



## **PTC acquires LBS Ltd, the leader in Integrated Logistics Support (ILS)**

PTC now delivers turn-key solution for S1000D Technical Publications, Provisioning (S2000M), Training and eLearning (SCORM), and Logistics Support Analysis (LSA)

## Acquisition Details

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### PTC acquires LBS Ltd. - the leader in Integrated Logistics Support (ILS) software

- Established in 1995, LBS Ltd. serves the Aerospace and Defense and Civil Aviation markets throughout Europe, North America and Australia
- LBS is based in the UK and has about 45 employees
- Recognized for specialist expertise, in-depth domain knowledge, and proven track record
  - LBS's founders come from the A&D industry and have unmatched experience in A&D and Civil Aviation
- Market leading solutions and support services to all levels of the supply chain including Defense Ministries, Armed Forces, Prime Contractors, Suppliers and Sub-contractors

### With this acquisition, PTC is uniquely positioned to deliver the industry's best Integrated Logistics Support solution for A&D and Civil Aviation, including

- Technical Publications compliant with S1000D
- Provisioning compliant with S2000M
- Training and eLearning compliant with SCORM
- Logistics Support Analysis (LSA)

## LBS Ltd. Fits PTC's Acquisition Strategy

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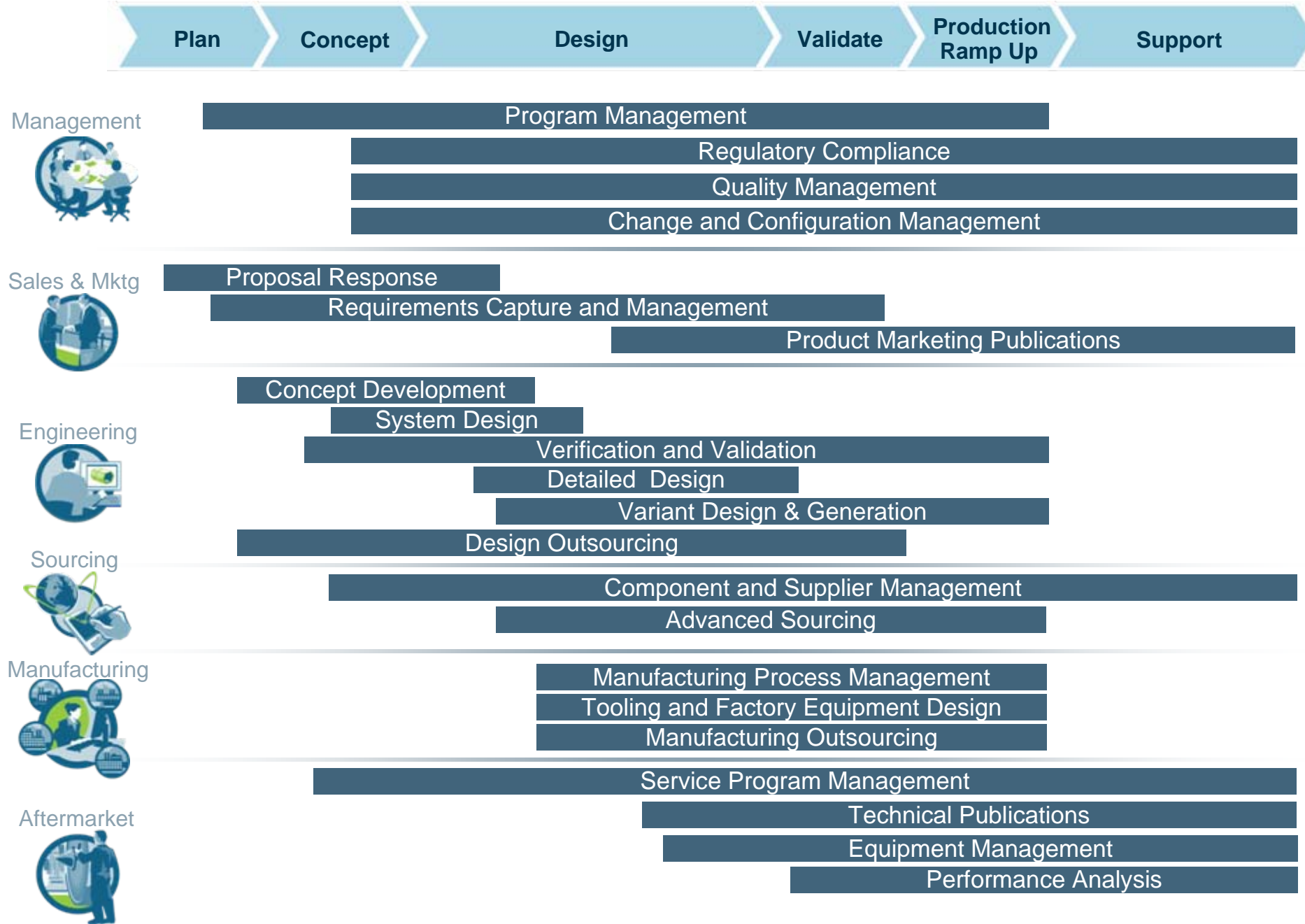
### Adds value for PTC:

