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Rapid Information Triage:

A Practical Approach

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Human Language Technology From Arabia to Afghanistan

Overview

- What is Information Triage?
- Enterprise Search vs. Intelligence Analysis
- Design for Exploitation
- Technology as a Force Multiplier
- Practical Examples

What is Information Triage?

Analyzing a large volume of time-sensitive data to identify items with intelligence value for further analysis

A time-limited search for information on a specific topic, using all available sources.

Conceptual Examples

- Captured document triage
- OSINT Monitoring
- Request for Information
- Operational/Targeting
- Intelligence Analysis

Use Cases

- Discover what information exists in a data set
 - Time-sensitive
 - Unspecific goals
- Discover relevant information about a general topic/entity
 - Time-constrained
 - Specific goals
- Ongoing topic/entity of interest monitoring
 - Continuous, periodic
 - Background task – until interesting information arrives

Enterprise Search vs. Intelligence Analysis



Enterprise Search

- Goal: Find one needle in a haystack
 - Find specific information that is likely to exist
- Challenges:
 - Data exists in many places and formats
 - Email, file server, CRM, ERP, DB, intranet
 - 80% unstructured
 - Difficult to link underlying systems
- Solutions:
 - Enterprise search solutions that index/search many datastores
 - Automatic metadata creation
 - Search based applications
 - Map parameters between datasets

Intelligence Analysis

- Goal: Find a needle in several needle-stacks
 - Locate, interpret, analyze, combine, based on context
- Challenges:
 - Data of many types, sources, quality, reliability
 - OSINT, SIGINT, HUMINT, etc.
 - Huge amounts of data
 - Limited time, access
 - Difficult to link data
- Solutions:
 - Digital filing cabinets
 - Manual data curating, security
 - Technology?
 - Search Based Applications?

