GOVERNMENT TECHNOLOGY®



HAWAII DIGITAL GOVERNMENT SIIMMIT

HONOLULU HAWAII NOVEMBER TWENTY-FIRST

2013







T8: Leveraging Legacy Applications

Technology Transformation

Establish a Reliable and Secure Infrastructure

Moderator:

Keone Kali

Deputy CIO, Operations
Office of Information Management & Technology



Session Focus

— Given an uncertain financial outlook, IT shops will (again) be asked to do even more with even less. And a good place to start is with core enterprise applications and software platforms. There are multiple ways to approach the modernization process. This session focuses on trends, possibilities, tools, techniques, resources and alternatives for transforming legacy systems.

T8: Leveraging Legacy
Applications





David K. Keane

CIO

Department of Human Resources Development



- ERP Implemenations PeopleSoft Human Resources Management System (HRMS)
 - -2000 v6.0
 - -2004 v8.3
- Support/Maintenance Mode from 2004 Present Day





Challenges

- Aging hardware and software (many no longer supported)
- Insufficient operating funds
- Reductions in staffing due to RIF, outside promotions, reallocation of resources





Solutions

- We are getting out of the Hardware/Sys Admin Business
- We plan to fully participate in OIMT's Shared Services Catalog Initiative
- Refocus our efforts and resources on our core business Human Resources





Mahalo!





Allan Stone
Director, Information Systems
Department of Education





Session T8: Leveraging Legacy Applications

Background

- DOE's Budget System and Financial Management Systems:
 - ~ 25 years old
 - on different legacy platforms
 - very limited integration between them

Problem:

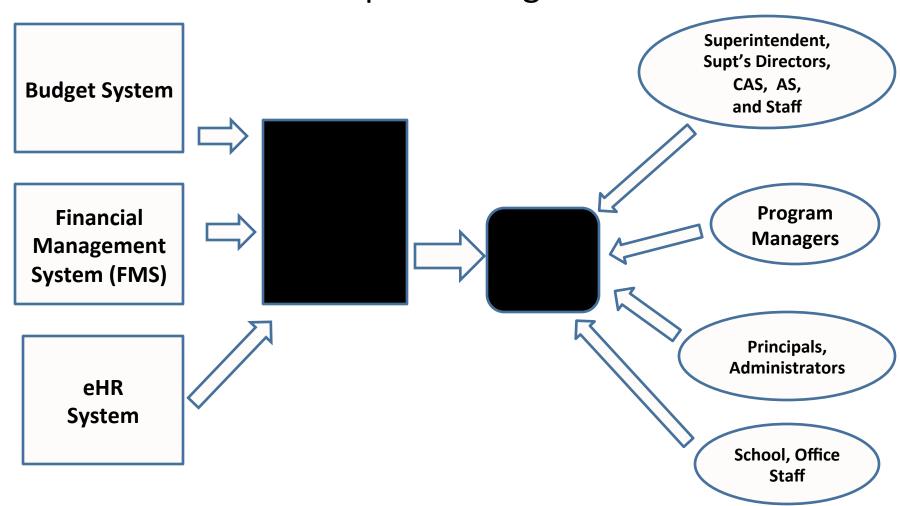
— How to make useful data available to a wide range of users from 25 year old legacy, but mission critical financial systems?



Solution

- Build a modern Financial Reporting System (FRS) on top of the older systems which:
 - integrates disparate data
 - provides selectable financial reporting capabilities
 - supports all levels of the organization
 - provides granularity from aggregate to drill down
 - provides timely and complete information
 - is adjustable to specific audiences

Web-Based Financial Reporting System (FRS) Simplified Diagram





FRS Data Sources:

- Financial Management System
 - (IBM Mainframe w/DB2 database
- Budget System
 - (Digital VAX/Alpha w/RDB database)
- Human Resources System
 - (HP Intel Xeon servers w/Oracle database)

FRS Technology:

- SQL Server 2008
- SQL Server Integration Services (SSIS)
- SQL Server Reporting Services (SSRS)
- FRS served to users through a SharePoint portal



Reports are Dynamically Generated (not "canned")

- Based on filters selected by user
- Can be exported to Excel or PDF

Report Filters Selectable by Users

- "As Of" Date
- Means of Finance (MOF)
- Organization Level
 - School or Branch
 - Complex Area / Office
 - DOE State
- Organization ID
- Program ID





Examples of Reports

- Monthly Financial Report
 - Based on user-selected options
 - Provides a cumulative graphical depiction of the progress through the fiscal year of budget and expenditures.
 - Provides current-month, and year-to-date budget and expenditures.



