Transforming Government..

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

US Department of Transportation Executive CIO Council
May 14, 2012

Sanjeev "Sonny" Bhagowalia
Chief Information Officer, State of Hawaii

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
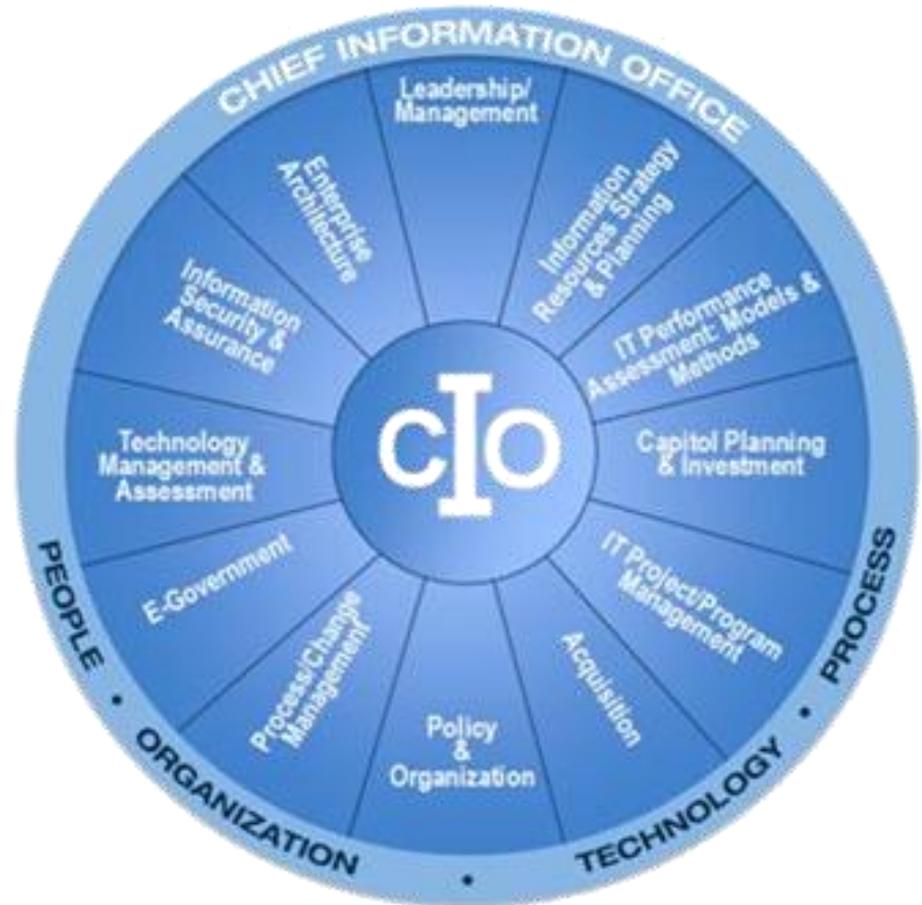
Transformation and Change isn't Easy

The Path of Innovation

Between the idea and the reality falls the shadow

- T.S. Eliot

OPTIMISM

Inception
Enthusiasm
Euphoria
Taking longer than we anticipated
No real progress
Is it worth it?

THE DARK NIGHT
OF THE INNOVATOR

Looking better
It's a good idea
It's great!

TIME
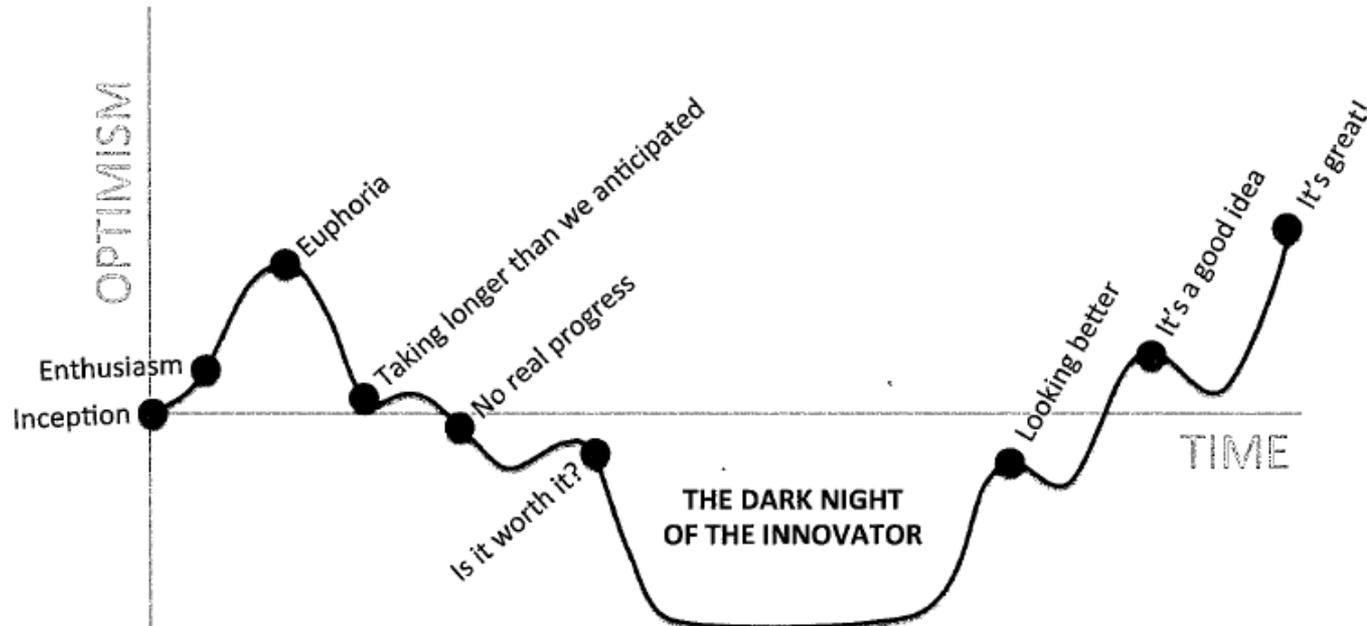
Source: Jeff Mohr, HCF

Future World...In the Clouds?

