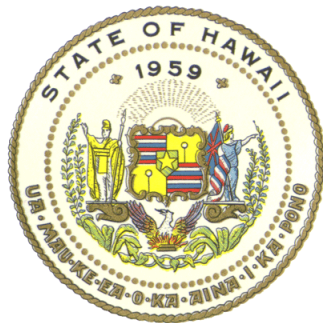


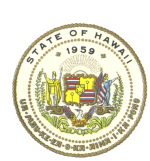
# Transforming Government

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

Sanjeev “Sonny” Bhagowalia  
Chief Information Officer  
March 13, 2012



State of Hawai'i  
**IMT**

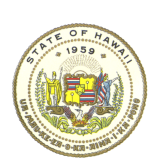


# Future World...In the Clouds?



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

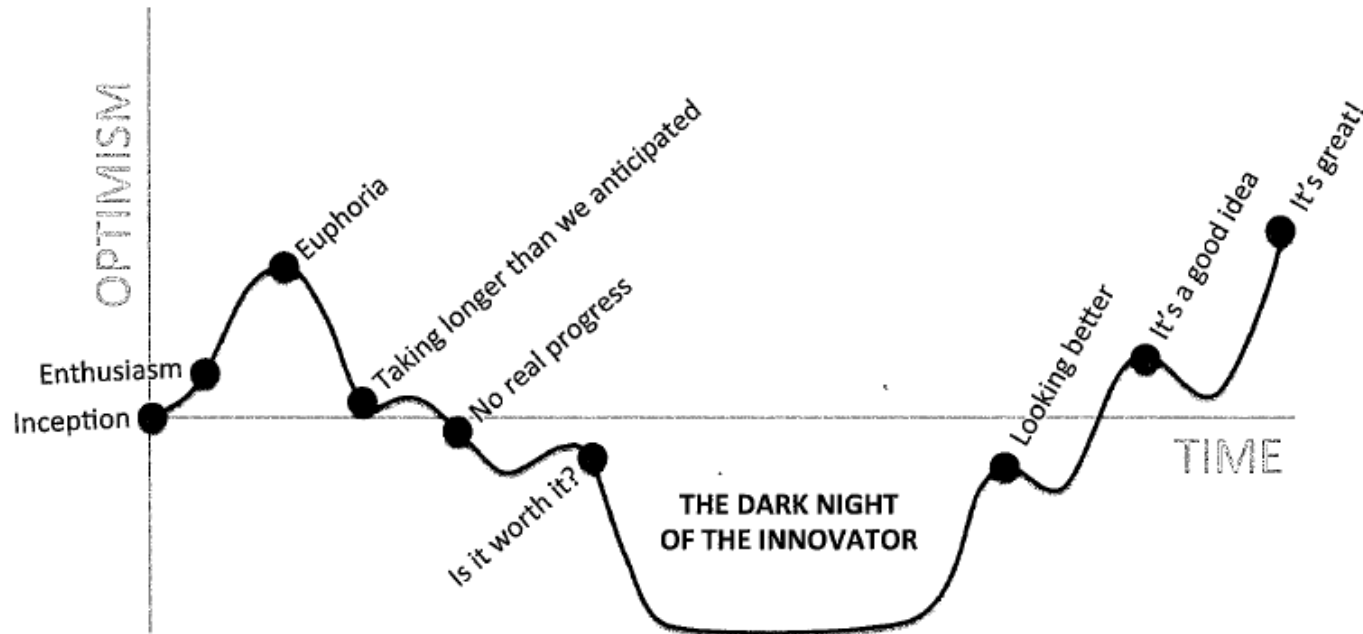
Source: New Yorker Magazine



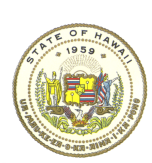
## *The Path of Innovation*

*Between the idea and the reality falls the shadow*

- T.S. Eliot



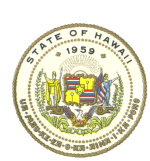
Source: Jeff Mohr, HCF



# Organizational revival depends on the ability to adapt to environmental change



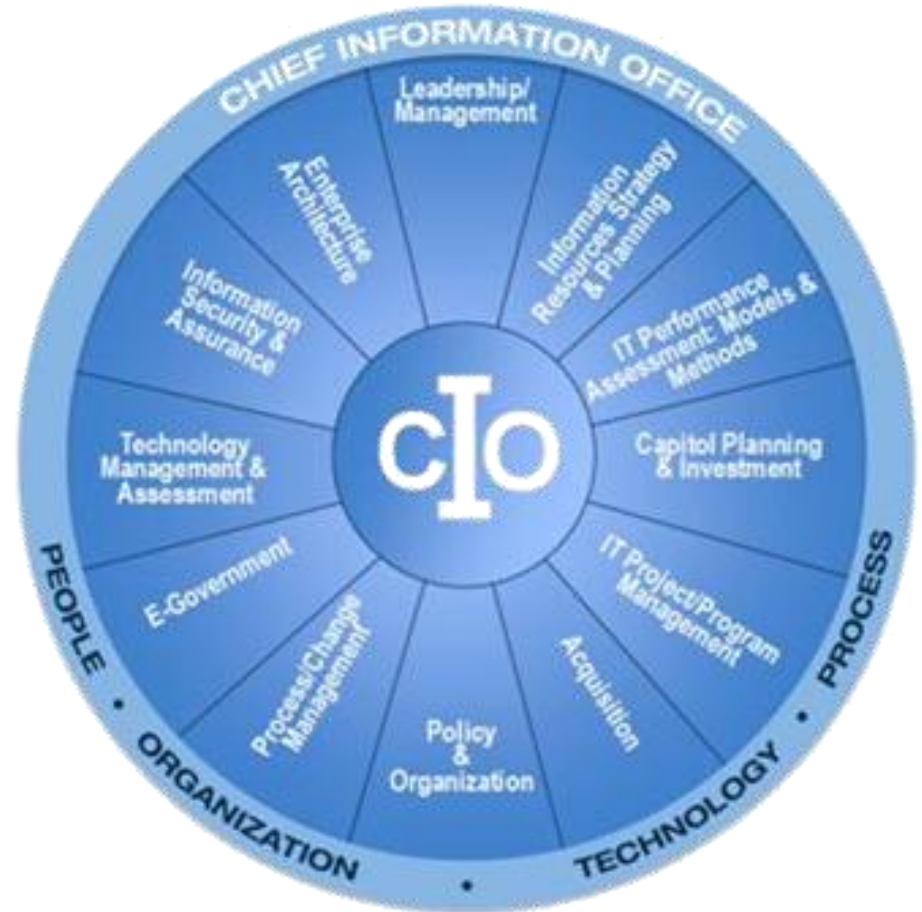
- **“We must become the change we want to see in the world” – Mahatma Gandhi**
- **“The journey of a thousand miles begins with a single step” – Lao Tzu**
- **“Automating a mess yields an automated mess” - Reengineering the Corporation, by Michael Hammer & James Champy, 1993**
- **“Information technology 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>



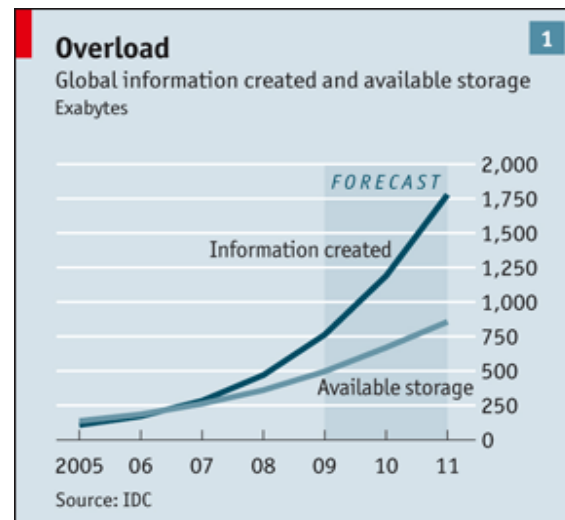
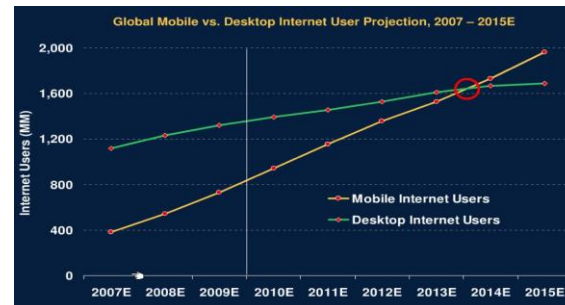
# Change is Coming (Like it or Not...)



