



# Department of Veterans Affairs

VLER Core  
Vendor Days  
1/24, 1/25

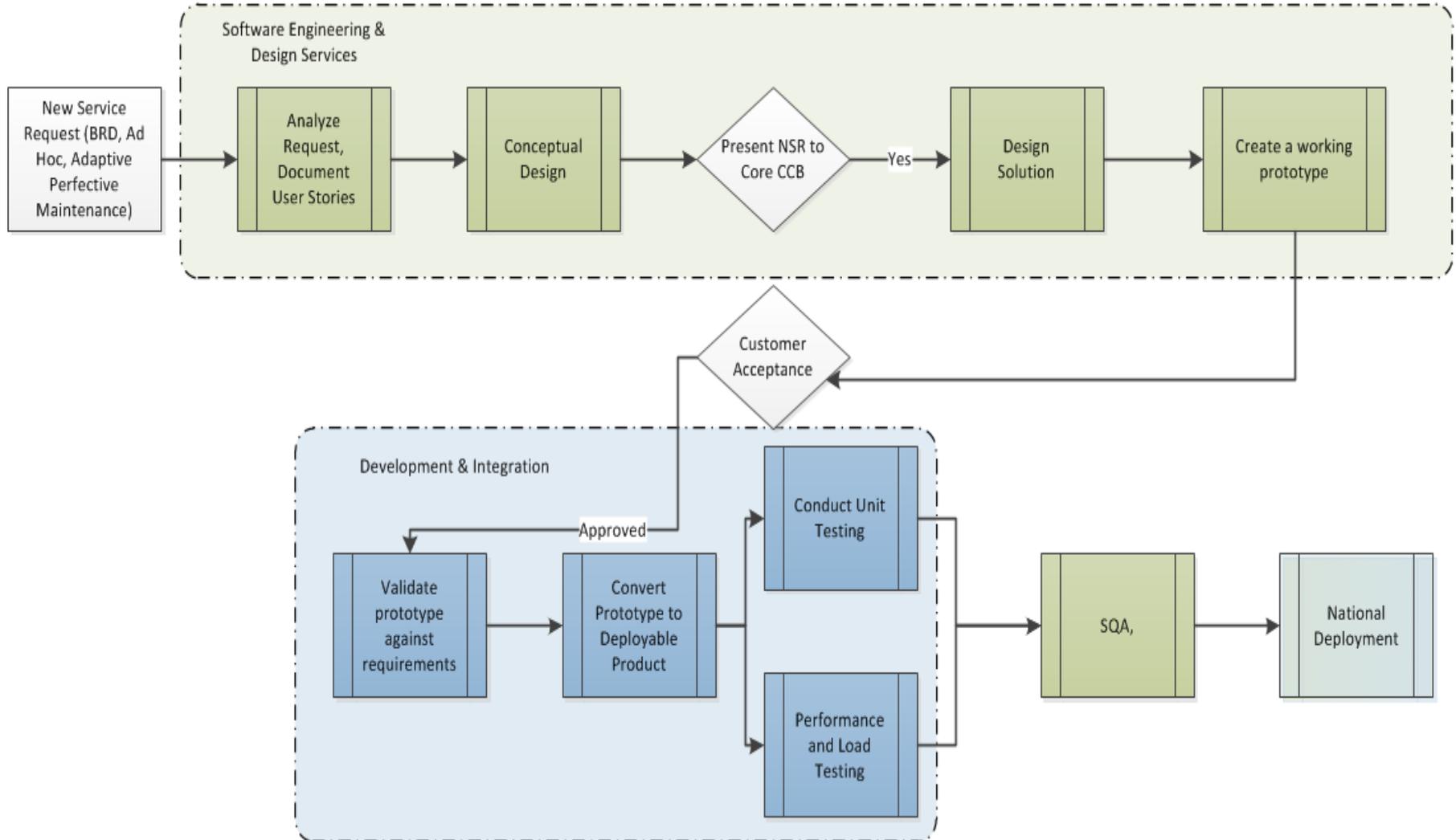


# Agenda

- Overview
- VLER Core Business Process
- VLER Core Model
- VLER Core Components
- Q&A