- Summary of Key Accomplishments
- Among many other features, FRS makes it easy for users to determine:
 - How have budgets been allocated?
 - How much has been spent, compared to budget?
 - What were the funds spent on?
 - What are the current balances?
- FRS has been available and providing services to users for the past three years.

T8 Leveraging Legacy
Applications





Current/Future Development Areas

- -Building Phase III Reports
- Mapping data to Dimension and Fact tables of our Longitudinal Data System
- Upgrade to SQL Server 2012 and SharePoint 2013



Mahalo!





Ryan Shimamura CIO Department of Human Services





Extending the Life of a Legacy Application System

- Conditions
 - ✓ Can the current System continue to do the Job?
 - ✓ Do your users like the current System?
- Planning to extend the life for in two mission critical Application
 Systems:

Child Protective Services System

Hawaii Automated Network for Assistance





Child Protective Services System (CPSS)

- Mainframe Based, Software AG: Natural, ADABAS
- Currently the System of Record (Captures all necessary data)
- Interfaces with Federal Partners
- Users find it hard to enter data/information
- Users find it hard to retrieve specific data/information as needed

Solution:

- Replace Application System over time, to provide updated functionality at accelerated pace
- Plan to start with:
 - -Create new front end for Data Input (Browser Based, Web Services)
 - –Create new back end for Data Reporting (Data Warehousing/Extracting)
- Overtime replacing functions and eventually the database until everything is replaced





Hawaii Automated Network for Assistance (HANA) System

- Server based application: JAVA, Database Software AG: ADABAS
- Currently the system of record (Captures all necessary data)
- User interface recently modernized
- Current users like the system

Solution:

- Replace database with a relational database
- This will allow easier access to the data/information





Mahalo!





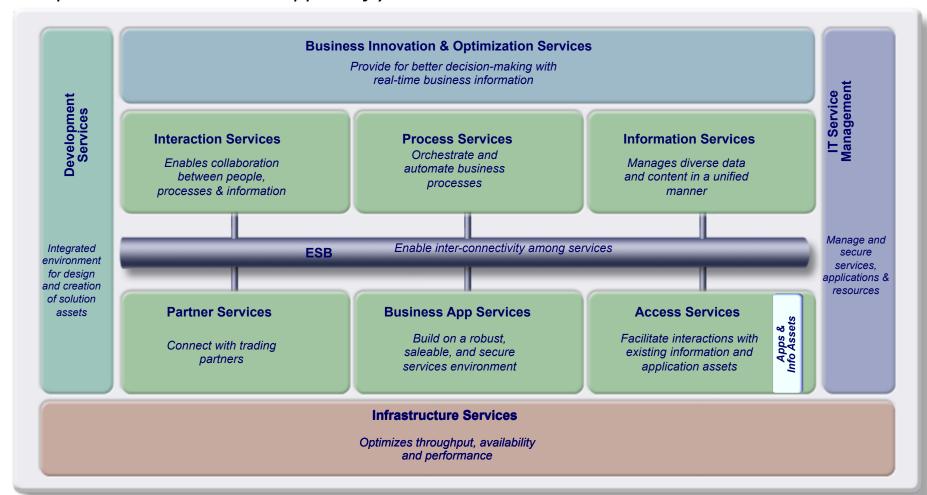
SOA – Services Oriented Architecture Shared Services Model

