



State of Nevada IT Benchmark Results

Redacted Version

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Project Background



State of Nevada's objectives in completing the benchmark

- Establish a baseline of State of Nevada's General and Administrative (G&A) organizations
 - Identify staff mix and resource allocation
 - Identify key cost drivers
- Analyze State of Nevada's G&A functions
 - Gain insight to how leading functions are organized and staffed
 - Identify ways to better leverage technology solutions
 - Identify performance gaps in best practice usage as compared to our database
- Provide a balanced, qualitative perspective through Executive Interviews and comprehensive Stakeholder Surveys
- Develop improvement recommendations

Hackett IT process scope

Process Category	Design	Build	Run	Manage
Process Group	<ul style="list-style-type: none"> ▪ IT Business Planning <ul style="list-style-type: none"> – Alignment – Project Prioritization – Communication ▪ Enterprise Architecture Planning <ul style="list-style-type: none"> – Governance – Standards Management ▪ Emerging Technologies <ul style="list-style-type: none"> – Technology Evaluation 	<ul style="list-style-type: none"> ▪ Infrastructure Development <ul style="list-style-type: none"> – Planning – Construct – Implement ▪ Application Development and Implementation <ul style="list-style-type: none"> – Planning – Construct – Implement ▪ Quality Assurance <ul style="list-style-type: none"> – Change Management 	<ul style="list-style-type: none"> ▪ Infrastructure Management <ul style="list-style-type: none"> – Operations Management – Security Management – Disaster Recovery Planning ▪ End User Support <ul style="list-style-type: none"> – Help Desk – End User Training ▪ Application Maintenance <ul style="list-style-type: none"> – Application Support – Enhancement Delivery – Upgrade Execution ▪ Risk Management <ul style="list-style-type: none"> – Audit and Compliance 	<ul style="list-style-type: none"> ▪ Function Management <ul style="list-style-type: none"> – Function Oversight – Personnel Management – Policy and procedures oversight
Process				

As the intent of the benchmark is to provide a consistent methodology for collecting data and comparing results, FTEs and Costs to support unique, large scale, focused technology / applications that are not common from organization to organization must be excluded.

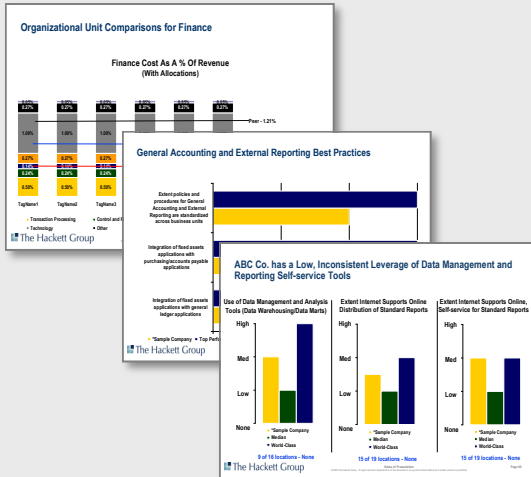
Departments/Agencies Within Scope

In-Scope Agencies (Finance, HR, IT, Procurement)		
Department of Administration	Department of Employment, Training & Rehabilitation (DETR)	Department of Public Safety
• Administrative Services	Department of Health & Human Services (DHHS)	• Highway Patrol
• Buildings and Grounds	• Welfare and Support Services	• Parole and Probation
• Public Works Board	• Aging and Disability Services Division	• General Services Division
• Purchasing	• Division of Child and Family Services (DCFS)	• Investigations Division
• Human Resource Management	• Health Division	• State Fire Marshall Division
• Enterprise IT Services	• Division of Health Care Financing and Policy	• Capitol Police Division
• Budget Division	• Mental Health and Developmental Services	• Training
State Department of Agriculture	Department of Motor Vehicles (DMV)	• Office of Traffic Safety
Department of Business & Industry (B&I)	State Gaming Control Board	• Division of Emergency Management/Homeland Security
Department of Conservation & Natural Resources	The Nevada Judiciary	Department of Taxation
Department of Corrections	Nevada Department of Transportation (NDOT)	Office of the State Treasurer

There are three key inputs to the benchmark project

Benchmark Results

Benchmark Questionnaire

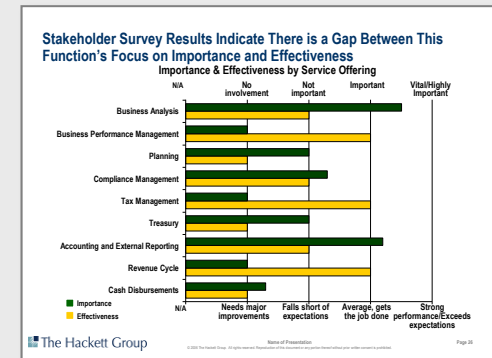


- Completed by IT staff
- 13 in-scope departments

Executive Interviews

- Gather management's perspective on:
 - Overall functional efficiency and effectiveness
 - The strategic connection between IT and specific business objectives
 - How recent, related initiatives affect business objectives
 - Opportunities for further improvement concerning IT
 - Expectations from the benchmark process

Stakeholder Survey



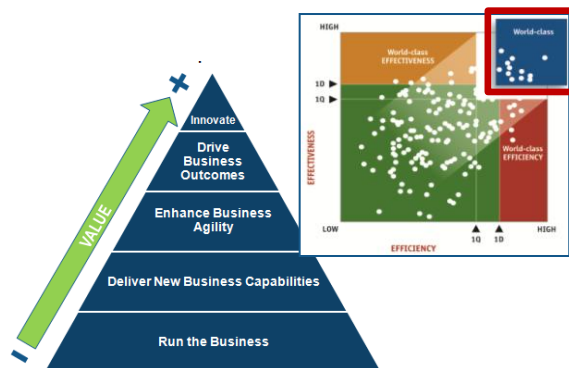
- Web-based survey sent to 152 IT stakeholders
- Responses received from 76 IT stakeholders (50%)

Benchmark results should be evaluated through the of the specific requirements of State of Nevada's operating parameters

What this benchmark is . . .	What this benchmark is not . . .
A starting point	... the end answer
An assessment of where efforts should be focused	...a detailed analysis of how to redesign processes
Best practice comparisons	...a competitive analysis
Process based comparison	...an exact match to organizational departments
One input to setting targets	...the only input
A broad look at the IT function	...going to cover all aspects of organization operations

Hackett's IT Benchmark

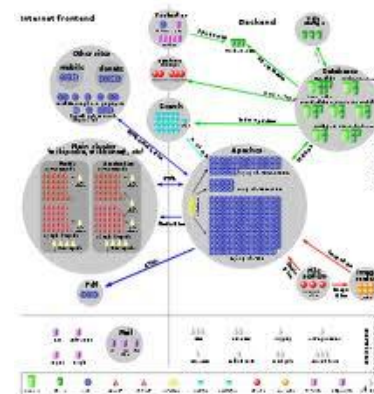
Focuses on the value of IT from a business perspective



VS.

Other IT Benchmarks

Focus on the mechanics of IT from an internal IT perspective

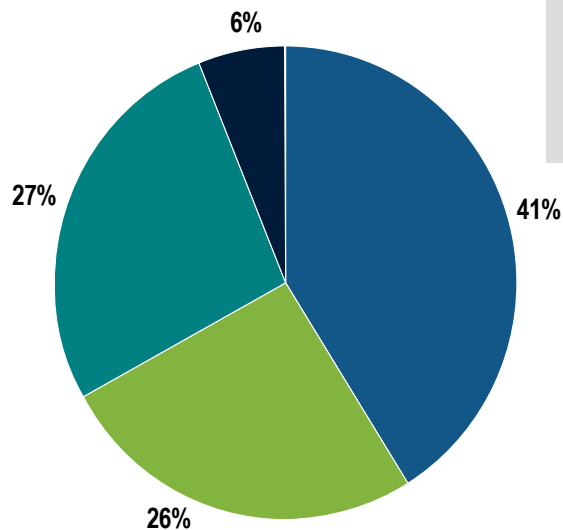


State of Nevada IT Function Baseline



State of Nevada's baseline IT cost is \$144.9 million with 694.3 FTEs supporting IT

\$144.9 Million



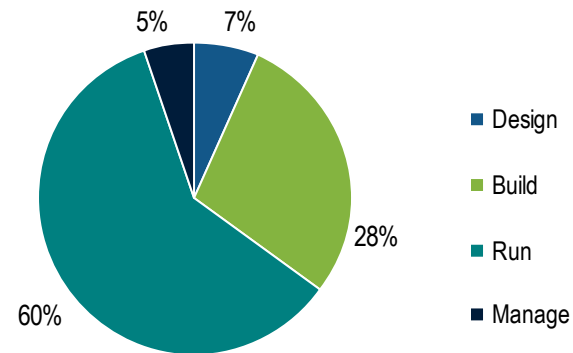
EUEs: 20,470

- **Labor cost – \$59.4 M**
 - Wages (full-time and part-time)
 - Overtime and bonuses
 - Taxes and fringe benefits
- **Outsourcing cost – \$38 M**
 - Outside services
- **Technology cost – \$39.6 M**
 - Hardware
 - Software
 - Voice & Data
- **Other cost – \$7.9 M**
 - Facilities & Overhead
 - Travel
 - Training
 - Other (Supplies, subscriptions, etc.)

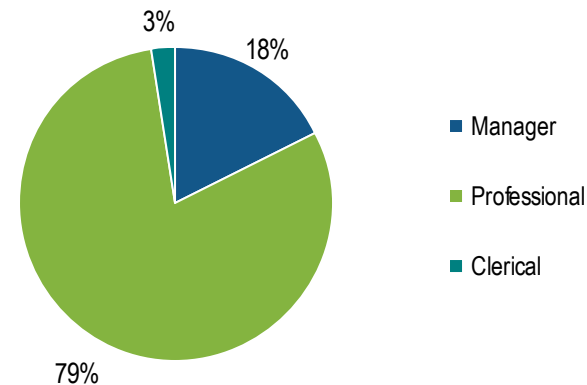
**Process Cost:
\$97.4 M**

FTEs = 694.3

FTE Allocation



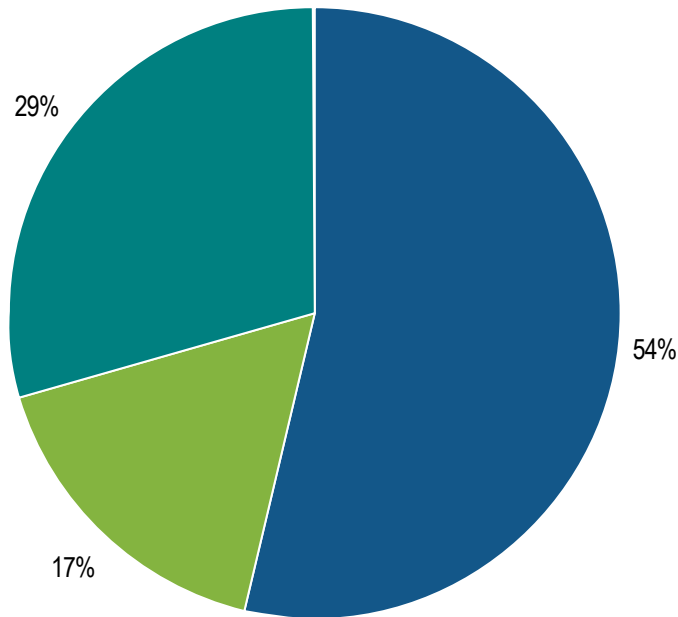
Staff Mix



State of Nevada's technology and other costs

Technology Cost Distribution

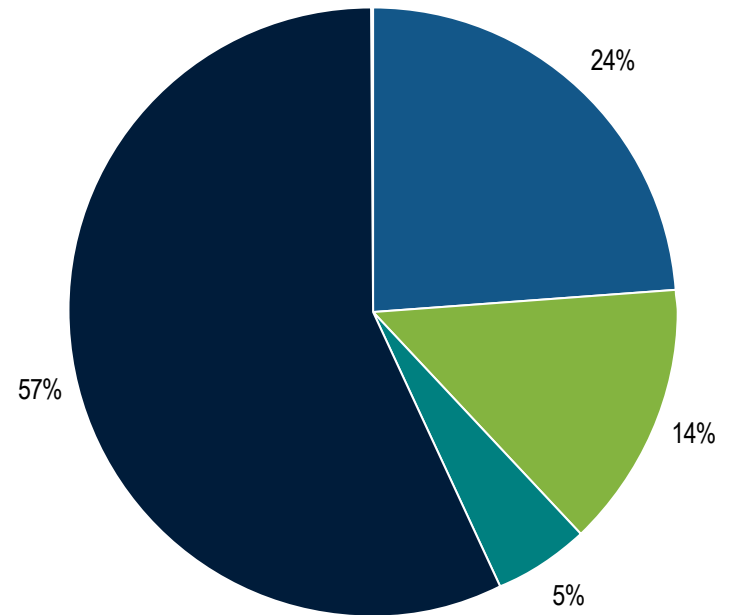
Technology Cost - \$39,646,416



- Hardware and Software
- Depreciation
- Voice & Data Communication

IT Other Cost Distribution

Other Cost - \$7,870,406



- Facilities and Overhead
- Training
- Travel and Expense
- Other

Executive Summary



Key Observations - Information Technology

Overall Performance

- State of Nevada's overall IT performance is bottom quartile (25th percentile) in both efficiency and effectiveness.
- Technology enablement to support internal processes is lagging across the state.
- Lack of sufficient state funding coupled with a fragmented support structure results in varying performance by agency and disparate systems.
- Stakeholders feel that IT is resource constrained and complain about project delivery and sub-par customer service.

Cost Profile

- State of Nevada's reported IT cost per end user is on par. However, IT cost as a percentage of revenue is notably high due to Nevada's modest revenue. There is not enough visibility into the true total IT cost due to the way costs are reported.
- Overall process cost (labor + outsourcing) per end user is high driven by more FTEs, more outsourcing spend and high cost for Application Development and End User Support.

Technology

- Like many states, Nevada's technology platform is built upon decentralized legacy systems and architecture.
- Nevada's technology cost is low. The ERP (Advantage) is owned by the state, with no vendor support costs. Technology spending was hampered due to budget cuts and is naturally lower in the 2nd year of the biennium.
- Nevada has low levels of automation and self-service to support business process performance.

Delivery

- Project delivery performance for infrastructure projects is low as there are not strong repeatable processes in place.
- Application project delivery is reported as favorable by IT with a keen focus on budget, but is likely overstated. Stakeholder sentiment suggests that much of the demand is not addressed and projects are often delayed.
- Benefits realization is high, but business case utilization and ROI tracking need to be improved.
- With a high number of help desk requests, Nevada struggles with first contact resolution (52%)

Governance

- 30% of the technology portfolio is considered as managed in shared services.
- Adherence to standards is lower than typical in all areas.
- Internal SLAs are not in place and no state-wide SLAs exist.
- There is minimal use of standard service methodologies

Stakeholder Feedback

- Stakeholders acknowledge the budget pressures that IT has to contend with, but desire more / better communication and faster response times.
- IT's most significant effectiveness gaps are in communication, flexibility and strategic thinking & analysis.
- Over 60% of Stakeholders view IT as having little or no involvement in daily operations of the organization

State of Nevada's IT function has opportunities to improve in both efficiency and effectiveness

PLAN EFFECTIVENESS

- Emerging Technologies Knowledge
- Role of IT*

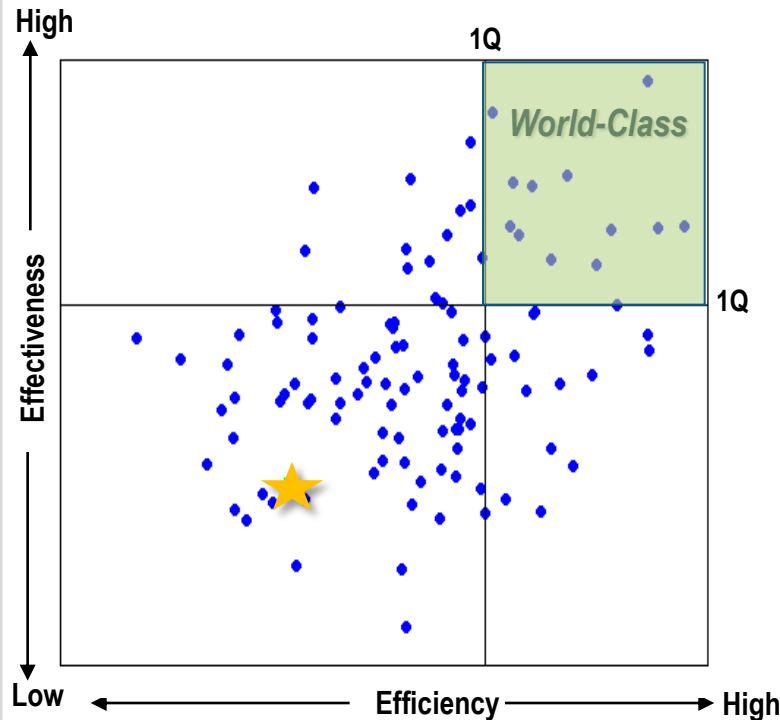
BUILD EFFECTIVENESS

- Application Project Delivery Effectiveness*
- Infrastructure Project Delivery Effectiveness*
- Project Benefits Realization

BUS. ENABLEMENT EFFECTIVENESS

- Project Return on Investment (ROI)
- Business Process Automation
- Self-service Enablement
- SLA Performance – Internal
- SLA Performance – External
- Help Desk First Contact Resolution

Hackett Value Grid™



- Metric is at or exceeds Median of World-Class
- Metric is between Median of Peer Group and World-Class
- Metric is below Peer Group Median
- ★ State of Nevada
- Other Organizations

BUILD EFFICIENCY

- Application Project Delivery – On Time*
- Application Project Delivery – On Budget*
- Infrastructure Project Delivery – On Time*
- Infrastructure Project Delivery – On Budget*

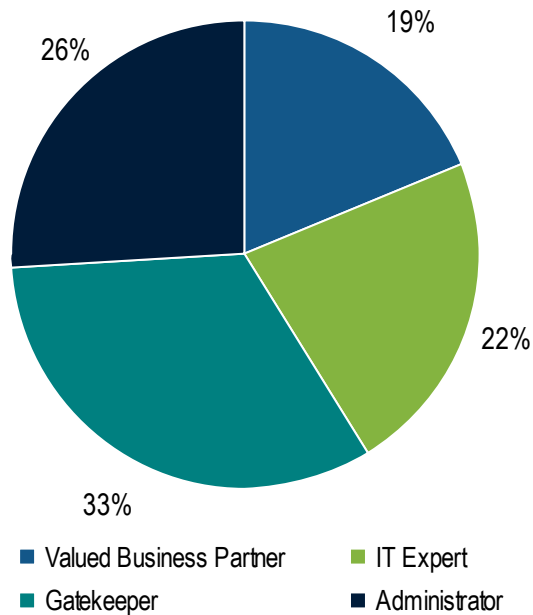
RUN EFFICIENCY

- Run process cost per EUE
- Run Process Cost %
- Hardware platform complexity
- Application Volume
- Number of Programming Languages
- Enterprise architecture compliance
- Volume of HW hosting facilities

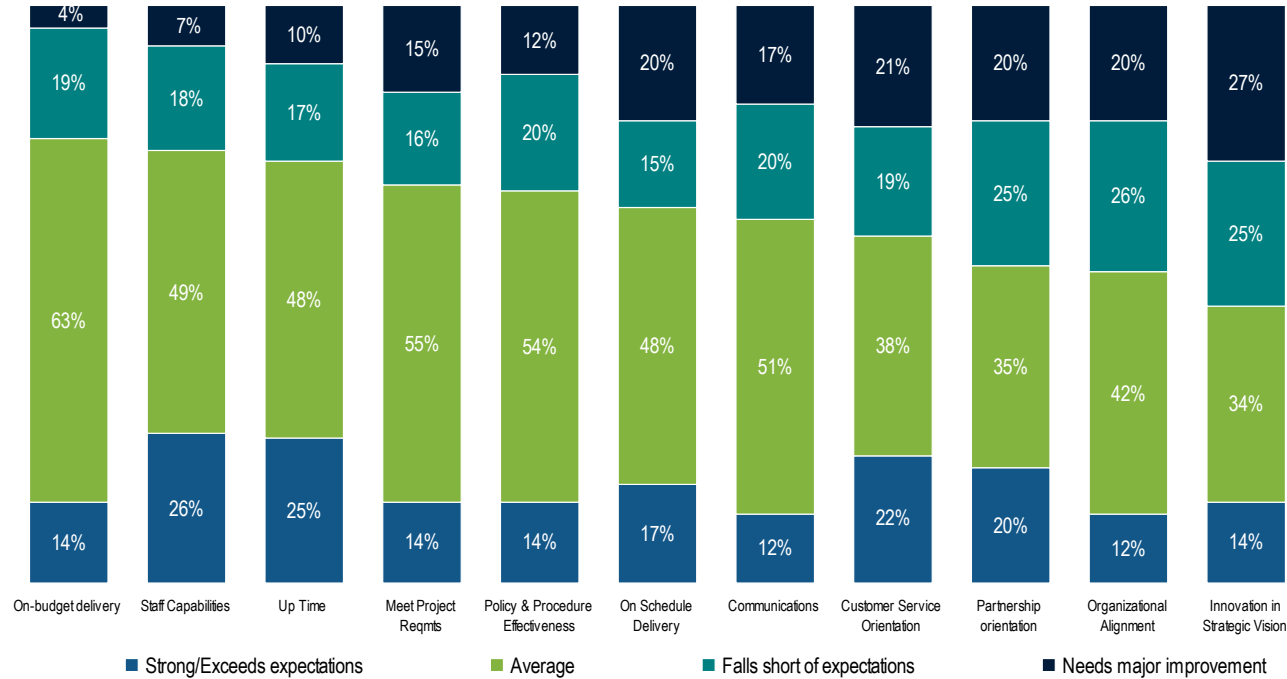
Note: The ranking of the drivers are a representation of gaps to World-Class and are not a direct indicator of where to focus/ launch initiatives. Specific action plans should not be developed until after the benchmark results are assessed within the context of the functional and business strategies.

