

### Transforming Government...

Through Business and Information Technology (IT)/Information Resource Management (IRM)

Asia-Pacific Information Management Conference

Sanjeev "Sonny" Bhagowalia State of Hawaii Chief Information Officer July 11, 2012

## Future World...In the Clouds?



"It was much nicer before people started storing all their personal information in the cloud."

Source: New Yorker Magazine

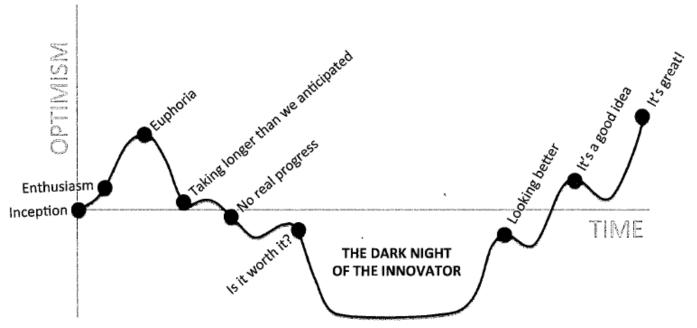


### Transformation and Change isn't Easy

The Path of Innovation

Between the idea and the reality falls the shadow

- T.S. Eliot





Source: Jeff Mohr, HCF

### It's not just about Technology....





Source: "Real Value from the Cloud: Moving beyond personal productivity", Center for Digital Government, 2012



# CIO Provides IT/IRM Leadership

- Develop, implement, and manage IT/IRM governance
- Establish and enforce policies and standards
- Create architectural requirements
- Provide statewide IT/IRM investment oversight



Source: <a href="http://www.ndu.edu">http://www.ndu.edu</a>

Source: <a href="http://www.cio.gov">http://www.cio.gov</a>



### Change is Coming (Like it or Not...)

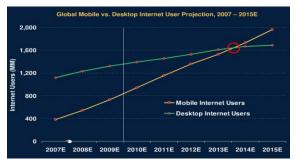


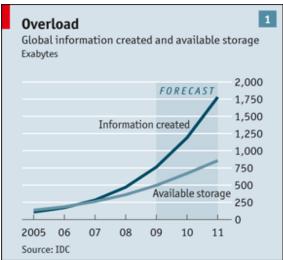
6 bold tech predictions: Fact or fantasy? FCW (December 8, 2010)

- 1. 20% of businesses will own no IT assets by 2012 (Gartner)
- 2. 75% of Stand-Alone IT Departments will disappear by 2015 (Corporate Executive Board)
- 3. One trillion devices will be connected to the Internet by 2013 (Cisco) Current = 35B
- 4. The government can save \$1 trillion in 10 years by harnessing certain proven technologies (Technology CEO Council)
- 5. 25% of personal computing devices sold will be tablets by 2015 (Forrester Research)
- 6. Data will grow by 800% in the next five years with 80% Unstructured Text/Media (Gartner)

Mobile will be bigger than desktop internet in 5 years
-- Mary Meeker, Morgan Stanley, April

-- Mary Meeker, Morgan Stanley, April 2010





Volume of digital information increases tenfold every five years & the data is replicated many times over!



### <u>Context: Maximum sharing and flow</u> <u>of information and knowledge</u>



- YouTube is now second largest search engine in the world
- 1.5 million pieces of content shared daily on Facebook
- On-line newspaper readers are up 30%
- 250 million visitors each month to Myspace, YouTube, and Facebook (none were around 6 years ago)
- Mobile devices will be world's primary connection tool to the Internet in 2020

As big an issue outside your organization as within it



## Trends We Need to Watch...

- 1. Consumerization & The Tablet
- 2. The Infinite Data Center
- 3. IT Consumption
- 4. Context Awareness
- 5. Hybrid Clouds
- 6. Fabric Data Centers
- 7. IT Complexity
- 8. Patterns and Analytics
- 9. The Virtual Enterprise
- 10. Social Networking



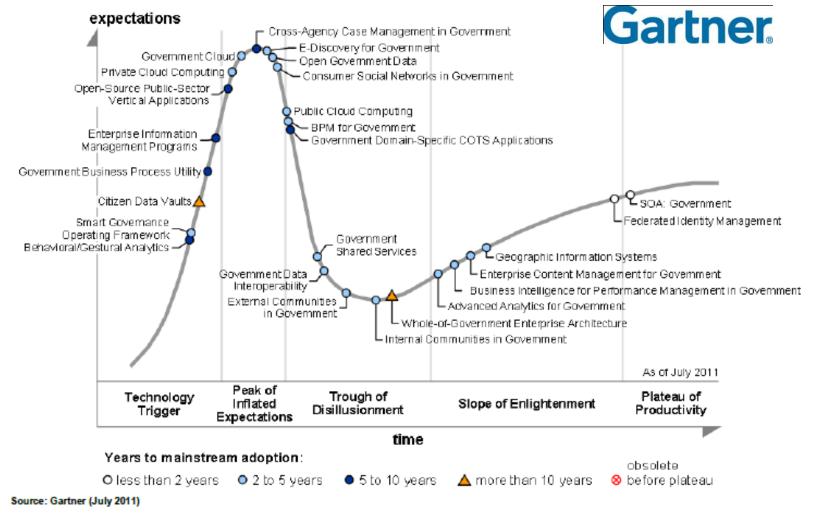


Source: Top 10 Trends and How They Will Impact Data Centers and IT, David Cappuccio, Vice President, Chief of Research, Gartner



