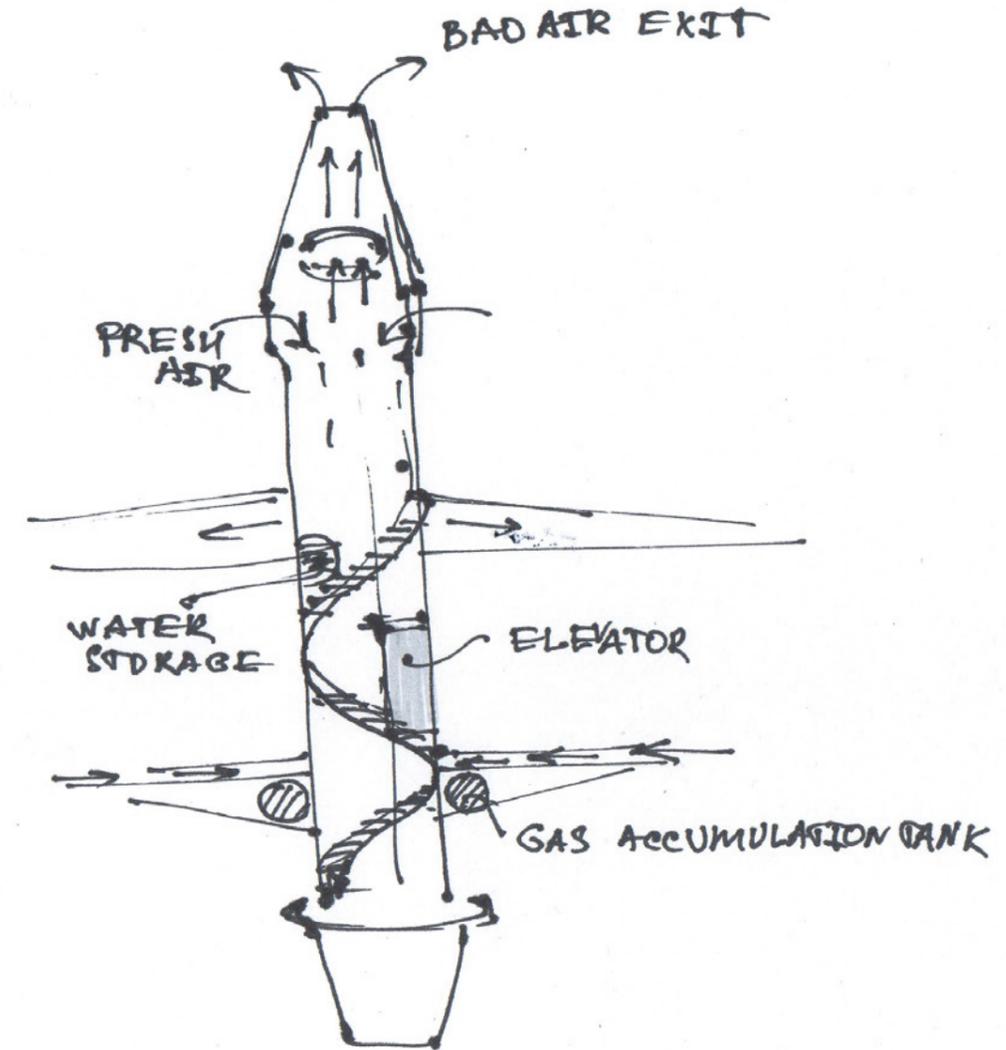
