

ORACLE®

SOA Development in the Real World

Customer Case Study - Health Canada

Mario Morgado mario.morgado@oracle.com
Technical Consulting Manager, Oracle Consulting

Agenda

- Health Canada – Business Problem and Needs
- Health Canada – The Business Solution
 - SOA
 - Oracle BPEL PM
- Best Practices and Lessons Learned

Health Canada – Business Problem Discovery

- Health Canada must inter-operate with several partners within the Government of Canada using several desperate methods and technologies.
- Health Canada must maintain, and support several processes that span across multiple internal departments and external partner agencies.
 - Royal Canadian Mounted Police (RCMP)
 - Canada Customs and Revenue Agency (CCRA)
 - Public Works and Government Services (PWGCS)
 - Communications Security Establishment (CSE) Labs
- Several process are currently in-efficient and poorly managed due to a lack of integration of several existing applications and aged processes.
 - Approx. 100K+ transactions are done manually (paper, phone, fax, etc.)

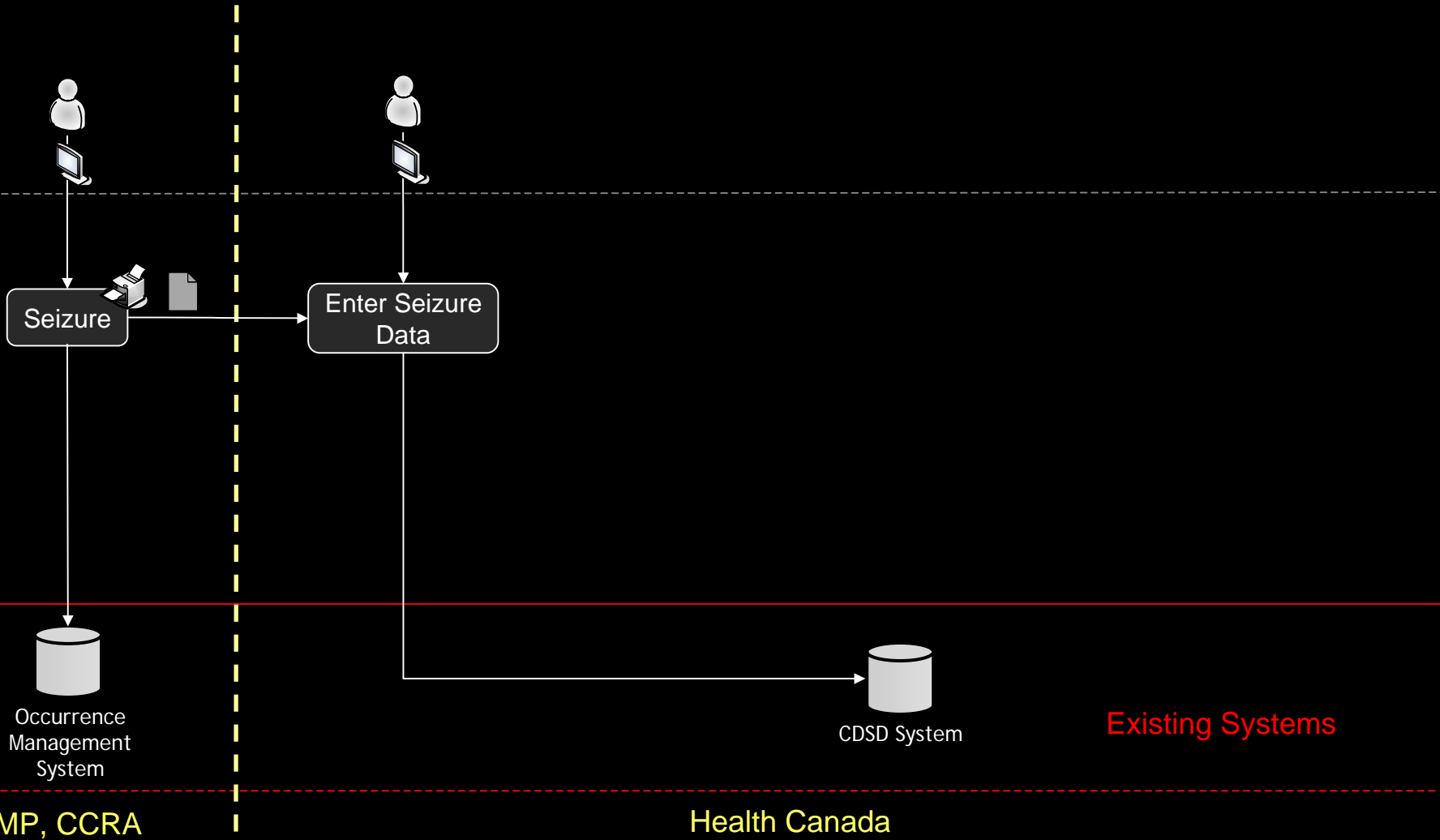
Health Canada – Business Problem Discovery

