

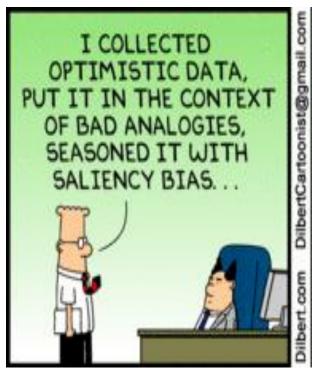
Transforming Government...

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

Association of IT Professionals (AITP)
March 28, 2012

Sanjeev "Sonny" Bhagowalia Chief Information Officer

Dilbert







Source: Scott Adams



Future World...In the Clouds?



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

Source: New Yorker Magazine

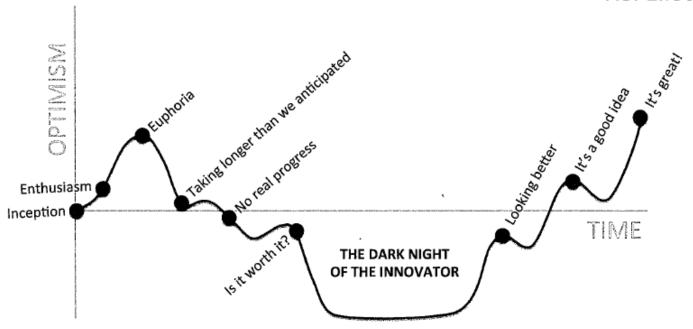


Transformation and Change isn't Easy

The Path of Innovation

Between the idea and the reality falls the shadow

- T.S. Eliot





Source: Jeff Mohr, HCF

Organizational revival depends on the ability to adapt to environmental change

- "We must become the change we want to see in the world" Mahatma Gandhi
- "The journey of a thousand miles begins with a single step" Lao Tzu
- "Automating a mess yields an automated mess" Reengineering the Corporation, by Michael Hammer & James Champy, 1993
- Information technology can expect to improve business process about 10%. However, redesigning a process and then adding technology can improve the process up to 90%" Bill Gates, Business @ the Speed of Thought, 1999
- * "The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency. The second is that automation applied to an inefficient operation will magnify the inefficiency" Bill Gates
- "Not everything that can be counted counts, and not everything that counts can be counted" – Albert Einstein (attributed)
- "What gets measured gets done, what gets measured and fed back gets done well, what gets rewarded gets repeated" – John E. Jones
- "The Problem is never how to get new innovative thoughts into your mind, but how to get old ones out" - Dee Hock, Founder and Former CEO of Visa
- "Innovation distinguishes between a leader and a follower" Steve Jobs, Apple



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: http://www.ndu.edu

Source: http://www.cio.gov



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

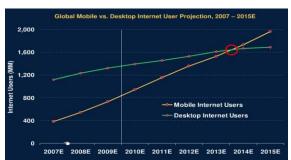


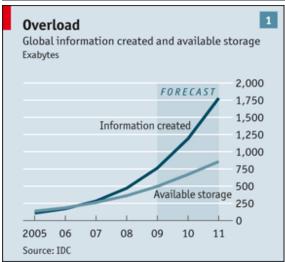
6 bold tech predictions: Fact or fantasy? FCW (December 8, 2010)

- 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

2010

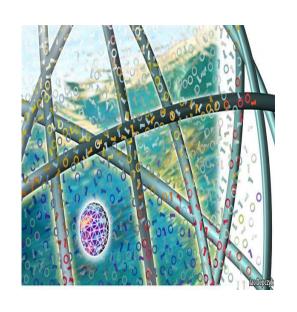




Volume of digital information increases tenfold every five years & the data is replicated many times over!



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

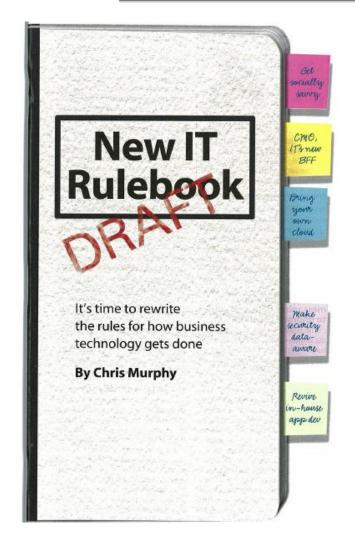


- YouTube is now second largest search engine in the world
- 1.5 million pieces of content shared daily on Facebook
- On-line newspaper readers are up 30%
- 250 million visitors each month to Myspace, YouTube, and Facebook (none were around 6 years ago)
- Mobile devices will be world's primary connection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

As big an issue outside your organization as within it



<u>New IT Rulebook – Draft</u>

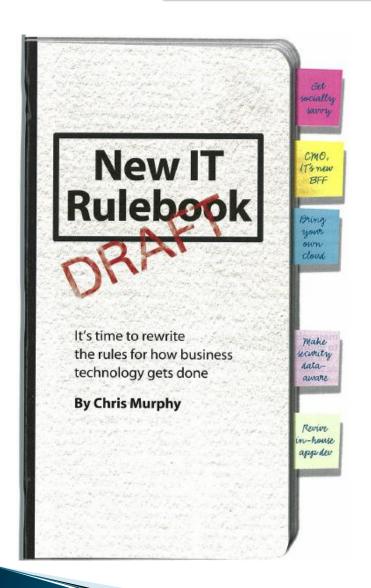


- Really know who buys your product
- Deliver IT projects in weeks or months, not years
- 3. Plan to adjust, don't plan to be perfect
- 4. Create analysis tools not stale reports
- 5. Evolve security to be data aware
- Get ready for 'bring your own cloud'
- 7. Build a cloud-friendly IT shop
- 8. Think of 'data-center' as a result, not a building

Source: InformationWeek.com/1327/rulebook

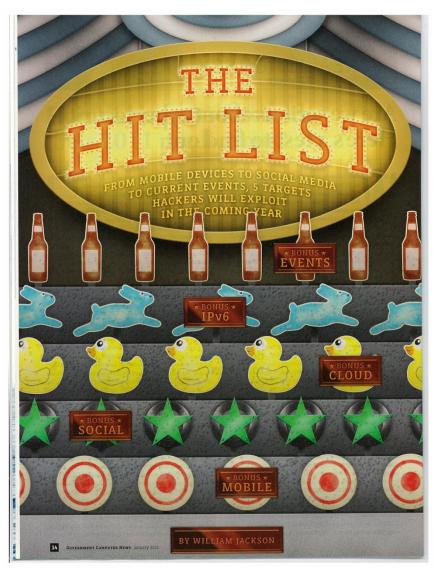


<u>New IT Rulebook – Draft</u>



- Keep skills in touch with the times
- 10. Revive in-house custom development
- 11. Use mobile to change the customer experience
- 12. Make the CMO IT's new BFF
- 13. Get socially savvy
- 14. Blend video, messaging, data, and voice to improve collaboration
- 15. Treat tablets as workhorses, not show ponies





- Personal Devices
- Social Networking
- The Cloud
- IPV6
- Current Events

Source: "The Hit List - From Mobile Devices to Social Media, 5 Targets hackers will exploit in 2012, Government Computer News, January 2012



Trends We Need to Watch...