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

Source: New Yorker Magazine

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

Global Mobile vs. Desktop Internet User Projection, 2007 – 2015E

Overload
Global information created and available storage
Exabytes
Source: IDC
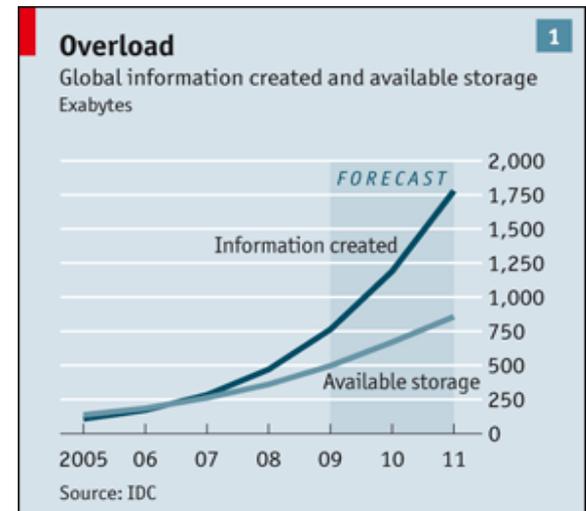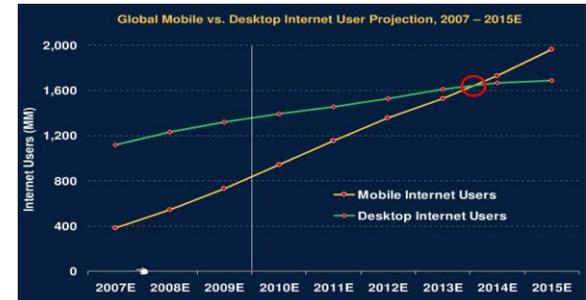
Volume of digital information increases tenfold every five years & the data is replicated many times over!

5

Context: Maximum sharing and flow of information and knowledge
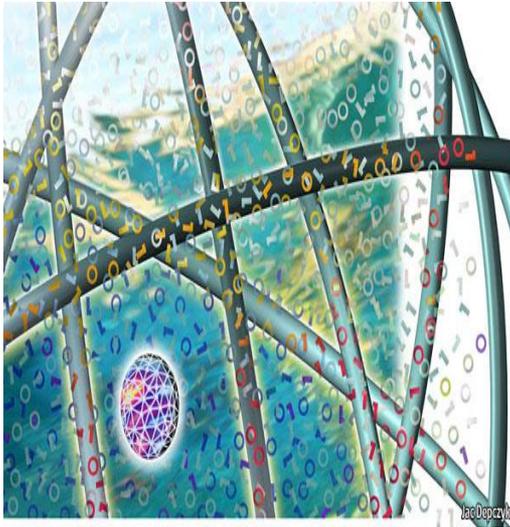
- YouTube is now **second largest search engine** in the world

- 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

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

Gartner

> ▸ 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

Gartner®

Effective IT

IT Results

| Adaptive cost structure | Increased Business Impact | Focus: Fewer things first |

IT Management

| Consolidated operations | Quality and cost performance | Information and business process | Business oriented IT structure | Business Aligned IT |

IT Transformation

| Modernized IT operations | Improving IT processes | Skilled people | Effective governance |

