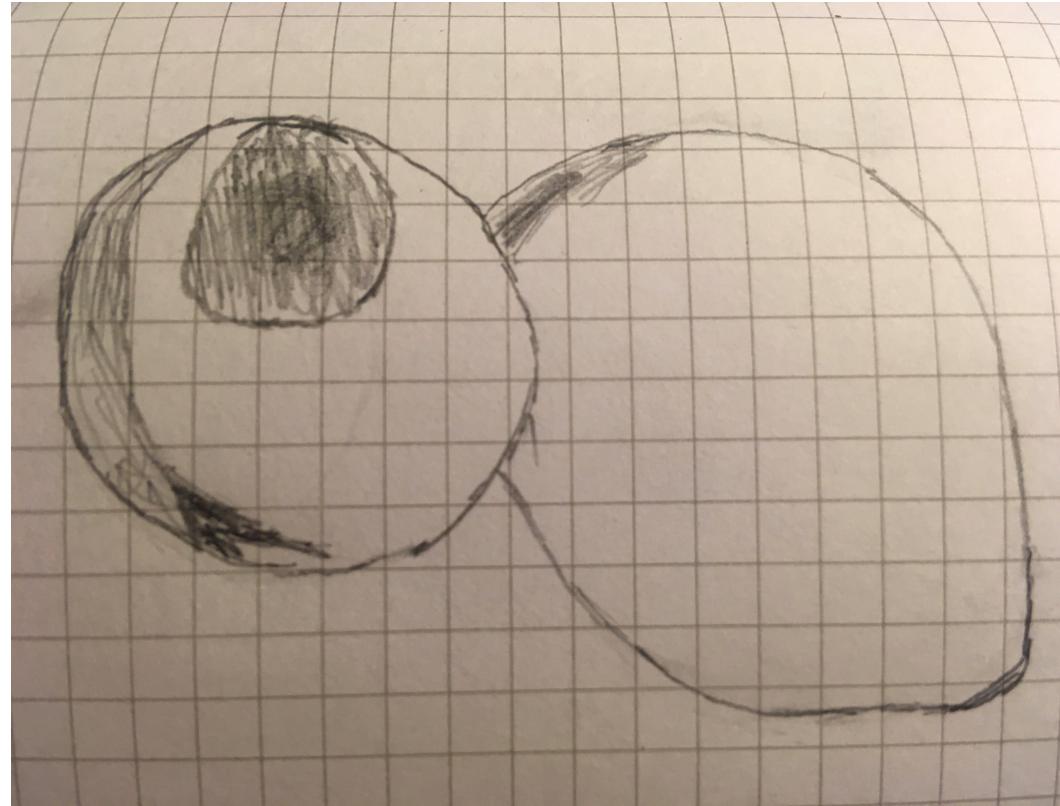


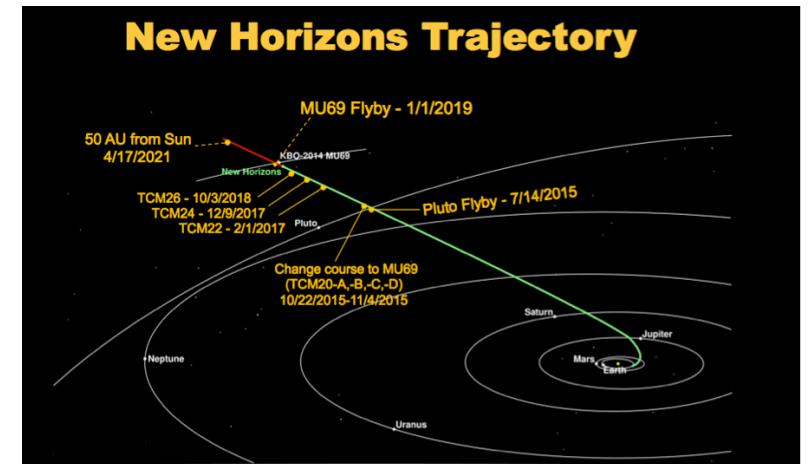
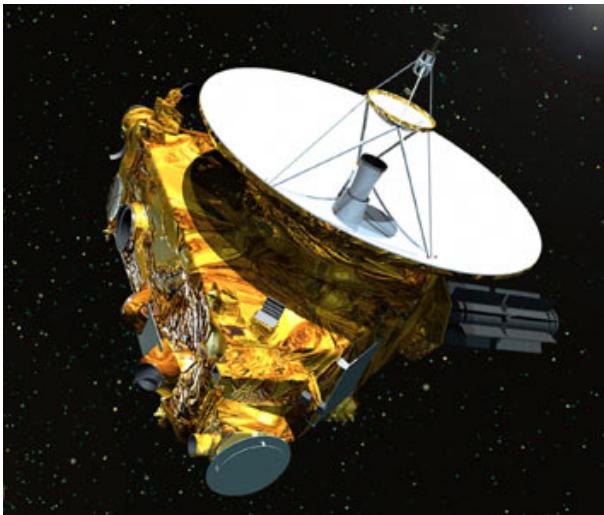
Challenge: The Trans-Neptunian Spaceway

