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THREE ERP'S, ZERO INTEGRATION: THE SUSTAINMENT CRISIS THAT NEED TO BE FIXED FOR INDIA'S THEATRE COMMANDS

LT GEN ANIL BHALLA, PVSM, AVSM, VSM (RETD)



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Room No 301, B-2 Wing, 3rd Floor
Pt Deendayal Antyodaya Bhawan,
CGO Complex, Lodhi Road
New Delhi –110003 (INDIA)

Telephone Nos: 011-24364881,
24366485

Fax: 011-24366484

Website: www.cenjows.in

E-mail: cenjows@cenjows.in

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301, B-2 Wing, 3rd Floor
 Pt. Deendayal Antyodaya Bhawan CGO Complex, Lodhi
 Road
 New Delhi-110003

Editor : Maj Gen (Dr) Ashok Kumar, VSM (Retd) (dg@cenjows.in)

Deputy Editor : Dr Ulupi Borah, Distinguished Fellow
 (distinguishedfellow1@cenjows.in)

Editorial Board :

Brig K Ranjeev Singh, VSM (ddg@cenjows.in)

Col Ajay Kumar Rajak, SM

(secy@cenjows.in)

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(seniorfellow2@cenjows.in)

Dr Ulupi Borah, Distinguished Fellow

(distinguishedfellow1@cenjows.in)

Dr Monojit Das, Senior Fellow, PRO

(monojit.das@cenjows.in)

301, B-2 Wing, 3rd Floor
 Pt. Deendayal Antyodaya Bhawan
 CGO Complex, Lodhi Road
 New Delhi-110003

Publication Head : Ms Vaibhavi Katal

All correspondence may be addressed to:

Editor
 Centre for Joint Warfare Studies (CENJOWS) 301, B-2 Wing, 3rd Floor
 Pt Deendayal Antyodaya Bhawan CGO Complex, Lodhi
 Road
 New Delhi-110003
 Telephone: (91-11) 24366485/Telefax: (91-11) 24366484 e-mails:
cenjows@cenjows.in / cenjows@yahoo.com Website: <http://cenjows.in>

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CONTENTS

Title	Page No
Three Systems, Three silos	6
The IAF's Own Internal Silo: IMMOLS and e-MMS	6
The Army's Missing Maintenance Module	7
The Ticking Clock	8
No Layer Above	8
The Way Ahead	9



CENJOWS

Three ERP's, Zero Integration: The Sustainment Crisis That Need to be Fixed for India's Theatre Commands

**Author: Lt Gen Anil Bhalla,
PVSM, AVSM, VSM (Retd)**

India's armed forces are building theatre commands to fight as one. Their logistics systems need to talk to each other.

The creation of Integrated Theatre Commands, including the Northern, Western, and Maritime Command or in whatever manner they come up, is the most consequential structural reform of India's armed forces since independence. The CDS has submitted the formal theatre command proposal to the defence minister, who is expected to hold wider consultations before taking it to the Cabinet Committee on Security for final approval. Yet beneath the doctrinal ambition lies an operationally decisive problem that needs to be confronted: the three services run entirely incompatible Enterprise Resource Planning systems. Currently, they cannot share logistics data, generate a joint inventory picture, or produce a unified sustainment forecast. And there is no integration layer above the three to provide theatre-level visibility to the DMA or the future theatre commanders. Theatre commands without integrated logistics are a building without plumbing.

Three Systems, Three Silos

The Air Force was first to move with Project IMMOLS or the Integrated Materials Management Online System, launched in 2003, custom-built by TCS, piloted across 22 sites, and rolled out nationally across all IAF bases by 2006 at a cost of approximately ₹55 crore. It tracks over 500,000 items of spares and equipment in real time and has since been extended to integrate with the Controller of Defence Accounts for digitised audit. Riding on AFNet, the IAF's ₹1,077-crore fibre-optic backbone, IMMOLS is a genuine success story, but it is, by design, a standalone system. Its proprietary codebase does not speak to SAP, Oracle, or any commercial ERP languages.

The IAF's Own Internal Silo: IMMOLS and e-MMS

The inter-service integration gap is well understood; less discussed is the fact that the Air Force itself operates two major and incompatible IT systems at the moment. IMMOLS, built by TCS and launched in 2006, handles inventory and materials management. The Electronic Maintenance Management System (e-MMS), contracted to Wipro in 2013 and launched at Air Force Station Pune in 2016, handles the entirely separate domain of Maintenance, Repair, and Overhaul. e-MMS is built on IBM's Maximo enterprise asset management platform and was designed to digitise the IAF's 89-year-old paper-based maintenance processes across a large number of sites, approx. 50 squadrons, and 70,000 users. By February 2023, the IAF announced full digitisation of its maintenance records through e-MMS.

Both systems ride on AFNet, but they were built by different vendors, on different technology stacks, for different functional domains. IMMOLS is a bespoke TCS-developed system; e-MMS runs on IBM Maximo integrated by Wipro. There is no native data bridge between the two. This means the IAF's inventory system cannot automatically correlate with its maintenance system to answer fundamental questions regarding spares availability in IMMOLS, reflecting the demand signals on e-MMS in real time. Before the IAF can credibly participate in a joint logistics architecture, it must first resolve its own internal integration challenge.