### Hype Cycle for Government Transformation

Figure 1. Hype Cycle for Government Transformation, 2011





# NASCIO Conference (2011)

#### **NASCIO Top Ten Strategy Priorities (2012)**

- Consolidation / Optimization
- 2. Budget and Cost Control
- 3. Governance
- 4. Health Care
- 5. Cloud Computing
- 6. Security
- 7. Broadband and Connectivity
- 8. Shared Services
- 9. Portal
- 10. Mobile Service/Mobility



#### **NASCIO Top Ten Technology Priorities (2012)**

- Virtualization
- Legacy application modernization/ renovation
- Cloud computing
- 4. Mobile workforce technologies
- 5. Networking
- 6. Enterprise Resource Management (ERP)
- 7. Identity and access management
- Business Intelligence (BI) and Business
   Analytics (BA) applications
- Document/Content/Records/E-mail management
- 10. Public Safety Radio Network

Source: http://www.nascio.org



### State of Hawaii Business Model

<u>Criminal Justine</u> Emigraphi Climin Der Collen begrechte National Action Date Designment ASSESSMENT HOUSE Service Middled Applicance Criminal History Reserve Charles Berginbourer Enterfative Outs Continuent Shaffel & Drug State Franchism Service Reported Contribution Commodition inspection and Bradies basegenetic Health Care Management On Fumping office Regregated Manifestine COME & Administration of Health Service Child and Adult Frederice Service Administration Services integrated dustice intermedian Storing Hermaterial Security Children with Sensial Health Needs People Corp. der Offender Rejubration Agricultural Irrigation Hamaland Security & Law Beforement Read and Nativities Assistance Zale D Certs Agricultural Land Lease Communication Change Child Care Socialisms Agricultural Laure Administration Community Salations Mind and Smalesment, Pleasant. Agricultural Medicing Assistance Derivat Health Services Committe Sealing Services Spiniford Masurement & Zandards States Newscool Developmental Displify Services Vendored School School Call Dalance infrastructure Manager Disease Cultimat & Biologopher Service: For The Visually and Harring Animal Committee and Importation Imageny Propositions and Empares Charles Milgalian Disease Cultivati Cantral After Galdie Heusing Socialisms Studen Empares Saleing Child Scorner Cherology Agustaliana Vertana Assistanta Regional Midded Series New Children in co. tain! Metaling for Agricultural Products Improve Communications State. Immunistian Series Agricultural Land Management Child Support Hearings Services Natifications. Intern Francisco Debine Support to traditions with and Worldman Management First Connection and Importation Control Millered & Child Health Senten Set Call Middles Inspection Fullis Health Hursing Services Computered Safety and Hearth Control Imaging Propositions Floring Vital Seconda Registry: Birth, Marriage, Francis Harth Care Law Administration Public Schole & Lee Seferance of Referral and Jack Flagment, Service Incomis Decisioners Instrumental Management Zale last leferance Labor Comment and Statistics Analysis Named in Behaviored Temperary Displify Insurance Law Barrarda Cararda & Arabab Series Bestra expectal Laboratory Service Committee of Solidishins Administration. Incomes Englanded Floreign - Intranspolal Management - Stianfaring Teacher Services Community Sound Medial Health University week in survivous Creation in South y Service Programs. Vigo and European Securable leaves Sopidary Information Signari Operations Corrections Fragram Service: Management Mark Desirement Fartnerships Heitara Carolinea Courts and Law Inforcement Courtination Marke's Composation too Highways Operations & Maintenance Land & Halland Favorances for Seriesan Computation Communica & Consumer Affairs Administration **Buding Explication** Description of Mall Paleiro an Anthony Commention & County Land Service Califor Salestates - Services Computation Commention Service heads Classification Consumer Advances Service Designment & Demographic Femoral & Public Order Co. Aquable Usersing Inmalia Health Care Fregren Consumer Fractacion Services Personal & Mildlife Management level in Vandieral Reliabilitation DCCA Administrative Having Services Harration Harrier Land's Spiglishians & Reportal Institution Services Historia Services Fally and Fraction for Sections Hilliescrapes industry Consight Natural Development Services Computation Vendored Manday Harration Harma Land's Development Connects Councille 20000 - Table Subsended Visiting Freferiend & Ventilend Densing Adult Mandley Zafe Forts Service. Information Nationals Regulated Industries Complaint Service Hamping Hamp Lands Maintenance Smartin Completes Wider Resource Management Havatan Hama Lands Laura Managama UStrary Services Land Survey Services Secretion Information