- Like the Trans-Siberian Railroad linked remote parts of Asia to the West, the Trans-Neptunian Spaceway (TNS) takes tourists and entrepreneurs to the newly accessible region of our solar system beyond Neptune. Your challenge is to develop marketing materials and/or tools for the Trans Neptunian Spaceway!



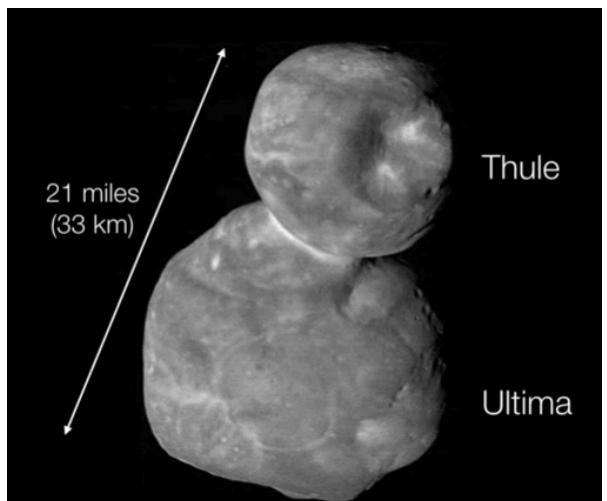
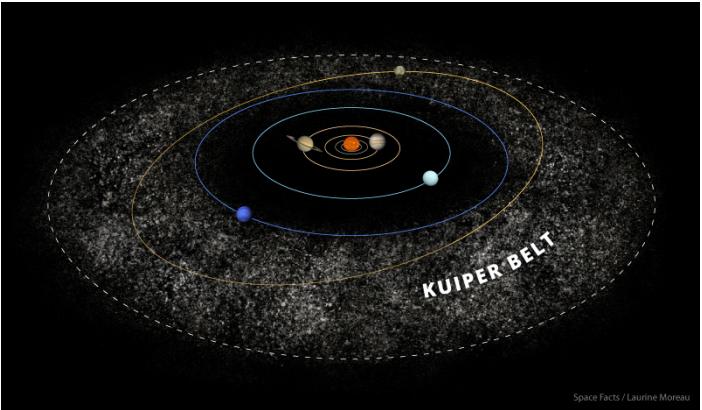
Ultima Thule Transportation
Services (UTTS) L.L.C
Yingquan Li