- LBS's technology enables PTC to deliver the industry's first turn-key ILS solution for A&D and Civil Aviation
- LBS enables PTC to sell aftermarket support solutions for A&D and Civil Aviation
- LBS's employees bring valuable A&D industry expertise to PTC

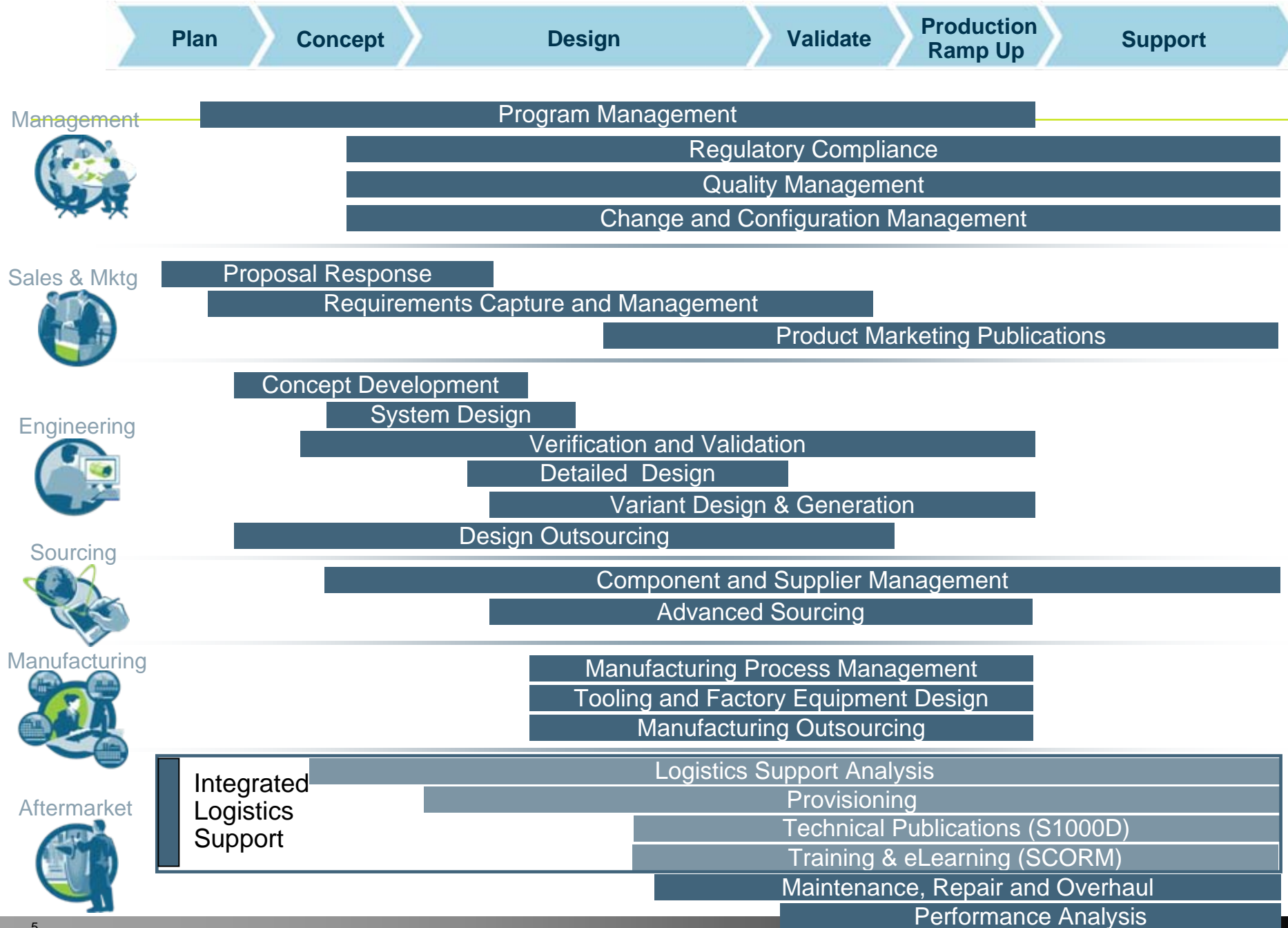
### Adds value for LBS:

- PTC's large customer base and global distribution model will help drive sales of LBS software in A&D and Civil Aviation
- LBS customers will have the opportunity to derive additional value from PTC's broad set of product development solutions
- PTC's global scale, financial strength and enterprise solutions expertise benefits LBS customers

# Current PTC A&D Landscape



# Impact of LBS Acquisition on PTC's support of A&D Processes



# Aftermarket Support Challenges and Opportunities

## Logistics support is a significant source of revenue and profit in A&D

- Aftermarket support and logistics often contribute for up to 60% of revenue from A&D and Civil Aviation programs
- Industry trend toward performance-based logistics

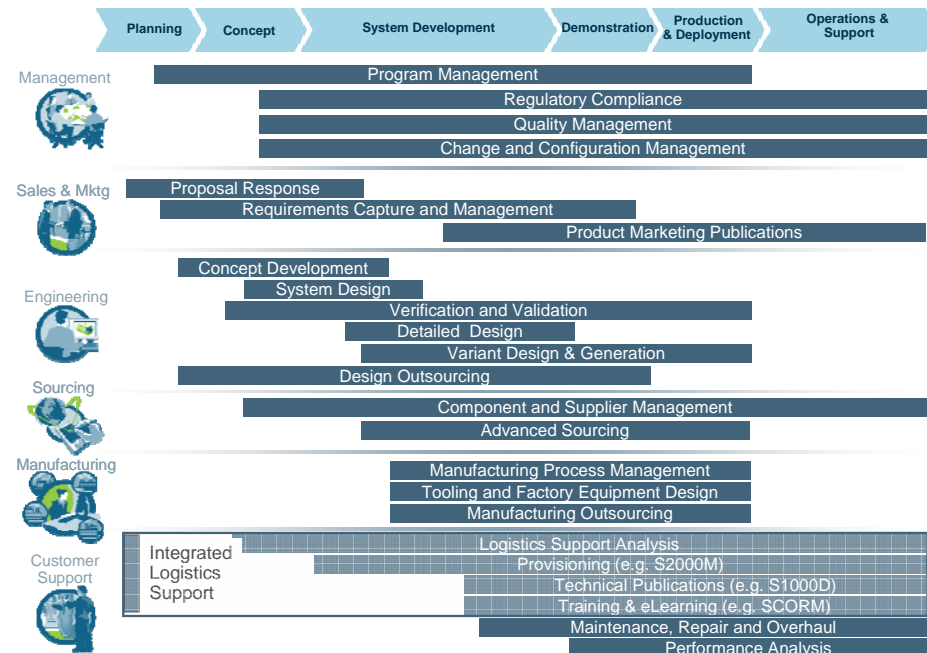
## Need for process integration

- In the past, each aftermarket process produced a separate set of information
- Interdependence between processes
- Opportunity for content reuse

## Integrated Logistics Support improves information quality and time-to-market

- Re-purposing product and logistics information
- Unified approach to addressing aftermarket support activities

Impact of LBS Acquisition on PTC's support of A&D Processes



# Industry Standards in A&D and Civil Aviation

## Value to global programs

- Increasingly global nature of the A&D and Civil Aviation industries
- Need for a common method to share information across geographically dispersed locations

## Value to equipment operators

- Mixed fleet in defense agencies and commercial airlines
- Lower training and support costs and reduce downtime by providing standard documentation different equipment and different vendors

## Value to OEMs

- Improved communication in the supply chain
- Product and aftermarket support information