- The Government of Canada wanted to reduce the amount of inefficiencies, reduce the amount redundancy and implement several compliance measures.
- No common data model for the exchange and inter-operability of agencies.
- Need to identify a starting point:
 - High impact in terms of visibility.
 - An ideal candidate for compliance
 - Well understood process, that was or could be documented.
 - Currently laden with inefficiencies and/or manual processes
 - Relatively low level of complexity
 - Relatively short time to market

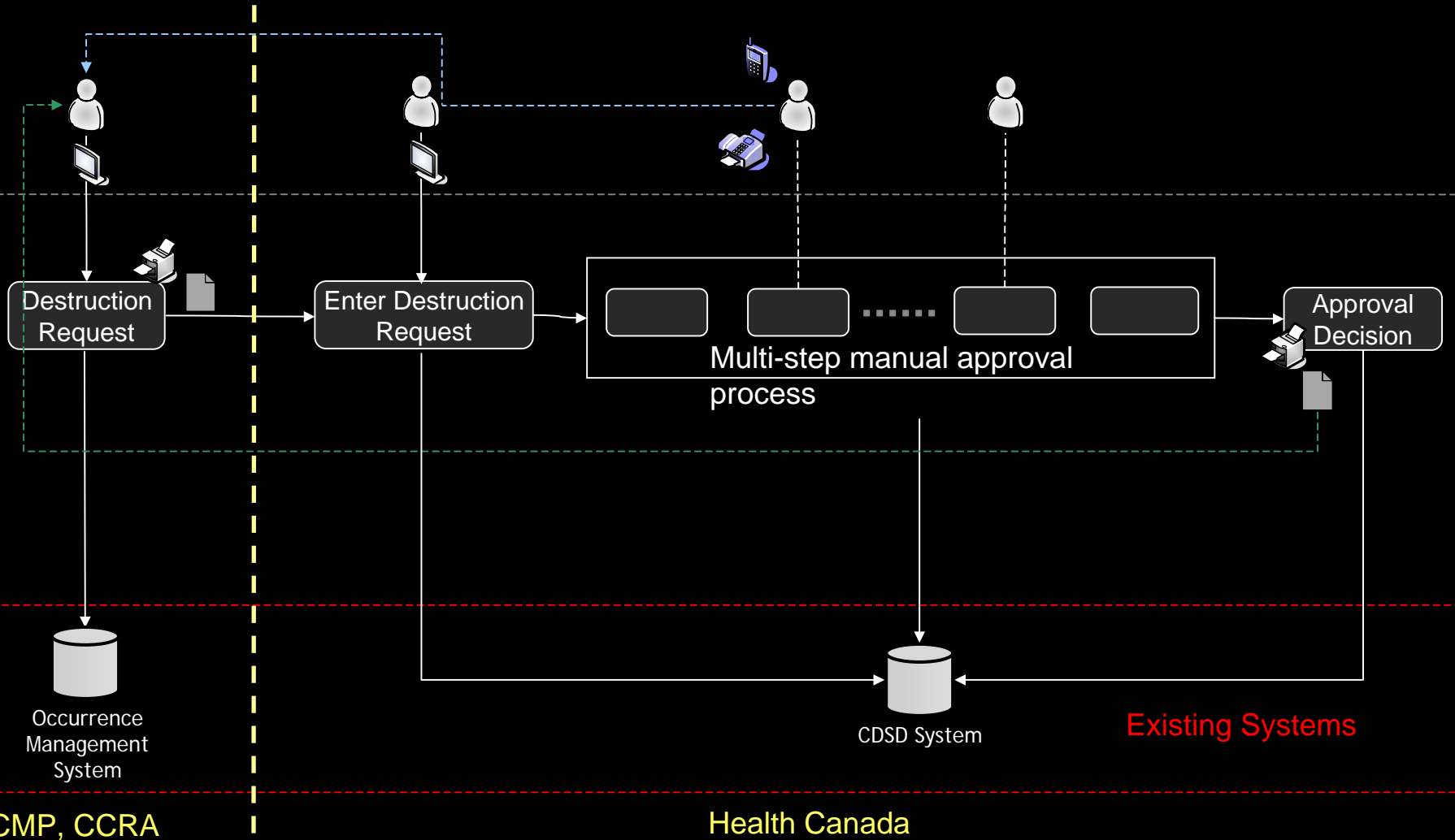
Health Canada Business Problem Identification