- 1. Consumerization & The Tablet
- 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



New Updates from Gartner - Access to Anything, Anywhere, Any Time

- 1) 30 billion pieces of content were added to Facebook this past month.
- 2) Worldwide IP Traffic will quadruple by 2015.
- 3) Over 107 trillion emails were sent this year (89% of which were spam).
- 4) Today's employees can access

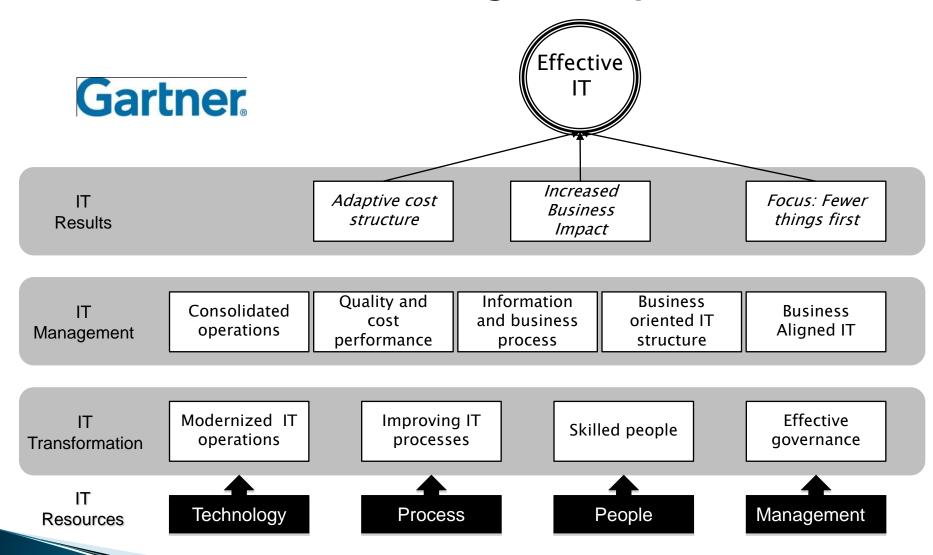


- Over 1 Billion Web pages (and growing)
- ▶ 350,000 iPhone and Over 100,000 Android Apps
- ▶ 10,500 Radio Stations, 5,500 magazines, 300+ TV Networks

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



CIOs build effective IT/IRM through transforming resources and management practices



Hype Cycle for Government Transformation

Figure 1. Hype Cycle for Government Transformation, 2011 **Gartner** expectations Cross-Agency Case Management in Government E-Discovery for Governmeht Government Clauc Open Government Data Private Cloud Computing 🥥 Consumer Social Networks in Government. Open-Source Public-Sector Vertical Applications Ò Public Cloud Computing BPM for Government. Enterprise Information Government Domain-Specific COTS Applications Management Programs Government Business Process Utility lCitizen Data Yaults 🖊 ⊈SOA: Governmenti ≒Federated Identity Management | Smart Governance Operating Framework Government Behavioral/Gestural Analytics Shared Services Geographic Information Systems Government Data: Enterprise Content Management for Government Interoperability

Business intelligence for Performance Management in Government External Communities Advanced Analytics for Government. in Gövernment i Whole-of-Government Enterprise Architecture Internal Communities in Government. As of July 2011 Peak of Trough of Technology Plateau of Inflated Slope of Enlightenment Disillusionment Productivity Trigger Expectations time Years to mainstream adoption: obsolete O less than 2 years 0 2 to 5 years 5 to 10 years ▲ more than 10 years 8 before plateau

Source: Gartner (July 2011)



NASCIO 2011 Survey*



*http://www.nascio.org/publications/

39 Questions

- Roles & Governance
- Legislative Affairs & Advocacy
- Financial Management, Funding and Budget
- Collaboration
- Consolidation and Shared Services
- Cloud Computing
- Sourcing Strategies and IT Workforce
- Health Care
- Business Intelligence and Business Analysis
- Mobility

Conclusions

State CIOs are changing

- How they provide services
- The Source and diversity of their revenue streams
- Their relationship with the legislature
- How mobile devices and apps connect citizens to their government



NASCIO Conference (2011)

NASCIO Top Ten Strategy Priorities (2012)

- 1. 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



It's not just about Technology....

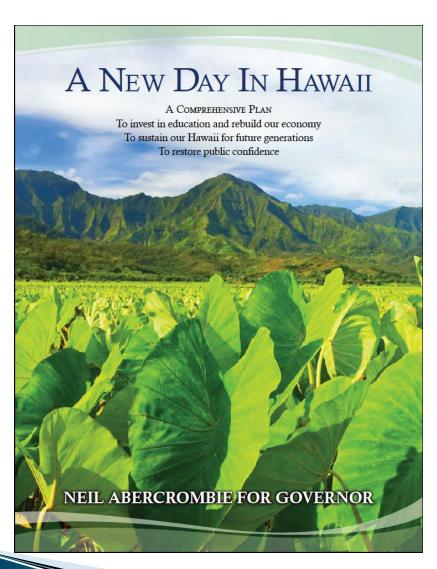




Source: "Real Value from the Cloud: Moving beyond personal productivity", Center for Digital Government, 2012



