GLOBAL ASTEROID PROTECTION SOCIETY
15736-100 AVE NW
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global asteroid protection society

Phase I : *Earth Based Infrastructure*

Land

We need to obtain land which is distant from human life, ideally next to an ocean in a country which is friendly towards the goals of the Global Asteroid Protection Society. The need to be remote is due to safety factors, as well as the security concerns.

Power Production Faculties

We need to produce enough power to meet the needs of all the faculties as well as the launch system. This can come from environmentally friendly sources or a range of other power systems.

Housing Faculties

We need to have structures which will allow for the comfortable existence of the staff which work at the Global Asteroid Protection Society.

Office Faculties

We need to have office space which allows for the successful interpolation between the different aspects of the Global Asteroid Protection Society. This will require a large number of networked computer systems.

Computer Aided Drafting

We will need various CAD development software packages to produce quality models of various kinds, which will allow us to manufacture a vast majority of components for additional phases.

Data Centre (storage and processing)

We will need to be able to store and process a massive volume of data. The estimates are in the kevabyte range. We will not be able to initially be able to meet these requirements, but over time we will eventually build up to this level.

A kevabyte is 10 to the 64th; or 1 with 64 zeros

Communications Arrays

The ability to communicate with our probes will be vital, using a range of communication equipment we will improve our ability to communicate over increasing longer distances with larger bandwidths. We will initially start with radio communications and build up from there.

Rapid Prototyping

Using 1950-present age rapid prototyping it is possible to manufacture every component which would be necessary. The only input is the stock material. With automatic systems we can limit or completely remove human interactions with the production, thus reduce/eliminate biological contamination

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Automatic Assembly

Using robotics and other automation systems this can be completed quickly and without human aid. This will be done in a clean-room quality to limit biological contamination.

Automatic Warehousing

Using RFID tagging and tracking, the automatic warehousing of manufactured components can take place. By limiting, if not out-right avoiding human interactions this can reduce biological contamination.

Automatic Staging Area

The staging area is the area in which all components are assembled into one-single unit. Using robotics and other automation systems this can be completed quickly and without human aid. This will be done in a clean-room quality to limit biological contamination.

Automatic Deployment Area

Using automatic systems, it is possible to move a launch ready vehicle into the deployment area (ie. The Maglev Track); This will be done in clean-room quality environments to limit biological contamination.

Magnetic levitation (MagLev) Launch System

A maglev launch-assist system would electromagnetically drive a space vehicle along a track. The magnetically levitated spacecraft would be accelerated at speeds up to 1200km/hr and then shift to ion engines(or other electric motor systems) to propel the vehicle into space.

"Maglev technologies could dramatically reduce the cost of getting to space. Much of the expense of conventional rocket launches is traced to the weight of propellant. Since maglev-assisted vehicles use electricity—an off-board energy source, the spacecraft's weight at liftoff could be about 20 percent less than a typical rocket, resulting in significant cost savings. Each launch using a full-scale maglev track would consume only about $75 worth of electricity in today's market. Electricity is both inexpensive and environmentally safe." (Source: www.msfc.nasa.gov/NEWSROOM/astptechbriefs/Maglev.pdf)