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# MEMORANDUM

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Date: July 18, 2014

To: The Honorable Chair and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator

A handwritten signature in black ink, appearing to be "CHH", is written over the printed name "C.H. Huckelberry".

Re: **Information Technology Leasing Proposal**

As you know from adopting the Fiscal Year 2014/15 budget, the cost of information technology continues to substantially escalate and becomes a larger component of our operating expenses. While technology has been an efficiency driver, it is not without cost and significant investment.

Our Chief Information Officer, Jesse Rodriguez, has been assessing our capabilities and system status since his appointment. Our infrastructure linkages and connections, data centers, and backup systems are modern and efficient as a result of past significant investments by the County. Our individual deployment systems, however, are haphazard and outdated.

Today, we have around 8,000 desktop and laptop computers deployed throughout the County. These systems are from various vendors – Compaq, Hewlett Packard, Dell and others – and have multiple operating systems. Some of the operating systems are no longer supported by software vendors, making operational responsiveness to downed systems problematic and difficult for our Information Technology Department (ITD), as well as vulnerable to outside attacks. Due to the age of these individual computer systems, whether they are laptops or desktops, responsiveness in performing work functions varies greatly, causing inefficiencies in service delivery. It is appropriate that we modernize the individual deployment of computer systems throughout Pima County.

Our ITD has obtained a leasing proposal that would standardize applications, operating systems and software.; and I asked Mr. Rodriguez to place this leasing proposal on the Board of Supervisors August 5, 2014 agenda for discussion and approval. If approved, this proposal would replace individual computer system deployment every three years and would place the County on one system of standardized equipment and software.

The initial capital cost of approximately \$2 million to begin this standardization is largely contained in the existing FY 2014/15 Adopted Budgets of the various County departments and agencies. To continue to fund such a program, I have asked Finance Director Tom Burke and Mr. Rodriguez to create an Internal Service Fund for this purpose. This will

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create a computer replacement charge for each department and agency similar to the present port charges for telecommunications services.

Attached for your information and review is an Executive Summary from the information technology report regarding this proposal.

Additionally the Information Technology department is developing a leasing strategy for servers and storage moving forward and while staff has not yet finalized the numbers for what these costs will entail, the preliminary data would indicate they will not exceed what the County is currently paying today for this equipment, and that, like PC's, will include standardized applications, operating systems and software. The goal will be to bring the contract to begin leasing the servers, storage and HP management software in September 2014.

CHH/mjk

Attachment

c: Jesse Rodriguez, Chief Information Officer  
Tom Burke, Director, Finance and Risk Management

## Executive Summary

### Introduction

A major issue facing all institutions is how to keep their technology relevant. Pima County is no exception. The current strategy employed by the organization is to purchase the needed technology outright. The problem with this strategy is that, after just a few years, there is little to show for the expenditures. Computer equipment rapidly becomes obsolete and purchases made at a later date often do not mesh well with that which is already in place, making support of the technology infrastructure not only more difficult but more expensive as well. Some of the equipment is so old that it will not run newer versions of established applications. Technology is also fractured between multiple platforms, including various versions of Windows and Mac OS. To address this issue, the organization should consider leasing its technology moving forward. Furthermore, thought should be given to standardizing on specific vendors for the different types of computer equipment needed in order to reduce cost and complexity to the organization.

### The Advantages of Leasing

Leasing technology provides several distinct advantages. First, it will allow the organization to purchase more equipment up front. Conceivably, the organization could purchase all the equipment slated for purchase over a three-year period during the first year. Pricing would most likely be better as the County could negotiate a better price per computer based on a larger number of computers being purchased up front—which should offset much of the interest paid on the lease, making the total cost of acquiring the computer a wash between a direct purchase and a lease. Additionally, such a strategy would deal up front with the issue of equity by ensuring that all departments and projects would receive new computer equipment at the same time. Also, this would go a long way towards enforcing standardization, making hardware and software support easier since staff would only have to support one type of computer with the same capabilities across the entire organization as opposed to the current practice of trying to support a broad spectrum of computer types and models with differing capabilities. Given that elected officials are not required to participate, an argument could be made that they could take advantage of this without having to relinquish control of their funding sources. They would just contribute to the cost of keeping their technology current and would be able to get better pricing by buying off a larger county-wide purchase agreement, and could expect to receive better support and training given that everyone in the County would be at the same place hardware and software wise.