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

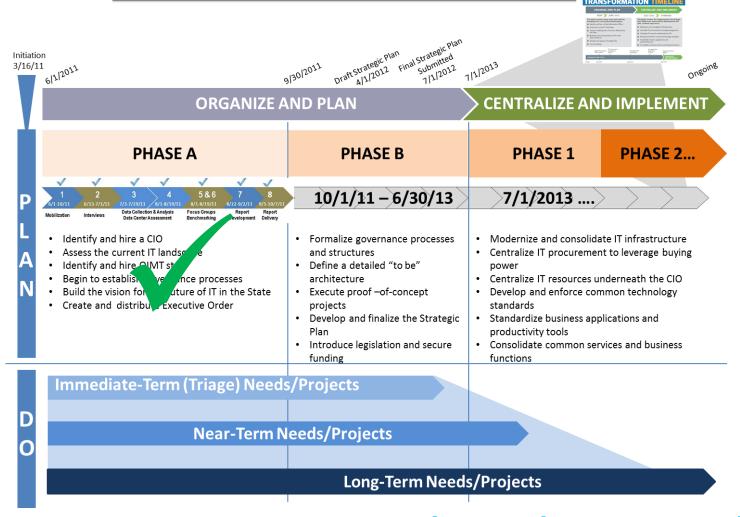
- Early Childhood
- Education and Workforce Development
- Healthcare Transformation
- Safety Net, Homelessness, Public Safety
- Housing

TRANSFORMING GOVERNMENT

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



An Integrated, Multi-Year Transformation Plan...







...With Wins Along the Way to a "New Day"

Overall Master Transformation Plan for the State of Hawai'i



Long-Term Projects

"Major Initiatives"

Strategic - Includes "Flagship" Projects



Near-Term-Projects

"Pilot"

Enabling and Enhancing – Executes projects that can be accomplished and offer significant benefits quickly (e.g., "Low Hanging Fruit" or "Quick Win" Initiatives



Immediate-Term Projects (Triage)

Critical or Triage Projects – Provides significant benefits quickly (e.g., low-hanging fruit or "quick win" initiatives)



2011

Immediate-Term Projects (Building Blocks)

2012

Foundational Projects – Establishes governance processes for enterprise IT management; Defines the Strategic Plan; Formulates project plans for the future relative to near – and long-term projects

"New Day" for IT A New Day In Hawaii



- Help Establish Open Government and Enhanced Self Governance
- Manage Basic IT Resources as a Reliable, Efficient State Utility
- Facilitate the Collaboration Required for Optimal Solutions and Speedy Outcomes
- Provide Career Development Opportunities for State IT Employees
- Manage Information as a State Asset

2015 ...

 Provide an Economic and Sustainable Technology Infrastructure

Phased Approach to Achieving IT Excellence

2013

Incremental improvements and delivery

2014





Baseline Assessment - Phase A

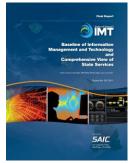
- Completed over 4 months
- Interviewed over 200 individuals from departments, offices and attached agencies
- Cataloged more than 1,500 pages of notes and background material

Major first step of a long journey completed



<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

Let us the let us th

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









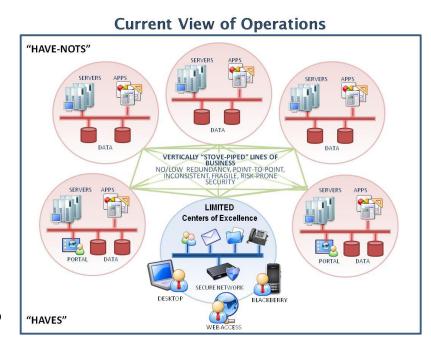
- Governance
- 2. Disaster Recovery (DR) and Continuity of Operations (COOP)
- 3. IT Procurement
- 4. Security and Privacy
- 5. Open Government and Social Media
- 6. Collaboration and Work Flow
- 7. Enterprise Applications
- 8. Enterprise Infrastructure
- 9. Wireless/Mobile/Radio
- 10. Business Process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

We are focusing 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



Widespread Symptoms of IT/IRM Management Challenges

- Inefficient manual interfaces
- Minimal enterprise integration and sharing
- Narrowly-focused federally funded solutions
- Limited use of IT/IRM to enable mission service delivery
- Aging legacy systems conditions (20+ years old)
- Proliferation of any and every type of IT/IRM product and service
- Little business process coordination or information sharing across departments (and programs)

A clear need for transformation!



Symptoms are Driven by Three Root Causes

- No coordinating authority for managing information resources and technology across the State
- Lack of cross-cutting business process reengineering (BPR)
- Deep cuts in resources and budget reductions in the State over the past decade

Major issues exist - but all are solvable!



State of Hawaii Business Model

Criminal Justine Emigraphi Climin Der Collen begrechte National Action Date Designment ASSESSMENT HOUSE Service Middled Applicance Criminal History Reserve Charles Banda basens Ente Anther Date Contentant Shaffel & Drug State Franchism Service Reported Contribution Commodition inspection and Bradies basegenetic Health Care Management On Fumping office Regregated Manifestion 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 Smale med. Pleasure? Agricultural Medicing Assistance Derivat Health Services Committe Confirm 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 Confeet Disease Cultivati Cantral After Galdie Heusing Socialisms Child Separat Services Studen Empares Saleing Agustaliana Vertana Assistanta Regional Midded Service 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 Imagency Propositions Floring Vital Seconda Registry: Birth, Marriage, Francis Harth Care Law Administration Public Schole & Lee Schoonwood Referral and Jack Flagment, Service Incomis Decisioners Instrumental Measurest Zale last leferance Labor Comment and Statistics Analysis Named in Behaviored Temperary Displiffy Insurance Law Barrarda Cararda & Arabab Series Bestra expectal Laboratory Service Committee of Solidishins Administration Incomes Englanded Floreign - Intranspolal Management & Manifestory 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 Factorships 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 Expiration** Description of Mall Paleiro an Antonio Communities & Comfol Land Service Califor Salestates - Services Computation Commention Service heads Classification Consumer Advancer 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 Vendiend Mondier Handler Hame Lends Dealesment 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 Harration Harma Lands Laure Administration

14 Support LOBs ~50 Services

20 Core LOBs

~150 Services

Core State Services (Services for Citizens) Secured Services Pales, Cardinals and Counside 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 Federmans Management & Sudd Services Farting Control Companyation Construction Formits and Ordinaryas Regarding Unit Contracts Planeter and Engages Altradius Zalium Consiliera Extende describe being Capital Flanning Microsto/Assessed Paralle Funding Classification Budget Permutation Public Communications Space and Residies Leading American Control States 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 fred bie Sant Management & Inspetors Control Reviewed & Midwid Mann Debt Calledian Admid Grant's Farrant and Consists Zale Breit Transfers and Consight Investory Control Applications Development Insuellant Tradica Applications Operations & Maintenance Sedama Amalysis & Design Francisco di Insuliani 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



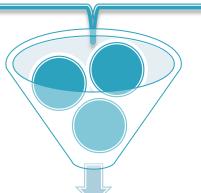
20 Key Recommendations

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 Change
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!



