Application of RAD Techniques

- TRW Application of RAD Techniques: 85%
- Application Most Requiring RAD
  - User Interface Intensive
  - Complex Operational Concepts
  - High Performance Distributed Applications
- Applications Least Requiring RAD
  - Computationally Intensive with Little Operator Interaction
- Successful RAD Techniques With High Payoff
  - User Interface Prototyping
  - System Architectures
  - Tailorable Commercial-Off-the-Shelf Components
- Extended Form of RAD: Incremental Product Delivery
  - User Involvement
  - Incremental Organizational and Environmental Evolution
Project Planning Trades

- Basic Trade: Project Success or Project Cancellation
- Successful Projects Have:
  - User Buy-In
  - Demonstrate Steady Progress
  - Have Early Investment Pay-Back
- Project Plans Must Include:
  - Demonstrations
  - Incremental Deliveries
  - User Involvement
- RAD Costs are Offset by:
  - Customer Satisfaction
  - Project Team Motivational Milestones

RAD Enablers

- Component Integration Technologies
  - Interface Standards (e.g., CORBA)
  - Cottage Industry of Off-the-Shelf Components
  - Architecture Frameworks
- Publication of Project Outcomes
  - Successes
  - Lessons Learned from Project Failures
- Involvement of All Stakeholders in Project Planning and Execution
  - Sponsors
  - Users
  - Interfacing Organizations
  - Technical Staff
Additional Observations

- Early Architecture Prototyping Using Frameworks (e.g., UNAS or Forte) Are Significant Risk Mitigators for Distributed Systems
- Software Release Frequency: Enhancements Must Be Balanced by the Overhead of Software Releases
  - Configuration Management
  - Software Distribution
  - User and Operator Training
- System Management Frameworks Enable RAD and Reduce Administration Complexity
- Software Size is No Longer a Good Measure of Software Complexity