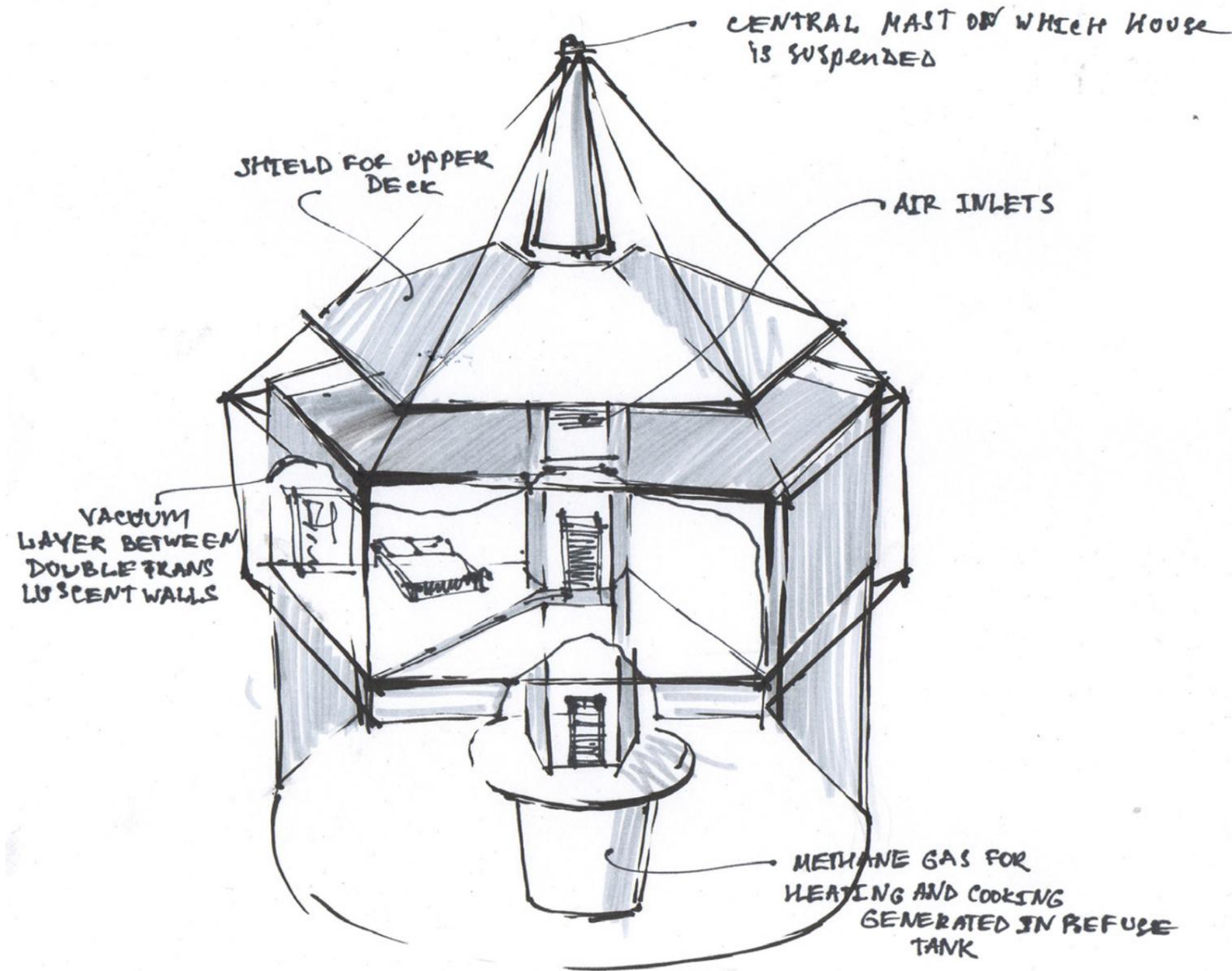