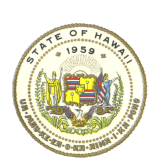
## 6 bold tech predictions: Fact or fantasy? FCW (December 8, 2010)

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)

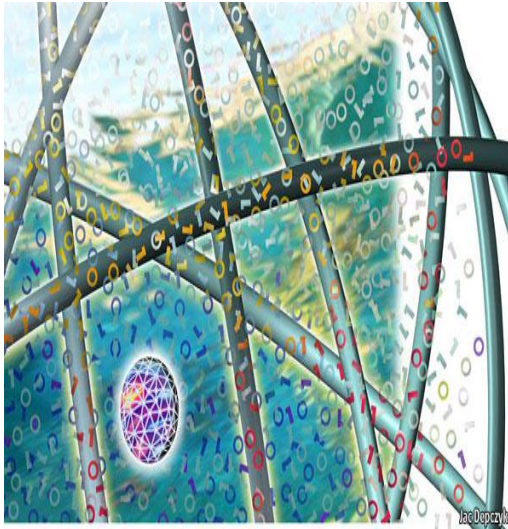
*Mobile will be bigger than desktop internet in 5 years*  
 -- Mary Meeker, Morgan Stanley, April 2010



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



# 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**



# 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

**Gartner**



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



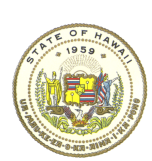
- 1) **30 billion** pieces of content were added to Facebook this past month.
- 2) Worldwide IP Traffic will **quadruple** by 2015.
- 3) Over **107 trillion** emails were sent this year (89% of which were spam).

4) Today's employees can access

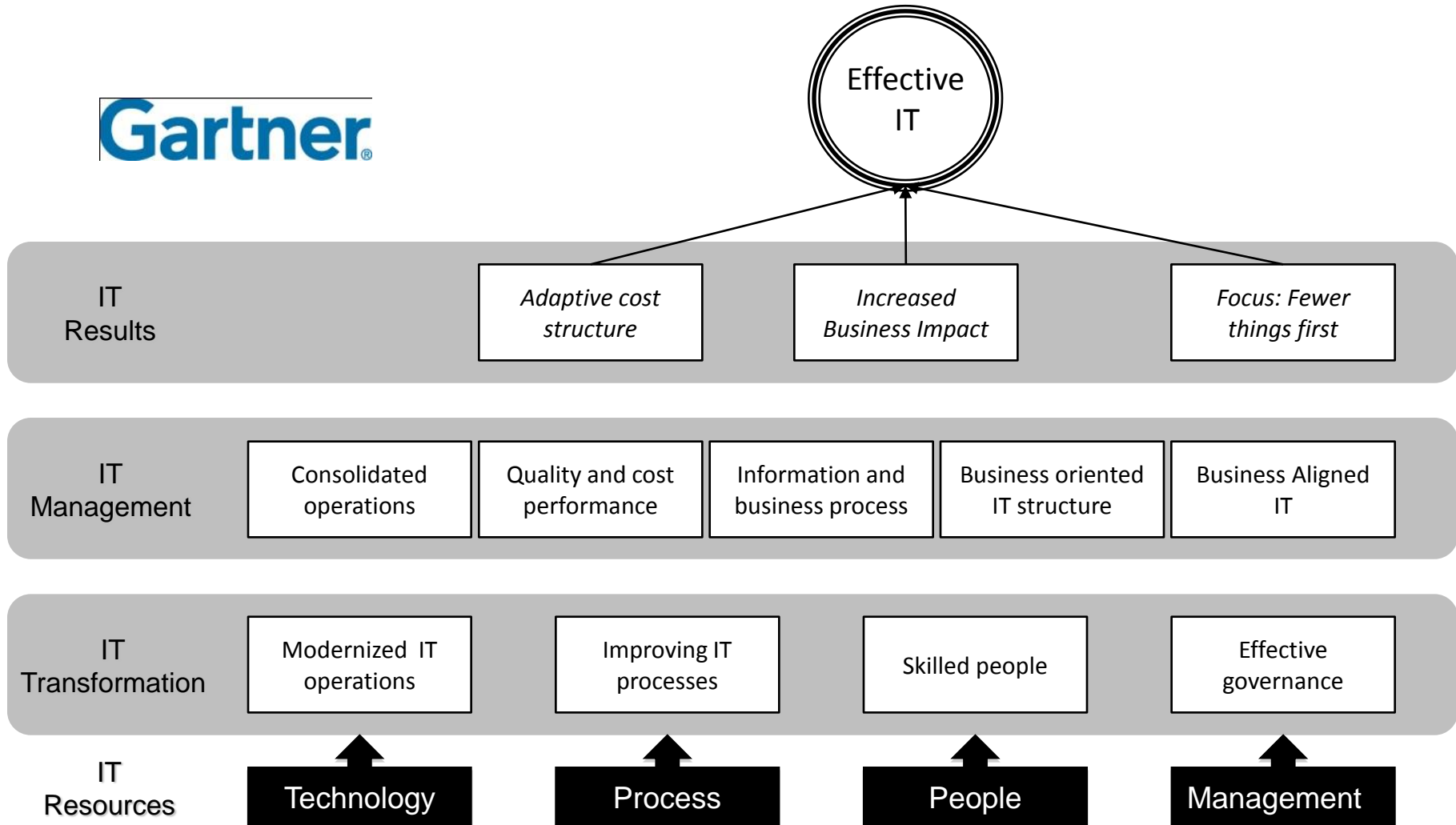


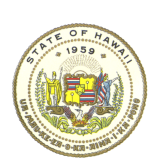
- Over 1 Billion Web pages (and growing)
- 350,000 iPhone and Over 100,000 Android Apps
- 10,500 Radio Stations, 5,500 magazines, 300+ TV Networks

