



# ***Expediting Capabilities to the Soldier:*** **Requirements to Fielding**

**LTG Michael A. Vane (Panel Chair)**

**MG Nickolas G. Justice**

**BG Peter N. Fuller**

**Mr. Kevin Fahey**

**Mr. Charles E. Dean**

**21 Apr 2010**

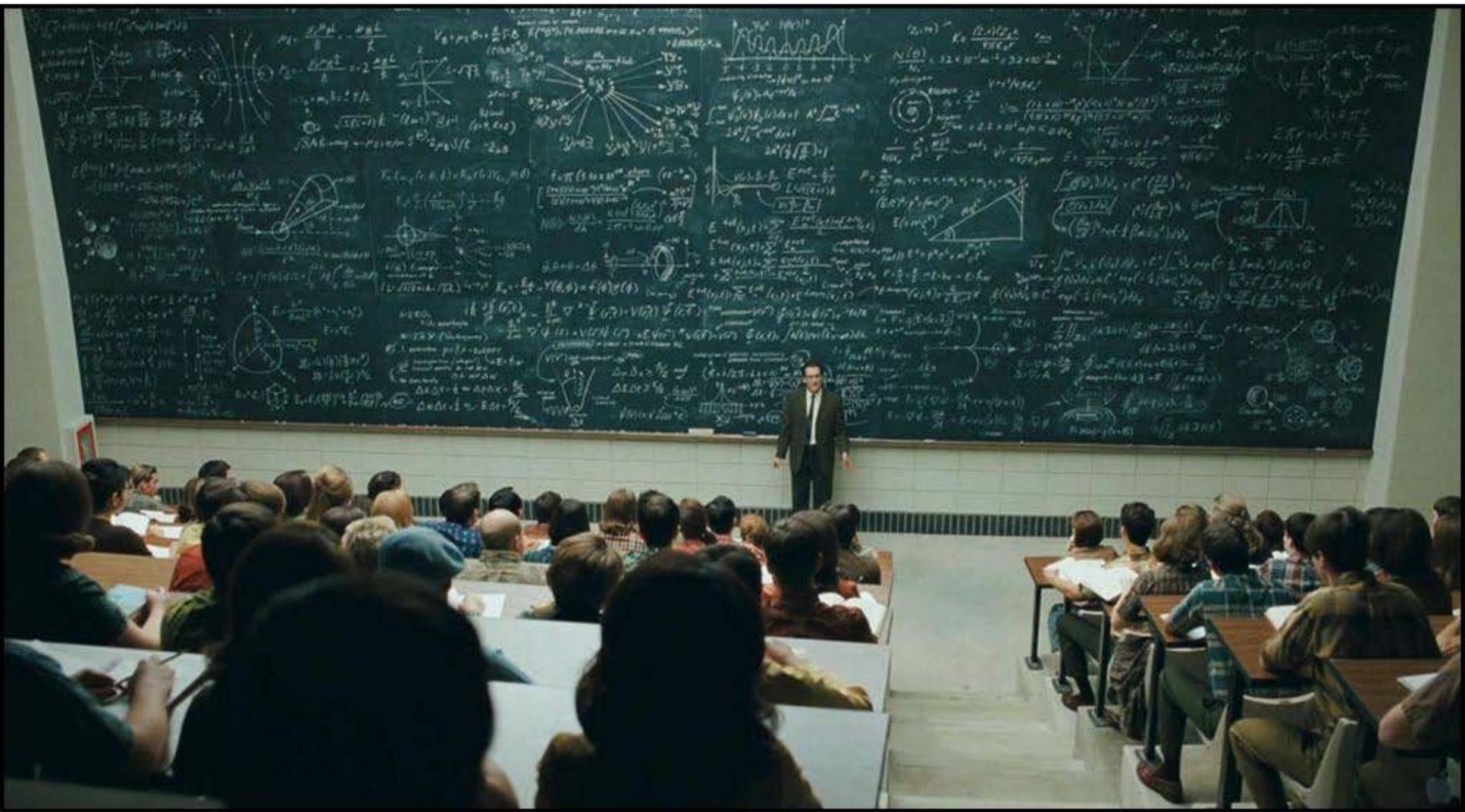


# **Operational Adaptation through Affordable Modernization**

**LTG Michael A. Vane**

**Deputy Commanding General, Futures, and  
Director, Army Capabilities Integration Center  
US Army Training and Doctrine Command**