IT Resources

| Technology | Process | People | Management |

Hype Cycle for Government Transformation

Figure 1. Hype Cycle for Government Transformation, 2011

NASCIO 2011 Survey*

The 2011 State CIO Survey
OCTOBER 2011

NASCIO
Representing Chief Information
Officers of the States

TechAmerica
WHERE THE FUTURE BEGINS

Grant Thornton

A New C⁴ Agenda

Perspectives and Trends from State Government IT Leaders

CONSOLIDATION   COLLABORATION

CLOUT   CHANGE

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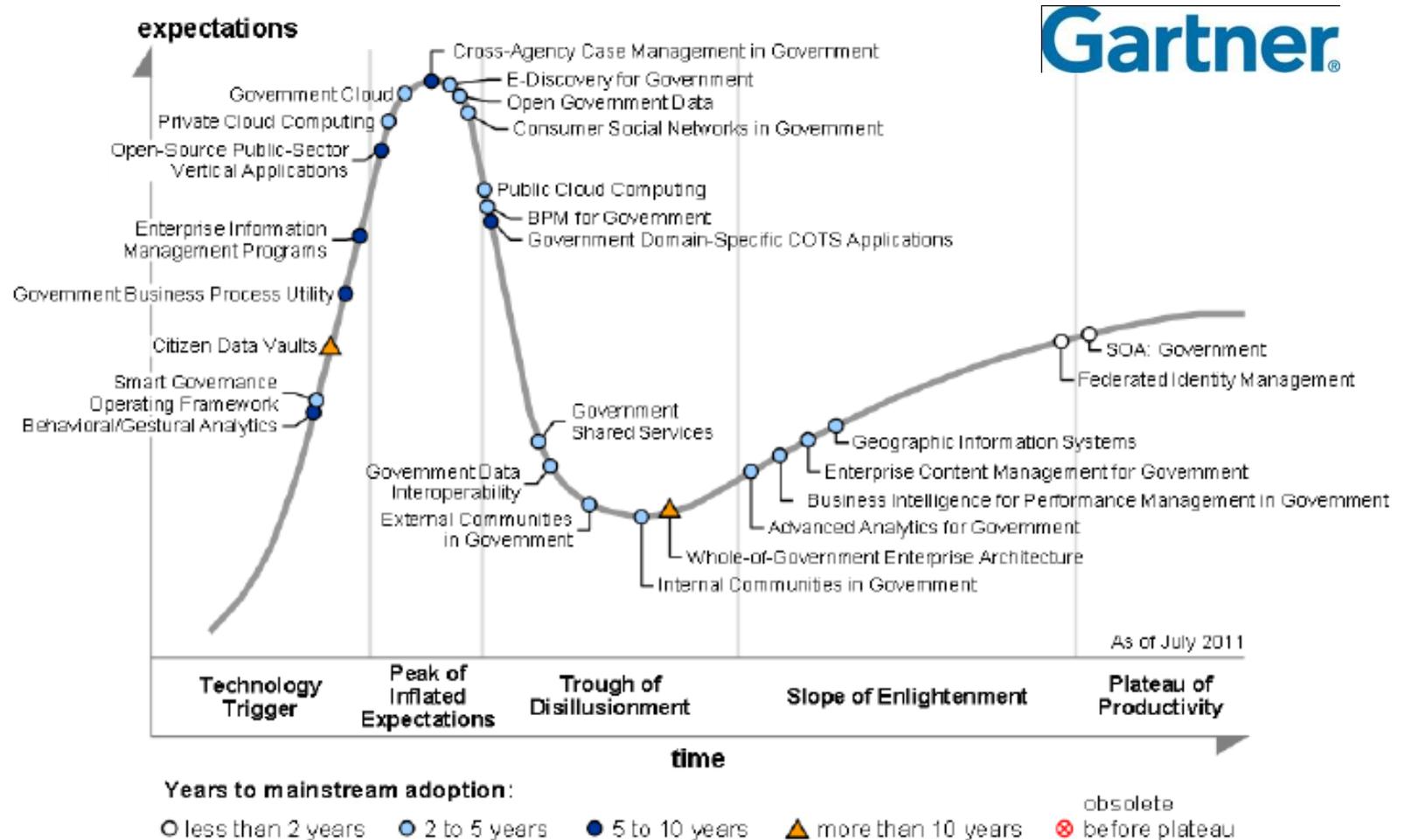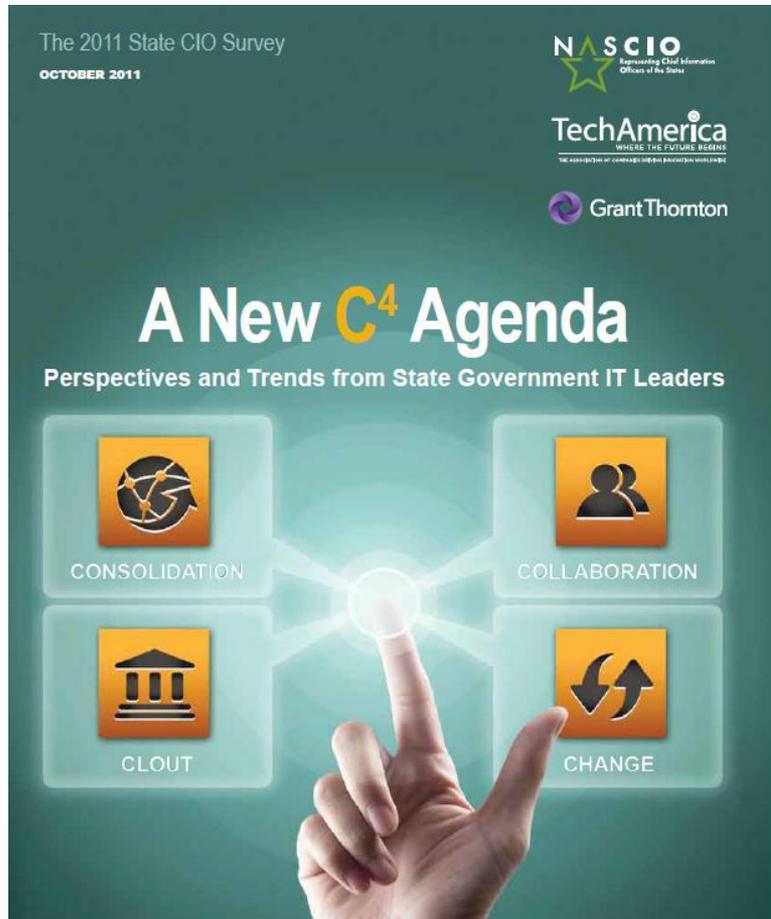
39 Questions

- 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)

1. Virtualization
2. Legacy application modernization/ renovation
3. Cloud computing
4. Mobile workforce technologies
5. Networking
6. Enterprise Resource Management (ERP)
7. Identity and access management
8. Business Intelligence (BI) and Business Analytics (BA) applications
9. 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

A New Day In Hawaii

A Comprehensive Plan
To invest in education and rebuild our economy
To sustain our Hawaii for future generations
To restore public confidence

NEIL ABERCROMBIE FOR GOVERNOR
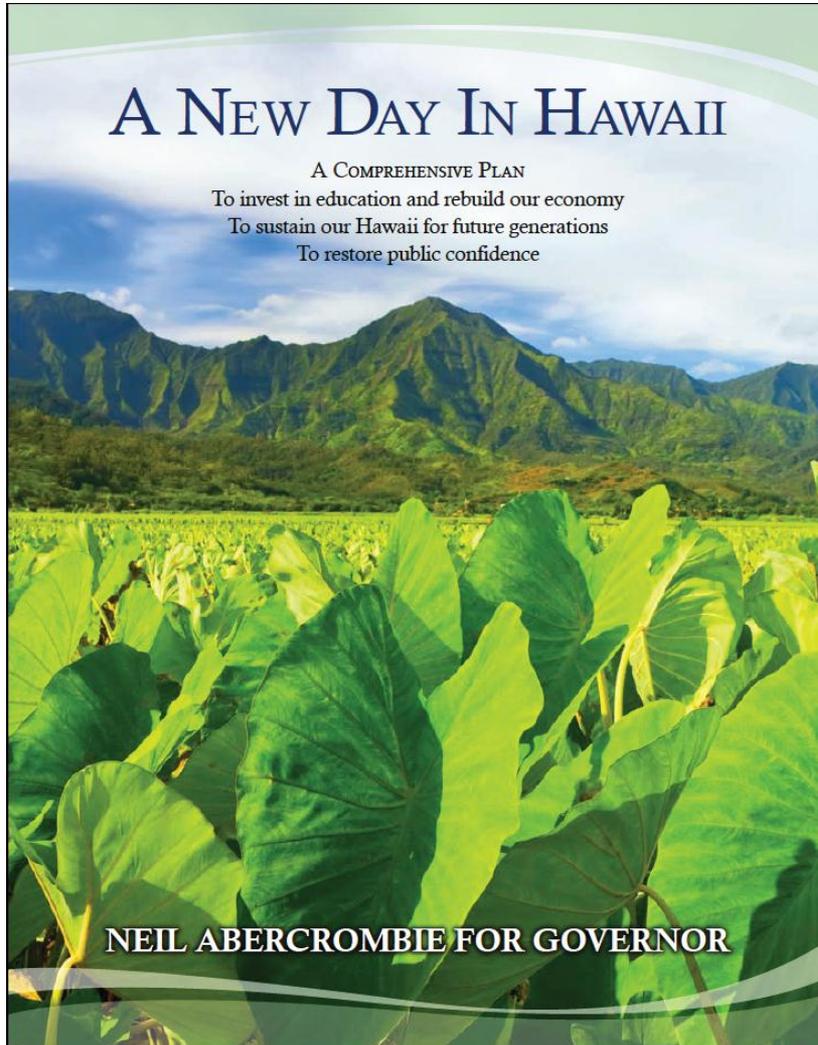
- **GROWING A SUSTAINABLE ECONOMY**
  - New Day Work Projects
  - Renewable Energy
  - Food Security
  - Innovation Economy
  - Improvements on Public Lands
  - Environmental Stewardship
  - Culture, Arts, Creative Industries

