



**BUSINESS
APPLICATIONS
SOLUTION**

One Commerce

EDW GLOBAL DESIGN OUTCOMES OVERVIEW

November 2020

BAS EDW GLOBAL DESIGN OUTCOMES

OVERVIEW



OBJECTIVE

Provide the Department, Bureaus, Line/Lab/Program offices the tools and capabilities needed to manage their business, anchored on operating consistently as an enterprise.

- **Single standardized instance of enterprise data warehouse** - one-stop-shop for data needs – for use across the Department, Bureaus, Line/Lab/Program Offices as common ground for data and insights
- **Robust reporting tool that empowers users to build reports/dashboards the way they need it** – e.g. copy & customize, drill to detail, export, creation of team workspaces.



End-User Focus

- **BAS core applications offer a robust suite of operational reports** – learn about these throughout Common Solution. Additional reporting needs – operational, cross-business function, managerial – can be developed with EDW ad-hoc reporting capability. **BAS EDW will develop the data foundation** (data processes, integrated reporting tables, pre-joined datasets in the BI tool) **to support ad-hoc reporting.**
- **To drive towards operating as an enterprise, create “community focus” reporting areas organized by business function** (e.g. Finance, Budget, HR). BAS will work with each group to **identify Power Users and provide them training in how to develop and publish reports for their area.**
- The BAS program will also be developing priority **advanced analytics features.**



Data Sources

- Prioritizing data feeds that meet cross-business function reporting objectives. Additional feeds can be added post-BAS implementation, based on purposed served and relative value.
- **Early deployment of first half of data sets in FY22 Q1 to work through network connectivity and ATO.**



Retiring Current Systems

- Current financial/acquisitions/property systems data will be copied into the EDW Data Lake.
- Reviewing current reporting applications for functionality that support cross-function enterprise missions, to adopt into BAS EDW (e.g. MARS).



Architecture

- Designed for continued development of advanced BI and analytics capabilities in the future.
- Vendor hosted and managed. Fit-for-purpose tech stack – add/remove services as needed. Scale up/down on demand.



Security

- XDR for continuous security monitoring and vulnerability detection. Annual ATO review of security posture.

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WHAT'S IN SCOPE & SCHEDULE

	FY22 (Go-live 10/1/21)	FY23 (Go-live 10/1/22)	FY24 (Go-live 10/1/23)	FY25 (Go-live 10/1/24)	
DATA	Inbound Data Ingest & Transformation into Integrated Data Model – data starting from point of Go-live; no historical data load				
	Travel: <ul style="list-style-type: none"> • E2 MIS • mLINQ 	HR/Payroll: <ul style="list-style-type: none"> • NFC • WebTA 	Grants: <ul style="list-style-type: none"> • Grants Online • OPCS 	<ul style="list-style-type: none"> • BAS Financial • BAS Acquisition • BAS Property 	<ul style="list-style-type: none"> • Grants: GMIS • USPTO (Data files USPTO provides the Department today, automate load into EDW)
	Full History Copy of Current System data into the Data Lake				
	<ul style="list-style-type: none"> • FRPM (All Bureaus) 	<ul style="list-style-type: none"> • NOAA CBS (NOAA, BIS, EDA) • NOAA C.Suite (NOAA) 	<ul style="list-style-type: none"> • NIST CBS (NIST, BEA, ITA, MBDA, NTIA, NTIS, OS, OIG) • NIST C.Suite (NIST) • OS ES C.Suite (BIS, EDA, BEA, ITA, MBDA, NTIA, FirstNet, NTIS, OS, OIG) 	<ul style="list-style-type: none"> • Census CBS (Census) • Census C.Suite (Census) • Legacy Sunflower (All Bureaus) 	
	Outbound BAS Data Service (e.g. EBS integration or EDW extract of financial data) to support out of scope functionality (e.g. custom data entry projection tool dependent on financial data)				
		<ul style="list-style-type: none"> • MARS (NOAA) 	<ul style="list-style-type: none"> • (NIST TBD) 	<ul style="list-style-type: none"> • (Census TBD) 	
BI REPORTING	Data universes for Community Powered BI Marts (Ad-hoc Reporting)				
		<ul style="list-style-type: none"> • Program Manager • Finance • Budget • Acquisitions 	<ul style="list-style-type: none"> • Grants • HR • Property • Travel 		
	Advanced Analytics Features – With Agile, reassess priorities and plan at the start of every release and adjust as needed (e.g. reporting change journey resulting in other enterprise reporting needs)				
		<ul style="list-style-type: none"> • Acquisitions / Agreements 360 Dashboard 	<ul style="list-style-type: none"> • Budget & Spend Planning • Position Planning 		
ARCHITECTURE & SECURITY					
	<ul style="list-style-type: none"> • AIP Infrastructure: AWS • Security: Controls & ATO 	<ul style="list-style-type: none"> • AIP Infrastructure: Tableau • Security: Controls & ATO 	<ul style="list-style-type: none"> • Security: Controls & ATO 	<ul style="list-style-type: none"> • Security: Controls & ATO 	