14 Support LOBs

~50 Services

20 Core LOBs

~150 Services

Harration Harma Lands Laure Administration Core State Services (Services for Citizens) Secured Services Faller, Cardinals and Consists Institution Entitions Extent and Research Harrier Engages Management Falley Credition and Falls Development Budget Planning Smallerer Claims and Micrison Controlled and Band Service Fragram Manifering Balcation, Compression Zafe Congruenced Information Reportal Empring Arabina Series Completes and Separting Zall Ferformanse Management & Sudd Services Farting Control Companyation Construction Formits and Ordinaryas Regarding Unit Contracts Planeter and Engages Altradius Zalium Consiliera Extends insuring being Capital Flanning Microsto/Assessed Paralle Funding Classification Budget Permutation Public Communications Space and Residies Leading Assessment Committee Resultment & Saffley Fragram/Frajed Flanning Fulblic Cultiment Martinian False Training Administration Markings Floring **Politica Management** Conditional Employee Zalf Desirement & Training Zraligis Flanning **Beneral Construction Management** Reserve Collection Time & Attendione Control Management User For Collection Section Collector Information Technology Management Zufe freid beim Sent Measured & Investory Control Reviewed & Midwid Mann Debt Calledian Admid Grant's Farrant and Consists Eatle Grant Transfers and Consight Investory Control Applications Development Insurface Tradition Applications Operations & Maintenance Sedama Amalysis & Design Francisco I Socialism If Bermanne, Falley & Domight Color Secretar VEID 12/18/2011 Support Services - Internal



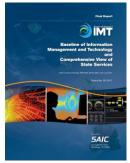
34 Total LOBs ~200 Services

#### Services to Citizens Land & **Juvenile** Hawaiian Defense **Legal Services Natural** lustice Homelands Resources Services Homeland **Child Support** Health Education Agriculture Security Services **Public Safety** Correctional **Economic** Disaster Human & Law **Activities** Services Development Management **Enforcement** Commerce & **Environmental** Criminal Workforce **Transportation** Consumer Management **Justice** Management **Affairs Enabling Services** Asset Policy, Financial Grants Management & Controls, & **Procurement** Management Management Inventory Oversight Control Planning & Human Legislative **Budget &** Revenue Resource Resource Relations **Finance** Collection Allocation Management Information General Public Affairs Logistics **Technology** Services Management



## <u> Phase A – Major Deliverables</u>

Baseline Report



Items 1-3 released in an open, transparent manner to the public

Benchmarking Report



Data Center Assessment

Los Research Control Research

Los Research Control Research

Los Research Control Research

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3) Data Center Assessment







High quality work products delivered on time and within budget – Phase A complete!

# The Study Found: Top 10 Areas of Opportunity









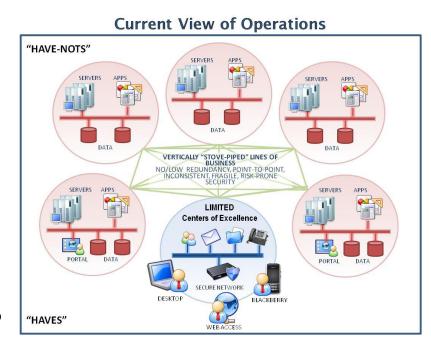
- Governance
- Disaster Recovery (DR) and Continuity of Operations (COOP)
- 3. IT Procurement
- 4. Security and Privacy
- 5. Open Government and Social Media
- 6. Collaboration and Work Flow
- 7. Enterprise Applications
- 8. Enterprise Infrastructure
- 9. Wireless/Mobile/Radio
- 10. Business Process Re-Engineering

We need to focus on these Top 10 opportunities...



## <u>Phase A – Findings</u>

- 18 Departments & University of Hawaii
- \$157.5 million IT/IRM budget
- 746 IT/IRM staff
- Over 500 applications
- 200 lines of business
- High duplication of effort
- Wide funding disparities
- Some focused areas of excellence



Many disconnected silos of effort



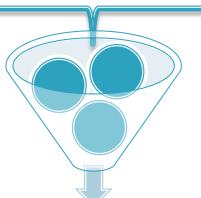
### 20 Key Recommendations

Business Reference Model Data Sharing and Collaboration

Manual Interfaces
Risk Assessments
Performance Measures
Funding for IT
Agency Model

Bargaining Unit Leadership Service Management Model Application Integration Platforms and Technologies Organizational Chang
ICSD
Applications Portfolio
Data Architecture
IT Costs
IT Skills

20



All recommendations are important but must be sequenced according to resources and readiness

Enterprise Focus

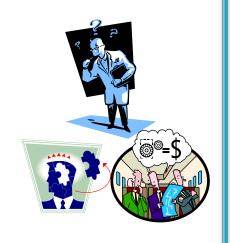
Governance Strategies
Business Process Re-Engineering
Technical Foundation

We are starting to implement the 4 basic foundational recommendations now!



