

Why We Like... Integrated Life Cycle Support (ILCS)

This article provides some background on the Team ILCS decision to adopt ILCS as an acronym for our thoughts on the discipline and concepts that we (supportability engineers, support providers and support managers) use to ensure complex equipment systems are (1) designed with consideration of support; and (2) sustained by an optimized and tailored support system throughout their full life cycle.

This life cycle support spans from initial needs/concepts through design and build stages, to then the lengthy in-service use and support stage and eventually to the retirement/disposal stage for the equipment and its support.

What We Have Called This Support Solution Business...

Over the years, we have seen evolution of acronyms and labels applied to the business we do... we offer a brief history of the primary terms we have used, and our perceptions of the pros and cons of each.

1950s – early 2000s - The Founders Choose ILS – Integrated Logistics Support

As the engineering discipline of Systems Engineering became accepted in the 1950s, the need to develop and foster a related systems-engineering-based methodology to both “design the equipment for support” and to “deliver a support system”, to better manage total ownership cost and ensure effective sustainment of the equipment for decades. the US Defense Department (US DoD) provided initial ILS guidance in the 50sⁱ and 60sⁱⁱ and formalized the associated Logistics Support Analysis (LSA) guidance in the 70s.ⁱⁱⁱ

Here are our perceptions of the original ILS pros and cons

ILS Pros

- Was the term/acronym adopted worldwide and used for decades
- A foundation term for international publications and professional associations such as SOLE (The International Society for Logistics) and CLEP (The Council of Logistics Engineering Professionals)

ILS Cons

- The early 2000s saw the massive growth of the discipline of “supply chain” logistics, generating resulting confusion of equipment support engineering with supply chain management
- ILS associations and terminology were not well recognized outside the community and fell behind in worldwide recognition of our sister discipline of

System Engineering. (Googling ILS as an acronym generates most hits on “Instrument Landing Systems”)

1990s to 2020s – The Shift to IPS - Integrated Product Support

In the 1990s NATO CALS office (Continuous Acquisition and Life Cycle Support) worked towards enhancing coalition by improving sharing of logistics and product support information, developing the NRDM (NATO Reference Data Model) as a conceptual foundation for lifecycle support data^{iv}.

To move from concepts to specifications and standards, in the early 2000s NATO collaborated with ISO to develop ISO 10303 STEP AP239 PLCS (Product Life Cycle Support)^v, which was later ratified by NATO.^{vi} The IPS term grew from this foundation to:

- become embodied in US law^{vii} and US Department of Defense Product Support Management guidance.^{viii}
- Be adopted and promulgated in ASD/AIS S-Series Specifications^{ix}.

IPS has become the most popular term in use in recent years. Here are our perceptions of IPS term pros and cons

IPS Pros

- Resolves the confusion of ILS with supply chain logistics by emphasizing the linkage to support for an equipment
- Has been adopted by US and international standards bodies, and many practitioners

IPS Cons

- The core of support engineering is to develop integrated support solutions not for a **PRODUCT** but rather for the subset of products used and supported as **ASSETS** for a specific customer. By example, while F35 is a very complex **PRODUCT** of Lockheed-Martin, there will be over 20 distinct integrated support solutions developed and maintained for each subset of **ASSETS** used/supported by each F35 customer airforce.

2025 - NATO Reinvents ILS (Integrated Lifecycle Support)

In June 2025, NATO published new alliance equipment support guidance^x which uses the term Integrated Life Cycle Support but re-defines the ILS acronym. NATO ALP-10 very much aligns with NATO’s adoption of ISO 15288 concepts of SLCM (System Life Cycle Management)^{xi} and with NATO guidance on system life cycle management^{xii}. Here are our perceptions of the “new” NATO ILS term.