# Core Business Process



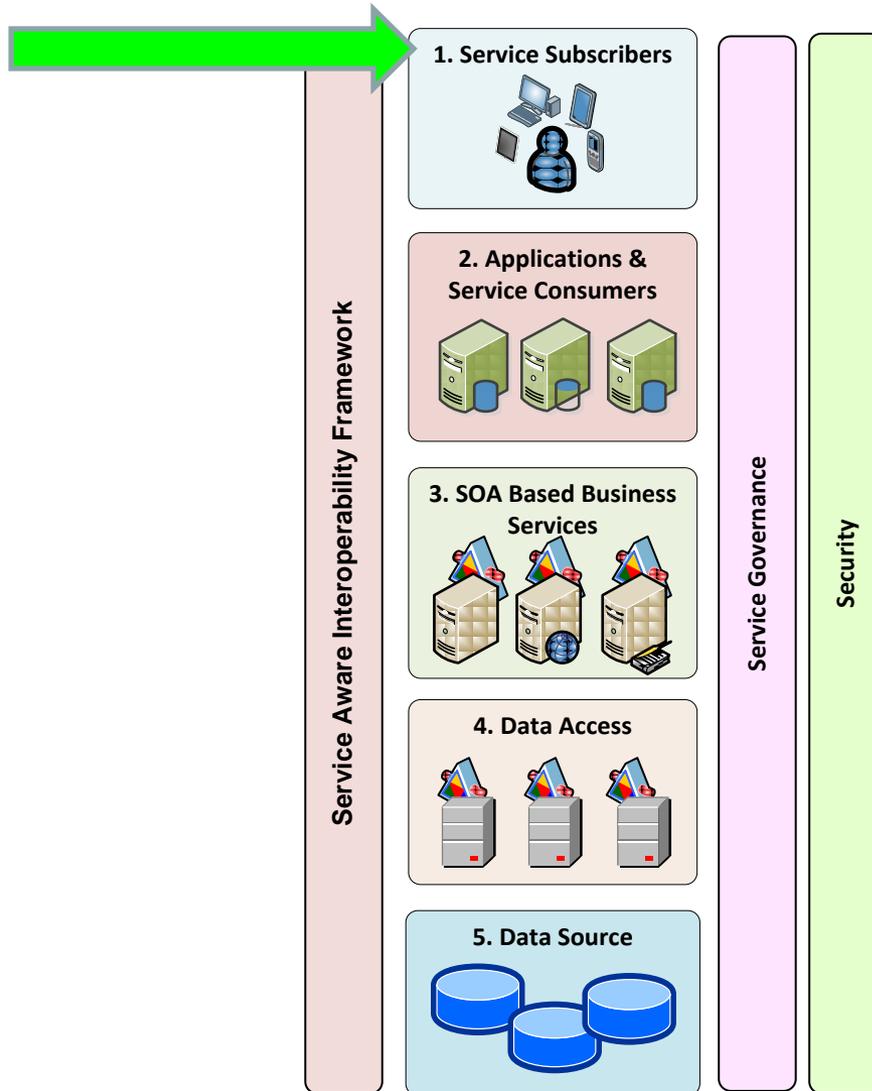


# Overview

- Purpose: Consumers use VLER Core to exchange (create/read/update) 415 Collection Sets
- Criteria:
  - Complies with VA enterprise architecture
  - Provide a tool kit to allow consumers and producers to independently build wrappers within two business days to be able to participate in the VLER data exchange.
  - Be able to interface any independently developed wrappers with the recommended solution without additional labor (implement “plug and play”).
  - Include a durable generic distributed XML data store to support in-flight data, audit, caching, preferences, configuration, session state, and standardized references.
  - Implement consent management and consent evaluation requirements for VHA, VBA, NCA, and external partners.
  - Include a secure role based ROI portal for manual consent management and reporting.
  - Audit all data exchanges.
  - Provide ad hoc reports on audit data.
  - Provide monitoring and test capabilities.
  - Be standards based.
  - Must be portable.



