

34th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)  
Is Space R&D Truly Fostering A Better World For Our Future? (2)

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MEDICINE AND ARCHITECTURE IN SPACE HABITATION (M.A.S.H) II - PROGRESSION

**Abstract**

A multi-disciplinary team highlights the post pandemic world with developments in sustainability as a cornerstone and the space sector including our ideas can contribute towards.

Identifying the commonality between the pandemic and long-haul space missions with space age sustainable habitats including medical facilities being proposed on earth. This will lead to future buildings being built around the individual and how their body and mind will react to prevent ill health and promote prosperity.

The key areas discussed which formulate this framework are;

Routine/Spontaneity: Spontaneous environment can be incorporated in sustainable living on earth just as in space. Goal: Flexible physical environment designed for space travel can be utilized for earth.

Exercise: Space habitats must incorporate personalised exercise experiences. Goal: Customised exercise experiences on earth both indoors and outdoors.

Senses: Touch, taste, sound, sight and smell are vital for human interaction with their environment. Goal: Five senses evolve our interior designs for a sense of place amongst the users of the habitat.

Working/Living Environment: Work – life balance which can be projected to future sustainable environment. Goal: Flexible space from the fit out of the design to the personal adjustments.

Eating/Sleeping: Balanced eating and sleeping are essentials for the optimal function of the human body. Goal: Set up a minimum standard of spatial design, in size and content for an enjoyable experience with others.

Escapism/ Hobbies: Escape perceived restraints which can help release endorphins, relieve stress and pain. Goal: The interior design of a habitat on earth and in space should include recreational spaces.

Social Interaction: The design of a space that can accommodate social experiences. Goal: The social experiences with face-to-face interaction ‘the live’ and the disconnected interaction from afar ‘the on demand’.

Personal Space Adaptation: With a resurgence of sustainability, designing more eco-friendly buildings with collective spaces with the lines merging. Goal: Earth applications of better solutions to design and technology for the physiological and psychological welfare.

Safety: Safe navigation in space can be adapted to future buildings on earth and extra layer of protection against microbes can be applied to space. Goal: Consideration of health and safety aspects of interior design of space habitats and space medical facilities can be adapted to earth in a sustainable way.

The lessons learnt from the Covid pandemic and the nine point interior design approach has enabled spinoff ideas for sustainable life on earth for sustainable energy and space based habitats.