- **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

A Strategic Plan for the State of Hawai`i

- **A comprehensive Statewide Strategic Plan will…**
  - Provide a unified view for all Departments and provide State employees at all levels with a clear line-of-sight from their daily activities to the Administration's strategic goals

  - Provide the Legislature with the objective, quantitative information they need to appropriately fund needed investments

  - Provide the citizens of Hawai`i with a vision for the future and an unobstructed view of the success of our programs

  - Make resource prioritization decisions more fact-based and defensible

  - Serve as a framework for the transformation of the State's business and IT/IRM enterprise

  - Make Hawai'i a leader in aligning resources to outcomes, achieving better results with lower investment in the long term

With a Plan in place we will be in a better position to:

  - *invest in education and rebuild our economy*

  - *sustain our Hawaii for future generations*

  - *restore public confidence*

An Integrated, Multi-Year Transformation Plan…
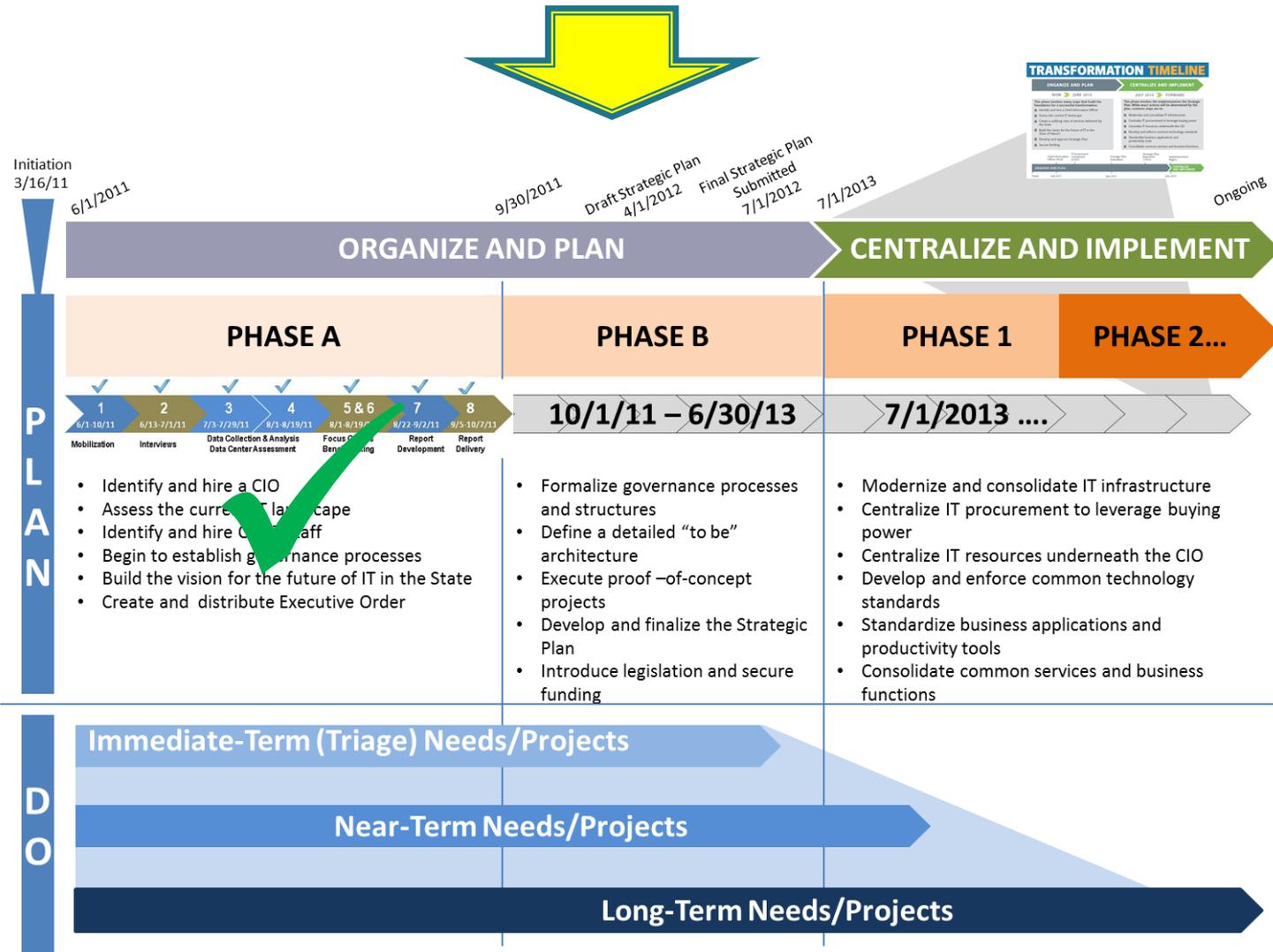
A *Seven-Phase, Eleven-Year Plan with delivery along the way*

