

OFFICE OF
INSPECTOR GENERAL

Audit Report

Farm Credit Administration's
Mobile Device Cost Controls
A-15-02

Auditor-in-Charge
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Issued July 31, 2015



FARM CREDIT ADMINISTRATION



July 31, 2015

The Honorable Kenneth A. Spearman, Board Chairman
The Honorable Dallas P. Tonsager, Board Member
The Honorable Jeffery S. Hall, Board Member
Farm Credit Administration
1501 Farm Credit Drive
McLean, Virginia 22102-5090

Dear Board Chairman Spearman and FCA Board Members Tonsager and Hall:

The Office of Inspector General (OIG) completed an audit of the FCA's Mobile Device Cost Controls. The objective of this audit was to determine whether the FCA had implemented effective cost controls for mobile devices and related services.

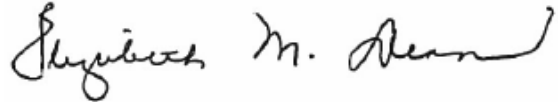
The FCA incurred \$192,787 in monthly wireless communications expenses from October 23, 2013, through October 22, 2014. Additionally, the FCA purchased \$18,762 in mobile devices. During our audit, we concluded that the FCA used a sound approach for selecting a smartphone and wireless communications service provider. Additionally, invoices for wireless communications service were reviewed for accuracy prior to payment.

However, we identified three actions that the Office of Management Services and the Office of Information Technology agreed to implement that will improve the management of mobile devices. These actions should reduce the cost of monthly wireless communication expenses and decrease the amount of data usage consumed:

1. Develop procedures for obtaining the Rate Plan Analysis Report from its wireless communications provider on a semi-annual basis and evaluate the benefits of proposed changes to plans.
2. Educate users on prohibited uses and the impact of excessive data usage.
3. Identify users exceeding the 5 GB threshold and notify the user and their supervisor of the data usage during that cycle.

We appreciate the courtesies and professionalism extended by the FCA personnel to the
OIG staff. If you have any questions about this audit, I would be pleased to meet with
you at your convenience.

Respectfully,

A handwritten signature in black ink that reads "Elizabeth M. Dean". The signature is written in a cursive style with a large initial 'E' and a long, sweeping tail.

Elizabeth M. Dean
Inspector General

Enclosure

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION AND BACKGROUND	2
AUDIT RESULTS.....	4
Mobile Device Costs	4
Agreed-Upon Action	6
High Data Usage on Mobile Devices	6
Agreed-Upon Actions	8
Acquisition Process	8
Mobile Device Inventory	10
OBJECTIVE, SCOPE, AND METHODOLOGY.....	12
ACRONYMS	14



EXECUTIVE SUMMARY

MOBILE DEVICE COST CONTROLS

A-15-02

OBJECTIVE:

The objective of our audit was to determine whether the Farm Credit Administration (FCA or Agency) had implemented effective cost controls for mobile devices and related services.

AGREED-UPON ACTIONS:

There are three agreed-upon actions to improve the management of mobile devices which should reduce the cost of monthly wireless communication expenses and decrease the amount of data usage consumed:

1. Develop procedures for obtaining the Rate Plan Analysis Report from its wireless communications provider on a semi-annual basis and evaluate the benefits of proposed changes to plans.
2. Educate users on prohibited uses and the impact of excessive data usage.
3. Identify users exceeding the 5 GB threshold and notify the user and their supervisor of the data usage during that cycle.

The FCA incurred \$192,787 in monthly wireless communications expenses from October 23, 2013, through October 22, 2014. Additionally, the FCA purchased \$18,762 in mobile devices. Invoices for wireless communications service were reviewed for accuracy prior to payment.

The FCA used a sound approach for selecting a specific smartphone model and wireless communications service provider. User input and specific criteria were considered during the evaluation. The Chief Operating Officer (COO) approved the smartphone lifecycle replacement decision based on the evaluation team and Information Resources Management (IRM) Operations Committee's (IRMOC) recommendation.