Buckminster Fuller/ The Dymaxion House

The word "Dymaxion," which combines the words dynamic, maximum and tension, was coined (among many others) by Fuller himself. In 1920 Fuller wished to build a sustainable autonomous single family dwelling, the living machine of the future. Although never built, the Dymaxion's design displayed forward-thinking and influential innovations in prefabrication and sustainability. Not only would the house have been exemplary in its self-sufficiency, but it also could have been mass-produced, flat-packaged and shipped throughout the world.



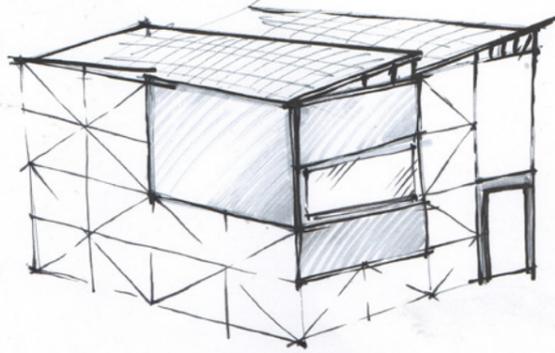
Buckminster Fuller's "more with less"

sustainability
prefabrication
flexibility

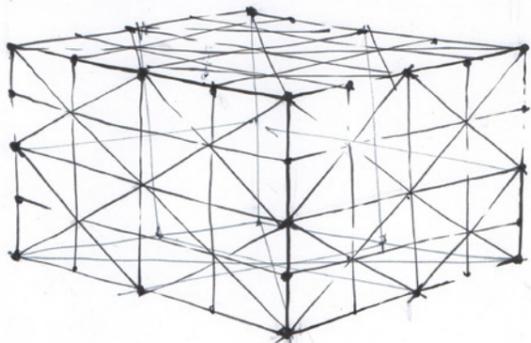
The 100 sqm hexagonal house was an earthquake and storm resistant structure, supported by a central pole from which cables would be suspended, allowing the outer walls to be non-bearing. By grouping all permanent utilities in the central pole, and letting the rest of the interior space remain modular, Fuller created a flexible plan that would allow tenants to transform the space according to their needs. The design also shows wind turbines on the roof and an extensive system of cisterns to collect and recycle water. For the bathing unit Fuller patented the "Dymaxion Bathroom" - a shower that required only one cup of hot water, and a toilet that consumed no water at all.

Modular house

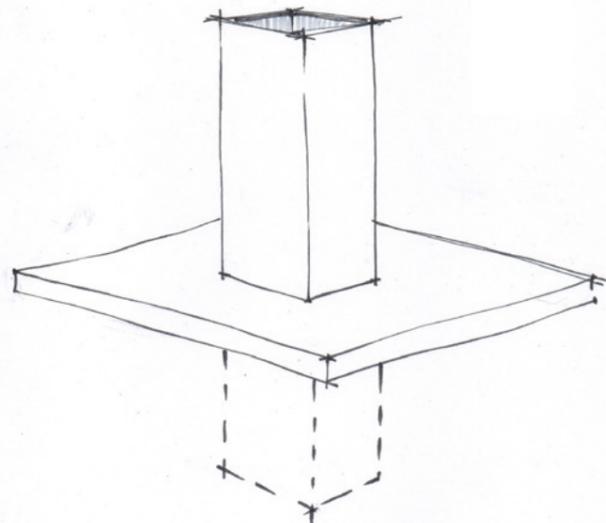
The idea was to perform Fuller's main principles in design. As in his Dymaxion house all servant facilities such as ventilation, canalization, water supply were put in central core that plays the role of main load' bearing element. That gives an opportunity to make plan flexible. Walls are made as a system of regular metal tubes that are beared by central pole and concrete basement.



