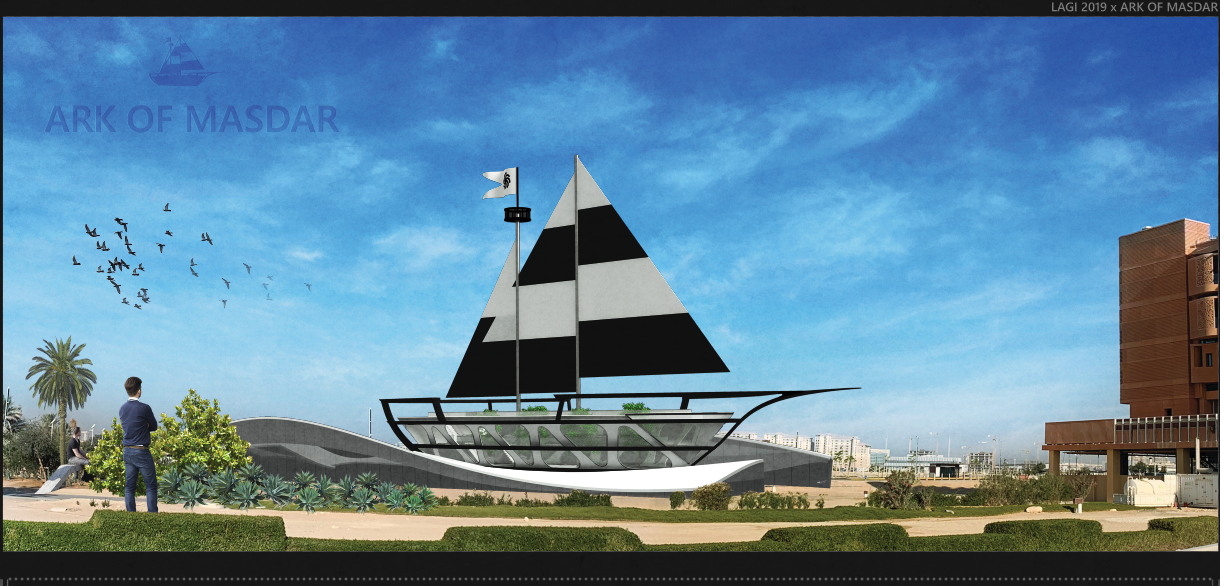
**­**

**LAGI 2019**

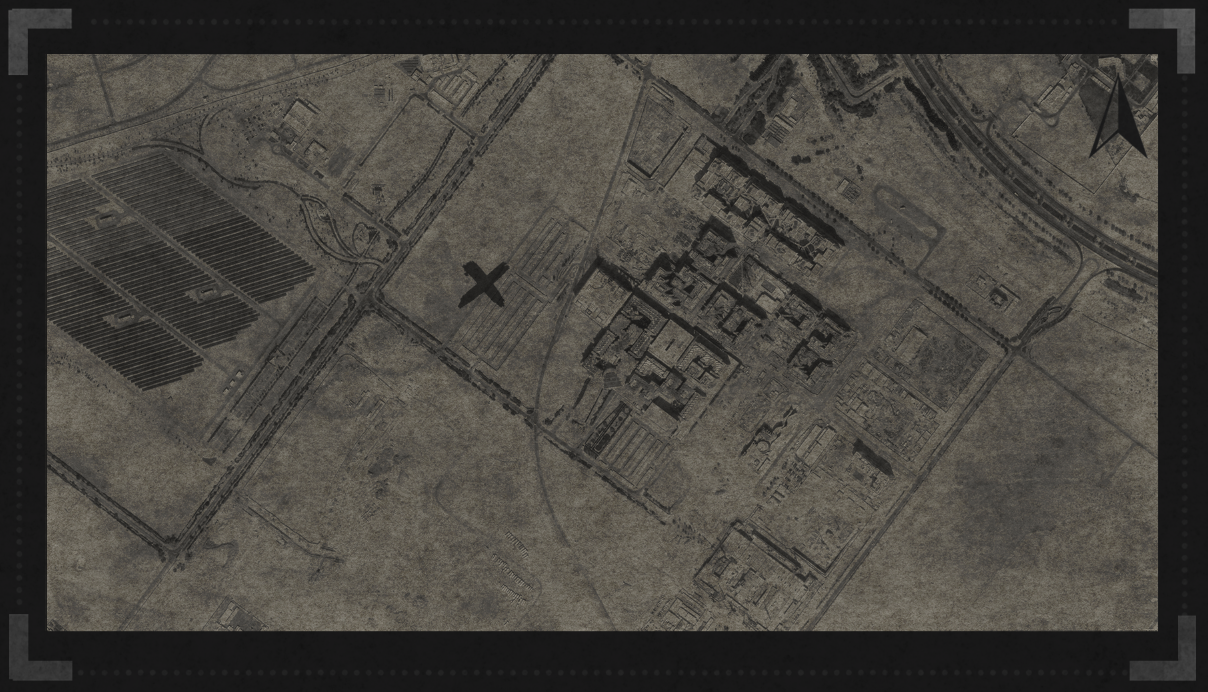
**Ark of Masdar**

Design Proposal

Ark of Masdar proposes to incorporate sport and art into electricity generation. It will provide sheltered parking space for 500 cars, offer drinking water for 2500 residents and keep 5000 healthy.