The following cost savings measures were adopted by the FCA:

- Reduced inventory of broadband cards due to increase in smartphones
- Offset the cost of smartphones by eliminating a \$4 per day telephone allowance for travelers with smartphones
- When mobile devices were turned in, billing was suspended
- Prohibited international phone service with rare exceptions

During our audit, we identified additional cost savings that could be achieved if the FCA changes plans for some of its smartphones. We also identified high data usage on several mobile devices.

- A review of the wireless communications service provider's Rate Plan Analysis Report and historical voice minute usage revealed that approximately \$15,000 per year could be saved by reducing the voice minutes for 99 smartphones. The FCA's current plan includes a shared voice minute pool of 96,000 minutes. The highest amount of voice minutes used between October 23, 2013, and October 22, 2014, was 36,202 minutes. Decreasing the pool to 56,400 minutes still provides ample voice minutes while saving the Agency approximately \$15,000 per year.
- We identified data usage on 30% of mobile devices exceeding 5 gigabytes (GB) during a monthly billing cycle. This level of data usage is typically an indicator of video and/or audio streaming. We learned the wireless communications service provider slows down the data connection speed for any device exceeding 5 GB in a billing cycle. High data usage does not impact wireless service costs since the FCA has an unlimited data plan. However, there is a direct impact on the user's performance when the mobile device is needed to download data for business purposes and their download speeds were reduced resulting from high data usage.

INTRODUCTION AND BACKGROUND

The Farm Credit Administration (FCA or Agency) is an independent agency in the Executive branch of the U.S. Government. The FCA is responsible for regulating and supervising the Farm Credit System and the Federal Agricultural Mortgage Corporation.

The FCA's mission as a financial regulator is to ensure a safe, sound, and dependable source of credit and related services for agriculture and rural America. In carrying out the FCA's mission, many Agency employees spend a significant amount of time traveling or away from their offices. In today's technological environment, the Agency keeps employees connected by leveraging technology to increase efficiency and communication.

Mobile devices such as smartphones and tablets are one of the tools the Agency uses to keep employees connected to its' information systems and each other. Additionally, mobile devices are part of the Agency's continuity of operations and emergency response strategy. It is the Agency's policy to provide mobile devices to employees based on the business needs of each office and the Agency.

"The **Federal Strategic Sourcing Initiative (FSSI)** is a government-wide acquisition service that leverages the Federal Government's consolidated buying power to acquire and manage IT resources at lower cost."¹ One of the FSSI acquisition programs identified is wireless/mobile. As a result of the FSSI, the General Services Administration (GSA) awarded a new government-wide blanket purchase agreement (BPA) for wireless service plans. The agreements GSA awarded provide agencies with the ability to pool minutes, as well as order plans and devices more efficiently and at lower costs.

At the FCA, the Chief Information Officer (CIO) is responsible for the agency's IRM program. The IRMOC supports the CIO in that role and brings an Agency-wide perspective to information resources. The IRMOC is composed of members representing the COO, the General Counsel, Office of Regulatory Policy, Office of Secondary Market Oversight, Office of Management Services (OMS), the Chief Examiner, and the Farm Credit System Insurance Corporation. The committee's primary responsibility is to recognize and address the Agency's information and technology needs which include mobile devices.

The agency has two key policies and procedures related to procurement and mobile devices:

- Policies and Procedures Manual (PPM) 812, Contracting/Procurement Policy, describes the Agency's policy and procedures regarding contracting and procurement. "The goal of the Farm Credit Administration (FCA) shall be to acquire products and services that will provide the best value to the FCA in a timely manner that most effectively meets program needs."

¹FEDERAL INFORMATION TECHNOLOGY SHARED SERVICES STRATEGY (n.d.): n. pag. 2 Mar. 2012. Web. 12 June 2015. <http://www.whitehouse.gov/sites/default/files/omb/assets/egov_docs/shared_services_strategy.pdf>.

- OMS Office Directive 009, Guidance for Providing Smartphones and Personal Smartphone Connectivity, describes the distribution of Agency smartphones. The directive states, “It is the Agency policy to provide smartphones to staff based on the business needs of the office and the Agency.” Office Directors determine which staff are provided Agency smartphones and include the cost of devices, accessories, and related services in their office budget.

