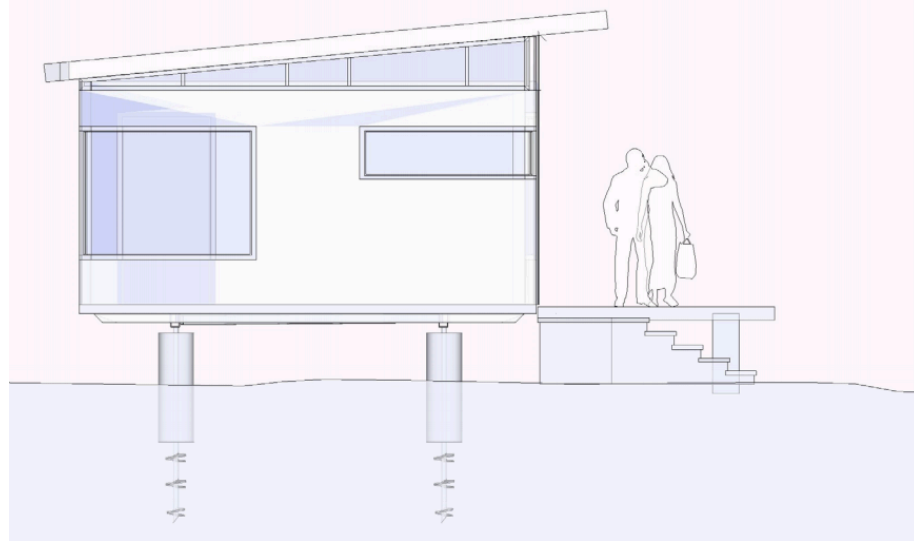


- The purpose of this report
 - This report is to evaluate the biomimetic framing and anchoring system
- The name and a short description of the design
 - “Manufactured homes are typically single family dwellings fully constructed off site, mounted on a wheeled steel chassis and delivered to its final destination. Clayton homes is the largest manufacturer of homes, started in 1966 is now part of Berkshire Hathaway and encompasses 35 manufacturing plants and 1300 retailers nationwide. The upper framing – usually 2x4 wood studs and small, pre-engineered wood trusses or joists constitute the bulk of the wood used for this type of dwelling. A lower wheeled steel chassis composed of large structural “I” beams, outriggers and square HSS tubes make for the majority of the structural steel needed.
 - The purpose of the design: To develop an improved safer design in regards of framing and anchoring systems and ultimately implement this into Clayton homes building process.
 - The aim or goals of the design: With this we aim to produce manufactured homes able to withstand high wind weather phenomena, expand on the Clayton Homes brand, improve customer appeal and ultimately expand sales.
- The one-page illustration of your design (from last week's report)



- Descriptions of how the design does and does not reflect each Life's Principles

Does the design adapt and evolve?

Is the design locally attuned and responsive?

- *Does it leverage feedback loops*

- Some components of the design respond to feedback: for instance, the drill-like anchors respond to pressure. Pushing on the anchor will compress it, making it sink into the soil, but pulling on it causes it to spread out, increasing the friction on the soil, and securing the anchor in the soil.
- *When it uses materials, are the materials locally available and abundant?*
 - It is not clear what materials will be used in the construction of this home.
- *Recommendations:*
 - When it comes to materials selection, simply ensure that the selected materials are available abundantly and locally, as this could affect the design of the home.

Does the design integrate cyclical processes?

- *Are processes cyclical?*
 - It is not clear if the processes are cyclical, though the house has been designed so that it can be moved. Because of this, the placement of the house is not permanent, and it can be moved to a new location without significant damage to the surrounding area.
- *Does it integrate local feedback loops?*
 - The house has been designed to survive considerable environmental conditions, but it is not clear if any of the design features respond or integrate local feedback loops.
- *Recommendations:*
 - Perhaps Victor could include a feature that would allow for the house to *increase* structural integrity under duress: for instance, an upper framing system that compresses with wind to reduce surface area and to strengthen structural integrity.

Is the design resilient?

- *Can it withstand disturbance while maintaining function?*
 - This is one of life's principles that this design addresses well: this structure is designed in a way to handle disturbance. From its exoskeleton-like exterior to its branched load-bearing system, this structure should be able to withstand considerable disturbance.
- *Does it heal after disturbance?*
 - This is unclear. It appears that the structure can *survive* a disturbance, but it does not appear that it can heal if it is damaged.
- *Are there opportunities for cross-pollination and mutation?*
 - The houses can be removed from their location and transported, which means that on a larger scale, the housing systems can be mutated and cross-pollinated as different houses can move to different housing systems.
- *Recommendations*

- Perhaps the houses could include some modular expansions or features that could be shared or swapped among other similar houses.

Does the design create conditions conducive to life?

Does the design optimize rather than maximize?

- *Does it integrate multiple functions?*
 - Yes. The design of this home allows for high structural integrity as well as mobility.
- *Does it recycle materials? Is it recyclable?*
 - Possibly, but this aspect does not appear to be addressed.
- *Does it perform functions with minimal material and energy?*
 - Yes. The house has been designed so that it can perform some functions (survive high impact environmental forces) with minimal effort, as the house has been designed according to form, not according to material.
- *Recommendations:*
 - Since the functions can be accomplished with form, not material, it provides opportunity to select a material that is recyclable.

Does the design use benign manufacturing?

- *Is it made from life-friendly materials?*
 - This is not addressed in the report
- *Is chemistry done in water?*
 - Again, this aspect is not addressed in the report
- *Are processes done at ambient/local temperatures and pressures?*
 - This is unknown.
- *Recommendations:*
 - Similar to the previous recommendation, since the design of this home is so form-intensive, it allows for greater flexibility in the selection of what materials will be used. Perhaps in the next stage of development, a life-friendly option for building materials can be identified.

Does the design leverage its interdependence in the system?

- *Does it foster symbiotic, cooperative, community-based relationships?*
 - Possibly! Since the home is mobile, it's possible that these homes are clustered together with other, similar homes (perhaps in disaster relief situations) that would foster relationships among the residents.
- *Does it foster emergent relationships?*
 - Again, since the home is mobile, the overall housing system can adjust and change with the needs of the users, even if the house itself changes nothing but location.
- *Recommendations:*

- The next level of development could include a system of electrical and plumbing connections that allow for easy integration to a pre-existing system, or to integrate each of the homes to each other.

Recommendation Summary:

Victor did a great job of ensuring that these homes could survive harsh conditions. Since many of the strategies used are form-intensive, this allows him the freedom to select life-friendly materials for the construction of the home. Selecting life-friendly materials for the home would go far in helping this design address all of Life's Principles.