architectural expertise, deliver projects in a timely manner at the most cost-efficient pricing available, and preserve the architect's main intent.

The company is looking to further improve efficiency and reduce time spent on manual documentation to facilitate the growth of the company. At the base, technology should provide a

sound foundation for the daily operation by which the company operates. The current processes are supported by a combination of bespoke and isolated systems whilst significant time is spent on coordinating manual processes due to end-users not being very technology-friendly.

EC requires a subcontractor and bid management solution which is user-friendly and simple in functionality. Current operations within the company are not significantly contributing to a competitive advantage and the expectation is that a software installation should be a feasible option.

2.2 General Information

2.2.1 Service Types

- Project and Construction Management: leadership and input to improve the project quality and constructability, control costs and adherence to stringent construction schedules
- Design Build: assemble a team of external professionals (architects, engineers etc.) to design the preliminary concept, undertake and deliver all remaining aspects of the design, the construction and timely delivery of the project
- Stipulated Fixed Price: prepare and present a detailed estimate of the construction costs to the client
- Time and Material: supply materials, labour, equipment and site supervision at predetermined hourly rates, prices and mark-ups

2.2.2 Key Facts

- EC plans on 10% year over year growth
- Approximately 30 bids prepared, 7 won and executed per year
- EC currently operates from one location in Montreal, QC

2.2.3 Bidding Process

- Search for available projects through SEAO (Système Électronique d'Appel d'Offres) moderated by the Quebec government.
- Legal documentation of the requirements for the project is requested from the service and analyzed.

- Subcontractors are contacted with the details of the project and expected to provide a quote for their service.
- Compile the subcontractor's quotes and prepare a bid on the project that is sent back through the website.
- Once the bid is finalized, it is submitted to the requester and whether it is accepted or rejected, the information is stored.

2.3 Scope

The scope of the intended software is focused on the following business functions and processes:

- Bid Management (Prepare, Compare, Send Bids)
- Subcontractor Management (Storage of Contacts, Contact History, Relationship Management)

7 people will make use of the system, equating to 5-7 concurrent user equivalents.

HR, Payroll, and Supervision are considered out of scope other than a basic element required to support subcontractor management for project delivery.

2.4 Current Technology Landscape

The current technology landscape consists of the following:

- Accounting (Sage Accounting Package)
- Contact Storage (Microsoft Outlook)
- Subcontractor Relationship Management (Microsoft Excel)
- Information Sharing (Dropbox)
- Video Conferencing (Zoom)
- Operating System (Windows OS)

2.5 Future System Scalability and Integration

Considerations:

- A pivotal requirement is the ability of the selected system to scale up to increased EC business demand, user base, increasing business complexity, multiple service sites in Canada, etc.

- At this time, there are no requirements to enable system integration within EC or with external organizations. That said, consideration will be given to Proponents who propose systems that have proven capability of extensive options to enable:
 - System integration with Sage Accounting Package
 - Data migration capabilities with Microsoft Outlook contacts and Microsoft Excel sheets
 - Bid notification
- EC currently does not have an internal IT department. EC will consider the following options for the new system:
 1. Software as a Service (SaaS) - preference will be given to offerings where EC could in the future elect to bring the software and the system in-house
 2. Off-site, hosted by third-party
 3. On-premise, hosted at EC

3.0 RESPONSE REQUIREMENTS

The following section outlines the detailed requirements which Proponents are requested to provide.

- Proponents are asked to format their responses in the sequence provided in this section.
- For your convenience, an electronic copy of this document can be made available, should you wish to insert your responses directly into the template.
- If you are unable to meet any of the requirements outlined in this inquiry, you must clearly state in your response that you are unable to meet the requirement.

3.1 Title Page and Executive Summary

3.1.1 Provide a title page showing the date, RFP number, Proponent's corporate name and address, telephone number, facsimile number and contact person.

3.1.2 Provide a brief Executive Summary which summarizes the proposal and why your firm and application suite are uniquely suited for EC.

3.2 Proponent Profile

3.2.1 Provide an overview of your company's background, highlight any specialty areas.

3.2.2 Describe your company's strengths and distinguishing factors.

3.2.3 Describe your company's relevant experience with software implementation, specifically for the construction industry.

3.2.4 Document how long your firm has been in business (for both the software vendor and the system implementer, when incorporated) and facts describing the firm's financial viability (e.g., sales revenues, operating profit for at least five years).

3.3 Requirements Matrix

Significant preference will be given to Proponents who provide most of the functionality "out of the box" while befitting the pricing and investment effort for a small-to-medium sized general contractor.

Proponents are requested to complete this matrix directly in the provided Microsoft Excel format in order to allow EC to score the products in an efficient manner. We request that the Proponent answer every question for Complexity; one of:

Complexity	Definition
Out-of-the-Box	This requirement is included in the base functionality of the solution. There is no need for Configuration, Customization, Software Development, nor is it an add-on from an independent software vendor (ISV). This is the most ideal status.
Configuration	The functionality of this requirement is included in the Out-of-box solution but it will require much or little configuration to meet its needs.
Functional-Workaround	This requirement can be met with an alternative use of the system's base functionality in order to meet the requirement. No software development is required.
Customization-Development	This requirement can be met but only with custom Software Development within or integration with the solution. It may also consist of a Functional-Workaround.
Add-on (ISV)	This requirement can be met with the purchase of the functionality from an authorized Independent software vendor

	(ISV) in which is partially or fully integrated into the suggested solution.
Does not exist	This requirement exceeds the software's functional/technical capabilities, it cannot be met neither by Configuration, Customization, Software Development, nor is it an add-on from an independent software vendor (ISV). This is the least ideal status.

