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