- Drug Offence and Disposition Process
 - No control over the initial documentation of controlled drug and substances seized
 - No provision of authorization from Health Canada to RCMP for destruction of seized drugs
 - No common collection of data regarding the seizure of illicit drug and disposition charges
- Reporting on data collected is submitted to
 - Various govt. departments and agencies (Stats Canada, Canadian Center for Substance Abuse), from various sources and repositories. This data can then be correctly or incorrectly acted upon by International organizations. (UN Drug Control Program, Interpol, Worlds Customs Organization)

Drug Offence and Disposition Process



Drug Offence and Disposition Process



Health Canada – Business Problem (Contd.)

- Process Inefficiencies
 - Employees in different departments and agencies use different systems to manage information
 - Departments automate the part of the process that belongs to them but then have to revert to manual processes to complete the cross departmental portion
 - Redundant Forms/Data Entry
 - Loss of data quality and integrity
 - Process latency

Health Canada – Business Problem (Contd.)

- **Process Inefficiencies** (contd.)
 - Inconsistent application of regulatory and non-regulatory compliance requirements
 - Inefficient use of resources (human/paper)
 - Difficulty tracking documents and process status
- **Partners have a mix of**
 - Disparate technology architecture
 - Packaged and custom home-grown applications
 - No common data model for the exchange of data

Solution Objectives and Why SOA?

- Tactical
 - Achieve operational streamlining by transforming the Drug Offence and Disposition System
 - Cost efficiencies and Savings
- Strategic
 - Apply standards based solutions and innovative technology
 - Interoperability in multi departmental environment
 - Information Sharing through the implementation of a federated data model (Common data element/XML)
 - Improvement of the quality and/or delivery of Programs, Services and Processes
 - Provide a reference architecture for government (e.g. use of ebXML)
 - Accountability and Transparency
 - Reusability and extensibility of solutions

to enable coherent business design across the government with a formal, standards-based approach that will guide and expedite business transformation to meet the government's high level business objectives.