Started on Four Key Recommendations

1 2 3 4



Enterprise Focus for Projects



Establish Enterprise Governance



Re-engineer Business Processes



Strengthen Technical Infrastructure



Focus on Cross-Cutting/Enterprise Solutions

Re-engineer processes that are:

- Performed by multiple Departments
- Paper-driven
- Shareable across a foundational, enterprise IT infrastructure
- Extraordinarily labor-intensive and therefore drive users to create one-off solutions

Don't just automate inefficient processes...re-engineer them!



Prioritized BPR Process Areas

Candidates for Cross-Cutting Enterprise Solutions	Immediate- Term	Near- Term	Long- Term
Financial Management Initiatives	√		
Procurement and IT Acquisitions	√		
Program/Project Management Process Definition	√		
Time and Attendance Reporting	✓		
Check Printing and Processing	✓		
Legislative Bill Tracking	✓		
Constituent Response Tracking	✓		
Data Entry	✓		
Enterprise Email Solution	✓		
Inventory/Asset Management		✓	
Document Tracking and Records Management		✓	
Neighbor Island Solution		✓	
PPACA Implementation		✓	
Longitudinal Data Enterprise Solution		✓	
Federal Grant Application and Lifecycle Management			✓
GIS Enterprise Solution			✓



Lay the groundwork for efficient delivery of services statewide

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

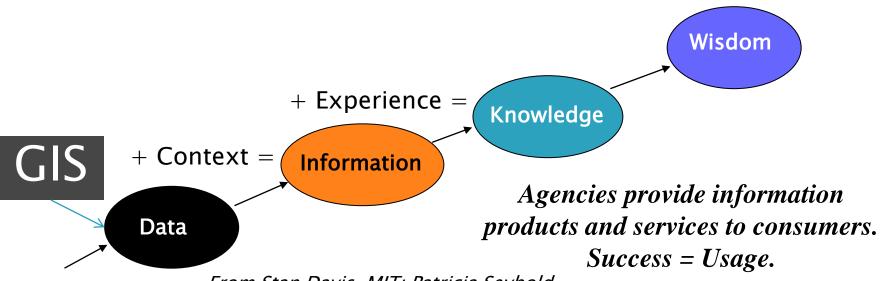
The transformation will benefit:

- 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.



A Value Proposition for Hawaii

How are state government agencies impacted by the information Age and Economy?



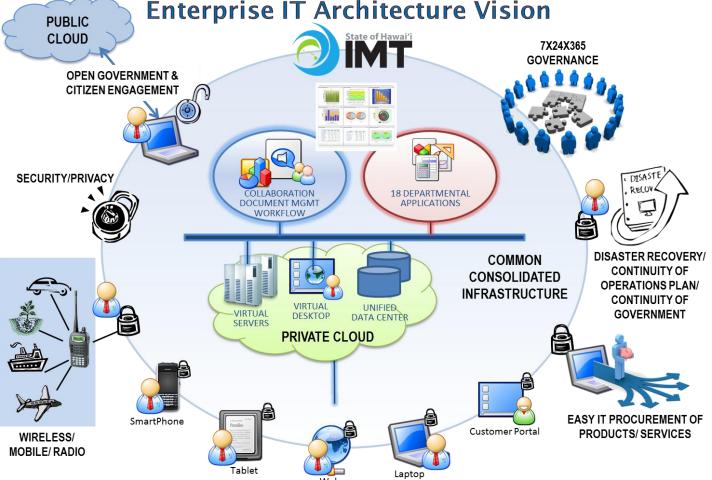
From Stan Davis, MIT; Patricia Seybold

<u>Challenge</u>: How do we institutionalize information and knowledge practices where "geo-enabled" information and knowledge is integrated into Systems/Apps, widely shared, available in a Timely, Secure Manner and used for decision-making?



<u>Vision</u>

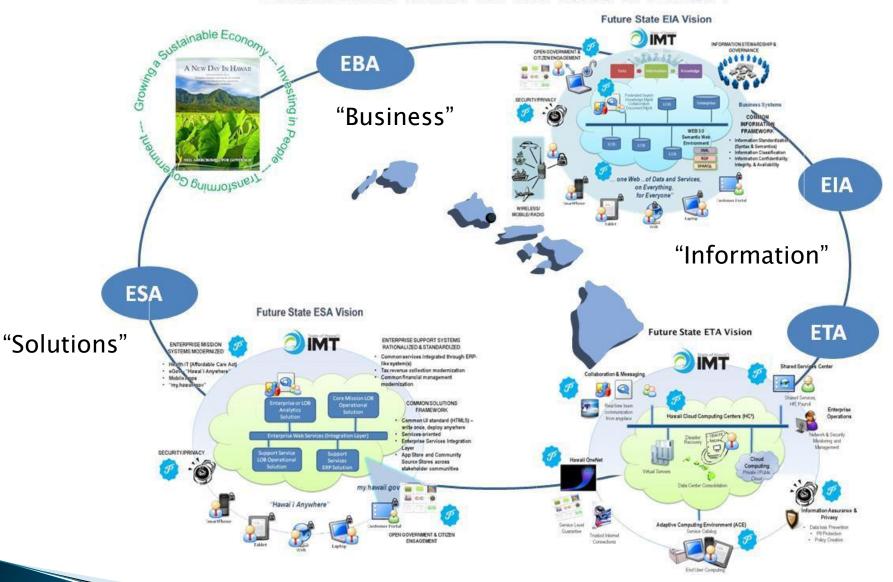
Preliminary Future Enterprise IT Architecture Vision