Leasing also allows the organization to plan for the replacement of its technology infrastructure. With ever-tighter budgets, technology has become essential in the day-to-day operations of an organization as a means of bringing efficiency, automation and cost containment to the organization. Organizations that view technology acquisition as a one-time activity do so at their own peril. Leasing provides the mechanism to institutionalize the need to stay technologically relevant by providing for the planned replacement of technology and addressing the ever-increasing rapidity of equipment obsolescence. It used to be that equipment could be migrated down, handed from one project to another. At that time, computer equipment was more capable than the software designed to run on it. That is no longer the

case. As an example, if we look at hardware requirements that current versions of Microsoft Office imposes and the requirements that the new ADP implementation will impose, one can see that a robust computer with considerable RAM is a necessity to run this suite of programs efficiently. Software is firmly in the driver's seat and this will become more pronounced in the future as County users utilize their computers to integrate voice, video and data simultaneously.

Clearly, this will have an impact not only on computers, but the servers, storage, hubs, switches, routers, and other network infrastructure to which these computers connect. Leasing addresses these issues. Pima County should entertain the notion of refreshing the equipment at the end of the lease period, rather than purchasing. This will become especially important, as there is a growing trend in this country to charge for the disposal of non-functioning or outdated equipment. This cost is usually more than the equipment being disposed of is worth. The current practice of the County is to donate outdated computer, but the County stills incurs warehousing costs, and staff time preparing equipment for disposal, which could be used more productively in support of active systems and end-users.

Lastly, services can be bundled with a lease. Maintenance contracts, for software for example, can be made a part of the lease. With large purchases of equipment, the County will likely not have to pay for normal maintenance and can negotiate favorable terms on such contracts that require other specialized maintenance such as software upgrades, etc. In addition, because these leases will probably be for large of amounts of equipment, the organization can ask for and receive some services free of charge or at a much reduced price in such areas as staff training and consulting services. Finally, hardware and software setups and asset tagging can be part of the lease as well as the removal of equipment at the end of the lease. These are all part of the total-cost-of-ownership costs that the County bears, but which are rarely factored in at the time that computer equipment is acquired.

### **Standardization of Equipment**

Related to the idea of leasing is the concept of standardizing the equipment to be purchased by the organization. Currently, the County purchases technology on a haphazard basis. No formal standards are in place for determining the models or configurations of equipment purchased and this is especially true with elected officials. What standardization currently exists is largely the result of preferences of the IT staff or issues of timing (such as when a new project buys a significant amount of hardware at one time as a startup expense). The County is supporting multiple manufacturers, models, and platforms running at least 7 different operating systems.

The same is true of software. The county currently supports at least 5 different versions of Microsoft Office. Pima County also has users, especially elected officials, who are still using unsupported applications and operating systems which pose a security risk to the organization. This lack of consistency causes problems in sharing information between users and departments, and is a significant burden for the support staff. Similarly, the County currently has databases in a number of different formats, including Sybase, dBase III, MySQL, Oracle, Informix, and Microsoft Access and SQL. Exchanging information between these databases ranges from difficult to impossible, and requires the IT staff to be proficient in a number of programming and scripting languages. Standardization offers distinct advantages over the status quo.

County PC acquisitions should be standardized and purchased from one vendor wherever possible. This standardization will dramatically lower the number of different platforms the County needs to support, and make maintenance and support significantly less burdensome. This standardized approach should also be used with other types of equipment, such as network infrastructure, software, and services. Wherever it makes sense and it is possible, equipment should be acquired through existing mechanisms open to the County. Where this is not possible a Limited Competition should be let and the selection of a dealer to provide the needed equipment, software, or service can be made through the bid process with the award going to the dealer providing the best pricing. Selecting a single vendor for a particular type of equipment, software, or service should allow the organization to exact better pricing.

Another advantage, alluded to in the leasing section of this document, is that it will be less costly for the organization to support the equipment of one manufacturer than to try to support the equipment of multiple manufacturers. This not only leads to cost savings in parts, but in other areas as well; for example, staff need only acquire the functional expertise on the offering of one computer manufacturer. Furthermore, combined with other improvements, standardization can significantly reduce the downtime associated with a broken computer by easily and effectively swapping out an in-service computer for a spare.

Finally, by standardizing the organization can lay the foundation for a structured approach to building its information systems infrastructure. Future purchases can be made with a high degree of confidence that they will mesh well with the purchases that came before. This also lends itself to the potential of a fruitful relationship with the equipment manufacturer and/or vendor. Over time, the organization can benefit from additional services, such as access to the long term strategic plans of the manufacturer as well as potentially play a role in the future development of products.