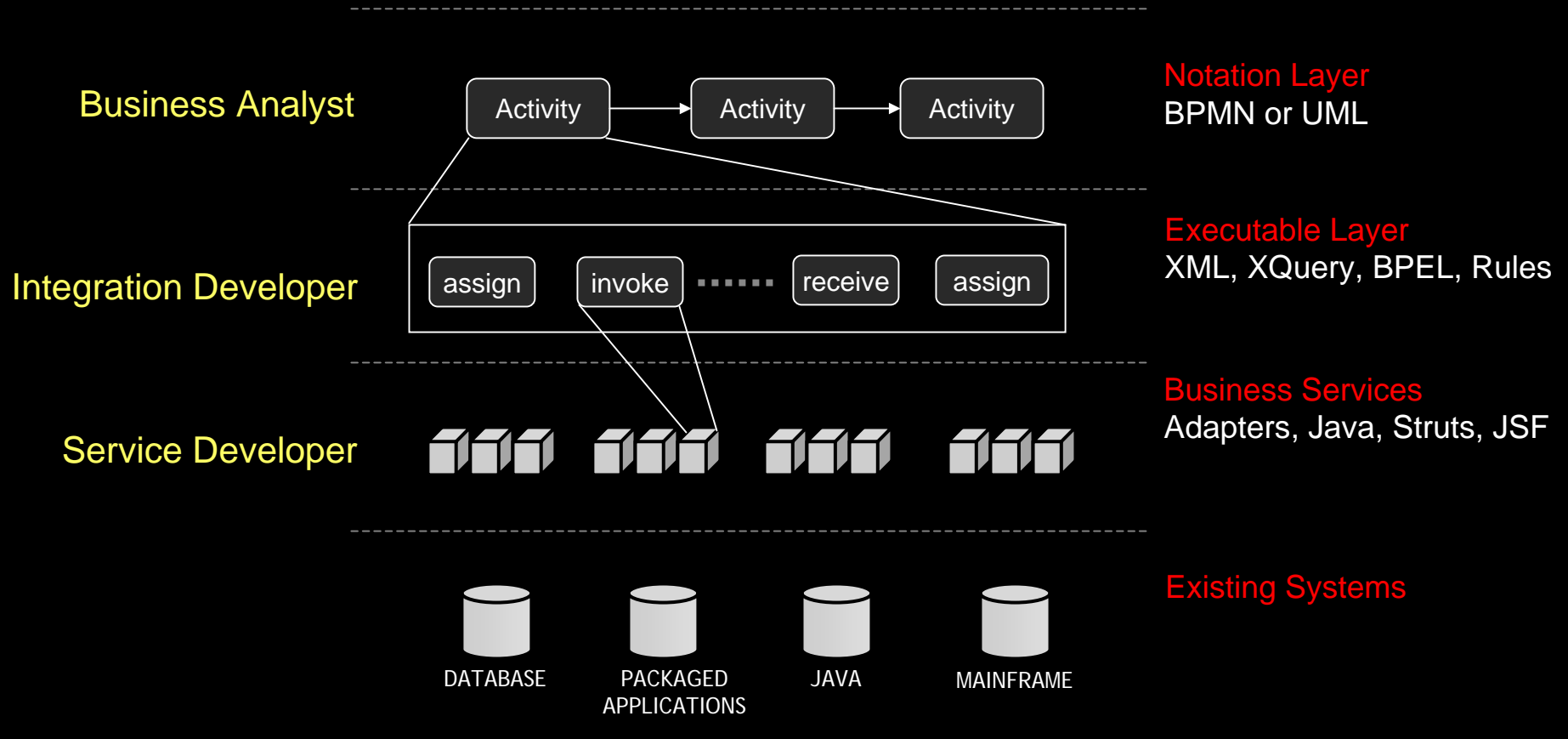
Pilot Project Discoveries

- Use of standards-based business process execution engine minimizes interoperability problems
- Data standards facilitated design, development and implementation as well as reuse and extension
- Standards-based B2B protocols can fulfill the needs of the solution initiative
- While cross-vendor ebXML communication (ebMS) is possible, products from different vendors are not at the same level/versions of standards