It All Started with the New Horizons Mission



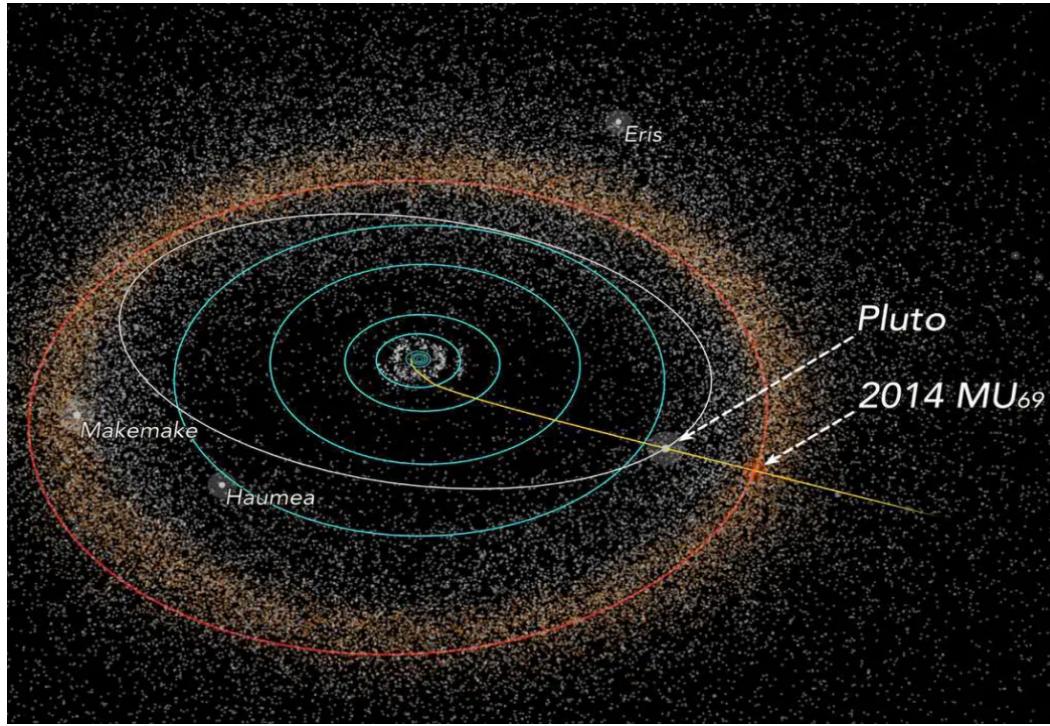
Interplanetary mission that send a spacecraft for a flyby of Pluto. Launched in 2006 and flew by Pluto in 2015.