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

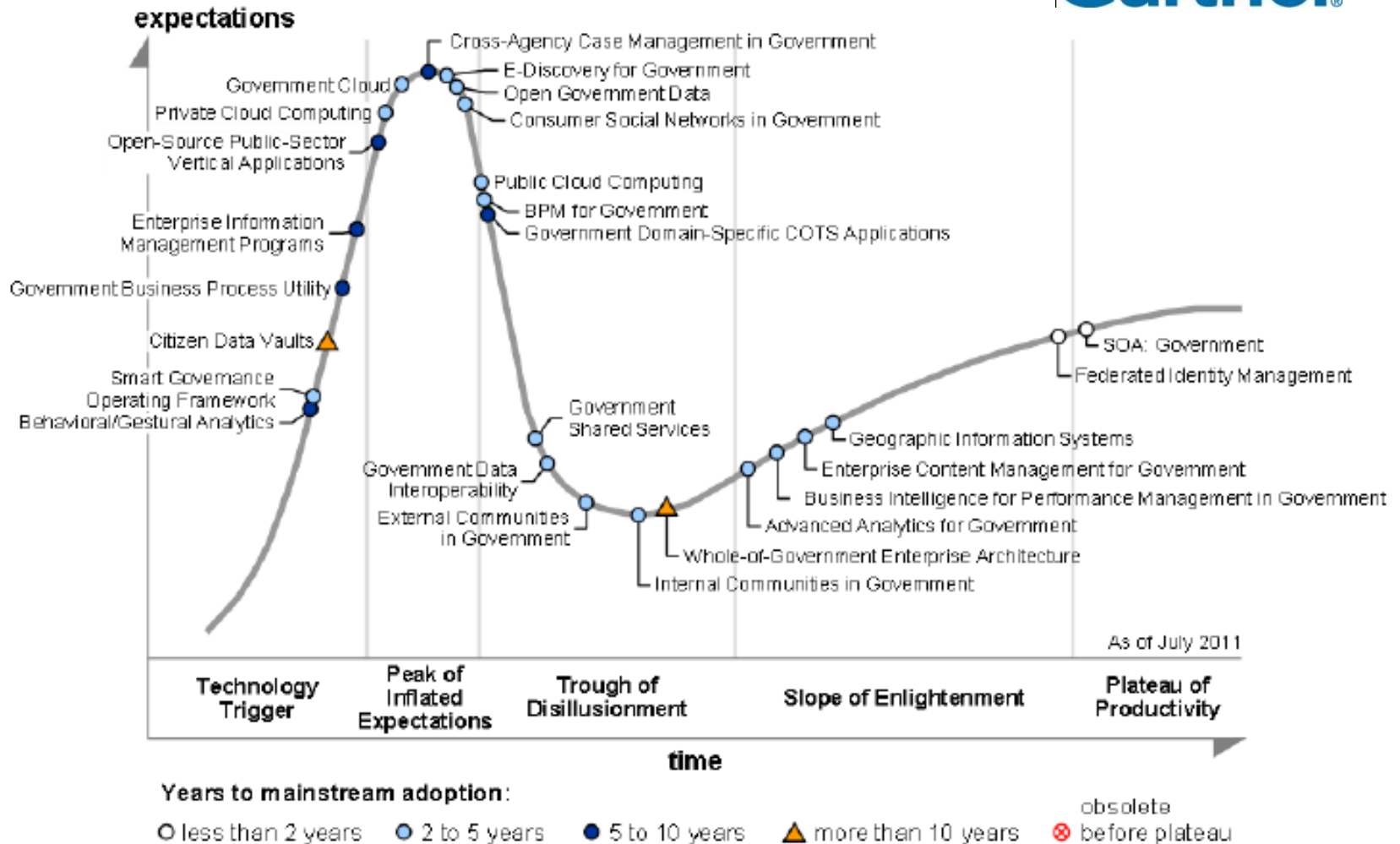




# Hype Cycle for Government Transformation



Figure 1. Hype Cycle for Government Transformation, 2011



Source: Gartner (July 2011)



\*<http://www.nascio.org/publications/>

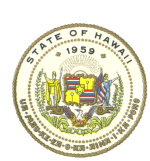
## 39 Questions

- 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)

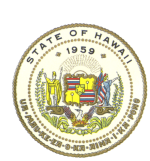
1. Consolidation / Optimization
2. Budget and Cost Control
3. Governance
4. Health Care
5. Cloud Computing
6. Security
7. Broadband and Connectivity
8. Shared Services
9. Portal
10. Mobile Service/Mobility

## NASCIO Top Ten Technology Priorities (2012)

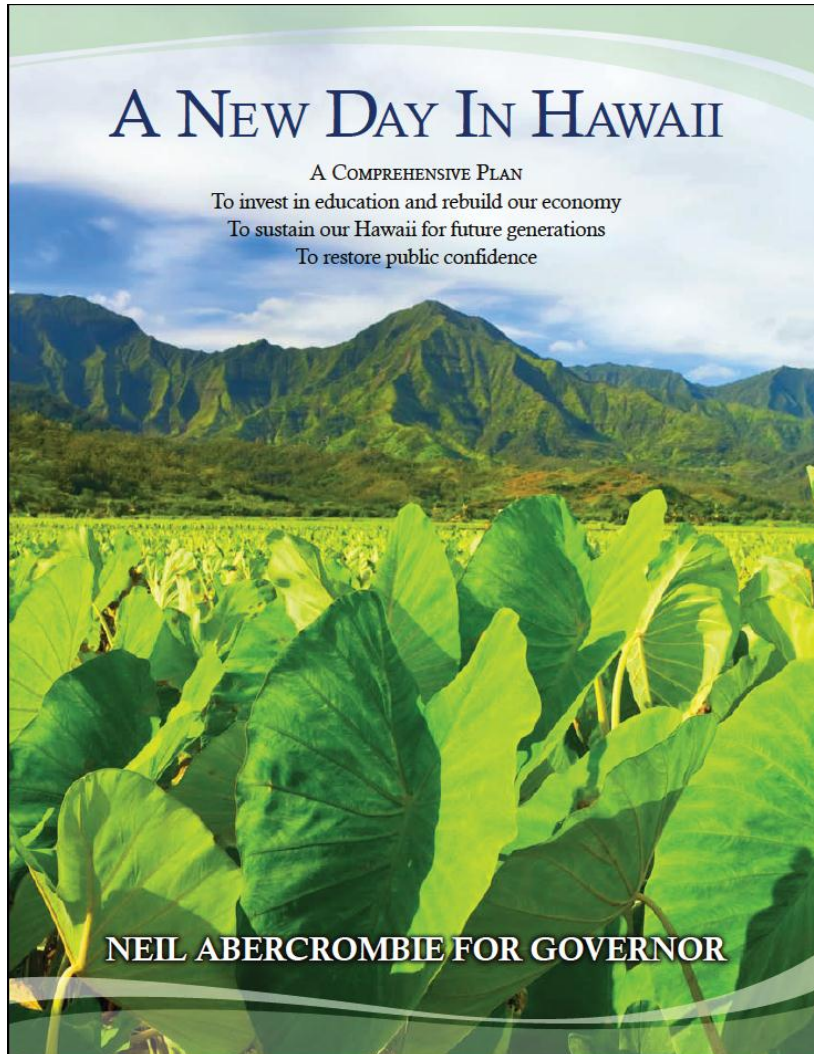
1. Virtualization
2. Legacy application modernization/ renovation
3. Cloud computing
4. Mobile workforce technologies
5. Networking
6. Enterprise Resource Management (ERP)
7. Identity and access management
8. Business Intelligence (BI) and Business Analytics (BA) applications
9. Document/Content/Records/E-mail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



