

# **WORKSHOP C: R&D/ SALES/ENGINEERING**

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**Overall Comments:** significant difference in outlook and perceived problems in those providing services to the Military and in those providing similar product services to the commercial world.

**General Workshop:** Good opportunity to share viewpoints, opinions, experiences in the problem areas discussed.

Identified problem areas which impede communications between Sales, R&D, and Engineering:

## **1. External Problems**

- Customer uncertainty
- Need for customer education
- Cost problems
  - Timing on funding

## **2. Internal Problems**

- No control on specifications
  - Ownership not defined
  - No product champion
- No common language
- Cultural differences

## **3. Product Problems**

- “The Perfect Product” vs “Good Enough”
  - “Good Enough” defined as what the customer really wants/needs

## **1. Possible solutions to external problems**

### **a. Customer education**

- Seminars, technical articles, workshops
- Anticipate the customer's need
  - Unsolicited proposals
- Sharing data with customer, even some proprietary

- Make the customer part of the problem and solution
    - Provide input on specifications
    - Joint development when appropriate
  - Customer visits to factory
- b. Staff Education
- Direct contact with customer by R&D and Engineering
  - Staff rotation into all Sales/R&D/Engineering functions
  - QFD (Quality Function Deployment)
  - Core Teams

## 2. Possible solutions to internal problems

### a. Abolish silos

- Core Teams
- Combined Meetings
- Concurrent engineering – Design for Manufacturing
- Co-location
- Self-elected planning group
- Self-empowerment
- Interactive brainstorming
  - Combined Sales/R&D/Engineering group
  - Unstructured, but with defined goals

### b. Other areas that may impede communication

- Use system engineering to tie project together
- Importance of testing
- Human engineering factors
- TQM – impact of ISO 9000
- Reaching the right person

## 3. Possible solutions for the “Perfect” vs “Good Enough”

- Communication with customers on options
- Knowing what the customer really wants
  - Verifying with customer
  - Communicating customer preferences to all
- Good specifications

- Consider customer costs
- Don't try to meet multiple customer needs with a single product
  - No killer general purpose solutions
  - Costs too much – Low customer value
- Design for manufacturing – manufacturing engineers on core team

