COE Enables
- Increased Capability Agility
- Reduced Life Cycle Costs
- Flexible Standards-based Infrastructure
- Enhanced Cyber Protection

EXAMPLE SERVICES
- Collaboration, e.g., Chat
- Enterprise E-Mail
- Enterprise Query
- Common Map Display
- Fusion
- Data Mediation
- Interoperability Gateway

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Command Post Computing Environment (CP CE)
• Addresses the current challenges that Commanders face to "mentally fuse" the digital information displayed on multiple system viewers for the warfighting functions of fires, logistics, intelligence, airspace management and maneuver.
• Consolidates these separate capabilities and displays them on a common, geospatial digital map hosted on a single workstation.

Mounted Computing Environment (MCE)
• JBC-P is the foundation for MCE
• Delivers intuitive situational awareness capabilities to the Soldier (will field in FY 15)
• Includes Google Earth-like interface and real-time chat rooms; Soldiers can quickly zoom in to view precise locations, use icons to pinpoint improvised explosive devices on a map, and use instant messaging to call for medics.

Mounted Android Computing Environment (MACE)
– Part of the MCE implementation; enables the rapid apps development that work across handhelds, radios, tactical vehicles and the command post.
## Long Range Planning

### FY2013 - FY2021

#### Integration Baseline

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### Baseline Capabilities

- **Unified Collaboration**
  - Increase the shared situation awareness of the commander and staff
  - Improve the ability of the command and staff to develop situational understanding
  - Allow commander's and staffs to collaborate from geographically dispersed locations
  - Reduces the need to travel to command posts

- **Standard Sharable Geospatial**
  - Ensures that organizations are operating from a common set of map data
  - Common geospatial standards and data products reduce the need for multiple formats of products and data sets

- **Unified Data**
  - Commander's, staff's, and systems utilize common data standards, vocabularies, ontologies and formats
  - Unified data allows the use of analytical capabilities that improve the situational understanding of commander's and staffs
  - Unified data reduces the need for multiple layers of mediation and transformation

- **Assured Delivery & On The Move**
  - Traceability of the data back to the or originator to facilitate situational understanding and decision making
  - Assurance that the data presented to the commander and staff is valid and assured
  - Mission Command function on the move. [NIE Gap #1 and NeMC ICD Gap #2]

### Baseline Capabilities

- **Common Virtual Server implementation**
- **Converged Server Hardware**
- **Rich Web Client**
- **Unified Collaboration**
- **Common Operating Picture**
- **Common Map**
- **Tactical Appstore**
- **Cloud Analytics**
- **Disconnected Workstation and Web-client**
- **Joint interoperability**
- **Enhanced Common Operating Picture**
- **Enhanced Common Operating Picture**
- **Unified Data**
- **Disconnected Infrastructure services**
- **Enhanced Performance**
- **Operational Adaptability**

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*23 September 2014 UNCLASSIFIED | For Public Release*
There’s a tactical app for that

Creating a mission command information sharing environment from garrison to theater and company to corps
Current and Emerging Technologies

CP CE and MCE enable collaboration between government, industry, and Science & Technology in one development environment to develop emerging technologies.

Web Applications (Apps)
- State-of-the-art, interoperable technologies will be easier and more cost effective to integrate using Software Development Kits (SDKs).
- SDKs are in place for both CP CE (leverages the Ozone widget framework (OWF) for apps in the command post) and Mounted Android Computing Environment (MACE) (leverages the Android framework for apps inside tactical vehicles).
**Unified Data**
- Common data standards, vocabulary, formats, ontology; Cell level classification; Robust mechanisms to share data in the technically challenging tactical environment

**Disconnected Intermittent Latent (DIL) Solutions**
- Uninterrupted operations for thin clients in the event of a network outage or the requirement to rapidly relocate a command post

**MACE Synch**
- Mechanism to share individual pieces of data (smart synchronization) in a network constrained DIL environment.
- Functions between mounted systems and command post servers
- Will enable Unified Data synchronization in the tactical environment
Current & Emerging Technologies

Single sign-on / PKI
• Practical authentication solutions for the battlefield

Information Assurance (IA)
• Simplify IA across multiple systems to reduce administrative burden and cost while maintaining secure environment

Tactical Server Infrastructure (TSI)
• Reduced server footprint (Quantity, Size weight and power (SWAP))
• Simpler, reduced training- Low virtual infrastructure administration overhead. e.g., VMWARE
• Remote administration
Mobile Handheld Fires Application (MHFA)

- Managed by FSC2, developed by the U. S. Army Aviation and Missile Research Development and Engineering Center (AMRDEC).
- Smartphone based system used by forward observers to support precision fires; GPS and Geospatial information enables soldiers to identify targets, establish location and transmit up the fire support chain.
- Expected to field in late FY16

Next Gen Blue Force Tracking Network (BFT)

- Support the JBC-P and FBCB2 family of situational awareness and mounted mission command systems
- Improved, efficient and effective communications beyond line-of-sight; Assured capability to key leaders to support MC applications
- Exploit government owned constellation
Summary

- PM MC provides intuitive, adaptive mission command and situational awareness capabilities for the command post and platform that enable mission execution by commanders and leaders at all levels to be more effective, agile and decisive.
- PM MC fields the Command Post Computing Environment (CP CE) and the Mounted Computing Environment (MCE); facilitates interoperability between multiple CEs.
- PM MC plans to simplify and optimize its capabilities to ensure commanders and Soldiers have the information they need to execute decisive actions anytime, anywhere, and on any device.
- PM MC will achieve this simplification by strengthening industry partnerships and using agile and effective development processes.