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

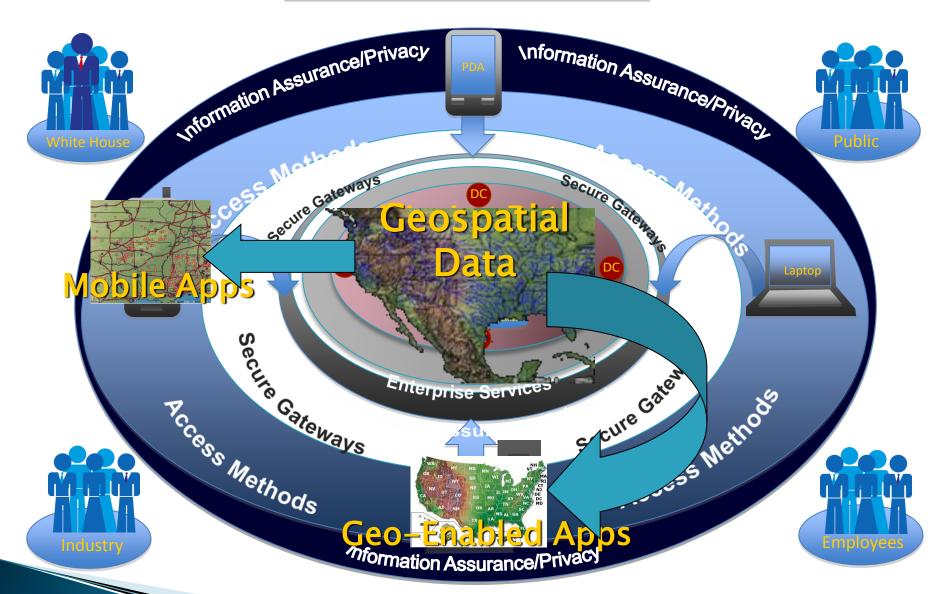


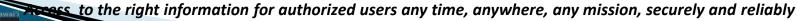
Enterprise Architecture Future State Vision for the State of Hawai`i



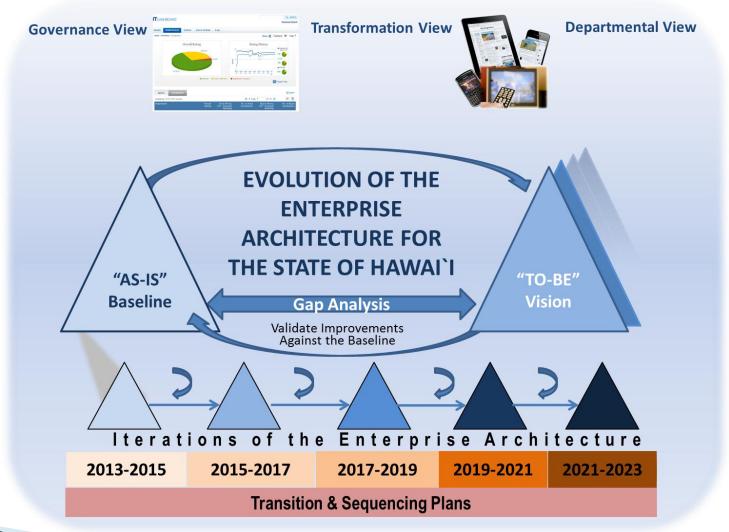


Notional Vision





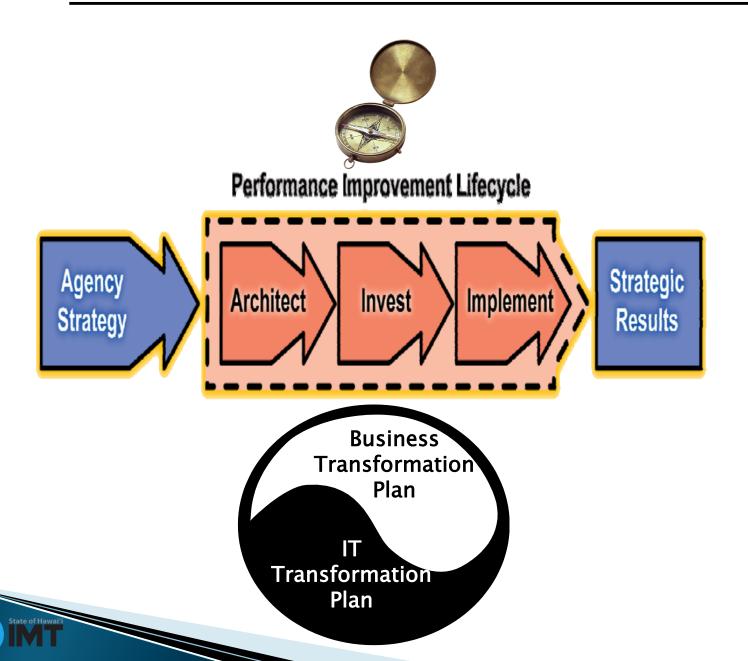
IT Strategic Plan Drives Long-Term Vision