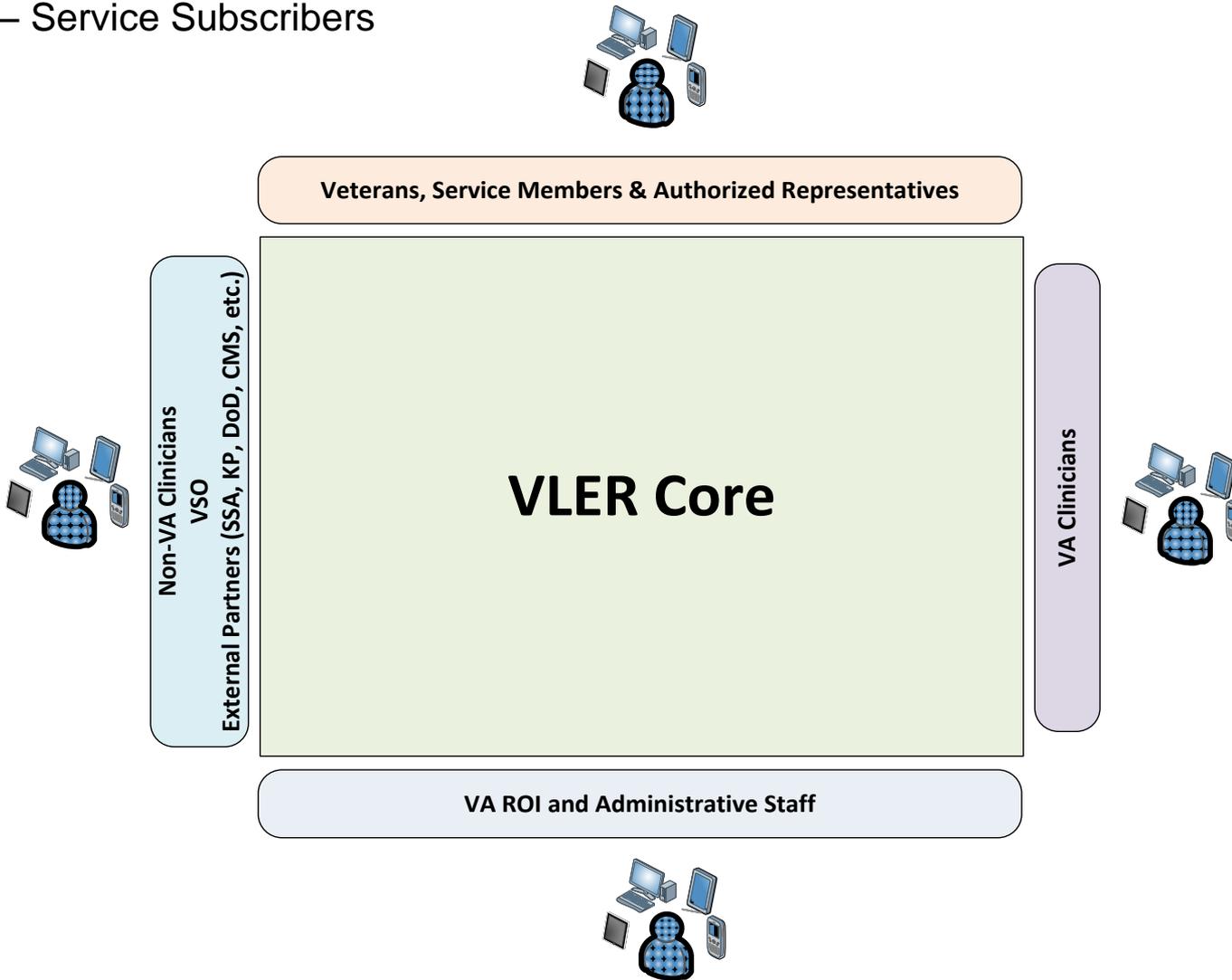
# 5 Layer VLER Core Model





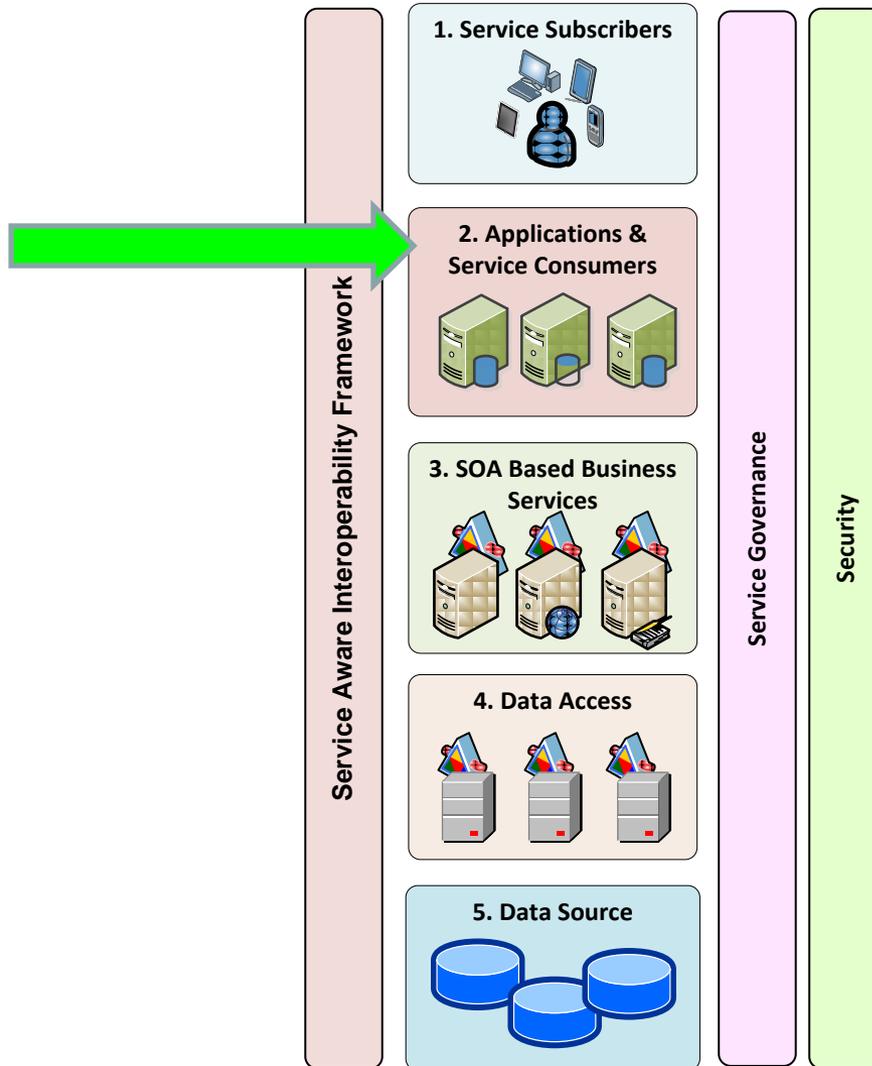
# VLER Core Components

## Layer 1 – Service Subscribers





# 5 Layer VLER Core Model





# VLER Core Components

## Layer 2 – Applications & Service Consumers



**Veteran Facing Applications & Portals**  
MyHealtheVet, eBenefits, etc



**External Gateway Services**  
(NwHIN CONNECT, DIRECT, B2B, CMS, etc.)

**VLER Core**

- Integrated Data Access for VA Enterprise: healthcare, benefits and administrative domains
- Consistent Standards Based Interfaces
- Decoupling of Producers and Consumers
- Integrated Authorization Decisions
- Integrated Preferences Management
- Scalable and customizable ROI Reporting and Analytics
- Centralized Auditing and Event Management/ Propagation
- Platform and Persistence as a Service
- Integrated Testing and Monitoring Framework

**VA Clinician Facing Applications & Portals**  
IEHR, HMP, EDIS, CPRS, VistAWeb, JANUS, Other Clinical Care Applications & Portals

