

Germinating the 2050 Cis-Lunar Ecosphere

In early 2013, the Marshall Space Flight Center (MSFC) Director and MSFC's Office of Strategic Analysis and Communications (OSAC) chartered a diverse team for a six-week "sprint" to speculate (in a disciplined manner) and paint (with broad brush strokes) a picture of how earth, space, and public/private entities might be operating and relating to each other...in the year 2100. Two 12-person groups of civil servants, one with members having 15 years or less of NASA experience and the other with more senior members, worked independently and then compared and integrated their conclusions. In 2014, the "Space 2100" team, with some new team members and different group boundaries, ran a longer sprint to a) develop more detailed estimates of the operations and economics of space activities in the vicinity of the Earth and Moon in the 2050 time frame, b) identify evolutionary steps and viable paths needed to make that a reality, and c) recommend actions to enable and invigorate those steps. This paper explores Space 2100's first two sprints and their projections of NASA's role in what will likely be a highly networked international space industry and cis-lunar infrastructure.