Robert Hoyt Healthcare Solutions Executive IBM Corporation

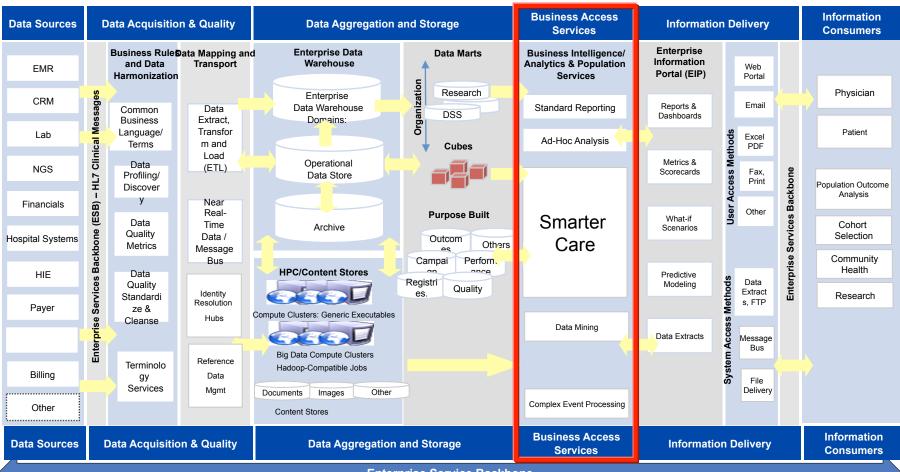


SOA Reference Architecture

Comprehensive services in support of your SOA



Healthcare Information Management Reference Architecture



Enterprise Service Backbone

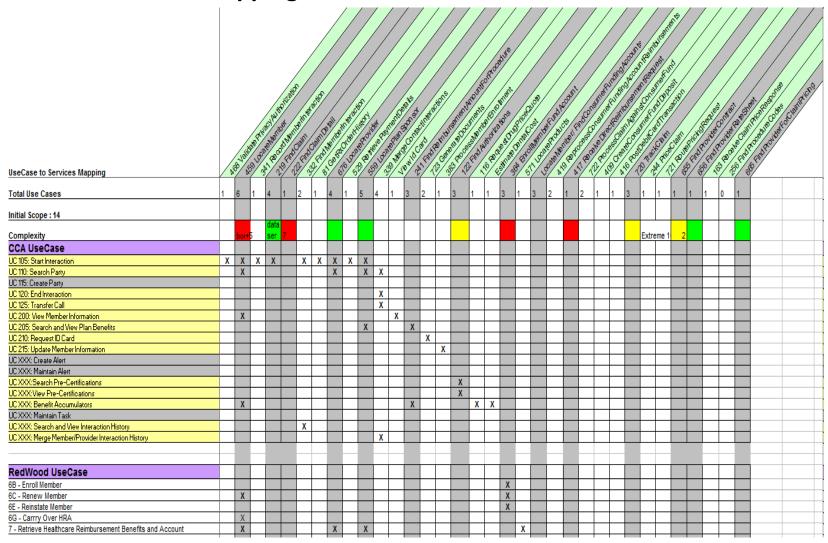
Identity & Access Management, Security, Data Obfuscation, Encryption, & Audit Controls

Infrastructure Services for Monitoring & Backup

Multi-tenant Data Models, Business Models	Content Analytics Management, Offline Clinical Mapping						
Data Modeling, Metadata Management & Business Glossary	data Management & Business Glossary Taxonomy SNOMED, RxNorm, ICD, Medra						
Data and Service							