BAS EDW GLOBAL DESIGN OUTCOMES



WHAT'S NOT IN SCOPE

FEATURE	COMMENT
Inbound Data Ingest & Transformation from data sources not identified for EDW during program planning .	<p>Some of these systems will interface with BAS Core Applications to support operational transactions and reporting. After users get familiarized with operational reporting available in BAS Core Applications, determine what other data sources are needed. Can manually upload to BI tool until automated feed be built (post BAS implementation).</p> <ul style="list-style-type: none">• Identified by Acquisitions community as used for reporting: FAAPS, FPDS-NG, OMB MAX, ESRS, CPARS, PPIRS, SAM, FAITAS, AIM, GSA + GSA-sponsored acquisition systems• Identified by Grants community as used for reporting: SAM, USA Spending, ASAP• Identified in MARS for HR reporting: RADS• Identified by Property community as used for reporting: BUILDER, (NIST) MAXIMO, NIST Facilities MIS• Identified by Travel community as used or reporting: TMD
Conversion of current system data outside of standard core application conversion (which includes open transactions only)	<ul style="list-style-type: none">• Core Applications will convert all open transactions from legacy systems into Core Application tables (Core Application data, included legacy converted data, will be pulled into EDW)• EDW will copy all legacy system data and store in legacy format into the EDW Data Lake for access if needed. (The tool used to copy data does not transform legacy data into the new data model).
Historical copy or data ingest for systems not being replaced by BAS	Grants, HR/Payroll, and Travel data sources
Historical copy of documents from current systems	Only current system data will be copied
Outbound Data Service to other systems for purposes redundant with BAS enterprise objectives	e.g. financial reporting
Data entry to create / update operational or reference data	e.g. updating Table of Organization in EDW
100% replication of current reporting systems	Functionality specific to a program may persist

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ROAD MAP



	FY21				FY22				FY23				FY24		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Phase 1 – Early Deployment															
Data	DB Sec. Ctrls Data Model			Code Freeze, Security Eval, ATO											
	ICD Design	E2, mLINQ, NFC, WebTA													
		ICD Design	Grants Online OPCS												
Phase 1 – Full Deployment															
Data				BAS Financial		BAS Acquisition	BAS Property	Code Freeze, Security Eval, ATO	Copy Legacy (NOAA CBS & C.Suite)						
						ICD Design	Extract to MARS								
		Requirements Grooming	BI Security Ctrls	Self Service Data Universes	Requirements Grooming	Acquisitions & Agreements Dev & Demo				Pilot & Enable					
Reporting								Requirements Grooming	Spend Planning Dev & Demo		Pilot & Enable				
											Requirements Grooming	Budget & Position Planning Dev & Demo	Pilot & Enable		
Phase 2															
Data								ICD Designs	GMIS	USPTO	Tentative Extract	Code Freeze, Security Eval, ATO	Copy Legacy (NIST & OS ES CBS & C.Suite)		

- Application (+ connectivity to data sources) must be operational in lower environment, security controls evaluated, and ATO received before data pipelines can be turned on in Production.
- Development of BI capabilities using established data pipelines will not require ATO before enabling in Production.

ENGAGING WITH YOU:
(Specific dates will be sent prior month)

- EDW Data Sources:** System PMs, Technical POCs
- **ICD Design:** Discuss/document/approve interface design (data transmission protocol, table definitions)
 - **Dev & Test:** Provide support during integration test

- User Communities:** Community Stewards, SMEs, Power Users
- **Requirements Grooming:** Define BI feature detailed requirements
 - **Dev & Demo:** Participate in product demos and provide feedback
 - **Pilot:** Participate in Pilot in production prior to releasing to all users