

SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND
DEVELOPMENT (D3)Novel Concepts and Technologies for Enable Future Building Blocks in Space Exploration and
Development (3)

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3D PRINTING ON ISS: REDUCING EARTH DEPENDENCY AND OPENING NEW SPACE BASED
MARKETS**Abstract**

Consistent constraints on what can be built for space have existed throughout the life of the space program. Limits have been placed on size, weight, and structural durability (due to launch) of every craft or piece of equipment that has been sent into orbit. Additionally, extended missions require that replacement parts must either be stockpiled or sent up from Earth, causing a substantial time delay. Made In Space, Inc. is currently under contract by NASA to establish an Additive Manufacturing Facility (AMF) on ISS by late 2014. Using 3D Printing technology, the AMF will enable for the first time manufacturing capabilities for astronauts on orbit. Commercial use of the AMF will allow for the creation of new space based markets, accelerate science objectives on ISS, and provide unique products for terrestrial markets.