Project Initiation

- A compilation of governance/policy and technical guidance artifacts to assist stakeholders with MCE app project management, execution & development
  - Governance artifacts:
    - A core document that can be specialized to aid in planning, execution & management of MCE-based capabilities
    - Document templates for required customer-provided deliverables
    - Programmatic/technical review checklists
    - Business process modeling notation governance flowcharts
  - MCE Technical Guidance:
    - Advisor document that enumerates the ways in which to develop upon the MCE common software infrastructure and their associated, requisite stakeholder responsibilities
    - Technical document itemizing how to be MCE compliant in the development & testing phases
# Project Initiation Checklist

## Notional Schedule

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### Project Definition Phase

**Entrance criteria for DP1:**
- MCE customer on-boarded
- Project Charter complete

**Exit Criteria:**
- Project charter approved
- Project endorsed by MCE AA

### Scope Definition Phase

**Entrance criteria for DP2:**
- Customer-funded project endorsed by MCE AA
- IPT formed
- CONOPS defined/understood
- Draft use cases defined
- Draft top-level requirements identified (L1/L2)
- Technical COAs identified
- Initial TASK package completed
- Initial WBS created

**Exit Criteria:**
- Scope defined
- Project scope approved by SEIPT

### Plan Definition Phase

**Entrance criteria for DP3:**
- Project scope endorsed by SEIPT
- Technical architecture/preferred COA selected
- WBS defined
- ROM estimate
- Customer MOA defined (to include budget/funding agreements)
- Project plan/schedule created

**Exit Criteria:**
- MOA signed
- Project charter updated
- Project plan approved by MCE AA
CP CE Technical Challenges
CP CE v1 and Beyond
CP CE Definitions

- **Capability** is a combination of software, data, hardware, interfaces and heuristics that supports and enables the community of applications to perform a function utilizing common infrastructure.

- **Application** is a set of software business logic and rules that enables the Warfighter Function to perform their duties.

- **Infrastructure** is software and/or hardware that is a shared resource, which performs a specific, but common, utility (e.g. shared geospatial). On top of which, applications will implement business logic and rules in support of their WfF.
Ozone Widget Framework

CP CE V2+
- Decomposing existing capabilities into HTML5 “Widgets”
- Providing JC2 compliance (IA, OWF 7)
- Utilizing the Common 3D Map
- Inter-widget communication

CP CE V3+
- “Wrapping” OWF widgets into MACE environment to create “Apps” to be run on Android OS
- Responsive Web Design (i.e. the widget/app is usable on whichever platform it is running on)
Responsive Web Design

Designing single Applications that run in multiple environments (dismount, mounted, and in the command post) that configure their UI to the environment

CP CE v2: Workstations and Monitors in a CP
- Web Clients (ala Ozone Widget Framework)

CP CE v3: mFoCS (Mounted Family of Computing Systems)
- MACE (ala Android Apps)
- Touch screen, stylus, organic interfaces

Handheld Devices
- Android Apps
- Hand-held Tablet and Phone sized touch screens, stylus, on the move operations
Unified Data

• Common Storage
  – Single storage solution on the Tactical Server Infrastructure (TSI)
  – All applications / apps/ widgets will store and access their data in the UD

• Management
  – Cell-Level security tagging
  – Metadata tagging
  – Data Archive

• Access
  – Single set of ingest / retrieval services
  – Able to run queries to retrieve either specific data or sets of data elements

• Data Exchanges
  – Deprecation of DDS exchanges within the Command Post
  – Use of SEAM data model
Single Sign On

- Identity Store Federation
- 2-Factor Authentication
- Hard-token solutions
  - PLI Beacon
  - CAC-like interface
  - Biometrics
- Role-Based Access Control
  - Widgets (based on responsibility)
  - Data (Classification, Read/Write/view privileges, etc…)
  - Login
  - LDAP
  - Automated initialization / update of data products (LDIF, C2R)
DIL Environment

- Android Apps and Ozone Widgets will function in a Disconnected Intermittent Latent (DIL) environment
  - Web services over troubled connections
  - Data synchronization – What data over what comms?
  - Lossy connections – error correction routines
  - Network aware apps
  - Data Caching – store and forward
  - Low-bandwidth, highly latent and lossy data protocols
    * Unicast Dissemination Protocol messaging
    * Smarter TCP protocols
  - Stand-alone Android Applications
  - Stand-alone OWF Widgets
Virtual Assistant

Apple™ Siri-like capability

• Voice Recognition

• Workflow automation
  – Simple tasks: sending a message to a recipient, Mayday, launching apps, reading messages
  – Complex tasks: Pulling in Datafeeds, submitting a trouble ticket, broadcast messages to a group of recipient, querying the system for analysis

• Data Analytics
  – Uses Unified Data (UD) to enable standardized queries to be performed on a large set of data
  – Only the result is returned to the user and is either read aloud or displayed on the screen
  – Ex. “When can I expect my next fuel shipment to arrive?”

• User interface manipulation
  – Map changes (ex. “Zoom in on Target Alpha”)
  – Conjuring UI boxes (ex. “Show me more information on Target Alpha”)
  – Etc…
Command Post Cloud at v2

- The CP CE implementation plan provides National Institute of Science and Technology (NIST)-defined cloud capabilities over the CP CE v2 and 3 baselines
  - Essential Cloud Characteristic
    - **Resource pooling**: The provider’s computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand.
  - Cloud Service Model:
    - **Infrastructure As A Service (IAAS)**\(^1\) The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).

\(^1\) ref. NIST Special Publication 800-145
Command Post Cloud at v3

• **Essential Cloud Characteristics**
  
  • **Resource Pooling** - computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand.

  • **Rapid elasticity** - Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand.

  • **Measured service** - Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service.

  • **Broad network access** - Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations)

ref. NIST Special Publication 800-145
Cloud Service Model:

- **IAAS and Platform As A Service (PAAS)**: The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

ref. NIST Special Publication 800-145
Questions