

Call Center Technology Refresh  
Enterprise IT Management Initiatives  
Arizona  
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August 2012 – December 2015

Arizona Revised Statutes 41-712 and 41-713 established the requirement for the State to establish an enterprise telecommunications services program to support the voice and data requirements of most agencies, boards and commissions. In the spring of 2004, the Department of Administration (“ADOA”) established the Telecommunications Program Office (“TPO”) to manage the program and issued the solicitation that eventually lead to the award of a statewide telecommunications outsourcing contract to one vendor, and the creation of the Arizona Network or “AZNet” program. The TPO oversees the AZNet program and its contractors.

Arizona awarded the second AZNET Voice and Network Communications Services contract to Centurylink on March 9th 2012. The general scope of the award required full management of all in-scope voice services, network service, and a complete technology refresh (replacement) of all active voice devices, data routers (core and agency), core security, and LAN switches. Prior to technology refresh, Centurylink was required to maintain all legacy voice and network services that were in scope for each agency. A technology refresh plan was set forth and began months into the contract. All in scope devices were to receive one technology refresh during the life of the contract.

Within the call centers, all management and support of call centers are included in the scope of the project. This is a critical service to the state, and in most cases is the main conduit for constituents to contact the State and its agencies. The Arizona call centers under the AZNET contract include 254 total applications, located at 95 physical locations, spanning 24 Agencies, and supporting 3375 total agents. The call centers process in excess of 1.75 million inbound calls per month on everything from child and elder abuse to unemployment insurance.

The vision of the state’s leaders and the concept of the project was to refresh the technology and bring Arizona’s telecommunications, and call centers into the 21<sup>st</sup> century. The challenge was that the call centers were operating on multiple platforms across various agencies in a decentralized model. Prior to being able to put all of the call centers on a single platform, the data cores would have to be refreshed and bandwidth expanded to handle the call volume. However, the state’s leaders believed that the cost savings, the standardized engineering, and the increased security benefits that could be realized by bringing all of the state’s call centers to a single platform was worth the effort. For agencies that had existing ACD functions, there was a mixture of Cisco and Avaya systems. CenturyLink had to migrate those to the new Cisco version that was deployed statewide. At the direction of TPO, CenturyLink installed Cisco Unified Contact Center, (IPCC) in all three data centers – both Phoenix and the Tucson location. All call processing equipment is located on premise to provide the State with complete control upon contract termination and transition to the State from the vendor. There are no automated call distribution “ACD” services in the cloud.

The successful implementation of this project is a model for other municipalities to follow. The cost and resource savings allow Arizona’s leaders to devote efforts to other challenges and the call center agents and managers to effectively and efficiently carry out their work.

## **Concept**

Arizona was operating on antiquated call center technology that impacted the citizens from reaching the state. When the TPO started, agencies were utilizing multiple platforms to support their call centers. Each platform required different engineering specialties to manage and maintain. In order to fulfill the statutory mandate to manage statewide voice and network platform, the agency specific platforms had to be replaced with a statewide solution. A statewide solution would allow for holistic monitoring, centralization of management, preventative maintenance and patch installation, reduced hardware and software requirements, reduced staffing requirements, increased bandwidth to remote locations, and reduced cost to the state.

Once CenturyLink was awarded the contract in March of 2012, TPO began working with the vendor to develop a comprehensive state refresh plan. The refresh order was based on a risk assessment. Sites with end of life/end of support legacy equipment were prioritized higher. Sites that were comprised of critical missions (health, safety, and welfare) were refreshed earlier in the schedule. The committees remained in place and were used to confirm that the plans and prioritization of sites met the needs of the individual agencies. After the refreshes began and the major policy decisions had been made, the Executive Governance Committee was eventually replaced with a Steering Committee.

The refresh plan consisted of phases. All phases were managed by TPO through weekly refresh meetings. Communication with the agency began 10-12 weeks prior to start of the phase. Project managers were assigned per site/project. For each site, there was a site readiness project manager and a refresh team project manager.

The first phase was the Site Readiness Phase. During this planning phase, the site completes readiness planning including a detailed site survey. The following items were reviewed during site surveys:

- A site's cabling infrastructure and rack space for the AZNet devices;
- An inventory of the power and battery backups including UPS/Surge protection to ensure adequate power;
- A needs assessment of carrier and bandwidth usage, allowing for scalability and growth, ensured that the agency would have ample bandwidth for both voice and network services;
- Grounding of electrical connections to electrical codes and best practices;
- HVAC assessment. An ambient temperature of 80 degrees for the equipment was recommended;
- Cable drop per install point/handset;
- Computer readiness and End User support assessment, to support the call center software; and
- Asbestos testing and if necessary remediation.