Stakeholder Survey reveals opportunities for IT to improve in customer service, partnership and innovation

Information Technology's Role



Performance of the IT Organization

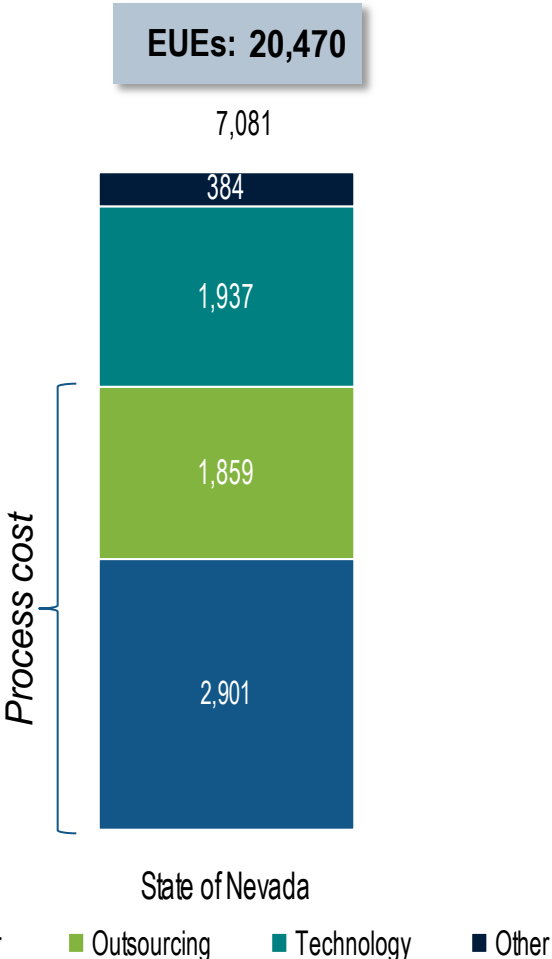


Representative Stakeholder Comments

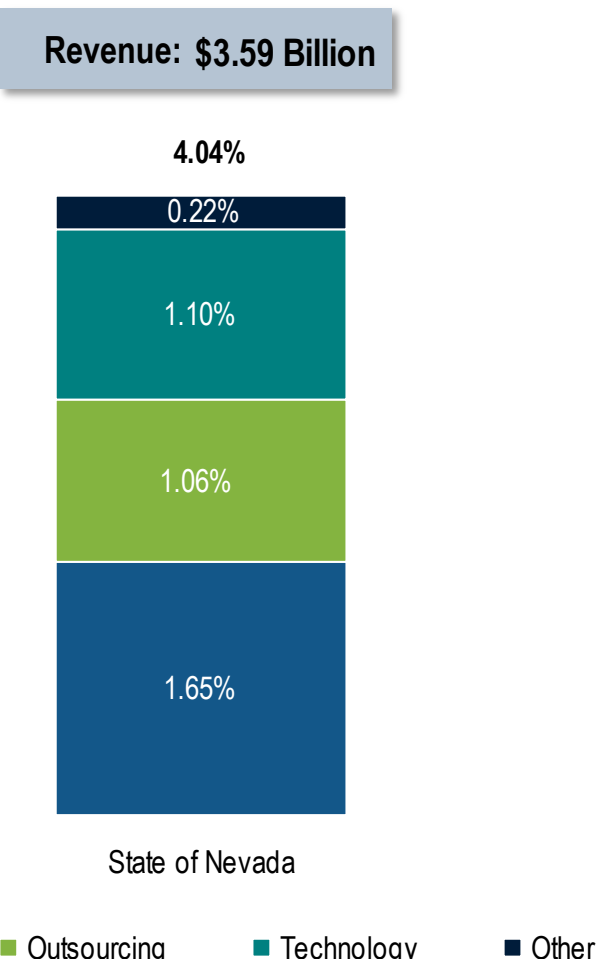
- *“They are good people who want to do a good job. Unfortunately they are the victims of the state budget crisis just like the rest of the agencies. The State gets what it pays for in terms of technical skill sets and equipment.”*
- *“Serve the people that pay for their services in a timely manner. It takes too long to get simple day-to-day items fulfilled”*
- *“Listen to the customers about their needs to improve program efficiency. Offer solutions and/or options to meet those needs. Understand the regulations, policies and procedures associated with the program (internal customer). Provide adequate resources to meet the needs of the customer”*
- *[Start] Staying up on technology and utilizing current software and infrastructure technology.*
- *[Start] Communicating better what they're doing, who to go to for what services, and improving project management.*

Nevada's IT cost per EUE and cost as a percentage of revenue

IT Cost (\$) per EUE

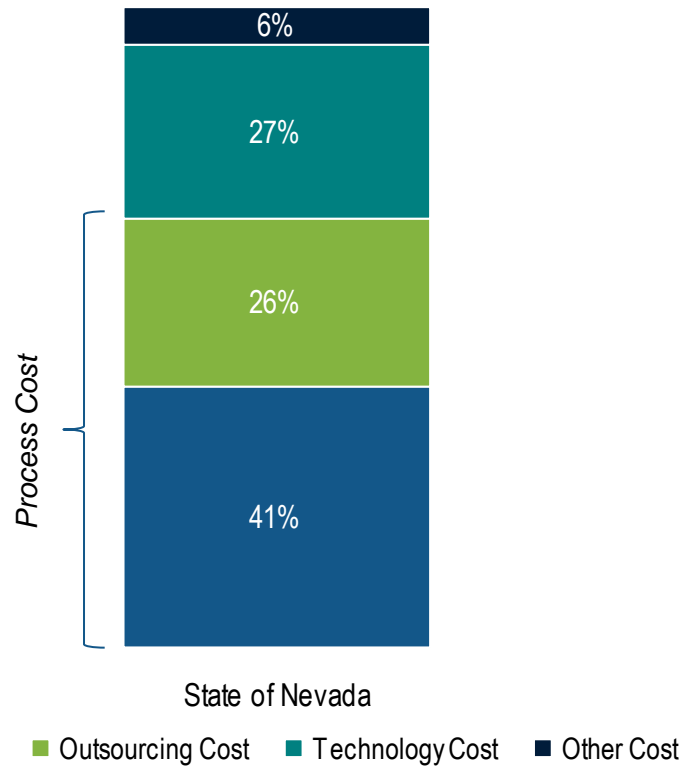


IT Cost (\$) as a % of Revenue

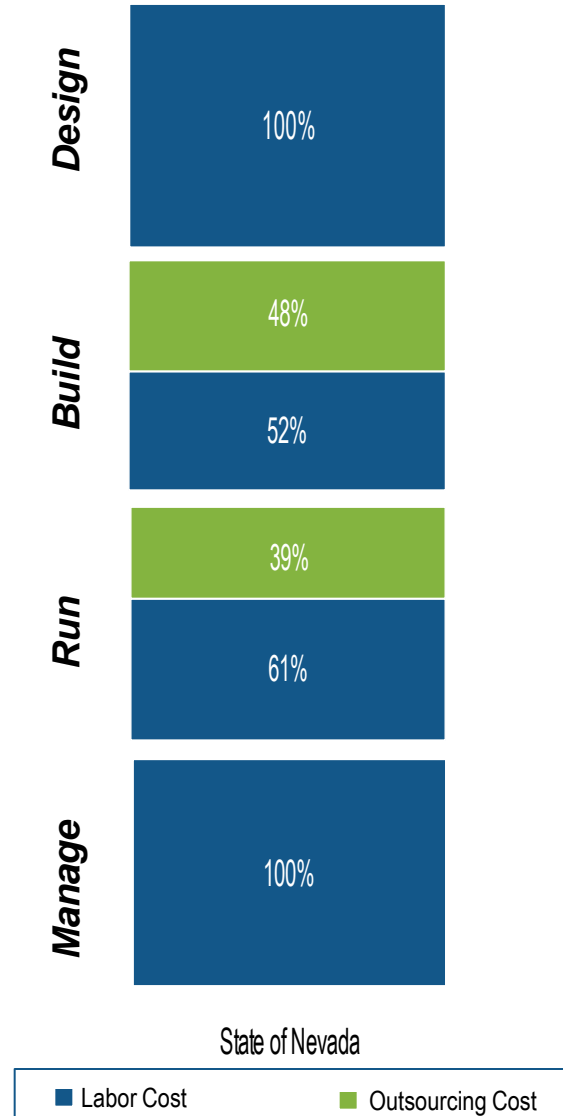


Nevada has a high allocation of outsourcing cost – particularly for the Build processes

IT Cost Distribution in %



Process Cost per End User Equivalent in %



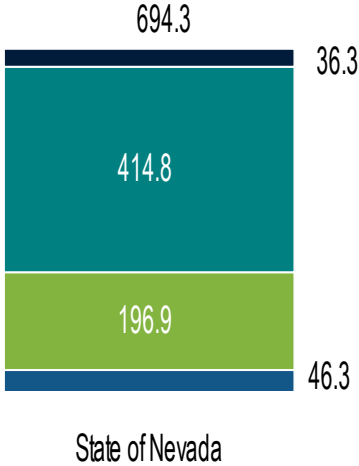
70% of Nevada's IT outsourcing cost supports Health Care Financing and Policy and DETR

Agency / Department	Process	Outsourcing Cost	Total
Health Care Financing and Policy	Infrastructure Management	\$ 3,527,130	\$ 16,874,039
	End User Support	\$ 4,279,242	
	Application Maintenance	\$ 3,570,042	
	Application Development and Implementation	\$ 5,497,625	
DETR	Infrastructure Management	\$ 10,161	\$ 9,622,677
	Application Maintenance	\$ 488,936	
	Application Development and Implementation	\$ 9,116,140	
	Quality Assurance	\$ 7,440	
Welfare and Support Services	Infrastructure Management	\$ 6,204,127	\$ 6,204,127
DPBH	End User Support	\$ 1,095,266	\$ 3,901,633
	Application Maintenance	\$ 1,192,666	
	Application Development and Implementation	\$ 1,613,701	
Aging and Disability Services	Infrastructure Management	\$ 335,962	\$ 671,924
	Application Maintenance	\$ 274,082	
	Application Development and Implementation	\$ 61,880	
B&I	Infrastructure Management	\$ 134,531	\$ 312,146
	End User Support	\$ 40,000	
	Infrastructure Development	\$ 16,800	
	Application Maintenance	\$ 120,815	
Public Safety	Application Maintenance	\$ 300,000	\$ 300,000
Conservation	Application Development and Implementation	\$ 70,265	\$ 70,265
Taxation	Application Maintenance	\$ 50,000	\$ 50,000
Controller	Application Development and Implementation	\$ 42,200	\$ 42,200

Nevada carries a relatively high number of IT FTEs

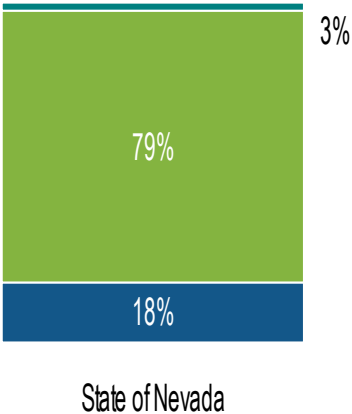
Number of FTEs per State of Nevada's EUEs

- Manage
- Run
- Build
- Design



Staff Mix distribution by category

- Clerical
- Professional
- Manager

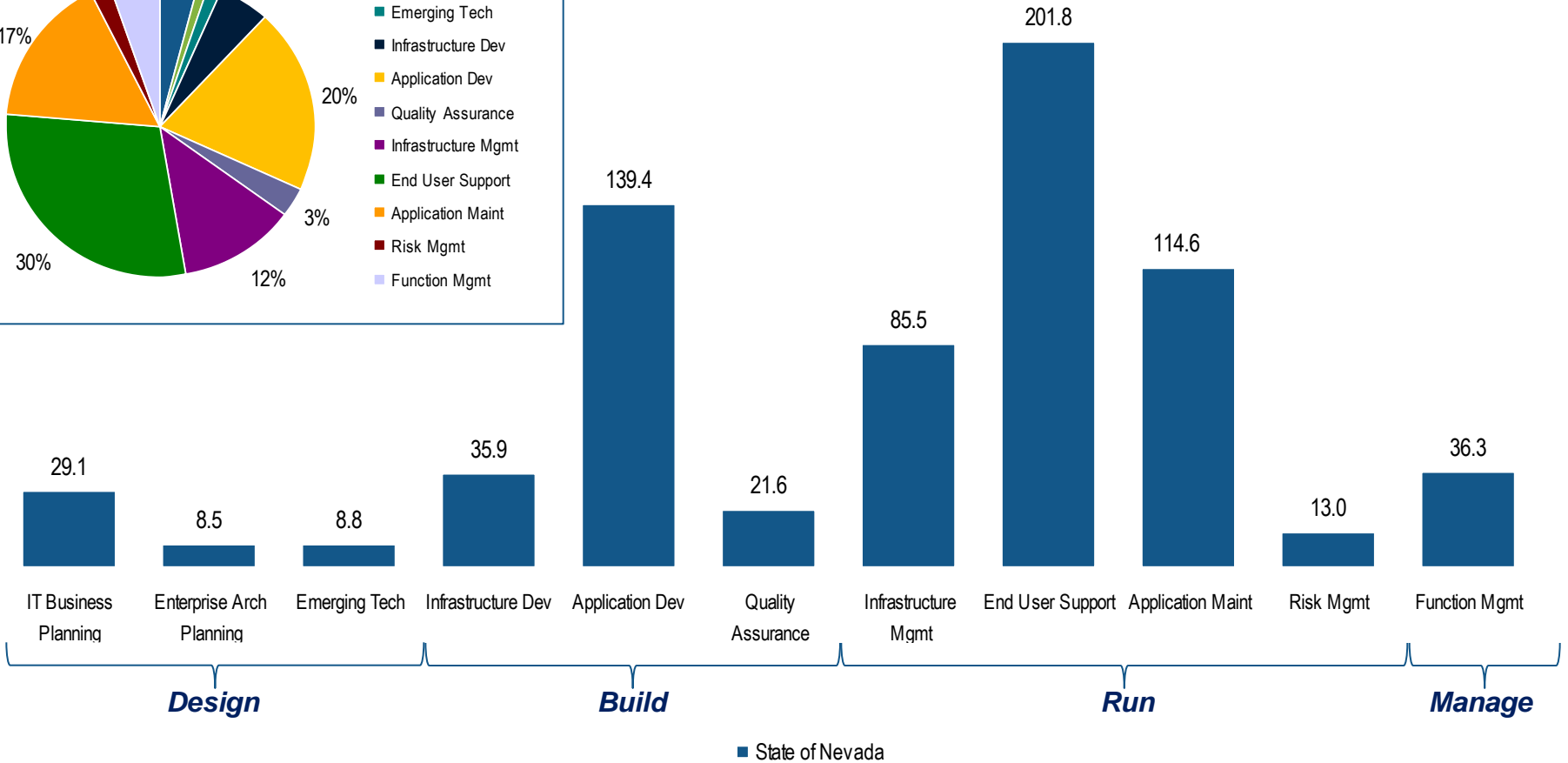
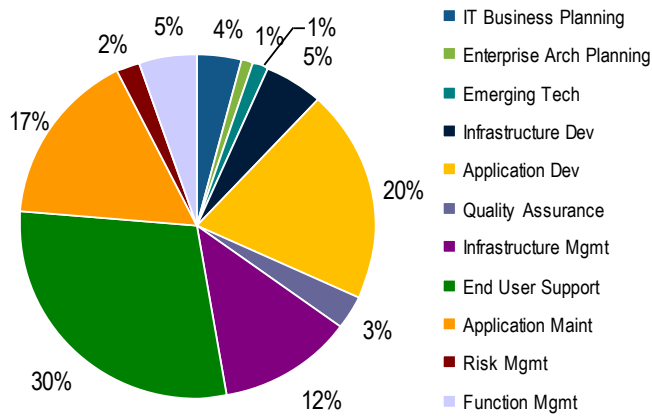


Managers are those that have performance management responsibilities

Nevada has the highest number of FTEs in Application Development and End User Support

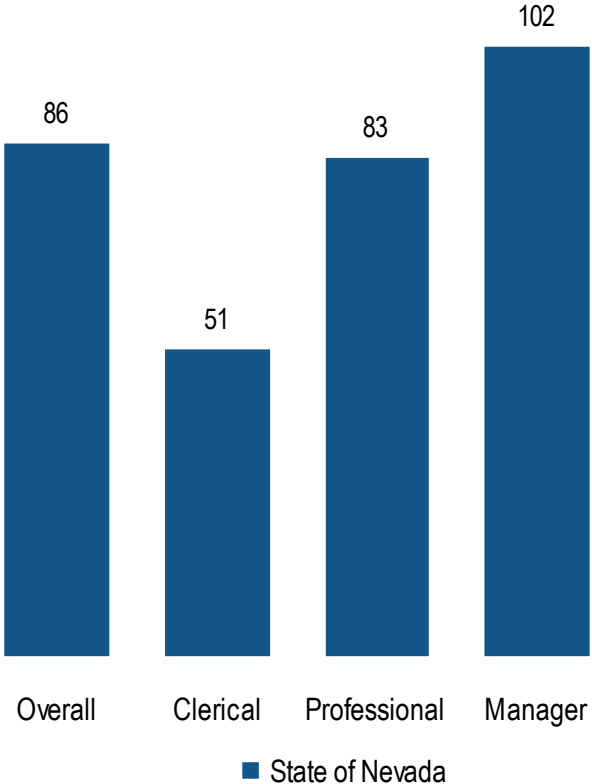
IT FTEs per State of Nevada's EUEs

FTE Allocation by Process Group



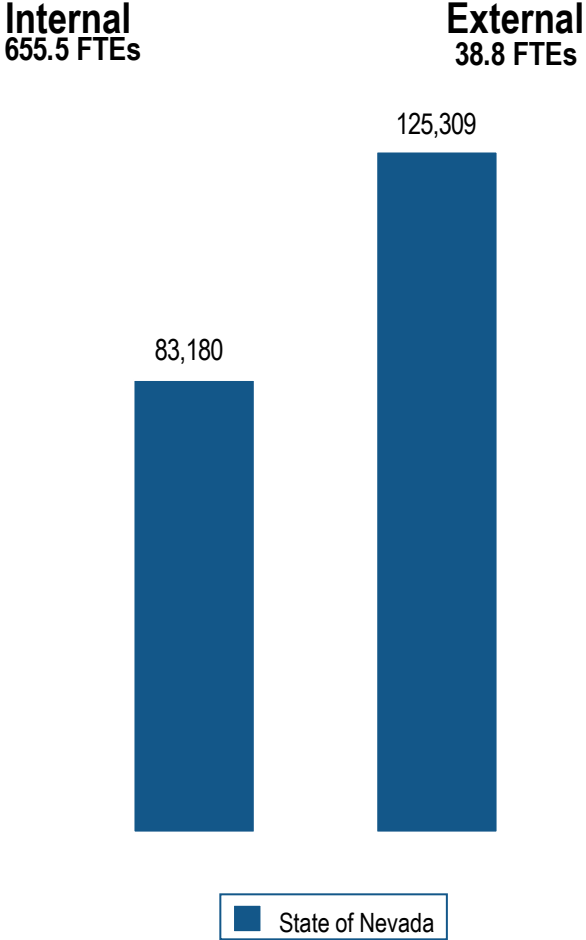
State of Nevada's average fully loaded labor costs

