**Challenges**

The Technology Readiness Level (TRL) of a product is understood, but the Manufacturing Readiness Level (MRL) is not known.

**What is the Manufacturing Readiness Level (MRL)?** An understanding of the manufacturing maturity of the technology at each step of the acquisition process is key to the timely delivery of a system.

**Can the technology be built?** As the TRL level matures, is there a known manufacturing process that can make the part?

**The Solution**

**MRL Assessment**

Using the MRL roadmap (Figure 1), assess the manufacturing maturity of the technology using the guidelines and levels provided. At each MRL level there are specific questions that need to be addressed to move to the next level of maturity. Often these questions are subjective in nature. An assessment by an outside team is recommended to review the artifacts that support the MRL level and document the status. This information can then be reported back to the program manager as an objective review of the maturity level.

*Figure 1: MRL Roadmap*
Solution Benefits
The benefits to the MRL Assessment include:

Reduces the risk for the program
By having an independent third party review the MRL, an objective assessment of the ability to manufacture the part is determined. This allows corrective action if needed.

Implements Design for Manufacturability in the acquisition process
Implementation of MRLs requires active participation by those responsible for sourcing and manufacturing the part.

Proactive implementation of Department of Defense (DoD) mandates for the use of MRLs during the Acquisition Process
Although not required by policy today, the use of MRLs is strongly recommended by the DoD Acquisition community.

Implementation
The Professional Services required for the MRL Assessment are as follows:

- **Phase 1 – Discovery**
  Determine the “as-is” TRL and MRL maturity usage by the organization and establish an assessment plan for specific programs.

- **Phase 2 – Assessment**
  Perform a detailed assessment of the MRL level for a specific program.

- **Phase 3 – Recommendations**
  Present the findings of the assessment to the program manager.

- **Phase 4 – Implementation**
  Assist with the implementation of the improvements.

Although the MRL Assessment does not require a specific software application, a variety of tools are available to support the assessment process, including standardized checklists and the MRL desktop reference book.

About the Electro-Optics Center
The Electro-Optics Center (EOC), a proud part of The Pennsylvania State University, is a hybrid between the best components of a university and those of private industry. This relationship allows us access to the university’s researchers and scientists, its state-of-the-art facilities and leading edge research.

Our staff, comprised primarily of former industry and DoD personnel, brings experience in exceeding sponsor and corporate expectations. Through the application of this hybrid model, the EOC is able to provide its sponsors with solutions that combine leading edge research with on-time and on-budget deliveries. Learn more at www.eoc.psu.edu.