The Transformation Plan
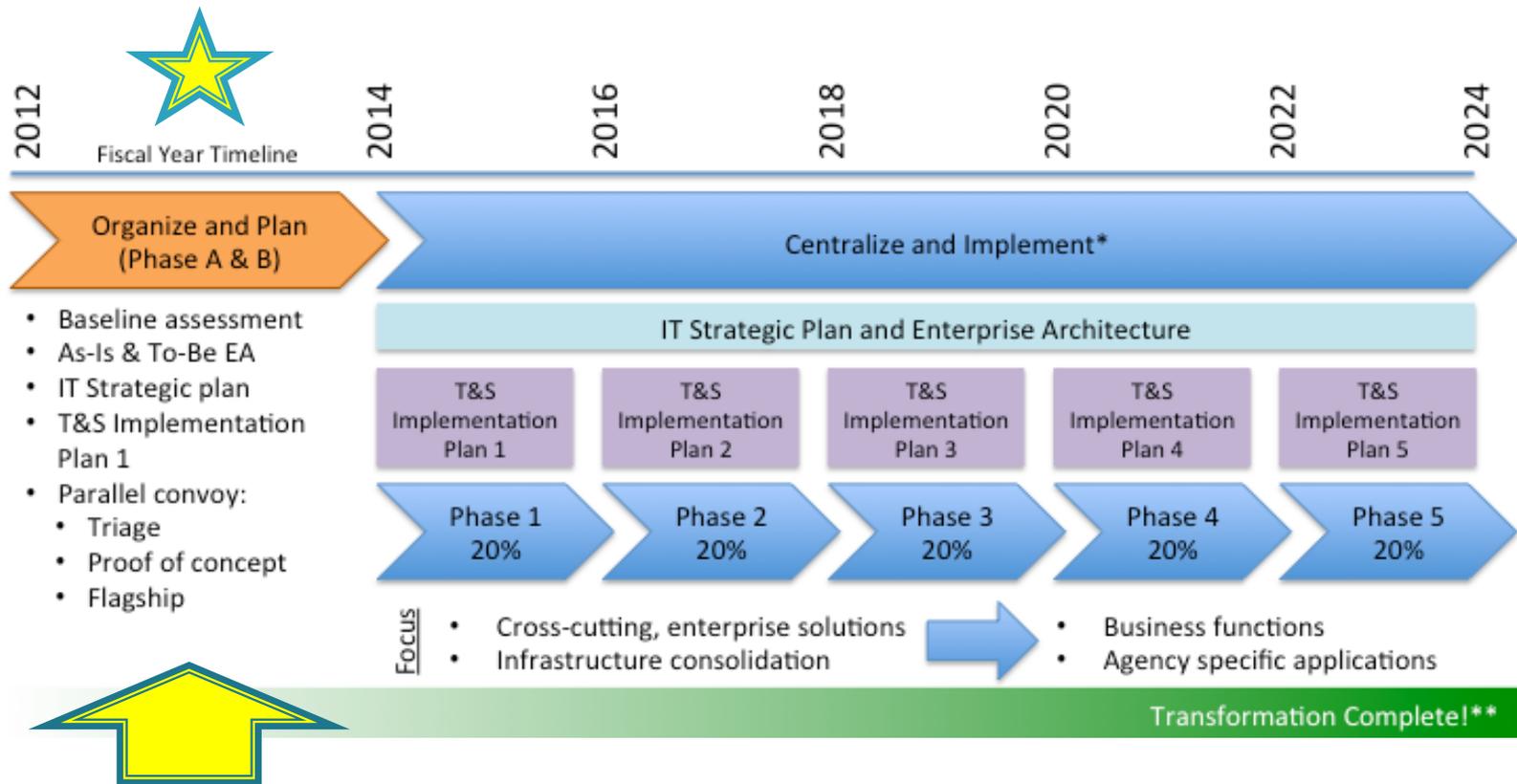
*Successful implementation of Centralize and Implement Phases dependent on funding

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

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

State of Hawaii Business Model

**20 Core LOBs
~150 Services**
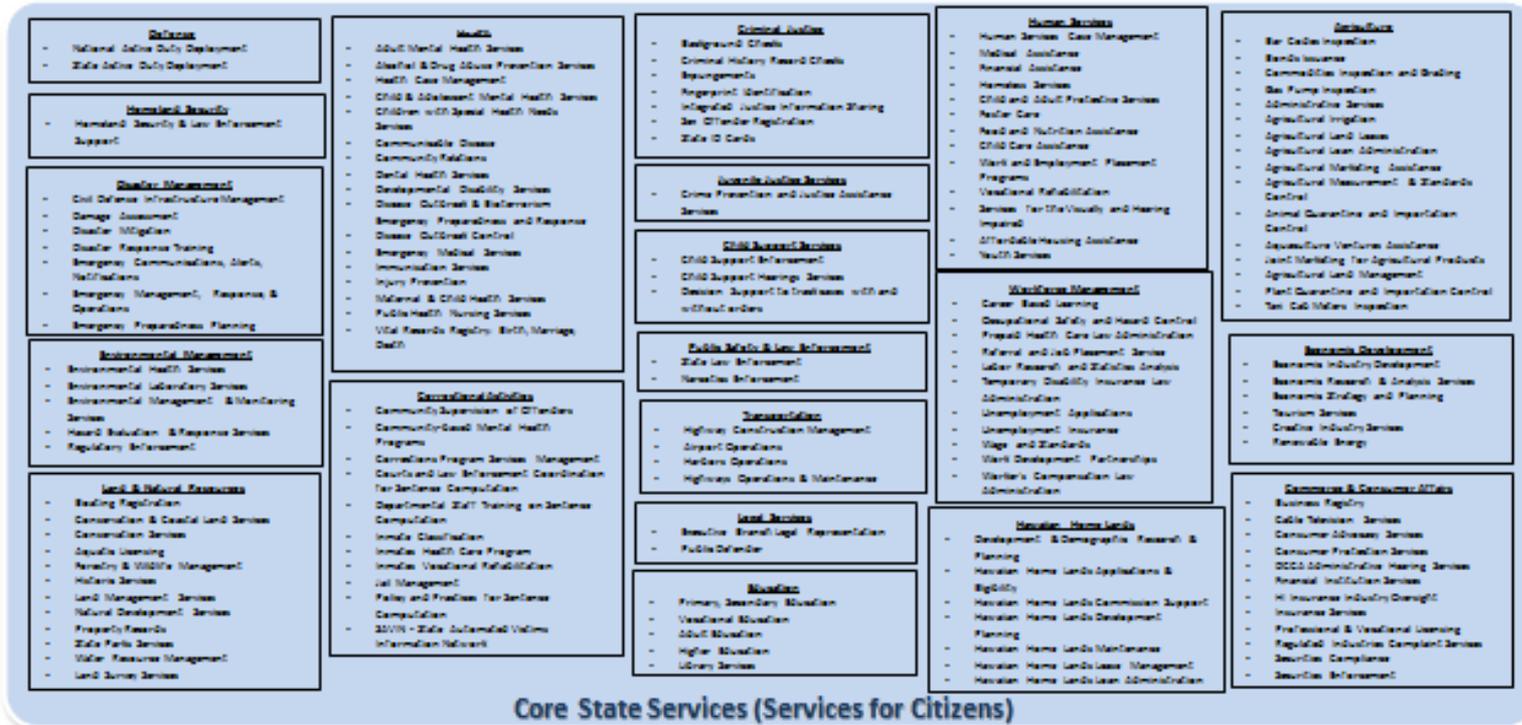
**14 Support
LOBs
~50 Services**
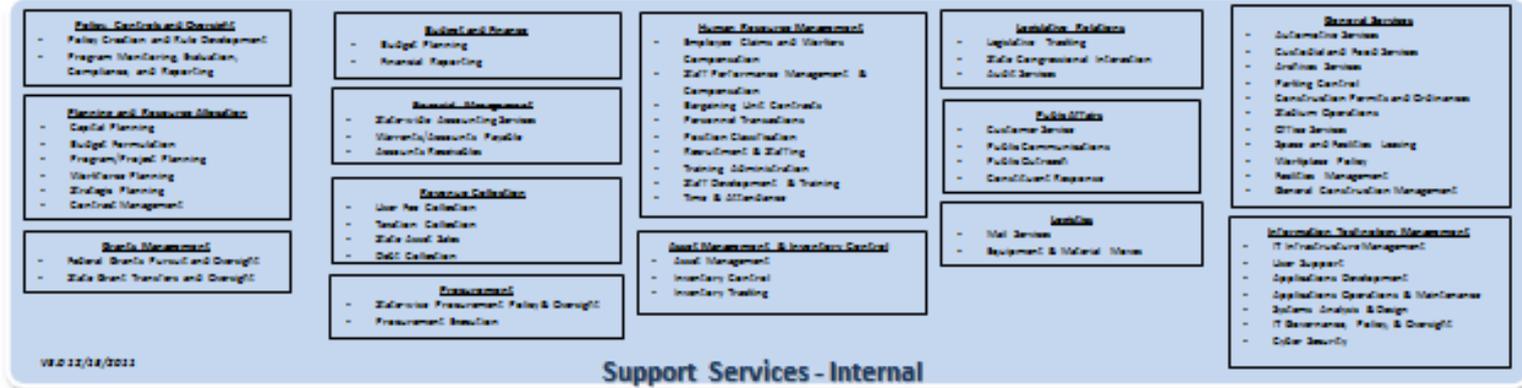
**34 Total LOBs
~200 Services**