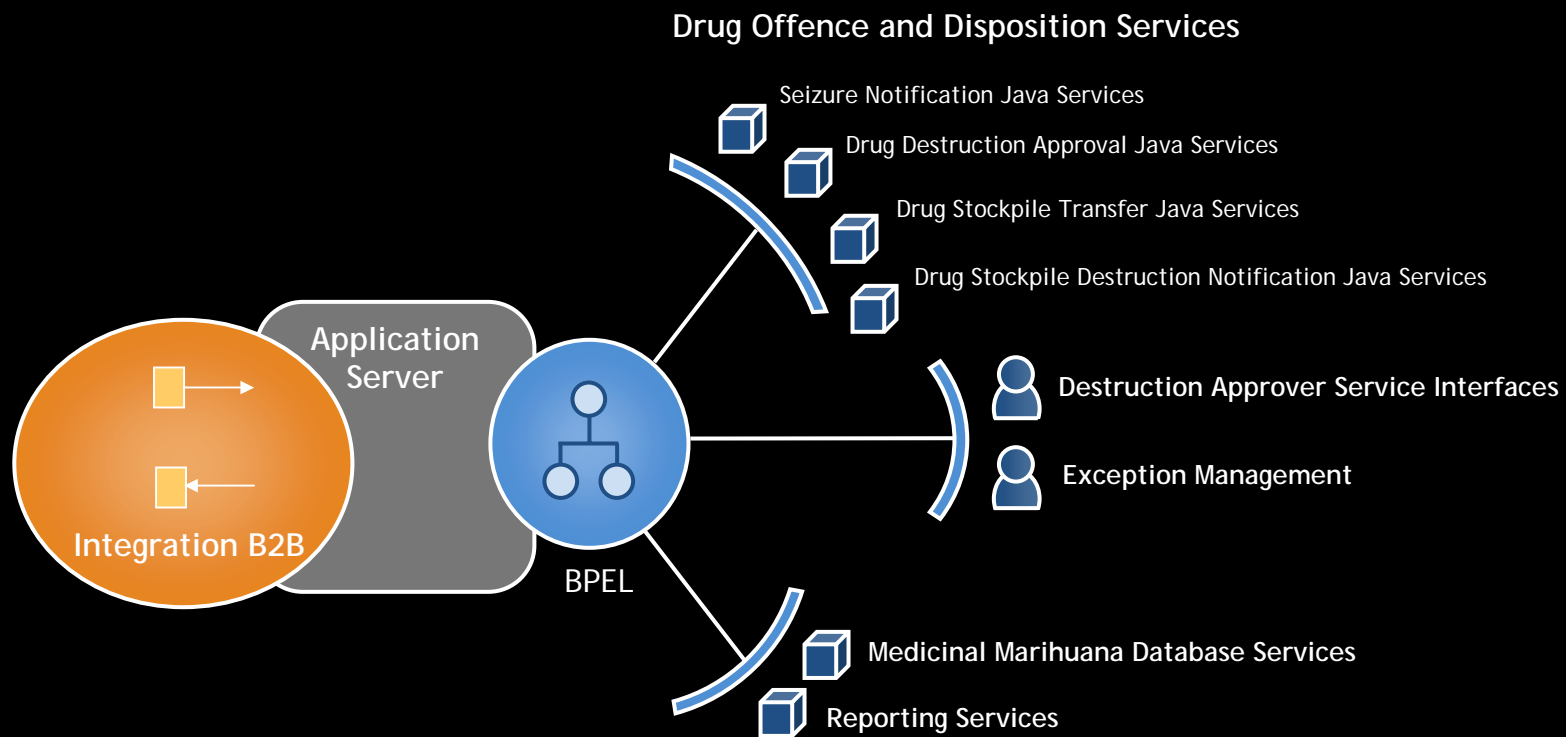
Pilot Project Discoveries

- Solution chosen should be hospitable to evolving standards
- Non intrusive to existing systems
- Extensible to new partners, new processes, new data with minimal changes
- Highly modular (does not break if one piece changes)
- Secure and Reliable