The Navy adopted SAP's commercial suite, deploying SAP ERP Central Component (ECC) to support its Navy-wide Financial Information System. Configured and custom-developed by Wipro, the SAP FIS was dedicated to the nation by the defence minister in August 2012. It links Naval Headquarters with Command Headquarters, ships, and establishments across the country, providing visibility across budgeting, procurement, and accounting for over 600 units. It is SAP-native and theoretically extensible.

The Army, the largest service by a significant margin, also adopted SAP. The Computerised Inventory Control Group (CICG) under the Ordnance Services Directorate has implemented it across major ordnance and logistics depots, with RFID-tagged ammunition tracked through GS-1 India standards. In November 2023, SAP India recognised the CICG's deployment as one of the most extensive SAP ERP implementations within the Government of India. A programme of approximately ₹900 crore has been approved for broader rollout, including migration from SAP ECC to S/4HANA. However, the ERP has not yet extended beyond major depots. Field formations, forward supply depots, and unit-level supply chains still rely on legacy processes. For an army that must sustain operations at 18,000 feet on Siachen and in the riverine Sundarbans, deploying a data-centre-dependent ERP requires a nuanced thought.

The Army's Missing Maintenance Module

There is a further structural gap in the Army's ERP landscape that mirrors the IAF's IMMOLS-EMMS disconnect. The CICG's SAP deployment focuses on inventory management and supply chain visibility for the Ordnance Services Directorate. It does not include a Plant Maintenance (PM) module covering the Maintenance, Repair, and Overhaul functions managed by the Corps of Electronics and Mechanical Engineers (EME). The eight Army Base Workshops, which handle depot-level overhaul of tanks, infantry combat vehicles, artillery, and radars, operate outside the SAP system entirely. Maintenance scheduling, work-order tracking, and equipment lifecycle management at these workshops remain on legacy processes.

This gap is now attracting institutional attention. The Army's January 2026 MoU with the MSME Ministry to connect ABWs with 33 Technology Centres, L&T's recent partnership with the 510 Army Base Workshop for Pinaka launcher overhaul under a structured lifecycle management framework, and reports of plans to include a maintenance module within the broader S/4HANA migration programme all indicate that the Army recognises the deficit. But as of mid-2026, the world's third-largest army still needs a digital link between its inventory holdings and the condition of its equipment. The inventory system knows that a T-72 engine is in a depot; it does not know whether that engine has undergone an overhaul or is awaiting spares.

The Ticking Clock

Both the Army and Navy face a hard, external deadline. SAP mainstream support for ECC 6.0 (Enhancement Packages 6–8) ends on 31 December 2027, with extended maintenance available until 2030 at a premium. SAP's CEO has confirmed that there will be no further extensions. After 2030, no standard support exists. The Army, mid-migration on a ₹900-crore programme, must complete the S/4HANA transition across its depot network while extending coverage to field formations, all before the platform it currently runs goes dark. The Air Force is insulated from SAP's timeline, but IMMOLS, now over twenty years old, and e-MMS, approaching a decade of operation, face their own questions of architectural longevity, mutual integration, and joint interoperability.

No Layer Above

Three services – two on SAP at different stages of maturity, and one running two proprietary systems that do not talk to each other. And no integration layer above the three exists. The IDS, DMA, and future theatre commanders will have no system from which to answer the most basic questions a joint commander must answer on demand: What is the aggregate ammunition holding across services in the Northern Theatre? If the Army is consuming 12mm rounds faster than planned, can the system trigger cross-service replenishment from naval armament depots holding compatible stocks? In 2026, the answer is no.

The Joint Logistics Nodes at Mumbai, Guwahati, and Port Blair, operationalised in 2021, handle common provisioning under a lead service. Three additional JLN's are planned at Leh, West Bengal, and Tamil Nadu. But JLN's are organisational constructs, not technological ones. They share physical infrastructure, not data architectures. The US, which India's theatre model partly draws from, recognised this gap decades ago and built the Global Combat Support System (GCSS), a family of joint-level ERP systems fusing supply, maintenance, and transportation data across all services into a unified logistics information architecture. India needs to begin this conversation.

The Way Ahead

What is needed is not a replacement of the existing systems but a Joint Logistics Information Architecture (JLIA), a theatre-level federation platform that sits above them. It should federate, not centralise, data from IMMOLS, e-MMS, Army SAP, and Navy SAP into a common operating picture using standardised APIs. It must enforce a unified materiel cataloguing standard; the same 12mm round cannot carry three different catalogue numbers across services. It should provide theatre commanders with predictive analytics and AI-driven demand forecasting on sovereign; secure infrastructure built on the Defence Communication Network. International benchmarks place such platforms at \$100–300 million (₹850–2,500 crore), a fraction of what the three services have already spent individually on disconnected systems.

Three steps are immediately actionable. First, the CDS and DMA should commission an independent technical audit of all ERP and maintenance management systems across the three services, including the IAF's IMMOLS-EMMS gap and the Army's missing maintenance module, to assess integration readiness and data schema compatibility within six months. Second, the DMA should establish a Joint Logistics Information Cell, a small, empowered team drawn from all three services and institutions like C-DAC, to design the JLIA architecture and prototype integration between at least two systems within eighteen months. Third, the Army's S/4HANA migration programme should mandate inclusion of a Plant Maintenance module from inception, ensuring that the next

generation of the Army's ERP does not replicate the inventory-only limitation of the current deployment.

India's armed forces are preparing to fight jointly. Their logistics systems must be able to support that. The plumbing is not as inspiring as the architecture, but without it, the building will not stand in good form.