Transformation in Contact

Naval Postgraduate School

Abstract

To address a rapidly evolving battlespace, the Army introduced Transformation in Contact (TiC) to expedite capability delivery through commercial off-the-shelf (COTS) solutions and rapid prototyping. By fielding capabilities in an iterative, tranche-style framework, TiC aims to counter unique threats at the speed of relevance. This research analyzes two current TiC programs—Short Range Reconnaissance (SRR) and Infantry Squad Vehicle-Heavy (ISV-H)—to assess the scalability, operational impact, and long-term viability of this strategy for the broader Army Acquisition portfolio

Methods

- **Research Design:** Case study analysis of two TiC programs at different maturity phases: SRR and ISV-H.
- **Analytical Frameworks:**
  - **DOTmLPF-P Analysis:** Identifies friction points when transitioning to PoRs.
  - **Root Cause Analysis:** Isolates variables creating bottlenecks in program execution and scaling.
  - **Intentionality Analysis:** Evaluates design intent and calculated trade-offs.
- **Measures of Effectiveness (MOEs):** Assessed scalability against four criteria: Acquisition Velocity, Operational Reliability, Sustainment Burden, and User Integration/Usability.

DOTmLPF-P Analysis

Domain	Institutional Friction & Programmatic Impacts
Doctrine	Hardware outpaces formal guidance; units rely entirely on decentralized, interim TTPs.
Organization	Injects capabilities into existing formations to bypass the bureaucracy of force-structure changes.
Training	Constant commercial iteration creates a persistent training burden and risks knowledge loss during unit turnover.
Materiel	Achieves rapid velocity but introduces proprietary "black-box" vulnerabilities and shifts testing burdens to end-users.
Leadership	Demands a highly risk-tolerant culture; current PME lacks the technical depth for rapid integration.
Personnel	Avoids creating new MOSs; shifts the technical burden onto standard maneuver personnel who lack diagnostic data rights.
Facilities	Divests from permanent military depots; relies entirely on tactical field repair & contractor support.
Policy	Agile pathways (OTAs/MTAs) successfully bypass delays, but legacy PPBE frameworks struggle to synchronize with continuous iteration.

Results & Impact

- **Unprecedented Velocity:** TiC successfully compressed fielding timelines to <1 year by leveraging agile authorities (OTAs and CSOs) rather than traditional FAR-based contracts.
- **Scalability Constraints:** TiC is highly effective but not universally scalable; its success depends on high TRLs and industrial surge capacity.
- **The "Black-Box" Sustainment Burden:** Heavy reliance on COTS technology introduces closed, proprietary software architectures. This prevents organic maintenance and creates a permanent tether to OEM logistics.
- **Calculated Programmatic Friction:** The systemic challenges are not unintended failures but deliberate trade-offs that prioritize immediate tactical readiness over long-term institutional supportability.

Future Research

- **Long-Term Sustainment Tracking:** Conduct 5 to 10-year longitudinal studies to measure the true life-cycle costs and operational readiness rates of continuous commercial iteration.
- **The Cost of Divestment:** Investigate if the savings from minimizing depot level sustainment is ultimately offset by the recurring costs of rapidly replacing tranches and relying on contractor logistics.
- **Scalability to Low-TRL Systems:** Assess whether the rapid-fielding mechanisms that make TiC successful for COTS platforms can withstand the lengthy, rigorous R&D timelines required for custom, highly developmental defense systems.

Samuel Flohr, MAJ, USA
Evan Hearn, MAJ USA
Sean Scally, CPT, USA
Advisors: Bob Mortlock
Raymond Jones