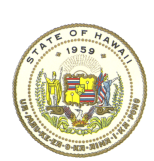
Source: <http://www.nascio.org>



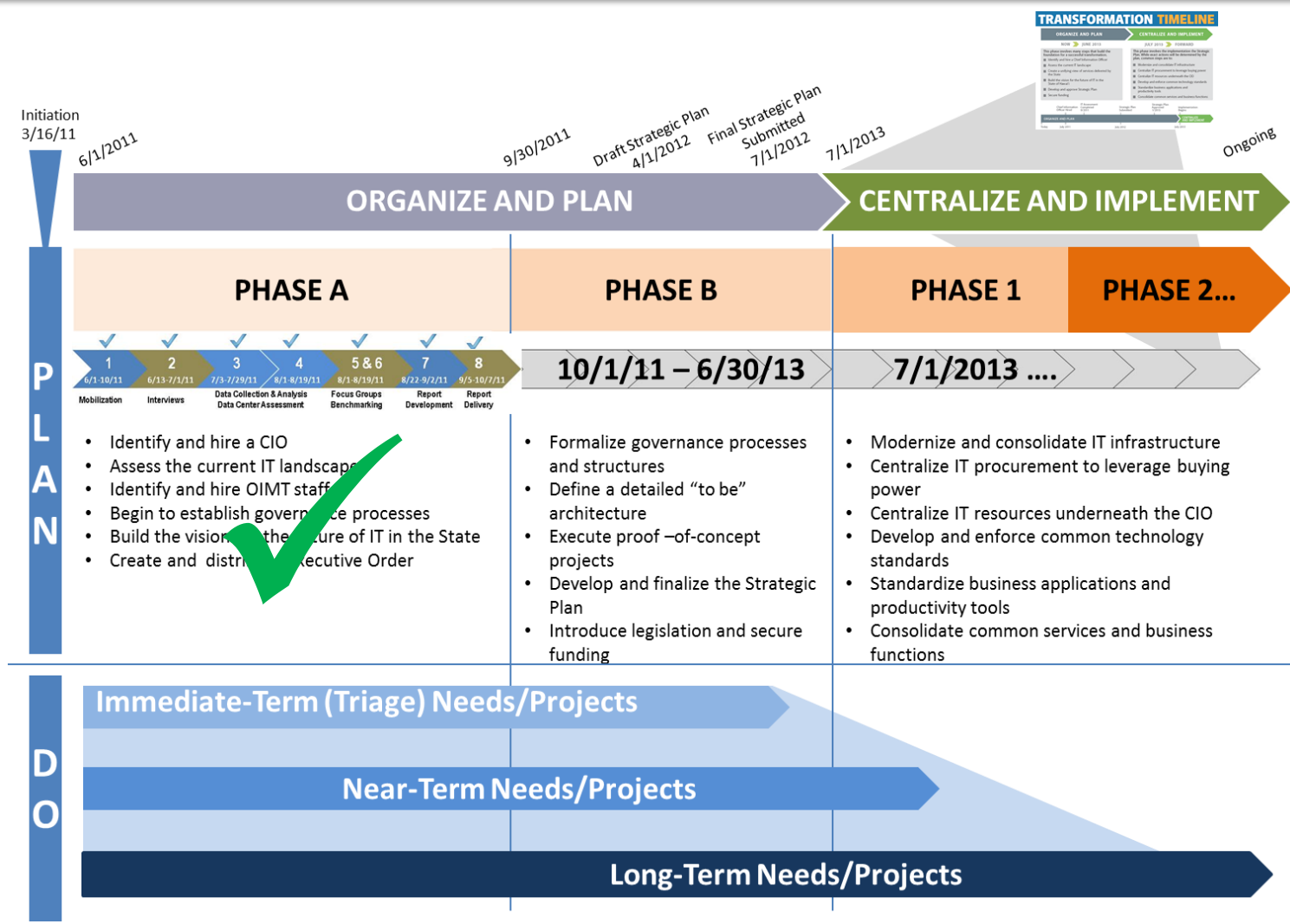
# The New Day Vision



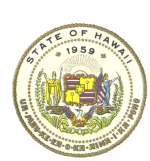
- **GROWING A SUSTAINABLE ECONOMY**
  - New Day Work Projects
  - Renewable Energy
  - Food Security
  - Innovation Economy
  - Improvements on Public Lands
  - Environmental Stewardship
  - Culture, Arts, Creative Industries
  
- **INVESTING IN PEOPLE**
  - Early Childhood
  - Education and Workforce Development
  - Healthcare Transformation
  - Safety Net, Homelessness, Public Safety
  - Housing
  
- **TRANSFORMING GOVERNMENT**
  - Information Technology
  - Fiscal Management
  - Operations Management
  - Customer Service
  - Civil Defense and Security



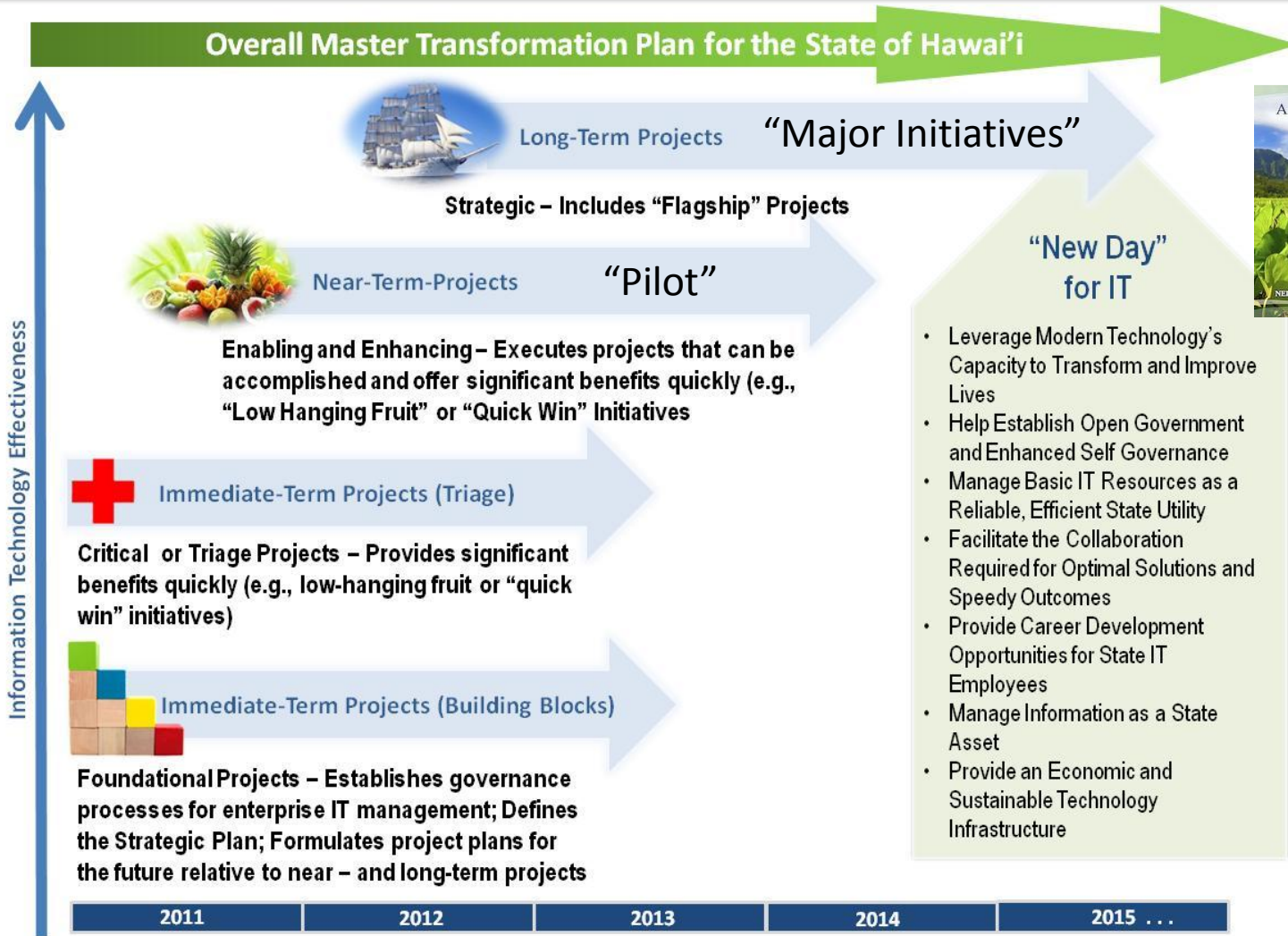
# An Integrated, Multi-Year Transformation Plan...