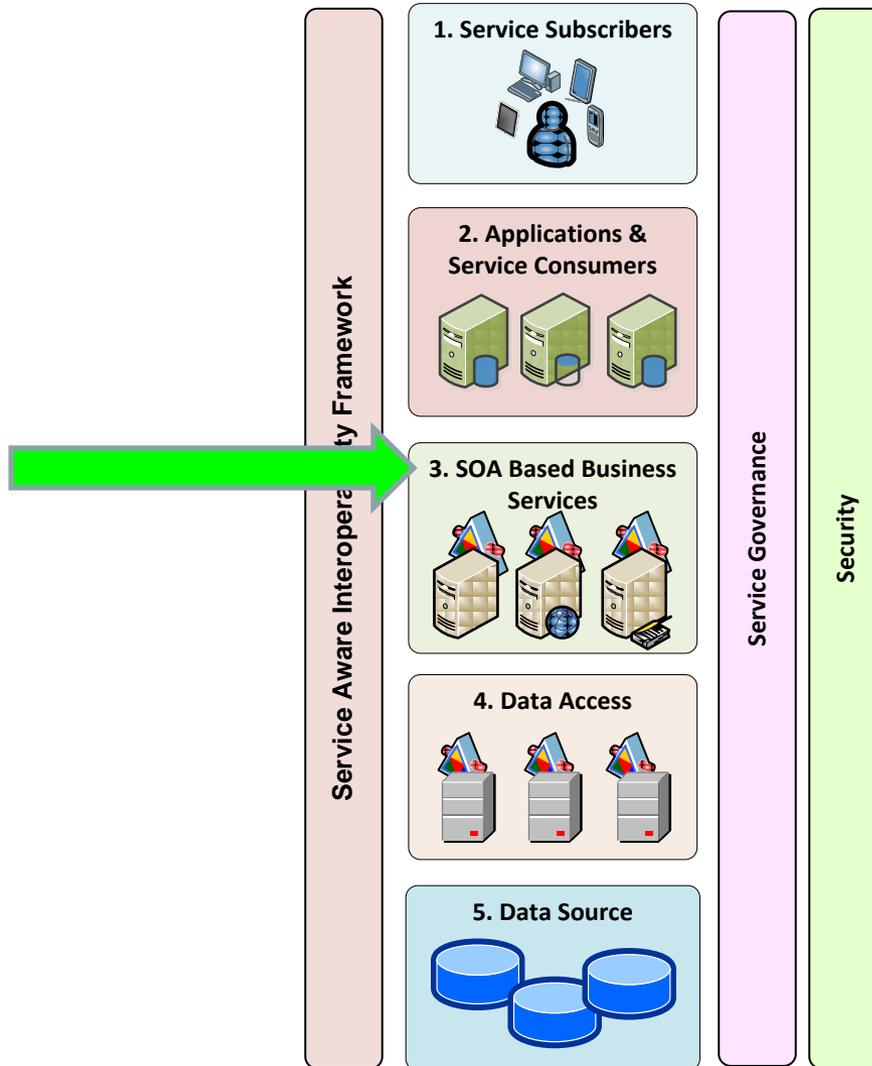


**VA ROI and Administrative Staff Facing Applications & Portals**  
Authorizations, ROI Portal, CRM, CPTS, WebDPRIS, C&P STAR, CAPRI, CH33, REAP, Other Administrative Portals