The agency was responsible to resolve any issue that was not adequate prior to continuing with phases. Once all issues were resolved, the project manager assigned would work with the site contact to determine timeframes for the next phase.

The Network Refresh Phase and Voice Refresh Phases are where the actual implementation occurred. Typically, refresh of network and voice, may be completed in tandem or separate depending on size of the site. While the refreshes may occur at the same time, the network refresh had to be completed prior to the voice to ensure that the Voice Over Internet Protocol (VOIP) had a stable network. In addition, the voice services were integrated with a single voice mail platform that fully integrates with the agencies' current e-mail and voice mail environments.

During voice refresh, the ACD/IVR (Interactive Voice Response) Migration Phase was completed, and it included the following steps:

1. IVR/ACD Site Survey
2. Call Flow Review
3. Scope and Design sign-off
4. Application testing
5. Cutover
6. Sign-off

The Documentation and Validation Phase was the final phase. During this phase, the engineering and documentation of each project was thoroughly reviewed and validated by TPO. All documents are stored in a SharePoint site with the vendor, TPO, and each agency having access. Agency access is limited to viewing their specific agency documentation only.

The reason this initiative was needed was to provide enterprise-wide system management. This would allow for centralization of management and monitoring, reduce rework, allow for enterprise-wide patch and preventative maintenance, decreased hardware/software, staff reduction, decreased cost, and increased bandwidth at remote sites. Having each agency support their own infrastructure was not cost effective. It required each agency to have network engineers and specialist on staff. Having different platforms prevented the state's systems from being able to interact and required individual repairs and maintenance. Having a single platform allows the agents to transition from one call center to the next with minimal on-boarding or training.

The solution was selected prior to the vendor being awarded a contract. TPO brought the agencies together to discuss their individual needs and functionality desires. A nationally recognized telecommunications consultant was hired to help the state identify current deficiencies and best in class technology available. An Executive Governance committee comprised of agency directors was established to provide policy-making decisions. An Oversight committee comprised of technical advisors was created to provide technical direction. These two committees had representation from the "Flagship" agencies (the top 5 largest agencies), a "90/10" representative (90/10 agencies are smaller in nature and funded 90% by licensing fees collected and 10% by state general fund), and various other mid-size agencies. Together with the

telecommunications consultant and the TPO, they developed a Request for Proposal “RFP” for statewide voice and network managed services.

The solution is part of larger project which included the refresh of all voice and network, not just limited to call centers. The contract with the vendor also included the support and management of legacy equipment, and ongoing monitoring and management of the entire network. The entire project was managed utilizing waterfall methodology – including phases of conception, initiation, analysis, design, construction, testing, production/implementation and maintenance.

Arizona opted for an all-inclusive pricing structure in the AZNet contract. A voice seat includes one technology refresh, physical devices, maintenance, repair, moves, adds, and changes. Moving the cost from a capital to operational expenses allowed the state to better plan and predict expenses. Each agency may have as many, or as few voice seats as they choose. Seats may be added and removed without cost or penalty. The cost of a seat ranges from \$17.56 to \$61.69 per month depending on features and functionality. The agency chooses what features they want for each seat. In addition to the voice seat, a network seat charge of \$22.44 to \$40.73 is assessed to each voice seat using the network. There is no charge for switches, routers, or refreshes as the seat cost is all-inclusive for the management of the entire voice and data network. The current cost of monthly services is just above \$2.2 million per month, which includes optional services such as wireless access points, firewall management, unified messaging, and paging. The current network includes more than 40K voice seats and 67K data ports. The Arizona call centers under the AZNet contract include 254 total applications, located at 95 physical locations, spanning 24 Agencies, and supporting 3375 total agents. The call centers process in excess of 1.75 million inbound calls per month.

The project’s success can be measured in various ways. Weekly operational meetings review the metrics to ensure success. Measurement points include uptime, outages, repair trends, response time, bandwidth utilization and capacity, trunk utilization, tandem call rates, file transfer success rate, billing error rate, ticket and task trends, service level agreement compliance, maintenance and patch management, and application control statuses. From a financial perspective, total cost of ownership has remained stagnant while bandwidth and capacity have increased.

The solution is a closed network with built-in redundancy. All state and federal security standards are met or exceeded to ensure the data on the network is accessible and secured.

The state is solely responsible for the oversight of the initiative and its outcomes. While the vendor is contractually responsible for performing the work, the TPO staff of six oversight managers are responsible for the operational oversight of the contract. TPO is housed within the Arizona Department of Administration, and is accountable to all of the agencies.

Communication about the project was started prior to the contract being awarded. In-person town halls and focus group meetings introduced the idea and sought to foster agency buy-in. Standing committees were created to engage the agencies in meaningful conversations and guide the development of the solution. Written communication is continuously sent in the form

of training guides, committee presentations, metrics, emails, user guides, and meeting minutes. The project has web presence, and social media has recently been added.