This standardization will be, initially, a difficult endeavor for the organization, requiring significant time, energy, and a new mindset in terms of how technology is acquired. However, employing the recommendations contained in this section should bring better per unit cost over the long term and reduce total-cost-of-ownership for the organization. To make this financially viable and take into account the fact that not all equipment can be installed within a one year timeframe, the organization should plan for a phased 3 year implementation plan.

To summarize, leasing offers the following advantages:

### Challenges

- Staff time tied up in keeping old and failing equipment in operation often resulting in poor quality of service.
- Keeping equipment running made more difficult with loss of key personnel.
- Staff development and training programs more involved to account for differing equipment and software in use within the organization.
- Funding sources not guaranteed year to year.

### Impact on the Organization

- Inability to improve operational efficiencies and increased total-cost-of-ownership.
- Information systems not adaptable over time making them slow to respond to evolving organizational needs.

### Benefits of Leasing Equipment Up Front

- Provides County with a known replacement cycle of its technology.
  - ✓ Predictable expenditures.
  - ✓ Costs spread over three (3) years.
- Addresses problem of rapid obsolescence.
- Addresses problem of limited ability to cascade equipment downward.
- Services can be bundled:
  - ✓ Maintenance contracts.
  - ✓ Removal of equipment at end of lease.
  - ✓ Hardware and software setups.
- Deals with disposal related issues.
- No need to continually justify purchases.

### Analysis

The table that follows shows the total cost of ownership comparison (including loss of opportunity costs, internal County labor, device and vendor managed services) of purchasing versus leasing the desktops for an overall estimated savings of \$5.3 Million over three years (Assuming a three (3) year lifecycle replacement for desktops).

### HP Purchase versus Lease Comparison Total Cost of Ownership (Including Labor) (Approximately 8000 devices)

Desktop Purchase vs Lease Comparison Including Labor (3 year comparison for 8000 Devices)				
Item	Description	Purchase	Lease	Variance
Computer	HP Hardware (Standard PC, Monitors- 2)	\$ 6,908,140.00	\$ 6,393,903.95	\$ (514,236.05)
Computer	HP Hardware (Standard Laptop, case, docking station)	\$ 1,062,400.14	\$ 809,017.20	\$ (253,382.94)
Computer	HP Engineering Workstation	\$ 595,442.00	\$ 440,789.76	\$ (154,652.24)
Computer	Panasonic Toughbook	\$ 1,825,320.00	\$ 1,759,953.30	\$ (65,366.70)
Purchasing	Departmental Staff Time (30 minutes)	\$ 138,275.00	\$ 220,000.00	\$ 81,725.00
Purchasing	IT Staff Time (30 minutes per item)	\$ 138,275.00	\$ 36,685.00	\$ (101,590.00)
Purchasing / Leasing	Finance Accounts Payable/Receivable (30 minutes)	\$ 138,275.00	\$ 220,000.00	\$ 81,725.00



# PIMA COUNTY

## INFORMATION TECHNOLOGY Technology Lease Proposal

Desktop Purchase vs Lease Comparison Including Labor (3 year comparison for 8000 Devices)				
Item	Description	Purchase	Lease	Variance
Data Collection	IT Staff time for user data collection (15 minutes per)	\$ 69,127.50	\$ 110,000.00	\$ 40,872.50
Maintenance	Estimated downtime for employees due to system failure (Most failures occur either in the first year or in the 4th year and later) Each request incurs an average of 8 hours of downtime (Given the leased pc's are younger the percentage of failure is calculated at 10% of a total number of PC's over the 3 year term), (Given the purchased pc's are older the percentage of failure is calculated at 25% of total pc count per year for years 1, 4 and 5)	\$ 2,640,000.00	\$ 352,000.00	\$ (2,288,000.00)
Maintenance	Estimated resource needs in hours to support each incident requested across the County. (Purchase - With the current 5 year replacement plan there is an estimated 1 tickets per year for the first year and an average of 2 tickets per item for years 4 and 5 due to system age), (Lease - With a 3 year replacement plan. Expected one ticket as an average for the first year and for comparison to the purchase lifecycle of 5 years then 2 tickets per machine over the course of 6 years); each ticket averages 2 hours	\$ 4,400,000.00	\$ 1,760,000.00	\$ (2,640,000.00)
Receiving	IT – Asset Management (15 minutes)	\$ 69,127.50		\$ (69,127.50)
Receiving	Finance – (5 minutes)	\$ 23,034.83		\$ (23,034.83)



