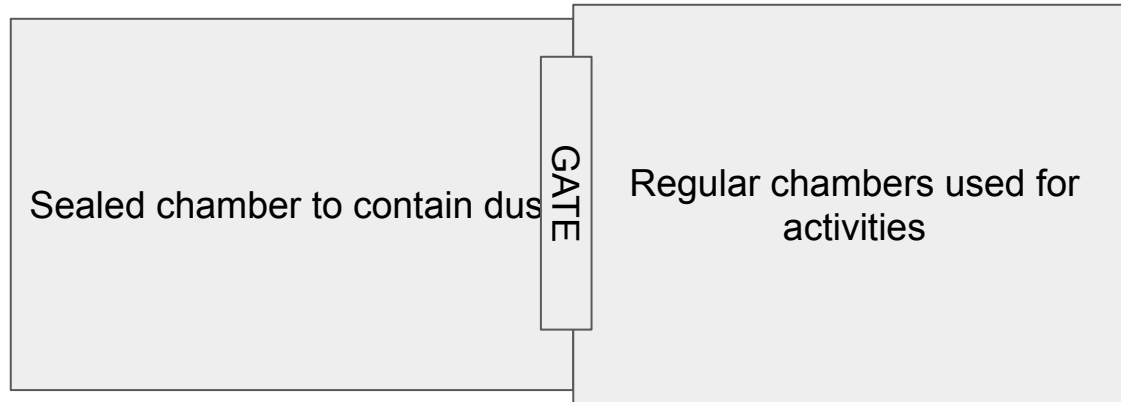


The dust sensor in space should detect the types of dust particles are found in a lunar environment. With the model being developed, the dust sensor will be able to detect particles found on Earth, but maybe not lunar dust particles. However, the same concept still applies.

In order to mitigate dust gathering in lunar modules, a separate chamber would have to be developed from the chambers regularly used by astronauts.



In order to counteract the damage that can be generated due to collisions between dust particles in space, which tend to be sharper, some kind of vacuum mechanism would have to be activated in order to remove the dust particles from suits and the chamber. However, the material of the vacuum itself would have to be more resilient and durable to the dust so that the vacuum is not damaged.

The dust sensor itself should have a upper limit of dust particles that can be in the air before the quantity becomes detrimental to human health, the technology, and the environment.

Moreover, greater security can be gained if an alarm activates once the upper limit of dust is reached.