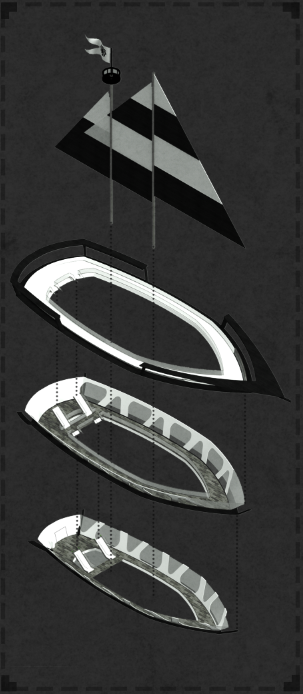
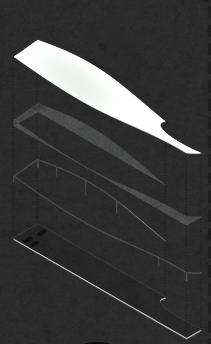
The proposed design is capable of providing 153.3 MWh of electricity annually. The installation cost comes close to the limit at $19 per watt, however, this can be easily justified as the Ark of Masdar will provide significant health and social benefits in return.

**Site**



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**Composition**



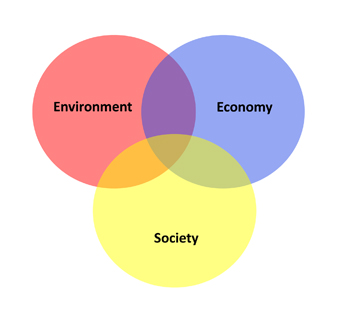


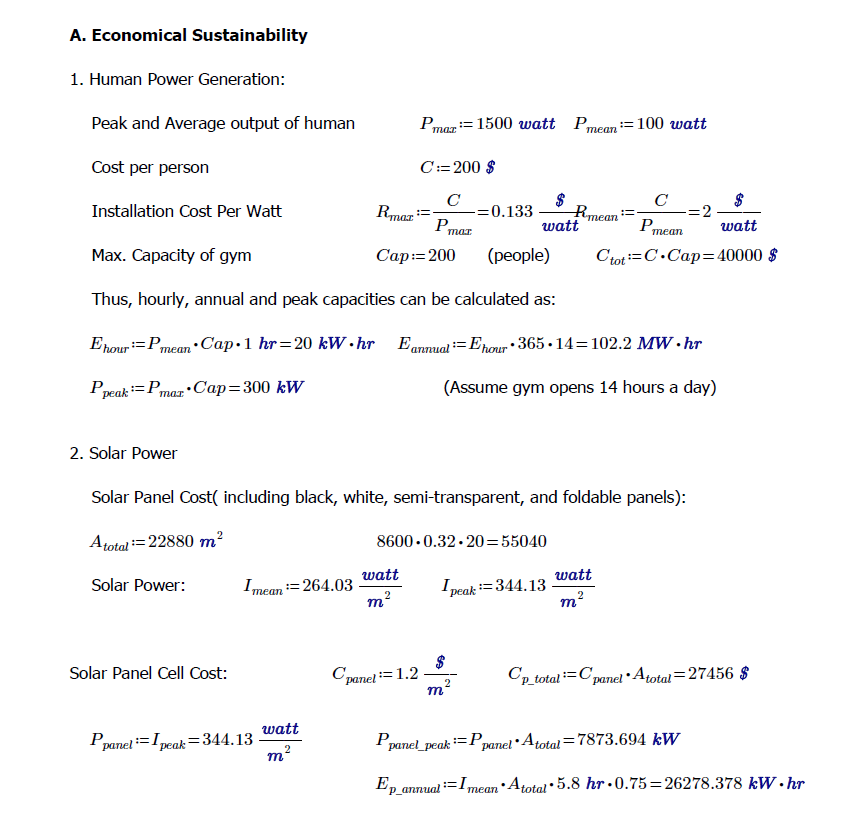
**Side View**

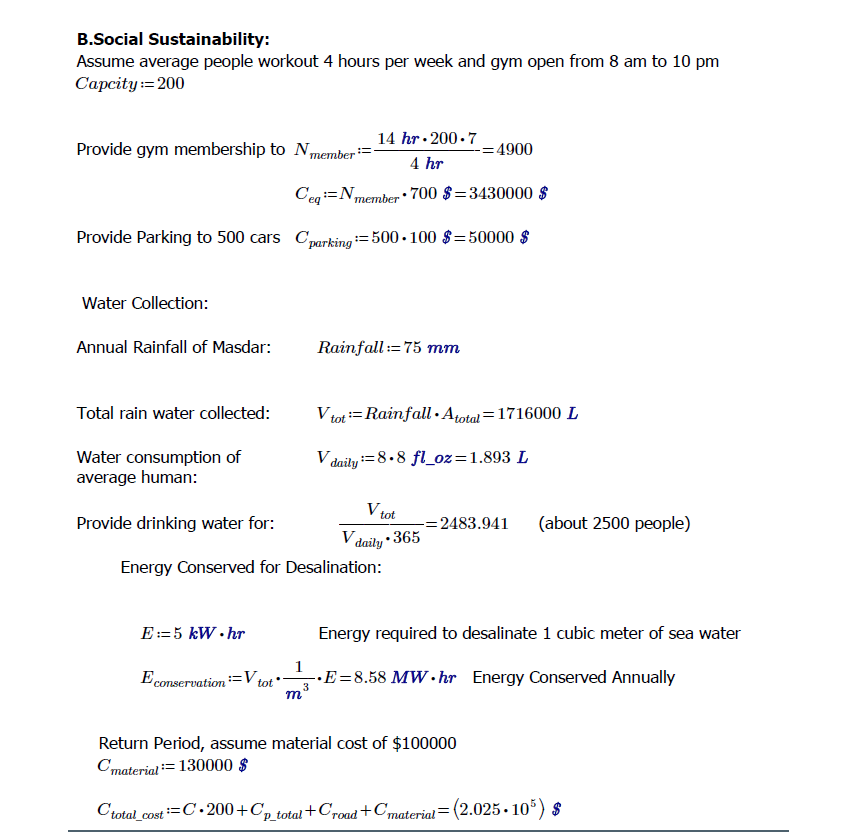
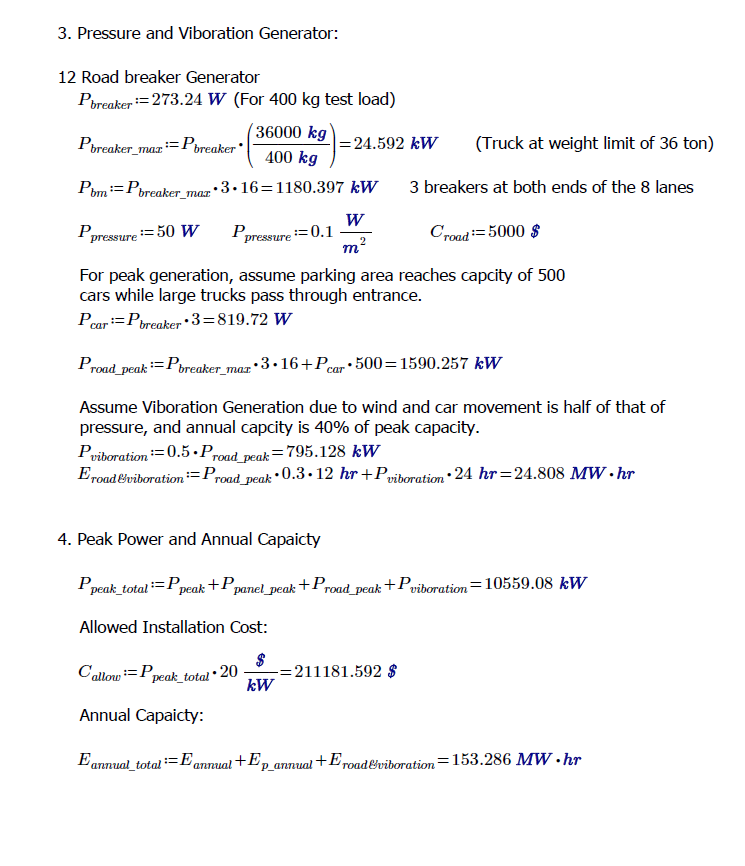
**Three Pillar of Sustainability**

Environment, Economy & Society

Enivroment, economy, and society form the thirr pillars of sustainability development, and the prosed design can thus break down into three sections accordingly. More details will be covered in the calculation section.



**Calculations**



**C. Environment Assessment Statement**

The Ark of Masdar is environmentally friendly due to the following reasons:

* Reducing noise level by replacing wind turbine with vibration generator
* Reduce concrete by 30% using composite floor slab.
* Use recycled aluminium for frames.
* Passive cooling lower carbon footprint

References in Addition to Competition Package

<https://www.researchgate.net/publication/264848061_Wind_Data_Collection_and_Analyses_at_Masdar_City_for_Wind_Turbine_Assessment>

<https://www.scad.ae/Release%20Documents/Energy%20and%20Water%20-%20Cover%20-%20EN-v2.pdf>

<https://www.mesia.com/wp-content/uploads/2017/09/Solar-for-Students.pdf>

<https://scholar.colorado.edu/cven_gradetds/396/>

<https://www.researchgate.net/publication/314213735_Speed_Breaker_Power_Generator>

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