# 2.2 Sustainability

A sustainable autonomous system is a system which either has positive or at least neutral impact on the world around it. There are many aspects relating to the systems that needs to be considered to make sure a system doesn’t negatively affect its surroundings. The most common are perhaps the environmental and climate aspects, making sure the system doesn’t release a lot of dangerous chemicals or use up natural resources we can’t replace. Other common aspects are those related to communities, economic and work. Especially making sure autonomous systems allows for economic growth for a whole community while also not removing the jobs of people is important. However, what is also an important part of sustainability, where autonomous systems are very good, are the health and safety aspects. Many autonomous systems biggest selling points are actually health and safety of humans doing dangerous work.

For the autonomous fuel extraction and refilling system, safety to human astronauts and educational aspects are especially important key drivers when considering the UN sustainability goals. But the economic and societal aspects are also very important, especially since the ultimate goal for the Starship rocket is to allow for multiplanetary settlement and this will allow humans a more robust chance of surviving potential disasters. Finally, the climate aspect of this system is the hardest to consider, since all our rocket technology uses unrenewable resources for propulsion. However, in the future a solution like electromagnetic propulsion might be a possibility which could be explored.