Average Fully Loaded Labor Cost (\$000's) per FTE



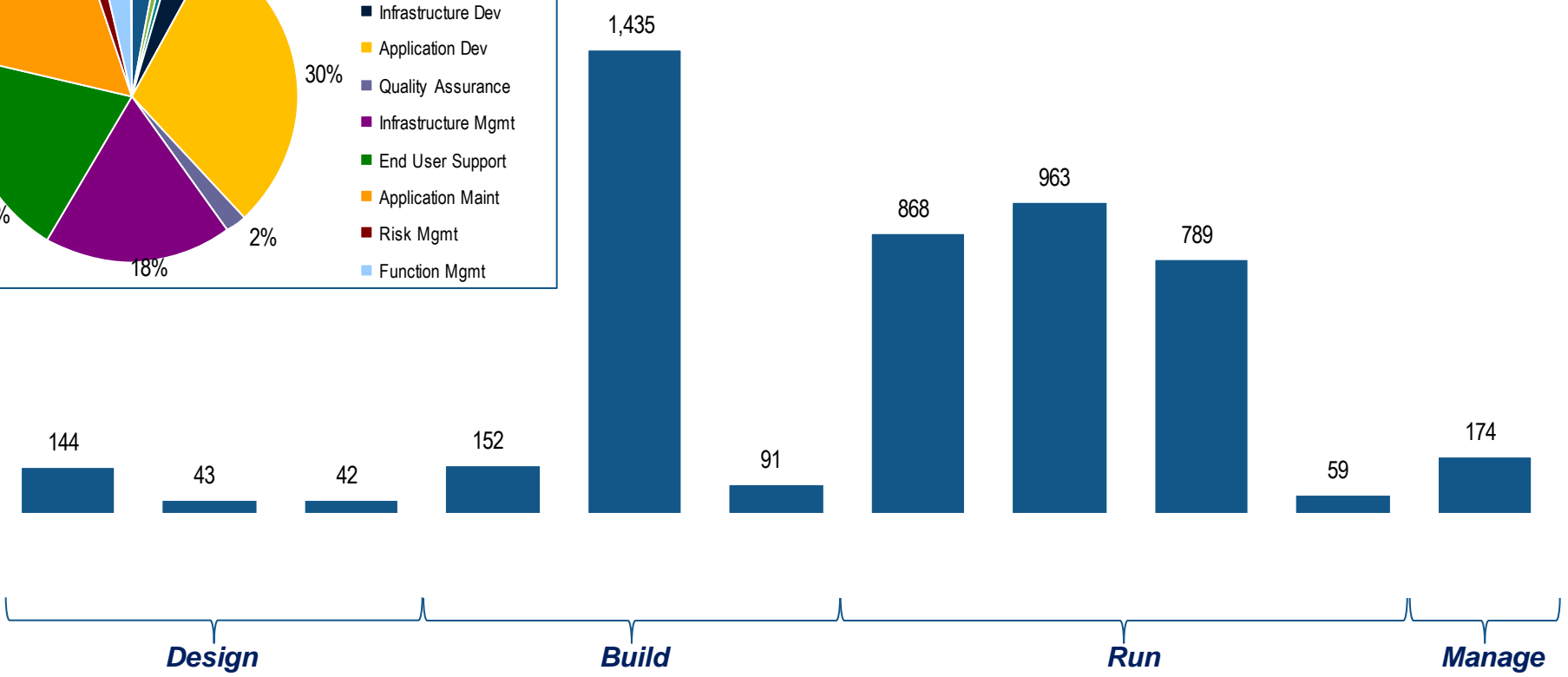
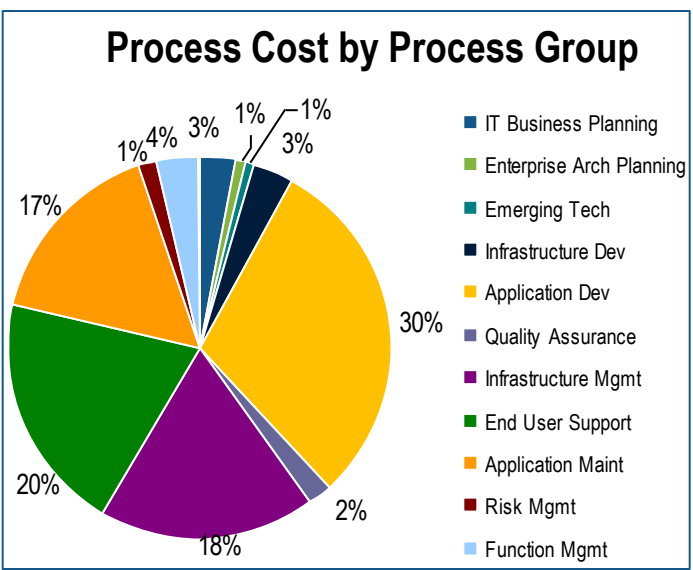
	Overall	Clerical	Prof.	Manager
FTEs	694.3	18.2	553.4	122.7

State of Nevada's Average Fully Loaded Labor Cost (\$) per Internal and External FTE



Nevada's process costs per EUE for Application Development and End User Support are comparably high, driven by the staffing levels

Process Cost (\$) per EUE



■ State of Nevada

Nevada's low technology costs are driven by lower funding in the 2nd year of the biennium and a "down" year in FY13

Technology Cost (\$) per EUE

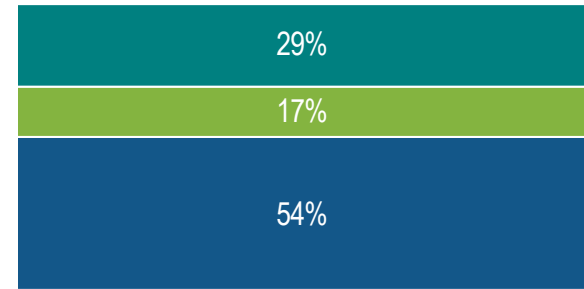
Technology Cost - \$39,646,416

1,937



State of Nevada

Technology Expense & Depreciation Cost Comparison



State of Nevada

■ Hardware & Software Expenses ■ Voice and Data Expenses ■ Depreciation Expenses

Technology HW & SW Cost (\$) per EUE

867



Hardware
expense &
depreciation

700



Software
expense &
depreciation

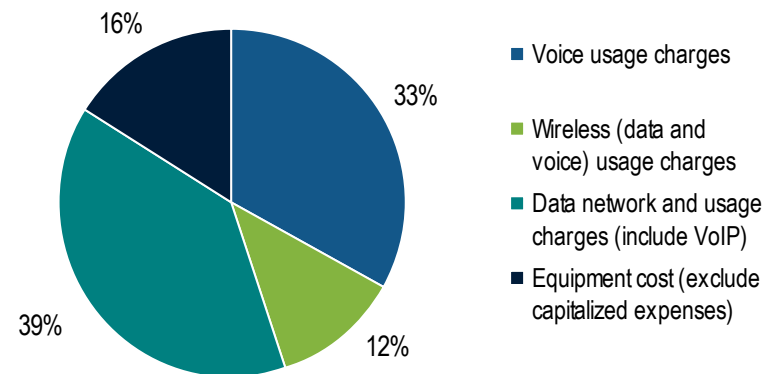
370



Voice and data
expense &
depreciation

■ State of Nevada

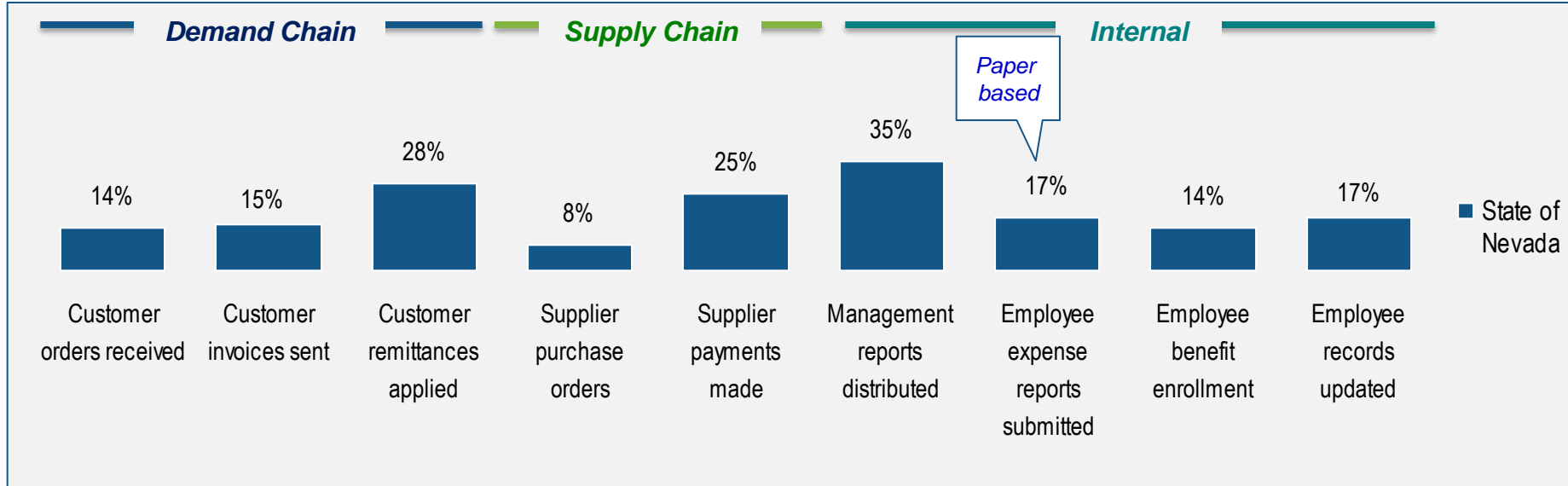
Voice & Data Distribution



■ Voice usage charges
■ Wireless (data and voice) usage charges
■ Data network and usage charges (include VoIP)
■ Equipment cost (exclude capitalized expenses)

Overall, Nevada is lagging in transaction automation and technology enablement to facilitate efficiency across the administrative functions

Transactions Performed Electronically



Technology Enablement

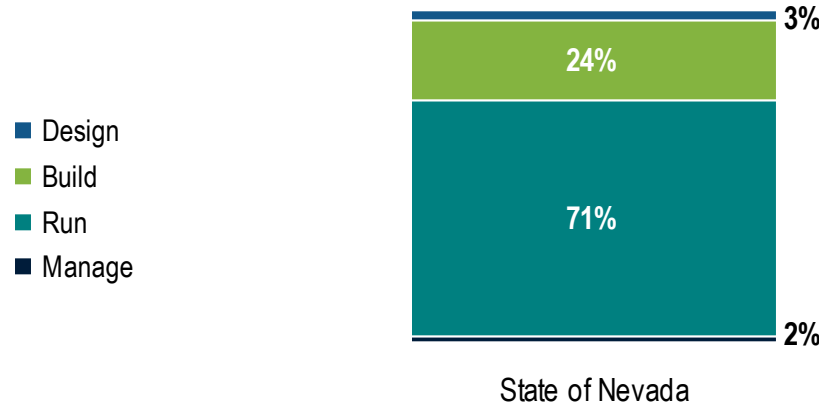
	State of Nevada
Business management reporting uses a data warehouse as its primary	28%
Indirect purchasing transactions utilize electronic catalogs	0%
Customers are covered in a CRM system	8%

Self-Service Enablement

	State of Nevada
Supplier invoice inquiry performed via self-service	0%
Customer online bill presentment	19%
Customer account review performed via self-service	23%
Employee requisitioning performed via self-service	8%
Budget input via self-service - Ops or cost center mgrs	18%

In FY 2013, Nevada spent a lower percentage of its total cost on Run processes as there was heavy application development work

Percent of Total IT Cost Devoted to Design, Build, Run, Manage



Design	Build	Run	Manage
IT Business Planning	Infrastructure Development	Infrastructure Management	Function Management
Enterprise Architecture Planning	Application Development & Implementation	End User Support	
Emerging Technologies	Quality Assurance	Application Maintenance	
		Risk Management	
		Technology Cost (HW, SW, V&D)	
		Other Cost (Facilities, T&E, Training, Misc.)	

State of Nevada has significant spending in Application Development, but seems to be underinvested in technology cost

EUEs: 20,470

IT cost (in \$ million)	State of Nevada
IT Business Planning	2.9
Enterprise Architecture Planning	0.9
Emerging Technologies	0.9
Total DESIGN	4.7
Infrastructure Development	3.1
Application Development and Implementation	29.4
Quality Assurance	1.9
Total BUILD	34.3
Infrastructure Management	17.8
End User Support	19.7
Application Maintenance	16.1
Risk Management	1.2
Technology Cost	39.6
Other Cost	7.9
Total RUN	102.4
Function Management	3.6
Total MANAGE	3.6
Total IT Cost	144.9

Recommendations



1. Enhance technology capabilities across the state

Nevada Observations

- Technology is antiquated, not user-friendly and not vendor supported.
- Nevada has low levels of automation and needs to increase IT leverage to improve process performance across the administrative areas.
- The total application count is underreported.
- End user training is insufficient to ensure proper understanding and use of technology.

Technology cost per EUE

\$1,937

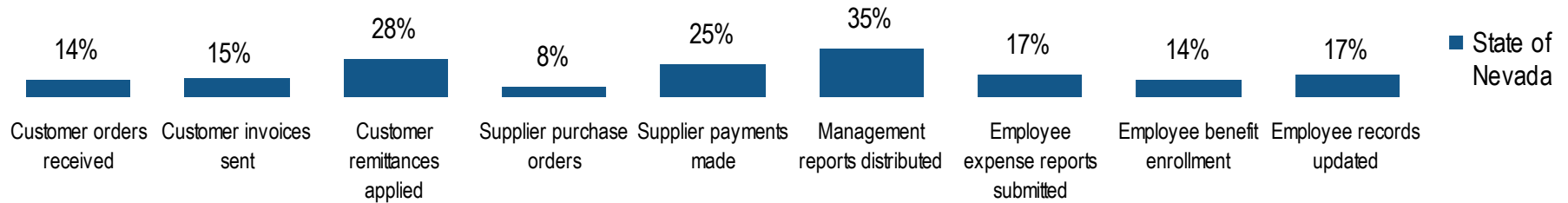


State of Nevada

Nevada Recommendations

- Move forward with analysis about replacing Advantage with an ERP that will satisfy the needs of the state.
- Increase automation and self-service capabilities for routine transactions and reporting needs to facilitate efficiency in administrative functions. This may result in a higher cost in IT to drive lower admin costs overall.
- Take an accurate inventory of the application portfolio and establish a routine to monitor and manage it.
- Ensure there is proper demand management and understanding of user requests to properly scope and plan delivery efforts to truly meet user needs and reduce the proliferation of unnecessary complexity.
- Bolster end user training to improve user understanding and acceptance of new technologies.
- Focus on ensuring that user needs are clearly understood and met.

Transactions performed Electronically (%)



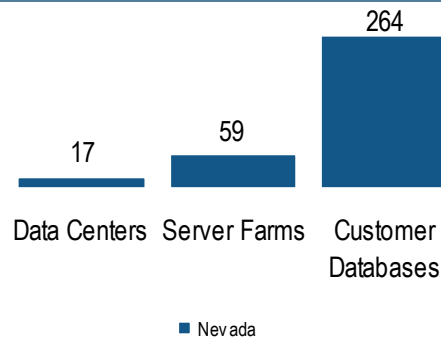
Note: Percentages are not completely accurate due to lack of available data, but determined to be directionally correctly

2. Selectively increase consolidation and centralization of Infrastructure as applicable

Nevada Observations

- The data reflects a down year so IT costs are typically higher than reported.
- Nevada has elements of high infrastructure complexity and low disaster recovery documentation and testing.
- Currently only 30% of the technology portfolio is considered as managed in shared services. The majority of the shared service is for the Service Desk, but performance is sub-par.
- Standards definition and adherence is low for hardware acquisition, hardware configuration and communication / network protocols.
- Infrastructure Development project delivery performance needs improvement.

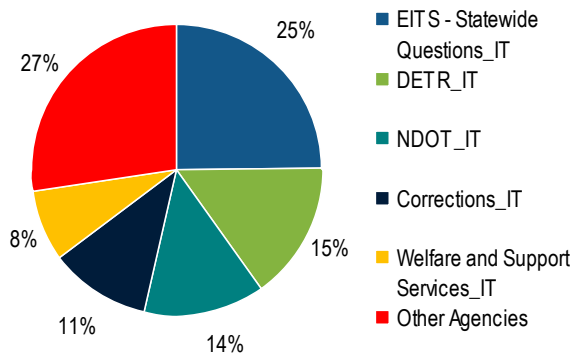
Select Infrastructure Volumes



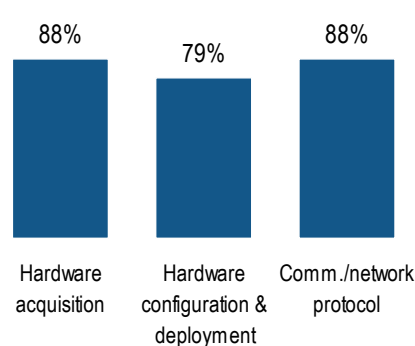
Nevada Recommendations

- Rationalize (reduce) the infrastructure portfolio to support the state in a more effective and efficient manner. Determine where there are opportunities to consolidate across agencies and departments into appropriate centers of excellence (where performance is strong) to reduce cost and improve performance.
- Investigate what is driving up the outsourcing cost for Welfare and Support Services and Health Care Financing and Policy. Determine if there may be a cost reduction opportunity from consolidating support.
- Make more effective use of existing systems through interfaces and, as appropriate, provide uniform views of information across departments. Focus on enterprise level business needs, not just by agency.
- Analyze which agencies have the most immediate opportunity to move to shared services for Infrastructure.
- Enforce compliance to standards across the organization. Ensure that a collaborative process and governance structure exists and is used to establish and maintain the enterprise architecture plan.

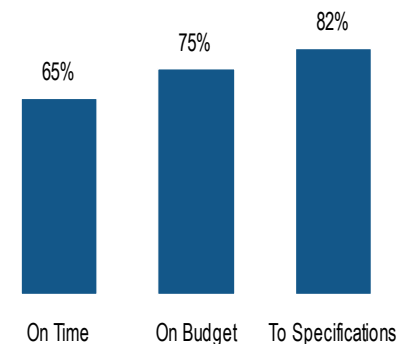
Infrastructure Mgmt FTE Allocation (Top 5 vs others)



Percent of Organization Adhering to Standards



Infrastructure Development Project Delivery



3. Improve project and service delivery and increase business value focus

Nevada Observations

- Nevada’s Application Development process cost is high. Nevada has a large number of projects in flight, but only about a third are supported by a PMO.
- Most projects don’t have a formal business case or ROI tracking.
- Stakeholder comments indicate performance issues in demand management, project delivery, communication, and customer service / support.
- First contact resolution for the help desk service is on 52% and Nevada has a high number of requests.
- There are no internal SLAs or state-wide SLAs in place.

Project Delivery Tracking	State of Nevada
% projects that have formal business case / cost-benefit analysis	42%
% ROI Not Tracked	64%
% Meeting ROI	23%
% Missing ROI	1%

Nevada Recommendations

- Review the demand management process to ensure that IT addresses the requests that provide the most benefit to the state. Establish a system for managing internal user demand; accurately categorize requests, forecast time and effort involved in delivery, communicate timeline for addressing inquiries.
- Working with Finance, develop a process to increase the utilization of business cases and ROI reviews post project implementation.
- Ensure that business relationship manager roles are in place, clearly communicated and effective to drive business linkage and alignment. Increase communication and responsiveness to internal customers.
- Routinely conduct a detailed analysis of trouble tickets (e.g. sources, types, frequencies, resolution times, final problem resolution) to assess root causes and develop a plan to reduce / prevent tickets.
- Identify/implement improvements (tools/training/process changes/incentives) to increase 1st contact resolution rate.

Help Desk Requests per Thousand EUEs

10,483



State of Nevada

% of First Contact Resolution

52%



State of Nevada

Stakeholder Comments

“Proactively interact with customers. Follow the customers’ lead, provide some leadership focused on customer needs, or get out of the way”

“Adding staff in critical areas such as applications development and project management. We have had to make due with missed delivery deadlines, project delays, and work-arounds because they don’t have the staff to address all of our critical projects in a timely manner.”

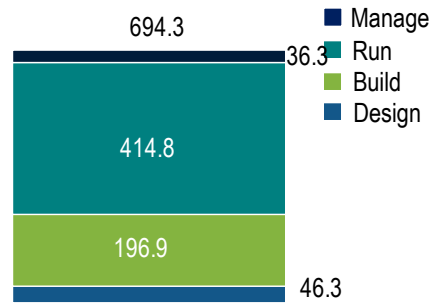
“Communicating better what they’re doing, who to go to for what services, and improving project management.”

4. Effectively manage talent

Nevada Observations

- Lack of enterprise resource leverage leads to the perception that IT is understaffed although Nevada has many IT FTEs. Nevada's service delivery model is very decentralized by agency.
- Nevada's outsourcing percentage is high at 26%.
- Average fully loaded labor cost for internal IT staff is lower than typical.
- Nevada spent less per IT FTE on training.

Total IT FTEs

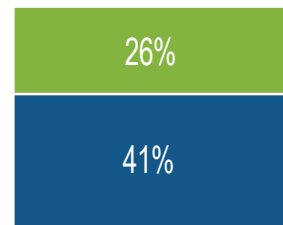


State of Nevada

Nevada Recommendations

- Consolidate some non-core services to eliminate duplication of efforts and provide a more efficient staffing model.
- Determine resource needs to support necessary on-going demand as well as the new support requirements for new technologies.
- Conduct a skills assessment to compare competencies needed to those resident in the current workforce. Assess the skills of each resource against his / her role, band level, salary, etc. and determine if the resources are appropriately aligned.
- Analyze the sourcing strategy to determine what skills and type of work are best accomplished by the internal FTEs vs. what is better suited for contracted employees and outsourcers. Utilize sourcing options to take work and redundant cost out and enable the staff to focus on more valued initiatives as well as meet demand and fill skill gaps. Ensure that outsourcers are evaluated by effective SLAs to ensure value is delivered.
- Work with HR to establish consistent training and workforce development for IT.
- Create meaningful and agreed upon services and service level agreements for major applications and create accountability.
- Organize staff in tiers and around specialty areas to meet stakeholder needs.