# Four Key Recommendations to Start

1 2 3 4



Enterprise Focus for Projects



Establish Enterprise Governance



Re-engineer Business Processes



Strengthen Technical Infrastructure



# The Way Forward





## A Vision for a Better Future

### **Mission**

To assist agencies in the effective, efficient and convenient delivery of programs and services to the public through business transformation and information technology modernization.

### **Vision**

#### A State where:

- the public engages with an open and transparent government;
- State employees, citizens and businesses have convenient and secure access to reliable information;
- government processes are streamlined, integrated and implemented to meet the public's service expectations;
- information technology and information capabilities align and support business needs, strategies, and outcomes;
- innovation and continuous improvement are fostered.





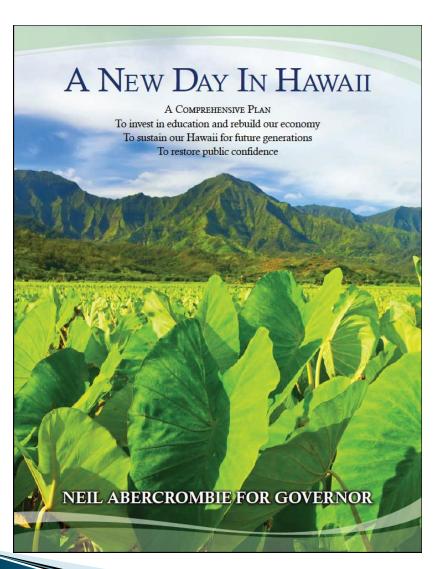
## Benefits of the Transformation

#### The transformation will benefit:

- State citizens through improved delivery of services and programs (e.g. going "online" instead of "waiting in line"); a more transparent and responsive government; and increased access to information and data.
- State employees with streamlined workflow processes allowing more focus on serving customers and access to a wider range of new technologies to support departmental mission, programs and services.
- State government through efficiently aligned services; reduced costs and unnecessary redundancies; increased reliability and security; and improved outcomes and accountability.



# The New Day Vision



#### GROWING A SUSTAINABLE ECONOMY

- New Day Work Projects
- Renewable Energy
- Food Security
- Innovation Economy
- Improvements on Public Lands
- Environmental Stewardship
- Culture, Arts, Creative Industries

#### INVESTING IN PEOPLE

- Early Childhood
- Education and Workforce Development
- Healthcare Transformation
- Safety Net, Homelessness, Public Safety
- Housing

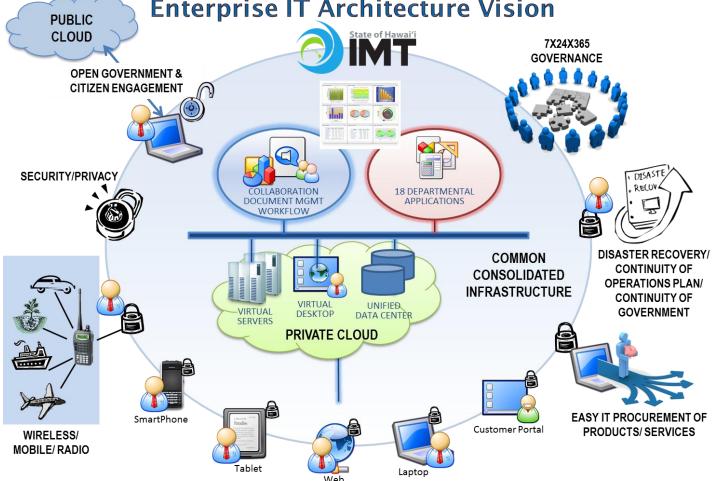
#### TRANSFORMING GOVERNMENT

- Information Technology
- Fiscal Management
- Operations Management
- Customer Service
- Civil Defense and Security



