



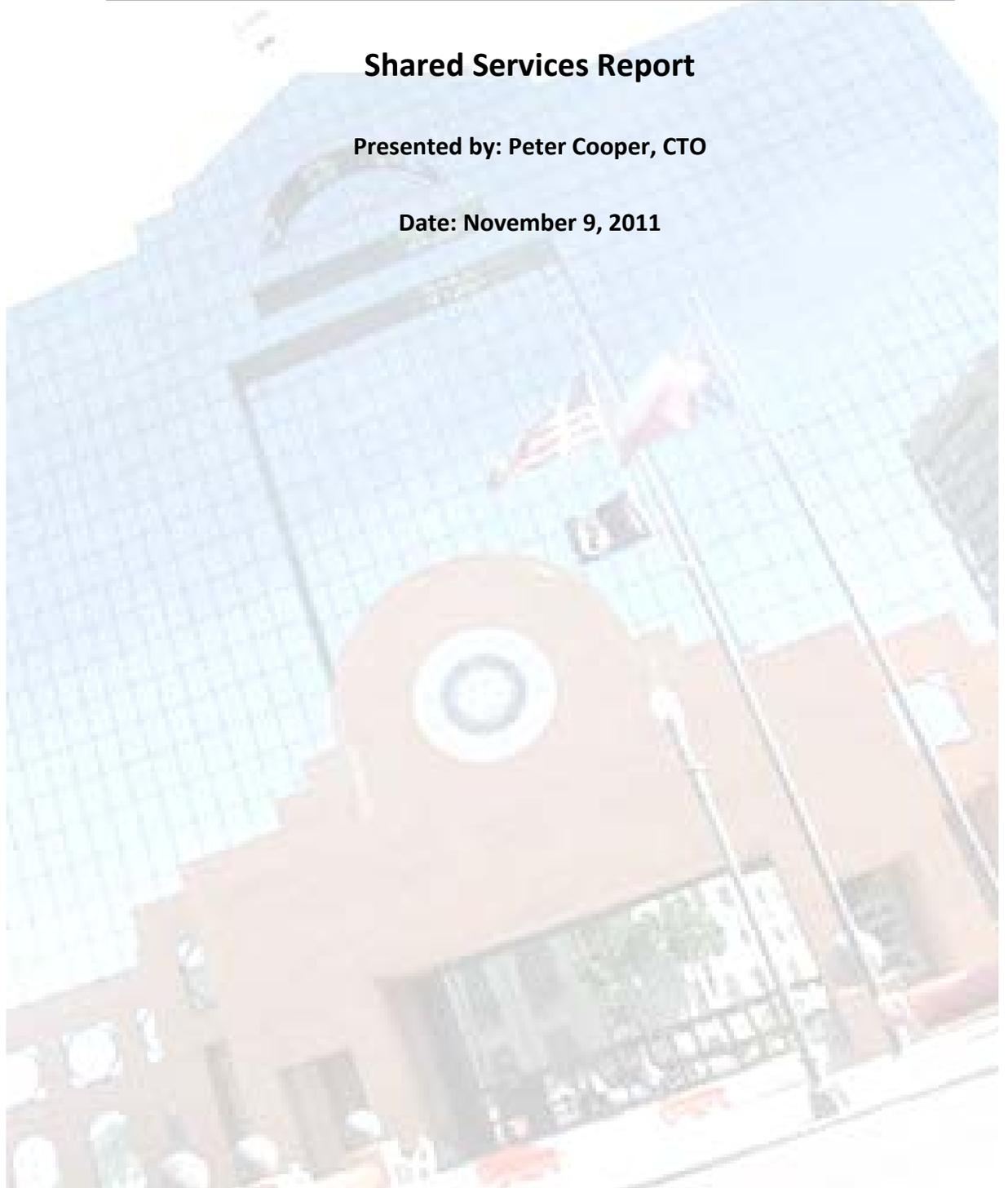
# **Information Technology Department**

---

## **Shared Services Report**

**Presented by: Peter Cooper, CTO**

**Date: November 9, 2011**



## Table of Contents

---

Executive Summary.....	1
Introduction and Background.....	2
Current Inter-local Agreement .....	2
Scope of Management Services .....	2
Achievements .....	3
Consolidation (IT Shared Initiative) .....	3
Joint Project Analysis.....	4
Automated Finger Print Information System (AFIS) .....	4
Microwave and Fiber Communications Project .....	5
Joint Datacenter Project .....	7
Fusion Center.....	9
NeoGov .....	11
In Motion .....	12
Next Steps and Recommendations .....	14

---

**Executive Summary**

During Fiscal Year 2010, Information Technology Department (ITD) evaluated the possibility of aligning the City and County IT departments. This Fiscal Year 2011, ITD has completed the development of a Cost Analysis on the financial impacts of both a consolidation; as well as, the cost of recreating the services if no sharing existed. The following analysis is a result of ITD's review of the existing budget data, discussions with City and County Human Resources, and discussions with the County Auditors.