Process Cost Allocation



State of Nevada

■ Labor Cost ■ Outsourcing Cost

Avg Fully Loaded Labor Cost (\$) per Internal FTE

83,180



■ Average fully loaded labor rate

Training Cost (\$) per IT FTE

547



■ State of Nevada

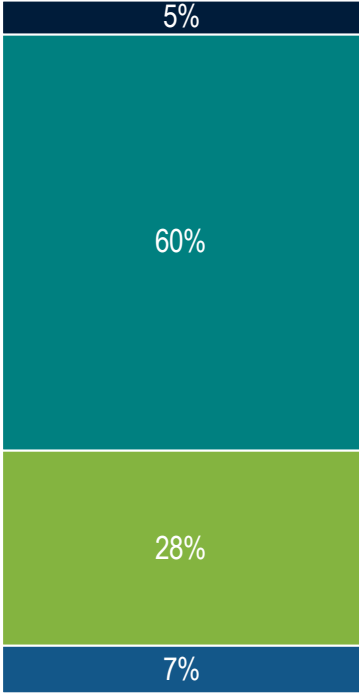
Performance Driver Analysis

- FTEs and Costs
- Design
- Build
- Run
- Manage



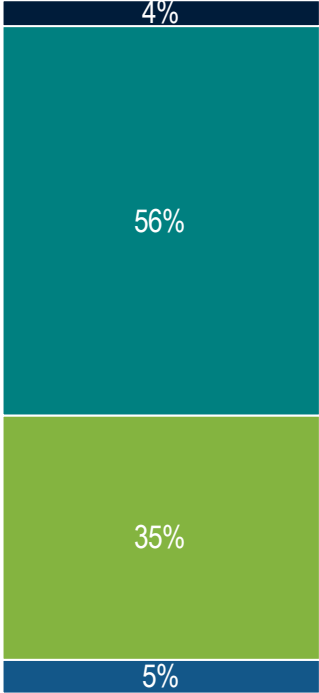
State of Nevada staffing and process cost allocation

Total IT Staffing Allocation



State of Nevada

Total IT Process Cost Allocation

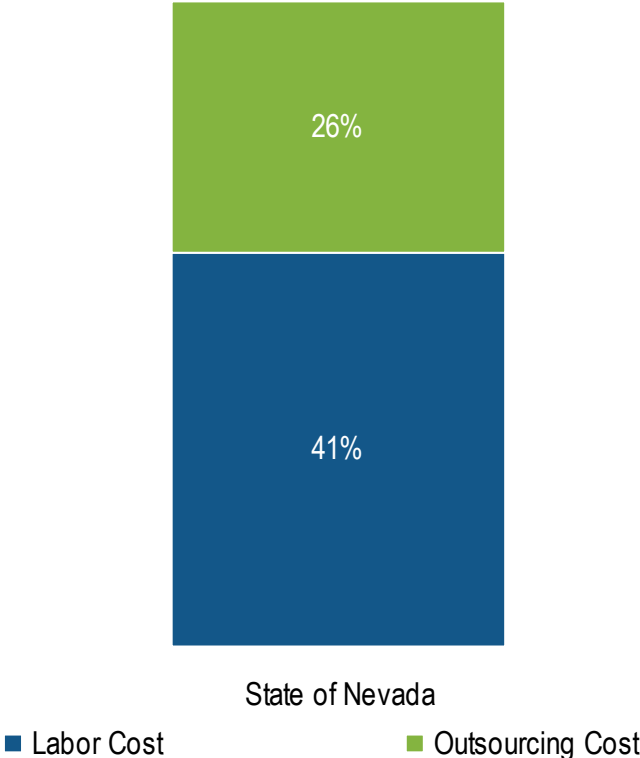


State of Nevada

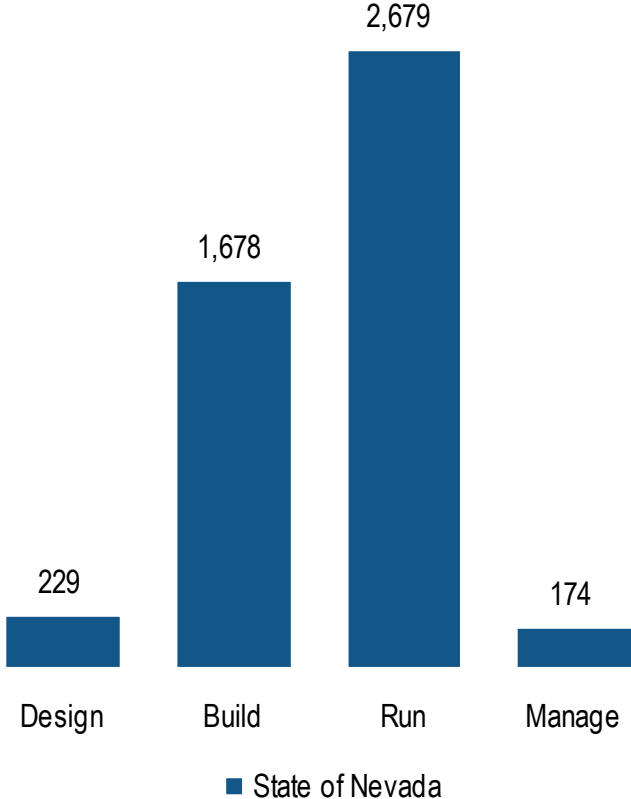


Nevada has high build and run process costs per EUE

IT Process Cost Allocation per EUE



IT Process Cost Allocation (\$) per EUE



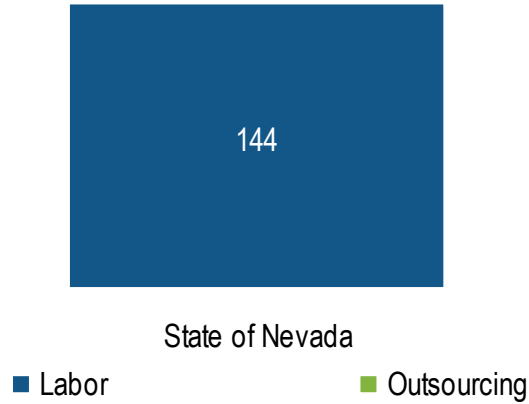
Performance Driver Analysis

- FTEs and Costs
- Design
 - IT Business Planning
 - Enterprise Architecture Planning
 - Emerging Technologies
- Build
- Run
- Manage

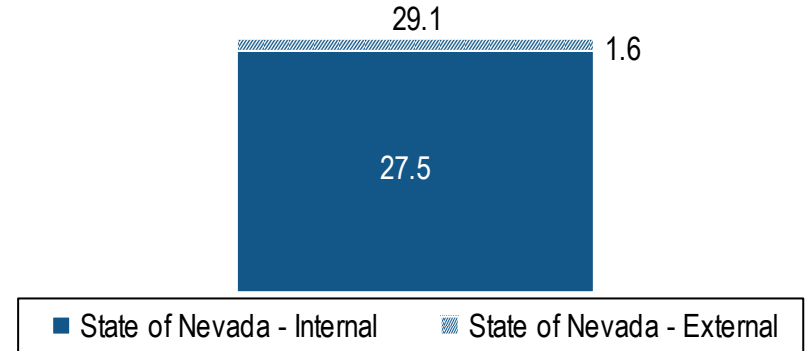


IT Business Planning

IT Business Planning Process Cost (\$) per EUE



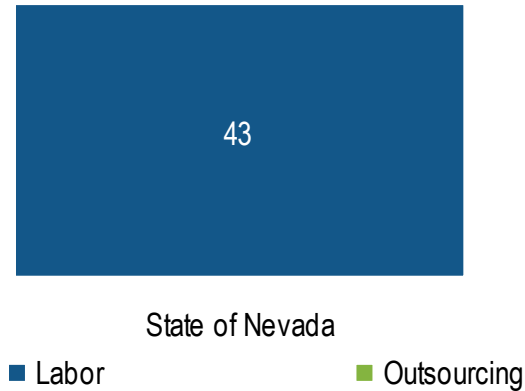
IT Business Planning FTEs at State of Nevada's EUEs



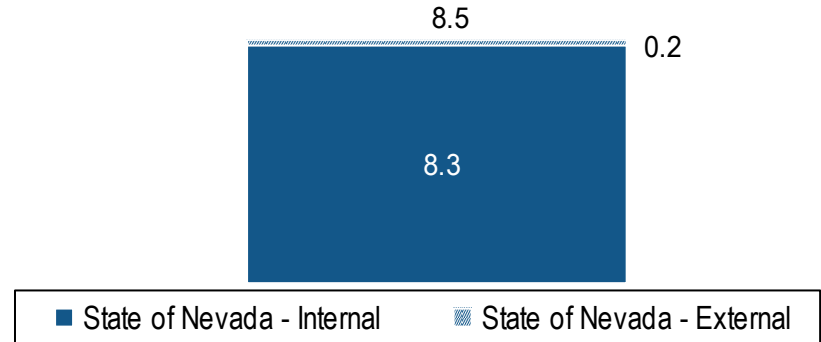
Practice Questions	State of Nevada
To what extent is there an IT communications plan defining stakeholders, messages, vehicles, frequency, accountabilities, etc.?	Ad hoc & loose
How effective is the communication of the IT strategy and vision?	Medium
Are there processes and centralized accountabilities for IT communications and performance reporting?	Ad hoc & loose
To what extent does an IT performance scorecard exist?	Does not exist
To what degree does the scorecard provide a holistic view of IT performance?	Low

Enterprise Architecture Planning

Enterprise Architecture Planning Process Cost (\$) per EUE



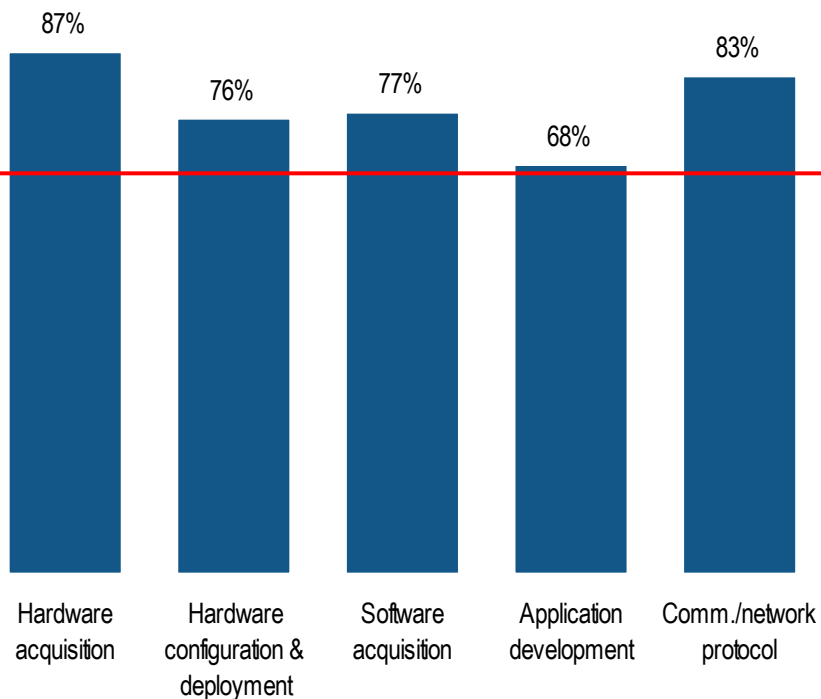
Enterprise Architecture Planning FTEs at State of Nevada's EUEs



Practice Questions	State of Nevada
To what extent is the technology portfolio actively managed?	Occasionally
Are architecture goals and metrics defined and monitored?	Occasionally, Often
To what extent is there a process in place for managing IT standards?	As needed
What percent of projects are compliant with architectural standards?	82%

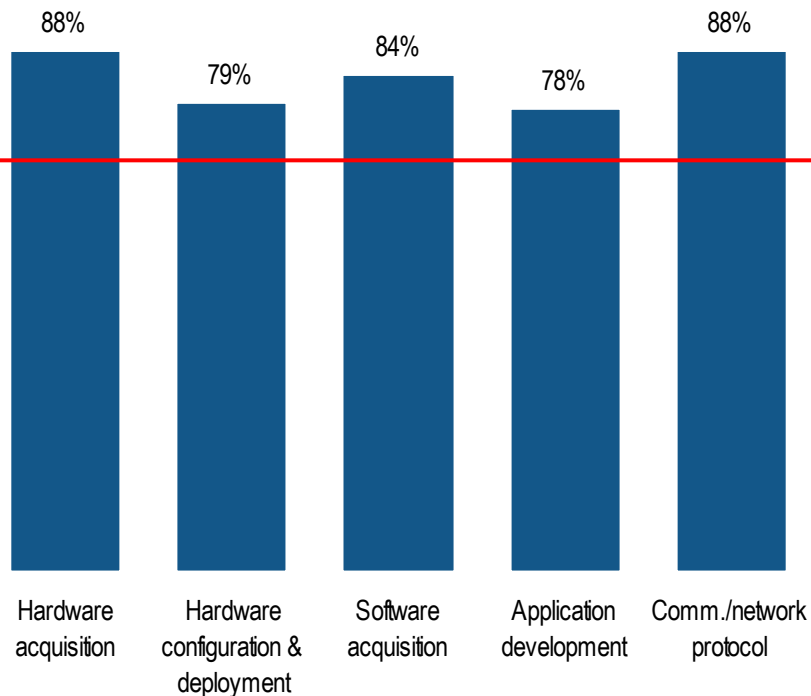
Nevada has lower levels of standards utilization and adherence across the board

Percent of Organizations Utilizing Standard Definitions



Percent of Organization Adhering to Standards

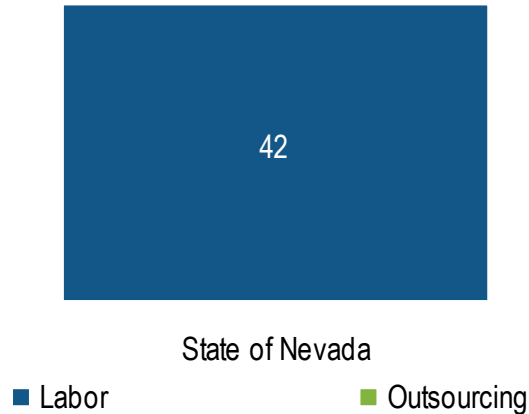
Best Practice - Standards are defined and enforced 100%



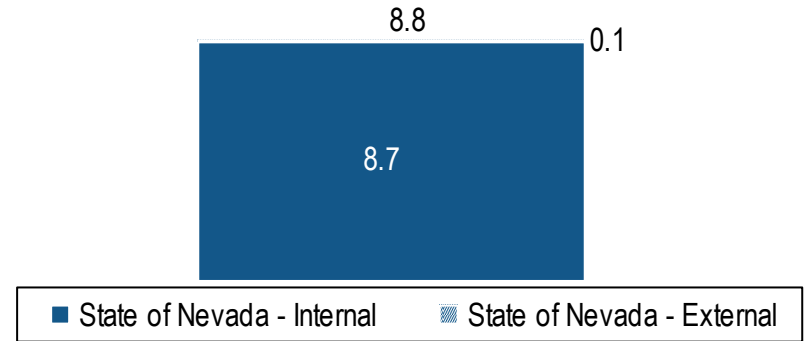
■ State of Nevada

Emerging Technologies

Emerging Technologies Process Cost (\$) per EUE



Emerging Technologies FTEs at State of Nevada's EUEs



Practice Questions	State of Nevada
To what degree is research and knowledge regarding emerging technologies shared throughout the enterprise?	Occasionally
How often is education provided for business executives on emerging technologies and potential business applications?	Occasionally

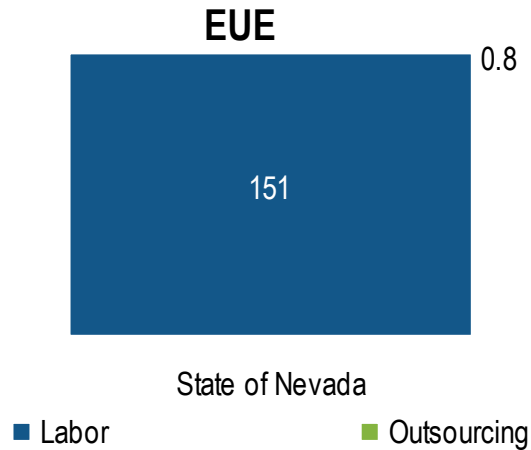
Performance Driver Analysis

- FTEs and Costs
- Design
- Build
 - Infrastructure Development
 - Application Development & Implementation
 - Quality Assurance
- Run
- Manage

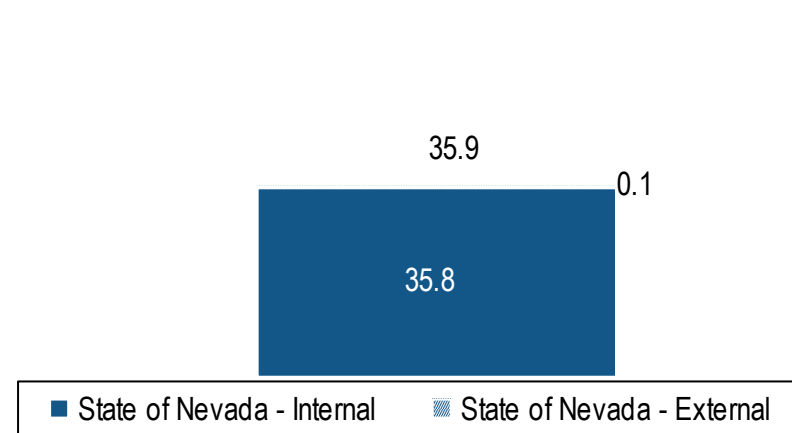


Nevada's IT organizations were engaged in a lot of large projects during FY2013, but without sufficient PMO support, delivery statistics suffered

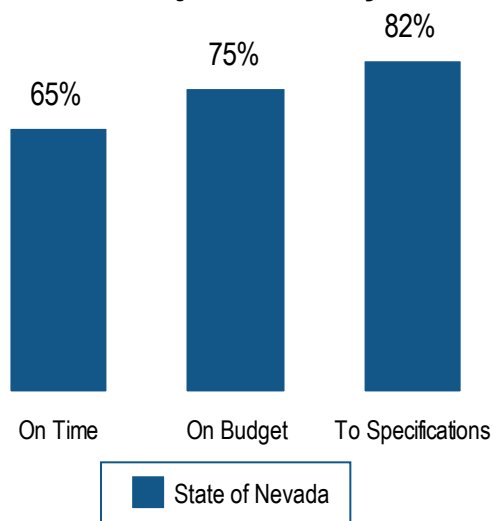
Infrastructure Development Process Cost (\$) per EUE



Infrastructure Development FTEs at State of Nevada's EUEs



Infrastructure Project Delivery Success

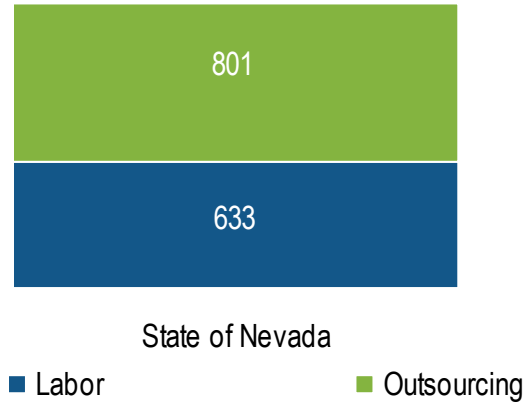


Infrastructure Projects (large projects)

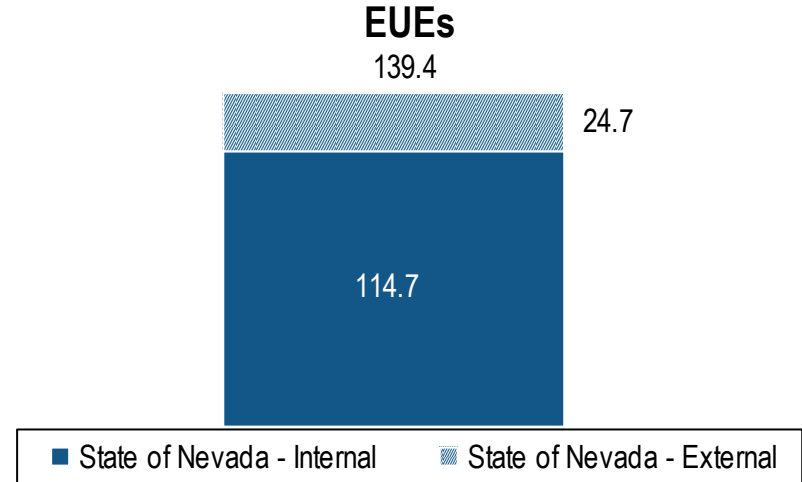
Infrastructure Projects	State of Nevada
Number of projects started in the last 6 months	36
Number of projects started in the last 12 months (include projects started in the last 6 months)	87
Percent under the control of the PMO	12%
Percent of IT project activity type - Improving or expanding infrastructure	24%

Nevada's project delivery for Application Development & Implementation projects is likely over estimated

