

# IMPROVE TELECOMMUNICATIONS MANAGEMENT PRACTICES TO REDUCE STATE AGENCY COSTS

Business and government operations use a large number of wired and wireless devices to communicate information internally and with their constituents. The state spent approximately \$474.4 million in All Funds on telecommunications-related services during the 2016–17 biennium. These services include Internet, landline, and mobile services. Other government and private organizations have evaluated their monitoring and management practices related to these services to improve administrative efficiency and to save costs. Legislative Budget Board staff collected information from 12 state agencies and institutions of higher education that have significant related expenditures. This data was collected to ascertain the agencies' practices regarding the monitoring of phone inventories and usage, and to identify opportunities for improvement. By providing agencies with additional direction to use more effective telecommunications management practices, the state could realize cost savings by decreasing unnecessary expenditures and increasing administrative efficiency.

## FACTS AND FINDINGS

- ◆ The Texas Department of Information Resources is responsible for providing certain telecommunications services to agencies, primarily landline and Internet services. Individual agencies are responsible for mobile phone procurement, although the Department of Information Resources has entered into contracts that approximately 90 state agencies participate in to some degree.
- ◆ JPMorgan Chase & Co. surveyed its staff in 2015 to evaluate opportunities to reduce telephone costs voluntarily, such as removing voicemail features, which resulted in approximately \$8.0 million in annual cost savings.

## CONCERNS

- ◆ Seven of 12 state agency respondents reported delegating the role of monitoring phone usage predominately to individual departments within the agencies. Without a central inventory, agencies have a limited ability to improve efficiencies, such as verifying proper device usage or leveraging all applicable agency resources to make procurements.

- ◆ Two of 12 responses indicated a process to identify whether staff need both landline and mobile devices, or if certain add-on features are necessary.
- ◆ Statute governing the Department of Motor Vehicles requires telephone and fax machine infrastructure to be in place for submission of certain permit and registration information, which requires the agency to maintain unnecessary and outdated equipment.

## OPTIONS

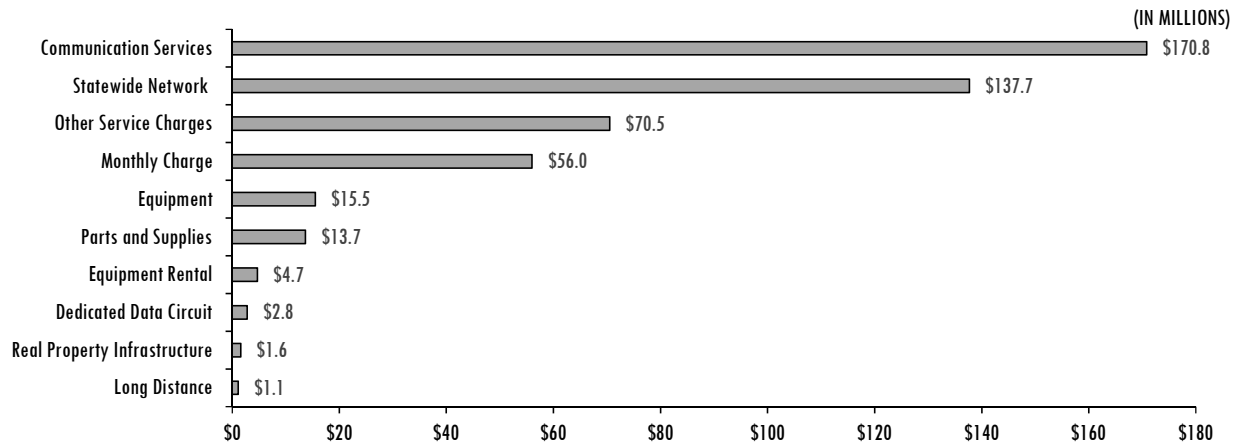
- ◆ **Option 1:** Amend statute to require state agencies to compile and maintain inventories of landline and mobile devices, including associated service limits and rates, and to develop documented procedures to assess device usage. This information would be reported to the Department of Information Resources, upon request, to assist in guiding contract negotiations.
- ◆ **Option 2:** Include a rider in the 2020–21 General Appropriations Bill requiring state agencies to survey staff for telecommunications preferences, to assist in determining potential cost savings from telecommunications services that no longer may be necessary, and to report results to the Department of Information Resources.
- ◆ **Option 3:** Amend statute to remove requirements that the Department of Motor vehicles maintains telephone and fax machine infrastructure to receive certain permit and registration information.