Additionally, the FCA has policies that outline personal use of the FCA’s office equipment, internet, email, and network. PPM 902B, FCA Internet, E-Mail, and Network Acceptable Use Policy, provides for limited personal use of the FCA’s office equipment. The policy also states personal use must not interfere with official duties or consume excessive resources. There are examples of excessive resources which include “downloading large non-work related audio or video streams”.

PPM 906, Personal Use of Farm Credit Administration Office Equipment, also provides for personal use during non-work time if there is minimal additional expense and does not interfere with the FCA’s operations. The policy also states, “Personal use must not decrease your productivity or interfere with official duties.”

AUDIT RESULTS

Mobile Device Costs

The FCA incurred \$192,787 in monthly wireless communications expenses from October 23, 2013, through October 22, 2014. Additionally, there was \$18,762 in purchases for related mobile devices.

The FCA's primary purpose for using mobile devices:

- Traveling to perform the FCA's mission
- Ability to stay connected to Agency network
- Continuity of operations
- Emergency response

The FCA's policy for providing smartphones to staff:

- Senior Managers
- Examiners with greater than 1 year of the FCA work experience
- Other uses approved by Office Director

Prior to payment, the FCA reviews wireless communication invoices for accuracy. The Contracting Officer's Technical Representative (COTR) reviews invoices for the following attributes:

- Prior payment applied,
- Expected credits,
- Usage charges,
- Equipment charges,
- New devices,
- Suspended devices, and
- Reasonableness of amounts.

The wireless invoice is organized by cost centers set up by the COTR. New mobile devices are not automatically assigned to a cost center and appear at the beginning of the detailed invoice making them easy to spot. The COTR identifies and assigns a name and cost center to new devices².

The most significant charges related to mobile devices were the monthly service fees and the cost of the devices. Although there were additional expenses such as cases, warranties, and charging accessories, these were not reviewed in detail.

² Effective for FY 2016, smartphones and related service will be budgeted centrally by the Office of Information Technology (OIT). Tablets will continue to be budgeted by each office.

Some of the cost saving measures used by the FCA identified during this audit included:

- The FCA reduced the number of broadband cards retained for traveling examiners and other employees since a majority of examiners and other employees now have an Agency smartphone.
- Although the Office of Examination (OE) increased the number of phones provided to examiners, OE justified the need for network connectivity for exams, amount of travel, and savings of \$4 per day telephone allowance while on travel status.
- When a mobile device was turned in, it was suspended without billing while pending reassignment.
- Agency policy generally prohibits international phone service due to security implications and cost.

We identified additional cost savings that could be achieved if the FCA changes plans for some of its smartphones. As a result of the OIG audit, the FCA's primary wireless carrier provided a Rate Plan Analysis Report³. The report included an analysis of usage from the past 3 months along with recommendations in plan changes that could potentially save wireless communication expenses to the Agency.

GSA's Federal Strategic Sourcing Initiative Wireless Program User Guide provides a method to assist agencies with reducing their costs for wireless communication expenses.

- Every six months, each contractor will provide a Rate Plan Analysis Report to each federal agency of its historical spending on the contractor's BPA along with recommendations of the most cost-effective service plans available to each of the Ordering Entity's end users.⁴