### **Significance**

This project was consequential and transformed the way the state engineers its call centers. Because the vendor was not provided any of the source code or documentation for the existing platform, each call center had to be reversed engineered in order to document and develop the new platform. The consequence of having all of the call centers on the same platform, the state is able to monitor and quickly respond to any issues that arise. All upgrades and technical patches can be applied at a single time, reducing maintenance times and increasing uptime. Simply stated, when a citizen needs to reach the state, the call goes through. A reliable platform means that the state employees can conduct business – internally and externally.

The scope includes the technology and device refresh of the state's call centers, including all physical devices and engineering. As a result of this project, the state's call centers have increased uptime, a higher level of security, and enhanced functionality. Call center agents and customers alike benefit from the enhanced functionality such as Virtual Hold/Courtesy Call Back. Management is better able to assign calls using Work Force Management, and the customizable reporting platform allows the state to monitor and manage its business and benefit from a more reliable network at a fixed manageable cost.

Moving from independently managed platforms to an enterprise VOIP solution is both innovative and distinct. The project is scalable and able to be duplicated in other municipalities. Moving the cost from a capital expenditure to an operational one was innovative and allowed the entire state, every device – handsets, switches, routers - to be replaced. From a technological perspective, Arizona moved from a disjointed and antiquated platform to the 21<sup>st</sup> century in a matter of months.

Measuring success of this project is simple – did uptime increase? The answer is yes. Arizona was able to increase uptime to as high as 99.999% - less than 5.26 minutes of downtime per year. Outages have been reduced and redundant engineering ensures business continuity. All of this while maintaining costs and increasing bandwidth and capacity.

Moving all call centers to an enterprise platform addresses the National Association of State Chief Information Officer's goals of security, consolidation/optimization, budget and cost control, talent management, and strategic IT planning. By having a single call center platform, security intrusions can be quickly identified and mitigated. Consolidating and centralizing the management and monitoring of the call center platform allows quicker reaction to outages and optimization of capacity. Opting for an all-inclusive seat price, moving from capital to operational expenditures allows the state better budget and manage cost. The state could not have afforded to refresh all of the devices in the network; however, spreading the cost across the life of the contract made it possible. By moving from independently managed call centers to an enterprise platform managed by a vendor, the state was able to reduce the number of staff needed to

support the network. The state realized a cost savings by reducing staff or reassigning and focusing on more critical endeavors. The staff that remained are able to focus their efforts on learning a single platform verses being versed in multiple technologies. The call center agents are now able to transition from one call center to another seamlessly. The time to train is minimal since all of the hardware and software is the same across the state. The entire project was the result of strategic IT planning. Determining what products and services could be outsourced allowed the state to focus on the services it does best. The governor has five primary goals, and this project directly supports two – protecting the communities and balancing the budget. By improving the reliability of the call centers, the constituents are able to reach the state and obtain services; this keeps Arizona communities safe. By managing the cost of the services and spreading the cost across the life of the contract, the project helps Arizona balance the budget.

### **Impact**

A single call center platform allows for a fluid IT environment. Workforce disruptions are minimized by engineering redundant devices. Decreasing downtime makes the government more efficient and more available to the constituents we serve. This project has served as an example to the state for managed services. Outsourcing what can be done efficiently and cost effectively allows the state to focus on the areas that the state does best. This project has been studied and is being replicated across the state and across functions beyond voice and network.

Prior to refreshing the state's call centers, outages were frequent because many of the platforms were end of life/end of support. The systems were unable to talk to each other, and management did not have a holistic view of the systems. Reporting had to be done individually and differed between call centers. Network resources had to learn multiple platforms and were unable to specialize and gain in-depth knowledge. Now that the call centers have been refreshed, outages and repairs are less frequent. All technology is compatible allowing for dashboard monitoring and reporting. The network resources are able to focus their efforts on a single technology and become subject matter experts. The agencies are able to utilize outbound call campaigns to connect with constituents like never before.

Arizona immediately benefited from improved technology. Arizona was operating call centers on legacy equipment and antiquated software. As each site's technology was refreshed, the reliability of that site immediately improved. As the entire state was migrated to the new platform, the overall uptime increased. As Tail End Hop Off strategies were implemented, cost reduction is being gradually realized. The agents and those contacting the state enjoy better service with clearer more reliable calls. Management benefits from call recording features, and email and screen capture. These features allow for better records and assistance to the customers.

This initiative ensures the state will be available when someone calls. Together with our vendor, we deployed an innovative, best-in-class solution resulting in scalable and feature-rich platform that provides value to the State Agencies and the constituents they serve.