



Biometric Enabling Capabilities Increment 1 (BEC Inc 1) Information Exchange

LTC Eric Pavlick
PM, Biometric Enabling Capabilities

30 JULY 2013

BEC Inc 1 Agenda

- **Program Overview** – LTC Eric Pavlick, Product Manager (PM) BEC
- **BEC Inc 1 Key Capabilities** – Mr. Will Graves, Chief Engineer, PM BEC
- **Challenges Requiring Industry Feedback** – Mr. Will Graves, Chief Engineer, PM BEC
- **Closing Remarks** – LTC Eric Pavlick, PM BEC

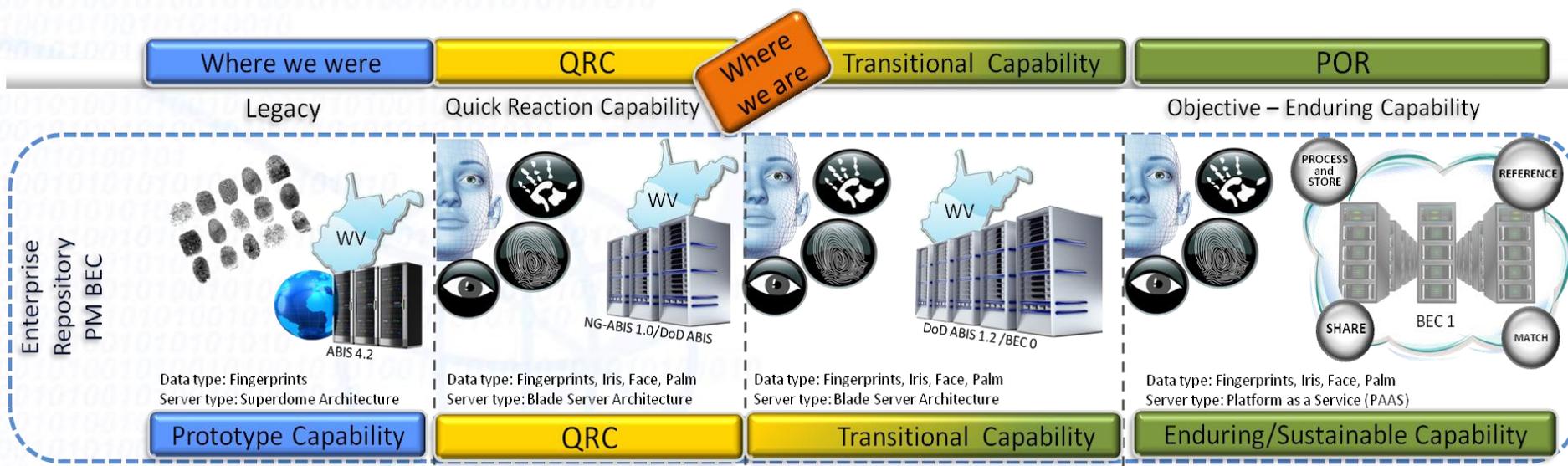
Objectives of Industry Information Exchange

- Exchange information on capabilities to meet BEC Inc 1 and seek industry's feedback on top level requirements
- Solicit information on the availability of Commercial-off-the-Shelf (COTS) products to meet BEC Inc 1 top-level requirements
- Solicit information on limitations and risks associated with known top-level requirements
- Solicit industry input for strategies or enhancements to consider to meet the Government's requirements in relation to risks, cost drivers, scheduling/methodology, and affordability
- Maximize industry participation
- Identify alternative approaches

BEC Inc 1 Program Overview

- Demonstrate technical capability to process, match, store, share, reference, and manage standardized biometrics and related contextual data in the authoritative database
- Support Biometric Modalities, which include: Fingerprint, Latent, Palm Print, Iris, and Facial Recognition
- Support full spectrum of DoD missions
- Provide fundamental functions that deliver critical information to directly supports user decide and/or act requirements
- Provide user-customizable watchlists
- Achieve Interoperability with Department of Homeland Security (DHS), Department of Justice (DoJ), and external agencies

Road to BEC Inc 1



Acronym List

POR: Program of Record
 ABIS: Automated Biometric Identification System
 NG-ABIS: Next Generation ABIS
 QRC: Quick Reaction Capability

BEC Product Comparisons



		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BEC Inc 0	Status Quo (1.0)	Gallery size growth close to system capacity	System capacity has been reached, hardware past end-of-life, COTS software support not available									
	Status Quo (1.2)*	Gallery size and daily transaction throughput requirements met, system scalability available			Matching core software end-of-life and software support sun setting		System capacity has been reached, COTS software support not available					
BEC Inc 1	Army data Center				Pre- MS B, Pre-Engineering, Manufacturing & Development (EMD) Phase, EMD Phase, Critical Design, Development and Testing		Deployment (MS-C), BEC software application sustainment, platform sustainment (hardware, OS, and web servers) responsibility transferred to the service provider.					
	Private Cloud				Pre- MS B, Pre-Engineering, Manufacturing & Development (EMD) Phase, EMD Phase, Critical Design, Development and Testing		Deployment (MS-C), BEC software application sustainment, platform sustainment (hardware, OS, and web servers) responsibility transferred to the service provider.					

