Product Support Analysis and Logistics Product Data

Executive Overview

George “Jay” Lasher
USAMC LOGSA / LED

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### Supportability Analysis

#### Policy & Standards Background

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Limited DoD Policy</td>
<td>DoDD 4100.35-G</td>
<td>DoD 5000.1</td>
<td>DoD 5000.1</td>
<td>DoD 5000.1</td>
<td>No Policy Guidance Only</td>
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</tr>
<tr>
<td>Maintenance Engineering Analysis</td>
<td>MIL-STD-1561</td>
<td>MIL-STD-1388-1A</td>
<td>MIL-HDBK-502</td>
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**Policy Standards**
- MIL-STD-1561
- MIL-STD-1388-1
- MIL-STD-1388-1A
- MIL-STD-1388-2
- MIL-STD-1388-2A
- MIL-STD-1388-2B
- MIL-HDBK-502
- MIL-HDBK-502A
- MIL-HDBK-502B

**Data Standards**
- DoDD 4100.35-G
- DoD 5000.1
- DoD 5000.2
- DoD 5000.2-R
- SAE TA-STD-0017
- SAE GEIA-STD-0007
Product Support Analysis (PSA)

✓ What is Product Support Analysis (PSA)?

• The selective application of scientific and engineering efforts undertaken during the acquisition and sustainment process, as part of the system engineering and design process.
• Set of required analysis (ACTIVITY) on a major weapon system, subsystems, and/or components
• Used to create package of support functions to field, and maintain readiness and operational capability

✓ What are the goals of PSA?

• Ensure supportability is included as a system performance requirement
• System is concurrently developed with optimal support system and infrastructure
Product Support Analysis (PSA)

✓ When is PSA performed?
   • Within the System Engineering Process for the Acquisition of some system.
   • Tailored to fit individual program
   • Hopefully will be required by DODI 5000.02 in next update (not interim document)

✓ Which documents define PSA?
   • SAE TA-STD-0017 Product Support Analysis (Normative – What to do)
   • MIL-HDBK-502A Product Support Analysis (Informative – How to do it)
     – DOD implementation guidance for SAE TA-STD-0017
Product Support Analysis (PSA)

✓ What are the results of PSA?
  • Product Support Package (As directed by DODI 5000.02)
    – PSA Documentation
    – Product Support Analysis Plan (PSAP)
      ▪ Documented risks, assumptions, maintenance concepts, supportability and supportability related design factors, analysis results, others
    – Logistics Product Data (LPD)
      ▪ SAE GEIA-STD-0007, Logistics Product Data
      ▪ SAE TA-HB-0007-1, Logistics Product Data Reports Handbook
      ▪ SAE GEIA-HB-0007, Logistics Product Data Handbook
SAE TA-STD-0017, Product Support Analysis

MIL-HDBK-502, DoD Guidance for TA-STD-0017, Product Support Analysis

SAE GEIA-STD-0007, Logistics Product Data

SAE GEIA-HB-0007, Logistics Product Data Handbook

SAE TA-STD-0007-1, Logistics Product Data Reports Handbook
## PSA Activities

<table>
<thead>
<tr>
<th>#</th>
<th>Activity Name</th>
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<th>Activity Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Support Strategy</td>
<td>10</td>
<td>Support System Alternatives</td>
</tr>
<tr>
<td>2</td>
<td>Product Support Analysis Planning</td>
<td>11</td>
<td>Evaluation of Alternatives and Tradeoff Analysis</td>
</tr>
<tr>
<td>3</td>
<td>Program and Design Reviews</td>
<td>12</td>
<td>Task Analysis</td>
</tr>
<tr>
<td>4</td>
<td>Application Assessment</td>
<td>13</td>
<td>Early Distribution Analysis</td>
</tr>
<tr>
<td>5</td>
<td>Support System Standardization</td>
<td>14</td>
<td>Diminishing Manufacturing Sources and Material Shortages Management (DMSMS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obsolescence Analysis</td>
</tr>
<tr>
<td>6</td>
<td>Comparative Analysis</td>
<td>15</td>
<td>Field Feedback</td>
</tr>
<tr>
<td>7</td>
<td>Technological Opportunities</td>
<td>16</td>
<td>Disposal Analysis</td>
</tr>
<tr>
<td>8</td>
<td>Supportability and Supportability Related Design Factors</td>
<td>17</td>
<td>Operational Suitability Test, Evaluation, Verification and Validation</td>
</tr>
<tr>
<td>9</td>
<td>Functional Analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Product Support Analysis (PSA)