**21 Apr 2010**





# What We Need Army Forces To Do



- Respond to a broad range of threats and challenges
- Operate under increasing uncertainty and complexity, most often in decentralized operations
- Defeat hybrid threats
- Conduct effective reconnaissance operations to develop the situation
- Perform wide area security operations
- Overcome sophisticated anti-access technologies
- Integrate combined arms, joint, interagency, & multi-national capabilities
- Build Partner Capacity and provide Security Force Assistance
- Consolidate gains and sustain efforts over time

*...operationally adaptive...*



# Lessons Learned



- Stay linked to the “Edge”
- Modernization is across DOTMLPF
- Must adapt faster than the enemy
- Accelerated methods work
- Must stay grounded in current fight
- Deliberate process too slow
- Institutional Army lags
- Risk and value added important for decisions



# ***Operational Adaptability through Affordable Force Modernization***



**Establish baselines**

**Innovate – when opportunities meet needs**

**Learn, adapt, learn, adapt...**

**Converge experimentation, exercises, and testing**

**Soldiers earlier**

**Establish constraints**

**Cost / Benefit**

**Risk**

**Speed matters**

***Buy fewer, more often***

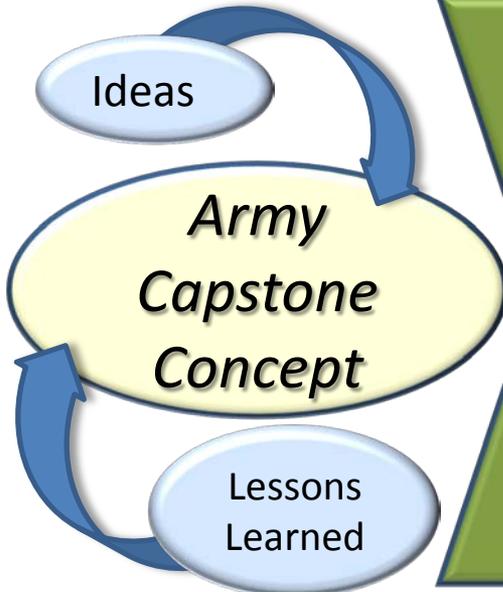


# Concepts to Capabilities...



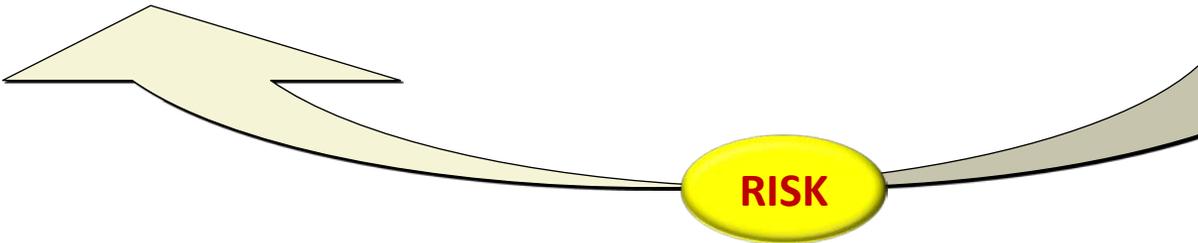
CURRENT

FUTURE



*versatile mix ...tailorable ...networked ...rotational cycle... sustained flow of ready forces for full spectrum opns ...hedge against unexpected ...sustain all-volunteer force*

- Capabilities to Joint Force Commanders**
- organizations of
  - well-trained soldiers
  - possessing right skill sets
  - with superior equipment
  - employing sound doctrine
  - led by competent and confident leaders who understand their organizations' potential
  - and are empowered in combat by superior information
  - supported by state-of-art facilities