* Matching core software replacement requires re-architecture of system

DoD ABIS v1.2 (BEC Inc 0) will reach end of life in FY17

We must invest in BEC Inc 1 to sustain the authoritative DoD biometrics repository

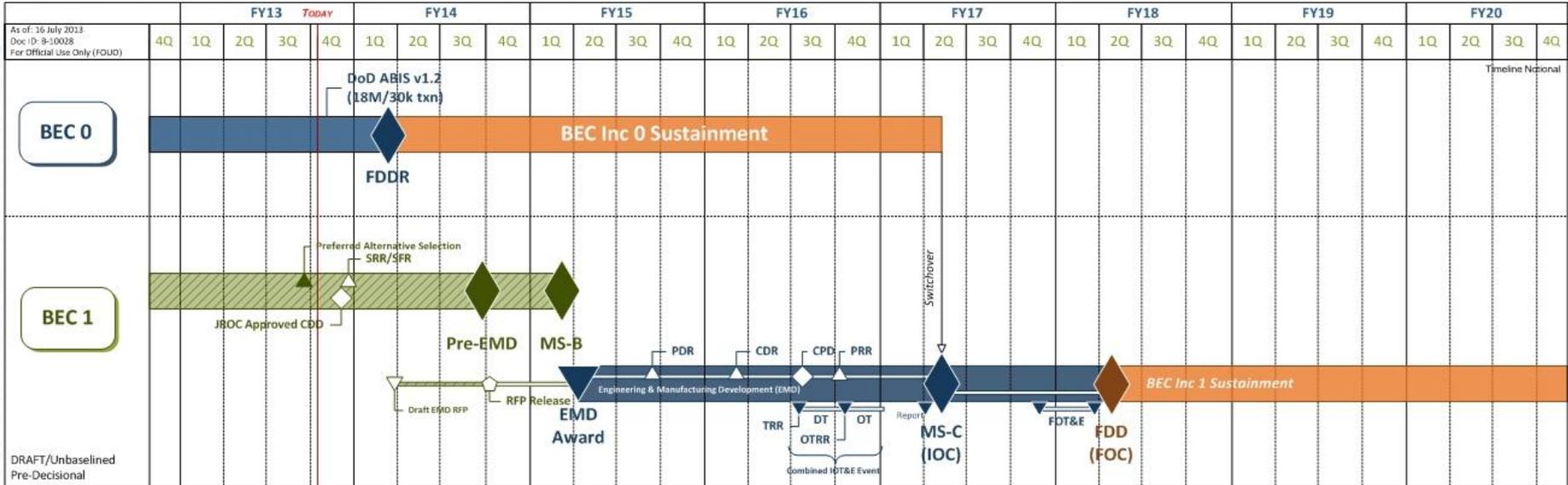
Acronym List

BEC Inc : Biometrics Enabling Capability Increment
 COTS: Commercial Off-The-Shelf
 DoD ABIS: Department of Defense Automated Biometric Identification System
 MS B: Milestone B
 MS C: Milestone C
 OS: Operating System

Legend

- Capability meets/exceeds requirements
- Capability at risk of meeting requirements
- Capability no longer meets requirements

BEC Inc 1 Notional Schedule



Schedule is the key driver to ensure availability of the authoritative DoD biometrics repository

Acronym List

BEC Inc : Biometrics Enabling Capability Increment
 CDD : Capability Development Document
 CDR: Critical Design Review
 CPD: Capability Production Document
 DoD ABIS: Department of Defense Automated Biometric Identification System
 EMD: Engineering, Manufacturing, & Development
 DT: Developmental Testing
 FDD/R: Full Deployment Decision Review

FOC: Full Operational Capability
 FOT&E: Follow On Operational Test & Evaluation
 IOC: Initial Operating Capability
 IOT&E : Initial Operational Test & Evaluation
 JROC: Joint Requirements Oversight Council
 MS B: Milestone B
 MS C: Milestone C
 OT: Operational Testing

OTRR: Operational Test Readiness Review
 PDR: Preliminary Design Review
 PRR: Production Readiness Review
 RFP: Request for Proposal
 SFR: System Functional Review
 SRR: System Requirements Review
 TRR: Test Readiness Review