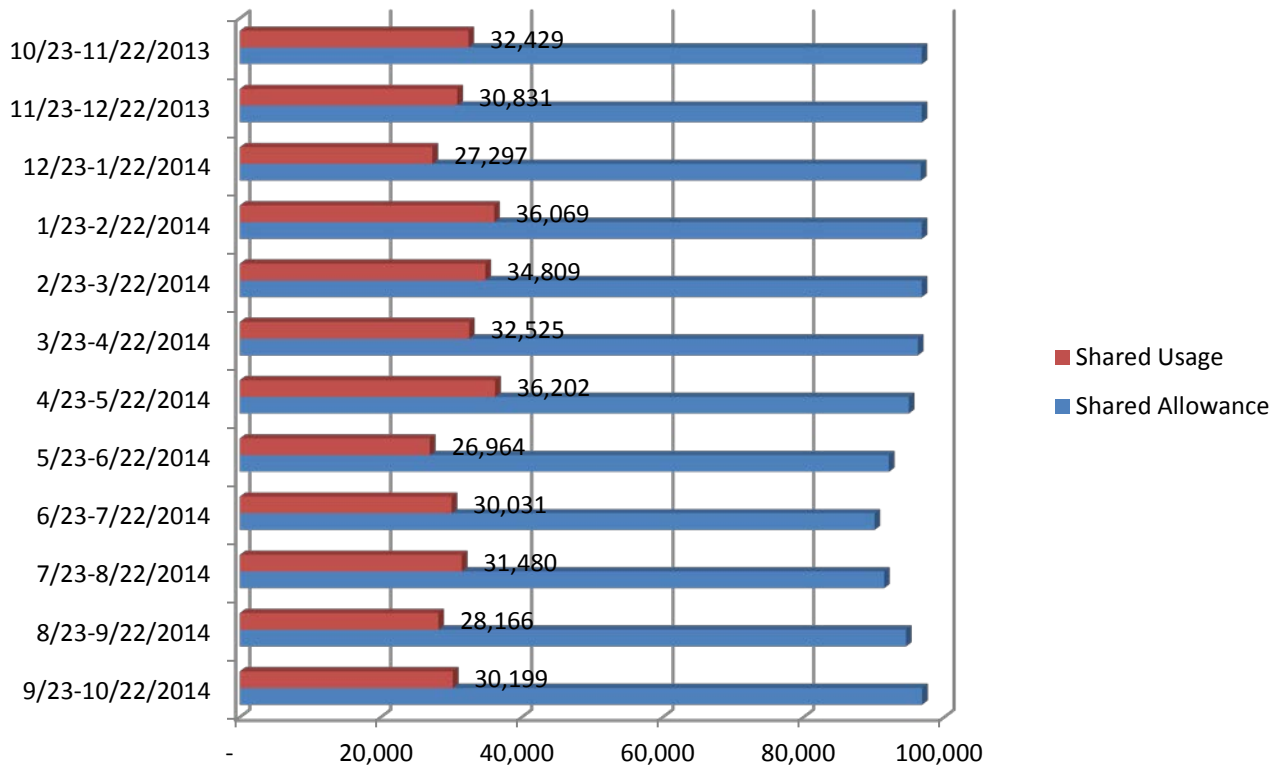
The Rate Plan Analysis Report revealed the FCA's 3-month average of voice minutes used from the January, February, and March 2015 billing cycles was 26,975 minutes. We also analyzed 12 additional months of voice usage from invoices obtained during our audit.

The bar graph below shows the highest amount of monthly voice usage between October 23, 2013, and October 22, 2014, was 36,202 minutes. However, the FCA's current plan includes a total of 96,000 voice minutes per month. If the FCA changes to a reduced voice plan for 99 of its smartphones reducing the shared voice minute pool to 56,400 minutes per month, the Agency could potentially save \$15,000 per year. The reduced voice plan contains all the same features as the current plan, and still provides ample voice minutes to avoid overage fees.

³ Rate Plan Analysis Reports were not requested from the wireless service provider prior to this audit.

⁴ General Services Administration. *Wireless FSSI User Guide* p. 18. N.p., 14 Feb. 2014. Web. 11 June. 2015. <<http://www.gsa.gov/portal/category/100931#docs>>.

Summary of Voice Usage and Allowance



Agreed-upon Action:

- OMS/OIT agreed to develop procedures for obtaining and analyzing the Rate Plan Analysis Report from its wireless communications provider on a semi-annual basis and evaluate the benefits of proposed changes to plans. Potential annual savings identified in the April 2015 Rate Plan Analysis Report were approximately \$15,000.

High Data Usage on Mobile Devices

During our review of wireless carrier invoices from October 23, 2013, through October 22, 2014, we identified data usage on several devices exceeding 5 GB⁵ during a billing cycle. This amount of high data usage is typically an indicator of video and/or audio streaming.

Approximately 30% of mobile devices were identified with high data usage during our review of invoices. Specifically,

- In at least 1 month of the year reviewed:
 - 74 devices exceeded 5 GB
 - 29 devices exceeded 10 GB
 - 12 devices exceeded 20 GB
- 9 devices exceeded 10 GB in at least 3 months of the year reviewed

⁵ 1 gigabyte (GB) = 1,024 megabytes (MB)

PPM 902B prohibits the consumption of excessive IT resources such as audio and video streaming. Although the FCA allows for some personal use of office equipment, PPM 906 clearly states productivity must not be decreased as a result of personal use.

