



Can State Governments Get Ahead of the Technology Curve?

Presenter: Robert "Bubba" Lange, SVP of Operations



- Introduction
- Rate of Change
- Keeping up with the competition
- Options available to Government Sectors
- Summary

- Presenter
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- Background
 - Thirty years in tax, enterprise software, and global services
 - Certified Platinum SAP Consultant
 - Specialties include custom design and build of pricing and taxes for upstream and downstream O&G
 - FuelQuest, SAP, Coca-Cola, FMC, CIA



- King Solomon's Time
 - Clothing based on agricultural resources
 - Communicated by word of mouth, and written dispatch
 - Traveled by Horse back, and Boat
 - Military based on hand to hand combat. Spears, Bow and Arrow, Swords

- George Washington's Time (3000 years later)
 - Clothing based on agricultural resources
 - Communicated by word of mouth, and written dispatch
 - Traveled by Horse back, and Boat
 - Military based on proximity combat . Cannons, Muskets, Pistols, Calvary

- Current Day (260 years later)
 - Clothing based on synthetic blends
 - Communication at the speed of Light
 - Travel at the speed of Sound
 - Military based Long Range Warfare. Rockets, Missiles, MIRV's, Etc

- If you're one in a million in China
- China will soon become
- The top 25% of India's population with the highest IQ's
- Translation
- There are 1300 people just like you
- The number 1 English speaking country in the world
- Is GREATER than the total population of the United States
- India has more honors kids than America has Kids

- The top 10 in-demand jobs in 2010
- We are currently preparing students for jobs that don't yet exist
- In order to solve problems
- The U.S. Department of Labor estimates
- Did not exist in 2004
- Using technologies that haven't been invented yet
- We don't even know are problems yet
- Today's learner will have 10-14 jobs by the age of 38

- In 2009 there were 31 Billion searches on Google every month
- The first commercial text message was sent December of 1992
- 1 out of 8 couples married in the US in 2008
- There are 200 million registered users on MySpace
- In 2006 this number was 2.7 billion
- Today, the number of text messages sent everyday exceeds the total population of the planet
- Met each other online
- If MySpace was a country it would be the 5th largest in the world between Indonesia & Brazil

- Radio
 - Television
 - Internet
 - iPod
 - Facebook
- 38 Years
 - 13 Years
 - 4 Years
 - 3 Years
 - 2 Years

- The amount of technical information
- THIS MEANS THAT For students starting a 4 year technical degree.
- NTT Japan has a fiber optic cable that pushes
- It is currently tripling every 6 months
- Is doubling every 2 years
- Half of what they learned in their first year of study will be outdated by their third year of study
- 14 trillion bits per second down a single strand of fiber (2660 CD"s / second)
- And is expected to do so for the next 20 years

- By 2013 a supercomputer will be built that exceeds the computational capabilities of:
- Predictions are that by 2049 a \$1000.00 computer will exceed the computational capabilities of:

- THE HUMAN BRAIN

- THE ENTIRE HUMAN SPECIES

- 67 Babies were born in the US
- 274 Babies were born in China
- 395 Babies were born in India
- 694,000 songs were down loaded illegally
- Factoids from Did You Know? series
 - By researchers, educators, and technologists – Karl Fisch, Scott McLeod, and Jeff Bronman

What Does All This Mean?

- The GAP Between the public and private sector will widen
- Resources with the latest knowledge will be harder to recruit and retain and both the private and public sectors will have to find means to continue training of existing resources or they will become obsolete
- Hardware will continue to advance every 24 months driving replacement considerations
- **It comes down to a very simple equation:**

Money + Time = Keep pace with changing technology

□ TIME:

- Is a fixed variable 24 hours a day no more no less
- Once you lose it you cannot get it back or get more
- It is on a fixed stream you cannot speed it up or slow it down