Design for Exploitation



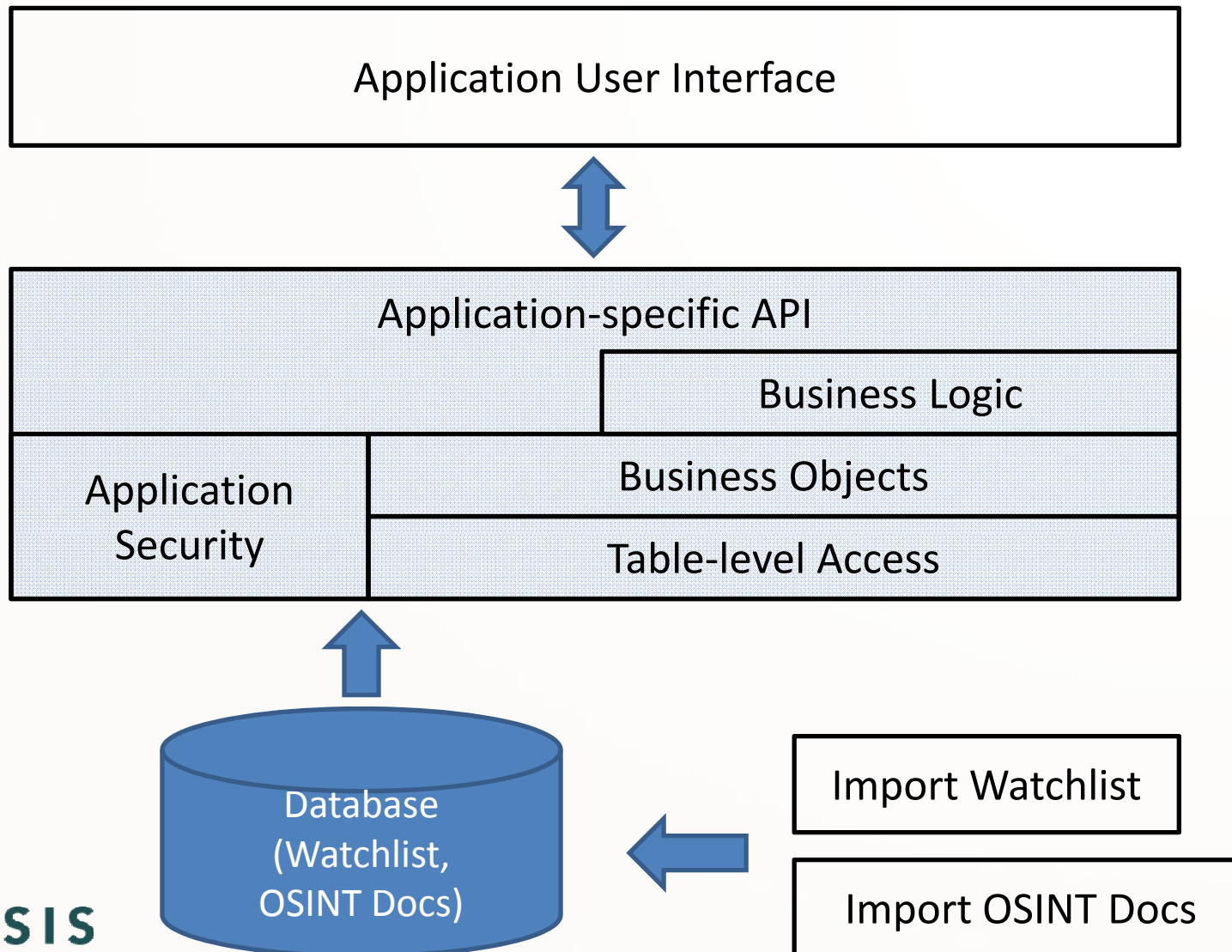
Goals of System Architecture

- Reduce Data Duplication/Replication
 - Security
 - Labor-intensive or expensive integration
 - Preserve data provenance
- Common data definition
- Operate on large data
- Combine multiple data sets
 - Quickly change focus of analysis

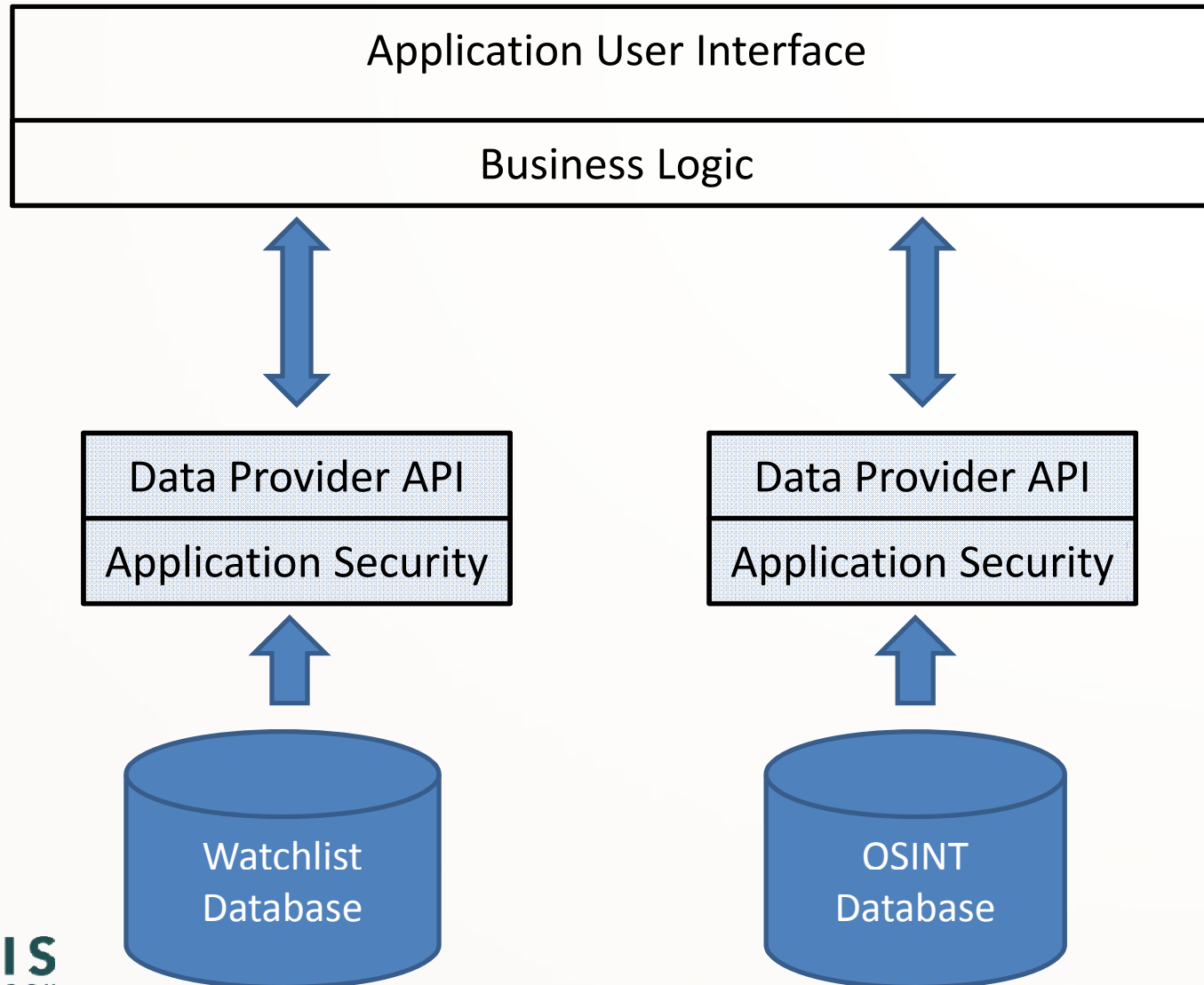
Why Service Oriented Architecture?

