

NSS ENVISIONED MILESTONES ON THE ROADMAP TO HUMAN SETTLEMENT OF SPACE

Based on what we know and can see now, the following are the major milestones that will be passed on the Road to Human Settlement Beyond the Earth.

Commercial Launch Purchase

Low launch costs will accompany an adequate launch market size with efficient vehicles with turnaround times measured in days, rather than weeks.

Legal Protection of Property Rights

Will be enacted to provide prospective off-earth settlers with the security to make take the risks.

Land Grants or other Economic Incentives

Will be provided to encourage private investment on off-earth settlements.

Technology for Self-Sufficiency

People will leave Earth with the technology and tools needed to settle, survive and prosper.

The milestones above will be passed enroute to the settlement of all destinations, the Moon, Mars, asteroids, O'Neill Habitats, and eventually the stars. Once these milestones are passed, the Roadmap will diverge somewhat based on the destination, with the following major milestones.

To the Moon:

Robotic Confirmation of Ice

Robots will determine if ice (water) is present in adequate quantity.

Research Facility

Will be established to research human habitation and conduct lunar investigations. If appropriate, development, testing, equipment checkout and training for Mars mission may also be performed here.

Government/industry Base

The research facility will begin as a government base and evolve to an industry base with the beginning of commercial functions performed by the first longer-term residents.

Moon Settlement

Settlement will grow with the base as the commercial center.

To Mars:

Mission Goal for Settlement

Exploration will accelerate with the clear purpose of eventual settlement. “Flags and Footprints” will not be the objective.

Robotic Exploration

Will precede human explorers.

Research Facility

Development, testing, equipment checkout and training for Mars mission will likely be performed close to home, in Earth orbit or on the Moon. Effects of long space mission will be studied close to home before sending humans such a great distance.

Human Explorers to Mars

Human explorers will follow robots to Mars either after field-testing on the Moon, in low Earth orbit, or directly from Earth. A base will be established.

Mars Settlement

Settlers will follow the explorers.

To Asteroids:

Robotic Exploration

Robots will identify the asteroids for settlement and development.

Human Explorers

Will follow, and confirm robotic information.

Asteroid Settlement

Settlers will follow to those asteroids offering economic opportunity.

To O’Neill Habs:

Once settlers can leave the planet these “cities in space” will be built.

Ad Astra:

New Physics Propulsion

Will be developed to carry humans to the stars.