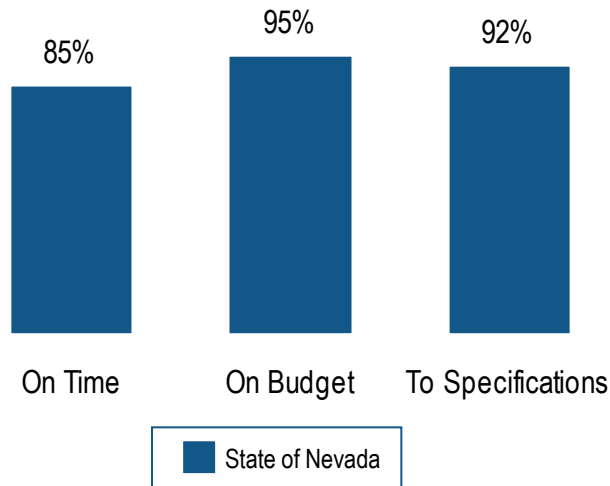
Application Development Process Cost (\$) per EUE



Application Development FTEs at State of Nevada's EUEs



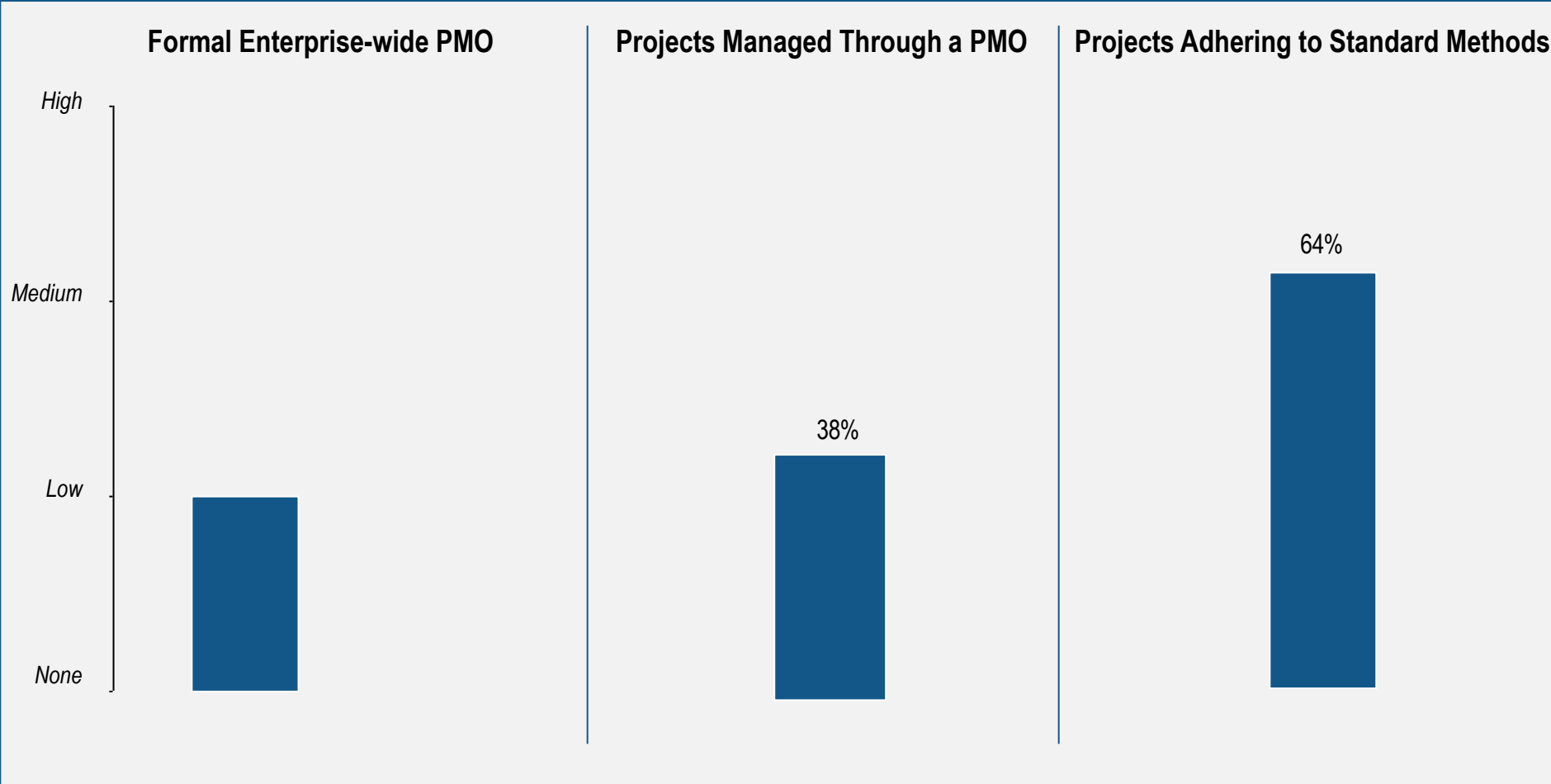
Application Project Delivery Success



Application Projects

Application Projects	State of Nevada
Number of projects started in the last 6 months	45
Number of projects started in the last 12 months (include projects started in the last 6 months)	77
Percent under the control of the PMO	36%
Percent of IT project activity type - Developing or implementing new in-house applications	20%
Percent of IT project activity type - Implementing (includes configuration) packaged software	7%

Nevada's PMO utilization and adherence to standard methods



Best Practice - All large scale projects are controlled by a PMO

■ State of Nevada

Project delivery practices

Project Delivery Practice Questions	State of Nevada
When projects or programs are reviewed for benefit realization, which organization is accountable for executing?	IT, Business
To what degree is a centralized project repository established, utilized and maintained to capture and access all project related deliverables and work products throughout the project life cycle?	Medium
To what extent are common project naming conventions established and utilized for all project-related documents, work products, files, directories, and code structures?	Medium
What best describes your approach to defining business requirements?	Technology organization develops and documents requirements from interviews, workshops etc involving the business organization
How involved are ALL stakeholders in the testing process?	Medium

Project delivery results

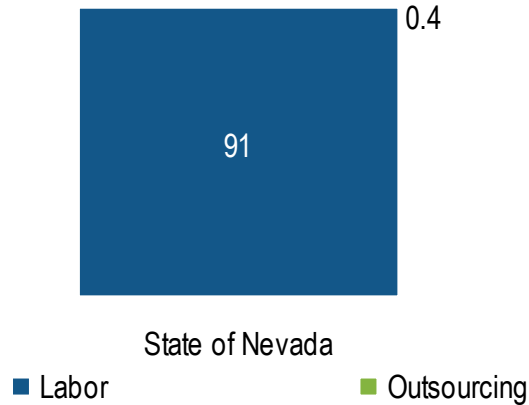
State of Nevada Project Related Information

Business Case and Benefit Realization	State of Nevada
What percent of projects deliver anticipated benefits?	83%
What percent of development projects have formal business cases/cost-benefit analyses?	42%
Upon completion, are projects/ programs reviewed to validate the original business case (both costs and benefits) and lessons learned fed back to improve methodologies and tools?	Low

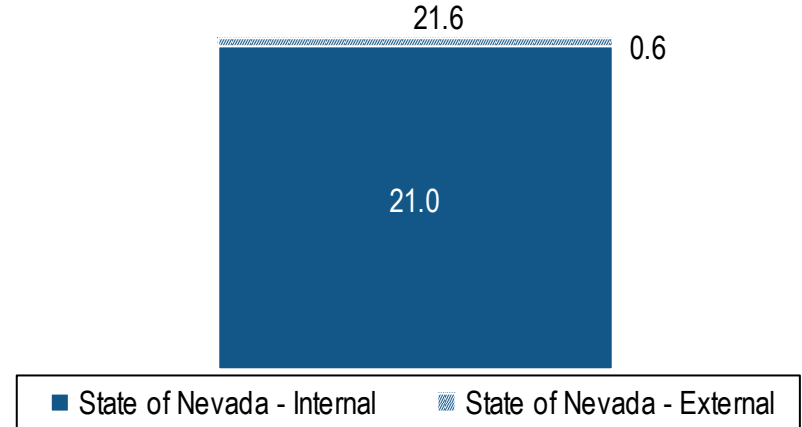
Percentage allocation relative to ROI for the completed projects	State of Nevada
Meeting ROI	23%
Missing ROI	1%
ROI Not Tracked	64%

Quality Assurance

Quality Assurance Process Cost (\$ per EUE



Quality Assurance FTEs at State of Nevada's EUEs



Practice Questions	State of Nevada
Is a QA organization established to manage and monitor quality standards, procedures and integrated testing for all systems changes eventually affecting the production environment?	Low
To what extent is there a formal environment established to support the Change Management process?	Ad hoc & loose
To what degree does everyone follow the change control process?	Medium

Practice Questions	State of Nevada
To what extent are changes managed and tracked within a formal Change Management system?	Medium
How often do change review meetings occur?	Ad hoc
To what extent are changes opened/approved/closed online?	Medium

Performance Driver Analysis

- FTEs and Costs
- Design
- Build
- Run
 - Infrastructure Management
 - End User Support
 - Application Maintenance
 - Risk Management
 - Technology
 - Other
- Manage



Infrastructure Management practices

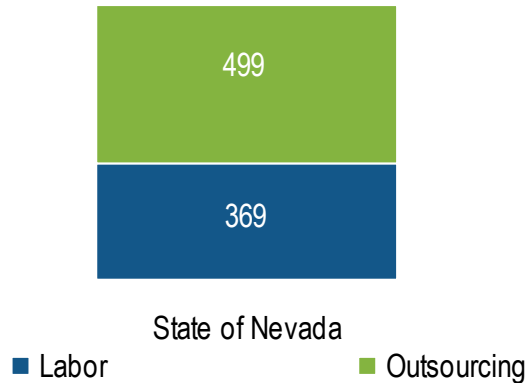
Technology Infrastructure Practice Questions	State of Nevada
To what degree is there a single point of accountability (process owner) for security management?	Medium
To what degree is role based security implemented throughout the enterprise?	None
How many security breaches were detected for any unauthorized/improper access during the benchmark period?	Zero instances
What impact did security breaches have on the daily operations?	None
To what extent is your Disaster Recovery plan formally documented?	Low
When was the last time the Disaster Recovery plan was tested?	Greater than 24 months
How successful was the most recent test of the Disaster Recovery plan?	Several problems but testing was completed
Do you have a backup site?	Yes

IT Services Management Methodology utilization

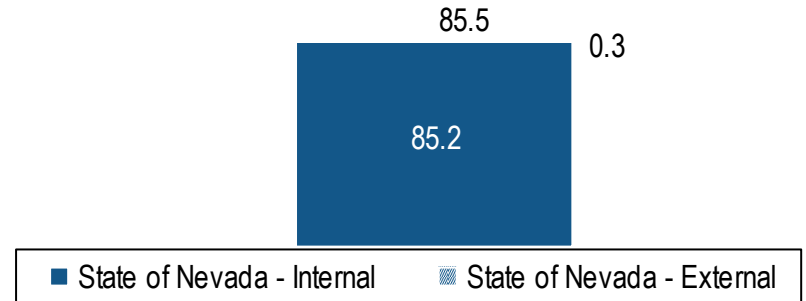
Level of Implementation	State of Nevada
Service Level Management	Yes
Capacity Management	No
IT Service Continuity Management	Yes
Availability Management	No
Financial Management	No
Service Desk	No
Problem Management	No
Configuration Management	No
Change Management	No
Release Management	No
Security Management	No
IT and Telecoms Infrastructure Management	Yes
Application Management	Yes
Business Continuity Management	Yes
Surviving change	No
Business transformation	No
Partnership and outsourcing	No

Similar to other states, Nevada's Infrastructure Management process is impacted by complexity as a result of the decentralized agency structure

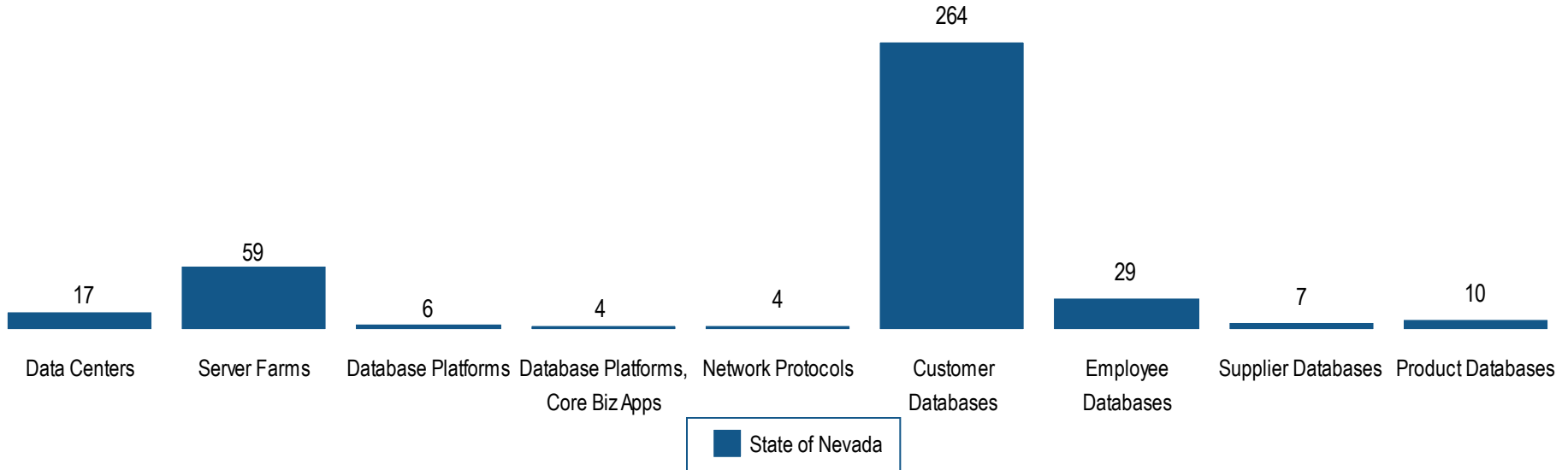
Infrastructure Management Process Cost (\$) per EUE



Infrastructure Management FTEs at State of Nevada's EUEs

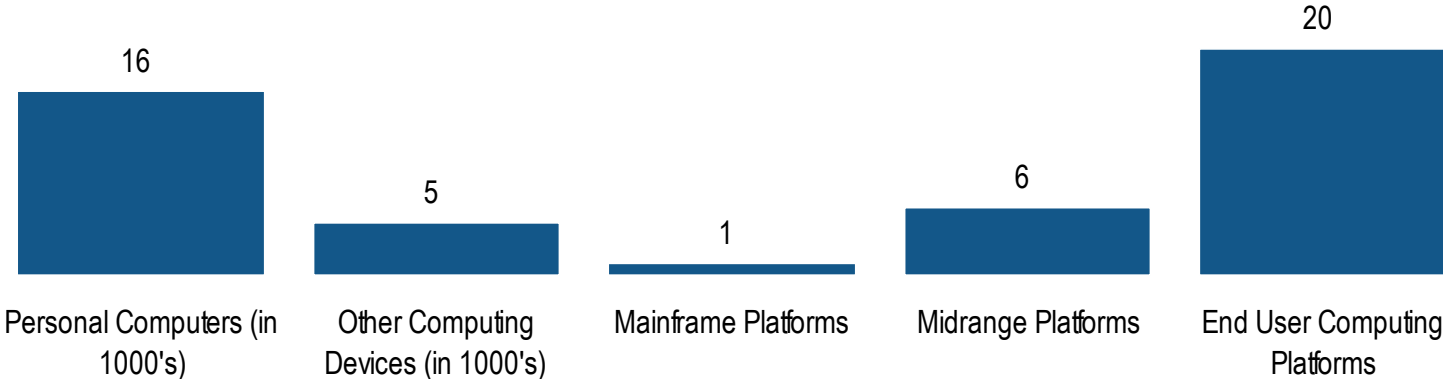


Infrastructure Volumes at State of Nevada's EUEs

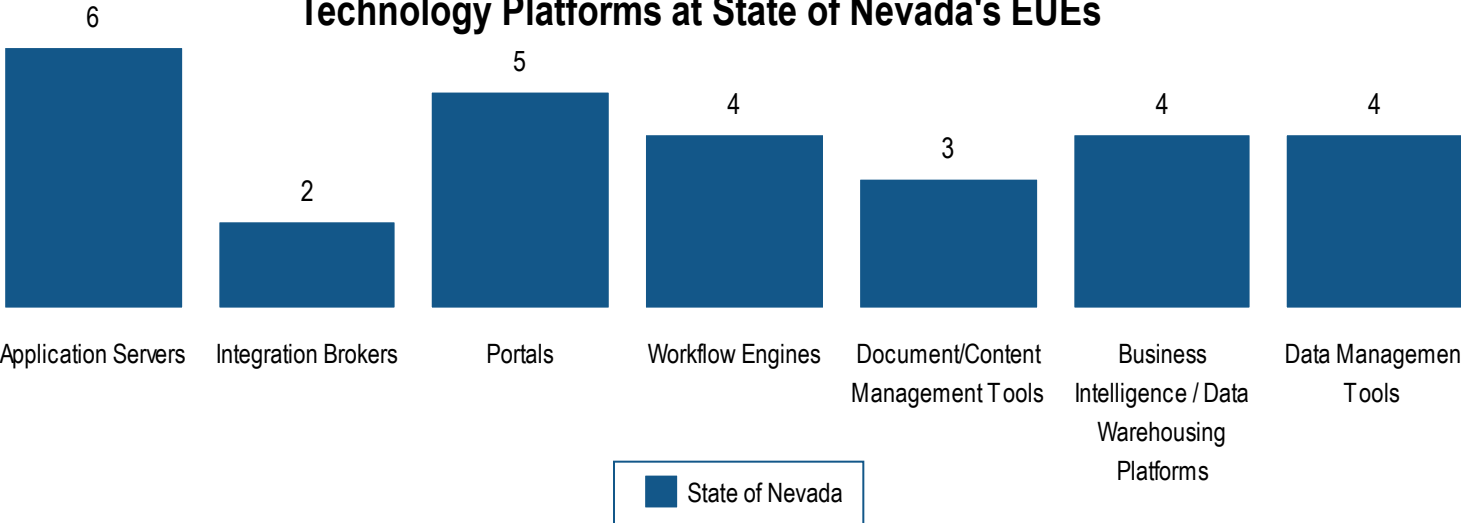


Other technology platform and hardware device volumes

Hardware Devices and Platforms at State of Nevada's EUEs

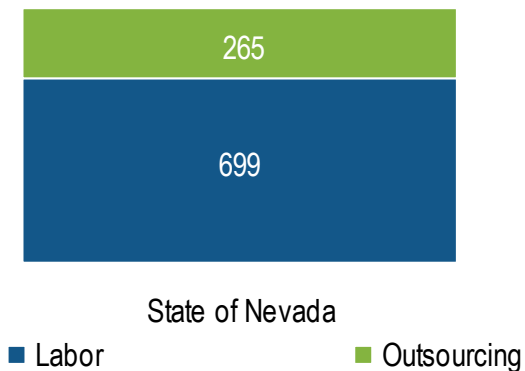


Technology Platforms at State of Nevada's EUEs

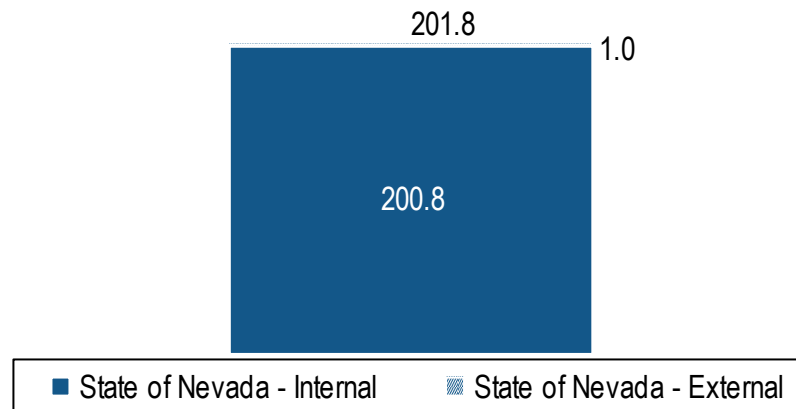


Nevada's End User Support process costs are high as a result of fragmentation

End User Support Process Cost (\$) per EUE



End User Support FTEs at State of Nevada's EUEs

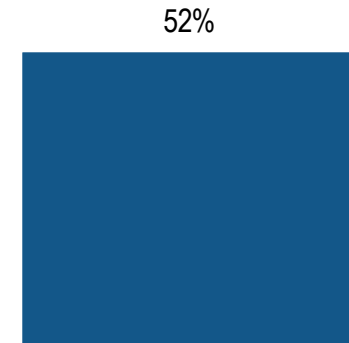


	State of Nevada
How is your help desk organized	De-centralized for the State
What is the help desk's primary objective	First contact
Target % for first call resolution	54%

Nevada supports a high volume of help desk requests with low first contact resolution rates

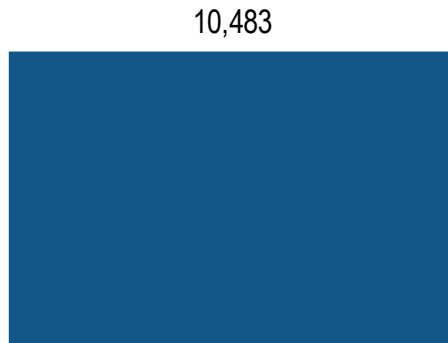
Regions Supported	State of Nevada
North America	Yes
Europe	No
APAC	No
Other	No
Hours of Operation	Other