## Value to OEM suppliers

- Standard documentation format for all customers

## Compliance mandate

- All program vendors (both main contractors and sub-contractors) must produce documentation compliant with the program standards



# Important Standards in A&D and Civil Aviation

## S1000D

- Defines how content for technical manuals should be created, managed, and published
- Simplifies data management and understanding through common information structure
- Defense programs in Europe mandate adoption
- Defense programs in USA, ROW, and commercial aviation programs recommend and will likely mandate adoption

## S2000M

- Defines business rules and standard messages used to exchange information
- Mandated for European defense programs including all program suppliers

## SCORM

- Collection of standards and specifications for web-based e-learning
- Set of rules that specify the order in which a learner may experience content objects
- Mandated by defense departments for eLearning purchases



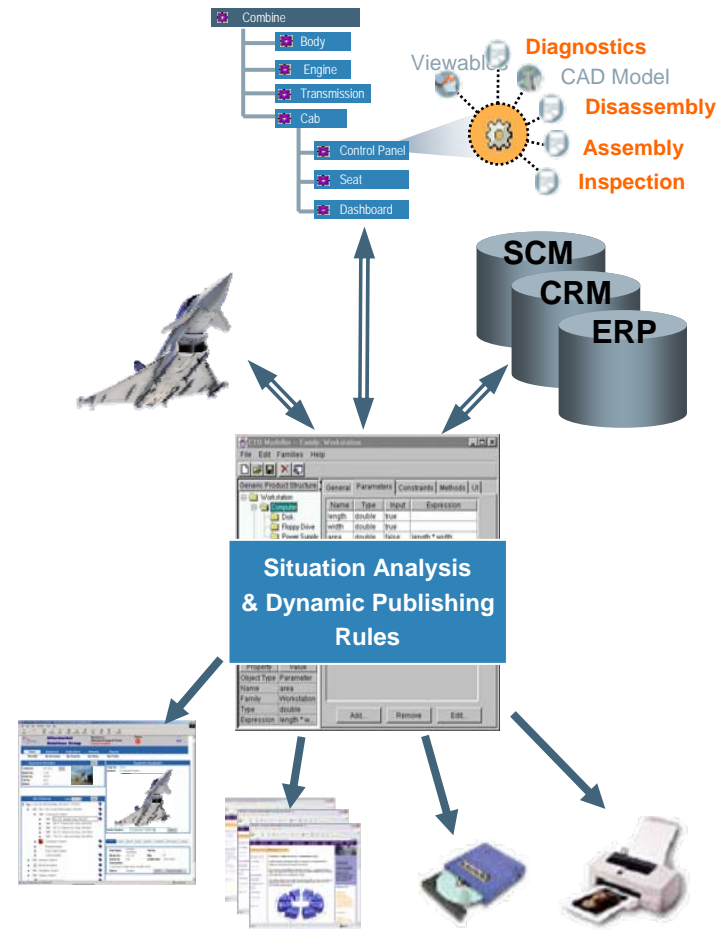
# Challenges Implementing Integrated Logistics Support (ILS) Solutions in A&D and Civil Aviation

## Standards complexity

- S1000D, S2000M, and SCORM require deployment of XML or SGML solutions that historically have been complex
- Standards contain mandatory vs. optional data (need to determine and communicate business rules and validate data)
- Programs struggle to adapt their solution to simultaneously comply with each standard required for the different aftermarket support processes (e.g. S1000D for technical publications, SCORM for training and eLearning)

## Fragmented solutions

- Organizations often integrate multiple point solutions
  - High integration cost and total cost of ownership
  - Lower reliability and upgradeability
- Solutions are often incomplete and lack automation
  - Manual programming as part of the publishing process
  - Design and configuration changes do not trigger documentation updates
  - No capability to reuse product development information or logistics data for technical publications
  - No capability to reuse published product support information for training materials



## LBS Enables PTC to Deliver the Industry's First Turn-Key ILS Solution

### PTC is a leading software supplier to A&D and Civil Aviation organizations

- All top 10 A&D companies are using PTC solutions
- PTC is a leader in the A&D market for scalable enterprise PLM deployments

### PTC provides the industry's de-facto standard publishing solutions

- With Arbortext, PTC offers the leading XML/SGML publishing solution (mandated by S1000D, S2000M, and SCORM)
- With ITEDO, PTC offers the de facto industry standard solution for creating and viewing S1000D-compliant CGM technical illustrations
- PTC understands XML/SGML and CGM technologies, concepts and adoption better than any other company in the market

