Evaluating Cloud Based Software Offerings

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Evaluating Cloud Based Software Offerings
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AGENDA

- Introduction & Background
- Everything old is new again
- What is the cloud and what are the advantages
  & What are the risks?
- What makes land records unique?
- Internal Considerations
- Legal Considerations
- Vendor Related Considerations
- Cautionary Tale
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Introduction & Background

Cloud Computing
The set of disciplines, technologies, and business models used to render IT capabilities as an on-demand, scalable, elastic service

>> Joe Martin, Gartner
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- Cloud Datacenters exist SOMEWHERE!
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- Some Terminology
  - IaaS - Infrastructure as a Service
  - PaaS – Platform as a Service
  - **SaaS – Software as a Service**
  - *Hosted Solutions*
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- Infrastructure as a Service - IaaS
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- Platform as a Service - PaaS
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- SaaS – Software as a Service
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- Hosted Solutions – What’s different from SaaS?
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Pizza as a Service

Traditional On-Premises (On Prem)
- Dining Table
- Soda
- Electric / Gas
- Oven
- Fire
- Pizza Dough
- Tomato Sauce
- Toppings
- Cheese

Infrastructure as a Service (IaaS)
- Dining Table
- Soda
- Electric / Gas
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- Cheese

Platform as a Service (PaaS)
- Dining Table
- Soda
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- Fire
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- Cheese

Software as a Service (SaaS)
- Dining Table
- Soda
- Electric / Gas
- Oven
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- Cheese

Made at home
Take & Bake
Pizza Delivered
Dined Out

You Manage
Vendor Manages
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• Everything Old Is New Again
  ◦ 1960s to 1980s – Computer Service Bureaus OR Large Centralized IT organizations delivering “green screen applications”
  ◦ 1990s to 2000s – Adoption of localized computing environments, increase in vendor-provided, on-premise application solutions
  ◦ 2010s and Beyond – Vendor provided Cloud Based Solutions / Cloud Service Providers
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- So... If you’re not “lost” yet.....
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- We Already Use “the Cloud”
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• Weighing Risks v Benefits
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• Benefits
  ◦ Limiting Capital Budget Needs
  ◦ Eliminate Need for Server Management
  ◦ Eliminate Need for Upgrades of Operating System & Database Management Software at Server Level
  ◦ Reduced Reliance on County IT Staff
  ◦ Ability to Incorporate Disaster Recovery Needs
  ◦ Ability to Scale for Increasing Storage Needs & Increased User Count
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- Risks (continued)
  - Data Ownership
  - Experience of SaaS Provider
  - Qualifications of Provider’s Staff
  - Financial Stability of Provider – Bankruptcy?
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- Benefits
  - Limiting capital budget needs
  - Limiting need for IT support staff
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- Eliminate Need for Upgrades of:
  - Operating System
  - Database Management Software at Server-level
  - Server-level anti-virus software, anti malware software, hardware and software based firewalls
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- Ability to scale
  - Increased numbers of end-users of applications
  - Increased web access for end-users
  - Potential for increased storage capability to accommodate data growth over time
  - Potential for incorporation of disaster recovery (application and data)
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• Risks
  ◦ Accessibility
  ◦ Data Security
  ◦ Data Location
  ◦ Data Segregation
  ◦ Data Integrity
  ◦ Inability to Manage Life Cycle of Information
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- Accessibility
  - Access at your office / Access for your clients or customers
  - Potential for down-time? Internet disruptions / Denial of service attacks
  - Potential for reduced responsiveness (slow response times)
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• Risks
  ◦ Security
    • Physical Security
    • Data Security
    • Internet Security
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- A Few Words About Security
  - SSAE 16 (fka SAS 70)
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• Risks
  ◦ Data Security
    • Access Security
    • Firewalls
    • Intrusion Detection
    • Anti-Virus, Anti-Malware, etc. Protection
    • Operating System patches
    • Database and Application security
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- What is SSAE-16?
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- Inability to Manage Information Life-Cycle
  - Retention management –
    - Storage for how long?
    - Ability manage disposition of records?
    - Ability to manage / document disposition of records?
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• Can the risks be mitigated? – Yes
• Can the benefits be realized? – Yes!
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• What Makes Records Management Aspects Unique?
  o On-premise ECM Solutions often support policy-compliant records disposition processes
    – “Storing forever” or Highly limited storage timeframes
    – Inability to provide security regarding records disposition
  o Application-specific cloud based solutions may NOT support any particular disposition processes
    – Inability to document disposition of electronic records
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- Organizational Considerations
  - Internet Bandwidth of office(s)
  - Bandwidth Costs
  - Reliability of Existing Internet Service Provider (ISP)
  - Tolerance for Internet Outages
  - Growth of Storage Over Time
  - Management of Retention and Disposition
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- Vendor Considerations
  - Financial health of vendor & subcontractors
  - Vendor level of experience with cloud-based application
  - Vendor “ownership” of cloud site or ability to manage/direct subcontractor
  - Vendor experience – How many years? Number of clients? Prior data breaches?
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- Vendor Considerations – Part II
  - Vendor monitoring of cloud site – 24 X 7?
  - Vendor fail-over capabilities (what happens when primary site is down?)
  - Hosting location / locations
  - Vendor testing processes for backup and recovery
  - Vendor policies for refresh of hardware, operating systems, etc.
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- Legal Considerations
  - Contract Needs and Requirements
  - Where is the cloud?
  - Who owns the cloud? – Vendor? Subcontractor?
  - What is included in the cloud based solution for security?
  - Data Use and Ownership by County
  - Uptime Requirements
  - Vendor’s Disaster Recovery capabilities
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- Legal Considerations – Part 2
  - Potential Security Issues
  - Management of Authorized Users
  - End of contract terms
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- What’s Happening on the Vendor Side of the Cloud?
  - Hundreds of cloud vendors today
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- A Cautionary Tale
  - Texas Education Agency – Bankruptcy of Cloud Provider
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- **To SaaS or NOT to Saas?**
  - Depends on organizational needs, policies
  - Benefits about as do risks
  - Plan for managing potential risks
  - Recommendation 1 – Do your homework
  - Recommendation 2 – Learn what you need to know
  - Recommendation 3 – Ask questions and evaluate which alternative is best?
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