

Legislative IT:
House Committees on Government
Operations & on Corrections &
Institutions

February 9, 2016

Room 11

Today's Discussion

- “Road map” for presentation
 - ✓ Review 9 reports
 - ✓ Summarize “high level” lessons
 - ✓ Focus on lessons from specific subject areas
 - ✓ For each area: Summarize relevant lesson & discuss how applies to legislative IT
 - ✓ End with 3 case studies to pull threads together
 - ✓ Thoughts for future
 - ✓ Questions and discussion

Reviews & Reports: Executive Branch IT

- Vermont Health Connect
 - ✓ Optum: CGI contract (Aug. 2014)
 - ✓ Auditor: Future Improvement Contingent on Successful System Development Project (April 2015)
 - ✓ Auditor: Status of Planned Enhancements (Nov. 2015)
 - ✓ Grant Thornton: Compliance with federal regulations
- JFO briefing with national experts (Nov. 2015)
- Special Committee on Utilization of IT in Government (Nov. 2015 & Jan. 2016)
- JFO consultant review Exec. Branch IT (Jan. 2016)
- State CIO report (Jan. 2016)
- Million Dollar Tech. Project Report (Jan. 2016)

“High Level” Lessons Learned: Report of the Special Committee on Utilization of IT in Gov.

- IT “is a core component of government no longer peripheral”
- “Successful IT projects flow from successful process improvement”
- Effective project management
- Security & accelerate cloud based hosting
- Hire talented individuals and let them do their job

Lessons Learned: Key Areas From Reports

- 1) IT Governance & budgeting
- 2) Contracting
- 3) Project design: COTS v. customized
- 4) Project management
- 5) Security
- 6) Cloud
- 7) Challenge of retaining talent

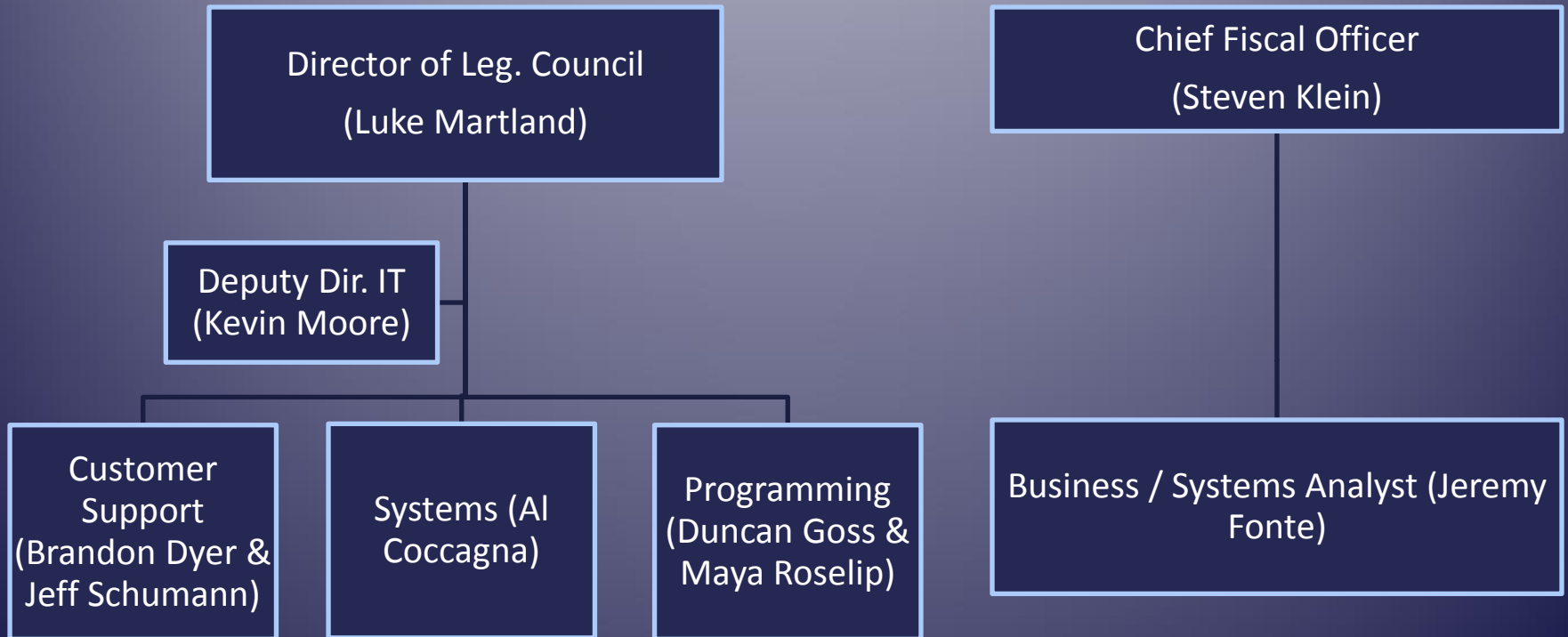
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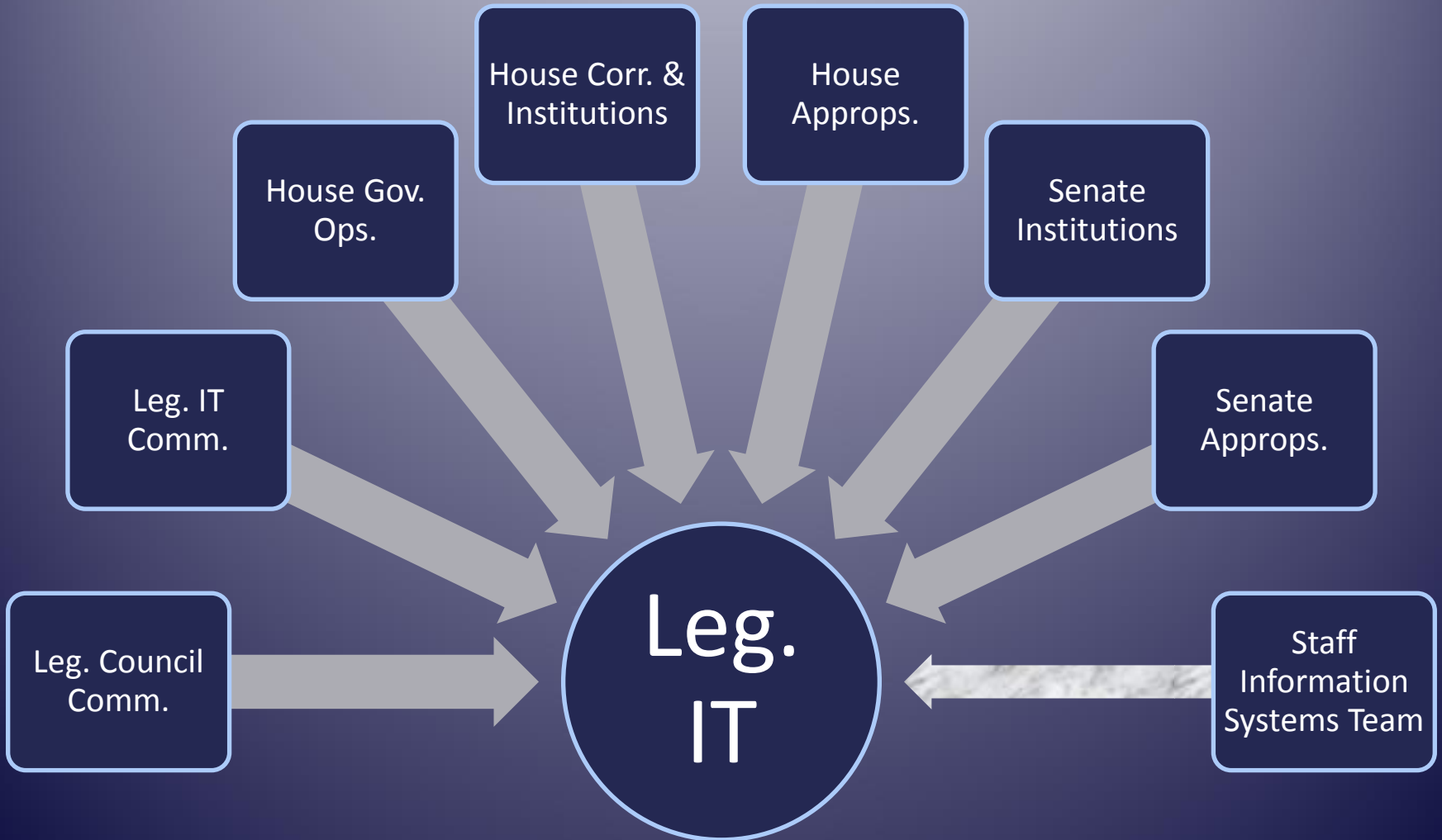
Lessons Learned: IT Governance

