

***ENGINEERING DESIGN PROJECT***

***DELIVERABLE H – PROTOTYPE III & CUSTOMER FEEDBACK***

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**1. Abstract**

This deliverable is focused on creating a third and final Prototype, based on the feedback that we received on our second Prototype. This is the third and final Prototyping Deliverable, aiming to improve our design to fit our clients’ needs, and to be a fully functioning solution to our clients’ needs ahead of design day and our Final In-Class Presentation.

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## ***2. Introduction***

This deliverable is the last one to be ahead of and before Design Day. It contains an outline and analysis of the feedback from our external clients (family and friends), our justification and reasoning for the choice of prototype that we chose to create, and an update to our Bill of Materials, after software purchases were made for us to work on our Prototype's rendering.

## ***2. Background on The Deliverable's Objectives***

The clients we sought out feedback from for the completion of this deliverable were external ones. They were our family and friends, who we surveyed, interviewed, and consulted to provide us with their personal feedback on our second prototype, which was an Analytical, Comprehensive Prototype. Our prompts to our clients were ones of whether they thought our overall design was optimal to meet our clients' needs and procure an implementable and feasible solution to our clients' problems, and what their thoughts were concerning the floor plan and organization that we had set up in our design of our clients building.

## ***3. Client Feedback Outline III***

The clients we sought out feedback from for the completion of this deliverable were external ones. They were our family and friends, who we surveyed, interviewed, and consulted to provide us with their personal feedback on our second prototype, which was an Analytical, Comprehensive Prototype. Our prompts to our clients were ones of whether they thought our overall design was optimal to meet our clients' needs and procure an implementable and feasible solution to our clients' problems, and what their thoughts were concerning the floor plan and organization that we had set up in our design of our clients building.

## ***4. Prototype II Testing Results Analysis***

The results from the testing we performed on our prototype were speculative; they were responses to the surveys, polls, consultations, and interviews our team performed and conducted of our external clients. They gave us their thoughts of and critiques on our second prototype, and how our Overall Design can be improved to provide the optimal Design Solution to our clients' Problem and Needs. The choice of using speculative feedback from external clients who did not necessarily have the background knowledge or expertise to methodologically critique our building's design for this Analytical, Comprehensive was appropriate, because speculative feedback on a focused sub-system or element of the building would not be translatable to any implementation of feedback to the Overall Design of the building.

Our external clients' feedback was generally positive with regards to their thoughts on our overall design. Of the 18 responses that we received from our clients, 83.3% reported that our design was a very well structured design, with 77.8% reporting that they reacted favourably to our floor plan design, both with regards to its layout and organization of the building's contents. This was a very good sign to our team that we were heading in the right direction, especially ahead of Design Day. Keeping in mind that our judges would be looking for a good design (considering that we only have three minutes to present them our design), this was appropriate feedback to receive from our clients, and was largely favourable.

We also asked that our clients make clear to us their critiques of the design, whether with regards to its overall concept, its floor plan organization and decisions that went into it, or any other critiques that they may have pertaining to our design of our clients' solution.

One client urged us to make the tables in the building bigger and more mobile. This was in reference to the needs that were outlined in Deliverable B (and later implemented in Deliverable C's Design Criteria creation) for the tables in the building to be mobile, for versatility of the building to whatever needs that our clients and customers would have for each space. This was a very good reminder that we should continue to refer to these two Deliverable's contents in order to keep our design in line with what our clients' needs are, that have been outlined to us in meetings and summarized in our initial Deliverables.

One of our clients commented that our building should reflect indigenous culture more evidently in its design. This was confirmation to us that we should indeed implement the colours of the medicine wheel that we had initially proposed to do to our clients (but never gave us feedback on whether we should have that in our design).

One client also commented that we should leave (or make) more room for the outdoor Garden Center & Green Room in the center of the building. This confirmed that the area was a very beneficial part of the building design, and confirmed that our attention should be focused on improving its presence (in this case, its size in relation to the other areas and elements of the building). Increasing the size of the building would be an inefficient use of budget (especially considering that this is not a functional requirement for the building), so our decision was to reduce the size of the interior of the building, in order to increase the size of the Garden Center & Green Room in the middle of the building.

One client criticized the need for the three meeting rooms that we had included in our second Prototype. They suggested that we remove one meeting room. This was the solution to the problem that we had of how to increase the size of the Garden Center & Green Room; to decrease the size of the interior of the building, we would remove one of the meeting rooms (since 2 would still be within the constraint that there should be 1 meeting room in the design).

One client commented favourably, saying that the design was very well structured, having a good amount of modern style to its floor plan and organization.

One client commented that the design wasted space, due to a lack of organization. They suggested that we should try a cube orientation for the building's design, rather than a circular one, and they commented that this orientation would optimize the space used and organization of the rooms, sub-systems, and areas in the building. Our decision concerning this critique was to listen to our actual clients' feedback concerning their positive reactions to our circular design and layout of the sub-systems in the building.

### ***5. Justification & Reasoning for Prototype III***

The reason for creating a Comprehensive & Analytical Prototype for this Deliverable seem evident. Firstly, there is a requirement for our Prototype to be an Analytical one for Design Day, in order for us to show our Judges the intricate parts of our design and Final Prototypic Layout of the building. Secondly, the final Prototype that we will submit for our Final Project Submission as a solution to our clients' Problem will need to be a comprehensive one, showing all of the building's sub-systems and elements interacting together as one single design.

### ***6. Update to our Prototyping Bill of Materials***

The update to our Prototyping Bill of Materials was our purchase of Building Design Modelling Rendering & Potential Implementation Software.

### ***7. Conclusion***

Our third prototype was created with the improvements made from the feedback received from our external clients. It is the prototype that we have decided to present to our judges on Design Day, and the Prototype that we will submit, as a team, for our Final Submission for this Design Project, that optimally and appropriately offers a solution to our clients' Problem.

### ***8. Wrike Snapshot***

Our Wrike Snapshot after completion of this Deliverable is available through this link:

<https://www.wrike.com/frontend/ganttchart/index.html?snapshotId=6bk4huM7jwvfagAiL1xsBnMVTHiaNgrH%7CIE2DSNZVHA2DELSTGIYA>.