"Elevating Ideas, One Bit at a Time"

Project Ox

MILESTONE SUBMISSION DOCUMENT

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Bits by Bytes Team

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Who is Bits by Bytes?

Team Introduction – "Elevating Ideas, One Bit at a Time"

Second year students in the Computer Information Technology program at Lethbridge College. Our mission is to develop solutions that elevate your ideas.

We work to produce quality solution(s) for a robust system on budget and in a timely manner. Our aim is to create a product that is simple and efficient with little to no maintenance or training.

Keeping in mind that we are students, we provide a limited warranty for the scope of the project only, including service updates after or during the original implementation, to a time frame to be decided upon project completion.

Team Information – Roles, Contact, and Information

Name	Email	Phone	Role(s)
Skyler Black			Business Analyst Requirements Analyst
James Haro			Team Leader/Organizer
Gradi Mbatika			Business Analyst Systems Analyst
Alexander Pham			Software Architect Systems Analyst
Jesse Van Schothorst			Infrastructure Analyst Software Architect

Project Ox

Client Introduction – Purpose, Request, Contact

The Bearded Ox Timber Co. takes in requests for high-end custom woodworking pieces that work with your budget. They work with many epoxy blends to create stunning, unique pieces of woodworking art. Implementing a web tool to produce reference for the consultation has been requested. Many options are required to produce an accurate reference piece. Models with data on dimensions, shapes, and textures are requested for visual aid. Production does not begin until after a consultation has been finalized into a work order. Currently, they use email forms submissions for contact and further consultation. Once an agreement is made, the work begins, and the results are astounding. Our aim is to expand upon that, with a database containing prefab models of different shapes and the various other options; These customized render s, and all other information are then recorded in the database. This system will be accessible in a web interface software with local access only.

Location
116 Kenyon Dr, Lethbridge, AB T1K 7N3
Contact(s)
Jacob Dennill, Owner
Brandon Boorsma, Sales
Email
sales@thebeardedox.ca
Phone
403.393.5650

Project Information – Description, Theory, Requirements

Project Ox involves elements of web components backed by database software and authentication protocols to restrict access to sensitive data. Administration, reporting, and management will all be accessible via a local panel. Information regarding each product's specifications, material cost, and budget estimates will be stored in the database. This will be used as a reference for consultation, which is required to provide an accurate quote to the customer. We can either integrate this into their current systems or provide options for hardware. Currently they take in orders via email form submission. Our aim is to provide a better means of automating their current systems while maintaining the current business process.

Before considering the hosting medium, we are assessing different options for software implementations. This includes web software that goes beyond the limitations of the current websites hosting platform, such as database restrictions. Authentication and authorization protocols will secure access to the sensitive information backing the IS. Database access will be utilized via a web panel or program designed for generating reports and entering in new data. Email forwarding will notify sales of any incoming form submissions as they are saved into the database.

To solve the limitations of the current web platform, an installation on current or new infrastructure is required. Current considerations for server software are httpd and MySQL, configured to protect sensitive information. We hope to accomplish this with local only access under a strict set of credentials. DBMS will be accessible for management, but not full administrative access; Except where applicable. This is to protect the integrity of the database's backend, while allowing for expansion and revision of the solution after implementation. All of which will be covered in training documentation for all use cases. Information received via form submission will be forwarded to the sales email after a correct entry has been recorded.

To summarize, our current requirements include:

- Web software that allows for scripting and database design.
- Database software that backs the web component.
- Panel or program to access/modify the data.
- Reporting, and generating invoices.
- Local access to sensitive data under strict rules.
- Documentation to provide training for any purpose.
- Email forwarding to send generalized information to sales@thebeardedox.ca.

Milestone 1 – Project Selection

Project Request (System Request)

PROJECT SPONSOR: Brandon Boorsma
BUSINESS NEED:
The Bearded Ox seeks to attract more customers to the *office* through a web tool. Furniture building in the browser will provide better detail to each request.
BUSINESS REQUIREMENTS:
Web tool to add to their current website, including multiple components. Form submission leading to database recording and email notification. Files, Reports, and Consultation documents safe, secure, and available.
- Size, Shape, and Dimensions of Product/Components.   - Base Types and Styles.   - Edging of Product.   - Wood Species.   3D Rendered Reference File.   - Custom Epoxy Options.   - Form submitted to sales@thebeardedox.ca / Database reference.
BUSINESS VALUE:
Providing more than picture reference to streamline the consultation process. A web tool of this nature would allow for the customer to envision exactly what they want. Taking this information into record and finalizing it as the process continues. Tracking quotes and price estimates on the backend for scaling.
SPECIAL ISSUES:
No quotes/money on site and must be accessible via their current website. Sales email requires update or notification. Three angles are saved from the tool. Any additional information can be entered into an "other information" section.

Feasibility

Technical – Can we build it? How? Why?

Yes. There are many pre-existing web and database software to satisfy the needs of the client. Web software "httpd" is currently a highly trending option and has modular "includes" pre-existing to work with. Database requirements involve field format and sanitization that pertain to entering/receiving form data and outputting it to a visual aid of a preferred medium. When the data is entered successfully, the web form receives a confirmation and forwards information to sales@thebeardedox.ca.

Authentication and network access type will regulate standards for privilege. Administrative actions will be under strict local access only. Managerial actions are limited off-site, and restricted on-site. Relative client information must be present and available for users upon proper authentication, such as status of the enquiry. Database shall keep record of pricing standards for trends of material costs. This establishes an accurate pricing range for the consultation. Records should be easily integrated into permanent storage after a customer has made a final order.

Developing the database will be our biggest task, as it will power the program, panel, and reporting of the web tool. Sanitization standards in the form submission will require tight and strict syntax formatting. Correct entries can be viewed in the web tool starting as a "received" status, with information about the customer's order. Managerial access strictly allows read only off-site, and limited permissions on-site. While on-site, administrative access grants the ability to manage the output formats. Backend access can be done on-site only and must be done through a specific terminal for advanced support.

Economical – Needs, Costs, and Implications

Client needs for this tool are to be satisfied by the number of potential and likely customers that will land successful sales after consultation. Currently the number of form submissions is almost twice that of the actual sales. With reference and a general idea of what you're going to get, with an option for budget information; We hope to close that gap completely and invite a larger audience while doing so. Actual costs for maintenance, requirements, and how this impacts the business will be minimal, if any.

Organizational – Business Needs, Training, and Usability

Documentation regarding the entire process shall serve towards training of various access levels for specific actions. Local access involves a terminal, equipped with the means to complete administrative actions. On-site access allows for generating reports based on modular field options read plainly to the program involved. Off-site is web panel access and must be limited to read only in most circumstances. Tooltip information will provide users with helpful information on the tool and its options. With these standards in place, plain to see, understand, and use; Gaps in submissions and sales should abolish if not decrease.

Summary – If We Build It, Will They Come?

Customer acquisition is the main "business need" here. Keeping the plain and simple in mind when developing the different forms of data delivery is important. Technically, we know how we can approach this. The feasibility here is strong. Economically, the impact should close the gap in their submissions to actual customers. All training required will be delivered in-line with the context of the action. Automating, improving, and simplifying the business process should do this effectively. Ultimately, we believe the feasibility is high for the success of this project.