- State's IT governance was a “contributing factor” to VHC “shortcomings.” Multiple committees with ill-defined decision-making responsibilities (*Auditor, VHC Future Improvement, pp. 15-16*)
- Q: If every agency has its own “wants” and there are different “islands” of IT, is anyone overseeing all projects? A: No (*Dan Smith, Gov. Ops. 1/27/16*)

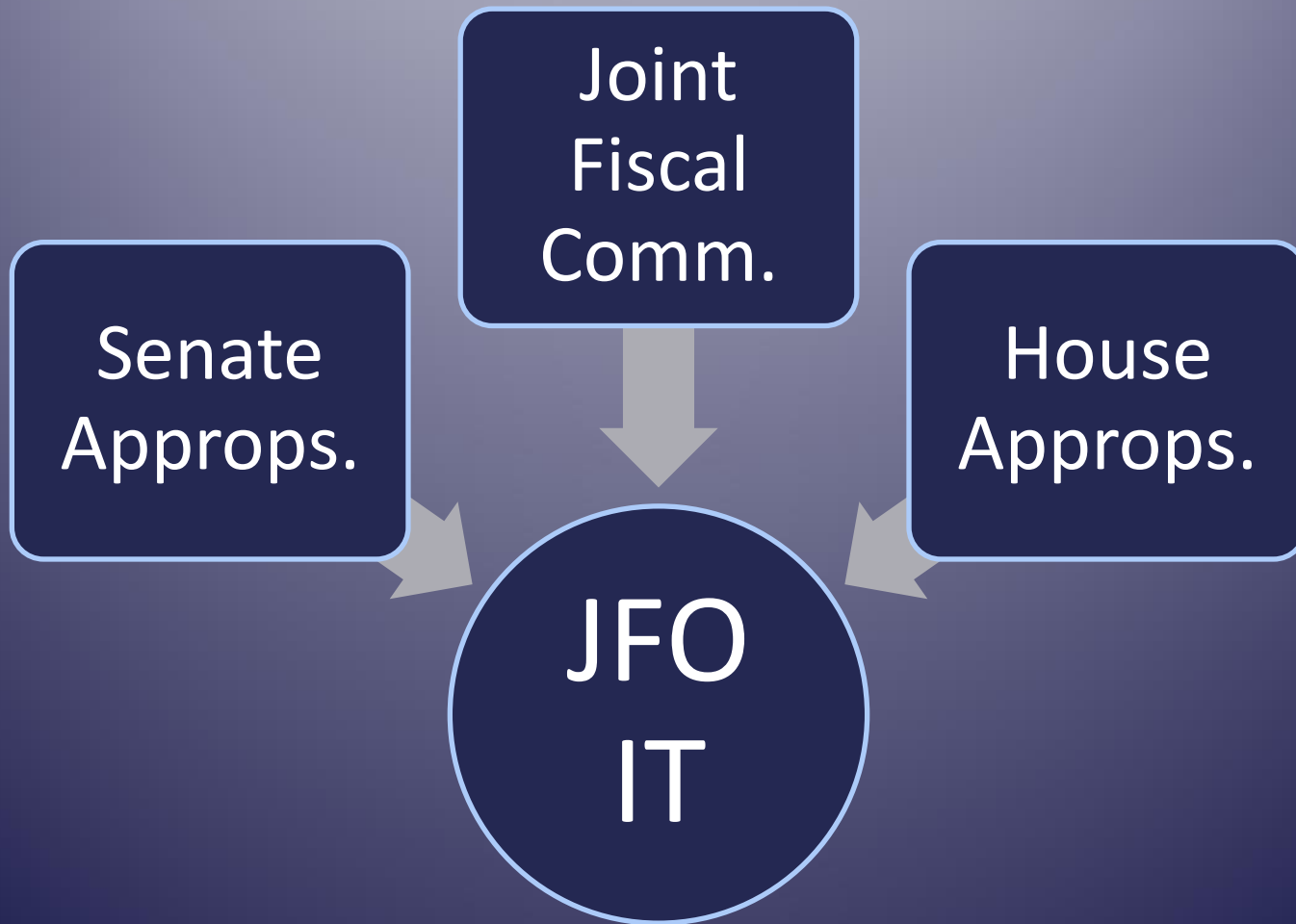
IT Within General Assembly



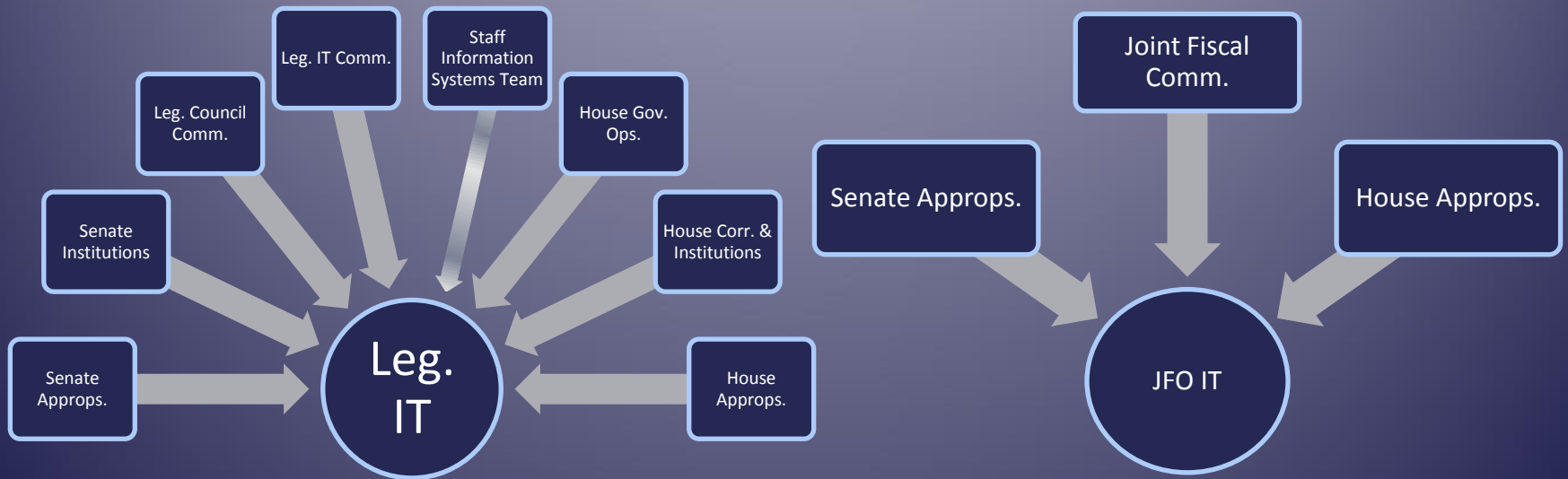
Oversight of Leg. Council IT



Oversight of JFO IT



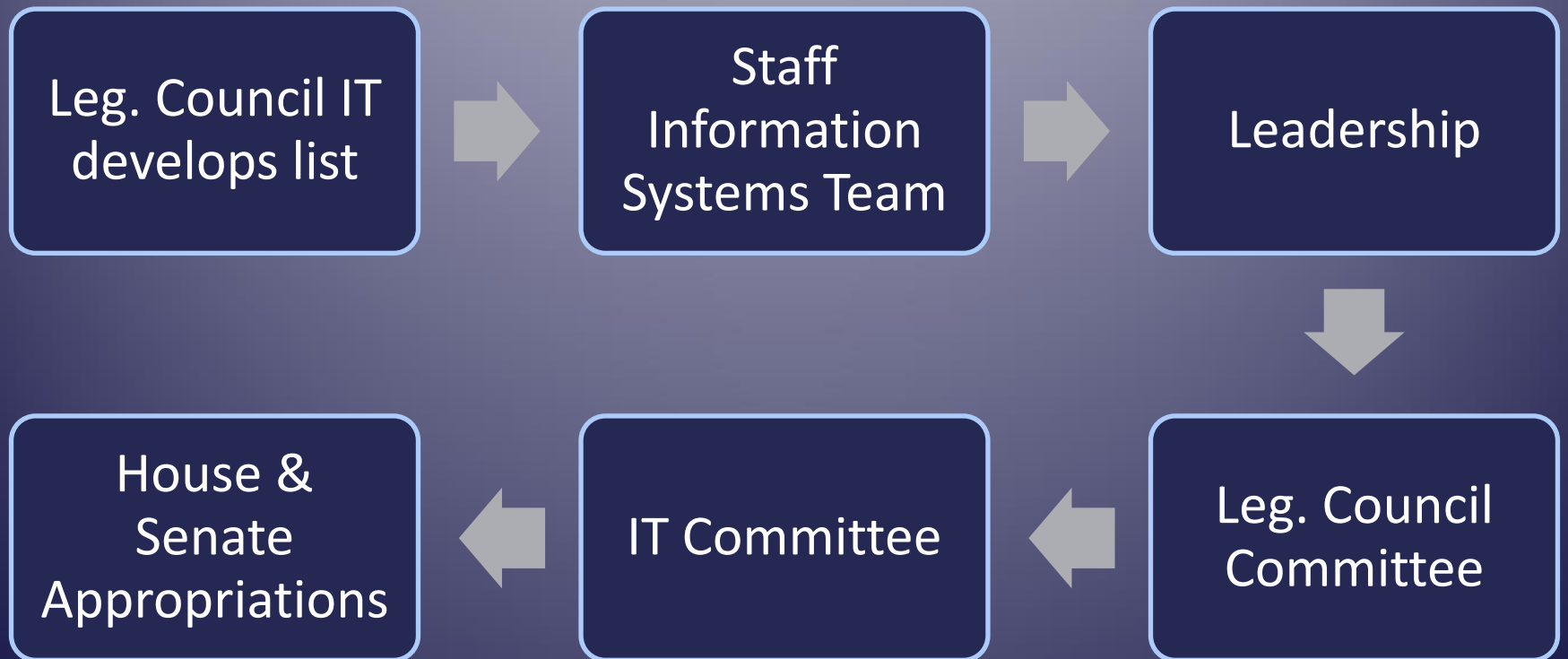
Legislative IT: Governance



Lessons Learned: IT Budgeting

- Best practices
 - ✓ Michigan has centralized IT budget and personnel
 - ✓ Washington emphasizes prioritization of IT requests (*Doug Robinson, Nat. Assoc. State CIO's, Nov. 2015*)
- Interaction: Centralization allows prioritization to carry out a project successfully

Leg. Council IT: Budget Approval Process



Leg. Council IT Budget

- Centralized
 - ✓ Project list for each FY
 - ✓ Supplies and other expenses
 - ✓ Salary & benefits
- Result: Prioritization & ability shift resources
 - ✓ Example: Website

Lessons Learned: Key Areas From Reports

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Lessons Learned: Contracting

- Failure execute contracts or amendments (*Auditor, VHC Status of Planned Enhancements, pp. 3, 23*)
- Penalties: VHC contract with Optum “does not contain provisions that allow the State to impose monetary consequences if Optum fails to provide timely and quality deliverables” (*Auditor, VHC Future Improvement, pp. 11, 44*)
- Lack competitive process: Sole source contracts accounted for 41% agency & department contracts (*Auditor, Sole Source Contracts, p. 3, Dec. 14, 2015*)
- Dan Smith (*House Gov. Ops.*)
 - ✓ Pay by hour v. lump sum
 - ✓ Incremental billing
 - ✓ Penalties

Leg. Council IT: Contracting

- RFPs and competitive process
- We use contracts negotiated by attorneys
- Bargaining
- Provisions
 - ✓ Lump sum (as opposed to pay by hour)
 - ✓ Incremental payments based on deliverables