The Transformation Plan





I Nanagement 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

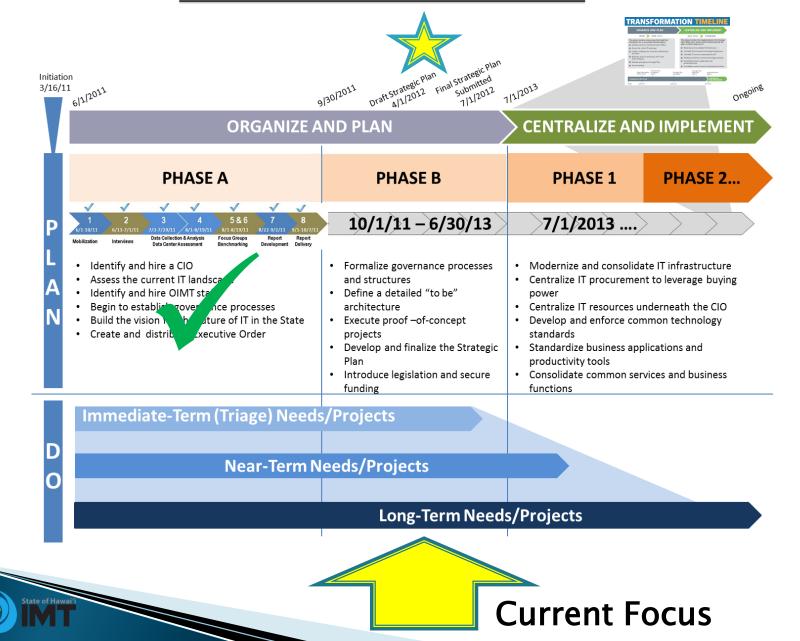
Major Initiatives

Business Process Reengineering

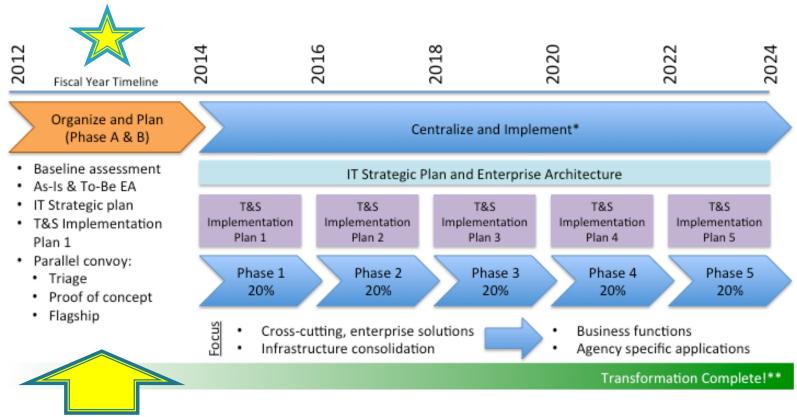




An Integrated, Multi-Year Transformation Plan...



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



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



An <u>Innovation</u> Agenda* defines the building blocks of innovation



Open Government



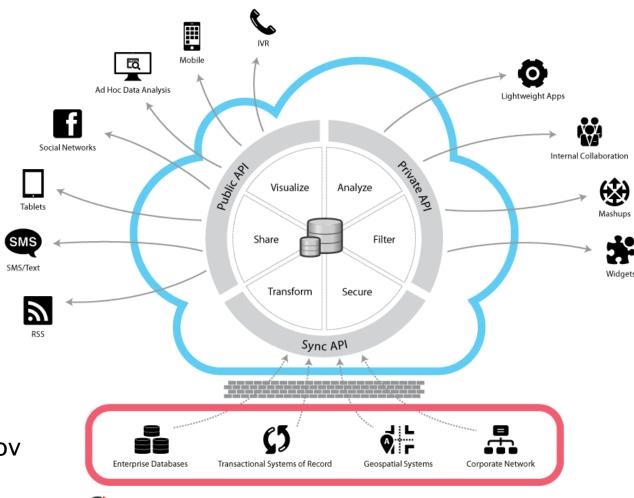
- Partnerships
- Entrepreneurship
- Prizes, Challenges, and Grants
- Idea Generation
- Innovative Science & Technology
- Creative Funding Strategies
- Promoting Competitive Markets

* "A Strategy for American Innovation", published Sept 2009



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

Socrata |









Next Generation Data.gov: Contrasting Legacy Data vs. Open Data







Attribute/Characteristic	d .	
	Legacy Data	Open Data
Core Use Cases	Data Collection, Process Automation, Enterprise Apps	Data Use and Reuse, Data Sharing and Collaboration, Ad Hoc Apps
Key Influences	Corporate Network Computing	Internet, Web 2.0 and the Social Web
Who Benefits?	Data Practitioners	The Rest of Us
Where's the Data?	On Premise	In the Cloud
Organizational Model	Business Process Optimized	Consumption Optimized
Designed for	The PC	The Web
Security and Permissions	Secure	Secure
Accessibility	Very Restricted	Very Accessible
Scalability	Employee Use	Widespread Use
Finding the Data	By Table Name	Searchable Catalog
Data Exploration and Analysis	Add-on PC/Desktop Tools	Native in Platform; In Web Browser
Charts and Maps	Add-on PC/Desktop Tools	Native in Platform; In Web Browser
Ad Hoc Access	None to Limited, guarded by a gatekeeper	Open and unfettered but authenticated
Developer Access	None to limited, rigid access via closed protocols	Open, standards-based, modern (RESTful) APIs
Reporting	Static	Dynamic
Data Usage Metrics	Ask the Gatekeeper	Open

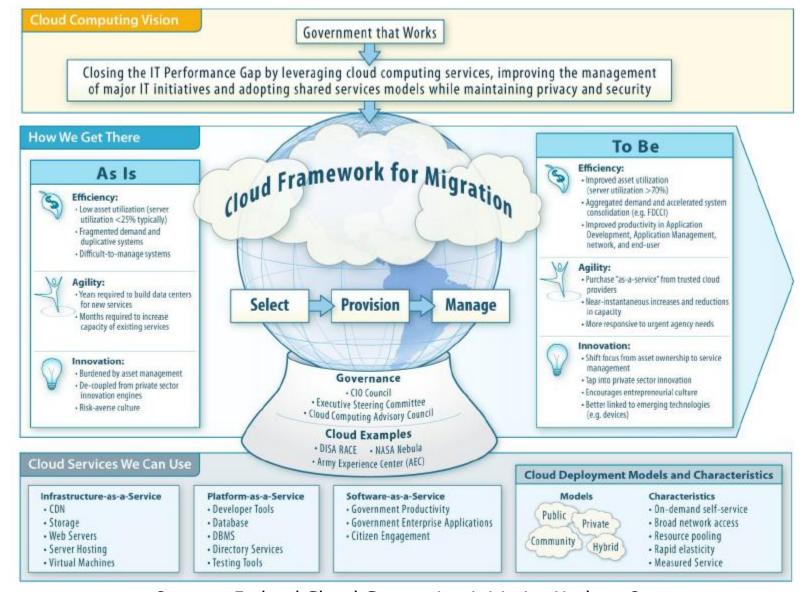


http://www.data.gov





Notional Cloud Computing View



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









State GIS Program

Geographic Information System Office of Planning, State of Hawaii



ABOUT THE PROGRAM

"improving efficiency and effectiveness in government decision-making through education, facilitation, and coordination of GIS mapping technologies"

Hawaii 's GIS Program is tasked with "...planning, coordinating, and maintaining a comprehensive, shared statewide planning, and geographic information system and associated geospatial database. The office shall be the lead agency responsible for coordinating the maintenance of the multi-agency, statewide planning and geographic information system and coordinating, collecting, integrating, and disseminating geospatial data sets that are used to support a variety of state agency applications and other spatial data analyses to enhance decision making. The office shall promote and encourage free and open data sharing among and between all government agencies," (§225M-2(b)(4), HRS)

In carrying out its statutory mandate as the lead agency for the statewide GIS program, the Office of Planning (OP) supports and coordinates GIS efforts across state agencies in addition to conducting spatial analysis and mapping for projects and initiatives in OP, the Department of Business, Economic, Development and Tourism (DBEDT), and other State agencies.