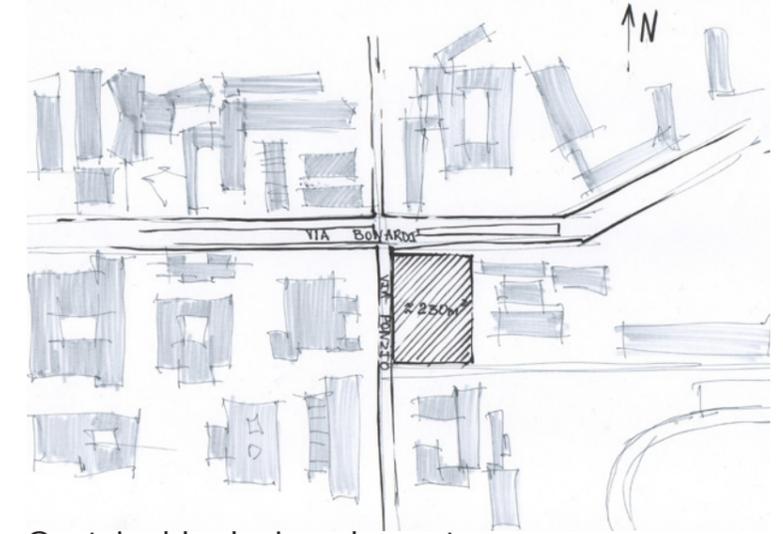
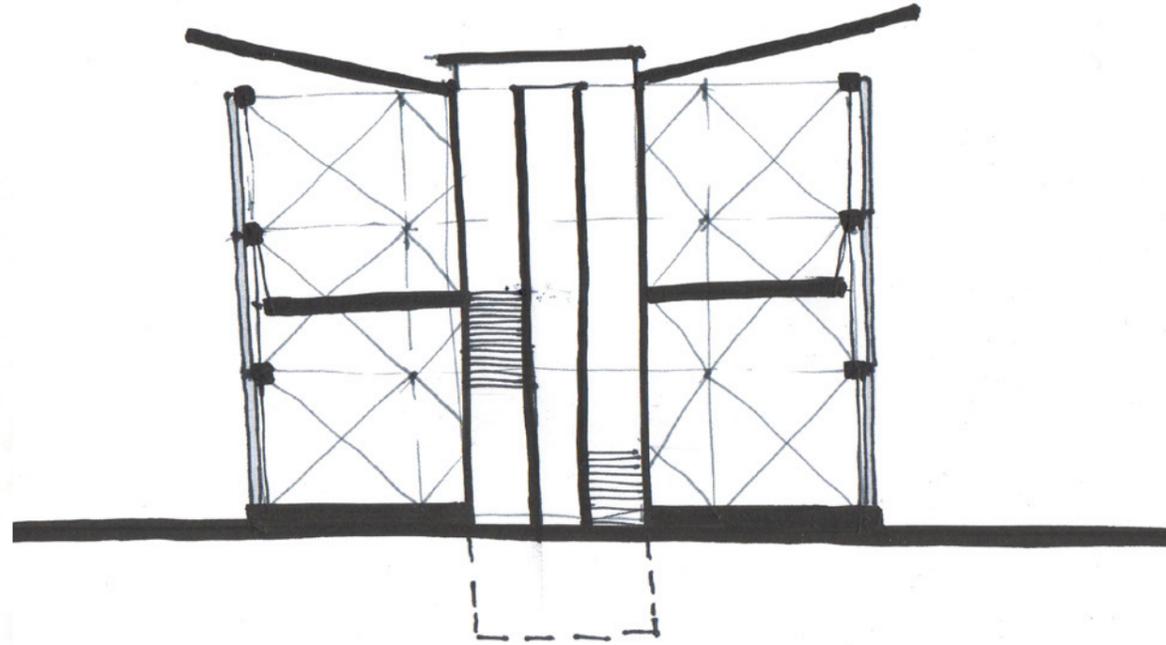
Panels of various sizes and materials connected to metal structure.