 - ✓ Penalty clauses
- Results
 - ✓ Website

Lessons Learned: Key Areas From Reports

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Lessons Learned: Commercial Off the Shelf (COTS) v. Customized

- State has a tendency not to use COTS (*Tim Kenney, Special Committee*)
- “COTS is the ideal” (*Dan Smith, H. Gov. Ops.*)
 - ✓ Minimizes risk: Reliable/proven product
 - ✓ Cheaper
- COTS can do 85% of what you want, “to get other 15% spend a lot of money” (*Michael Schirling, Special Committee*)
 - ✓ Changing business practices to achieve COTS

Leg. Council IT: COTS

- We purchase COTS if available
 - ✓ MS Office Suite
 - ✓ Anti-Virus
 - ✓ Scanning
- If COTS not available, open source (website)
- Example of 85% v. 15%
 - ✓ Case study: Committee recordings

Lessons Learned: Key Areas From Reports

- 1) IT Governance & budgeting
- 2) Contracting
- 3) Project design: COTS v. customized
- 4) **Project management**
- 5) Security
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Lessons Learned: Project Management

- VHC project management was “insufficient or ineffective,” did not follow best practices, and State lacked project “ownership” (*Auditor, VHC Future Improvement, p. 15*)
- “Must get one person to say ‘I own this,’ there has to be one person on top of this whole thing” (*Dan Smith, H. Gov. Ops.*)
- Q: Is it true that the cause of most project failures is not technical but poor project management? A: Yes (*Michael Schirling, Special Committee*)

Best Practices: Project Management

- Define project
- Develop work plan
- Define how team will operate
- Manage (plan, budget, scope, risk)
- Monitor (deliverables, schedule)

(Techrepublic.com, Liquidplanner.com, Wrike.com)

Leg. Council IT: Project Management

- Weaknesses
 - ✓ Not certified project managers
- Strengths
 - ✓ Accurately gauge what we can accomplish
 - ✓ Prioritize and shift resources
 - ✓ Work as a team
 - ✓ Very clear decision-making process
 - ✓ Clearly defined ownership
 - ✓ Manage & monitor effectively
- Results