# PIMA COUNTY

## INFORMATION TECHNOLOGY Technology Lease Proposal

Desktop Purchase vs Lease Comparison Including Labor (3 year comparison for 8000 Devices)				
Item	Description	Purchase	Lease	Variance
Deployment	IT – Delivery, Imaging, Installation (2.5 hours per item)	\$ 687,500.00		\$ (687,500.00)
Disposal	IT – Removal (30 Minutes), Data cleanup (15 minutes), Surplus (15 Minutes) ( 1 hour per item)	\$ 275,000.00		\$ (275,000.00)
Disposal	Finance – Asset Management (30 minutes)	\$ 138,000.00		\$ (138,000.00)
Lease	Managed Services (Deployment/Disposal)		\$ 792,000.00	\$ 792,000.00
Leasing	IT Staff Time – Initial Award		\$ 16,500.00	\$ 16,500.00
Leasing	Procurement Staff Time – Initial Award		\$ 2,200.00	\$ 2,200.00
Deployment	IT – Application Installation (2 hours per item)		\$ 880,000.00	\$ 880,000.00
	<b>Total</b>	<b>\$ 19,107,916.97</b>	<b>\$ 13,793,049.21*</b>	<b>\$ (5,314,867.76)*</b>

\* Preliminary Estimate, includes County staff time

Below is a comparison between the current primary Pima County desktop vendor Dell and the comparable Hewlett Packard purchase and Lease options, including all staff costs related to the equipment.

Description	Current Dell	HP Purchase	HP Lease	Est. Savings (Per Item) for HP	Est. Savings (8000 items)
Desktop	\$2,697	\$ 2,529	\$ 1,593	\$936	\$7,488,000

The cost per unit for a lease is estimated to be \$1,593 as opposed to the estimated cost to own the same unit being \$2,529. This shows an estimated savings of \$936 (\$1,104 if we look at our current Dell purchases) per unit or \$7,488,000 (over three years) for the 8,000 computers that Pima County currently owns.

It is recommended that PC's be leased for no longer than three years to take advantage of the free maintenance on the equipment during the lease duration and to ensure that the County has residual value for each computer as it enters the next lease cycle. This approach will also ensure that the equipment will always be suitable for any existing business requirements and will cement down a known replacement cycle for the County.



**PIMA COUNTY**  
**INFORMATION TECHNOLOGY**  
**Technology Lease Proposal**

HP will also be the vendor of choice for servers and storage moving forward and while staff has not yet finalized the numbers for what these costs will entail, the preliminary data would indicate they will not exceed what the County is currently paying today for this equipment, and that, like PC's, will include asset tagging with an electronic asset information database provided for uploading into our accounting system, imaging, deployment, removal and wiping of hard drives. The goal will be to bring the contract to lease desktops and laptops to the Board of Supervisors in August 2014, followed by a lease contract for the servers, storage and HP management software in September 2014.

Below is a table of the expected expenditures over the next three fiscal years for Desktops/Laptops (not including Pima County staff time). This table indicates the total estimated payments to the lessor for 8000 devices.

<b>Contract Expenditures by Fiscal Year (Not including Labor)</b>				
<b>Item</b>	<b>FY 14/15</b>	<b>FY 15/16</b>	<b>FY 16/17</b>	<b>Total</b>
<b>Desktops</b>	<b>\$ 1,597,585</b>	<b>\$ 2,562,797</b>	<b>\$ 3,483,158</b>	<b>\$ 7,644,540</b>

**Recommendation**

Given the need to replace a large number of obsolete desktop PC's, servers and storage, staff looked at what the lease vs buy costs would be and the result of the analysis leads staff to recommended that the organization standardize on a tier 1 vendor, Hewlett Packard, as it was deemed the most suitable vendor to meet the County's needs. As the analysis of the lease vs buy costs show, the best option for the County is to acquire PC's, servers, and storage via a lease and it is recommended that staff prepare a Limited Competition to lease computers from HP moving forward. Not only is the cost of leasing less than acquiring the equipment outright, but when accounting for the fact that the cost of the leased equipment includes asset tagging with an electronic asset information database provided for uploading into our accounting system, imaging, deployment, removal, and wiping of old hard drives, the true total-cost-of-ownership for the leased equipment is actually much less than it would first appear if looking only at the acquisition cost alone.