✓ Where do I begin?

- Dependent upon life cycle phase
  - Don’t do a full Maintenance Task Analysis in MSA (TMRR Phase)
- What products will be purchased
  - CLS (Data delivery still required)
  - Technical Manuals (Begin in EMD)
  - LORA/FMECA/FTA (Begin at TMRR)
  - Full organic support (Begin at the beginning)
Product Support Analysis (PSA)

✓ How do I tailor? (Reduce the number/breadth of activities/subactivities)
  • Research…Research…Research
    – Work already performed?
      ▪ Don’t reinvent the wheel!
    – Design Freedom?
      ▪ Are you required to use certain items?
      ▪ If you can’t change it, why analyze it?
    – Limitations on the phase of the life cycle
      ▪ Perform limited Maintenance Task Analysis in MSA (TMRR Phase)
    – In-house capabilities?
      ▪ Utilize what you may already have, matrix an individual, or use center of excellence (like LOGSA)
  • Thru contracting
    – Clear path to what you want!
  • Buy the data
    – Generate your own products
How do we support the system?

✓ Get involved early!
✓ If the product cannot be supported, should it be used?
✓ During MSA –
  • Identify and begin to document the supportability factors
    – Can this system be used in its intended environment?
    – Do we have something like it that already exists?
    – Can we buy it COTS or GOTS?
    – Are there operators/maintainers in the field or do we need more training? (Don’t reinvent the wheel.)
  • Identify sustainment metrics (Will later be documented in A and B Entities)
  • Work up a plan for supporting the system
✓ Keep PM and System’s Engineering informed.
What is SAE GEIA-STD-0007?

- Data Exchange Non-Government Industry Standard (NGS)
- XML based and data exchange in nature, rather than LSAR format; no storage of the data prescribed
- Used to assess design, design the support structure and develop Integrated Product Support Products.
- Defines data elements for Provisioning, Cataloging and Support Equipment, Reliability, FMECA, skills, Task Analysis, Facilities and Transportation.
- More flexibility and less oversight than 2B
- More structured approach with far more data than MIL-PRF-49506.
- Lower cost to implement than LSAR
- Little change in way of doing business
SAE GEIA-STD-0007 Handbooks

✓ SAE GEIA-HB-0007, Logistics Product Data Handbook
  • Standard Guidance (How to)
  • Data population during life cycle phases
  • Tailoring, contracting, data selection
  • Data Map
  • Detailed information on data development for key and major fields (LCN, PLISN, UOC, etc)

✓ SAE TA-HB-0007-1, Logistics Product Data Reports Handbook
  • Standardized reports
  • Lists data elements needed to generate reports (helps in contracting)
  • Defines report selection options, processing, format, sequence, & output (can help in contracting, if standard format is desired)
Logistics Product Data (LPD)

✔ Where does LPD come from?
  • Output from Product Support Analysis
  • Technical Manuals
  • Field Feedback
  • Historical Data
  • Contract Documents (Requirements)

✔ SAE GEIA-STD-0007 has been adopted by the Defense Standardization Office as the standard for exchanging LPD.
SAE GEIA-STD-0007
Data Relationships-Summary

- Customer Requirements
- Engineering Design Drawings
- Product Breakdown
- Transportability Requirements
- FMECA
- RCM
- Task Analysis
- Parts/Consumables
- Support Equipment/Tools
- Skills/Training
- Facilities