NATO ILS Pros

- It shifts off the product component of IPS, and enables the customer asset view of tailored support
- It aligns with ISO and NATO view of SLCM albeit not using same acronym for life cycle.
- It aligns support solutions thinking with much broader worldwide systems engineering and systems life cycle management processes that are widely adopted and that can be easily applied to a support solution program of work/processes

NATO ILS Cons

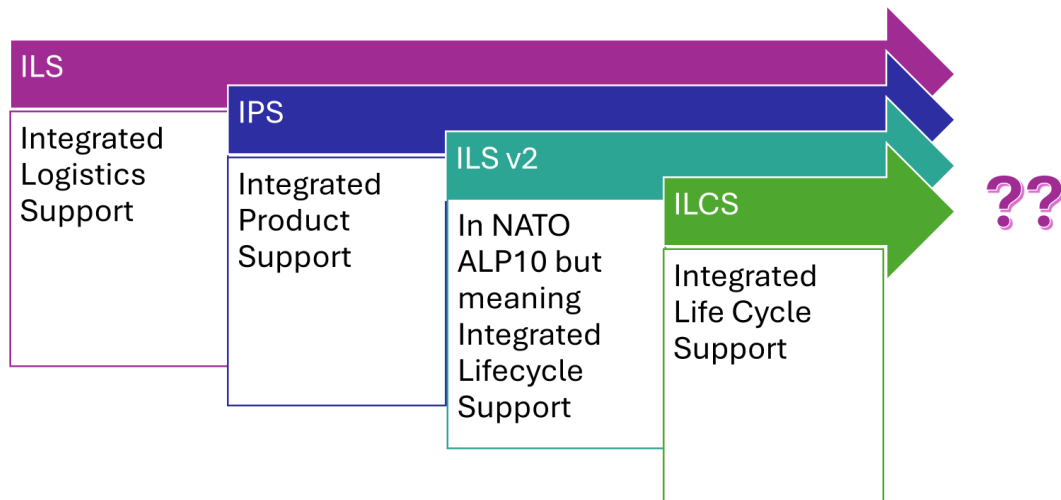
- By refining with the same acronym, it risks confusion with embedded and historical meanings of this acronym since the 1950s
- It does not align with other life cycle acronyms in NATO and elsewhere.

2026 - So Why We Like ILCS – Integrated Life Cycle Support

Here in Team ILCS, we have adopted the acronym of ILCS meaning Integrated Life Cycle Support, because we feel it:

- Avoids confusion with past acronyms used in our community
- Resolves the perceived PRODUCT vs ASSET issues of IPS
- Avoids the potential misinterpretation of the 2025 NATO redefined ILS
- Aligns with the life cycle acronyms widely used in ISO and NATO for systems engineering and systems life cycle management
- Aligns with the life cycle acronyms used for the US DoD Life Cycle Logistics community of practice and with the SAE Life Cycle Logistics Support WG developing SAE standards for our community

What Do You Think Is Best Used Going Forward??



ⁱ U.S. Department of Defense. *DoD Directive 3232.1: Inspection and Maintenance of Military Materiel*. Washington, DC: DoD, 1955.

ⁱⁱ U.S. Department of Defense. *DoD Directive 4100.35: Logistics Support Policies*. Washington, DC: DoD, 1964.

ⁱⁱⁱ U.S. Department of Defense. *MIL-STD-1388-1: Logistics Support Analysis*. Washington, DC: DoD, 1973.

^{iv} NATO CALS Office, *NATO CALS Handbook*, Brussels: NATO, 1994.

^v ISO, *ISO 10303-239: Product Life Cycle Support (PLCS)*, Geneva: International Organization for Standardization, 2005

^{vi} NATO Standardization Office, *STANAG 4661: NATO Product Life Cycle Support (PLCS)*, Brussels: NATO, 2010

^{vii} U.S. Congress, *Weapon Systems Acquisition Reform Act of 2009*, Public Law 111-23

^{viii} U.S. Department of Defense, *Product Support Manager Guidebook*, Office of the Assistant Secretary of Defense for Sustainment, 2016

^{ix} ASD/AIA, *S-Series Integrated Product Support Specifications Overview*, ASD/AIA IPS Council, 2013

^x NATO Standardization Office, *ALP-10 NATO Guidance for Integrated Life Cycle Support Edition D, Version 1*, Brussels: NATO, 2025

^{xi} ISO/IEC/IEEE, *15288:2023 Systems and Software Engineering – System Life Cycle Processes Edition 2*, Geneva, 2023

^{xii} NATO Standardization Office, *AAP-48 NATO System Life Cycle Processes Edition C, Version 1*, Brussels: NATO, 2022