Use Case to Services Mapping

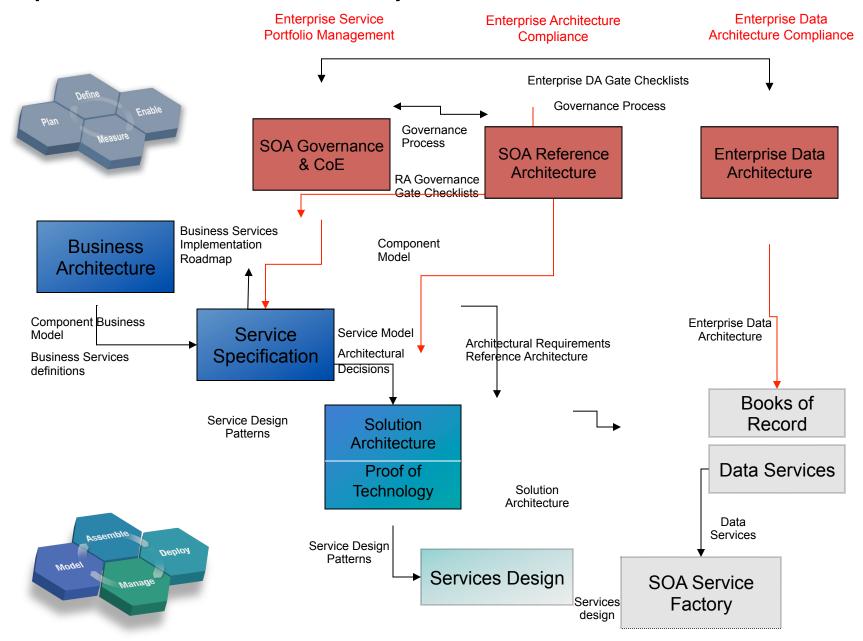




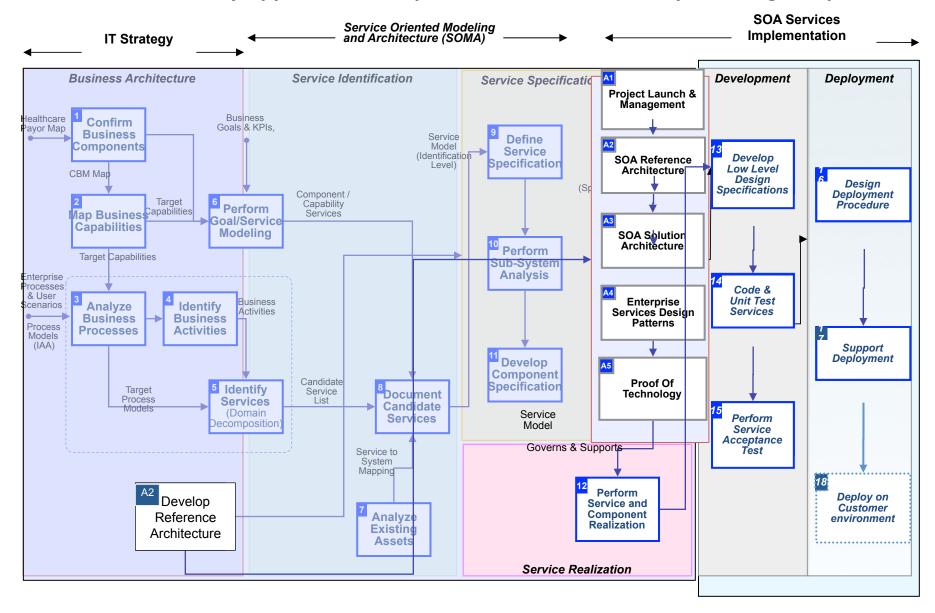
Service Candidates

•	Category	Candidate IT Service	Candidate IT Service Description	Service Disposition	Comments	SLT 1.1	SLT 1.2	SLT 1.3	SLT 1.4	SLT 1.4	SLT 1.4	SLT 1.4	SLT 1.4	1.4	SLT 1.4	SLT 1.4	SLT 1.4	Proj Impac	
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▼		T			▼				_ ▼	[▼		▼		▼	T	[▼]	_ [▼	▼	4
11 Account Installation		EstablishConsumerFundAccounts	Establishes the fund accounts (HRA, HSA, FSA, Debit Card) required at the plan sponsor level for benefits and services selected.) Publishes information to downstream partners (MBI, JPC) and BOR's. Sets up of banking collaterals such as HSA debit card layout, welcome kits, or other	Exposed	This would basically establish the account structure and eligibility requirements for consumer accounts (HBA, HSA, FSA) and Debit/Credit Card Accounts for offered benefits and services. A sub-service would publish the information to downstream BORs and partners. RED 11/20 - Per Dave Nadeau may want to	X	×	X			X							1	3
			communications. Allows development of client banking structure for the purposes of associating funding arrangements with various products and product structure. Sets up the client bank accounts and associates the accounts with various benefits. It also sets up banking reports and client banking		PKED 11/20 - Per Dave Nadeau may want to consider this a part of the larger service to "Set-up Account Structure".														
	Billing Location	RetrieveBillDetails	Retrieves bill details. Retrieves bills for a given party. Retrieves the details of a given bill.	Exposed		×	×	×									Portal s	0	
	Billing Location	RetrieveBillingDetails	Retrieves billing details – payment frequency, paying method.	Exposed	An activity of OperateDirectPaymentCollection. Used to select alternate payment method when direct payment fails.	Х	X	Х									Portal s	0	
	Care Program	SubmitClaimAppeal	This service allows to create appeal or dispute a claim.	Exposed	JRM 11/29: Putting as part of the Medical Management (Care Program). JRM 12/12 - Appeals and Grievances category. Appeals could be payment appeals, med mgmt appeals.	Х	X	×	×									1	
	Care Program Location	FindAppealsCase	Responsible for searching for all details associated with an "appeals case" for correct member response.	Exposed	Need some more information about what type of care management information a consumer will be searching for. This may actually break down further into more specific types of case information.	X	X	X	X									1	
	Care Program Location	FindAuthorizations	Responsible for retrieving the appropriate level of care and authorization information for the claim being submitted. This information is required by external pricing in order to price the claim.	Exposed	RED 11/20 - Per Bob Harwood part of ICMS rewrite.	X	X	X	X	×								2	
	Claim Adjudication	ApplyClaimOverrides	Responsible for applying any exceptions to the claim process. This is used to override the normal decision making process when extenuating circumstances prevail. Currently, these are called Scenario-based Processing	Exposed	JRM 12/11: ??	Х	X	X		×		×						2	