Success Rate – Projects 2012

<u>Project</u>	<u>Vendor or Staff</u>	<u>Success or Failure</u>	<u>On Budget</u>	<u>On Time</u>	<u>Notes:</u>
Implemented WhatsUpGold network monitor	Vendor/Staff	Failure	Yes	No	Marty left during project.
Reapportionment	Staff	Success	Yes	Yes	
Office 2010 Upgrade	Staff	Success	Yes	Yes	
DM Upgrade	Staff	Success	Yes	Yes	
xmLegislator modifications for Office 2010	Vendor	Success	No	Yes	Overbudget ~\$15-18K?
Replaced Trend Micro Office Scan with Trend Micro Deep Security.	Vendor	Success	Yes	Yes	
Modify DM for passive integration; compatibility with xmLegislator	Vendor	Success	Yes	Yes	
Created 40s Wiring closet	Vendor	Success	Yes	Yes	
30s renovations – install whiteboards and projectors in all rooms	Vendor	Success	Yes	Yes	
Moved large wall monitor from Room 33 to Ethan Allen Room	Vendor	Success	Yes	Yes	
Expand iPads to House Appropriations, Health Care, Judiciary, & Ways and Means	Staff	Success	Yes	Yes	
Change administrative passwords and security requirements	Staff	Success	Yes	Yes	
Implement master password list	Staff	Success	Yes	Yes	
Committee web pages (SharePoint) for Health Care	Staff	Success	Yes	Yes	
House sound system upgrade.	Vendor	Success	Yes	Yes	
Workstation and printer replacements	Staff	Success	Yes	Yes	
Re-purpose VDI VMWare hosts to production server cluster	Staff	Success	Yes	Yes	
Replaced HP WiFi hardware with Ruckas	Vendor	Success	Yes	Yes	
Replaced server room racks, wiring management	Vendor	Success	Yes	Yes	
Permanent projection screens and infrastructure in House chamber	Vendor	Success	Yes	Yes	
Installed additional Ethernet cables to satellite switch locations	Vendor	Success	Yes	Yes	
Number of Projects	% Staff Only	% Successful	% On Budget	% On Time	
21	42.86%	95%	95%	95%	

Success Rate – Projects 2013

Project	Vendor or Staff	Success or Failure	On Budget	On Time	Notes:
Security audit	Vendor	Success	Yes	Yes	
Replace main SAN (storage device)	Staff	Success	Yes	Yes	
Implement real-time replication using old SAN in Senate vault, relocated AD server to Senate vault	Staff	Success	Yes	Yes	
Implemented rolling switch replacement	Staff	Success	Yes	Yes	
Upgrade SQL server and implement failover cluster	Vendor	Success	Yes	Yes	
Upgrade VMWare to current revs	Vendor	Success	Yes	Yes	
Migrate GroupWise users to Exchange 365	Vendor	Success	Yes	Yes	Under budget - ~\$30K
Migrate all old GroupWise archives to Exchange 365	Vendor	Success	Yes	Yes	
Installed 5 servers in support of Exchange 365	Staff	Success	Yes	Yes	
Replace copy room copiers	Staff	Success	Yes	Yes	
40s renovations – install whiteboards and projectors in all rooms	Vendor	Success	Yes	Yes	
Expand iPad project – all House committees, most of Senate	Staff	Success	Yes	Yes	
Add additional VMWare host for production servers	Vendor	Success	Yes	Yes	
Rebuilt vCenter management server	Vendor	Success	Yes	Yes	
Split xmLegislator database by session to restore performance	Vendor	Success	Yes	Yes	
Implemented Committee web pages	Staff	Success	Yes	Yes	
xmLegislator updates (per user requests)	Vendor	Success	Yes	Yes	
Upgraded Senate office connectivity	Staff	Success	Yes	Yes	
Upgraded Senate office workstations	Staff	Success	Yes	Yes	
Replaced scanning infrastructure	Staff	Success	Yes	Yes	
Moved large wall monitor from Room 41 to Room 10.	Vendor	Success	Yes	Yes	
Replaced Room 41 monitor with smaller monitor (small room)	Vendor	Success	Yes	Yes	
Completed replacement of HP WiFi hardware with Ruckas	Vendor	Success	Yes	Yes	
Undertook discovery searches of email for public records requests	Staff	Success	Yes	Yes	
Installed cabinet for laptop library with power and connectivity	Staff	Success	Yes	Yes	
Developed single image for all workstations and laptops	Staff	Success	Yes	Yes	
Installed KMS licensing server	Staff	Success	Yes	Yes	
Replaced WiFi print server	Staff	Success	Yes	Yes	
Migrated main file server to Server 2008	Staff	Success	Yes	Yes	
Installed new JFO database server	Staff	Success	Yes	Yes	
Implemented VEEAM backup	Staff/Vendor	Success	Yes	Yes	
Upgraded PA system in Room 11; installed PA system in Room 10	Vendor	Success	Yes	Yes	
Workstation and printer replacements	Staff	Success	Yes	Yes	
Number of Projects	% Staff Only	% Successful	% On Budget	% On Time	
	33	54.55%	100%	100%	100%