### **Vision**

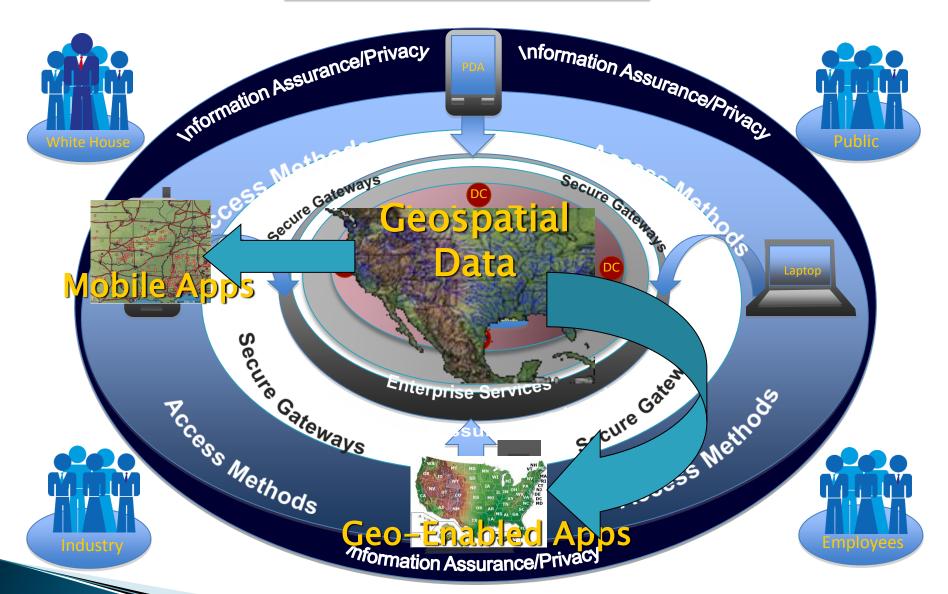
Preliminary Future Enterprise IT Architecture Vision

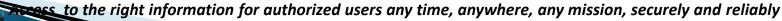


Access to the right information – anywhere, any time, any mission, securely and reliably

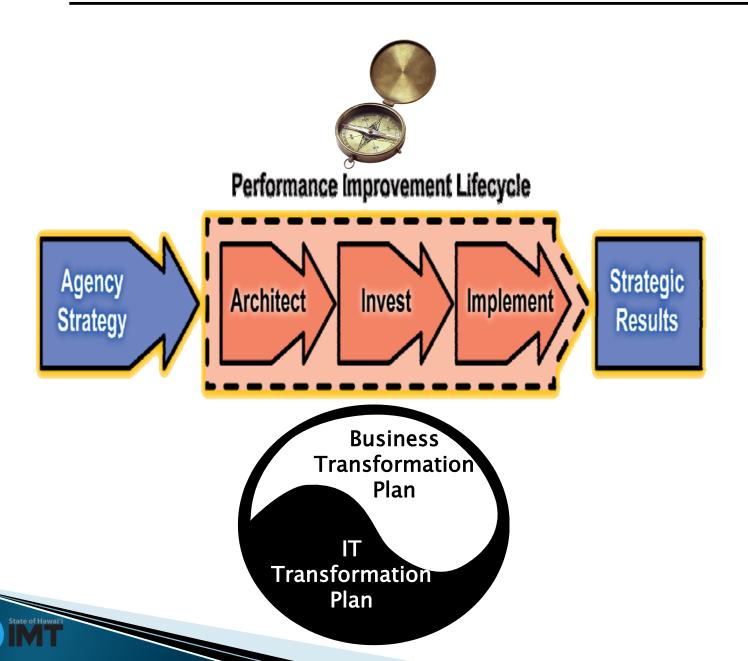


### **Notional Vision**





# The Transformation Plan



### Strategic Plan



### New Day Vision



**Drives** 

Management and Oversight (Governance)