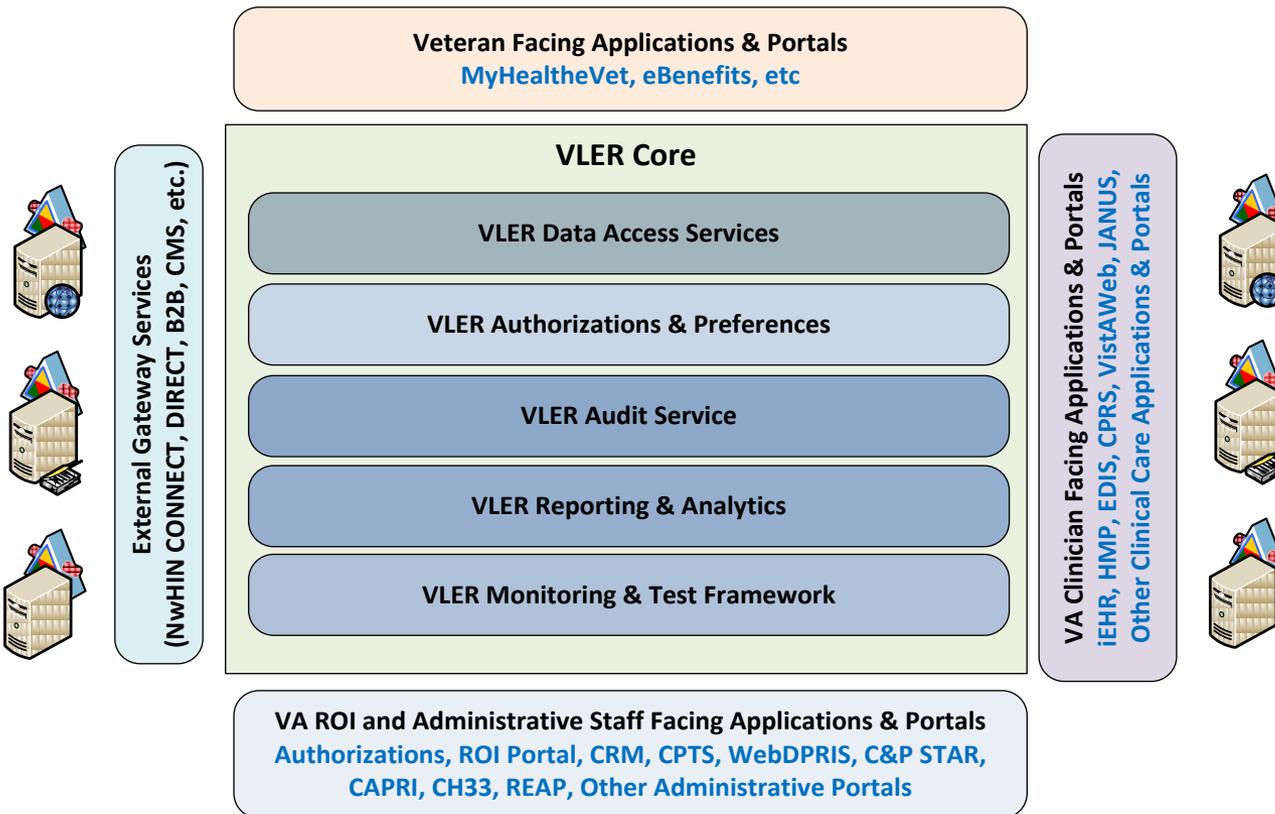
# 5 Layer VLER Core Model





# VLER Core Components

## Layer 3 – SOA Based Business Services





# Overview

- **Data Access Services** - Highly reliable & scalable infrastructure for developing and deploying producer and consumer wrappers to facilitate VLER data exchange
  - Includes a variety of foundational services to facilitate data exchange (RESTDdesc – Semantic Descriptions)
  - Decoupled Components – Load balanced, Asynchronous Systems.
  - Parallel Processing – Parallel Retrieval, Thread Safe, Multiple Asynchronous Nodes using Load Balancer
  - Static Data Closer to Consumers, Dynamic Data Closer to Computing Components (Caching, Import/Export, etc.)
  - Security – IAM at every layer, Secure Data in transit, Confidential Data encrypted
  - Automatic Service Matching & Service Discovery



# VLER Core Components

- **VLER Authorizations & Preferences**– Core module used for capturing consent directives (authorization and restrictions) from Veterans, Service Members or Authorized Representatives and rendering authorization decisions for data sharing.
  - Evolution of Veterans Authorizations and Preferences (VAP) Engine to meet enterprise needs (VHA, VBA, NCA, etc) by building a system that is loosely coupled, standards based, scalable, performant and highly available
  - Supports fine-grained Consent Management (Creation, Update, Retrieval of Authorizations, Revocations and Restrictions) and Consent Evaluation (PIP)
  - Alignment with XACML Specifications and VA Security Reference Architecture
  - Alignment with IDM/MVI Directives (Baker Memo)
  - ROI Portal – Veterans, Service Members, Authorized Representatives manage consent directives
    - Secure Role Based Access
    - Pre-Built, User-Driven, Vendor-Driven Portlets
    - Pre-Canned and Adhoc Reporting
  - Operational Data Store (ODS)
    - Relational Data Store that stores Veterans Preferences, Consent Directives, Partner Information and Reference Data
    - Uses the Core persistence framework for CRUD operations
    - XML DB

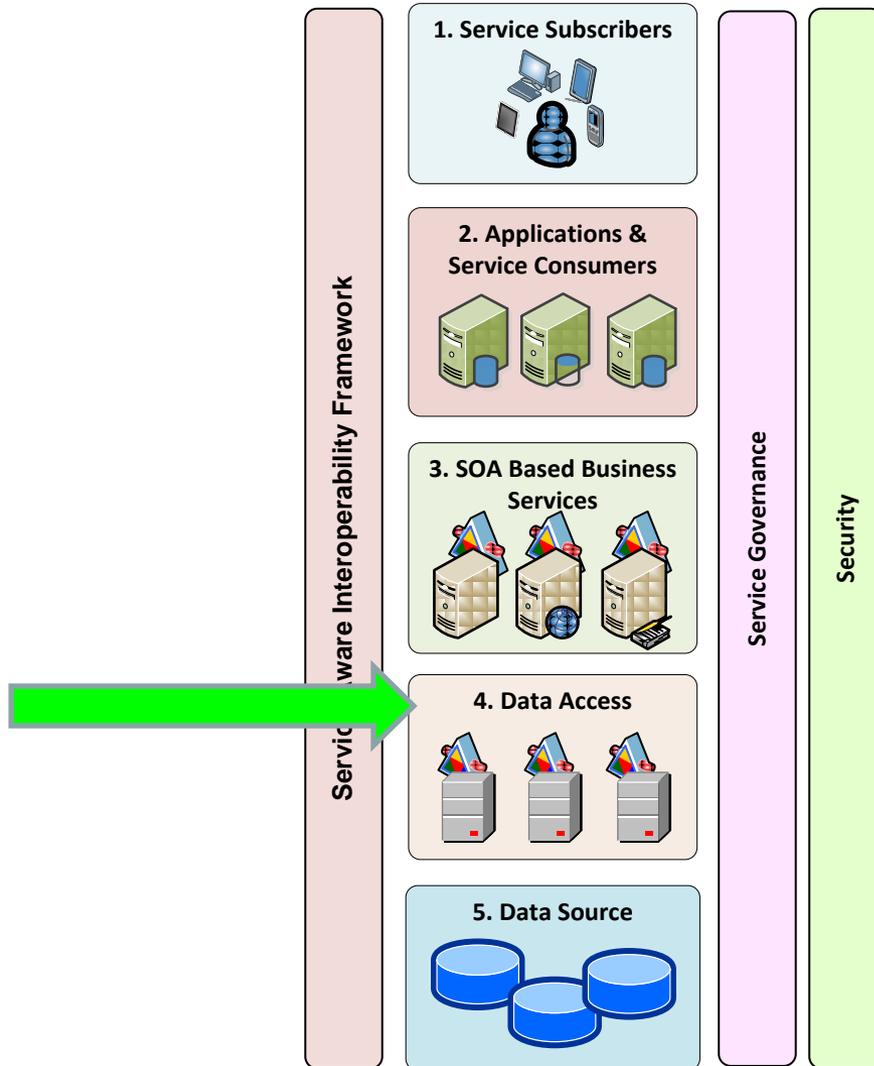


# VLER Core Components

- **Audit Service** – Central, highly available store for logging information about messages, conditions, events, status updates, recurring activities, workflow processes, device/application states.
  - Auditing
  - Archival & Regulation Compliance
- **Reporting & Analytics Service** – A central view across the enterprise to present audit information consistently.
  - Monitoring & Tracking
  - Metering
  - Trend of Business Analysis
  - Ad-hoc Reporting
- **Monitoring and Test Framework Services**
  - Service Watch
  - Heart Beat Messages (may include Test Patients)
  - Pre-selected Metrics
  - Dead Letter Management