### The combined solution is an industry first

- LBS's products are already integrated with Arbortext
- PTC's turn-key solution contains the full set of capabilities required to create, publish, and deliver information, compliant with S1000D, S2000M, and SCORM



# Combined PTC and LBS Solutions

## Integrated Logistics Support (ILS)

- Technical publications (S1000D)
  - Authoring (including text and illustrations)
  - Content Management
  - Publishing
  - IETM/IETP Viewing
- Provisioning (S2000M)
  - Illustrated Parts Catalog
  - Spares Provisioning
- Training and eLearning (SCORM)
  - Learning Content Management
  - Learning Management System
- Logistics Support
  - Logistics Support Analysis (LSA)
  - Interface between LSA and Technical Publishing



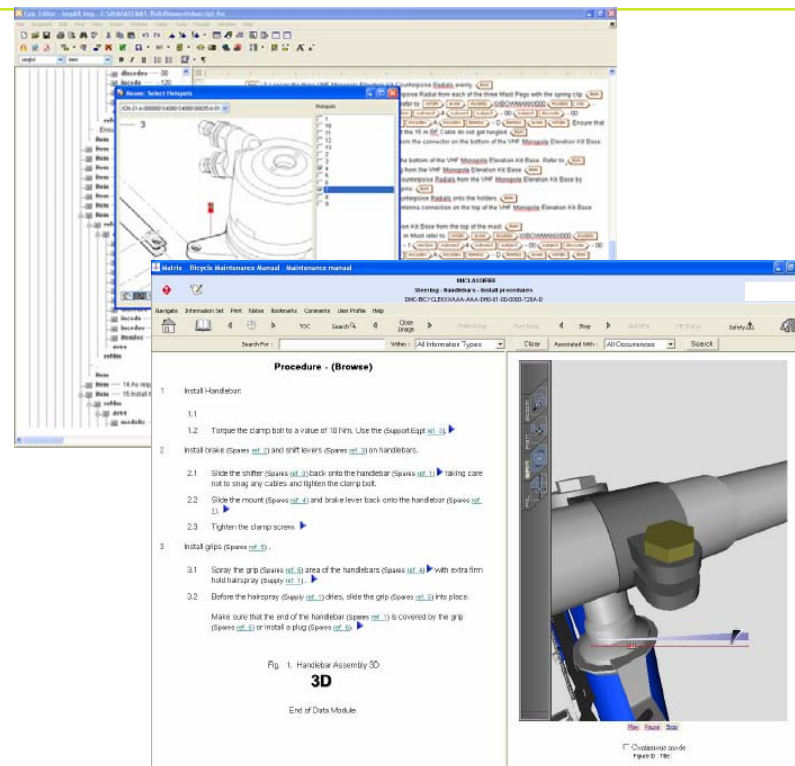
# Technical Publications (S1000D)

## What is it?

- Turn-key solution that automates and optimizes the publishing process for **S1000D technical publications** for Aerospace & Defense and Civil Aviation industries
- Enabled by a comprehensive set of configuration files and authoring templates that automatically control how the content is authored, managed, and delivered

## Capabilities

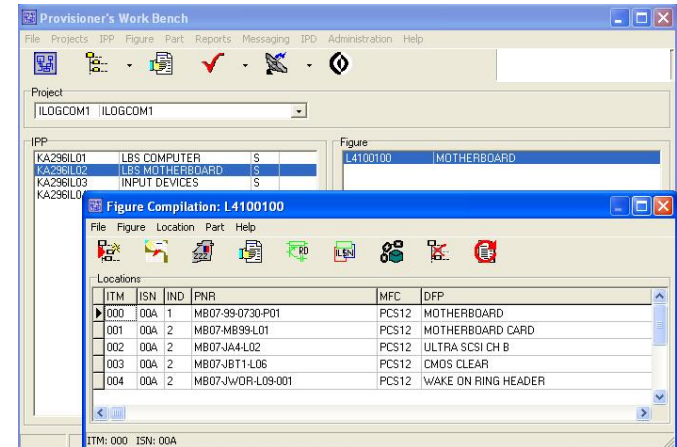
- Text, technical illustration, process data module authoring
  - Guided authoring templates
  - Business rule validation
- Content management
  - Facilitates reuse and manages information at a component level
  - Integration with logistics and PLM systems
- Dynamic publishing and delivery of S1000D compliant technical publications
  - Hard copy (print); interactive electronic technical publications (IETP Class V Type II)