BEC Inc 1 Top-Level Requirements

Modalities	Storage	Submissions	Match Response	Match Processing	Bulk Enrollments	Watchlist	Data Recovery	Access/ Operational Availability (OA)	Standards/ Privacy/ Information Assurance
<ul style="list-style-type: none"> •2D face, finger, iris, palm, and latent print Examination 	<ul style="list-style-type: none"> •50 million biometrics DoD EBTS enrollments, scalable to 100 Million biometrics DoD EBTS enrollments 	<ul style="list-style-type: none"> •45,000 transactions per day, scalable to 160,000 transactions per day 	<ul style="list-style-type: none"> •Automatic High Priority match/no match < 5 Min (Up to 9,000/day) 	<ul style="list-style-type: none"> •Query database using contextual or biographic data fields. •Fusion matching for combination scores of multiple modalities. 	<ul style="list-style-type: none"> •Process 10K Bulk Enrollments/ Fingerprint Cards a day from non-network submissions. 	<ul style="list-style-type: none"> •Multi-modal watchlist that contains template biometrics records and is customizable by users including choice of templates or images. 	<ul style="list-style-type: none"> •COOP - MAC 2 Sensitive Certification (Mission/ Business Essential functions < 24 hrs, Receive/Store submissions < 4 hrs.) 	<ul style="list-style-type: none"> •Support NIPR/SIPR Web Access • OA > 98% 	<ul style="list-style-type: none"> •Support DISR and DoD EBTS standards and backwards compatibility. •Comply with privacy and identity protection policies. •Comply with applicable Federal, DoD and Army information assurance policies.

Must be interoperable throughout DoD, other federal agencies and international partners

Acronym List

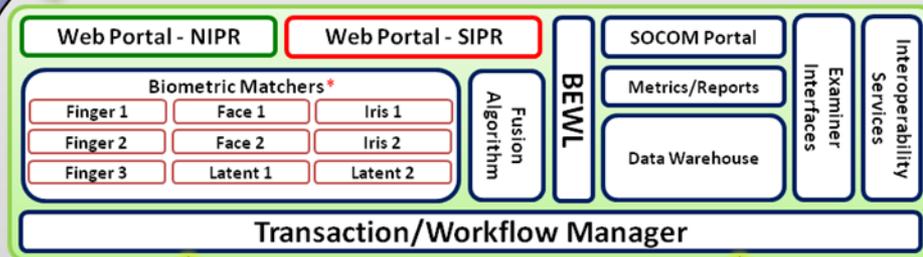
COOP: Continuity of Operations
 DISR: DOD Information Technology Standards and Profile Registry
 EBTS: Electronic Biometric Transmission Specifications
 MAC II: Mission Assurance Category
 NIPR: Non-Classified Internet Protocol Router
 SIPR: Secret Internet Protocol Router

PM BEC Engineering Approach

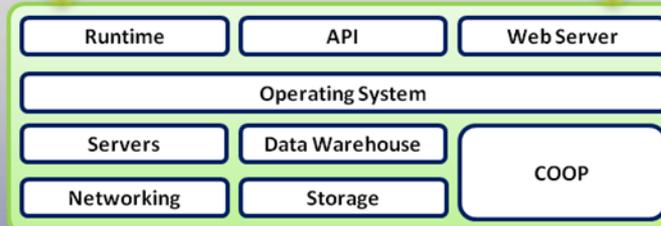
Capability-based software development decoupled from infrastructure solutions

Enables

Developer/System Integrator



Notional services depicted



Notional services depicted

Army Data Center/
Cloud Provider
(Solution TBD)

Enables

Long-term scalability, flexibility and cost savings through platform service provider



Users/
Biometric Examiner



Acronym List
 API: Application Programming Interface
 BEWL: Biometrically Enabled WatchList
 COOP: Continuity of Operations
 NIPR: Non-Classified Internet Protocol Router
 SIPR: Secret Internet Protocol Router
 SOCOM: Special Operations Command

Areas of Interest: Industry Feedback

Available COTS Products should focus on:

1. Single- and Multi-Biometric Fusion solutions to increase confidence in identifying individuals and reducing human verification workloads
2. Biographic or contextual fusion to combine with biometric match results identification of individuals
3. Solutions to provide easy implementation of multi-vendor matching algorithms
4. Biometric workflow management
5. Cost-effective alternatives to provide Continuity of Operations (COOP) capabilities across multiple data centers
6. Options for application profile builder that takes Electronic Biometric Transmission Specifications (EBTS) 3.0 and lets stakeholders build a customizable version of EBTS for their operational use

Areas of Interest: Industry Feedback (cont'd)

Available COTS Products should focus on:

7. Cross Domain Solutions (CDS) that enable sharing of unclassified biometrics data across security domains (SECRET to Unclassified and Unclassified to SECRET)
8. Interoperability: What type of mechanism can be put into place to limit the responses to outside organizations and international partners? The solution should be flexible, scalable, easily configured, and cost effective

Areas of Interest: Industry Feedback (cont'd)

Implementation Approach:

1. Impacts of biometric matching in a virtualized environment
2. Considerations related to storing Personally Identifiable Information (PII) in a cloud environment and any restrictions
3. Risk mitigation when utilizing a platform as a service (PaaS) vendor that is different from the application developer
4. How does the FedRAMP process work for cloud systems and what are the schedule considerations?