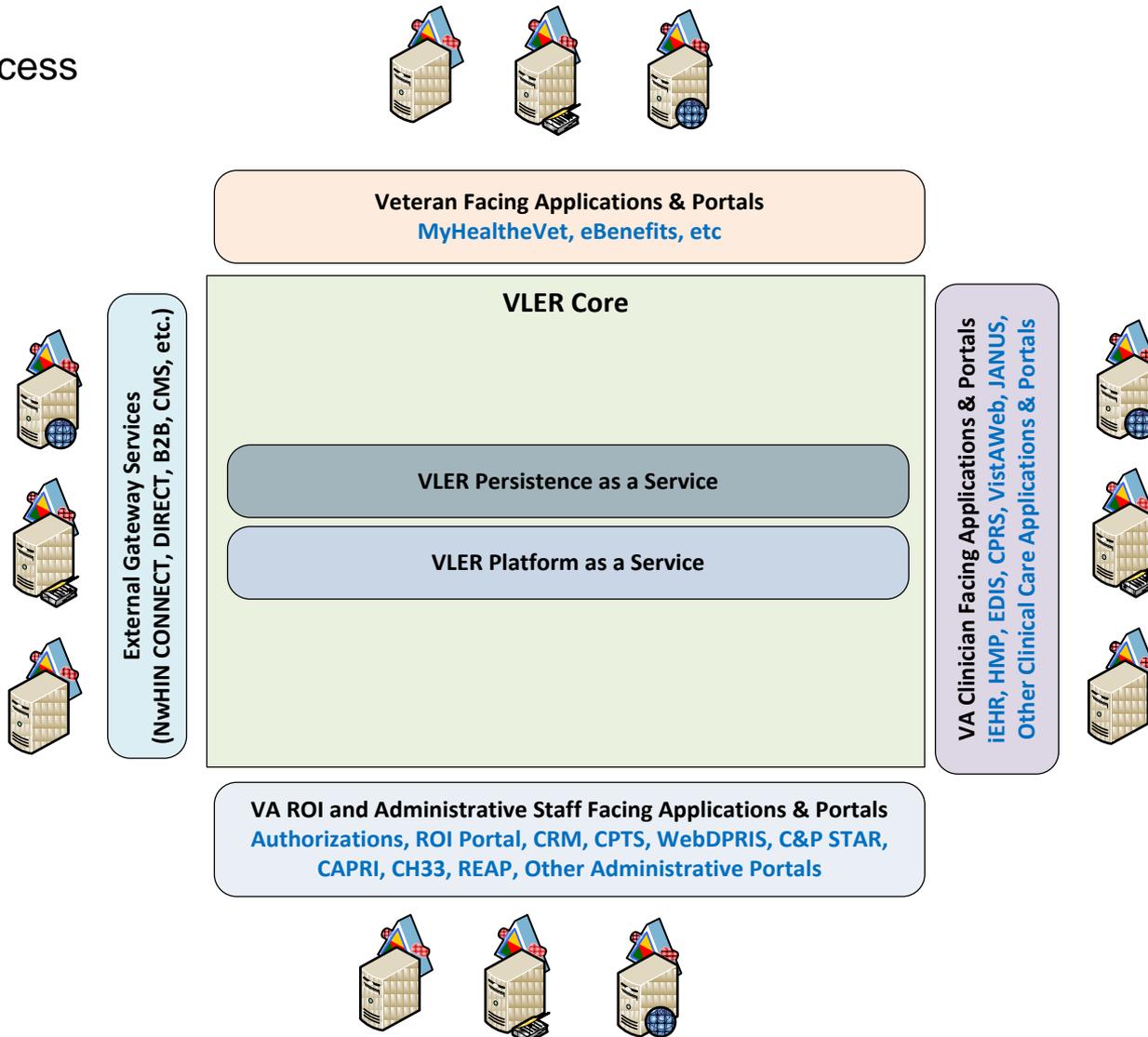
# 5 Layer VLER Core Model





# VLER Core Components

## Layer 4 – Data Access





# VLER Core Components

- **Persistence as a Service**

- Highly durable and distributed data store – HTTP REST interface stores and retrieves large amounts of data as objects in buckets (containers).
  - Static or Streaming Content (XML/JSON)
  - Real-time lookup and simple querying structured data without operational complexity (Key/Value Pairs)
  - Fully Redundant Storage Services (VLER SORN)
    - In-Flight Data
    - Audit
    - Caching
    - Preferences (HL7 CDA R2/NIEM)
    - Configuration and Session State (stored outside of component)
    - Standardized References/Lookups
  - Off-instance Storage & Memory cache
  - Import/Export Capability
  - NoSQL and Relational Data store