Kuiper Belt Object: (486958) 2014 MU69 Ultima Thule

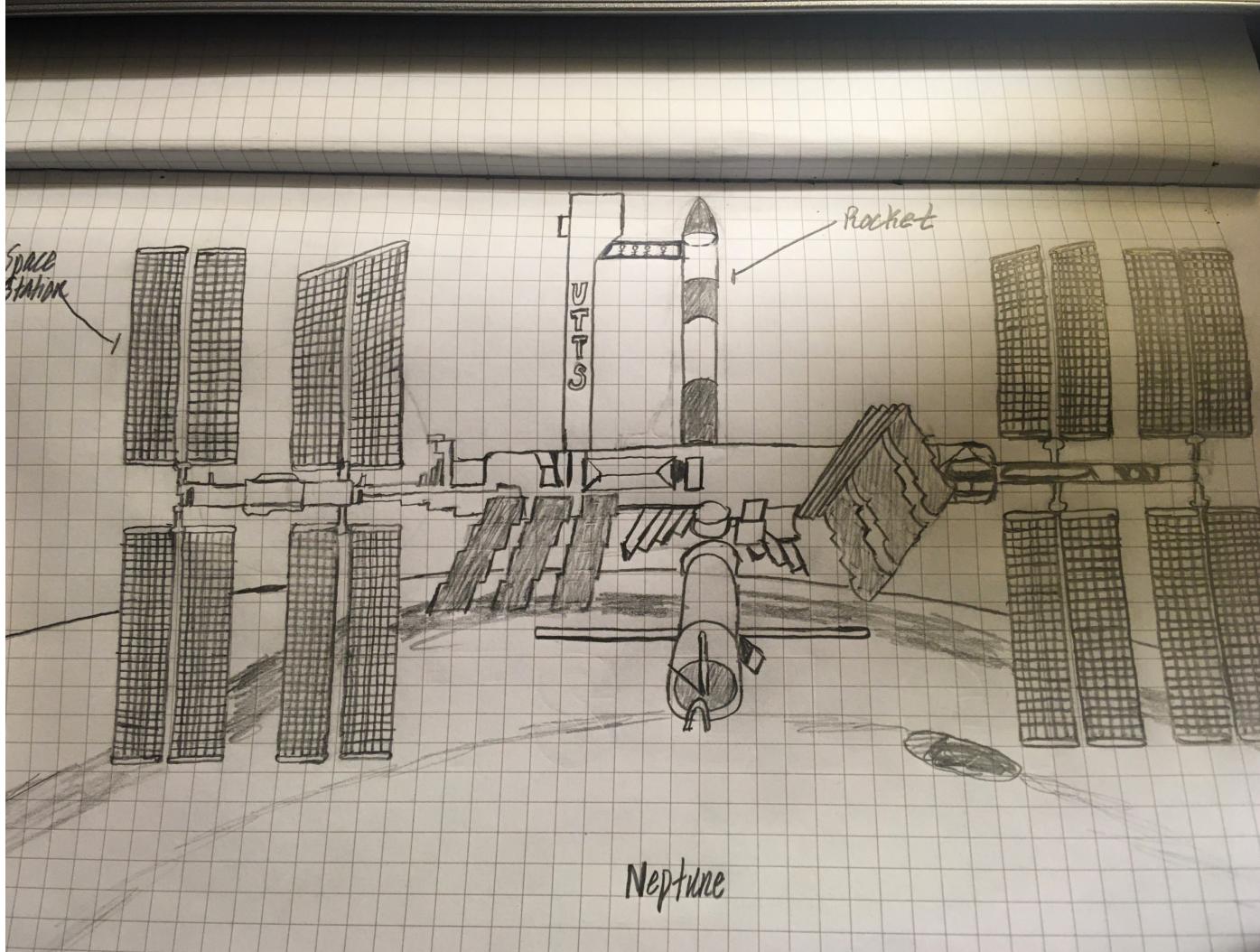


- New Horizon made a flyby of Ultima Thule on January 1st, 2019; Ultima Thule: small, fringed Kuiper belt object
- “contact binary” composed of two lobes, Ultima and Thule
- Was originally discovered in 2014; was selected over two other objects for a flyby by *New Horizon*

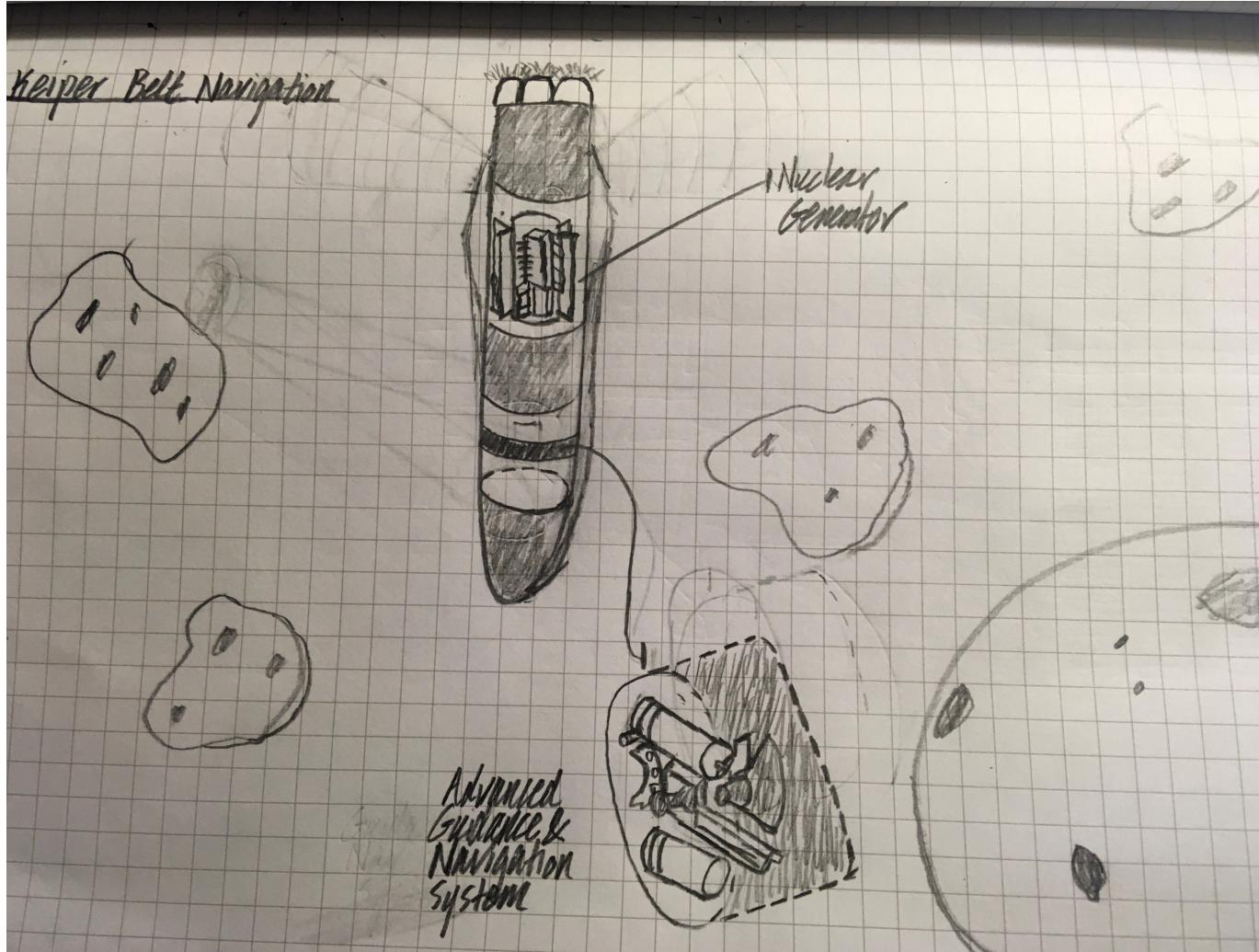
Question: How can we send people to Ultima Thule?