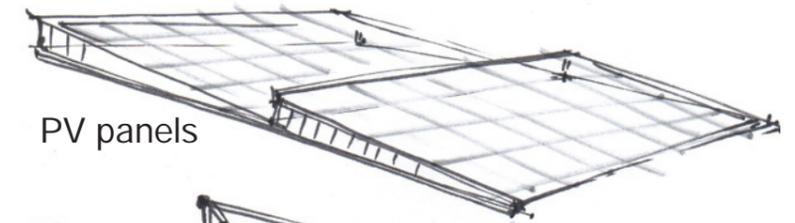
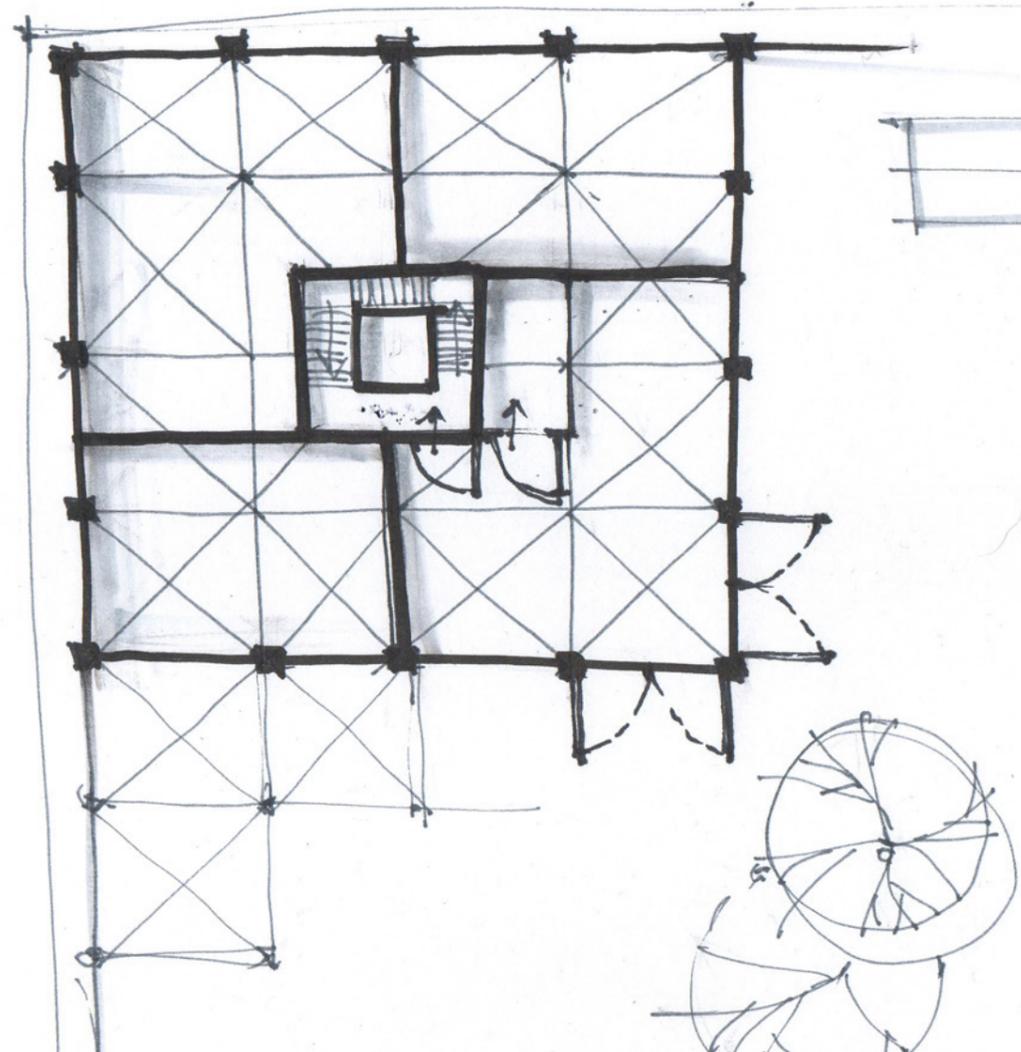
Self-bearing metal structure supported by concrete basement and staircase core.



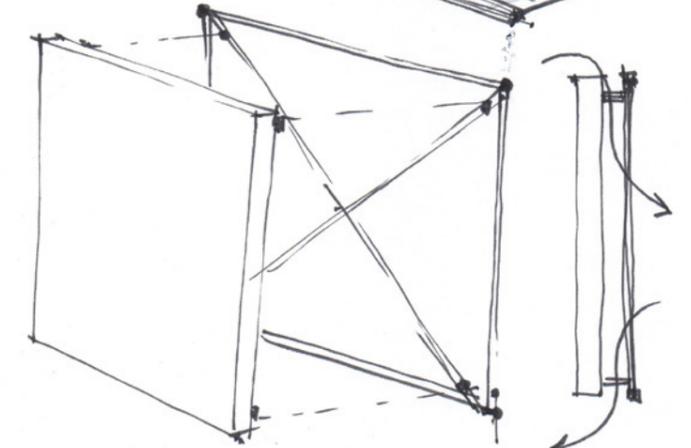
Concrete basement and central pole that contains utilities and staircase.