PROGRAM COMPONENTS

State CIS Database

OP is responsible for managing the State GIS database. The GIS Program encourages and facilitates sharing of data among agencies to minimize stove-piping of data, thus cutting costs and reducing duplication of effort. The State GIS database contains over 200 data layers, including contributions from federal, state, and county agencies.

State GIS Website

The State GIS website (http://hawaii.gov/dbedt/gis) contains a wealth of information for decision-makers, the public, and GIS experts alike. The site has nearly 200 downloadable GIS data layers for use in mapping and GIS analysis, as well as popular downloadable maps and easy-to-use web mapping services. The site is a well-known resource across Hawaii and even the nation. OP's GIS Program was the first government agency in Hawaii to offer public GIS data sets for download at no charge.

State CIS Coordination

In executing its statutory mandate as the lead agency for GIS in State government, OP supports and tracks GIS efforts across State agencies. As part of its new partnership with the State Chief Information Officer, OP looks forward to even more coordination and collaboration with this group. OP is a founding member and sits on the Board of Directors of the Hawaii Geographic Information Coordinating Council (HIGICC), a nonprofit organization consisting of members of Hawaii's geospatial community. HIGICC's goal is to provide coordination of geospatial activities among GIS users from all sectors. OP is also a member of the National States Geographic Information Council (NSGIC), a national organization committed to efficient and effective government through the prudent adoption of geospatial information technologies.

GIS Mapping, Analysis, and Technical Support

The GIS Program conducts mapping and analysis for projects and initiatives in OP, DBEDT and other State agencies, as well as providing technical support and GIS guidance to all State GIS users.

PROGRAM FACTS

Number of Datasets/Layers on State Server

Number of Downloadable Layers on GIS Website

Number of Web Mapping Services Deployed

Number of Downloadable Maps on GIS Website

Sample Data, Maps, and Services at GIS Web Site

LSB Land Locator (Prototype Application), Enterprise Zone Locator, 2010 Census Thematic Maps, Census Interactive Online Maps . Hawaii Biomass Resources. Geothermal and Warm Ground Water, Rainfall and Rain Gauge Stations, Solar Irradiance and Radiation, Wind Energy Resource, Tsunami Evacuation Zones, Ocean Recreation Areas, Water Quality Classifications, Agricultural Lands of Importance to the State of Hawaii (ALISH)

Hawaii State GIS Partners

Federal: NOAA, USGS, US Census Bureau, DOA/NRCS, USFWS, USACE, NPS, NGS

State/County: OIMT, ICSD, DBEDT, DOA, AG, DOE, DOH, DLNR, DOT, OHA, HCDA, LUC, County of Hawaii, City and County of Honolulu. County of Kauai. County of Maui.

Others: Hawaii Geographic Information Coordinating Council, Pacific Disaster Center

Hawaii GIS Program Positions

* All figures as of January 20, 2012

KEY ACCOMPLISHMENTS

- database, containing data developed and contributed by all levels of government.
- Maintains the State GIS database, adding, updating and organizing date and metadata.
- First government agency in Hawaii to create (non-FGDC) metadata for all public layers, listing data source, date, scale, attribute definitions, etc.
- First government agency in Hawaii to offer public geospatial data for download over the internet at no cost.
- With County, State and Federal partners, built the State GIS . Participated in (and often helped to organize) several joint funding agreements with other County, State and Federal partners to acquire such critical data sets as TMK percels, satellite imagery data, and digital topo maps.
 - Maintains a State GIS User email list in order to disseminate information about new and updated data and upcoming events of interest to the State geospetial data user community.
 - Maintains the State GIS Website, containing nearly 200 donwloadable GIS layers. links to other geospatial data providers and links to various web mapping applications developed by the State GIS Program.

FUTURE INITIATIVES

Since establishment in 1988, the Hawaii State GIS Program in the Office of Planning has undertaken a number of initiatives in a variety of areas related to geospatial data and coordination. Currently, the program is involved in the following initiatives:

Conversion of Hawaii State CIS Database

Although the 200+ layers in the State GIS database have proven to be a great resource for State agencies and the public aske, they will be far more useful to State agencies after they are converted into one or more spatial geodatabases. This conversion will make querying and displaying the data much faster due to the more efficient storage and delivery of data in a relational database. As part of this prolect, the State GIS Program will convert the existing metadata into metadata meeting the FGDC standard.

Modernizine Howell State CIS

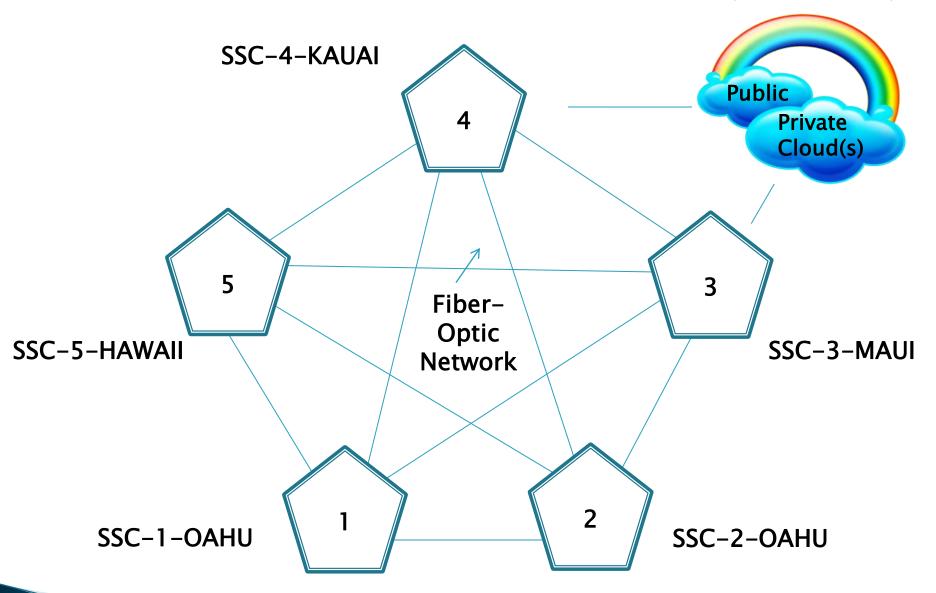
The GIS Program is working closely with the new State Chief Information Officer on modernizing the State GIS. A Strategic Planning effort. for GIS has just begun, and will include plans to move the State GIS database off of the 7-year old server on which it resides, to current technology, possibly including high-end servers and cloud storage. In addition, the CIO and GIS Program are planning to deliver the data to users in more efficient and user-friendly ways, including web mapping and web feature services and dashboards.