Additionally, the wireless carrier has the right to terminate service or slow down the data connection speed for users exceeding 5 GB in a billing cycle. The agreement with the wireless communications service provider contains prohibited uses. An example of a prohibited use is continuous uploading, downloading, or streaming of audio, video, or games. The wireless communications service provider presumes anyone using more than 5 GB in a billing cycle is using their mobile device in a prohibited manner. We learned the wireless carrier slows down the data connection speed to these devices causing a noticeable difference in download performance which could impact productivity.

Below are relevant excerpts from the wireless contract terms, conditions, and features regarding data usage:

- “Examples of prohibited uses include, without limitation, the following: (i) continuous uploading, downloading or streaming of audio or video programming or games...”
- “...but downloading movies using P2P file sharing services and/or redirecting television signals for viewing on laptops is prohibited.”
- “We reserve the right to limit throughput or amount of data transferred exceeding 5 GB in a given month, and to deny or terminate service, without notice, to anyone we believe is using an Unlimited Data Plan or Feature in any manner prohibited above or whose usage adversely impacts our network or service levels.”
- “Anyone using more than 5 GB per line in a given month is presumed to be using the service in a manner prohibited above, and we reserve the right to immediately terminate the service of any such person without notice.”

For comparison purposes, we obtained from a large wireless carrier, examples showing how much data is used for common tasks⁶:

Task	Quantity	Frequency	Estimated Data Usage MB-megabytes GB-gigabytes
Email Messages	100	Daily	29.3 MB/month
Browsing Internet Pages	100	Daily	2.93 GB/month
Audio streaming (e.g. radio, music)	1 hour	Daily	1.76 GB/month
Video streaming-standard definition	1 hour	Daily	19.04 GB/month
Uploading/Downloading Photos	10	Daily	1.46 GB/month
Video Calling-high bandwidth (e.g. FaceTime, Skype)	1 hour	Daily	21.09 GB/month
Online Games	1 hour	Daily	150 MB/month

⁶ "Data Usage Calculator." *Data Calculator*. N.p., n.d. Web. 11 June 2015. <<http://www.verizonwireless.com/b2c/splash/datacalculatorPopup.jsp>>.

In addition to the common tasks above, other examples of potential data uses at the FCA include creating a mobile hotspot that is shared by examiners while performing an on-site examination. This hotspot could be used to connect to the FCA's virtual private network for downloading loan data, obtaining email, accessing shared network drives, and web browsing. If an examiner creates a hotspot and shares with multiple users, this could result in a high usage of data.

The FCA has an unlimited data plan, so high data usage does not impact wireless service costs. However, data utilization that exceeded the wireless carrier's contract terms resulted in a throttled or slower data downloads for certain users. When a user exceeds a specified threshold within a billing cycle, the wireless communications service provider throttles the user's speed until the next billing cycle. The user will experience a noticeable difference in the speed of downloads to their mobile device. This decrease in speed will have a direct effect on the user's performance when the mobile device is used to download data for business purposes.

Agreed-upon Actions:

2. OMS/OIT agreed to educate users on prohibited uses and the impact of excessive data usage with mobile devices.
3. OMS/OIT agreed to identify users exceeding the 5 GB threshold and notify the user and their supervisor of the data usage during that cycle.

Acquisition Process

The FCA used effective controls over the acquisition process for mobile devices. Although the Farm Credit System Building Association (FCSBA) contracts with wireless service providers on behalf of the FCA, the FCA makes decisions regarding which devices and service providers are used. Additionally, the FCA manages the day-to-day wireless communications operations directly with the wireless service providers.

The FCA Policy Statement 68 states, "The FCSBA was established to provide the facilities and related services for the FCA and its field offices." FCA Policy Statement 68 further outlines the FCSBA's responsibilities which include supervision of the telecommunications system. The FCSBA therefore contracts with the wireless communication service providers on behalf of the FCA, and the FCA reimburses the FCSBA for the actual cost of wireless communications services. FCSBA's role is limited to contracting with the wireless provider and payment of wireless carriers' invoices.