State of Hawai`i Business and IT/IRM
Transformation Strategic Plan

2



**Enterprise Architecture** 

3

As Is

T & S Plan

To Be

**Projects** 

4

Triage

**Pilots** 

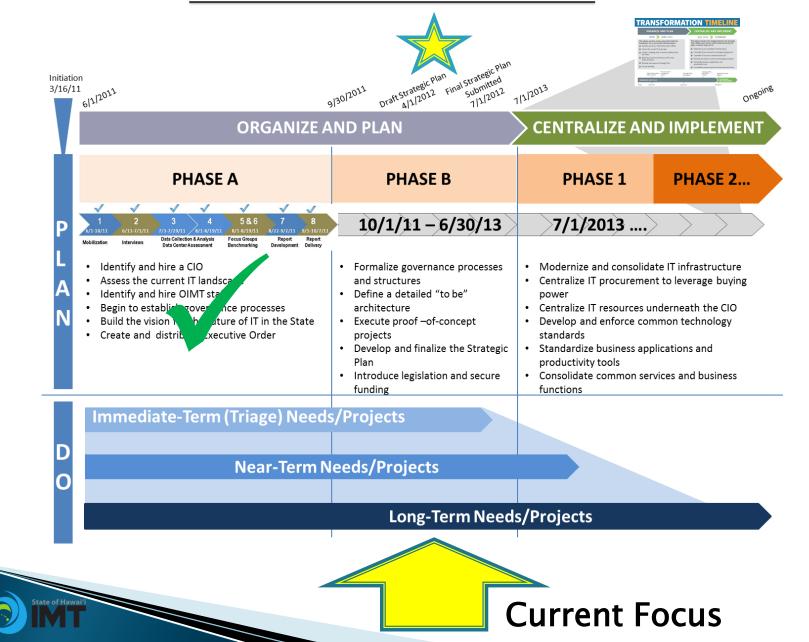
Major Initiatives

**Business Process Reengineering** 

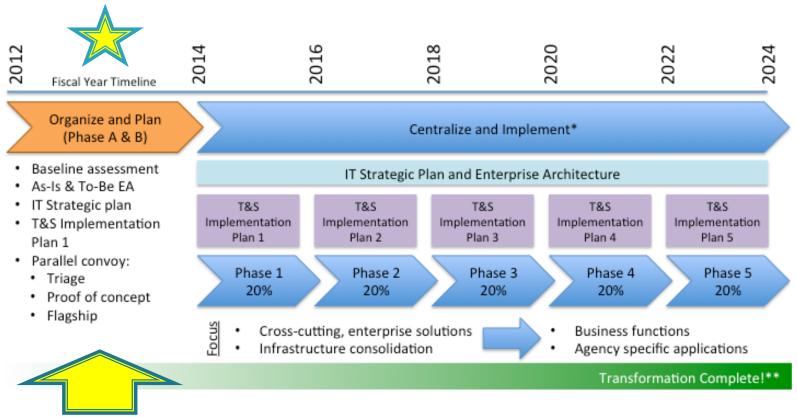




# An Integrated, Multi-Year Transformation Plan...



### The Transformation Plan



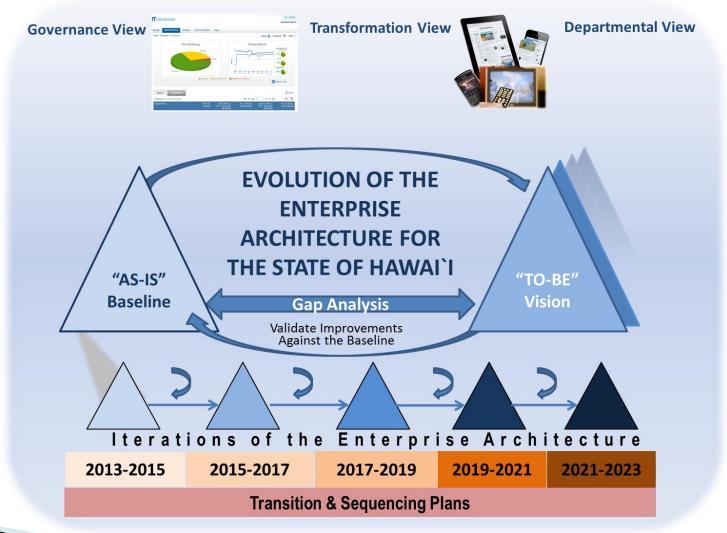
\*Successful implementation of Centralize and Implement Phases dependent on funding

\*\*State will pursue continuous improvement and innovation during and after the transformation

A Seven-Phase, Eleven-Year Plan with delivery along the way



## **Transformation Plan**





# The Open Government Initiative



### **Transparency**

promotes accountability

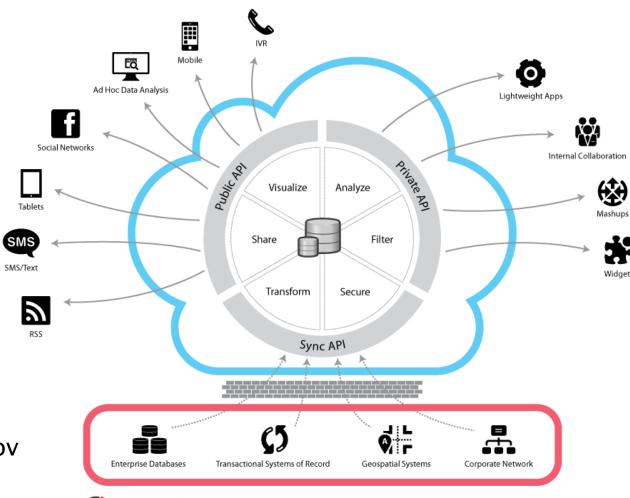
Participation allows people to contribute ideas/expertise; government benefits from broad knowledge sharing