- Loose coupling of components
- Platform/technology neutral

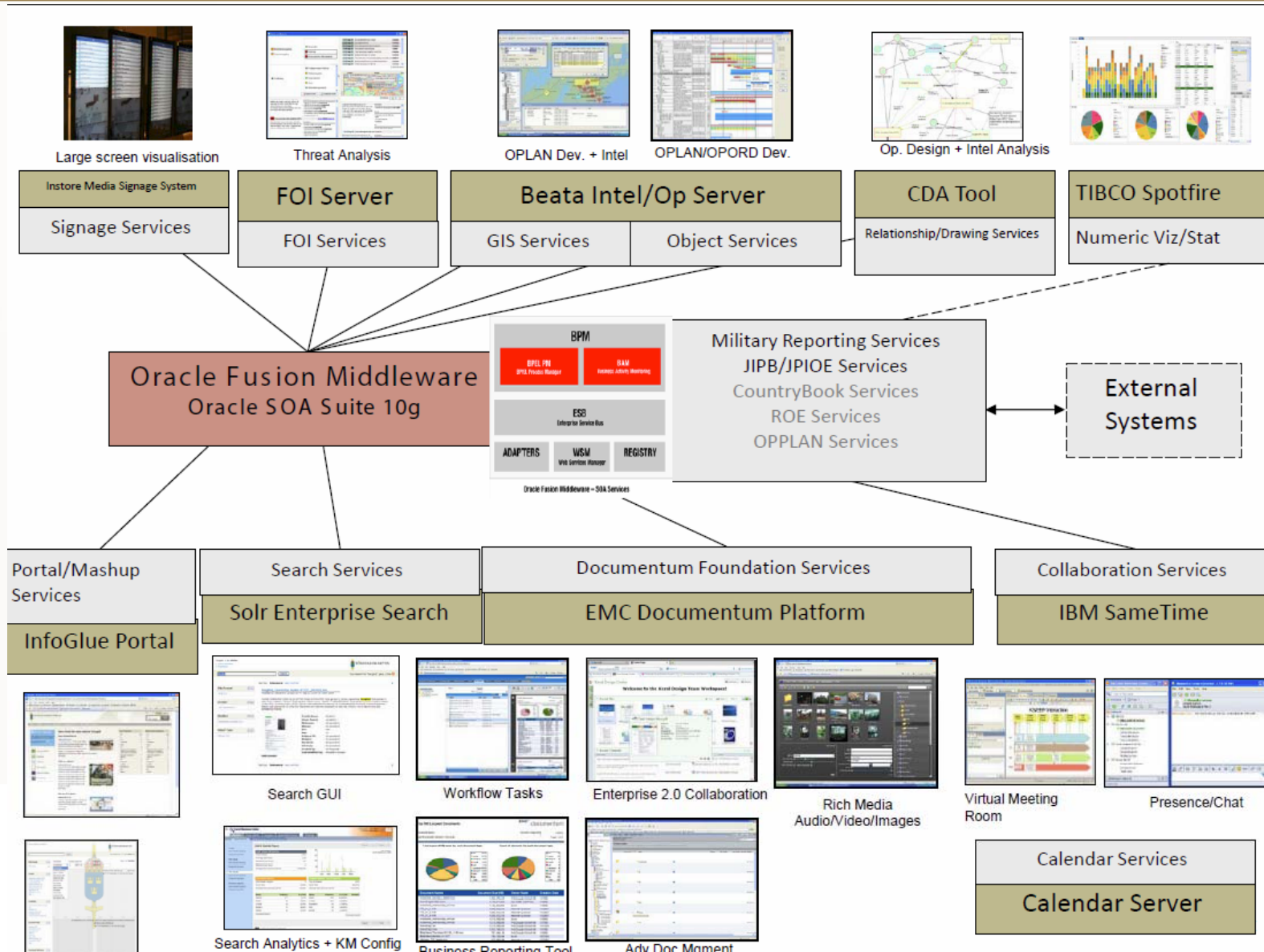
Traditional Architecture



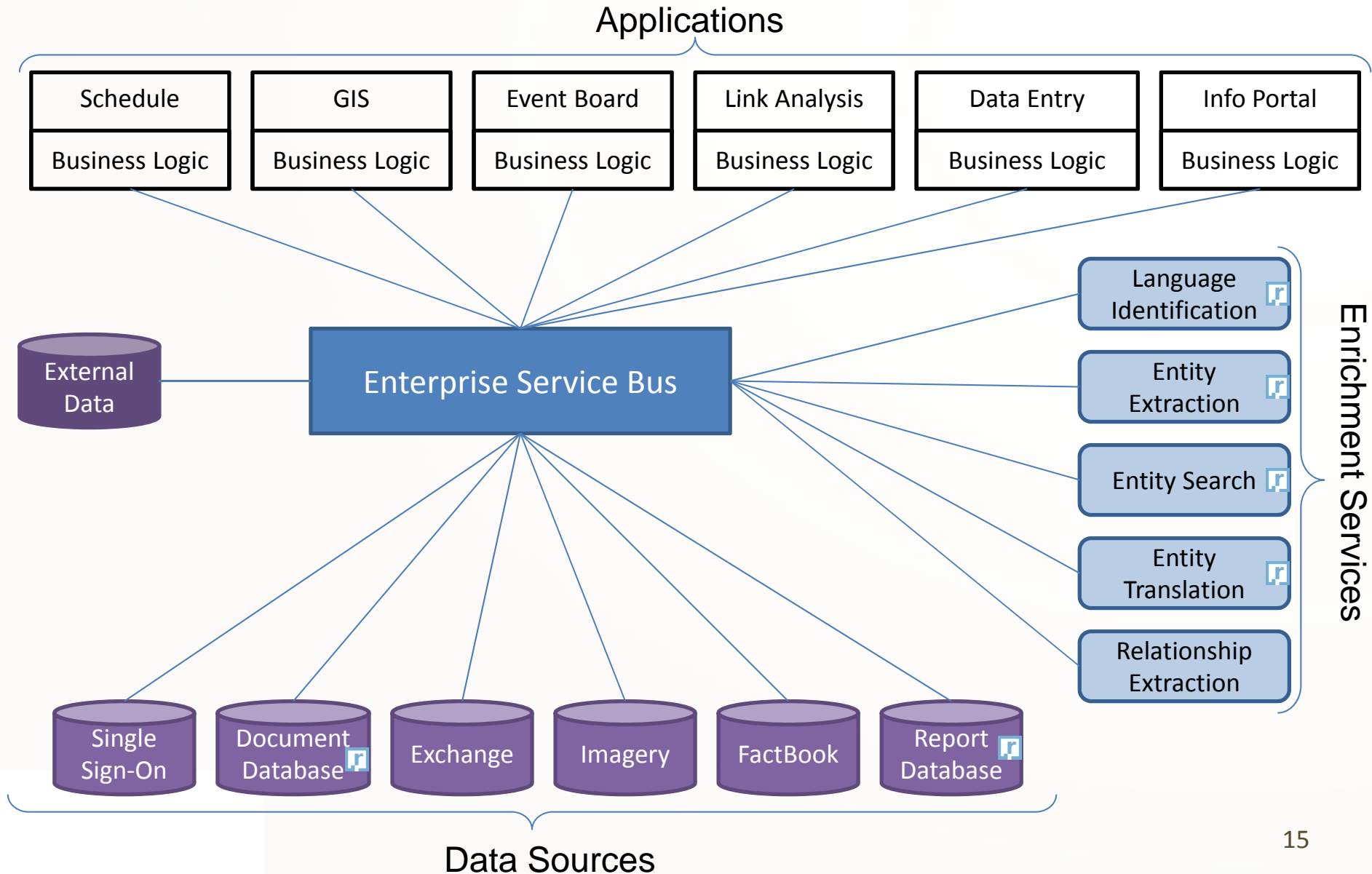
Service Oriented Architecture



Enterprise Service Bus



Enterprise Service Bus



Search Based Applications

- Task, domain, or workflow-specific applications built around search and text analytics
 - Search is critical to the user's interaction with the application
- Examples:
 - Job Search
 - E-Discovery
 - Intelligence Analysis
 - Life Sciences
 - Publishing
 - Financial Compliance

Search Based Applications

- Customized search
 - Thematic searching
 - Object (ontology: person, location, etc)
 - Time
 - Spatial
 - Relational
 - Advanced Linguistics
- Leveraging all metadata
 - Explore within result set
 - Faceted Navigation
- Automatically generate metadata

