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Author: Mr. John C. Mankins

ARTEMIS Innovation Management Solutions, LLC, United States, john.c.mankins@artemisinnovation.com

INTEGRATED TECHNOLOGY AND RISK ASSESSMENT: RECENT EVENTS, METHODOLOGIES,  
TOOLS AND EXAMPLES

**Abstract**

During the past decade, many organizations have undertaken formal technology readiness assessments (TRAs), typically using the technology readiness level (TRL) scale developed by NASA during the 1970s-1980s. These efforts have ranged in the US from NASA to the Department of Defense, and recently to the US Department of Energy. And, internationally they have involved efforts by organizations from the European Space Agency, to the Canadian Space Agency, and others. Recently a TRL / TRA working group was formed under the auspices of the International Standards Organization (ISO).

This paper will review the status of technology readiness and risk assessment best practices by various organizations around the world, including how the TRL scale may be incorporated with systems analysis results to frame integrated technology readiness and risk assessments (TRRA). An integrated technology readiness and risk assessment was performed as part of the International Academy of Astronautics (IAA) study on the topic of space solar power. The paper reviews the results of that TRRA effort as an example of the methodology.

The paper concludes with some thoughts regarding future directions for integrated TRRAs, including potential methodologies and tools for the facilitation of future assessments.