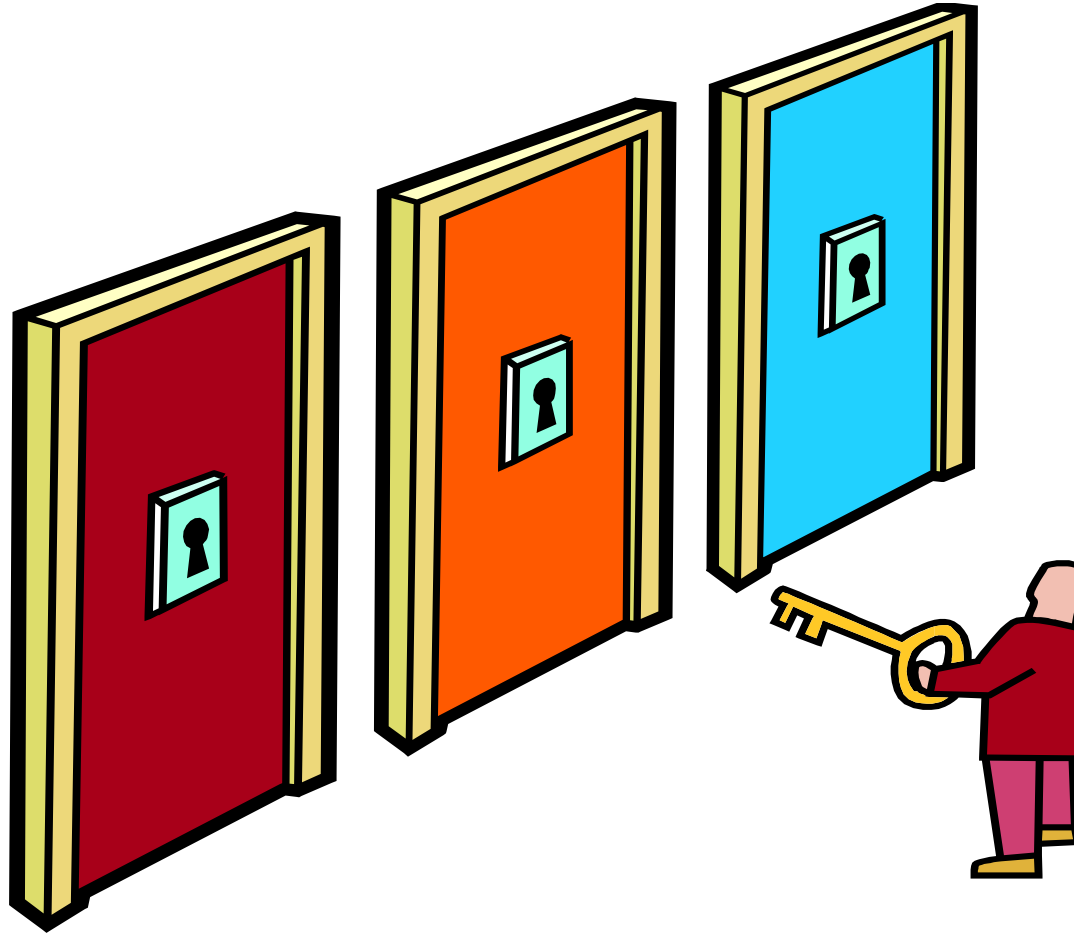
□ Money:

- Is a finite variable known to the world as a BUDGET
- It is a variable in constant competition with competing requirements
- FACT: States cannot afford to replace people and hardware every 4 years

- ❑ Frequent and numerous tax rule, rate, and form changes
- ❑ Manual and complex processing
- ❑ Complex audit process
- ❑ Filer confusion, errors, and fraud
- ❑ Revenue risk
- ❑ Compliance with existing state IT structures and procedures



Government Options for Tax Filing



Government Options for Tax Filing

- In-House, internally developed solution



DESIGN ISSUES



MAINTENANCE ISSUES



FLEXIBILITY ISSUES

□ Benefits

- ▣ Meets the unique processes and requirements of the State

□ Disadvantages

- ▣ High opportunity costs due to long build & implementation timeline
- ▣ Lack of best practice support
- ▣ Advanced features such as fraud detection never realized
- ▣ Competing demand for internal IT resources DOR, DOT, EPA, etc.

Government Options for Tax Filing

- General Tax Solution (one size fits all)



SOFTWARE DEMO



PRODUCTION REALITY

□ Advantages

- One-stop shopping for all tax solutions
 - Income tax, sales and use, excise, franchise
- Tax focused design enables the use of best practices crossing tax types
- Smaller footprint than a total ERP System enables vendor to keep pace with technology changes
- One support line to call

□ Disadvantages

- Unique requirements for each tax type prevent robust solution (largest revenue driver gets the development dollars)
- Increased customization do to degrees of variance between tax types with in the same state, and state to state requirements
- Competing demand for limited vendor IT resources (roadmap functionality, release schedules)

Government Options for Tax Software

- Best of Breed Purpose-Built Solution
(Motor Fuels, Sales and Use, Income, Property, Franchise, Etc.)



