# Financial Boundaries, Gaps and Disconnects
or Why Systems Fall Short When it Comes to Sustainment - A Systemic Problem -

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<th>Phase</th>
<th>Focus</th>
<th>Transition</th>
<th>Accountability/Responsibility Gaps</th>
<th>End Goal:</th>
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<td><strong>Concept / Pre-Award Phase</strong></td>
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<td>Transitions (Problem Areas)</td>
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<td>Minimize Lifecycle Costs while efficiently meeting all operational, maintenance &amp; logistics requirements</td>
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<td><strong>Design / Development Phase</strong></td>
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<td><strong>Manufacturing / Production Phase</strong></td>
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- **Team P**: Typically Company Funded (though sometimes CRAD or Down-Select Funding is provided)
- **Team D**: Little or no incentive to ensure next phase / Team is successful, efficient, cost effective or sustainable
  - Accountability & Responsibility End the End of Each Phase – Team members move on to other programs
  - Diagnostic Design has perhaps the largest impact to the next two phases....but what's the consequence of not doing a good job?
  - Design / Development Contract Funded
- **Team M**: No vested interest; no incentive, no punishment, etc.... From one phase to the next
  - Manufacturing / Production Contract Funded
- **Team S**: Different Teams throughout the Lifecycle
  - Different Requirements Not directly related to the End Goal
  - Different Funding Profiles (buckets) and Priorities
  - Different Program Managers
  - * No Accountability Going Forward
  - * Typically Very Little Continuity
  - Customer Funded
    - Though some depot funding may come back to contractor

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**Budgetary Boundary**

- Typically acquired and budgeted at the beginning of the program
Typical Present Day Trends

Potential With Robust Diagnostics Designs

*Investment into Early Maintenance Concept Simulations, Diagnostic Design, Health Management Requirements, Functional Partitioning, etc.*

*Savings in Diagnostic Troubleshooting Sequencing, Fault Tree Analysis, TRD & TPS Development, System Test, System Integration & Factory Checkout*

*Projected Lifecycle Cost Savings (total of green area)*

*Early Investment = Optimized Designs = Maximized Reuse = Lifecycle Savings*

*Savings During Operation & Maintenance Sustainment Phase => Minimized RTOKs, CNDs, MTTR, Skill Levels, etc. Optimized Availability, Health Management, Diagnostic Troubleshooting, Sparing Levels, etc.*
DSI ISDD Tool Applications By Phase to Optimize Total Lifecycle Benefits

**Concept / Pre-Award Phase**
- **Acquisition Cost**
  - Investment into Early Maintenance Concept Simulations, Diagnostic Design, Health Management Requirements, Functional Partitioning, etc.

**Design / Development Phase**
- **Acquisition Cost**
  - Savings in Diagnostic Troubleshooting Sequencing, Fault Tree Analysis, TRD & TPS Development, System Test, System Integration & Factory Checkout

**Manufacturing / Production Phase**
- **Unit Prod. Cost**
  - Typical Present Day Trends
  - Potential With Robust Diagnostics Designs

**Sustainment Phase**
- **Operational & Maintenance Support**
  - Projected Lifecycle Cost Savings (total of green area)
  - Savings During Operation & Maintenance Sustainment Phase => Minimized RTOKs, CNDs, MTTR, Skill Levels, etc.
  - Optimized Availability, Health Management, Diagnostic Troubleshooting, Sparing Levels, etc.