3.4 Technology

3.4.1 Please outline if your proposed solution can be offered as a hosted solution (on-premise, off-premise) or Software as a Service, or both.

3.4.2 Describe your company's policy for data ownership. Would EC be able to extract its data from your solution, if required? If yes, explain how and any costs your company would impose on EC.

3.4.3 Outline what data migration utilities your software supports. Make note of any accelerators your software has that would help expedite data migration from some, or all of, the existing EC systems in place.

3.5. Planned System Implementation Approach, Method, and Tools

3.5.1 Describe your company's planned approach in order to meet the requirements of EC.

3.5.2 Based on your past experience, outline a training approach that is most suited for a project of this nature.

3.5.3 Describe the challenges and risks which you foresee for this project.

3.5.4 Describe your system implementation approach, guiding principles and how your firm ensures delivery of a quality solution aligning to the business requirements and future growth considerations.

3.5.5 Outline your company's approach to data migration and expectations of EC.

3.6 Macro Project Plan

3.6.1 Provide a Gantt chart based on the estimated timelines which shows the macro planned project activities and clearly highlight the critical project milestones and significant dependencies.

3.7 References

3.7.1 Provide three (3) references which are specific to your organization's previous construction implementations and/or are relevant to this system implementation Note that local references will receive preference during the evaluation of this RFP.

Please include response reference name and contact details, project description and comments.

3.7.2 Should your company be short-listed for the next round of review, please specify if an on-site visit to one of you reference / existing customers would be a feasible option. Preference will be given to customers that are located within 250 km of Montreal QC.

3.8 System Implementer Resources

3.8.1 Provide resumes for the team which your company would like to propose for this project highlighting relevant experience. Clearly highlight if subcontractors, or resources from a company other than your own, would be used. EC understands that the system implementer may have to substitute some of the proposed resources for others of equal, or better, experience depending upon EC's decision and contract award timing.

3.8.2 If possible, please denote which resources you can commit to assuming mutual adherence to EC schedule of events as outlined in *Section 1.19 RFP Schedule of Events*.

3.8.3 Please outline where the proposed consultants are based i.e., home office,

3.8.4 Provide an estimate for the involvement you would require from EC's resources. For increased clarity, please make note of these requirements by major project stage (e.g., blueprint, build, test, implement and stabilize).

EC Employee	Total Estimated Effort	
Sales Manager		
Operations Supervisor		
Executive		
IT Personnel		
Finance		
Other EC staff		

3.9 Fees - Implementation Services

3.9.1 Provide the total effort estimates and consulting fees for each of the proposed resources according to the following table (please specify currency - CAD or USD):

Resource Name and Role	Total Estimated Effort (Hours)	Hourly Rate	Total Cost (Plus Taxes)

3.9.2 Please specify the invoicing / financial basis (e.g., time and materials, fixed price) and whether your company can offer any risk-reward mechanisms.

3.9.3 Please outline anticipated travel expenses, including the planned number of trips per proposed consultant role, if applicable. Please note EC does not plan to cover any travel and commuting costs within the Greater Montreal Area, QC region.

Resource Name and Role	Estimated Trips	Consultant Home Base (City)	Travel Expenses

3.10 Fees - Software (and Hosting)

3.10.1 Outline the detailed cost estimates for the software and the pricing options (e.g., concurrent user licensing, named user licensing, subscription fees, etc.) Provide details for initial investment costs as well as ongoing service / assurance fees (e.g., annual maintenance fees).

Please provide pricing for any, or all, of the following options for your proposed solution:

1. Software as a Service (Cloud)
2. Off-site hosted
3. On-premise hosted

3.10.2 If providing a quote for off-site hosted software, please also provide a proposed price for the ongoing hosting fees and any initial set-up fees. Please clearly identify if a third-party hosting company is providing this service and how this company would invoice for its services (e.g., direct to EC, via the System Implementer or Software Vendor).

3.10.3 If providing a quote for on-premise hosted software, please also provide a cost estimate for what eC would need to provision in hardware (assume a DEV-PROD landscape), including hardware specifications. EC understands that this is a quote only and that detailed hardware sizing would need to be done to finalize the final hardware requirements and investment cost.

3.11 Risks

3.11.1 Outline the top risks and challenges you foresee EC facing in this implementation and how your company has, or would plan to, overcome such challenges to ensure successful project delivery.

3.12 Change Management

Outline how your company will help to ensure end-user adoption and buy-in of the new solution. Outline what activities your company employs to ensure this success.

3.13 Assumptions

3.13.1 Please state clearly all assumptions. Any exceptions to the requirements outlined in this inquiry should be explicitly stated in your response.

3.14 Proponent Feedback

3.14.1 (Optional) Provide any other feedback or suggestions based on your organization's previous experience.

3.15 Presentation Requirements

- Short-listed Proponents will be given the opportunity to showcase their products on-site at EC in Montreal, QC during a 2 - 3 hour presentation session to be scheduled one of the days between April 11 and 13, 2021.
- Short-listed Proponents will be required to showcase a live demonstration of their proposed system and to answer questions. (Note: PowerPoint slides can be used to support the presentations, but a live system demonstration is a critical requirement to qualify for consideration. Proponents are encouraged to focus on the system fit to the EC business requirements and how the Proponent will approach the project to ensure success).