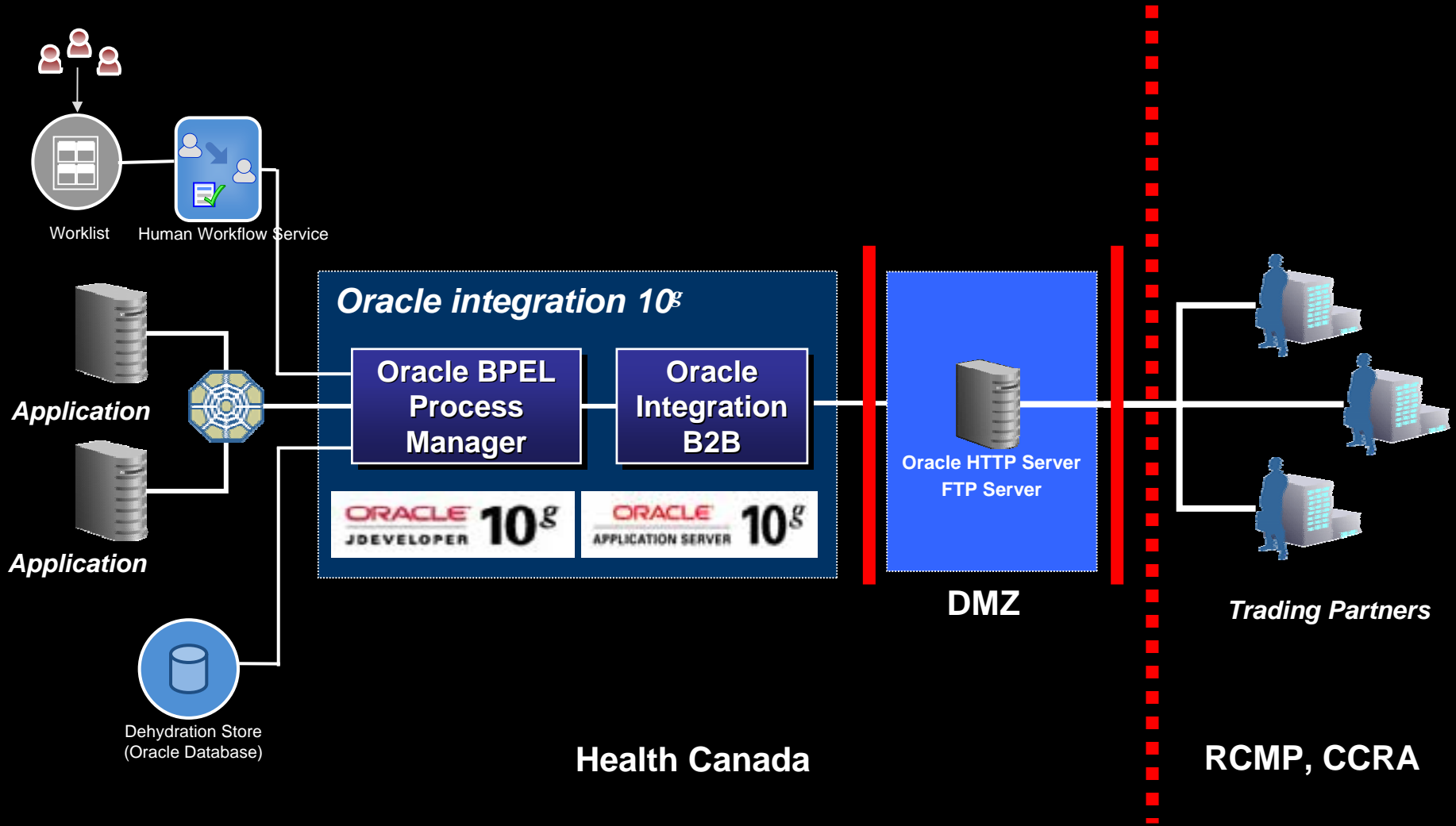
The Top Down Perspective



Health Canada Drug Offence and Disposition Services



Health Canada Solution Architecture



Why SOA using Oracle BPEL PM?

- 100% open standards based solution
- Hot pluggable (can sit in front of existing architecture)
- Integrated architecture with ebXML support provided by Oracle B2B
- Custom workflow capabilities for internal processes

Why SOA using Oracle BPEL PM? (Contd.)

- Integrates easily with backend systems using adapters
- Real-time process visibility with Business Activity Monitoring (BAM)
- Highly secure and manageable
- Large customer base providing critical and honest feedback

Experiences and Best Practices Learned

- Process and Architecture
 - Loosely coupled interfaces (XML, WSDL) for coarse grained services
 - Common classification policy and schemas
 - Use of asynchronous processes improves efficiency and reliability

Experiences and Best Practices Learned

- Process and Architecture
 - Expect to focus on exception management
 - Include security early in your architecture
 - Apply integration patterns early in design
 - Services re-use makes it easier to add or change partners

Experiences and Best Practices Learned

- Plan and Manage
 - Senior management commitment and IT governance (roles, authority and responsibility) is critical
 - Setting up Service Governance
 - Monitor, Defining New and Authorize Changes to Existing Services
 - Collaboration between partners to achieve interoperability is key to success
 - Avoid tunnel vision – department/employee

For additional information

- <http://www.oracle.com/soa>
 - SOA Best Practices: The BPEL Cookbook
- <http://www.oracle.com/integration>
- <http://otn.oracle.com/bpel>