% of First Contact Resolution



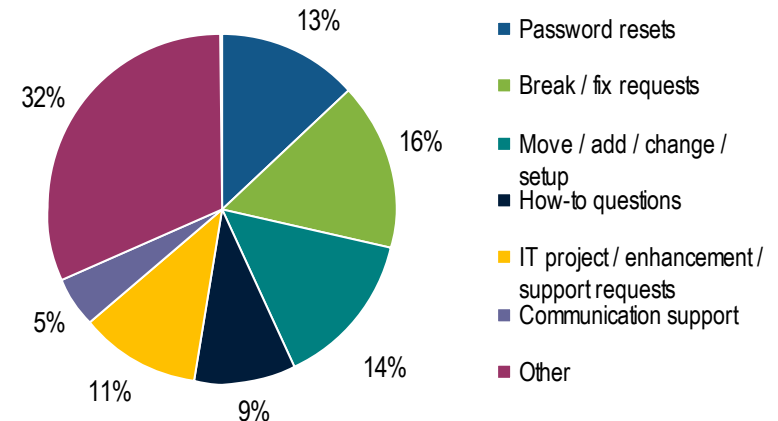
State of Nevada

Help Desk Requests per Thousand EUEs



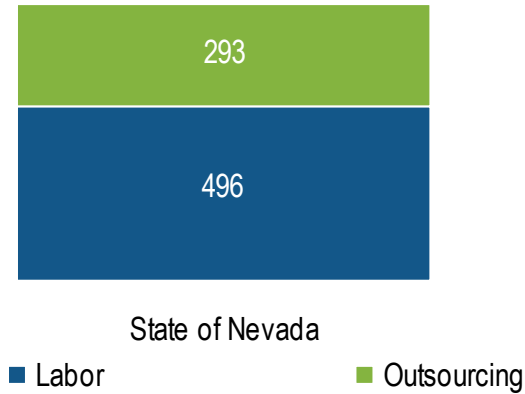
State of Nevada

Help Desk Request Distribution

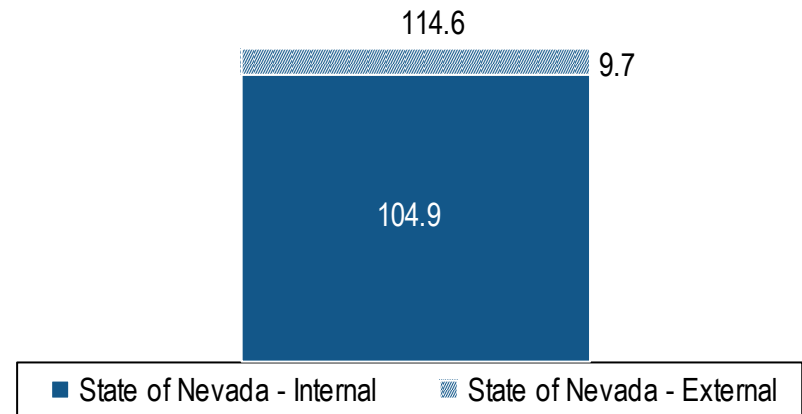


Application Maintenance and End User training

Application Maintenance Process Cost (\$) per EUE



Application Maintenance FTEs at State of Nevada's EUEs



End User Training

	State of Nevada
End user training requirements	Ad hoc and loose
How is training compliance monitored	Not monitored
Extent a formal set of end user training offerings exists	No formal set exists, Limited
# of training hours required annually per employee	1.50
How often are training requirements updated	As needed
Who determines/defines training requirements	IT partnering with the other functional areas
Degree training requirements satisfied internally	Medium
Extent training is being supported through self-service	Medium
Extent training is supported with commercially developed products versus in-house developed	Low

Application volumes

Applications seem understated

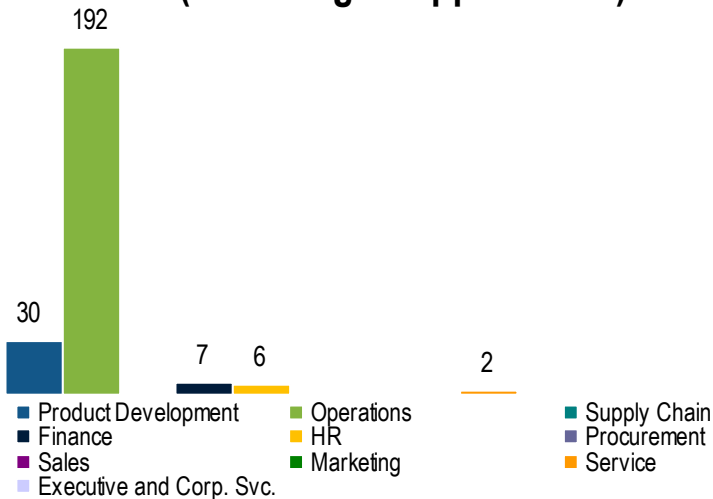
Number of Applications Supported per 1,000 EUEs



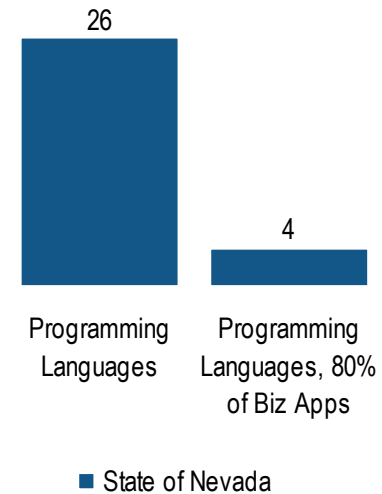
Applications Breakdown by Type

	State of Nevada
Primary business application suite vendor	Other
Primary business application suite modules	24
Secondary business application vendor	Not Applicable
Secondary business application modules	6
Productivity applications	22
Collaboration tools	4
Domain specific or Best of breed applications	23
Custom applications	184
BI applications	16
Total	279

Application Breakdown by Function (excluding BI Applications)



Programming Languages

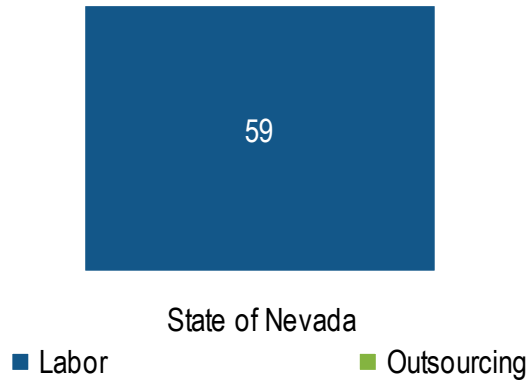


Application Maintenance practices

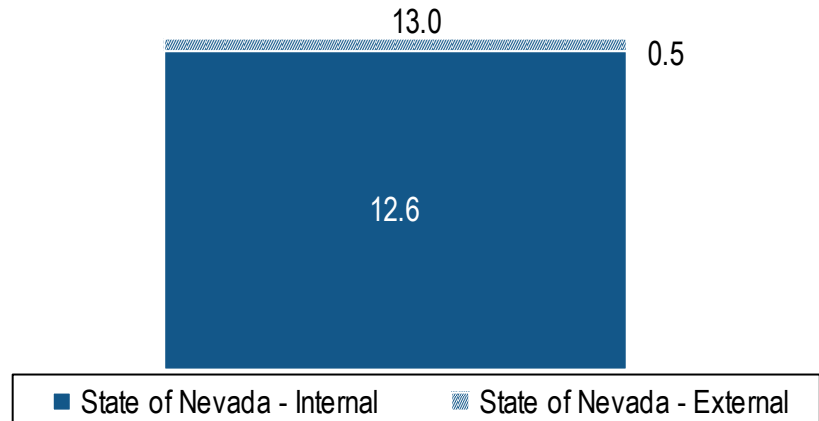
Application Management Practice Questions	State of Nevada
Which organization maintains ownership of tier 1 business application support?	Business
To what degree is a single centralized system used to track requests, provide status to business and IT staff, and capture data on the demand management process?	Low
To what extent are estimating tools and models used to understand, define and validate assumptions for in-coming requests?	Low
Do you have a global single license agreement for your primary business application suite? <i>Nevada owns Advantage – no maintenance agreement with AMS vendor</i>	No
What are the characteristics of your primary ERP suite - Number of versions	2
What is the maturity of your primary business application?	Single ERP / Multiple instances
Are you currently on vendor maintenance or support for your primary business application suite?	No
To what degree does your development organization use a formal application development methodology and toolset?	Medium

Risk Management

Risk Management Process Cost (\$) per EUE



Risk Management FTEs at State of Nevada's EUEs

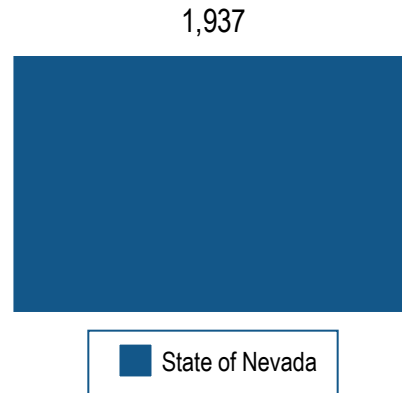


Practice Questions	State of Nevada
To what degree is there a single point of accountability (process owner) for audit & compliance management?	Medium
What percentage of the audits fail?	Low

Practice Questions	State of Nevada
Who is responsible for performing audit reviews?	External Audit
With what frequency does Audit perform a periodic review for security and information access risk?	Annually
Do you have a Chief Security Officer ? <i>Nevada has ISO</i>	Yes

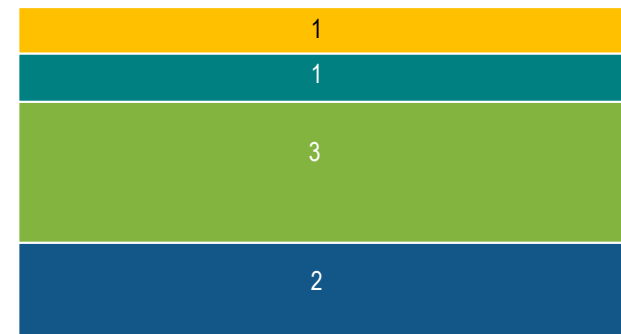
State of Nevada's IT technology investment

Technology Cost (\$) per EUE



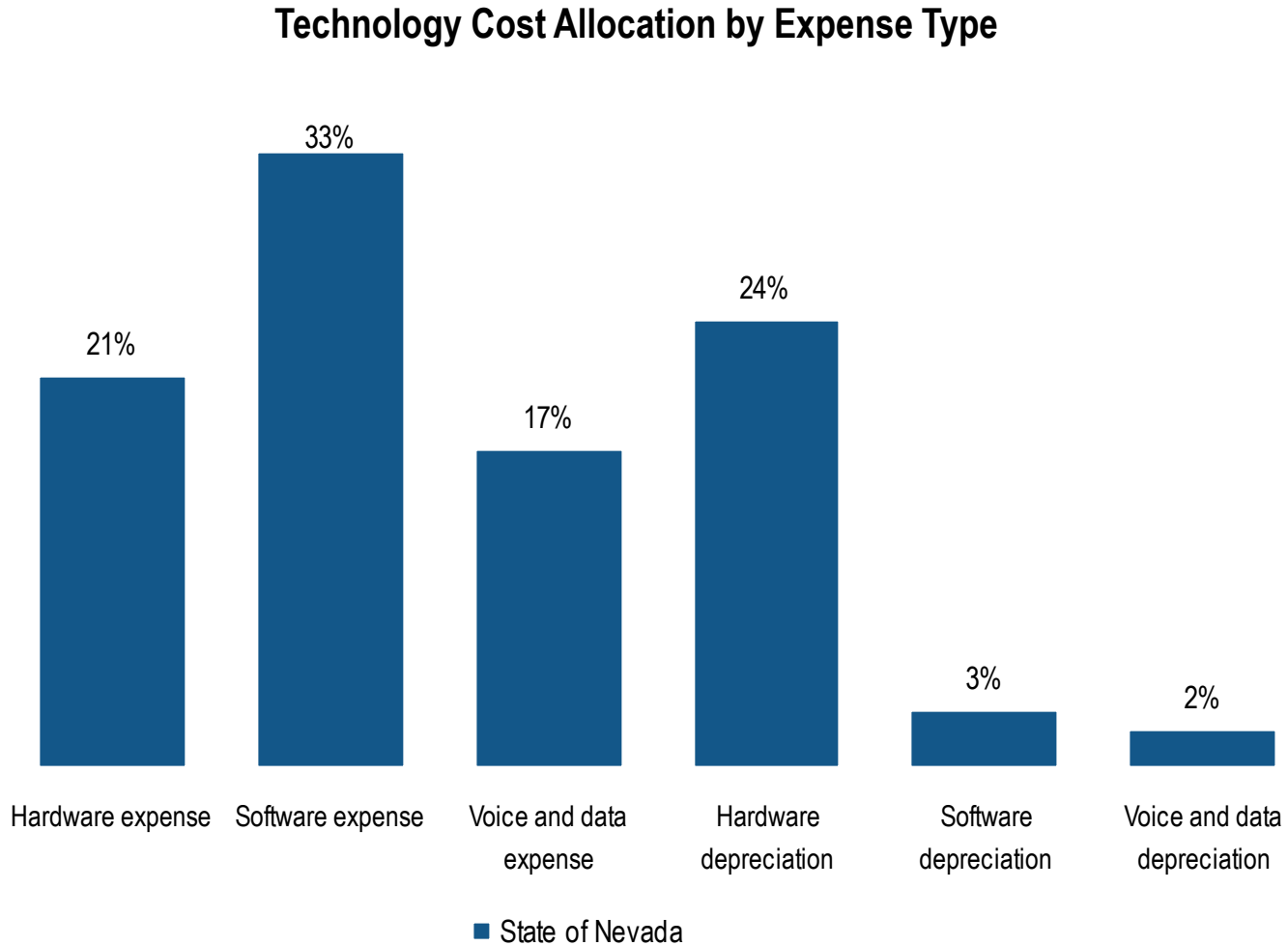
	State of Nevada
Primary database platform	Oracle
% of business applications using primary database	50%
# databases supporting core business applications	4

Development Platforms Being Supported



State of Nevada
 ■ J2EE/Java ■ .NET ■ 3 GLs ■ 4 GLs ■ OpenSource

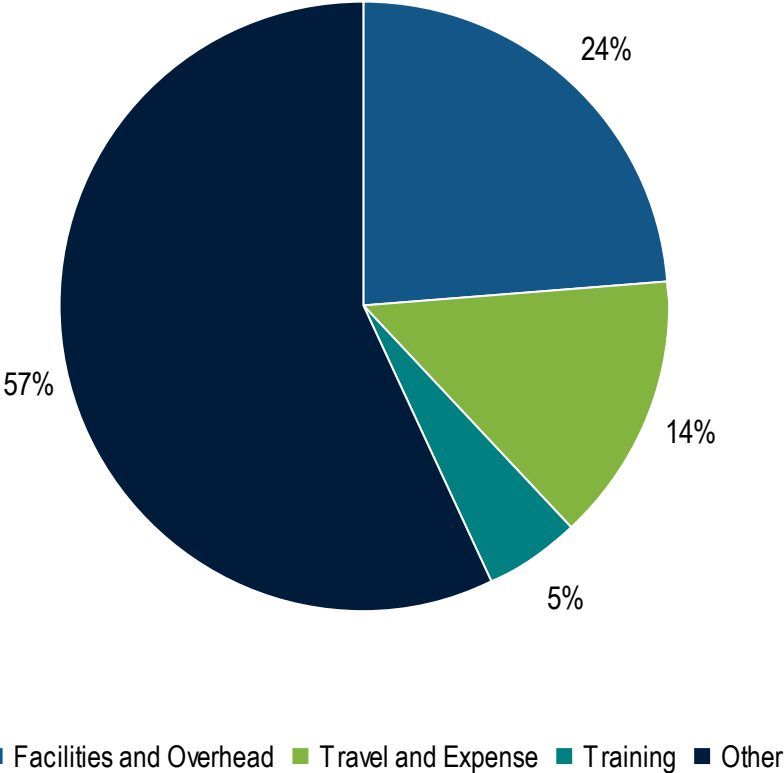
Technology cost allocation breakdown



State of Nevada's Other Costs

IT Other Cost Distribution

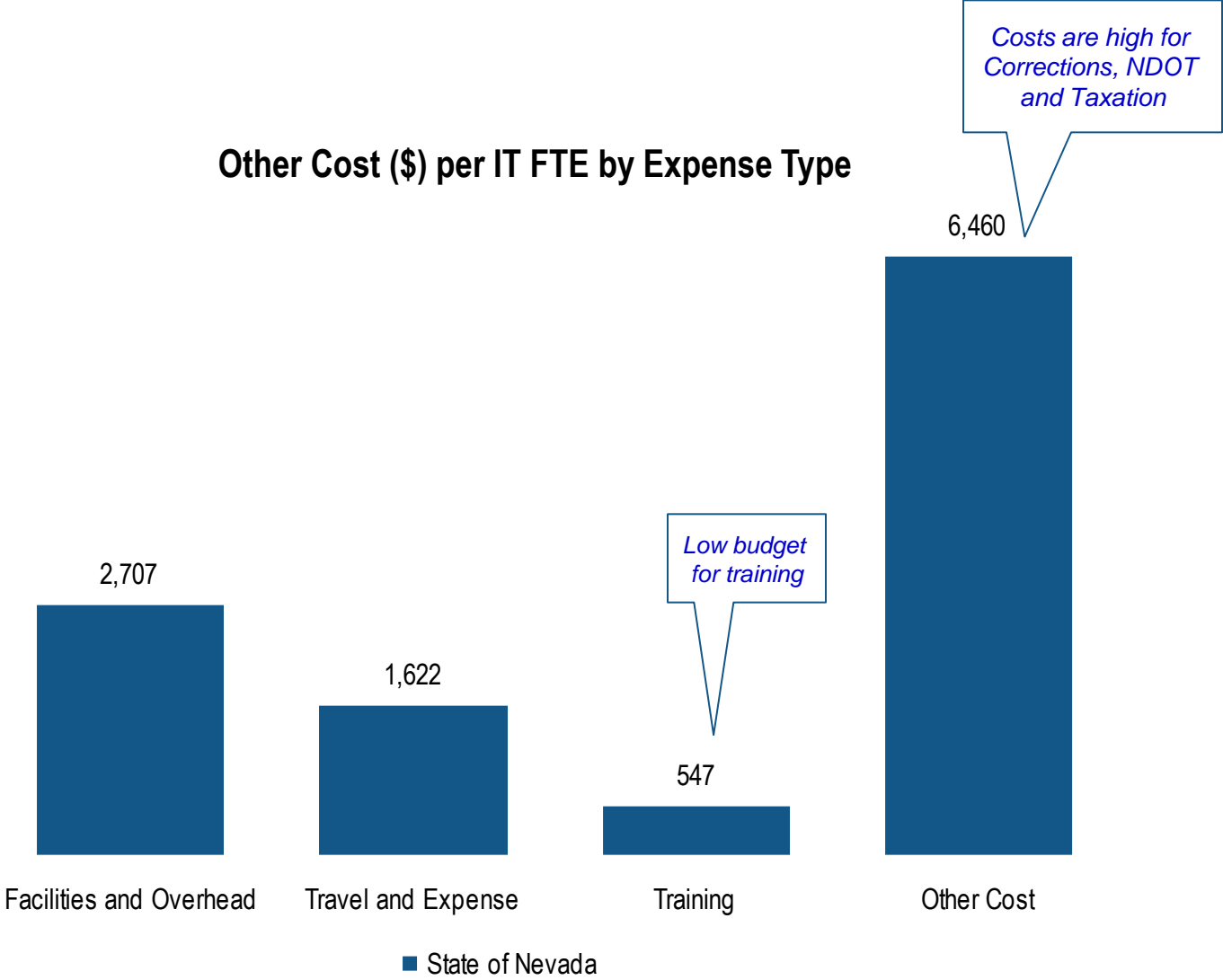
Other Cost - \$7,870,406



Other Cost (\$) per EUE



State of Nevada's other cost components



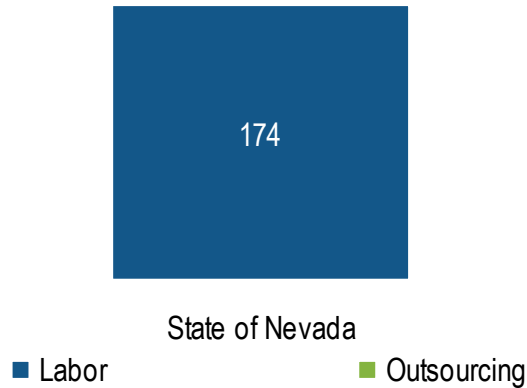
Performance Driver Analysis

- FTEs and Costs
- Design
- Build
- Run
- Manage
 - IT Management & Administration