## DISCUSSION

All state agencies use wired or wireless devices as a means to communicate internally and with their various constituents. Legislative Budget Board (LBB) staff analysis identified 10 Comptroller of Public Accounts (CPA) Uniform Statewide Accounting System accounting codes primarily associated with telecommunications services, including landline and mobile telephones and data and Internet services. Expenditures for these services are shown in **Figure 1** and totaled \$474.4 million in All Funds for the 2016–17 biennium.

These accounting codes, however, encompass additional items that are not related directly to landline or mobile

**FIGURE 1**  
**TELECOMMUNICATIONS-RELATED EXPENDITURES FOR STATE AGENCIES AND INSTITUTIONS OF HIGHER EDUCATION, ALL FUNDS**  
**2016–17 BIENNIUM**



SOURCES: Legislative Budget Board; Comptroller of Public Accounts, State of Texas Cash Activity.

telephone services. The term telecommunications can encompass other services including fax machine line charges, wireless Internet, and others. As a result, it is difficult to isolate the direct cost to the state for landline and mobile telephone equipment. **Figure 2** shows details regarding the largest categories of expenditures.

**ROLE OF DEPARTMENT OF INFORMATION RESOURCES**

The Department of Information Resources’ (DIR) mission is to provide technology leadership, solutions, and value to state government, education, and local government entities in Texas. DIR’s mission includes enabling and facilitating the fulfillment of these entities’ core missions. The Texas Government Code, Chapter 2170, establishes the statutory framework for how DIR fulfills this mission and interacts

with its customers regarding telecommunications services. Statute requires agencies to use DIR intercity services, including long-distance, local network, and wide-area network functions. For intracity services, agencies officed outside the Capitol Complex in Austin are authorized to use alternative providers in lieu of DIR, provided these agencies use a bidding process. Provisions relating to mobile devices, however, are outlined within the Texas Government Code, Chapter 2157, because these devices are considered a commodity like other types of hardware and software. Agencies are not required to purchase wireless services through DIR. However, DIR negotiates contracts with telecommunications providers for wireless services. According to information supplied to DIR, approximately 90 of 135

**FIGURE 2**  
**STATE AGENCIES’ LARGEST TELECOMMUNICATIONS EXPENDITURES, 2016–17 BIENNIUM**

CATEGORY	DESCRIPTION	EXPENDITURES (IN MILLIONS)
Communication Services	Electronically transmitted communication services, which include but are not limited to computer lines, teleconferencing, and wireless Internet	\$170.8
Statewide Telecommunications Network	Payments by the Department of Information Resources for communication technology services rendered to the Statewide Telecommunications Network	\$137.7
Telecommunications – Other Service Charges	Other telecommunications charges, which include but are not limited to cellular phone and tablet computer data plans, roaming charges, and telephone line installation	\$70.5
Telecommunications – Monthly Charge	Monthly telephone charges	\$56.0

SOURCES: Legislative Budget Board, Comptroller of Public Accounts, State of Texas Cash Activity and Manual of Accounts.

state agencies, or two-thirds, purchase some or all of their mobile services through DIR contracts.

Customers that are eligible to enter into DIR's acquired service agreements include state agencies, institutions of higher education, and local governments and school districts. According to DIR staff, this larger customer pool enables DIR to negotiate lower pricing structures in the market. Aside from pricing negotiations, DIR's other contractual incentives include billing reconciliation on behalf of customers, streamlined procurement processes, and negotiated standard terms and conditions. **Figure 3** shows the number of entities participating in service agreements with DIR, by customer type, during fiscal years 2015 and 2016. As of April 2018, DIR employed 5.0 full-time-equivalent (FTE) positions as billing analysts, who review bills submitted by vendors for accuracy. DIR then bills the agencies for the services, less any amount disputed for incorrect charges.