Other:

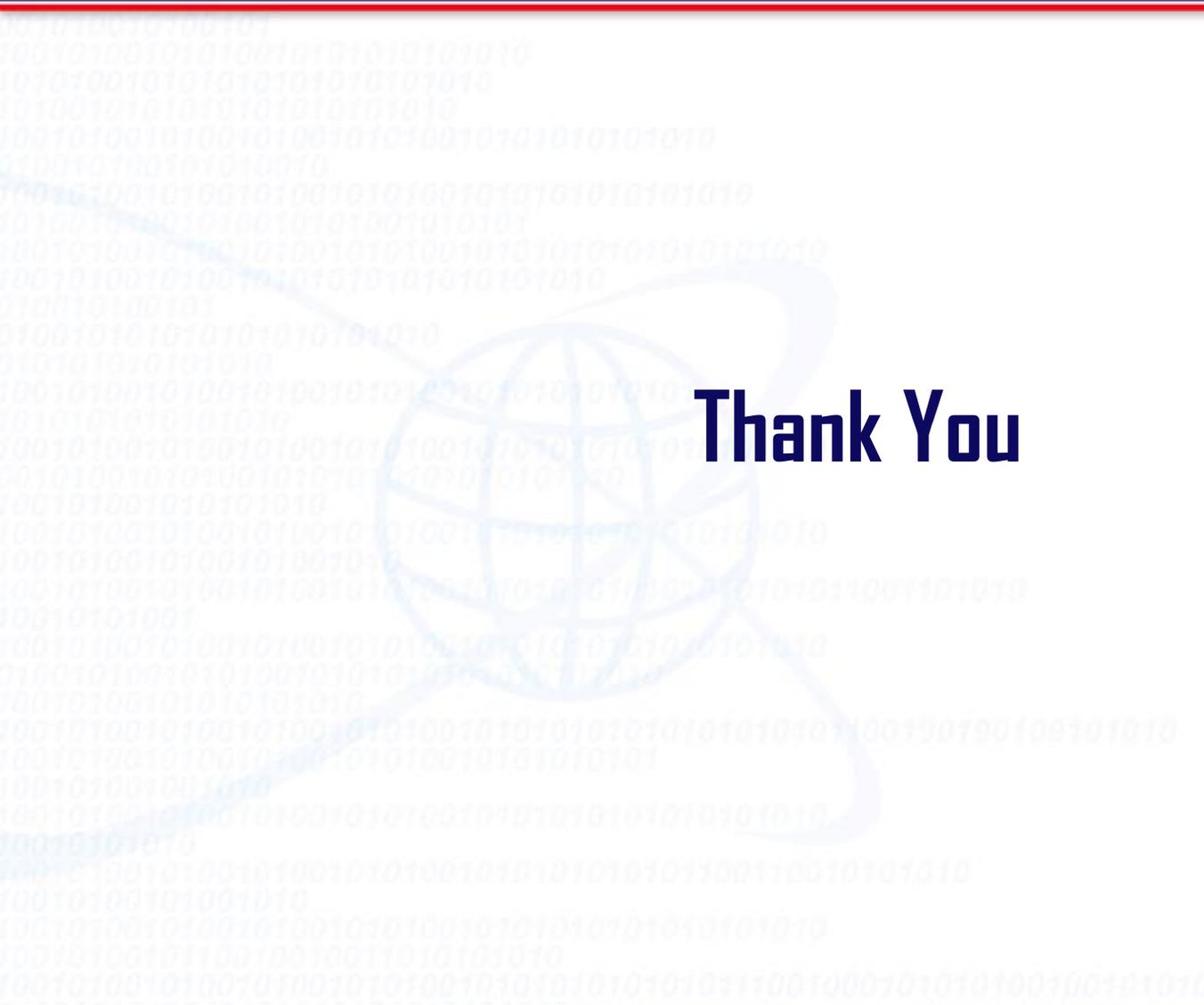
1. Big data use-cases for biometric systems and other positive benefits

Key Areas of Consideration

- Minimize implementation timeline and risks
- Utilize cost effective COTS-based solution
- Reduce customization
- Demonstrate ability to easily implement multiple algorithms
- Reduce manpower requirements

Upcoming Opportunity

- Request for Information is projected to be posted to FedBizOpps in August 2013 on topic areas identified in the previous chart entitled, “Areas of Interest: Industry Feedback” (It will have a new announcement number)



Thank You