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



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



*Incremental improvements and delivery*





# 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

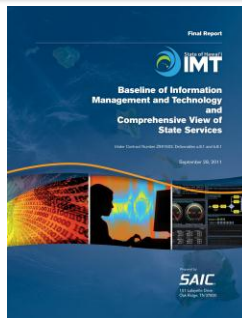
*Major first step of a long journey completed*



# Phase A - Major Deliverables

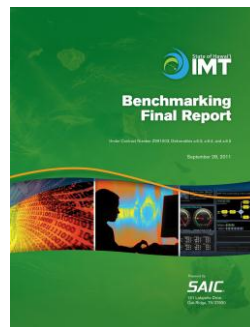


## 1) Baseline Report

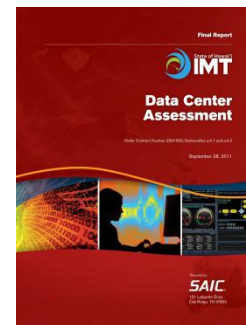


Items 1-3 released in an open, transparent manner to the public

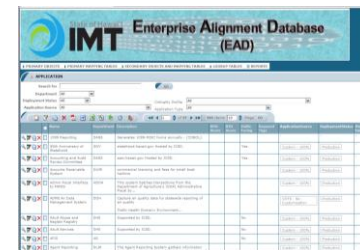
## 2) Benchmarking Report



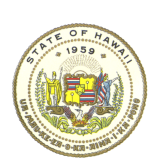
## 3) Data Center Assessment



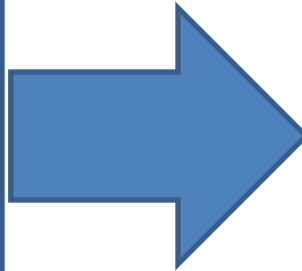
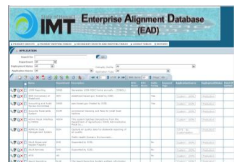
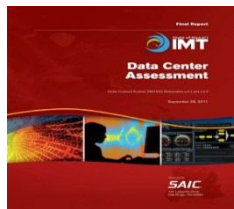
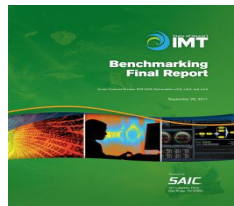
## 4) Enterprise Alignment Database (EAD) Tool



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



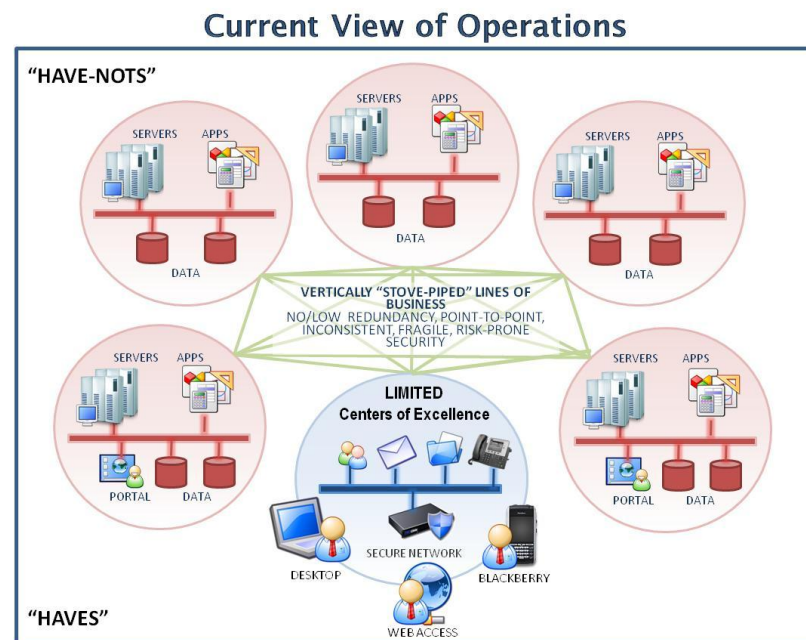
# Our Study Found: Top 10 Areas of Opportunity



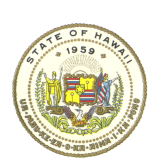
1. Governance
2. Disaster Recovery (DR) and Continuity of Operations (COOP)
3. IT Procurement
4. Security and Privacy
5. Open Government and Social Media
6. Collaboration and Work Flow
7. Enterprise Applications
8. Enterprise Infrastructure
9. Wireless/Mobile/Radio
10. Cross-Cutting Business Process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

*We need to focus on these opportunities...*

- 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*

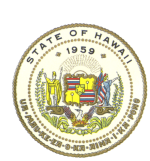


# Widespread Symptoms of IT/IRM Management Challenges



- 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!***

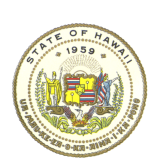


# Symptoms Driven by Three Root Causes



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

***Major issues exist – but all are solvable!***



# 20 Key Recommendations

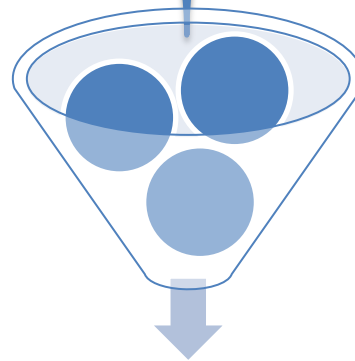


Business Reference Model  
 Manual Interfaces  
 Risk Assessments  
 Performance Measures  
 Funding for IT  
 Agency Model

Data Sharing and Collaboration  
 Bargaining Unit Leadership  
 Service Management Model  
 Application Integration  
 Platforms and Technologies

Organizational Change  
 ICSD  
 Applications Portfolio  
 Data Architecture  
 IT Costs  
 IT Skills

# 20



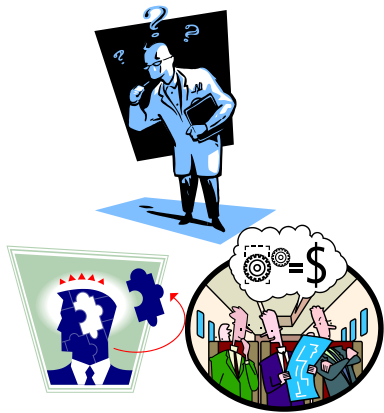
All recommendations are important but must be sequenced according to resources and readiness

# 4

Enterprise Focus  
 Governance Strategies  
 Business Process Re-Engineering  
 Technical Foundation

***We must start implementing 4 basic foundational recommendations now!***

1



**Enterprise  
Focus for  
Projects**

2



**Establish  
Enterprise  
Governance**

3



**Re-engineer  
Business  
Processes**

4



**Strengthen  
Technical  
Infrastructure**

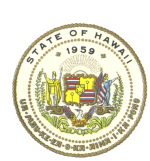


Re-engineer processes that are:

- 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

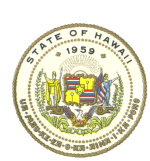
***To assist agencies in the effective, efficient and convenient delivery of programs and services to the public through business transformation and information technology modernization.***



## Vision

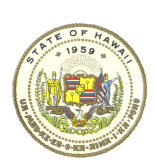
***A State where:***

- ***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.***



The transformation will benefit:

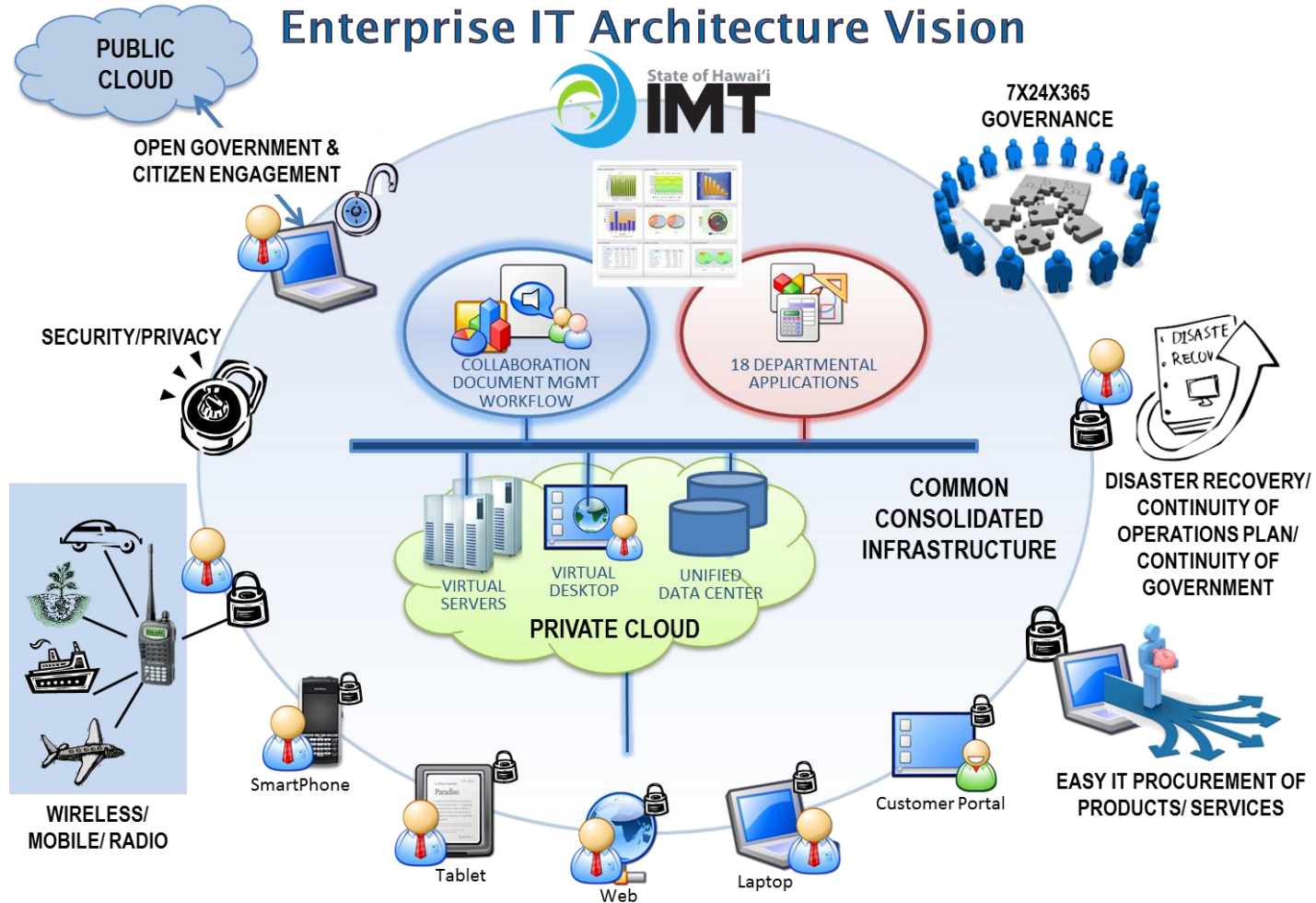
- **State citizens** through improved delivery of services and programs (e.g. going “online” instead of “waiting in line”); a more transparent and responsive government; and increased access to information and data.
- **State employees** with streamlined workflow processes allowing more focus on serving 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.



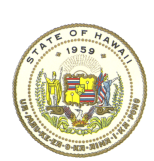
# Vision



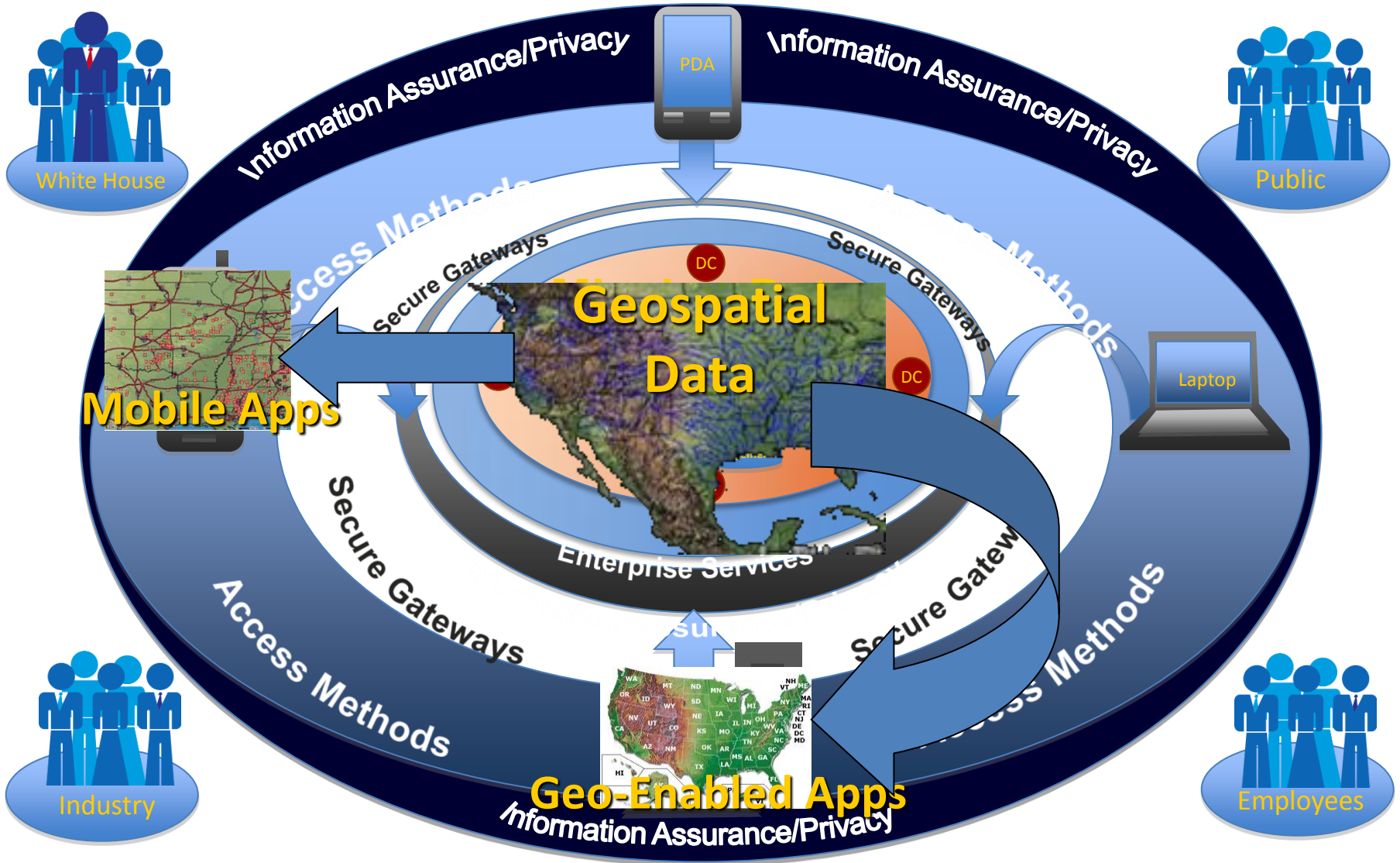
## Preliminary Future Enterprise IT Architecture Vision