**TELECOMMUNICATIONS PROGRAMS**

DIR has several service programs for agencies to use, depending on agencies' locations and business needs. **Figure 4** shows DIR's primary telecommunications programs, the Capitol Complex Telephone System (CCTS) and the

**FIGURE 3  
DEPARTMENT OF INFORMATION RESOURCES'  
PARTICIPATING COMMUNICATIONS TECHNOLOGY  
SERVICE CUSTOMERS, FISCAL YEARS 2015 AND 2016**

CUSTOMER	2015	2016
State Agencies	134	135
Local Governments	430	436
Education	324	349 (1)
Other	4	5
<b>Total</b>	<b>892</b>	<b>925</b>

NOTE: Education calculations include customers in both public and higher education. For fiscal year 2016, the Department of Information Resources had 238 customers in public education and 111 customers in higher education.

SOURCE: Department of Information Resources, 2016 Report on Telecommunications.

statewide consolidated telecommunications system called the Texas Agency Network (TEX-AN). As of April 2018, DIR employed 6.0 FTE positions to assist agencies in ordering services through DIR's contracts for these programs.

The Texas Government Code, Chapter 2170, provides that a state agency should use TEX-AN to the fullest extent possible. A state agency may not acquire other telecommunications services unless DIR's executive director

**FIGURE 4  
PRIMARY TELECOMMUNICATIONS PROGRAMS PROVIDED BY DEPARTMENT OF INFORMATION RESOURCES  
FISCAL YEAR 2017**

**CAPITOL COMPLEX TELEPHONE SYSTEM (CCTS)**

- provides help desk support; move, add and change support; and telephone equipment supplies within the Capitol Complex area;
- manages approximately 20,000 phones, supporting 90 agencies in 48 buildings;
- the Eighty-fifth Legislature, General Appropriations Act (GAA), 2018–19 Biennium, Department of Information Resources, Strategy B.4.1, Capitol Complex Telephone, provides \$9.4 million from the Telecommunications Revolving Account to maintain and increase CCTS capabilities;
- performance measures developed with the Legislative Budget Board (LBB) and reported by the Department of Information Resources (DIR) show that 95.0 percent of customers were satisfied with CCTS during fiscal year 2015; and
- the CCTS system in use is scheduled to be decommissioned during the 2018–19 biennium. As of the end of fiscal year 2016, DIR had transitioned some or all of the phones in 19 agencies to a Voice over Internet Protocol (VoIP) platform. An additional 62 agencies have been briefed on imminent changes, and 23 agencies are planning for transition.

**TEXAS AGENCY NETWORK (TEX-AN)**

- provides telephone service other than CCTS, data circuits, Internet, and video services to Texas cities, state and local government agencies, local school districts, and institutions of higher education statewide;
- DIR contracts with Gartner, a research and advising company, to assist in benchmarking rates to achieve competitive vendor pricing;
- the 2018–19 GAA, DIR, Strategy B.5.1, Network Services, provides \$176.0 million from the Telecommunications Revolving Account to maintain the legacy TEX-AN and provide enhanced TEX-AN network services; and
- performance measures developed with the LBB and reported by DIR show that 84.6 percent of customers were satisfied with TEX-AN during fiscal year 2015.

SOURCE: Legislative Budget Board, Department of Information Resources.

**FIGURE 5  
TEXAS ENTITIES PROVIDING INFORMATION FOR TELECOMMUNICATIONS ANALYSIS, FISCAL YEAR 2018**

Texas Facilities Commission	Texas Department of Criminal Justice
Office of the Attorney General	Department of Public Safety
Department of Family and Protective Services	Parks and Wildlife Department
Health and Human Services Commission	Department of Motor Vehicles
Texas A&M University System Health Science Center	Department of Transportation
University of Texas at Austin	Texas Workforce Commission

SOURCE: Legislative Budget Board.

determines that the agency’s requirement cannot be met at a comparable cost by TEX-AN or CCTS. State agencies are granted an exemption for the procurement of telecommunications services that are not part of TEX-AN or CCTS. The following services are included in this exemption:

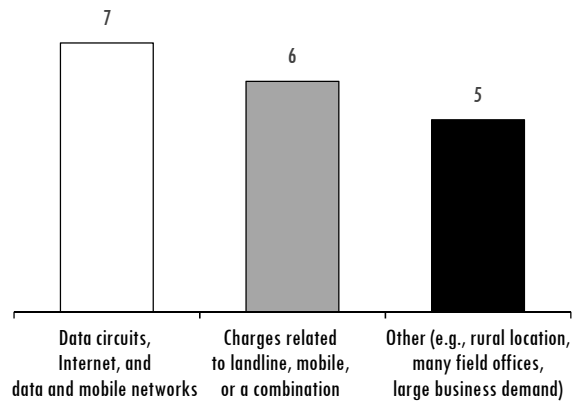
- cellular devices and service – applies only to devices bought with corresponding service (e.g., cellular phones, air cards, etc.);
- local telephone service;
- over-the-phone interpretation service;
- answering or paging devices and services;
- radio telephones, including cellular type for vehicle, marine, personal, etc.; and
- interpreter services that are electronically assisted, such as foreign language, hearing impaired, etc.

Agencies are able to obtain telecommunication services through DIR’s acquired service contracts throughout much of the state. However, gaps may exist in locations where DIR has no contracted services available to state agencies. In these cases, agencies may be granted a waiver to contract outside of DIR’s contracts, but agencies seeking exemption must request bids for services. As of March 2018, 143 DIR telecommunications waivers were active. Of this amount, 128, or 89.5 percent of waivers, were for Small Office/Home Office services for one to 25 workstations. The majority of these waivers were granted to the Texas Parks and Wildlife Department for remote park locations.

**TELECOMMUNICATIONS PRACTICES OF STATE AGENCIES AND INSTITUTIONS OF HIGHER EDUCATION**

LBB staff collected information from 12 agencies and institutions of higher education to identify how agencies monitor and manage their telecommunications infrastructure.

**FIGURE 6  
STATE ENTITIES’ REPORTED PRIMARY TELECOMMUNICATIONS COST DRIVERS  
FISCAL YEAR 2018**



SOURCES: Legislative Budget Board; agency survey submissions.

Figure 5 shows the entities who provided information for this analysis; they were chosen based on having the greatest telecommunications-related expenditures, according to the Texas Comptroller of Public Accounts’ Cash Activity data for the 2016–17 biennium.

Agencies reported a variety of factors as significant cost drivers for telecommunications operations. Seven of 12 entities indicated data circuits, Internet, and data and mobile networks were primary cost drivers; six of 12 entities indicated that landline and mobile charges also were cost drivers. Figure 6 shows cost drivers reported by agencies.

Ten of 12 respondents reported using DIR services for the majority of their telecommunications functions, excluding those exempt from using required DIR services. Six agencies reported that they did not fully utilize DIR services because some services are not available in all areas of the state. In rural areas of the state, although DIR may not have a contract available, alternative sources are available for agencies to

receive telecommunications services. For example, the Texas Statewide Telephone Cooperative, Inc., (TSTCI) is a statewide association of 45 rural telephone cooperatives and independent local telephone companies. TSTCI contracts with clients including state agencies, municipalities, independent school districts, and institutions of higher education.

#### **FEDERAL MONITORING OF MOBILE TELECOMMUNICATIONS USAGE**

Federal Executive Order 13589, 2011, stated that federal agencies should assess device inventories and usage and establish controls to ensure that they are not paying for unused or underutilized equipment. The federal Office of Management and Budget (OMB) issued guidance regarding mobile services to federal departments. Departments are required to implement a comprehensive central inventory and policies that assess individual accounts for overuse, underuse, and no usage. OMB later identified potential savings of approximately \$388.0 million from federal fiscal years 2013 to 2015 by consolidating or eliminating certain mobile device contracts.

Following the release of OMB's guidance, the U.S. Government Accountability Office (GAO) reported on weaknesses in 15 selected agencies' controls of mobile device spending in 2015. GAO found that most agencies did not have an inventory of mobile devices and associated services that could be used to assess usage. According to GAO, without an inventory that includes each device and associated service limits and rates and documented procedures to assess device usage relative to service rate plans, agencies have a limited ability to monitor device usage and determine if it should be canceled or moved to a different service plan. Furthermore, without a reliable inventory of mobile service contracts, agencies are less likely to identify opportunities for consolidation and are less likely to achieve the associated cost savings.

#### **STATE PRACTICES IN INVENTORY AND DEVICE USAGE MONITORING**

The generating of a device inventory and call usage history was a key component of the OMB and GAO reviews. LBB staff collected similar information from participating state agencies and institutions. DIR does not receive or maintain a breakout of usage by individual device number. Seven agencies were not able to provide this information readily because the monitoring of telecommunications-related data is delegated to individual departments within those agencies.