**U.S. Army Research, Development and Engineering Command**



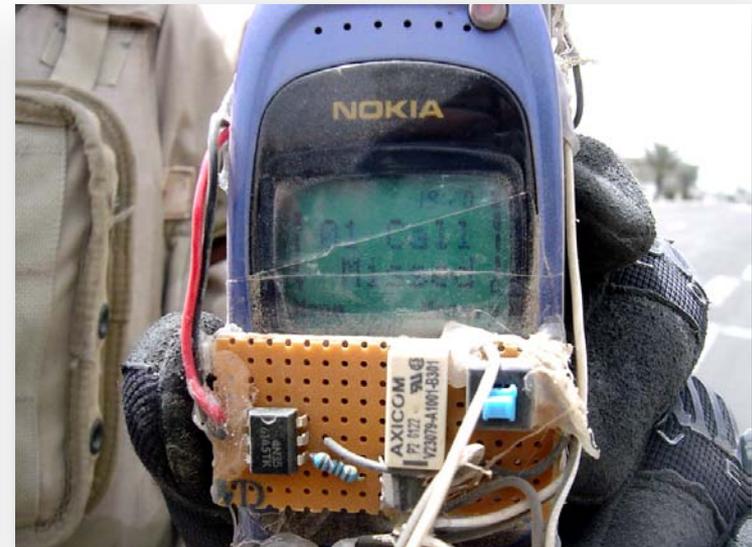
**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

*National Defense  
Industrial Association  
Executive Seminar  
21 April 2010*

*MG Nick Justice  
Commander, RDECOM  
Expediting Capabilities to the  
Soldier: Requirements to Fielding*



# The Challenge

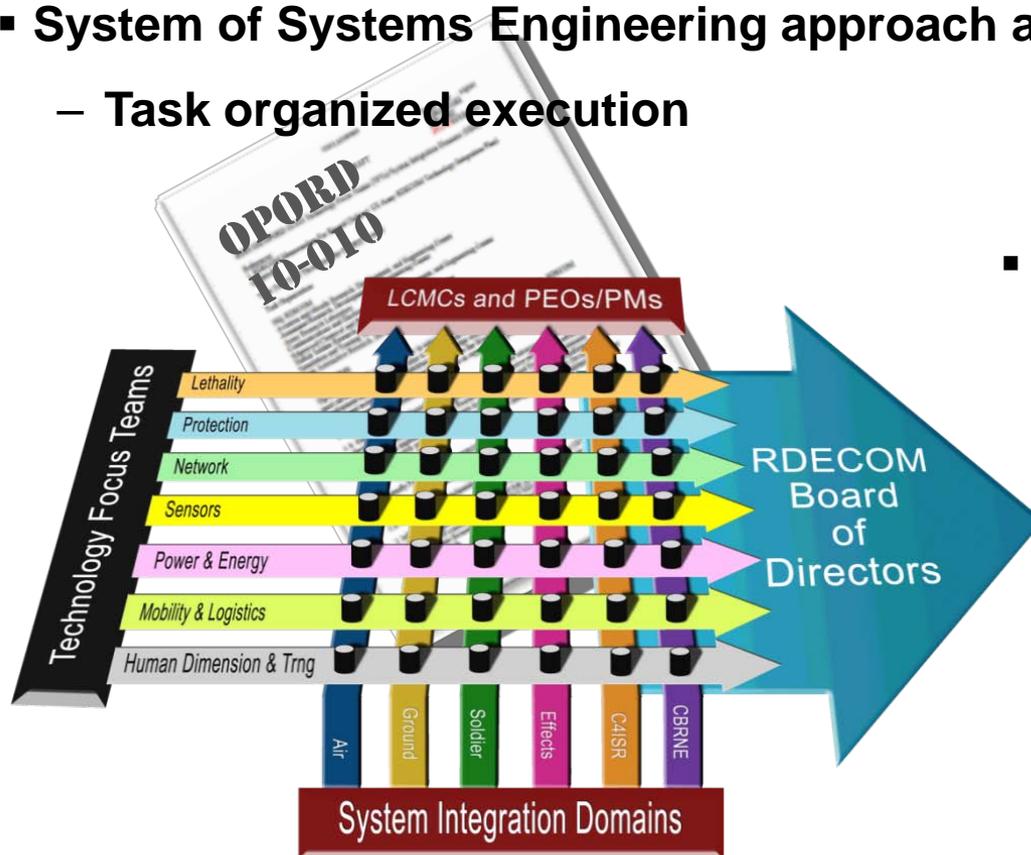


**Industrial Age  
Meets  
Information Age**



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

- Enterprise process applied to all RDECOM efforts for all timeframes (rapid, near, mid, and far term)
- System of Systems Engineering approach aligned to ARFORGEN
  - Task organized execution