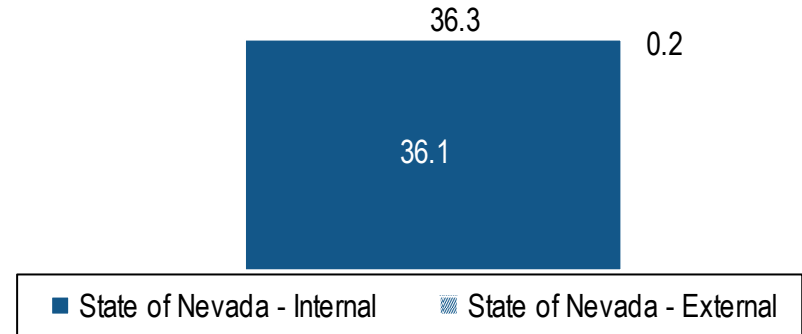


IT Management and Administration

IT Management & Administration Process Cost (\$) per EUE



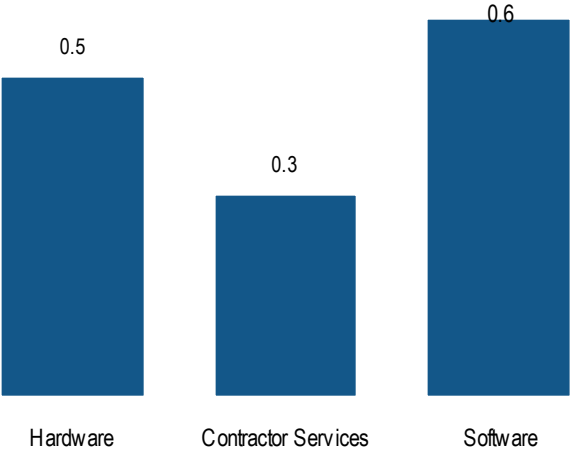
IT Management & Administration FTEs at State of Nevada's EUEs



Practice Questions	State of Nevada
To what degree does an IT strategy exist?	Ad hoc and loose
How often is the IT Strategy Updated?	Upon request <i>or every 2 yrs</i>
How often are IT executives engaged in business strategy discussions and decisions?	Often
To what degree are the IT planning and budgeting processes aligned?	High
To whom does the CIO report?	Reports to Governor, Accountable to CFO
Is your CIO a member of the company's Senior Executive Committee?	Yes
What percent of the total IT budget is controlled by the most senior IT executive?	19%

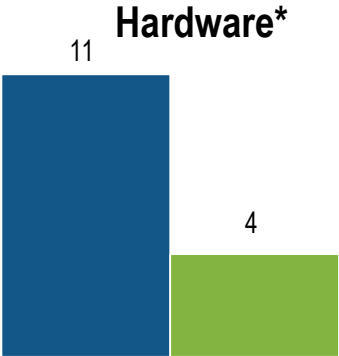
Nevada has reported very few suppliers

Number of Suppliers per 1,000 EUEs

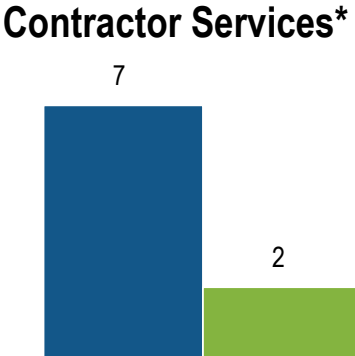


■ State of Nevada

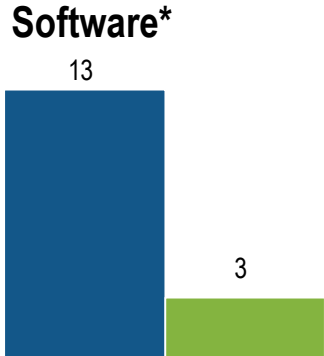
	State of Nevada
Degree of adherence to the preferred vendor list	Often
What percent of the IT spend/purchase activities is influenced/managed using a formal procurement organization	90%
To what extent are cost reductions and the utilization of gain sharing agreements used with suppliers	Never
Included in physical asset database – End user devices	95%
Included in physical asset database – Infrastructure devices	90%



State of Nevada



State of Nevada



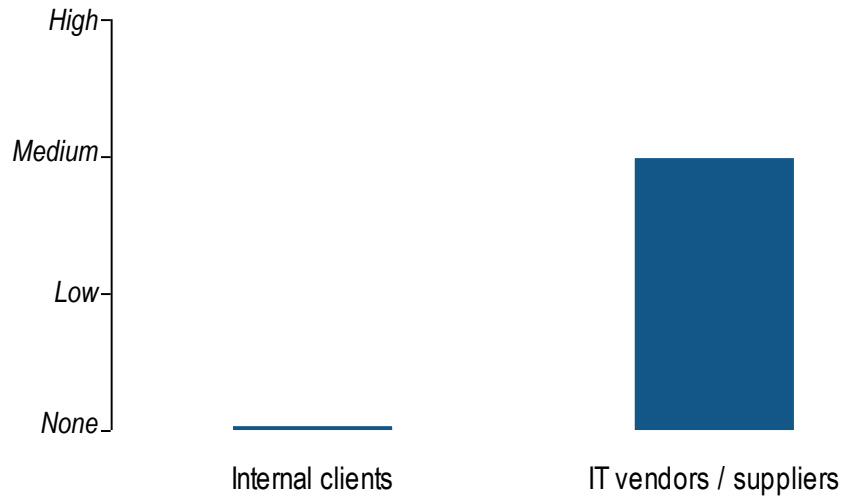
State of Nevada

* Values are reconciled, not normalized calculations

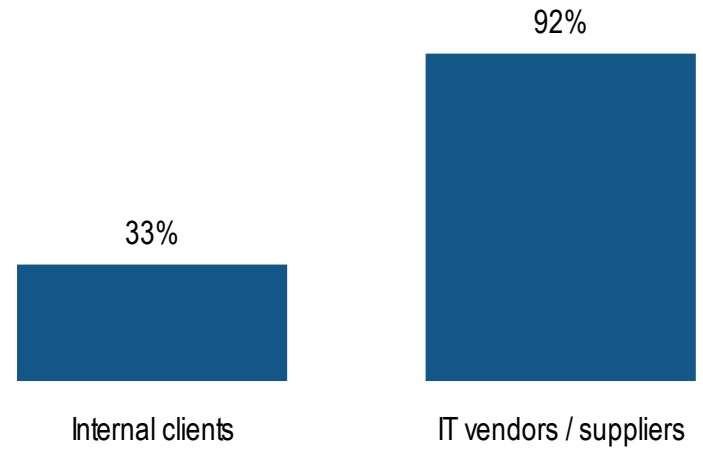
■ Number of Suppliers ■ Suppliers representing 80% of Spend

Service Level Agreements (SLAs) for Nevada are established by agency, there are no state-wide SLAs

Existence of Formal SLAs



Percent of SLAs Being Met



■ State of Nevada

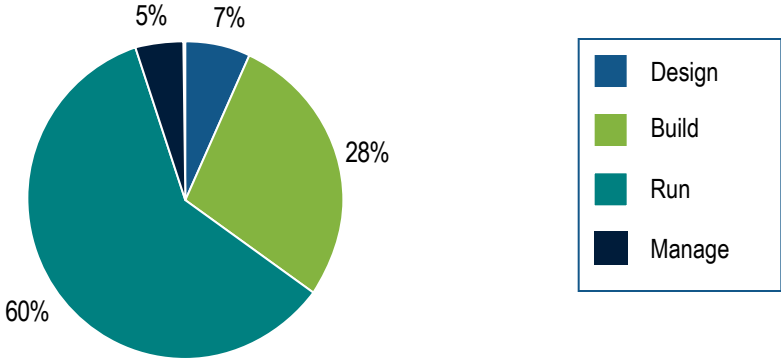
People / Organization



Resource allocation and staff mix

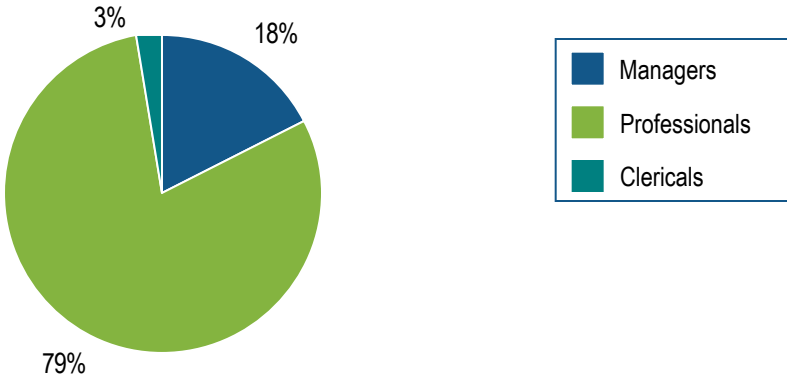
IT Resource Allocation

State of Nevada



Staff Mix

State of Nevada



Staff mix per process - Design

IT Business Planning



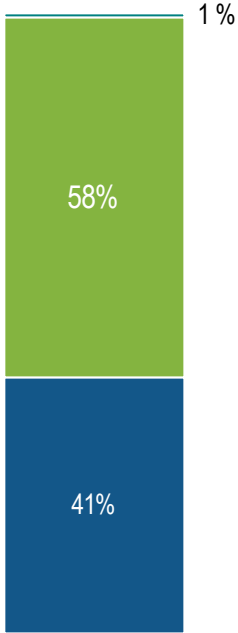
State of Nevada

Enterprise Architecture Planning



State of Nevada

Emerging Technologies

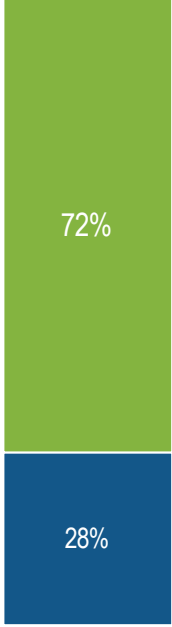


State of Nevada

■ Manager ■ Professional ■ Clerical

Staff mix per process - Build

Infrastructure Development



State of Nevada

Application Development and Implementation



State of Nevada

Quality Assurance



State of Nevada

■ Manager

■ Professional

■ Clerical

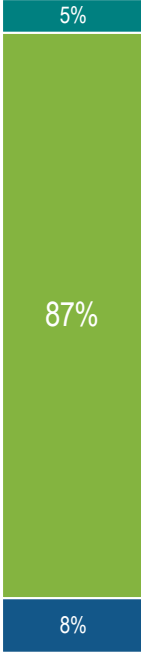
Staff mix per process – Run and Manage

Infrastructure Management



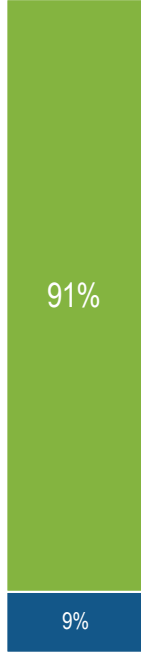
State of Nevada

End user Support



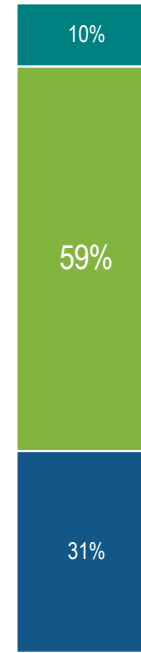
State of Nevada

Application Maintenance



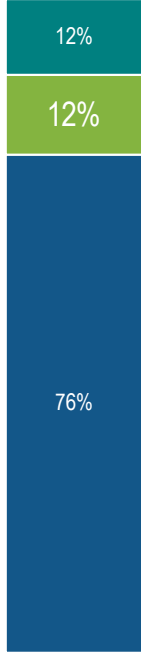
State of Nevada

Risk Management



State of Nevada

Function Management



State of Nevada

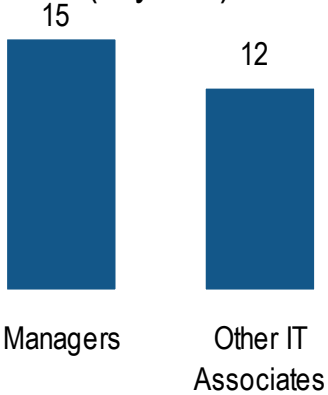
■ Manager

■ Professional

■ Clerical

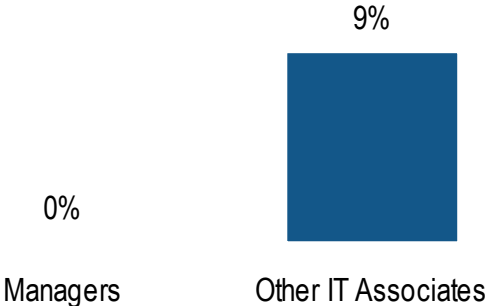
IT staff experience and turnover

Average Tenure (in years)

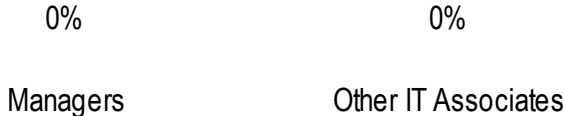


State of Nevada

Voluntary Turnover



Involuntary Turnover



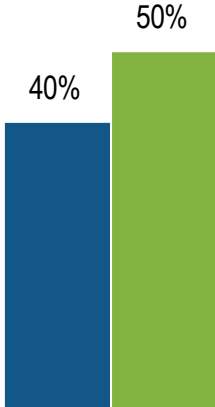
Education of the IT staff

Certifications



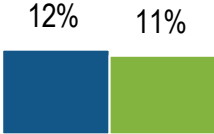
State of Nevada

College Degrees



State of Nevada

Advanced Degrees

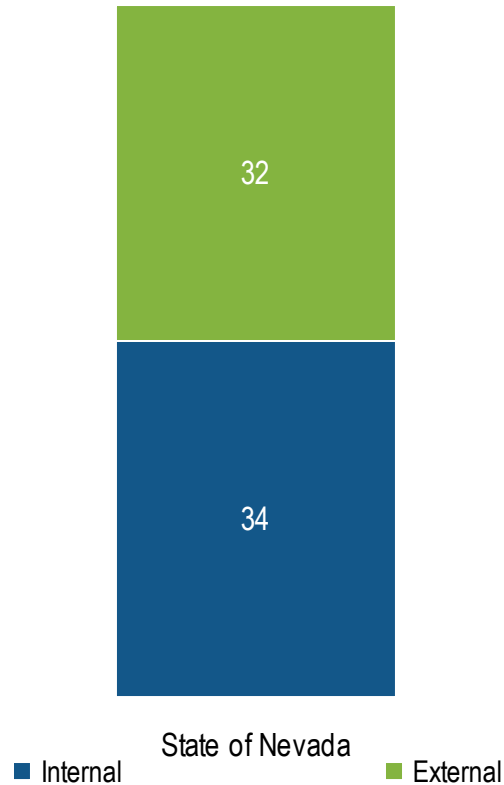


State of Nevada



IT training hours

Annual Training Hours per IT FTE
(Internal + External Training)



IT personnel management practice questions

IT Personnel Management Practice Questions	State of Nevada
To what extent does a formal training program exist for the IT staff - Management staff	None
To what extent does a formal training program exist for the IT staff - Professional staff	None
What percent of IT managers and professionals are routinely rotated through business operations positions as part of a formal career development program?	0%

Appendix

- Stakeholder Survey Results



Stakeholder Survey Results

- Participants' Demographics
- Baseline and Overall Findings
- Additional Stakeholder Comments

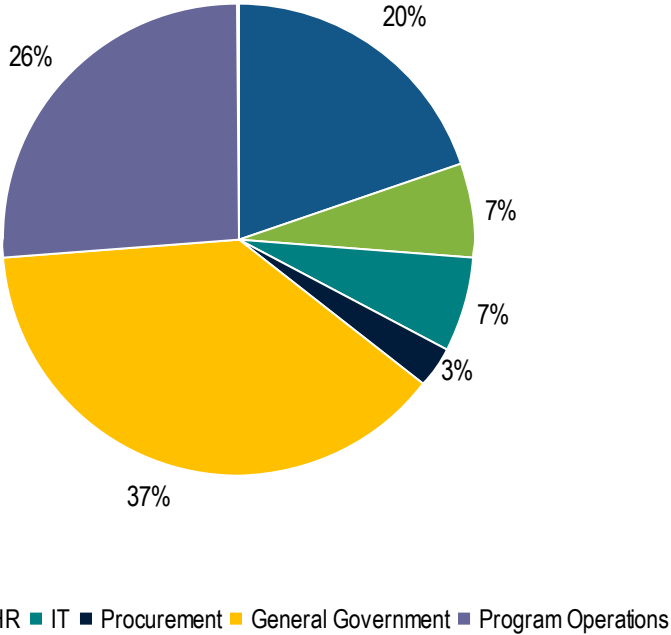
Participants' Demographics



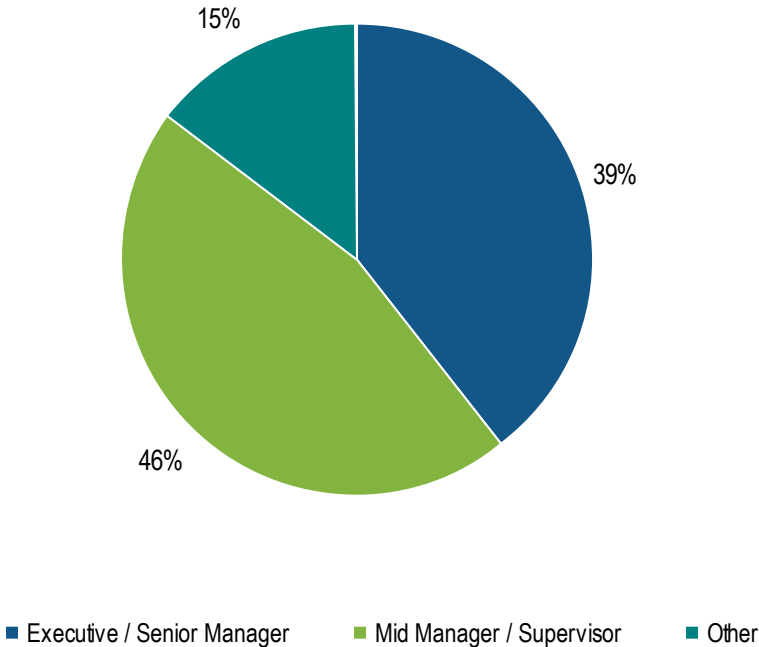
Survey response demographics

- The Stakeholder Survey was sent to 152 stakeholders
- 76 responses were received, representing a response rate of 50%

Respondents by Function

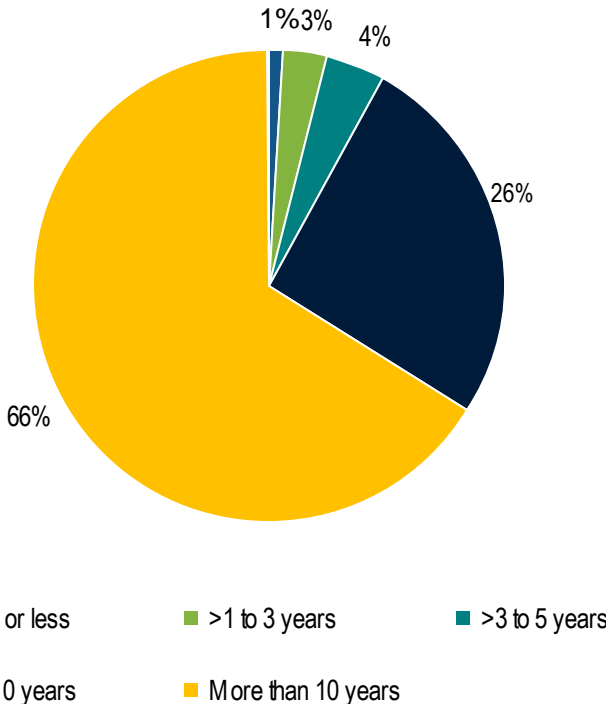


Level of Responsibility



Survey response demographics (con't.)