The FCA used a sound approach to select a specific smartphone model. The FCA surveyed users to obtain their input on preferences of smartphone features. The FCA's technology staff developed a list of specific evaluation criteria. Some of the evaluation criteria included:

- Cost
- Technical specifications

- Weight
- Size
- Battery life
- Security features

The evaluation criteria were used to compare three different smartphone models, which resulted in a recommendation by the evaluation team to upgrade the existing smartphone with a similar model.

A sound approach was also used to select a primary wireless service provider. Two year lifecycle costs were compared for three major service providers. Other key considerations were coverage areas of the FCA office locations and a sample of Farm Credit System institutions. The evaluation of service providers resulted in a recommendation by the evaluation team to remain with the same wireless service provider due to their proven record with the Agency, reliability of coverage, and efficiency in continuing service with the same network.

The IRMOC was kept informed of activities involving the FCA's mobile device strategy, including the:

- procurement process and distribution of new smartphones,
- reevaluation of the mobile device management tool, and
- purchase and evaluation of tablets through a pilot test group.

The smartphone lifecycle replacement decision was approved by the COO. The evaluation team presented three options to the IRMOC with a recommendation based on users experience, current technology, industry research, training requirements, and security. The IRMOC approved the evaluation team's recommendation and presented the three options and recommendation to replace the existing smartphones with an upgraded model and continue service with the same wireless provider to the COO.

Smartphones and tablets were procured via purchase order and included on the wireless carrier's monthly invoices. GSA's Federal Supply Schedule was the source for the contract and pricing for the selected wireless communications provider.

The contracting specialist places the orders for mobile devices directly with the wireless service provider. The Information Technology Specialist receives and inspects the mobile device generally within two days of receipt. The user is then notified that the mobile device was received and provided with instructions required before the device can be activated. Users are notified that a personal credit card must be used for any potential app purchases. The Information Technology Specialist and user complete the setup process either in person or via video conference. The user is provided with the mobile device after setup and training are complete.

Mobile Device Inventory

The FCA had the following inventory of mobile devices⁷:

- 233 smartphones
- 32 tablets
- 13 USB Broadband devices
- 4 personal mobile devices

Smartphones

Any excess inventory of mobile devices caused by departing employees are reassigned to new employees or used to replace lost, stolen, or broken devices. We determined that although the unassigned inventory of smartphones had grown to over 20 as a result of several departures of the FCA staff, this excess inventory was recently reduced to a more reasonable level.

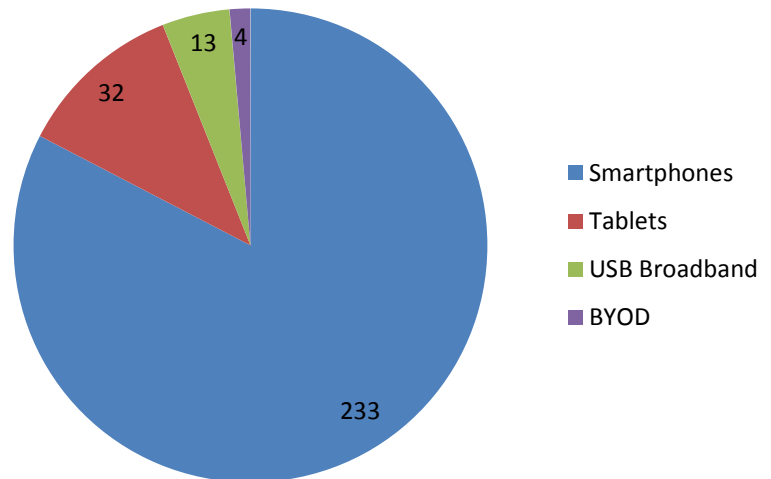
We reviewed invoices to determine whether there were unused mobile devices. Although we identified some mobile devices with no voice, messaging, or data usage for three months or more, we determined these devices were suspended, disconnected, reassigned to another employee, or left in inventory for future reassignment. We did not identify a systemic issue with unused smartphones.