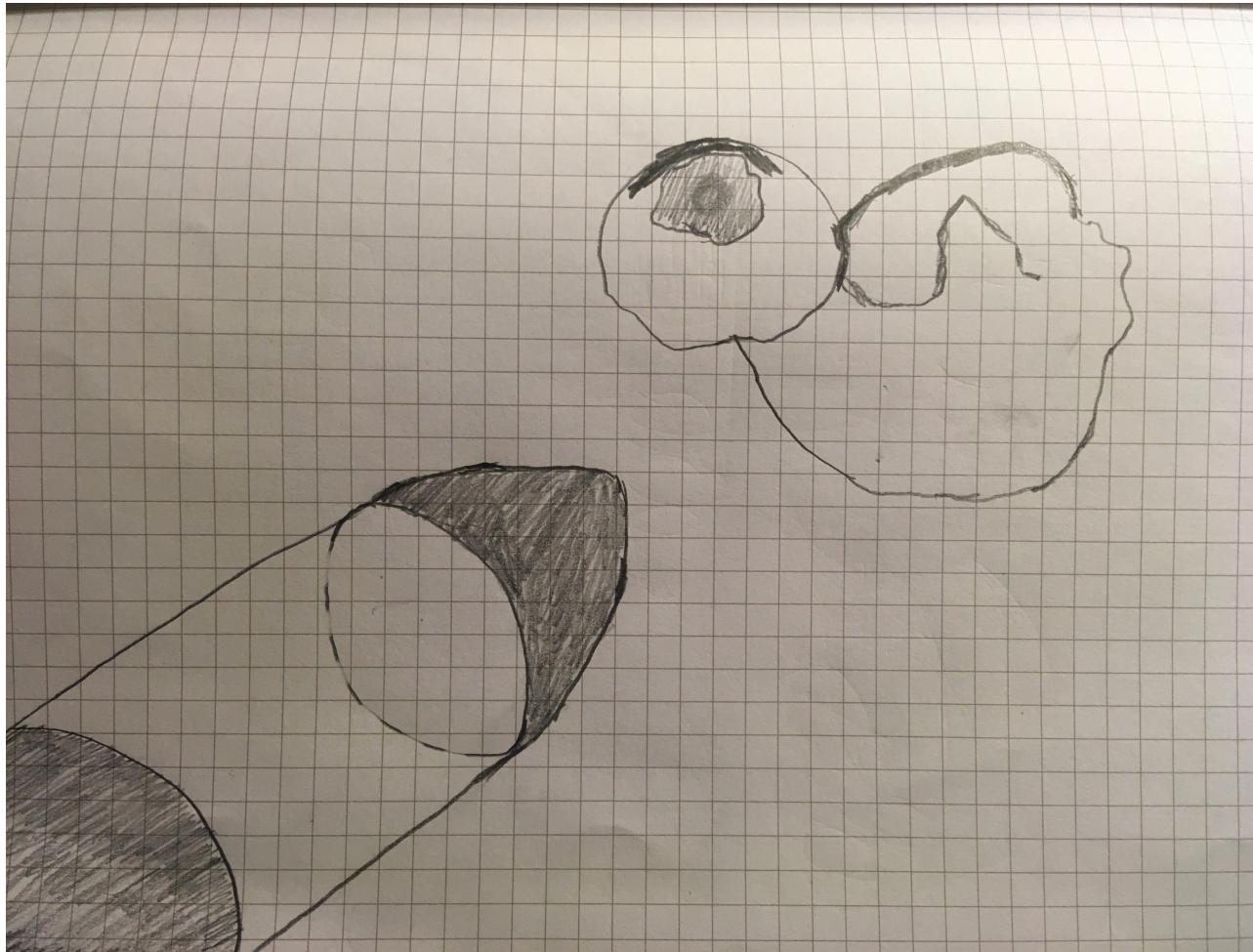
Put Space Station in Neptune's Orbit with Launch Vehicle; Load passengers



