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FROM MISSION ARCHITECTURE TO ELEMENT DESIGN: DECISION INTERDEPENDENCE AND  
CONNECTIVITY**Abstract**

With cancellation in 2010 of the Constellation program, the question of space architecture being a part of new exploration programs has been raised. The cancellation closed some opportunities for space architects in development of surface habitats on the Moon but opened a possibility to emerge into new programs and create new projects at earlier stages of development. Now it is time to ask what Space Architecture can bring to the table for successful space exploration in coming decades. The paper focuses on an architectural approach to tackling mission and design problems and looking at future programs from a holistic point of view. That methodology aims modelling overall architecture towards emerging technologies with an accent on sustainability; targeting “no black zones” architecture. This paper will provide an overview of such practice and its applicability to human space exploration of our solar system, and discuss:

1. Evaluation of element design in relation to overall mission architecture;
2. Alternative design solutions and feasibility studies matrix;
3. Mission goals affecting element design;
4. Influences and contradictions in design and planning.

The paper brings attention to some design and planning essential aspects and merits such as: staging; versatility; optimization; adaptability; affordability and resourcefulness. The summary is based on existing space industries’ design experience and proposed space exploration programs and strategies.