Success Rate – Projects 2014

Project	Vendor or Staff	Success or Failure	On Budget	On Time	Notes:
Website project	Vendor	Success	Yes	Yes	
Implemented new virtual servers for web project	Staff	Success	Yes	Yes	
Replaced main firewall	Staff/Vendor	Success	Yes	Yes	
DM upgrades	Staff/Vendor	Success	Yes	Yes	
Committee room digital recording pilot	Staff	Success	Yes	Yes	
Installed Audio Repository server	Staff	Success	Yes	Yes	
xmLegislator updates (per user requests)	Vendor	Success	Yes	Yes	
Experimental modification to xmLegislator Agenda module (de-Word)	Vendor	Success	Yes	Yes	
Replaced SCCM server	Staff	Success	Yes	Yes	
Updated VMWare and SQL to current release levels	Staff	Success	Yes	Yes	
Updated Trend Micro antivirus system	Vendor	Success	Yes	Yes	
Continued rolling switch replacement	Staff	Success	Yes	Yes	
Installed network attached storage for backups	Staff	Success	Yes	Yes	
Migrated and updated Veeam backup	Staff	Success	Yes	Yes	
Replace workstations and printers	Staff	Success	Yes	Yes	
Installed projectors and whiteboards in last two House committees	Vendor	Success	Yes	Yes	
Installed speakerphones in all Senate committee rooms	Vendor	Success	Yes	Yes	
Investigated possible replacements for DM	Staff	Success	Yes	Yes	
Implemented Cisco Meraki Mobile Device Management system	Staff	Success	Yes	Yes	
PowerShell, Security, ICND training for IT staff	Staff	Success	Yes	Yes	
Replaced WebDAV server with FTP application (iPads)	Staff	Success	Yes	Yes	
Number of Projects	% Staff Only	% Successful	% On Budget	% On Time	
21	61.90%	100%	100%	100%	