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

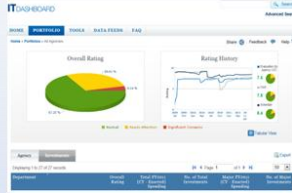


# Notional Vision



*Access to the right information for authorized users any time, anywhere, any mission, securely and reliably*

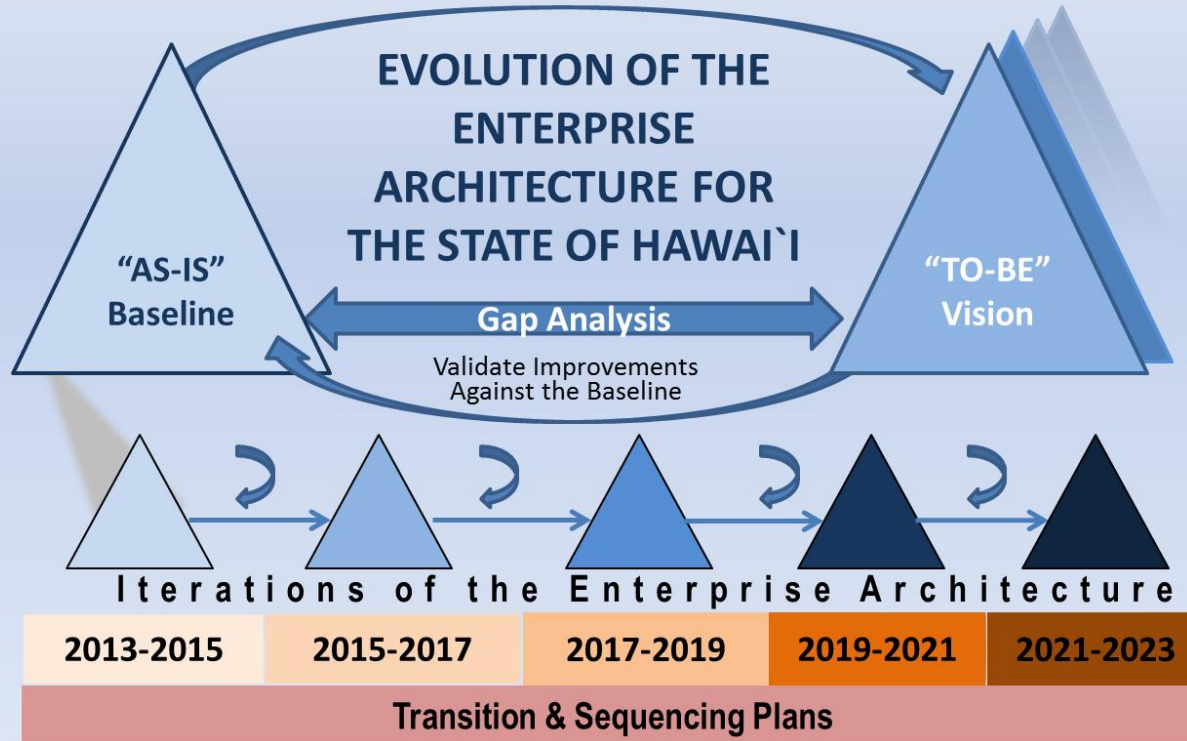
Governance View



Transformation View



Departmental View



*Deliver outstanding customer services and business value*

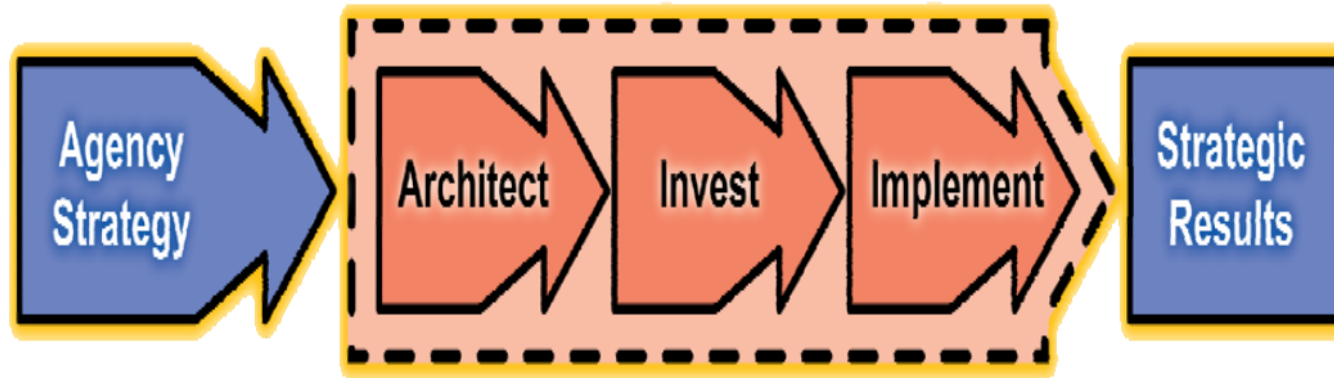


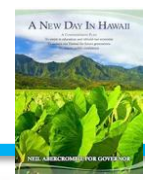


# The Transformation Plan



## Performance Improvement Lifecycle





Transformation Framework

Management and Oversight (Governance)