Jesse Souki/Director, Office of Planning, DBEDT Joan Delos Santos, GIS Program Manager

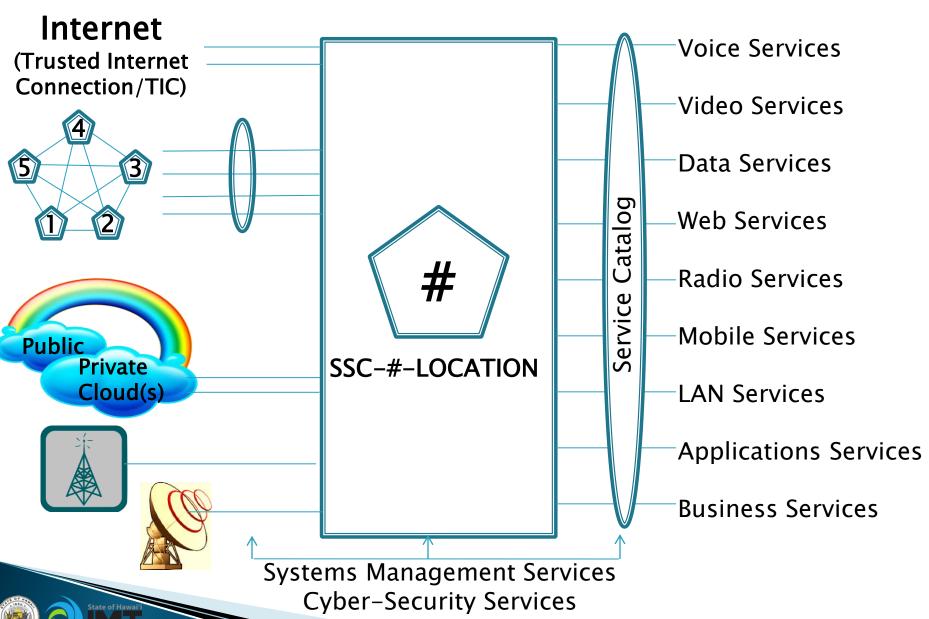


Hawaii Shared Services Center Vision (Notional)

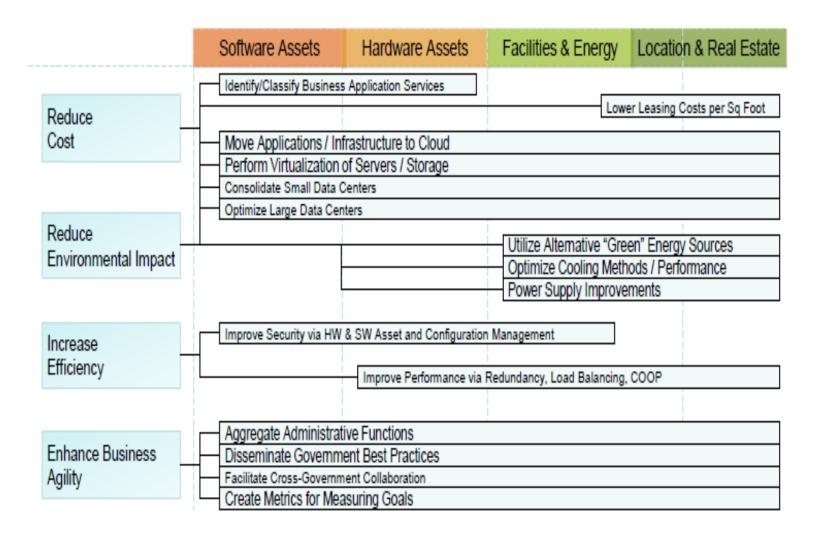




Typical Shared Services Center (Notional)



Data Center Consolidation

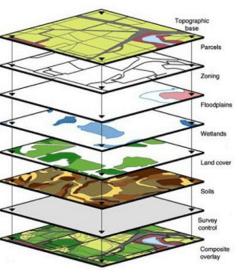




What's Next?









Mobile

Cloud and Web 2.0/3.0

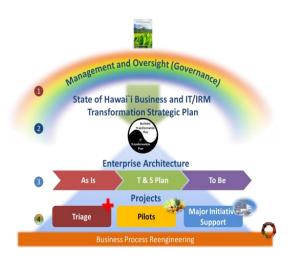
Next-Generation GIS

...and Much More...

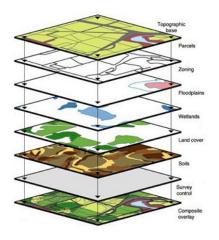


What We Need From You

We are collectively developing the State of Hawai`i Business and IT/IRM Transformation Strategic Plan



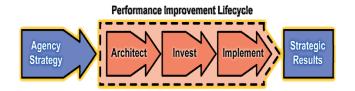
In April, and June, 2012, we need your input in our future vision for the State, and what does the ideal Business and IT/IRM environment look like?



Please stay tuned to http://www.hawaii.gov/oimt for details and announcements! We intend to Publish our Plan by July 31, 2012.



The Crossroads...



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



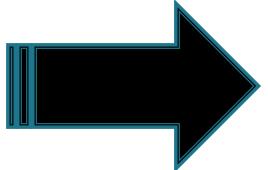
Geo-enabled, Integrated, Mobile, **Transparent, Web-**Accessible, Open, Standards-based, Agile, Reliable, Available, Secure **Enterprise** Information and IT **Environment** (Goal)

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!









*<u>Source</u>: Alan Kay, Stanford Peter F. Drucker







INNOVATION
SUCCESS
EVALUATION
DEVELOPMENT
GROWTH
SULUTION
PROGRESS
MARKETING

Mahalo!

http://www.hawaii.gov/oimt