HEAVY LIFTING



QUICK & AGILE



STRAIGHT SPEED

- IE: Tax solution built specifically to process motor fuels excise taxes
 - ▣ Advantages
 - Best practices built into solution
 - More standardization less custom build
 - Software investment focused on advanced features that drive greater efficiencies
 - Architects and Developers have better understanding of requirements
 - Smaller footprint allows vendor to keep pace with technology changes
 - ▣ Disadvantages
 - Limited use for other tax areas
 - Maintaining interfaces and master data with SOR

- Technology is turning over every 2 years
- The quantity of hardware to run systems
- Retaining trained talent to support hardware is becoming more difficult
- Filer systems will be across a greater range of interfacing systems and speeds (Antique to Bleeding Edge)
- Let's face it: States were not in line to get the latest iPhone for its employees on the launch date
- What ever the state currently owns is what you will have to work with



- State purchases and owns servers and software
 - Advantages
 - Security issues easier to manage, all data inside state controlled firewalls
 - Lower total cost of ownership over several years usage
 - Tighter controls over SLA
 - Disadvantages
 - Once purchased all options limited from that point
 - Restricts IT flexibility and functionality options
 - Run the risk of losing talent as technology changes, but states retain older systems

- **Outsource Hosting (State owns software but not hardware)**
 - **Advantages**
 - States can better budget hosting cost with fixed contracts
 - Vendor keeps hardware up to the latest technology standards
 - Easy to expand and shrink server requirements
 - Some software companies will sell a license for software to the state and also offer hosting of same software
 - **Disadvantages**
 - State data is outside the states controlled firewall.
(False perception on which is most secure)
 - Security technology and challenges are changing just as fast, and the private sector is staffed to keep up with the changes
 - State under SLA „s with vendor

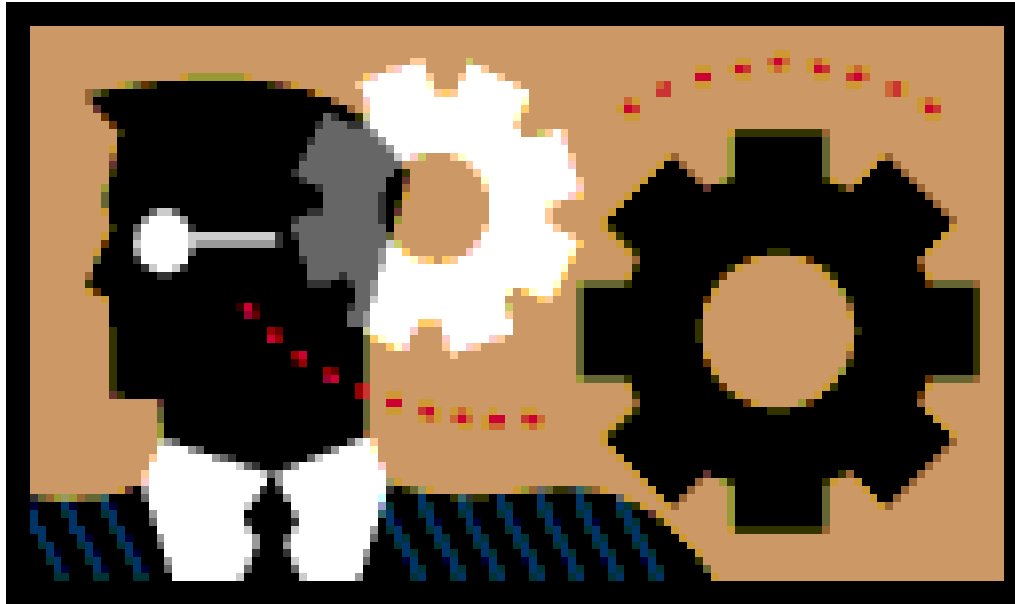
Government Options for Hardware

- SaaS Model (State rents servers / software by the month)
 - Advantages
 - States can better budget total cost of ownership
 - Vendor keeps hardware and software up to the latest technology and release standards
 - Easy to expand and shrink footprints
 - States can switch options at the end of the contract period or 90 day notice
 - States spread cost over time (No license cost up front)
 - Disadvantages
 - State data is outside the states controlled firewall.
(False perception on which is most secure)
 - Security technology and challenges are changing just as fast, and the private sector is staffed to keep up with the changes
 - State under SLA „s with vendor
 - Integration, training, SLA remediation, culture shock

Summary

Government Options	Custom Build by internal staff	ERP Solution 1 Size Fits All	Best of Breed
Own and operate software and data center	Slow to make software and data center changes	Software changes come at a faster pace and fall on vendor's shoulders. data center issues remain slow to change	Smaller footprint allows software vendor to remain focused on tech, changes. states have to deal internally with more interfaces
Own software outsource data center	Reduces data center upkeep, but does not eliminate the software upkeep, software can hold data center back	Reduces data center and software upkeep	Reduces Data Center and software upkeep
SaaS Model (rent a hosted software package)	NA	Optimizes data center and software upkeep Spreads cost evenly month to month	Optimizes data center and software upkeep Spreads cost evenly month to month

- We are living in exponential times
- States are bound by time and money
- Resources are going to become more scarce and expensive
- States can push keeping up with the rate of technology changes onto vendors and focus on managing the process
- Software options
 - In House Build
 - ERP System
 - Best of Breed
- Hardware options
 - Own and Operate
 - Outsource Hosting Own Software
 - SaaS





Thank You

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