Respondents by Tenure with State



Baseline and Overall Findings



Stakeholders perceive the largest performance opportunity gap in Technology Infrastructure

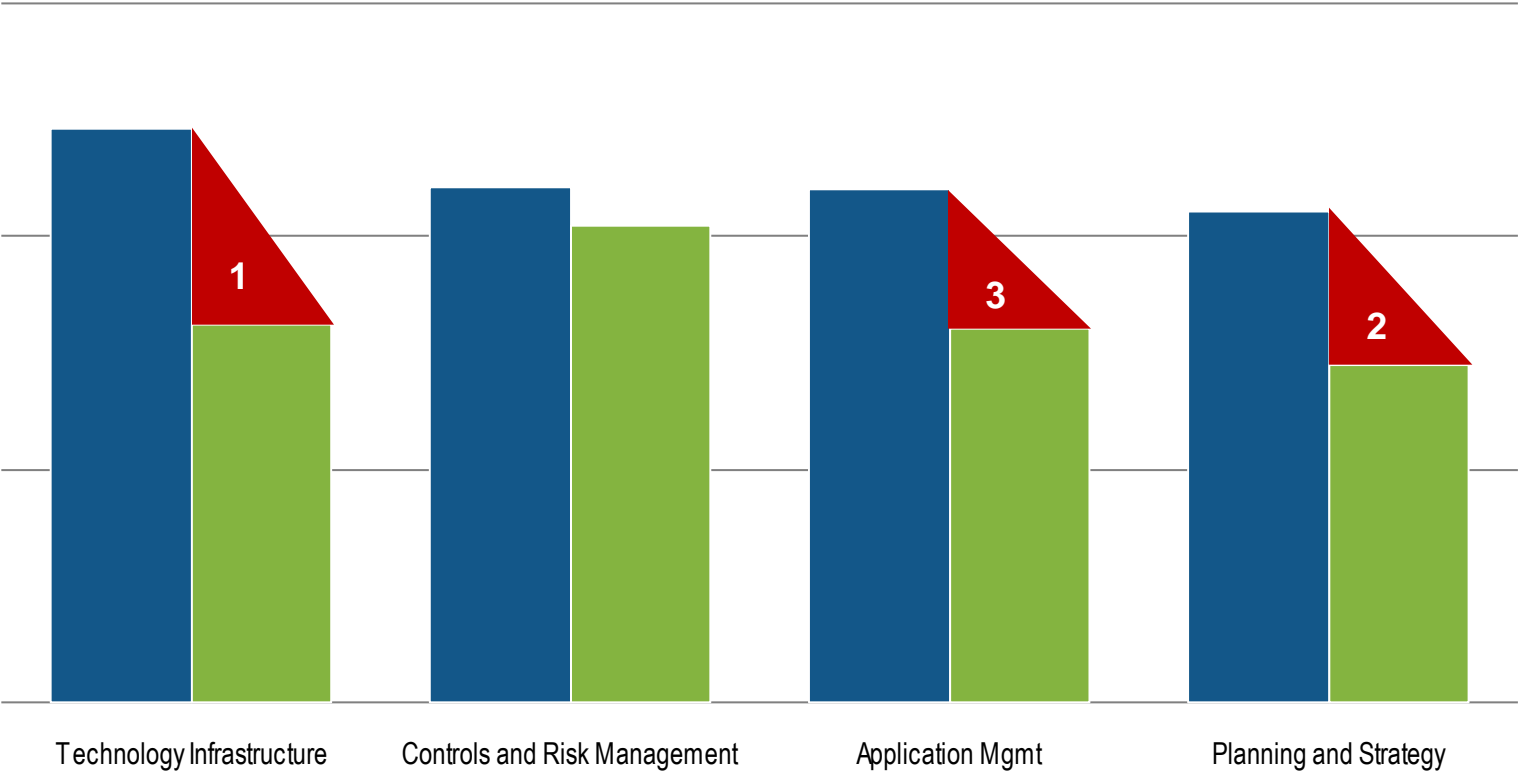
Importance & Effectiveness by Service Offering

Vital/Highly Important
Strong Performance,
Exceeds Expectations

Important
Average, Gets the
Job Done

Not Important
Falls Short of
Expectations

No Involvement
Needs Major
Improvement



Business strategy enablement – IT's role

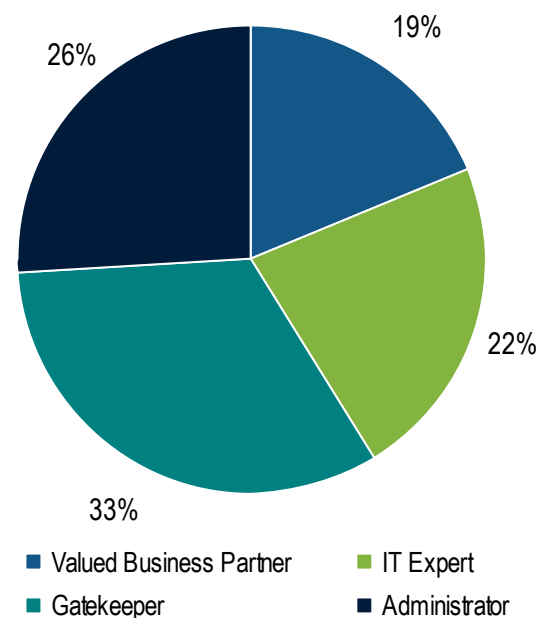
“Upper management needs to support IT staff 100% in the daily function / operation and emergency repairs to IT systems”

“Serve the people that pay for their services in a timely manner. It takes too long to get simple day-to-day items fulfilled”

“Provide a product that is more user friendly and obtain a system that can be better used for statistical data”

“Listen to the customers about their needs to improve program efficiency. Offer solutions and/or options to meet those needs. Understand the regulations, policies and procedures associated with the program (internal customer). Provide adequate resources to meet the needs of the customer”

IT's Role



Business strategy enablement – IT's involvement

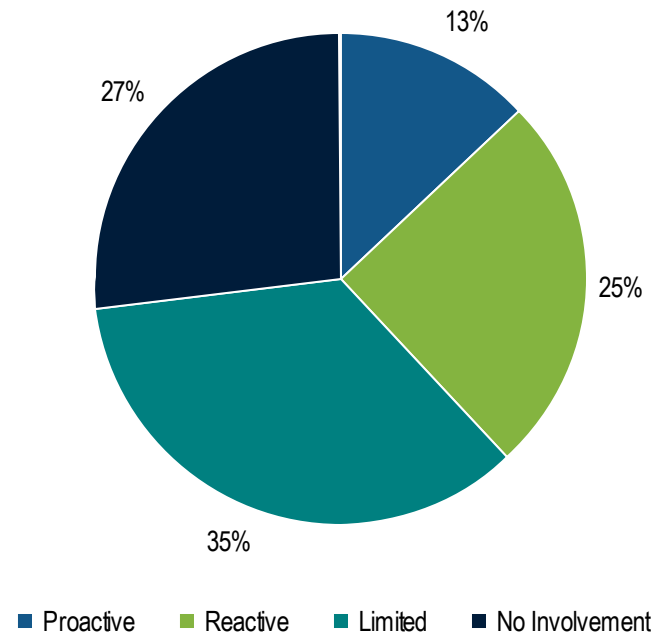
“The IT organization should make it a priority to know and understand each division's work program and strategic needs”

“Become proactive in improving the IT environment for DPS; don't wait for your customers to bring forth the improvement ideas”

“Involve more stakeholders in the decision-making process. While the stakeholders may not have all of the technical expertise of the IT staff, they may be able to offer suggestions and/or critiques of IT's proposed solution”

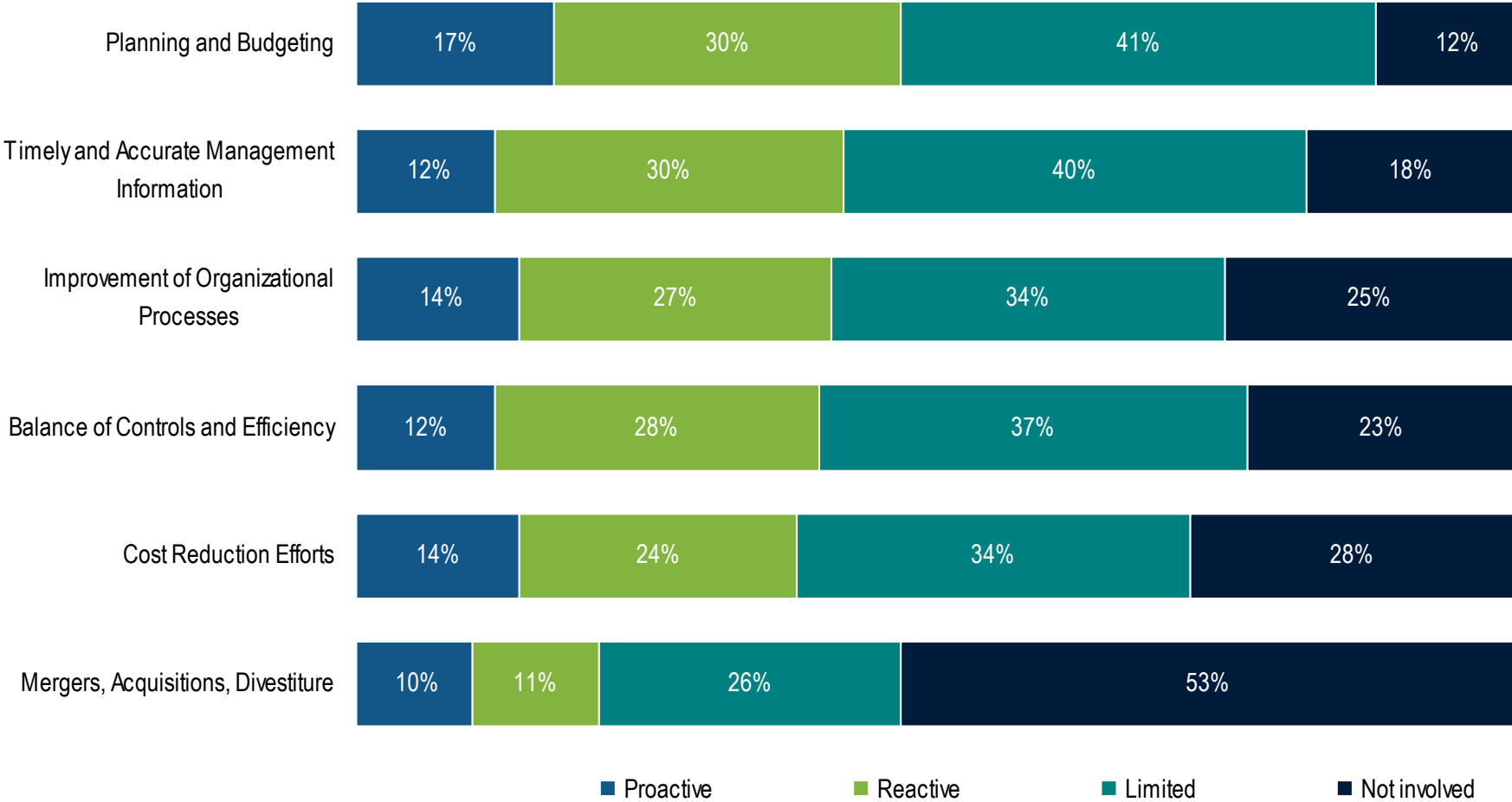
“Proactively interact with customers. Follow the customers' lead, provide some leadership focused on customer needs, or get out of the way”

IT's Involvement



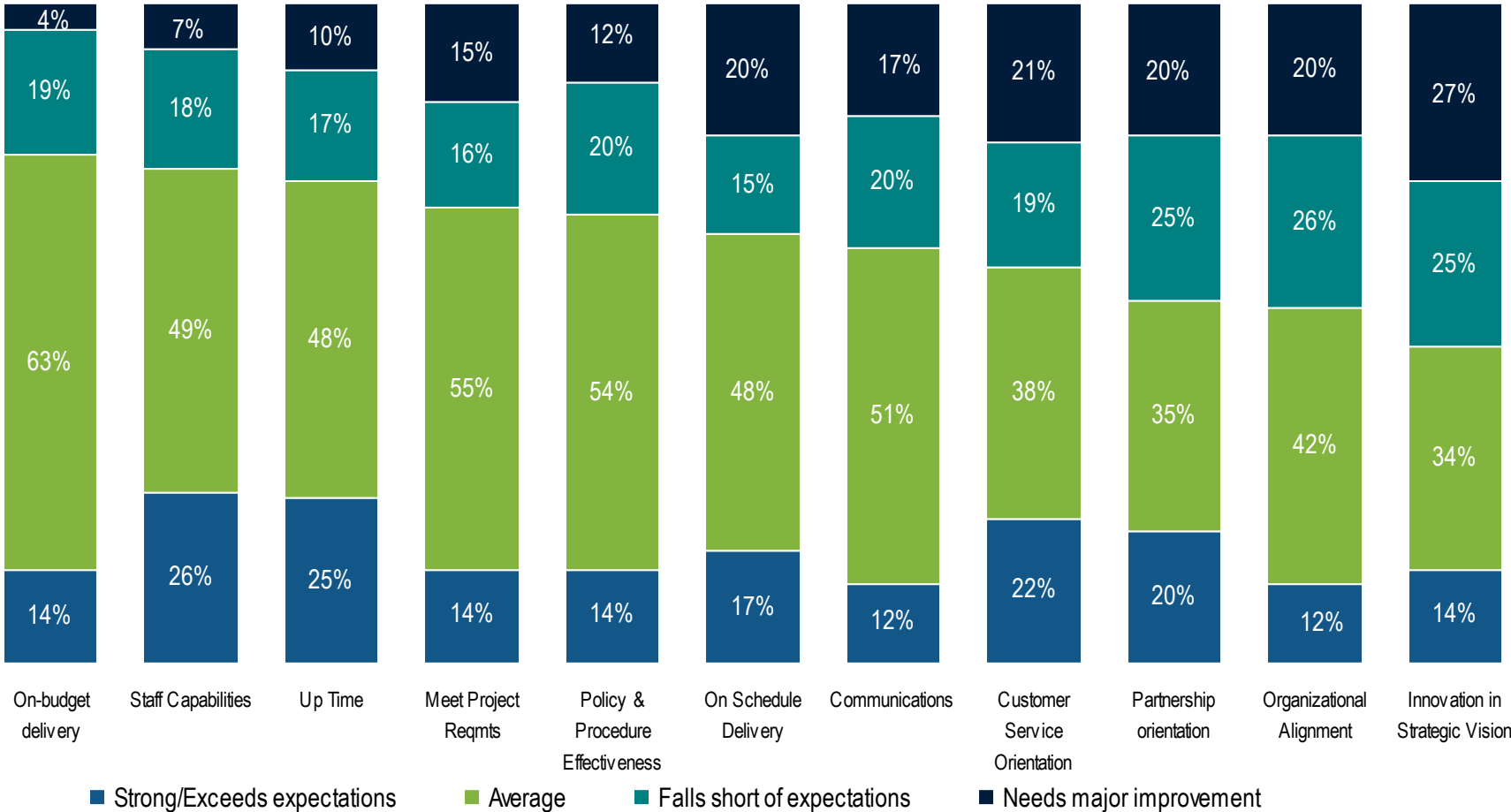
IT involvement in the business

Nature of IT's Involvement in Key Activities



Performance of Overall IT Organization

Performance of the IT Organization



Skills - Importance & effectiveness

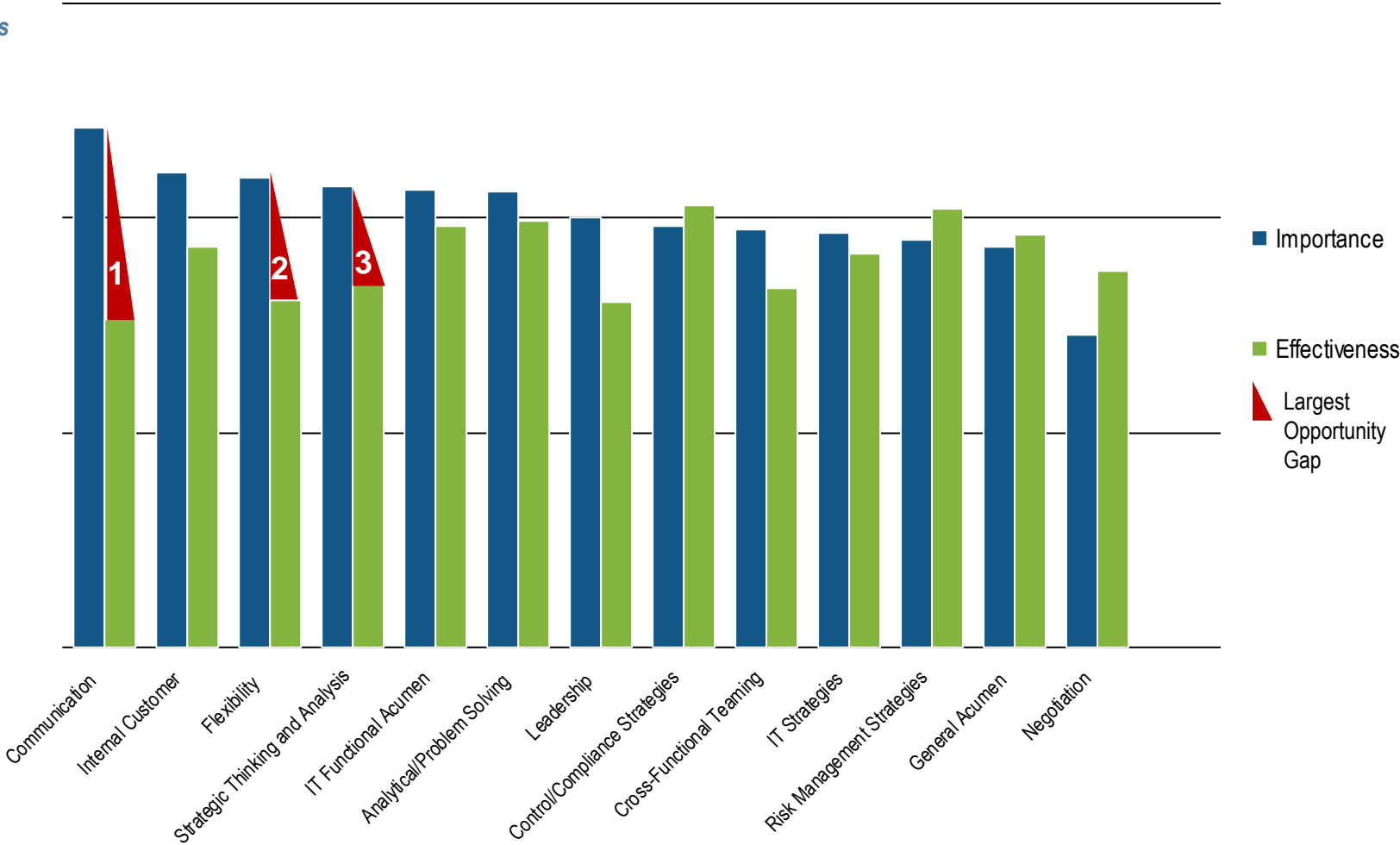
Importance & Effectiveness of IT Skills and Knowledge

*Vital/Highly Important
Strong Performance/
Exceeds Expectations*

*Important
Average/Gets Job
Done*

*Not Important
Falls Short of
Expectations*

*No Involvement
Needs Major
Improvement*



Additional Stakeholder Comments



Stakeholder suggestions/comments

To add value, Stakeholders believe IT should start:

- *Adding staff in critical areas such as applications development and project management. We have had to make due with missed delivery deadlines, project delays, and work-arounds because they don't have the staff to address all of our critical projects in a timely manner.*
- *Providing better estimates of time for implementation of new programs.*
- *Working on more user friendly systems.*
- *Responding to requests vs ignoring them. Communicating with staff and managers vs no interaction. Being proactive rather than reactive. Understanding the needs of the customer vs talking about the needs of IT.*
- *Programming that interfaces with local governments; applications knowledge and training for staff; strategic planning to help organization keep up; following through with budget*
- *Providing better customer service, more forward thinking, better planning and better leadership.*
- *Staying up on technology and utilizing current software and infrastructure technology.*
- *Communicating better what they're doing, who to go to for what services, and improving project management.*
- *Building their capacity to have more in house developers for new projects and enhancements. The state would be well served with much more custom apps, and there is little to no emphasis on cultivating and growing their own coding talent.*
- *Demonstrating that they are capable of delivering timely and effective enterprise solutions and offer these services at a competitive rate.*

Stakeholder suggestions/comments

To increase value, Stakeholders believe IT should stop:

- *Ignoring requests. Stating the importance of what IT is doing and trying to explain what IT is doing vs just producing the product.*
- *Relying wholly on web based work tickets.*
- *Isolating themselves from the customers they serve resulting in lack of communication / Spending more time telling customers what they cant do, instead of what they can do.*
- *Using antiquated rate models for their services or at least allow agencies to shop around for a more competitive product. Stop making enterprise wide decisions without input from the businesses you are supposed to be supporting.*
- *Operating isolated single agency developments that do not coordinate with the whole. Deny new requests to continue status quo.*
- *Basing the footprint and office space for each and every state building on providing an office workspace and desktop computer for the employee; instead think "mobile workforce", and move to apps and cloud systems. The state could save millions of dollars per year by allowing telecommuting and enabling specific personnel to work from home, car or from the field as their jobs allow.*

Stakeholder suggestions/comments

Additional Comments from Stakeholders

- *They are good people who want to do a good job. Unfortunately they are the victims of the state budget crisis just like the rest of the agencies. The State gets what it pays for in terms of technical skill sets and equipment.*
- *You need to utilize your resources at the division level to assist you with day-to-day tickets, like installing programs, setting up a new printer, giving people access to folders and calendars. Also you need to put all of the databases that are highly restrictive in their own server space made for only those users that use it and put everyone else in a less restrictive server set-up so we can operate like a normal business.*
- *The appearance is that either IT staff are either undertrained, or the department is understaffed, or IT is not interested in working with the customer. Basic communication (ie, here is what we can do and here is when it can be done by) would be helpful vs no communication whatsoever. There does not seem to be any management structure, leadership or direction in the IT Department. While individual IT staff are friendly and try to be helpful, the system is so fragmented or staff do not have the basic knowledge of the IT structure to actually provide assistance.*
- *Ratings reflect Department IT services, not services provided by EITS. Department IT services are functioning smoothly. We are opposed to plans by EITS to centralize IT staff/services since it would most likely increase costs, reduce services and be extremely disruptive.*
- *You are a customer service organization. If the customers are not happy, they will find ways to go elsewhere.*

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