Phase A - Major Deliverables

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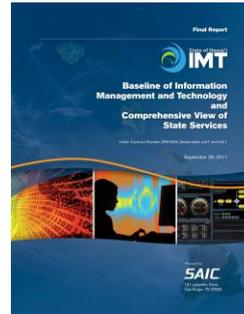
Items 1-3 released in an open, transparent manner to the public

2) Benchmarking Report
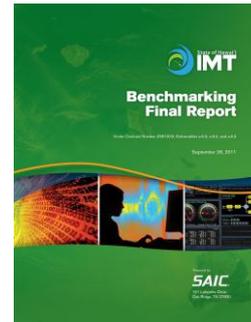
3) Data Center Assessment
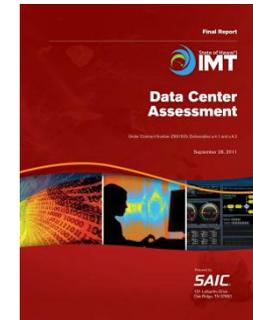
4) Enterprise Alignment Database (EAD) Tool

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

State of Hawai'i IMT

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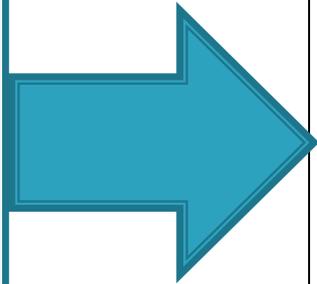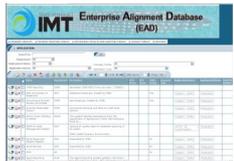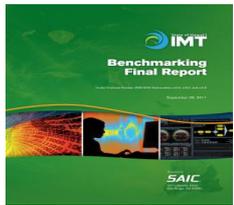
1. Governance
2. Disaster Recovery (DR) and Continuity of Operations (COOP)
3. IT Procurement
4. Security and Privacy
5. Open Government and Social Media
6. Collaboration and Work Flow
7. Enterprise Applications
8. Enterprise Infrastructure
9. Wireless/Mobile/Radio
10. Business Process Re-Engineering

We are focusing on these
Top 10 opportunities...

Top 10 Strategic Areas of Opportunity

1. **Governance**
   - Creating and Reenergizing Advisory Committees; Policies and Procedures; Investment Planning and Oversight
   - IT Transformation Roadmap; Strategic Plan
2. **Disaster Recovery and Continuity of Operations**
   - Where, What, When, and How
3. **IT Procurement**
   - Leverage Federal schedules
   - State-wide licensing and "buys" for hardware, software, and services
4. **Security and Privacy**
5. **Open Government and Social Media**
   - Facilitate, integrate, and ensure
6. **Collaboration and Work Flow**
   - Document management (inter and intra-departmental) and work flow; Web content management; eSignature
7. **Enterprise Applications**
   - GIS; Cloud Computing; Consolidated eMail in the Cloud;
   - Legacy System Modernization
8. **Enterprise Infrastructure**
   - Network extension and improvement
   - Data Center enhancement and consolidation
   - Virtualization – server and desktop
9. **Wireless/Mobile/Land Mobile Radio/Broadband**
10. **Cross-Cutting Business Process Reengineering**

Federal Systems and Interfaces are about a 1/3rd of the Portfolio and represent challenges in Duplication

State of Hawai'i
IMT

Phase A – Findings

- 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

Current View of Operations

"HAVE-NOTS"

SERVERS APPS

DATA

VERTICALLY "STOVE-PIPED" LINES OF BUSINESS
NO/LOW REDUNDANCY, POINT-TO-POINT, INCONSISTENT, FRAGILE, RISK-PRONE SECURITY

LIMITED
Centers of Excellence

DESKTOP

SECURE NETWORK

BLACKBERRY

WEB ACCESS

PORTAL DATA

"HAVES"
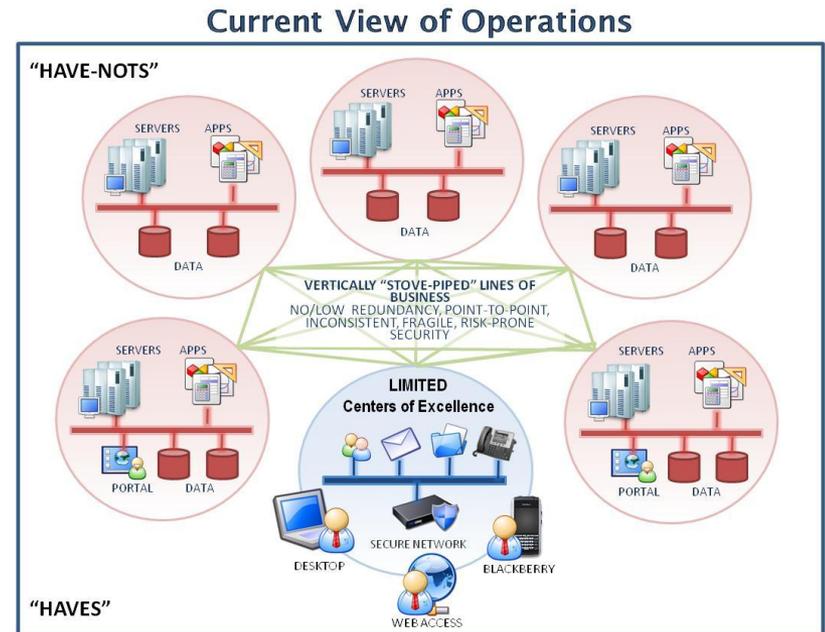
Many disconnected silos of effort