### **Collaboration**

encourages cooperation within government and with industry



# Next Generation Data.gov: A Platform Designed for Data Access & Consumption



http://www.data.gov



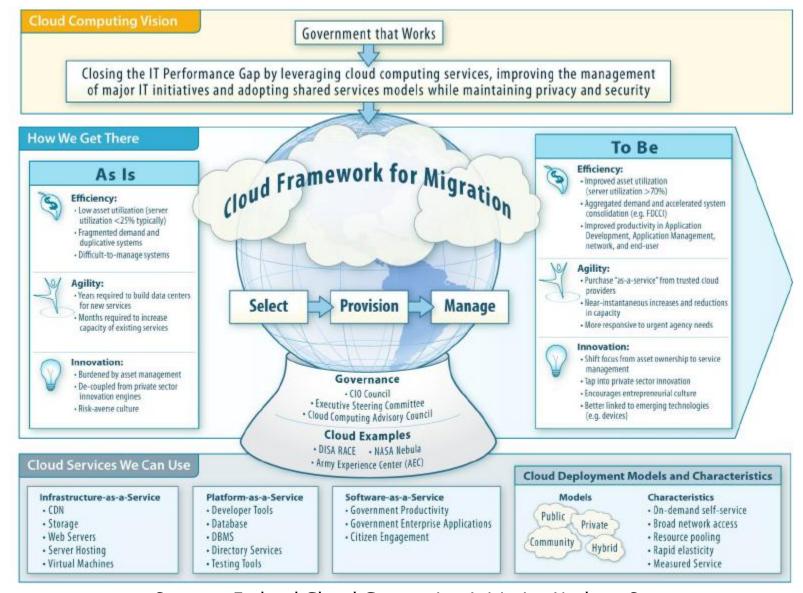








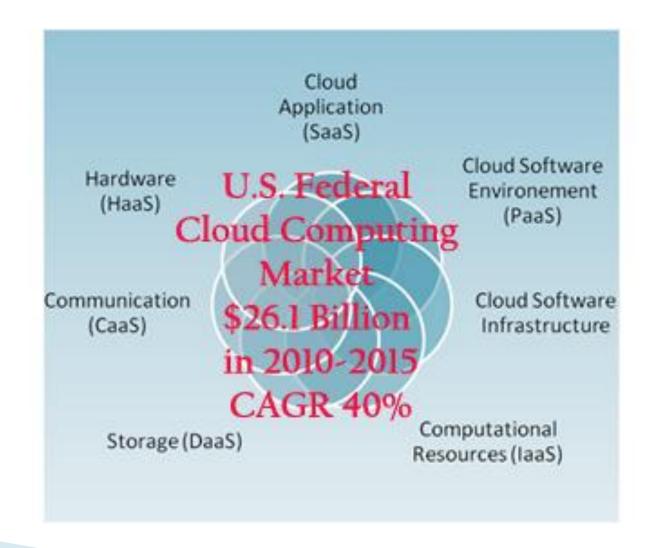
### Notional Cloud Computing View



Source: Federal Cloud Computing Initiative Update, Sonny Bhagowalia, Deputy Associate Administrator, GSA, June 22, 2011

