

## **RELIABILITY REQUIREMENTS OBJECTIVES**

### **1. MEASURABLE**

Reliability requirements are stated as probability statements measurable by test or analysis during the product development timeframe. They are not goals or non-measurable allocated numbers.

### **2. BENCHMARKING**

Reliability requirements are benchmarked against target competition, when possible, so that requirements execution exceeds “Best in Class.”

### **3. PRODUCT REQUIREMENTS**

Functional product requirements are well defined so that the measurable reliability requirements relate to their “intended function”.

### **4. TIME**

A clear statement of time (such as hours, cycles, miles, etc.) must be specified as part of the reliability requirements.

### **5. CUSTOMER USAGE & OPERATING ENVIRONMENT**

The combined customer usage and operating environment profiles are adequately defined in product requirements, and the corresponding tests duplicate actual field failure modes.

### **6. DEGRADATION**

The allowable degradation over time is defined in the requirements and represented by tests.

### **7. FAILURE DEFINITION**

The requirements include a clear definition of product failure, and this definition is incorporated into tests. It is preferred that components or subsystems are tested to failure as part of Reliability demonstration.

### **8. BALANCE**

All reliability requirements are balanced with other vehicle & subsystem performance objectives, and are agreed to by project management.

### **9. ASSUMPTIONS**

Assumptions about test-to-field correlation or failure distributions are valid.

### **10. TECHNICAL SPECIFICATIONS**

Reliability Requirements are incorporated into technical specifications and thereby into subsystem & component validation plans.