Based upon the data collected, the County contributed \$5,067,013 to joint projects; and received benefits of \$9,754,982. To duplicate the County's information and technology resources (if it were alone without the City) resulting from these joint projects, the County would need to invest an additional \$5,401,437 over what it actually invested. The capital contributions from both entities have mostly come from bond proceeds that were issue for these purposes. The cost of this debt will be paid out over the useful life of the assets acquired. In addition several grants were applied for and received that further aided in the financing of these projects.

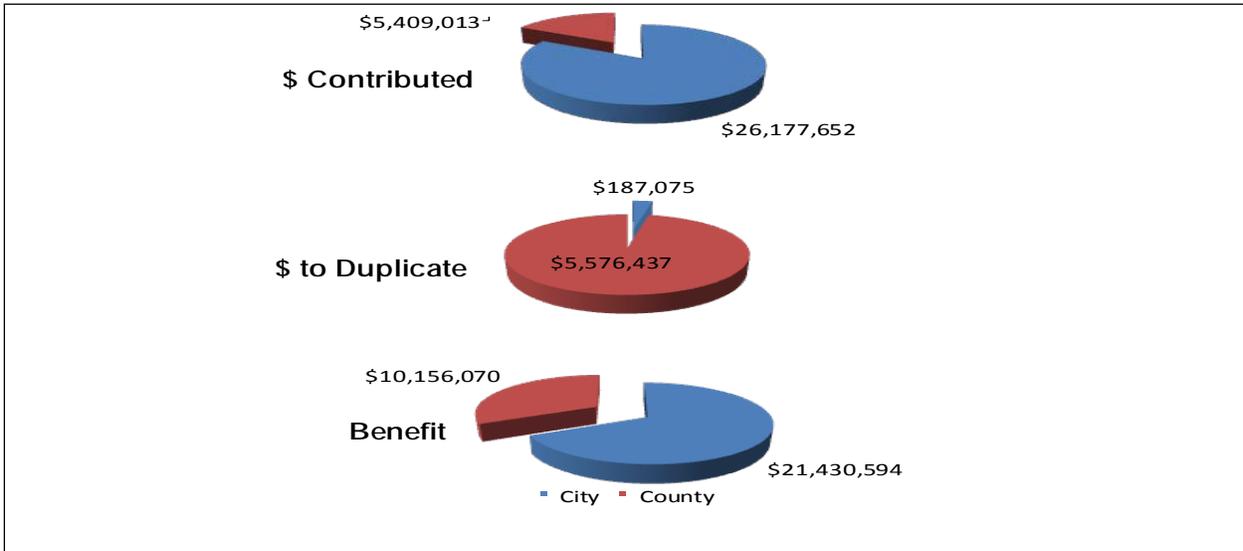
The County's benefits were calculated based on the resources made available to the County resulting from the joint projects. This analysis is based upon economies of scale. The common sources of economies of scale are purchasing (buying bulk of materials through long-term contracts), managerial (increasing the specialization of managers in both organizations), financial (providing cost savings to the taxpayers by sharing the costs of expensive projects, thereby reducing duplication of effort), and technological (taking advantage of returns to scale in technology projects). Other benefits related to the initiative are improved management, operational efficiencies, improved access to information, and improved customer service to both organizations. Joint projects undertaken by the two government entities are summarized in the table below.

System	City			County		
	Dollars Contributed	Dollars Necessary to Duplicate	Benefits Based on Shared Services	Dollars Contributed	Dollars Necessary to Duplicate	Benefits Based on Shared Services
AFIS - (1)	\$ 3,488,000	\$ -	\$ 2,285,984	\$ 67,975	\$ 1,202,016	\$ 1,269,991
Microwave - (2)	\$ 7,365,000	\$ -	\$ 6,243,236	\$ 629,388	\$ 1,121,764	\$ 1,751,152
Data Center - (3)	\$ 10,816,352	\$ 187,075	\$ 8,973,546	\$ 4,369,649	\$ 3,077,657	\$ 6,212,455
Fusion Center - (4)	\$ 3,389,000	\$ -	\$ 2,867,615	\$ -	\$ -	\$ 521,385
NeoGov - (5)	\$ 56,500	\$ -	\$ 37,382	\$ -	\$ 28,000	\$ 19,118
In Motion - (6)	\$ 1,062,800	\$ -	\$ 1,022,830	\$ 342,000	\$ 147,000	\$ 381,970
Total	\$ 26,177,652	\$ 187,075	\$ 21,430,594	\$ 5,409,013	\$ 5,576,437	\$ 10,156,070

- (1) AFIS – Automated Finger Print Information System, stores all fingerprint identification information for anyone arrested/detained in the El Paso area.
- (2) Microwave – Allows the County of El Paso to extend its network outreach through high speed links.
- (3) Data Center – Implementation of a Performance Optimized Datacenter (POD) with backup/redundancy at the MDR building.
- (4) Fusion Center – Combines incident reporting from regional law enforcement agencies, the 911 District, and fire. All of the El Paso regional law enforcement agencies can reference the data.

