

## September Roundtable Take-A-Ways

### Subject: Software Project Management

Capability Maturity Model (CMM) growing as “know thyself” tool for software total quality management. As with ISO, and TQM in general, the objective of using CMM is to remove heroics by implementing a logical and repeatable process.

- CMM uses five levels of proficiency
- Helps assess whether a development organization can do what it says it can do and define if it is repeatable as a process

ARDEC uses internal people to assess vendors 70% of the world is at Level 1 (Initial), 10-15% at Level 2 (Repeatable). Only three organizations are at Level 5 (Optimizing) - Boeing Space Delivery, Lockheed Martin (NASA), and Motorola - India (cell phones, communications switches). Recommendation is that CMM be used a framework for quality software development and acquisition. Group observed that engineers generally are not trained in most (any) of the management aspects required by CMM. Training in project management is critical.

GTECH likes the idea of using Shenhar’s Pace, Scope, Complexity matrix to assess projects, define the risk, and then work with customer to deliver to requirements in doable phases. “Real” process of software development/management is not “clean”. Software project managers must strongly “manage” the customer (including marketing) because of how easy - it appears - to be able to change software. Technology is making customers more sophisticated and more demanding. Therefore, must manage expectations to an ever increasing extent. Software reuse is becoming more of a driver in software development.