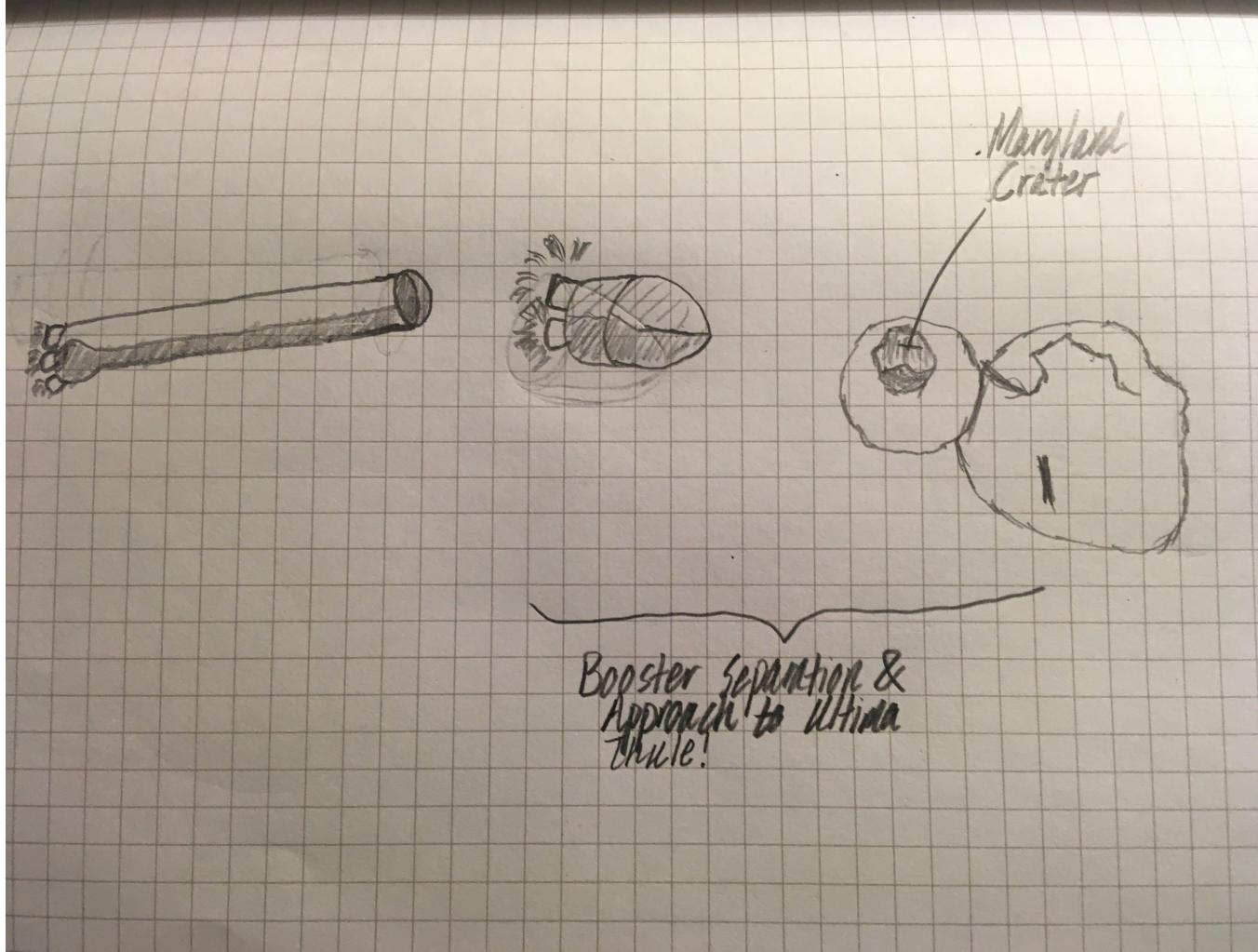
Power and Guidance and Navigation (GNC) Systems