Tablets

The FCA's mobile device strategy included determining the feasibility of tablets replacing laptops. Currently, senior managers are testing the utility of tablets. Tablets are primarily used for email and browsing the internet. The FCA is considering a lighter weight laptop that would reduce the need for tablets during the next rollout of laptops.

USB Broadband Devices

The FCA reduced the number of USB broadband devices retained for traveling examiners and other employees who do not have an Agency smartphone. The broadband devices are used by traveling staff to provide internet and network connectivity when away from the FCA offices. Since a majority of examiners now have an Agency smartphone with mobile hotspots that provide connectivity to agency systems, the need for USB broadband devices is greatly reduced.



⁷ Inventory as of 3/20/2015. Includes devices used by the Farm Credit System Insurance Corporation (FCSIC) and managed by FCA.

The FCA currently has 13 broadband devices in its pool⁸ of devices, which are used primarily for traveling employees that do not have an agency issued smartphone. The FCA continues to analyze inventory levels and adjust as needed. OMS plans to reduce the inventory of USB broadband devices to 6.

Personal/Bring Your Own Device (BYOD)

Some staff without a mobile device assigned by the Agency may want to connect their personal mobile device to the Agency's internal electronic calendar and email system. Currently, there are only 4 personal devices connected to the FCA's systems. Although the FCA permits personal mobile devices to connect to the Agency's email and calendar system, this requires case-by-case approval as the personal mobile device must meet the following conditions:

- Approved by the employee's supervisor
- Connected to the Agency's mobile device management tool which enforces policy and security settings
- Employee must immediately report a missing, lost, or stolen mobile device to the OMS Helpline
- OMS has the right to remotely wipe data from any missing, lost or stolen personal mobile device

⁸ FCA has plans to deactivate an additional 7 broadband devices in the near future.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this audit was to determine whether the FCA implemented effective cost controls for mobile devices and related services.

The scope of this audit focused on the acquisition and cost controls for smartphones, tablets, wireless broadband devices, and associated wireless service plans during fiscal year 2014.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To accomplish our audit objective, we performed the following procedures:

- Identified and reviewed related laws, regulations, and Agency policies and procedures;
- Obtained background information on the FSSI;
- Reviewed audits related to the subject matter performed by the Government Accountability Office and other Offices of Inspector General;
- Obtained an understanding of:
 - the procurement process for acquiring mobile devices and associated service plans
 - wireless contract service plan structure and options
 - mobile device inventory management
 - monthly wireless service payment processing
- Conducted interviews of key staff and managers with responsibility for overseeing management and procurement of mobile devices and their associated services;
- Identified significant internal control processes and determined if they were operating effectively and efficiently;
- Reviewed related documentation, including;
 - 2013 Smartphone Lifecycle Replacement decision memo
 - GSA Federal Supply Service Contract
 - Wireless service plan options
 - Requisitions, purchase orders, and modifications
 - Invoices from October 23, 2013, through October 22, 2014
 - Mobile device inventory
 - Rate Plan Analysis Report
- Summarized equipment costs and monthly service fees.

We reviewed internal controls identified as significant to the audit objectives and did not identify any material control weaknesses.

To assess the reliability of the data used to achieve our audit objective, we reconciled and compared various data sources and performed reasonableness tests. We determined the data used during this audit were sufficiently reliable for the purposes of our report.

This audit was performed at the FCA Headquarters in McLean, Virginia, from February through July 2015. At the conclusion of this audit, we provided management with a draft report of our observations and held an exit conference on July 15, 2015.

ACRONYMS

BPA	blanket purchase agreement
BYOD	bring your own device
CIO	Chief Information Officer
COO	Chief Operating Officer
COTR	Contracting Officer's Technical Representative
FCA	Farm Credit Administration
FCSBA	Farm Credit System Building Association
FSSI	Federal Strategic Sourcing Initiative
GB	gigabyte
GSA	General Services Administration
IRM	Information Resources Management
IRMOC	Information Resources Management Oversight Committee
MB	megabyte
OE	Office of Examination
OIG	Office of Inspector General
OIT	Office of Information Technology
OMS	Office of Management Services
PPM	Policies and Procedures Manual

R E P O R T

Fraud | Waste | Abuse | Mismanagement



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