Started on Four Key Recommendations
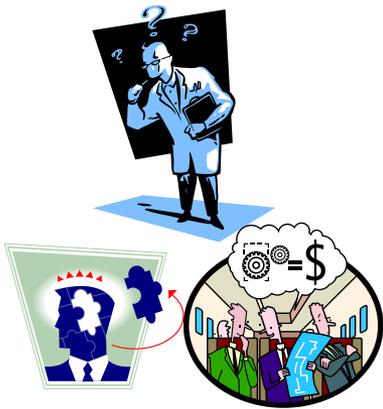
| 1	2	3	4
Enterprise Focus for Projects	*Establish Enterprise Governance*	*Re-engineer Business Processes*	*Strengthen Technical Infrastructure*

The Way Forward

Vision

Preliminary Future Enterprise IT Architecture Vision
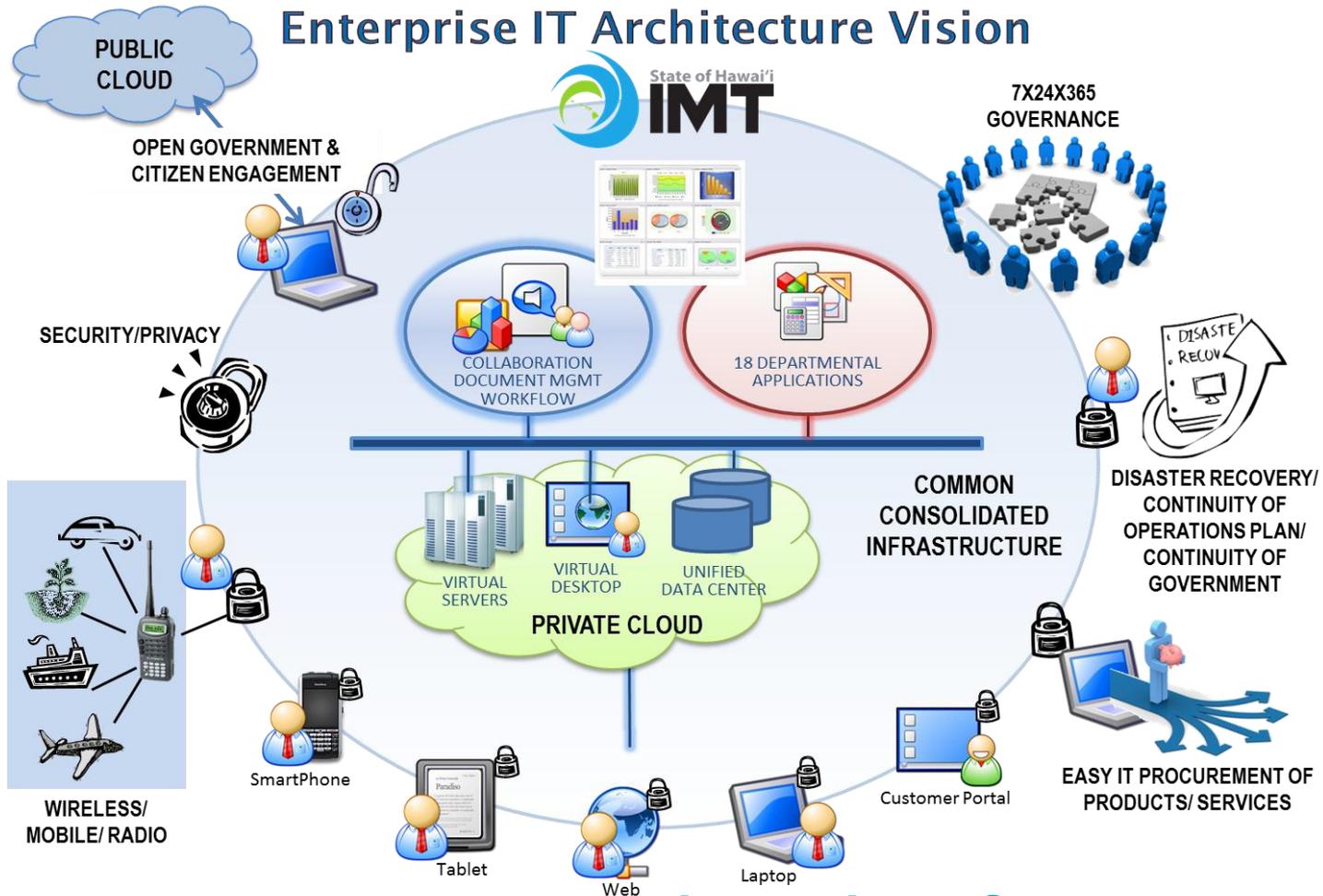
Access to the right information – anywhere, any time, any mission, securely and reliably

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

"Business"

"Information"

"Solutions"

"Technical"