This data is not provided to a central location within the agency. Two agencies reported that requested information was not kept in-house and that they would need to contact their private vendors to obtain it.

Several agencies submitted samples of phone statements, although these usually were supplied as scanned PDF documents of paper invoices. According to agency submissions, seven agencies receive their billing statements in both paper and electronic formats. Some agencies indicated that they receive electronic invoices from DIR and typically receive paper statements from vendors. One agency reported that it receives 13,000 pages of mobile inventory billing statements from its vendor per month. Three respondents reported receiving all of their billing statements electronically. One respondent that receives both electronic and paper statements acknowledged that some vendors offer paperless statement delivery options and may offer discounts; however, program-level staff must research and request those options.

Regarding processes to monitor the actual usage of their landline or mobile inventories, agencies indicated that they typically delegate this function to individual departments within those agencies. Three respondents did not indicate having any process to review landline usage, and two respondents did not indicate having a process to review mobile device usage. Three agencies indicated that they use a process to eliminate lines that have no usage during a finite period; the frequency of this evaluation ranges from one month to six months. The remainder of survey respondents reported having a general process for monitoring device usage in which individual division personnel had the ability to view these reports and could make management adjustments accordingly.

DIR indicated that agencies submit monthly vendor sales reports, not detailed cost or equipment information. According to DIR, agencies' additional service detail information could strengthen DIR's negotiating position. Additionally, DIR indicated that having centrally organized telecommunications information would enable DIR to communicate with the same staff from a particular agency, improving DIR's ability to assist these agencies.

Option 1 would amend the Texas Government Code, Chapter 2170, to require state agencies to compile and maintain inventories of landline and mobile devices, in a manner determined by DIR. These inventories would include device usage, any associated contracts, and service limits and rates. This amendment also would require agencies

to document procedures to assess device usage relative to service rate plans. DIR would be authorized to request these inventories and any other related service information to assist in guiding contract negotiations. As part of Option 1, statute also would be amended to require agencies, as feasible, to receive information related to their telecommunications services in electronic format from their contracted vendors. This requirement would enable agencies to compile the information described in Option 1 more efficiently for analysis by all parties. Information compiled through Option 1 would be collected to the extent feasible by the agency; some agencies operate within a telecommunications infrastructure that would prevent the complete aggregation of these variables. The ability of an agency to receive its information electronically is predicated on the vendor's ability to supply that information in the desired format.

In some cases, agencies could receive information more feasibly from individual departments electronically and compile the data. Another structure could mimic what the Texas Facilities Commission (TFC) uses, wherein the agency's central fiscal division receives the monthly agencywide bill electronically. TFC's fiscal division divides the bills by organization code, and emails the individual bills to the appropriate divisions. These bills include call data for every device, which enables each division to review its device use every month.

#### **SOLICITATION OF STAFF INPUT REGARDING TELECOMMUNICATION PREFERENCES**

The process of soliciting direct input from staff regarding their telecommunications preferences can yield additional opportunities for cost savings and improved administrative efficiency. For example, as part of a larger cost-cutting initiative in 2015, JPMorgan Chase & Co. eliminated about two-thirds of its voicemail operations based on staff surveys, which led to approximately \$8.0 million in annual savings. The Coca-Cola Company performed a similar survey of its staff, and 6.0 percent of staff chose to retain their voicemail functionality, leading to an annual savings of \$0.1 million. During the surveys and analysis performed in 2015, JPMorgan had an average of 234,598 FTE positions and Coca-Cola had 123,200 FTE positions. In comparison, during fiscal year 2017, Texas state agencies and institutions of higher education employed an average of 327,016.0 FTE positions. According to Verizon Communications Inc. business division staff interviewed in 2015, digital telecommunications services have reduced the common

availability of voicemail features so that approximately one-third of office phones have voicemail.