# Provisioning (S1000D and S2000M)

## What is it?

- Turn-key solution that automates and optimizes creation of **illustrated parts catalogs (IPC)** for Aerospace & Defense and Civil Aviation industries
- Enables the cost effective compilation of S2000M provisioning data for the production of IPC and delivery of S2000M-compliant EDI messages



## Capabilities

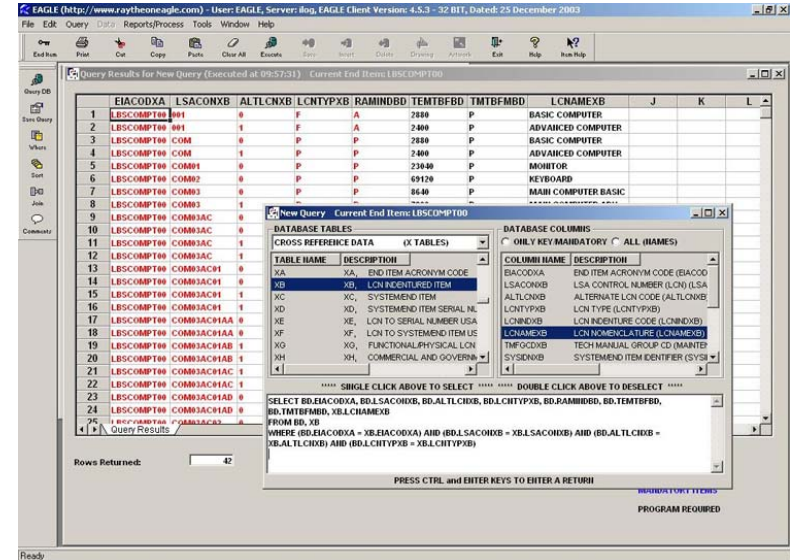
- Create and maintain S1000D IPC data
- Reuse information from provisioning system and/or BOM
- Automatically output and publishing of the IPC data modules
- Spares provisioning model for calculating spares quantities
- Compliant with the S2000M provisioning system



# Logistics Support Analysis (LSA)

## What is it?

- An enhanced integrated logistics support software system
- Provides the capability to reuse LSAR data for Technical Publications, Supply Support and Life Cycle Costing



## Capabilities

- LSAR (Logistic Support Analysis Record) relational database (based on and fully compatible with MIL-STD-1388-2B, MIL-PRF-49506 or DEF STAN 00-60) provides a complete logistics architecture
- Enhance specifications by adding engineering drawings, technical manuals, and video support
- Speed complex, time-consuming logistics tasks by enabling users to navigate the logistics database by discipline and focus on specific functions within each discipline

# Customer Success



## Going forward

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**LBS's solutions are a natural extension of the Arbortext family of dynamic publishing software**

**Turn-key ILS solution that optimizes the following processes**

- S1000D technical publications
- Provisioning (compliant with S1000D and S2000M)
- Training and eLearning (compliant with SCORM and S1000D)
- Logistics Support Analysis (LSA)

**Interoperable component of the PTC Product Development System**

**Repurposing and reuse of product and logistics information and S1000D content**

**PTC will maintain interoperability with 3<sup>rd</sup> party logistics and PLM solutions**

## Summary

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**A&D and civil aviation programs have become more global and are relying standards to optimize aftermarket support**

**LBS brings A&D and civil aviation expertise and leading technology to PTC**

**With this acquisition, PTC is best positioned to provide an ILS solution for the A&D and civil aviation industries**

- S1000D technical publications
- Provisioning including illustrated parts catalogs (IPC)
- Training and eLearning content
- Logistics Support Analysis (LSA)

**The combination of PTC's solutions with LBS's solutions enables companies to better leverage engineering, logistics and support information to optimize customer support processes**

- Repurpose PLM and Logistics information for S1000D technical publications
- Repurpose PLM and logistics information and S1000D content for illustrated parts catalogs
- Reuse technical publications content for training content (compliant with SCORM)

**PTC's scale and financial stability will benefit LBS customers**