- (5) NeoGov – Automates the hiring and performance evaluation process.
- (6) In Motion – Provides the ability for vehicles to operate on their own wireless network to support use of multiple wireless devices by officers in the field.

The summary results of these projects can also be seen graphically below.



**Introduction and Background**

The Information Technology Department for the County of El Paso (COITD) entered into a shared services inter-local agreement with the City of El Paso on December 22, 2009. In this agreement (current inter-local agreement), the Mayor and County Judge authorized COITD to manage and organize the IT functions for the City, including re-organization functions, employing, and managing budgets and finances for the department. Under chapter 791 of the Texas Government Code, local governments may enter into contracts of this nature in order to increase the efficiency and effectiveness of governmental functions.

**Current Inter-local Agreement**

**Scope of Management Services**

Under the terms of the inter-local agreement, COITD has provided professional IT management for the City. During this time, COITD assisted the City in hiring the City's IT Director and several necessary key City IT personnel. Additionally, COITD assisted in the creation and management of the City's 2009 FY budget, 2010 FY budget and the 2011 FY budget and bond outlay.

Additionally, the agreement provides for the opportunity to explore consolidation of the City and County IT departments to better serve the El Paso community (along with both entities). The agreement suggests that if operations could be enhanced or streamlined by a consolidation, then, agreement would be the basis for the consolidation. The county currently receives \$164,000 for providing managerial services to the City. If the City were to employ the necessary staff to fulfill these duties it would cost them approximately \$546,000 more than the current interlocal and they would ideally have excess capacity above current needs. If the City hired their own staff it would cost them a total of \$710,000. The County also desires to utilize the cities expertise if we were to hire the FTE equivalents it would cost the county \$562,000 but if we were to pay for the amount of time that our projects require it would only cost the county \$174,000, a savings of \$388,000. In aggregate to cost avoidance to the entities exceeds \$934,000, a true savings to the taxpayer as a shared service.

**Achievements**

Major achievements resulting from the County and City IT partnership include but are not limited to:

- The HP POD datacenter located at the Municipal Service Center at 7968 San Paulo Rd. in El Paso. The HP POD datacenter is a state of the art datacenter alleviating the space and electrical issues faced by the City. The advantage the HP POD datacenter provides the County is geographic redundancy and failover for the County's critical IT assets.
- Sharing of fingerprint identification information for anyone arrested/detained in the El Paso area. This is a result of the regional AFIS system where equipment is deployed in both City and County facilities with a shared searchable backend database.
- The expansion of the County's data network to over 95% of the County via high speed communication links (microwave and fiber) while eliminating much of the older T-1 communication technology in use by the County.

All these initiatives are at the core of this inter-local agreement in order to move the County and the City to the highest level of technology efficiency and operation. As a result of the inter-local agreement, both the County and the City have been encouraged to use economies of scale by jointly developing, operating, maintaining, and enhancing information technology projects and resources.

**Consolidation (IT Shared Initiative)**

The overall vision of an IT shared initiative would be to provide the citizens of the El Paso community with a cost effective and efficient set of IT organizations that make the best use of non-duplicative resources. This would include but not be limited to a set of government wide, modern, cost-effective, standardized, and interoperable IT solutions providing common, core functionality to support the County and City strategic management, and the safety and security of the El Paso community. The table below provides further detail on the objectives and goals of the IT shared initiative.