Ten of the 12 respondents indicated that they have never performed such a survey of their staff. One agency stated that it administers an informal survey of mobile phone users and phone management, which is performed annually when the mobile phone plan is reviewed. Another agency described performing a similar, onetime survey process as part of its voice over Internet protocol (VoIP) migration. Additionally, agencies were asked what processes exist to determine whether staff need both landlines and mobile phones. One agency responded that it is assessing the need for staff that also have agency-issued mobile phones, although the agency's practice is to provide all workstations with landlines. The remaining 11 agencies typically described a process to determine whether to issue mobile devices, but they did not comment directly on any processes that have been used to evaluate the ongoing need to retain landlines. Two respondents did not include any related processes.

Option 2 would include a rider in the 2020–21 General Appropriations Bill requiring state agencies to conduct a onetime survey of staff that have a dedicated landline telephone, mobile phone, or VoIP system to gauge their telecommunications preferences. This survey would require agencies to obtain staff opinion regarding the following factors: (1) the necessity of retaining multiple forms of telecommunications hardware; and (2) whether certain supplemental features, such as voicemail or any features for which the agency pays a premium, are necessary for employees to properly conduct business. Whether an agency pays a premium for supplemental features varies by vendor. Some vendors bundle additional services including voicemail in their pricing, and others may charge supplemental fees for those services. Results from this survey would be reported to DIR.

Agencies may wish to augment any staff survey tools they currently administer, to identify potential administrative efficiencies or costs savings from removing unnecessary telecommunications devices or features. For example, the Health and Human Services Commission issues to its staff a biennial survey conducted by the University of Texas Institute for Organizational Excellence. Although the survey is not specific to telecommunications, it asks staff about their satisfaction with various information systems. Considering the JPMorgan and Coca-Cola case studies, based on the size of the state's workforce, and assuming the same levels of state staff have voicemail services that incur a similar premium,

the state could achieve an annual savings from \$0.4 million to \$11.2 million in All Funds by decreasing the prevalence of this feature. In examining a sample of DIR-approved contracts, some pricing plans for landline or VoIP services would include separate premium charges for services such as voicemail, caller identification, or call forwarding. Other contracts or negotiations made on individual cases may bundle these types of charges together. It is unknown to what degree agencies pay premiums for services such as these. Additional savings could be achieved through the identification of other unneeded services, such as having both a dedicated landline and mobile device for individual staff.

#### **DEPARTMENT OF MOTOR VEHICLES COMMUNICATION RESTRICTIONS**

State law may guide agencies in the method of communication they are to use when interacting with the public. Respondents did not indicate any areas in state law that limit their ability to communicate with the general public, except the Texas Department of Motor Vehicles (DMV). According to DMV, two sections of statute establish impediments because, due to advancements in technology, the following communication methods are required to be available but are inconsistent with the agency's business model:

1. Submission of Insurance for Vehicle Registration – The Texas Transportation Code, Section 502.046, relates to providing evidence of financial responsibility during the submission of insurance for vehicle registration. This provision requires an infrastructure to support the submission of this information to the local county assessor-collector through both telephone and fax machine; and
2. Oversize/Overweight Permit Issuance by Department – The Texas Transportation Code, Section 623.081, requires DMV to have a process and infrastructure to provide for issuing a permit by telephone for the operation of an overweight or oversize motor vehicle on a state highway.

For both of these provisions, statutory language requires the retention of older technologies and infrastructure. Option 3 would amend the Texas Transportation Code, Chapters 502 and 623, to remove these communication requirements, enabling this information to be received through electronic or other means that the county or agency determines to be

the most effective method of communicating with its constituents.

#### **FISCAL IMPACT OF THE OPTIONS**

Option 1 would amend statute to require state agencies, as feasible, to compile landline and mobile device information, in a manner determined by DIR, within a central location within each agency, draft policies to monitor and evaluate usage, and make this information available to DIR upon request. No significant fiscal impact is anticipated as a result of Option 1, and it is assumed this task can be accomplished within existing resources. Performing a staff survey, as described in Option 2, also could be accomplished within existing resources, and no significant fiscal impact is anticipated. This effort may result in the elimination of certain telecommunications devices, services, or additional features such as voicemail, which could lead to cost avoidance for those agencies. However, this amount would depend on the structure of the agency's current telecommunications contract(s), and the amount of cost avoidance is not anticipated to be significant. No significant fiscal impact is anticipated as a result of Option 3, which would enable certain DMV-related communications to be performed through alternative methods to telephone or fax.

The Senate introduced 2020–21 General Appropriations Bill includes a rider to implement Option 2.