1

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

2

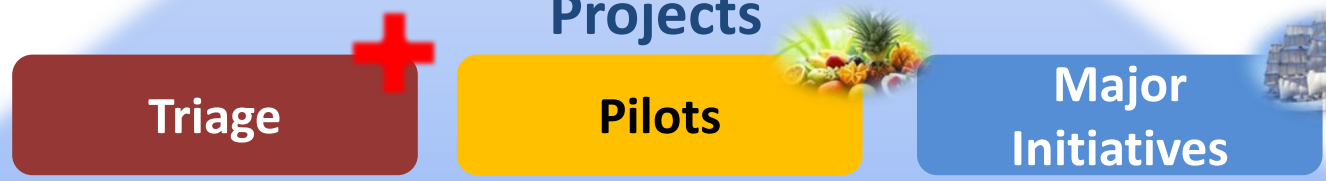


Enterprise Architecture

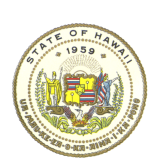
3



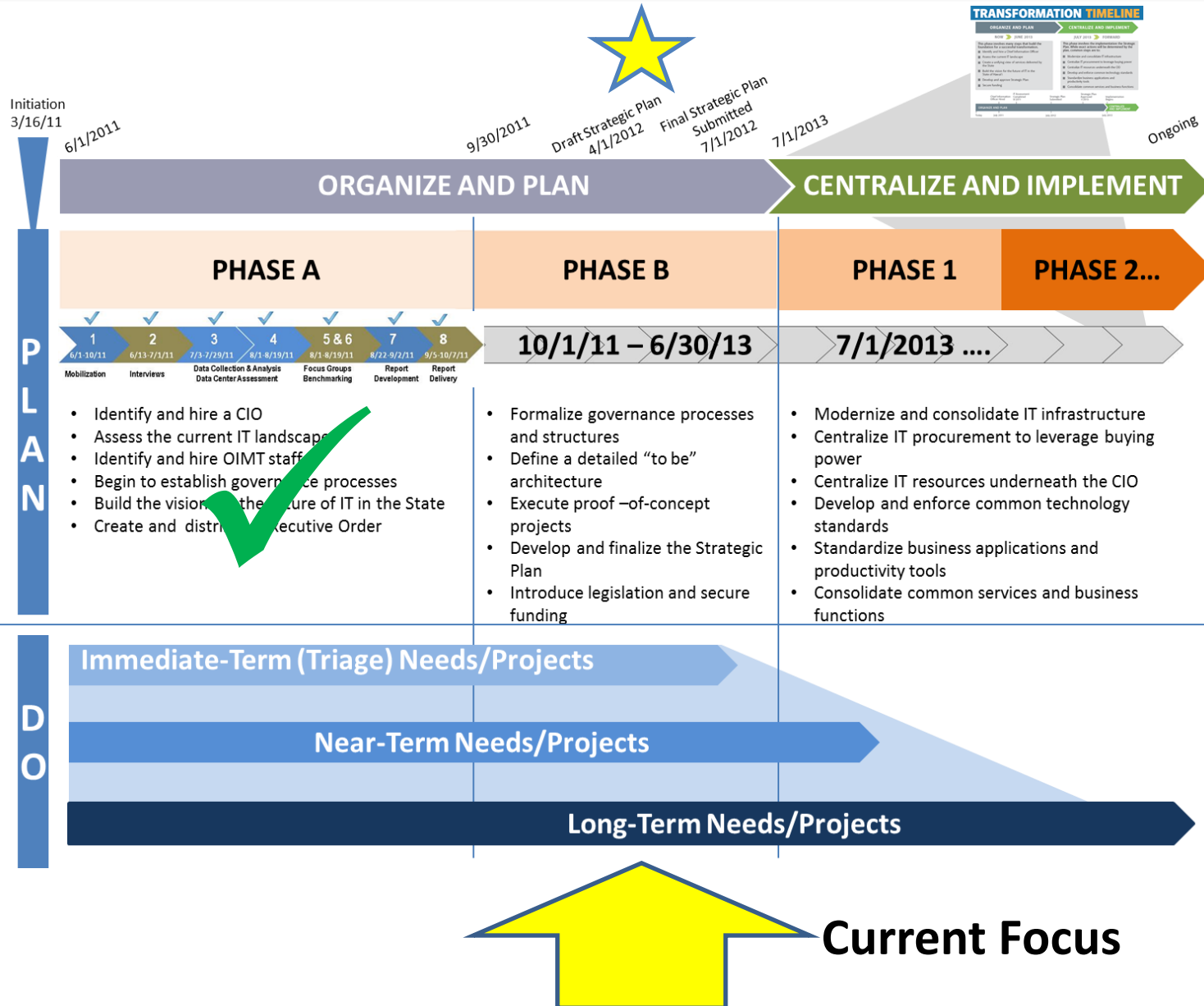
4

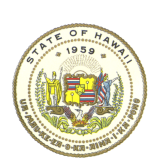


You will see incremental improvements and delivery

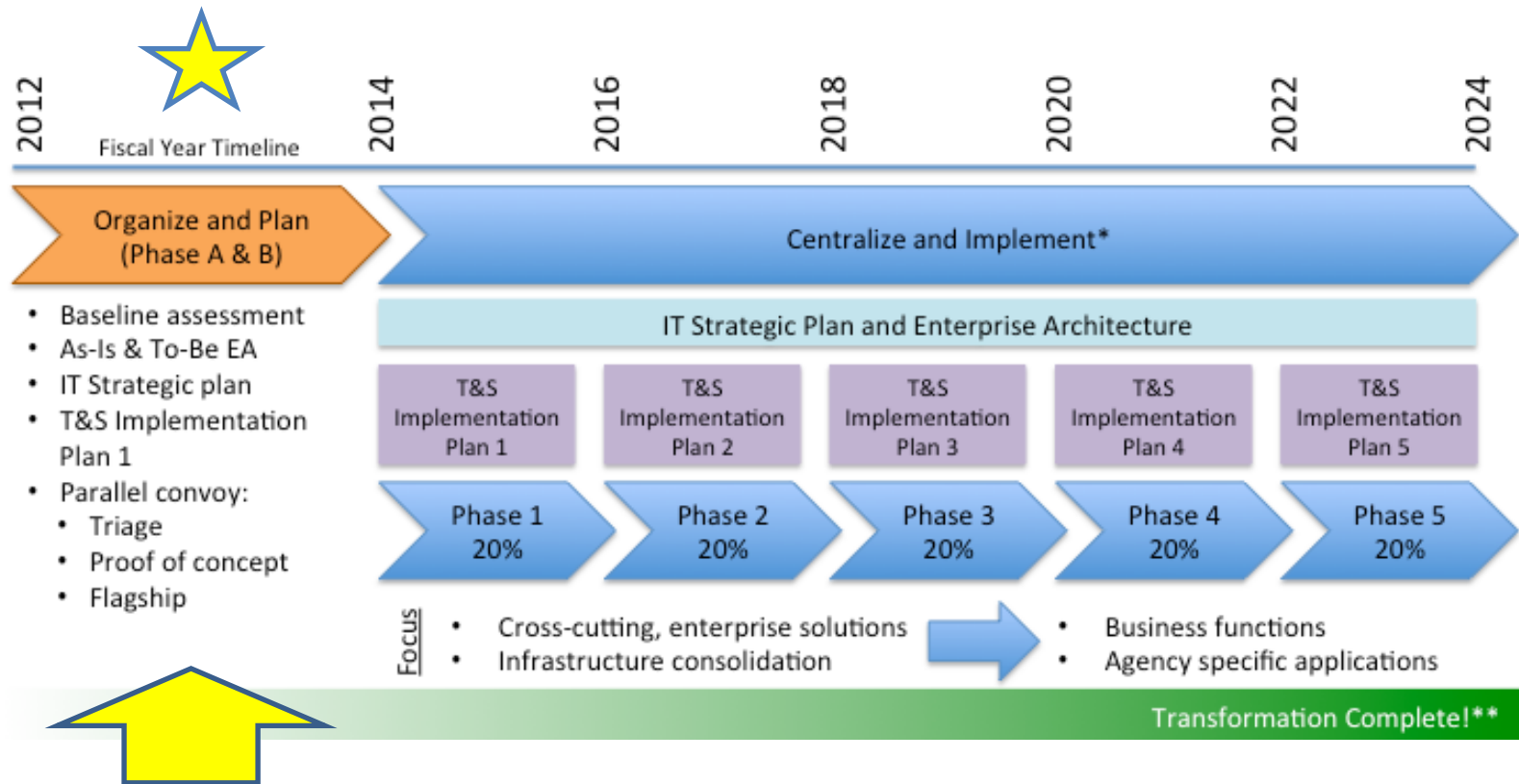


# An Integrated, Multi-Year Transformation Plan...





# The Transformation Plan

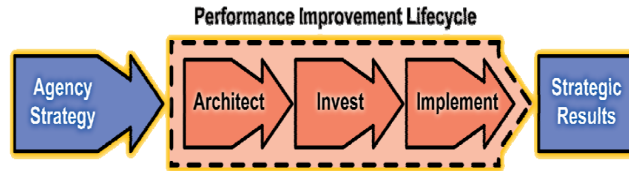


\*Successful implementation of Centralize and Implement Phases dependent on funding

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

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





**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!**



INNOVATION  
SUCCESS  
EVALUATION  
DEVELOPMENT  
GROWTH  
SOLUTION  
PROGRESS  
MARKETING

# Mahalo!

<http://www.hawaii.gov/oimt>  
[oimt@hawaii.gov](mailto:oimt@hawaii.gov)