- Common Operating Picture (COP) for RDECOM mission space:

- Primary Interface to: TRADOC, LCMCs, PEOs, COCOMs, Army Leadership
- **Capability Needs:** System Integration Domains (SIDs)
- **Technology Needs:** Technology Focus Teams (TFTs)

**Research for the Future, Design for Change**



*Keeping the Army on the Cutting Edge of Technology*



# CENTER OF OUR STRENGTH

Program Executive Office Soldier

## PEO Soldier Overview For NDIA Panel

### Requirements to Fielding

21 April 2010

Brigadier General Peter N. Fuller  
Program Executive Officer Soldier

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703-704-3446



# PEO Soldier Mission





# *Impacts to the Soldier*



# PEO Soldier Portfolio

≈ 468 Products/Programs

## Lethality



## Survivability



## Operating Environment

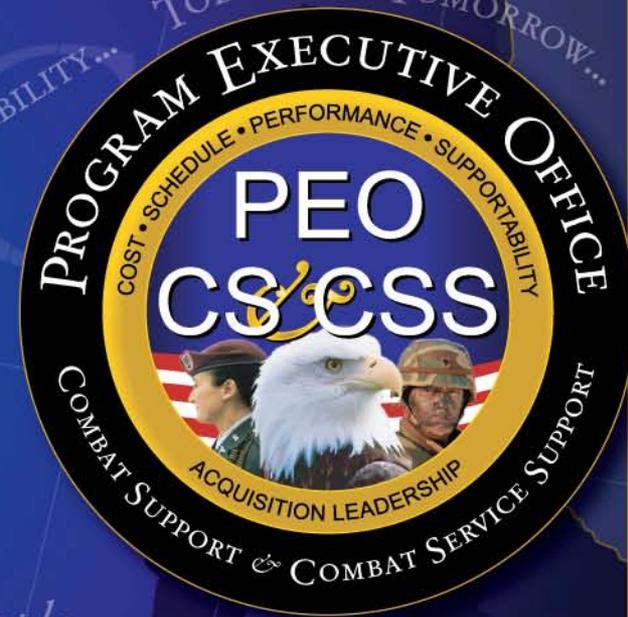


- Integration of capability
- Future funding profile
- Modernization vs. sustainment
- Early assessments of capability
- Think out of the box



# Overview of Program Executive Office Combat Support & Combat Service Support

EQUIP OUR JOINT WARFIGHTERS WITH THE WORLD'S BEST CAPABILITY... TODAY AND TOMORROW...



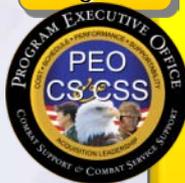
*The Right People...  
The Right Product...  
At the Right Time...  
From the Right Source...  
At the Right Price*