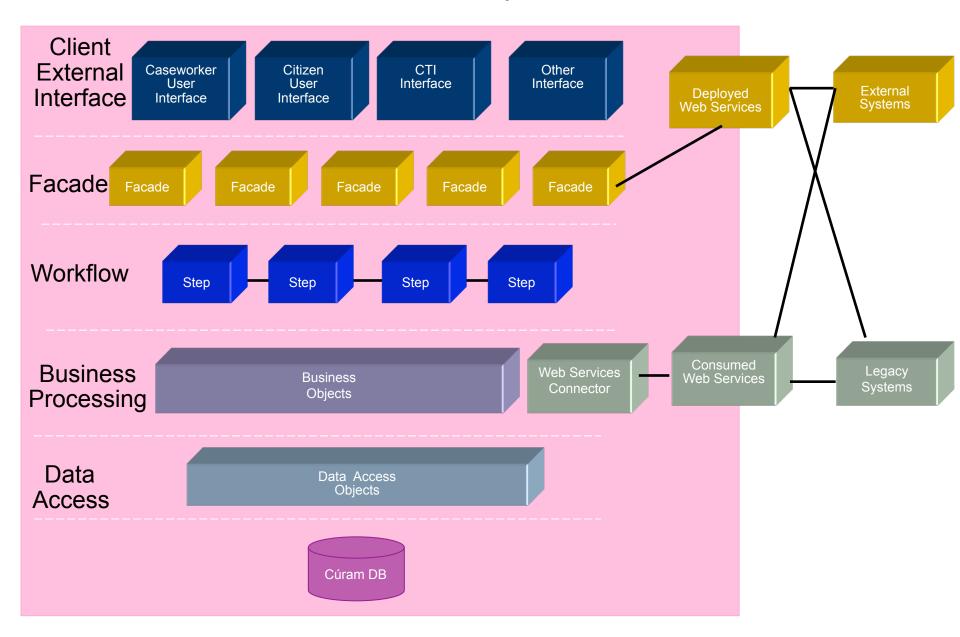
Enterprise SOA Work Stream Summary



SOA Services Factory Approach - Enterprise SOA covers from step 1 through step 13.



Cúram and SOA – A State-Wide Healthcare/Social Services Solution





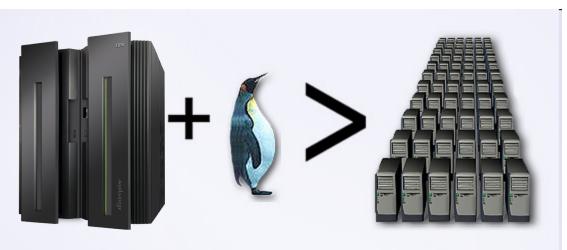
Linux on System z – take back control of your IT A data center in a box – not a server farm

- Potentially lower cost of operations
 - Less servers
 - Fewer software licenses
 - Fewer resources to manage
 - Less energy, cooling and space

- Central point of management
- Increased resource utilization
 - Shared everything architecture
- Fewer intrusion points
 - Tighter security
- Fewer points of failure
 - Greater availability

It's simple

System z® and Linux provide a better, faster solution to IT complexity



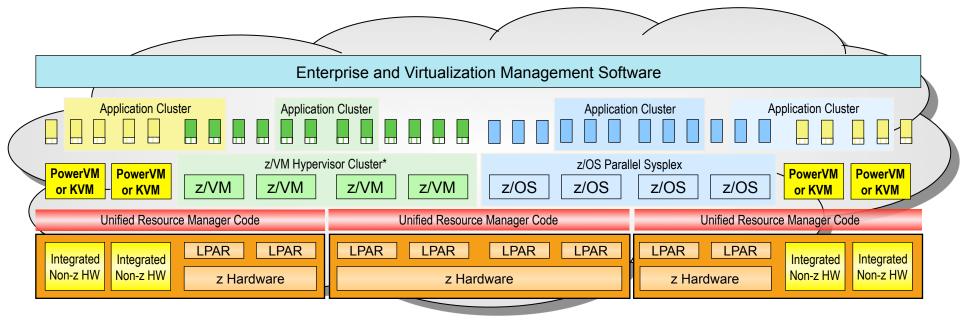
IBM Multi-Architecture Virtualization – "Fit for Purpose"

System z Multi-System, Federated Hypervisor Configuration

- zEnterprise offers a federation of platform management functions, including:
 - Resource monitoring
 - Workload management
 - Availability management

- Image management
- Energy management

- Integrates with hardware management and virtualization functions
- Controls hypervisors and management agents on blades
- Open integration to enterprise-level management software







Mahalo!





Summary

- Key Lesson(s) Learned and Best Practice(s)
- Next Steps
- How can you help?
- Who do you contact?

Don M. Hongo / ICSD