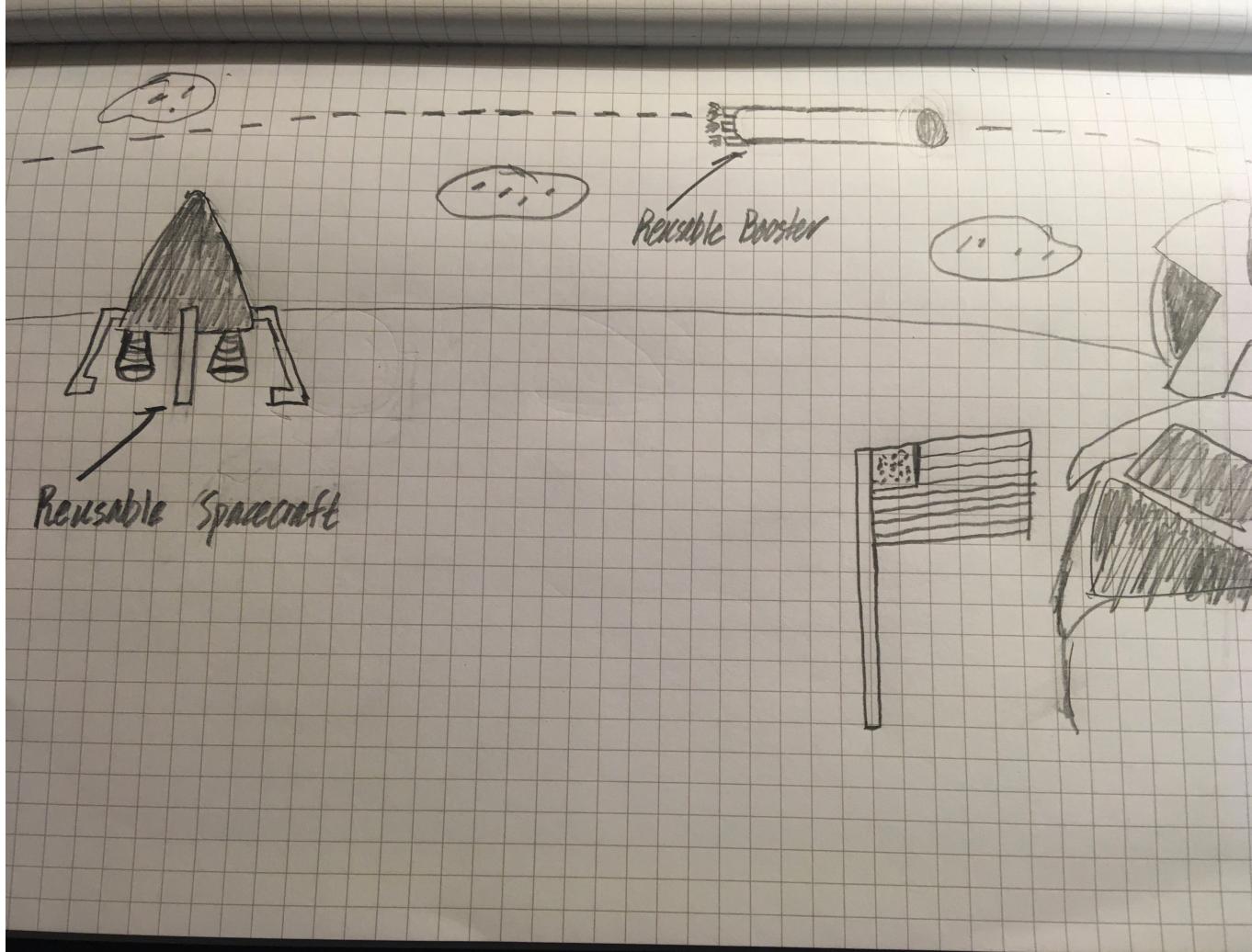
Launch Vehicle Approaches Ultima Thule



Booster Separation as Space Craft Approaches Maryland Crater



Destination Reached; Spacecraft and Booster Reusable for Return Trip



Impact

- Cool factor; people are going to be enticed to visit the farthest object studied so far in our solar system
- Cost: \$100 million dollars per person; all profit will be reinvested into R&D efforts

100

A large, red, stylized number '100' is centered on the page. It has a thick, rounded font. Below the number are three parallel, slightly curved red lines of varying lengths, creating a sense of depth or motion.

Target Audience & Benefits

- Around 2.2 - 2.3K Billionaires in the world
- Adventurers, engineers, entrepreneurs, etc.
- Cool activities include: Walking on a crater, go-karting, asteroid mining, amazing science experiments, legacy as a explorer (i.e. Leaf Erickson, Christopher Columbus, Lewis & Clark etc.), advance the human condition!