**MR. KEVIN M. FAHEY**  
Program Executive Officer  
Combat Support & Combat Service Support



# PEO CS&SS Organization

500+ Programs



**Program Executive Officer**  
*Mr. Kevin Fahey*

**Deputy PEO**  
*Mr. Thomas Bagwell, Jr.*

**Deputy PEO ~ AL&T**  
*COL Michael Receniello*

**Chief of Staff / Executive Officer**  
*Ms. Linda Reichlmayr*



145 Programs



**Force Projection**  
PM: Ms. Patricia Plotkowski  
DPM: Mr. Steve Roberts



**Product Manager Bridging**  
*Mr. David Marck*



**Product Manager Combat Engineer/Material Handling Equipment**  
*LTC Darrell Bennis*



**Product Manager Force Sustainment Systems**  
*LTC Daryl Harger*



**Product Manager Petroleum & Water Systems**  
*LTC Dariel Mayfield*



**Product Director Army Watercraft Systems**  
*Mr. Fred Williams*

210 Programs



**Joint Combat Support Systems**  
PM: COL John Myers  
DPM: Mr. Dennis Mazurek



**Product Manager (USA) Joint Light Tactical Vehicles**  
*LTC Wolfgang Petermann*

**Product Manager (USMC) Joint Light Tactical Vehicles**  
*LtCol Ruben Garza*



**Product Manager Sets, Kits, Outfits & Tools**  
*LTC Brian Tachias*



**Product Director Test, Measurement, & Diagnostic Equipment**  
*Mr. George Mitchell*

38 Programs



**Mine Resistant Ambush Protected Vehicles**  
PM: COL Kevin Peterson  
DPM: COL Jeffrey Carr

**Product Manager MRAP - All Terrain Vehicle**  
*LTC Coll Haddon*

**Product Manager Joint Logistics**  
*LTC John Conway*

**Product Manager MRAP Vehicle Systems**  
*LTC Andrew Oderkirk*



**Product Manager Assured Mobility Systems**  
*LTC Charles Dease*

98 Programs



**Tactical Vehicles**  
PM: COL David Bassett  
DPM: Mr. Tony Shaw



**Product Manager Light Tactical Vehicles**  
*Mr. Dennis Haag*



**Product Manager Medium Tactical Vehicles**  
*LTC Shane Fullmer*



**Product Manager Heavy Tactical Vehicles**  
*LTC Allen Johnson*



**Product Director Armored Security Vehicles**  
*LTC Kent Moorhouse*

# Closing the Gap from Need to POR

*At best, we procure technologies that are already 7-10 years old at the time of LRIP*

Charlie Dean

# Industry Observations

Today's requirements and funding processes need to be relooked to recreate a more aggressive, more combat-focused approach to support this immediate fight.

- Within the existing JCIDS process, requirement approval speed is far too slow and a completion timeline is not mandated above TRADOC. This can be greatly improved without changing DoD5000.
- Validated ONSs are looked at individually and do not systematically feed into TRADOC recognizing these needs as enduring Capability Gaps.
- TRADOC centers of excellence and industry are not habitually/systematically consulted in Army level ONS validation.
- Generally, no funding is systematically set aside to handle rapid test and fielding of Disruptive Technologies.
- “Supplementals are going away,” so how will quick wins be addressed in the future?
- Experimentation is not an accelerated path to fielding yet it is encouraged though expensive to Industry.
- PMs and Combat Developers often say: “The field is not asking for your demonstrated capability...” Result: little to no technology push to the field.

# Forward Velocity of Competing Acquisition Systems

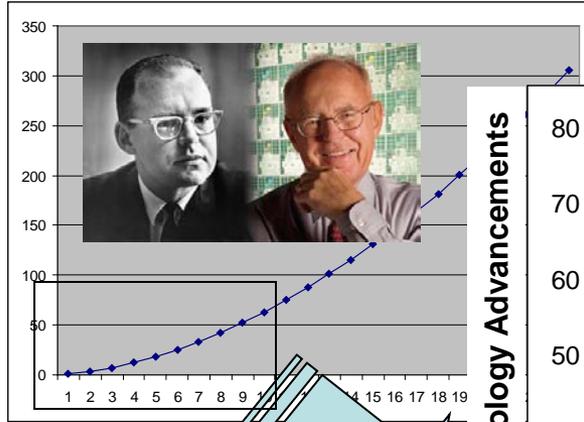


Likely equipped with new technologies in < 6 months from time of recognized need if funding is available.



Can be ONS equipped with limited quantities of new technologies within 1-2 years, at best, from time of recognized need if funding is available. Most of the force is not impacted by these new technologies until many years later when the technology might become a program of record.