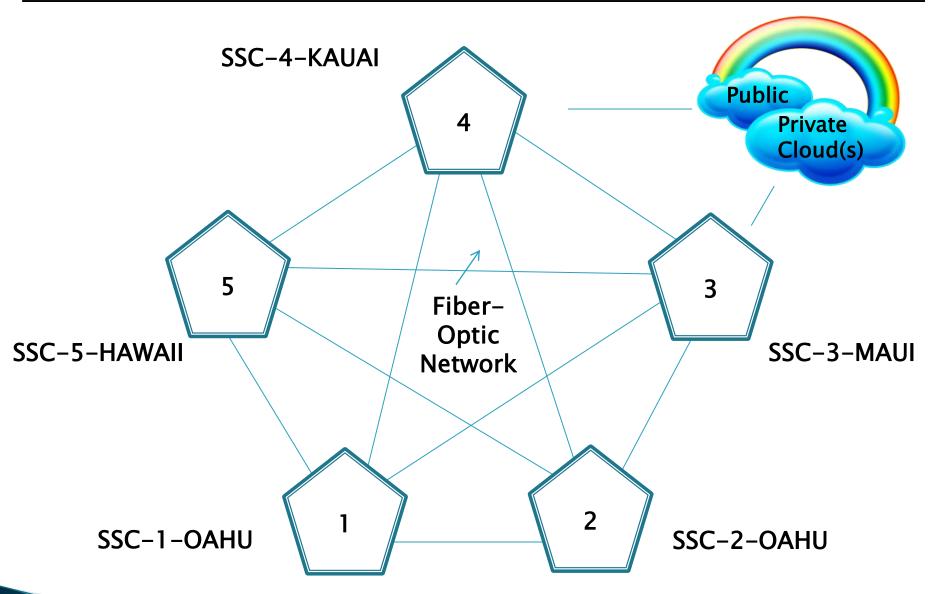


### Cloud Computing Market (Federal)



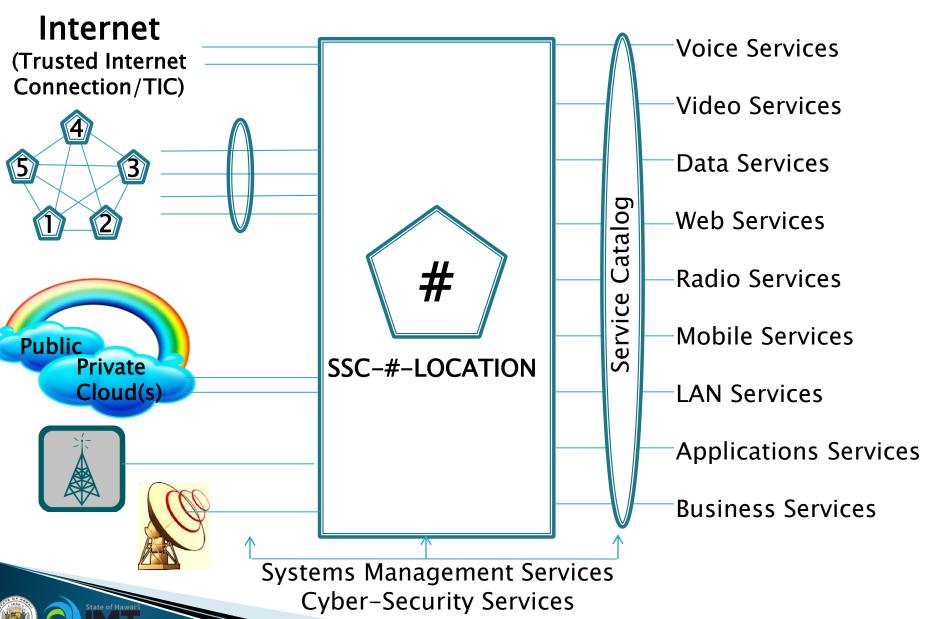


### Notional Shared Services Center Vision For Hawaii

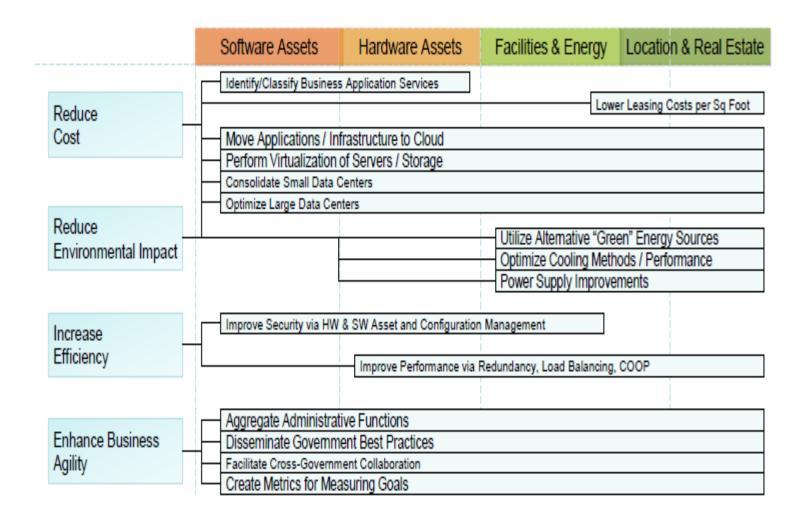




### Notional Typical Shared Services Center



### **Data Center Consolidation**

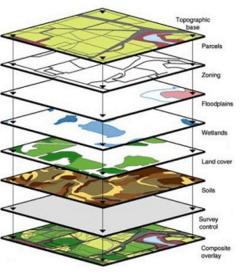




# What's Next?









**Mobile** 

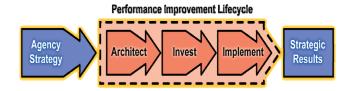
Cloud and Web 2.0/3.0

Next-Generation GIS

...and Much More...



### The Crossroads...



Stove-Piped,
Sub-optimized,
IRM and IT
Environment
(Today)



Geo-enabled, Integrated, Mobile, **Transparent, Web-**Accessible, Open, Standards-based, Agile, Reliable, Available, Secure **Enterprise** Information and IT **Environment** (Goal)

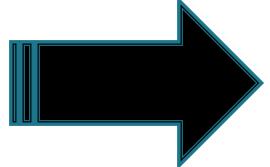
We are at a Crossroad in History – Let's Choose the Pathway to Success!



# "The Best Way to Predict the Future is to Invent it"\*...Let's Go!



\*Source: Alan Kay, Stanford Peter F. Drucker













INNOVATION
SUCCESS
EVALUATION
DEVELOPMENT
GROWTH
SOLUTION
PROGRESS
MARKETING

# Mahalo!

http://www.hawaii.gov/oimt