State Strategic Plan

Transformation Framework
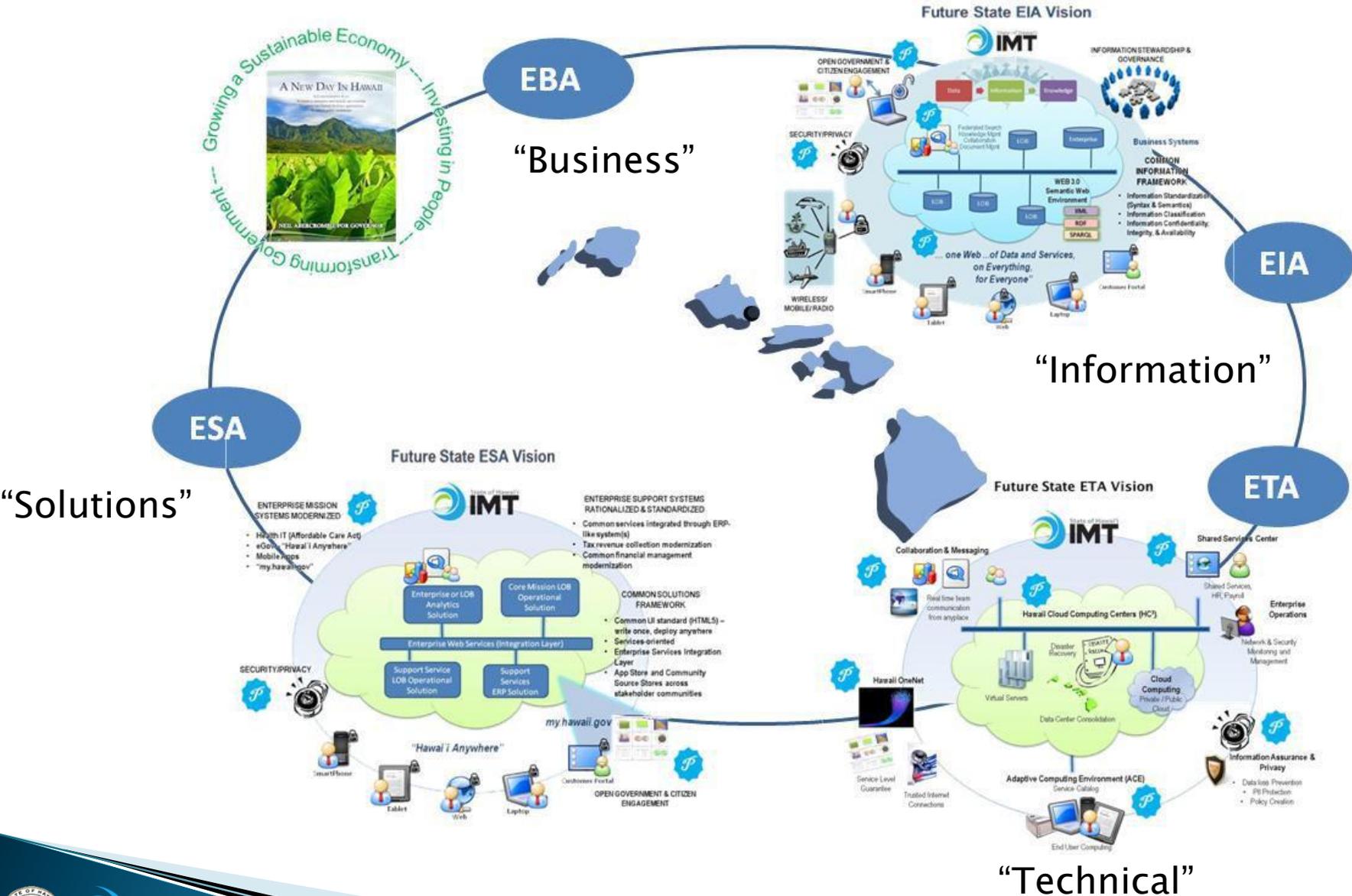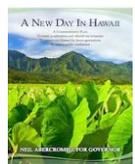
Management and Oversight (Governance)

① State of Hawai`i Business and IT/IRM Transformation Strategic Plan

Business Transformation Plan

IT Transformation Plan

②

Enterprise Architecture

③

| As Is | T & S Plan | To Be |

Projects

④

| Triage | Pilots | Major Initiatives |

Business Process Reengineering

What's Next?
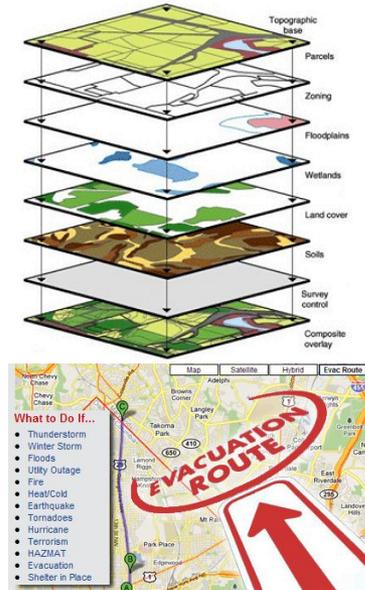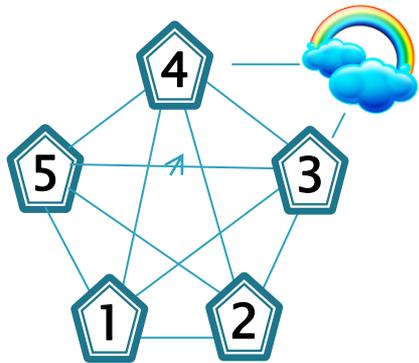
Shared Service/ Data Centers

Mobile

Cloud and Web 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 May, and June, 2012, we need your input in our future vision for the State, interfaces to federal Government systems and what does the ideal Business and IT/IRM environment look like?
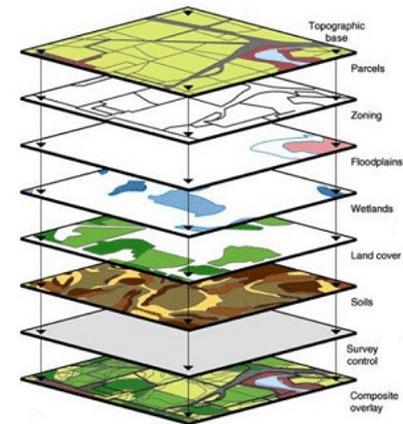
- Please see http://www.hawaii.gov/oimt for details and announcements! We intend to Publish our Plan by July 31, 2012.

The Crossroads...

Performance Improvement Lifecycle

Agency Strategy → Architect → Invest → Implement → Strategic Results
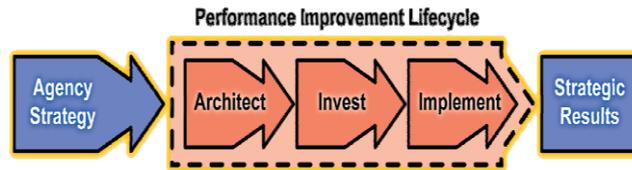
Stove-Piped, Sub-optimized, IRM and IT Environment (Today)

Innovation

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!

Mahalo!

http://www.hawaii.gov/oimt