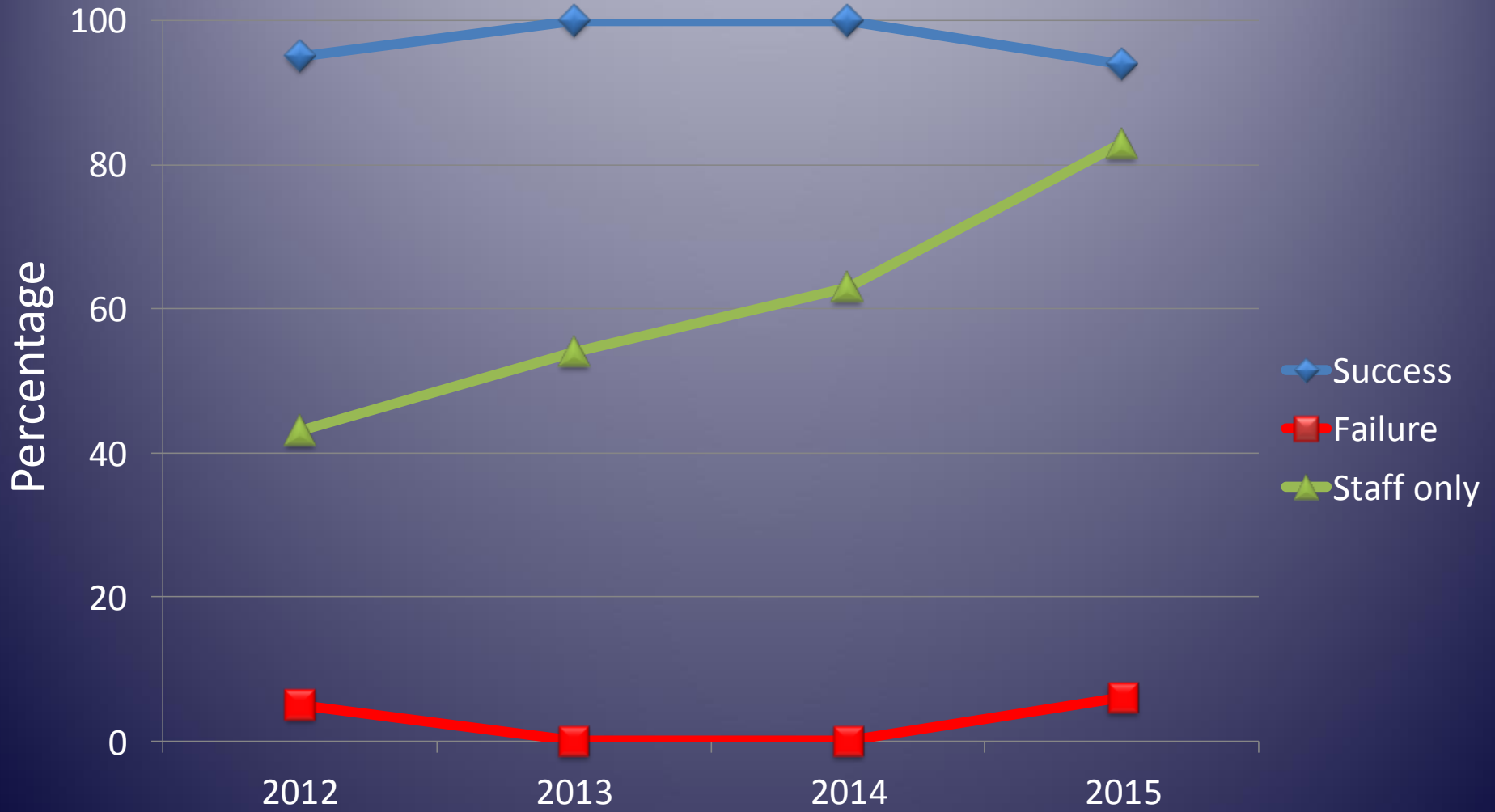
Success Rate – Projects 2015

<u>Project</u>	<u>Vendor or Staff</u>	<u>Success or Failure</u>	<u>On Budget</u>	<u>On Time</u>	<u>Notes:</u>
Council & House office wiring	Staff	Success	Yes	No	Peck Data PM was inconsistant
Add additional VMware Host	Staff	Success	Yes	Yes	
Upgrade to current VMware revisions	Staff	Success	Yes	Yes	
Continued rolling switch replacement	Staff	Success	Yes	Yes	
Implement PRTG Network Monitoring Suite	Staff	Success	Yes	Yes	
Locate Monitoring Suite Off-site	Staff	Success	Yes	Yes	
Replace tape library	Staff	Success	Yes	Yes	
Replace backup server	Staff	Success	Yes	Yes	
Route WiFi through Firewall	Staff/Vendor	Success	Yes	Yes	
Workstation and printer replacements	Staff	Success	Yes	Yes	
Replace Copiers in House, Senate, LC Back Office, 1Baldwin 2nd and 3rd floor	Staff	Success	Yes	Yes	
Reconfigure email authentication	Staff	Success	Yes	Yes	
Mobile Device Evaluation Project	Staff	Success	Yes	Yes	
Digital Recording	Staff	Success	Yes	Yes	
Renew Microsoft Enterprise Agreement	Staff	Success	Yes	Yes	
De-Word IRC xmLegislator	Vendor	Failure	No	No	
Website updates/upgrades	Staff	Success	Yes	Yes	
Full text search - Calendars and Journals	Vendor	Success	Yes	Yes	
Number of Projects	% Staff Only	% Successful	% On Budget	% On Time	
	18	83.33%	94%	94%	89%

Overall Success Rate 2012 - 2015

- 93 projects over 4 years
 - ✓ 90 on time = 96.7% on time rate
 - ✓ 91 on budget = 97.8% on budget rate
 - ✓ Only 2 projects were complete failures, overall 97% success rate
 - ✓ “Staff only” rate increased from 40% to 80%

Project Success Rate 2012-15



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Lessons Learned: Security

- A security audit is the “best and only way” to ensure an organization’s systems and data are secure (*ITSecurity.com*)
- 2013 security audit of VHC found “noncompliance in about 65 percent” of controls evaluated (*Auditor, VHC Future Improvement p. 20*)
- Special Committee & CIO report

Leg. Council IT: Security

- Security review summer 2013, report Nov. 2013
 - ✓ Upgrade firewall
 - ✓ Change firewall security policies
 - ✓ Automated server update procedures
 - ✓ Remove vulnerabilities

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Lessons Learned: Cloud

- Movement toward cloud (*Doug Robinson, National Assoc. of State CIO's, Nov. 2015, & Special Committee*)
- Advantages
 - ✓ Flexible
 - ✓ Better security
 - ✓ Lower cost
 - ✓ Transition from direct provider of services to broker of services to customers

Leg. Council IT: Cloud

- Transitioning from direct provider to broker
 - ✓ MS Office 365 (e-mail)
 - ✓ Cisco Meraki MDM
 - ✓ Citrix GoTo Suite

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Lessons Learned: Attracting & Retaining Talent

- Challenges retaining talent (*Doug Robinson, Nat. Assoc. State CIO's, Nov. 2015*)
- Ensure IT is staffed as well and paid as well as DCF and State Police (*Michael Schirling, Special Committee*)

Leg. Council IT: Attracting & Retaining Talent

- Summer 2015, 40% turnover
 - ✓ Competing with private sector
 - ✓ Vicious cycle & continuing turn over
 - ✓ Talent is portable & State follows an out-of-date model

Case study # 1: Website (2014)

- RFP
- Contract
 - ✓ Lump sum, not hourly
 - ✓ Incremental billing
 - ✓ Penalties / large final payment
- Project management
- Open source
 - ✓ Reduction overall cost
- Importance of centralized budget

Case study # 1: Website (2014)

Overall Status:



1. **Project Justification:** *(Why are we doing this? Is the project necessary and beneficial?)*



2. **Clarity of Purpose:** *(Is there a clear definition of success? Is the scope statement complete?)*



3. **Organizational Support:** *(Is the organization ready to undertake this project? Has the potential need for business process change been acknowledged, and is there a Change Management Plan?)*



4. **Project Leadership:** *(Has a qualified person been designated to lead the project, and has that person been empowered to do so?)*



5. **Project Management:** *(Is the project management staff appropriate?)*



6. **Financial Considerations:** *(How much will it cost to complete the project, how much will it cost to maintain and operate the system, and how it will all be paid for?)*