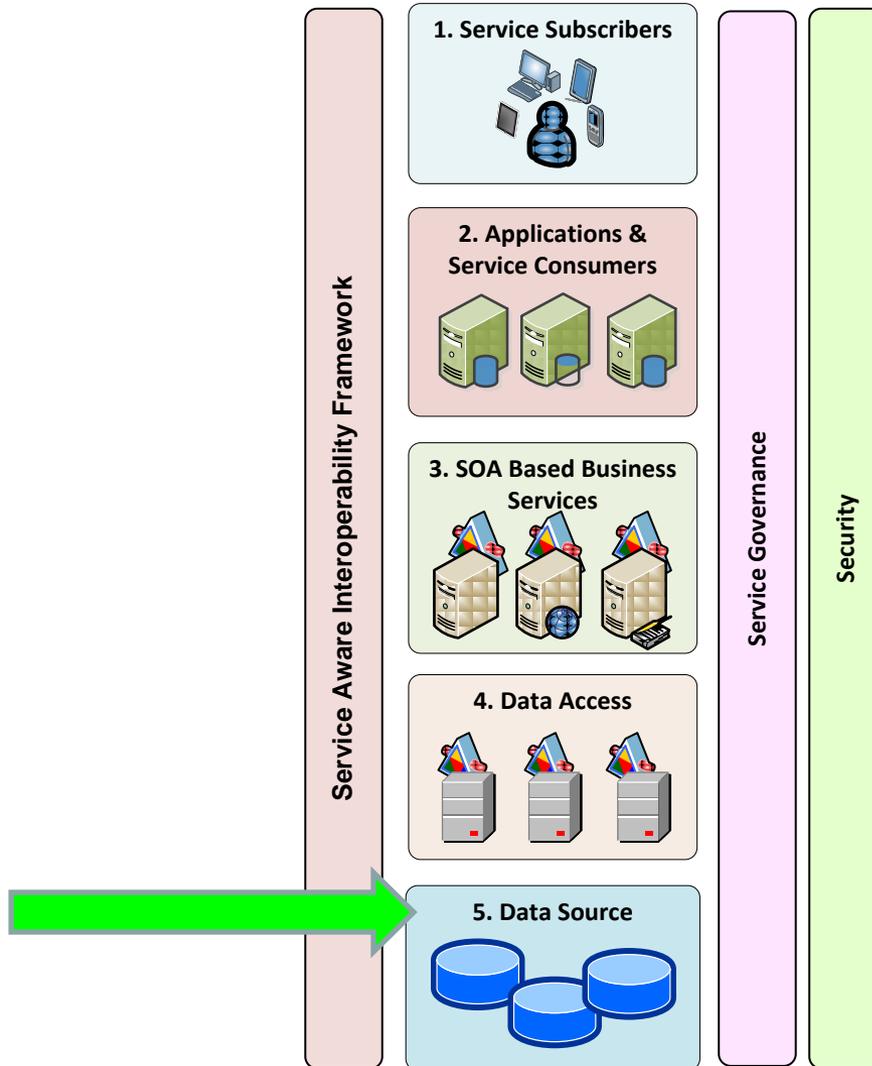


# VLER Core Components

- **Platform as a Service** – Build, Deploy, and Run Create/Read/Update/Delete (CRUD) Wrappers.
  - Standards-based open source language runtimes and implementations
  - Automated deployment process
  - Streamlined configuration and build process
  - Contract-first development (SOAP UI Projects & Mocks)
  - Built on Open Source, be Open Source, no proprietary APIs
  - Library of “Recipes” – Style sheet templates, configuration and deployment toolkits
  - Connectors, Transformers, Mock Services, Templates, How-to Guides
  - Pull Code from a Community of Contributors