# How Can We Dramatically Close the Gap?

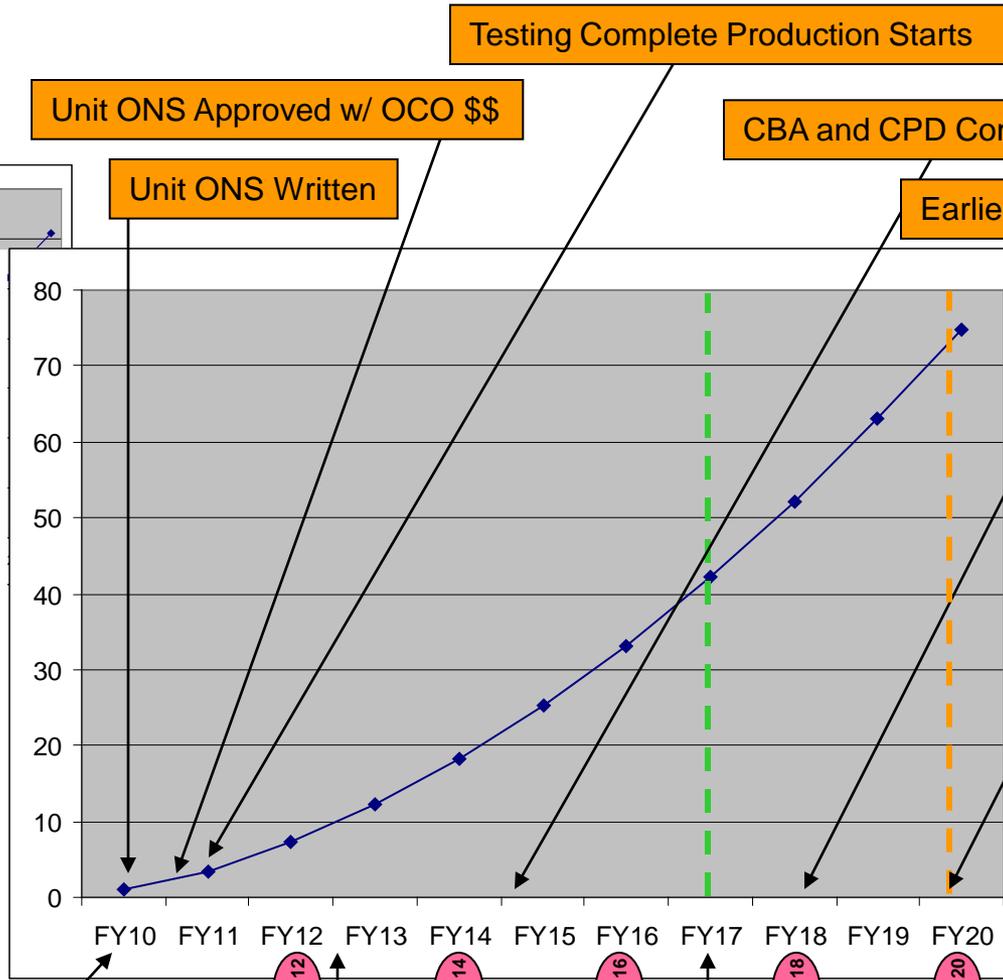


Intel co-founder Gordon Moore was visionary. In 1965, his prediction, popularly known as Moore's Law, states that the number of transistors on a chip will double about every two years.



Technology Need Recognized

Moore's Pace of Technology Advancements



Over here, we use a different system

Legend

JCIDS

ONS

# How Can We Dramatically Close the Gap?

## Requirements:

- In the interest of rapid acquisition and supporting the current fight, the Army could create a Rapid Requirement Process and mandate the total CBA to approved CPD timeline < 6 months total.
- Create windows along the CPD review and approval path for allowed updates for advances in technology so these CPD updates don't require restarting the process from scratch.
- Consider assistance from Industry as partners/technical advisors to TRADOC centers of excellence so that draft requirements reflect near-term technical capabilities.
- Tie ONSs and groupings of ONSs to Capability Based Assessments to learn of and recognize current capability gaps. Review ONSs monthly within TRADOC for new or evolving capability gaps. ONSs are a current voice of the field Army.

## Funding:

- Establish an aggressive program to fund getting current technologies into the fight in the absence of supplementals.
- Consider Wedges in all PM budgets for rapid acquisition of game-changing capabilities.

## Technology Advances:

- All PMs should be leaders in their craft, not managers of a project, and should seek knowledge on advances, pushing this information to the field for input and possible fielding.
- All PMs should FIGHT to get improvement funding, shorten test timelines (same standards), and constantly improve the capability of their customers wherever and whenever they can.

## Industry Can:

- Push to reduce developmental timelines by taking reasonable risks.
- Provide open feedback to PMs, RDECOM, and TRADOC on lessons learned and evolving capabilities.
- Better provide technical advice to TRADOC centers of excellence in order to educate on what is possible today as well as tomorrow.



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