A → J
X,H → B
X,H → B
B → B
B → C

Task
Resources
Identify Specific Product Support Requirements
Provisioning technical documentation, maintenance plan, training materials, IETM/ETMs, parts lists, RPSTL, supply support, MAC, and other required support products

Tailored Logistics Product Data Requirements

Tailored Logistics Product Support Analysis Requirements
Contract for:
FMECA, LORA, MTA, FTA, use studies, AoA, LCC Analysis, RCM, and others (SAE TA-STD-0017)

Contract for:
Provisioning data, task data, cataloging data, and other data (SAE GEIA-STD-0007)

Logistics Product Data Deliverables
Require delivery of:
Provisioning data, task data, cataloging data, and other data (SAE GEIA-STD-0007)

Government Generated Support Products
Government generates:
Provisioning technical documentation, maintenance plan, training materials, IETM/ETMs, parts lists, RPSTL, supply support MAC, and other required support products
• **Maintenance Planning**
  – Maintenance Plan (LSA-023/LSA-024)
  – Maintenance Allocation Chart (LSA-004)
  – Preventive Maintenance Checks & Services (LSA-033)
  – Maintenance Procedures for IETMs (LSA-019)

• **Support and Test Equipment**
  – Support Equipment Recommendation Data (LSA-070)
  – Calibration Maintenance Requirements Summary (LSA-076)
  – TMDE Registration (LSA-072)

• **Supply Support**
  – Provisioning Technical Documentation Lists (Long Lead, Post Conference, Common, Bulk Items, etc.) (LSA-036)
  – Design Change Notice Information (LSA-036)
  – Cataloging/Screening/Parts Breakout (LSA-032/LSA-154)
  – Indented Parts List (LSA-030)
• Manpower, Personnel & Training
  • Annual Man Hours by Skill Specialty Code and Level of Maintenance (LSA-001)
  • Manpower Authorization Criteria (LSA-065)
    – Task Inventory/Training Task List (LSA-018)
    – New/Modified Skill/Training Requirements (LSA-014)
    – Identification of Training Devices (LSA-011)

• Packaging, Handling, Storage, and Transportation
  – Packaging and Preservation Data (LSA-025/LSA-026)
  – Transportability Requirements (LSA-085)

• Facilities
  – New/Modified Facilities Requirements (LSA-012)
  – Maintenance Tasks Requiring New/Modified Facilities (LSA-012)

• Reliability and Maintainability
  – Reliability Centered Maintenance Results (LSA-050)
  – FMECA Results (LSA-058)
✓ **Contracting for Data only.**
  • Pros:
    – Saves some cost in not delivering the actual summaries.
    – No duplication of data element purchases. Can ask for the attribute once and create as many reports/summaries as desired.
    – Be assured data conforms prior to submission in downstream systems (LMP, ICAPS, etc).
  • Cons:
    – Government is responsible for data validation, data cleansing and report creation.
    – Additional data elements may be required to produce a report than what actually shows on a report.
    – Data can be immature depending on delivery schedules

✓ **Contracting for Summaries only.**
  – Pros:
    • Saves cost in not purchasing unnecessary data elements.
    • Validation is on the contractor.
    • Work is done by contractor.
  – Cons:
    • No other data is purchased.
    • Could purchase duplicate data elements if elements are on multiple contracted summaries (PLISN on 036, 080, 151, etc.)
    • No assurance that data conforms prior to submission in downstream systems (LMP, ICAPS, etc).
Contracting for both Data and Summaries.

- Pros:
  - Everything you need (summaries to check progress along the way, data when it is immature).
  - Validation is on the contractor.
  - Work is done by contractor.
  - Better assurance data conforms prior to submission in downstream systems (LMP, ICAPS, etc).

- Cons:
  - Higher cost as duplicate information is produced.
PowerLOGJ is FREE

Contains the SAE GEIA-STD-0007
49 Reports

Guidance
Contact the Logistics Engineering Center for assistance

Questions