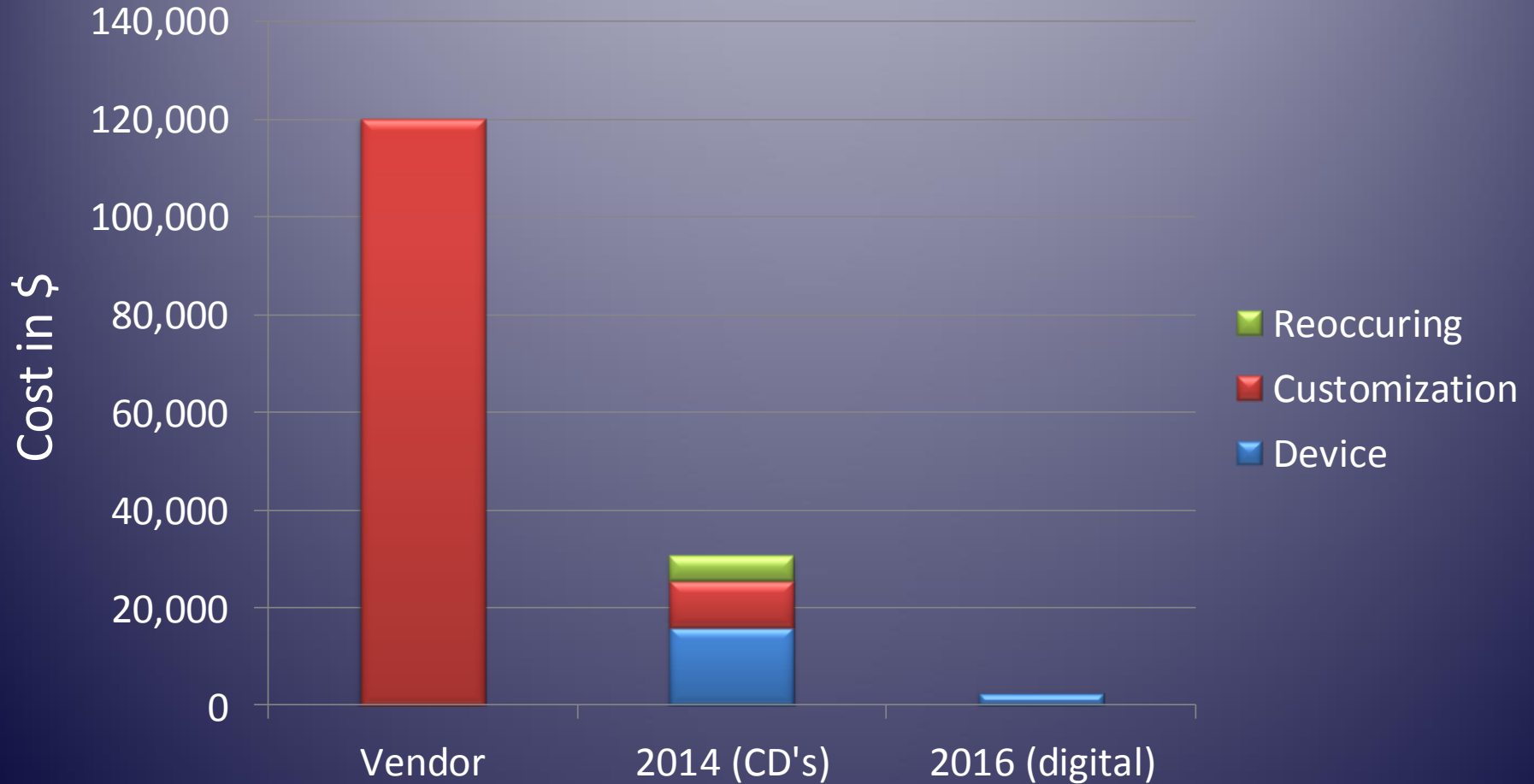
7. **Technical Approach:** *(Is the proposed solution achievable, realistic, and appropriate?)*



Case Study # 2: Committee Recording (2015-16)

- CDs
 - ✓ Cost per unit (32 units): \$500
 - ✓ Modifications per unit: \$300
 - ✓ Recurring costs (CDs and maintenance): \$110
- Custom full-service product
 - ✓ 2 quotes of \$100,000 - \$120,000
 - ✓ Locked into that vendor & product
- Digital recorders (COTS)
 - ✓ Cost per unit: \$95
 - ✓ Modifications & recurring costs: \$0

COTS: Committee Recordings



Framework for Analyzing Individual Projects

Overall Status:



1. Project Justification: *(Why are we doing this? Is the project necessary and beneficial?)*



2. Clarity of Purpose: *(Is there a clear definition of success? Is the scope statement complete?)*



3. Organizational Support: *(Is the organization ready to undertake this project? Has the potential need for business process change been acknowledged, and is there a Change Management Plan?)*



4. Project Leadership: *(Has a qualified person been designated to lead the project, and has that person been empowered to do so?)*



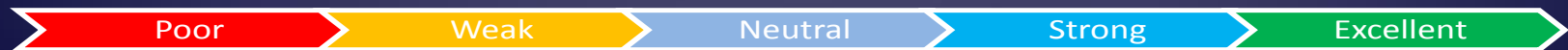
5. Project Management: *(Is the project management staff appropriate?)*



6. Financial Considerations: *(How much will it cost to complete the project, how much will it cost to maintain and operate the system, and how it will all be paid for?)*



7. Technical Approach: *(Is the proposed solution achievable, realistic, and appropriate?)*



Case Study #3: IRC “Decoupling” Contract (2015-16)

- Update on “decoupling” contract
- Project governance & management
- Contracting process
 - ✓ Lump sum payment upon completion & penalties
- Customization v. COTS
 - ✓ Can we change work flow?

Framework for Analyzing Individual Projects

Overall Status:



1. Project Justification: *(Why are we doing this? Is the project necessary and beneficial?)*



2. Clarity of Purpose: *(Is there a clear definition of success? Is the scope statement complete?)*



3. Organizational Support: *(Is the organization ready to undertake this project? Has the potential need for business process change been acknowledged, and is there a Change Management Plan?)*



4. Project Leadership: *(Has a qualified person been designated to lead the project, and has that person been empowered to do so?)*



5. Project Management: *(Is the project management staff appropriate?)*



6. Financial Considerations: *(How much will it cost to complete the project, how much will it cost to maintain and operate the system, and how it will all be paid for?)*



7. Technical Approach: *(Is the proposed solution achievable, realistic, and appropriate?)*



Future: Questions to Consider

- Are we making decisions as if 2011 or 2016?
- Do we do what we tell others to do?
- Are we undermining our own success?
- Will we choose to retain our talent?
- Use your talent

References

- Auditor, *Vermont Health Connect, Future Improvement Contingent on Successful System Development Project*, April 14, 2015
- Auditor, *Vermont Health Connect, Status of Planned Enhancements*, November, 18, 2015
- National Association of State CIO's *State Information Technology and the Forces of Change*, Nov. 2015
- Techrepublic.com, blog "10 Best Practices for Successful Project Management); Liquidplanner, blog "Best Practices for IT Project Managers"; Wrike.com, blog "Project Management Best Practices"

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