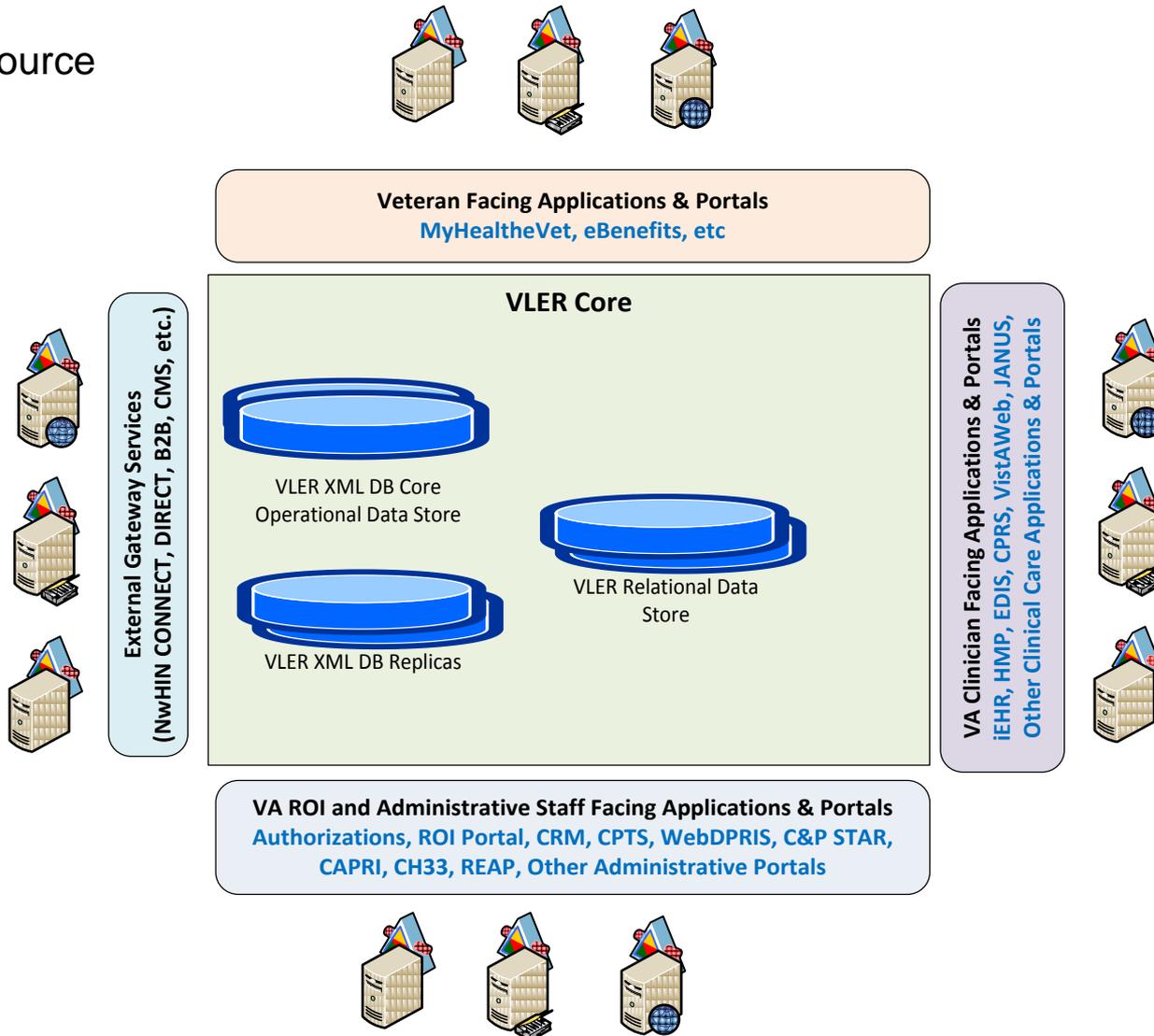
# 5 Layer VLER Core Model





# VLER Core Components

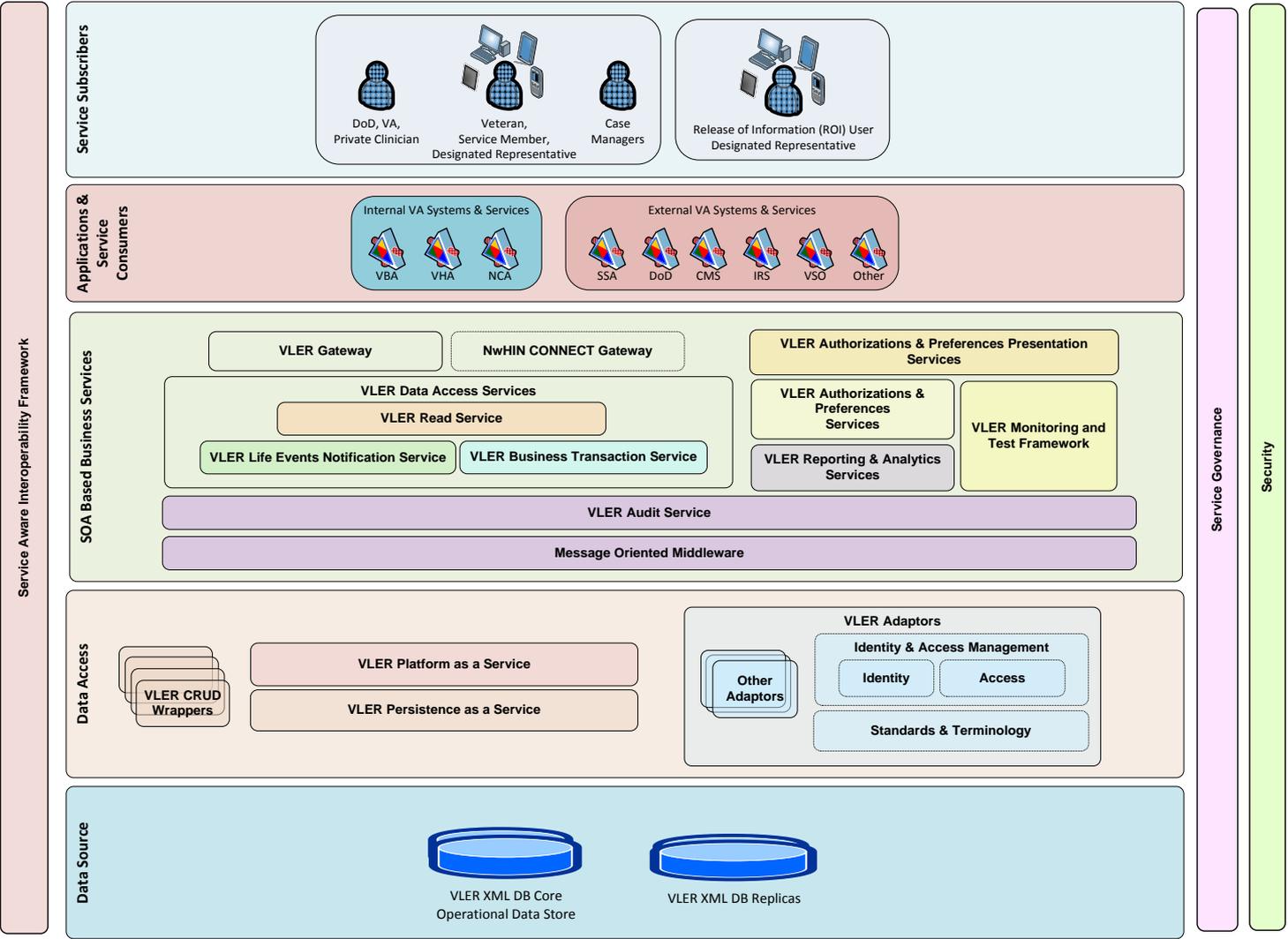
Layer 5 – Data Source





# 5 Layer VLER Core Model

5 Layer VLER Core Model - High Level Conceptual View



External to VLER Core



# Questions