Sustainable design elements



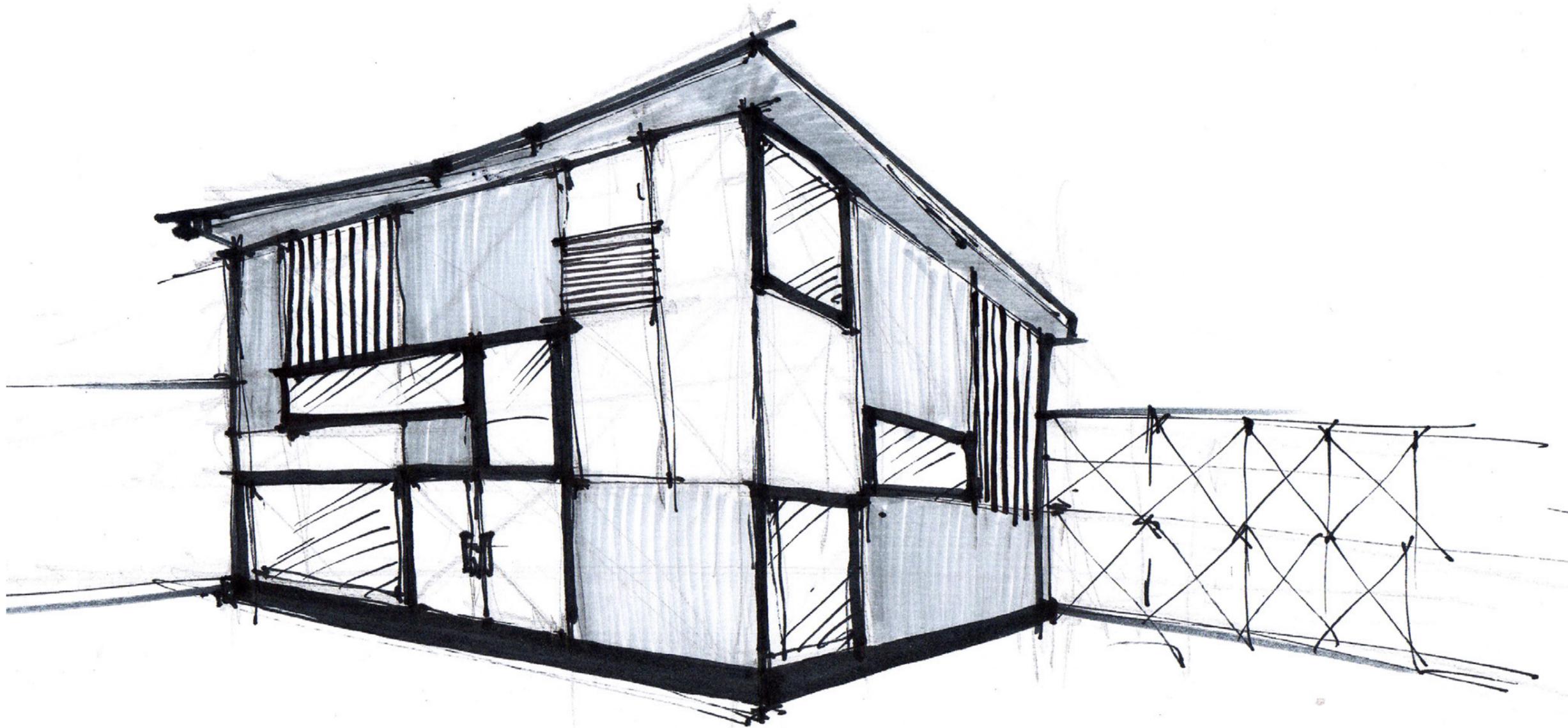
PV panels



Air gap between structure and facade panels allowing natural ventilation



Rain water collection and storage



Building elements

Precast concrete basement

Precast concrete core with staircase

Precast concrete roof

Metal profiles of two different length and two different types of connections

Panels of variable materials and sizes