Dust
collection
bag

LAYOUT OF DUST COLLECTION CHAMBER

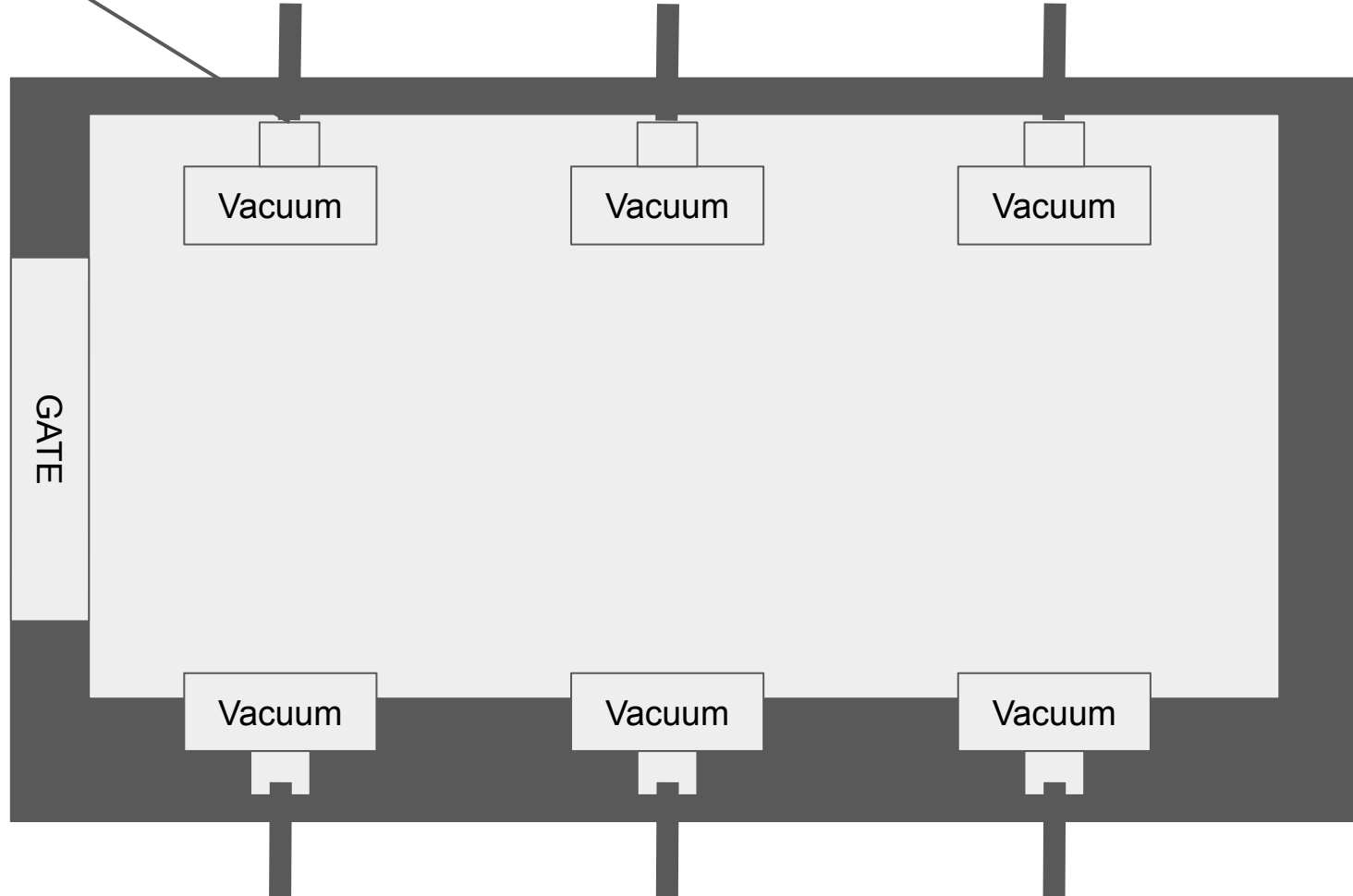
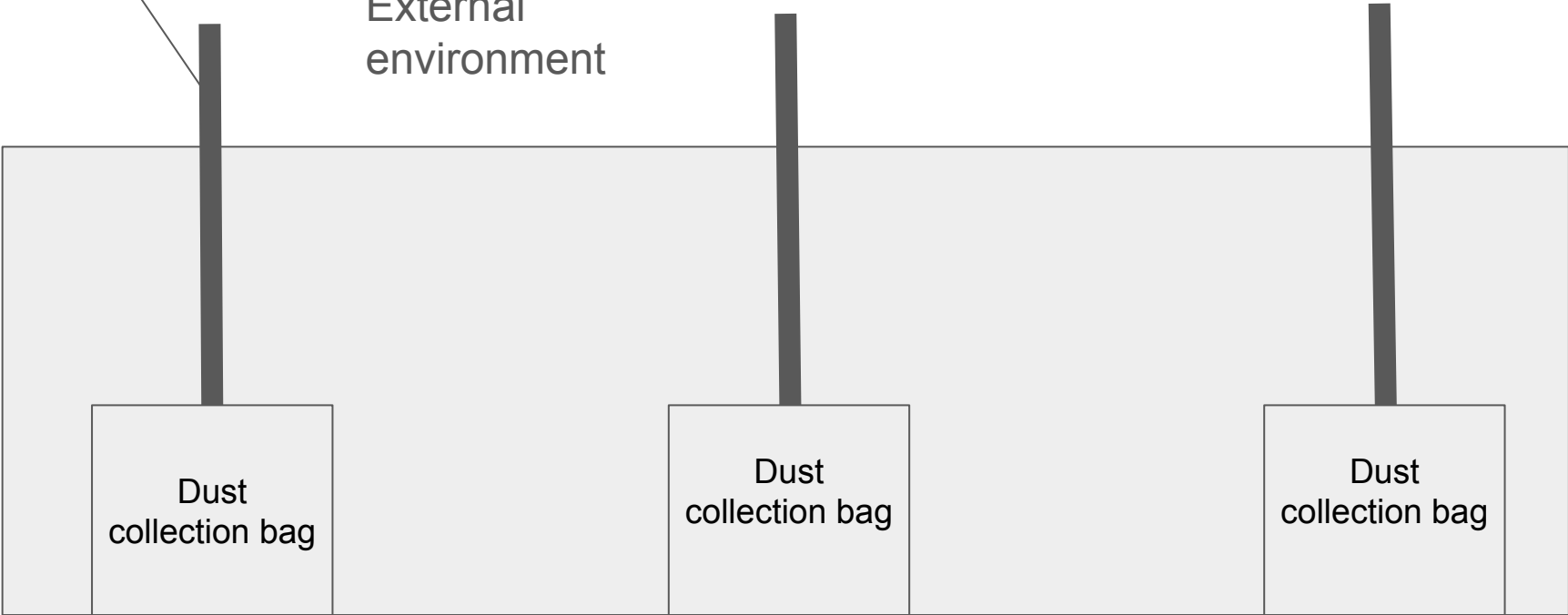


DIAGRAM OF PIPING WITH THE DUST BAG

Pipe leads
dust out of
chamber

External
environment



With these models, there is a lot of simplification and the hardware running inside will take up space on its own. Due to this, the walls may end up becoming thick. In order to prevent dust from entering the chamber through the pipes that force dust out of the chamber, the pipes either have to continuously blowing air outwards, or the pipes should have a closing mechanism like a lid.