Technology as a Force Multiplier



Technology

- Not a replacement for human analysis!
- When used properly, saves Analyst time
 - Repetitive Tasks
 - Standards-based transliteration.
 - Challenging/Time Consuming Tasks
 - Language Identification
 - Tagging entities and relationships
 - Entity Search
 - Search/discovery

Relevant Technologies

- Language Identification
- Search Engine Enablement
- Entity Extraction
- Entity Search
- Entity Translation
- Relationship Extraction

Demonstrations

Odyssey Information Navigator

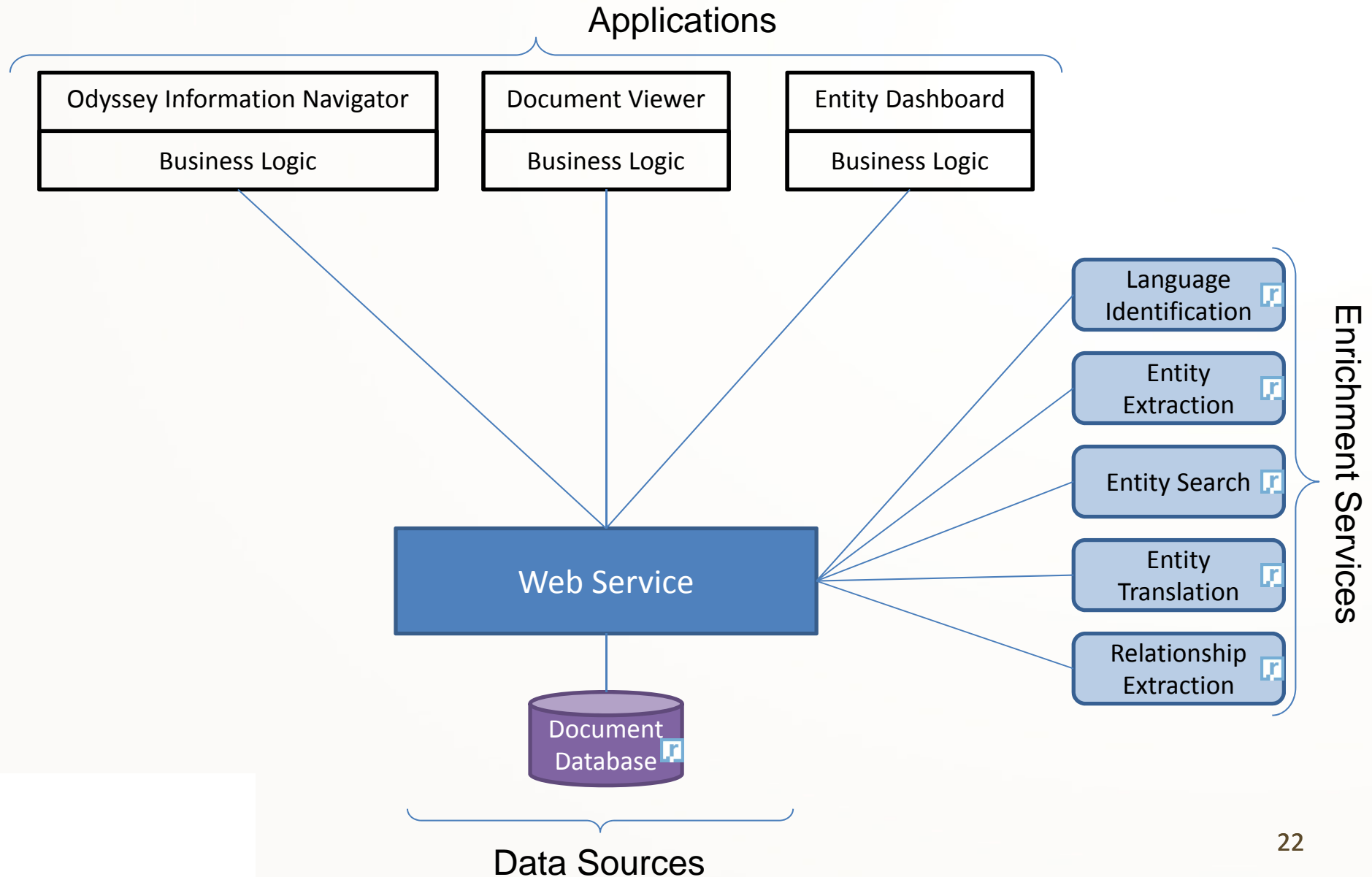
- Sample Application using Rosette + Solr
- Language ID, Search, Entity Extraction, Entity Search

Document Viewer

Entity Dashboard

- Entity Resolution, Automatic relationship extraction

Odyssey Information Navigator



For More Information

- Visit www.basistech.com
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Thank you!

