HB642: Select Committee on Efficiency in Government

“Gentlemen, we have run out of money. Now we must think.”

Winston Churchill

Agenda

- Vendor Ecosystem Economics (Cloud)
- Economics of IT in Government (Montana IT Maturity Model)
- Purchasing IT in Government
- Regional or Multi-State Collaboration
- Quick Wins and Opportunities
- Estimated IT Spending In North Dakota, South Dakota, Wyoming, Idaho and Montana

The State CIO and Vendor Ecosystem Economics

- During dotcom bust and financial crisis, broadband and mobile computing increased
- Exxon and Apple – BTU's replaced by Gigabytes
- Oracle, IBM, Apple, Google, Microsoft, ATT, Verizon , etc. Rise of ecosystems economics
- Oligopolies
- Switching Costs and lock-in
- Competition to Acquire Customers
- Supply – Side Economies of Scale (Applications)
- Demand – Side Economies of Scale (Telecommunications)
- The Cloud - "Pay as you grow"

Cloud Computing

- On-demand service: what you need when you need it.
- Broad network access: access is anywhere, anytime.
- Resource pooling: pool of users shares location-independent resources and costs in an environmentally sustainable way.
- Flexible resource allocation: as demands fluctuate, cloud services can scale rapidly (elasticity).
- Measured service: usage is metered—often per user or per hour, pay only for what you use. Service levels are contractually defined (Consumption Based: pay as you grow).

Definition of Cloud Computing by the

National Institute of Standards and Technology (NIST)

Montana IT Maturity Model Vision

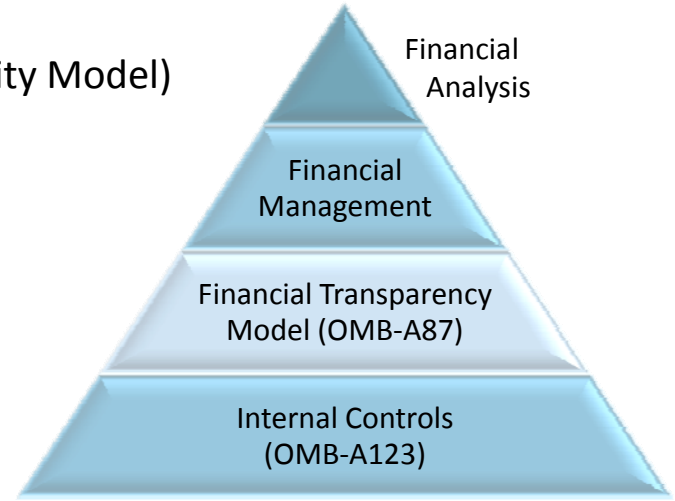
Level 0 Ad Hoc IT

Level 1 **Agency IT** – Budget Based focused on Agency, Division, or Bureau Missions

- Increase productivity (tactical).

Level 2 **Market-Based IT** – Economics Based focused on Government-wide IT Missions

- Tools
  - Financial Transparency Model (Full Cost Maturity Model)
  - Financial Stack
  - Consumption Based IT
  - IT Services Portfolio
  - GIS Cloud RFP (MT, UT, CO, OR)
- Provide decision support (strategic) for management decisions based on economics.



Level 3 **Communities of Interest IT**

- Create around disciplines and services that are state or regional in scope
  - Examples: Public Safety, Environmental, Education, Natural Resources, etc.
- Reduce fix costs, and increased economies of scale.

Level 4 **Enterprise IT**

- IT is a basic building block of policy, not an add-on after policy is determined.

Economics of IT in Government
"Government as a Service"

- Themes
  - Technology is *the* 21st century pillar of growth and development
  - IT is an Asset of the State of Montana as compared to being a bottom line expense item
  - Decisions regarding technology need to use economics and not just be budgetary in nature
  - There needs to be a transition in how Montana philosophically views information technology.

Economics of IT in Government
"Government as a Service"

- Agency Budget vs. State Economics
- Consumption Based IT – "pay as you use"
- Inelasticity of Supply or Demand
- Oligopolies
- Switching Costs and Lock-in
- Total Cost of Ownership
- Reduce Fix Costs
- Economies of Scale
- Marginal Cost of Services
- Multi-state Collaboration

Purchasing IT in Government

- Commodities
- RFP's
- (f) Public-private partnerships are used to deploy information technology systems when practical and cost-effective. 2-17-505 MCA

Regional or Multi-State Collaboration

- GIS RFP – MT, UT, CO, OR
  - Workshop Hosted in Helena: IBM, Google, Amazon, Microsoft, ESRI, Skygone
  - Western States Governors Association Meeting
- DLI Multi-State hosting
- Oregon and Texas – Disaster Recovery
- Western States Contracting Alliance
- Washington State Digital Archives
  - 100 million records

Quick Wins and Opportunities
(No Particular Order)

- Move Montana IT Maturity from Level 1 to Level 2 in the next 4 years
- Electronic Signatures – Identify statutes, rules, etc. that require wet signature.
- Electronic Record – Identify statutes, rules, etc. required physical piece of paper for official record.
- Records Management – Develop strategy to support e-signatures and e-records, paperless office. Privatization? Washington State Archives?
- E-mail Archiving – Develop strategy to support email archiving for retrieval and discovery. Privatization? Washington State Archives?
- Network – Develop a strategy for a stable, predictable, affordable and funded statewide network that will meet the State technology need for decade or longer.
  - Bundling or piggybacking on the University Northern Tier Network or other national education/government initiatives.

Quick Wins and Opportunities

- Data Centers – Develop opportunities for government to government or public-private partnerships for Helena and Miles City. Montana county, local government, tribal and schools disaster recovery facility. Oregon/Texas disaster recovery.
- Multi-State and Regional Solutions – As a strategy, actively engage other states, provinces and jurisdictions in finding common solutions or purchasing services for Montana. Oregon/Texas disaster recovery.
- Mobile Computing – Develop a long-term strategy for Mobile Computing and 1) designate where it is to be used inside government to aid in productivity and 2) which applications are to be a part of the State Web portal
- GIS – Develop a long-term strategy for the funding and use of GIS as an aid for communication with citizens, and government service planning.

Quick Wins and Opportunities

- Dedicated Funding for IT – Look at ways to provide dedicated funding for IT to retire legacy systems and make OM investments of existing systems. Example: Legislative Services use of left over session funds for IT. Efficiencies realized from this effort put in a fund?
- Periodic Reengineering for Efficiency – High touch systems should be routinely looked at for improved efficiency instead of rip and replace at the end of its life. Pilot project?
- What other States and Provinces are doing – Research incentives, tax policy, etc. that jurisdictions are using to lure IT to them.

Estimated IT Budget in North Dakota, South Dakota, Wyoming, Idaho and Montana

* Digital Government Magazine

- Wyoming
  - Population: 544,270
  - Estimated IT Budget: $152,088,354
- North Dakota
  - Population: 646,844
  - Est. IT Budget: $94,761,373
- Idaho
  - Population: 1,545,801
  - Est. IT Budget: $93,437,880
- South Dakota
  - Population: 812,383
  - Est. IT Budget: $78,161,010
- Montana
  - Population: 974,989
  - Est. IT Budget: $52,267,239

HIC SUNT DRACONES

*There Be Dragons