Objective	Goals
<p><b>Improved Management</b> Improve the government-wide strategic management of human capital</p>	<ul style="list-style-type: none"> <li>• Faster decision making</li> <li>• More informed policy making</li> <li>• More effective workforce management</li> <li>• Improved resource</li> </ul>
<p><b>Operational Efficiencies</b> Achieve or increase operational efficiencies in the acquisition, development, implementation and operation of IT management &amp; support</p>	<ul style="list-style-type: none"> <li>• Improved servicing ratio/response times</li> <li>• Reduced lifecycle refresh times</li> <li>• Improve system stability and information delivery</li> </ul>
<p><b>Cost Savings and Cost Avoidance</b> Achieve or increase cost savings and cost avoidance from IT solution activities</p>	<ul style="list-style-type: none"> <li>• Reduced duplicative software/hardware/operations</li> <li>• Streamline IT delivery</li> </ul>
<p><b>Improved Customer Service</b></p>	<ul style="list-style-type: none"> <li>• Increased accessibility to end users</li> <li>• Improved communication and responsiveness</li> <li>• Enhanced quality</li> <li>• Enhanced timeliness</li> <li>• Enhanced accuracy</li> <li>• Enhanced consistency</li> </ul>

## Joint Project Analysis

### Automated Finger Print Information System (AFIS)

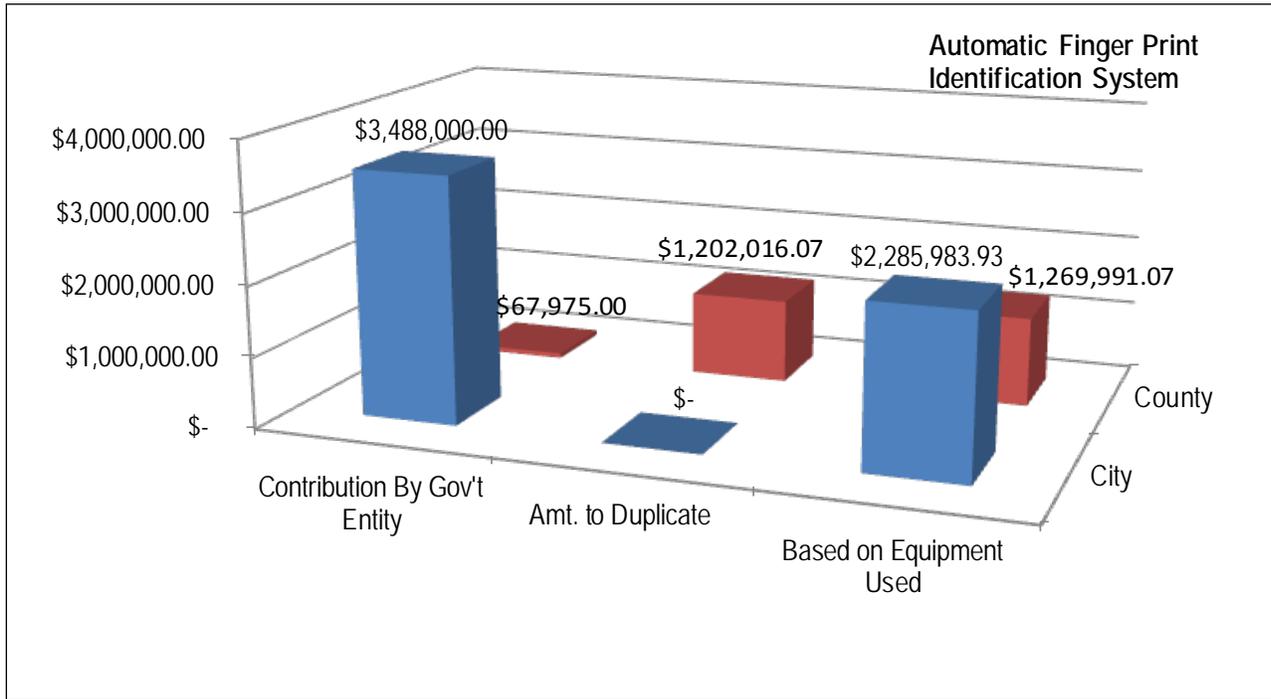
The Regional AFIS System stores all fingerprint identification information for anyone arrested/detained in the El Paso area. Historically, the El Paso Police Department (EPPD) stored all fingerprints resulting from EPPD arrests, including Class C arrests that were not reportable to DPS, while the County only stored electronic fingerprints for reportable offenses. As of 2009, the El Paso County Detention Bureau began processing fingerprints for all persons detained at the Downtown Jail and Jail Annex as well. This includes Class C Arrests, Federal Inmates, and Transfers. Fingerprinting of all inmates allows for a much larger fingerprint database, which can be used for investigation purposes and identification of repeat offenders at the Detention Facility. It also allows officers in the field to transmit Fast ID fingerprint information for immediate identification of suspects that have previously been through the system, dramatically reducing the potential for misidentification of arrestees. In addition, the capability also extends to the Court and the Adult Probation Department for verification of the identity of Defendants and Probationers.

The benefits of a regional AFIS go hand in hand with the benefits of regional records management, regional crime reporting, and regional crime analysis. To the extent that this technology can effectively erase the geographical and jurisdictional boundaries that sometimes exist between neighboring law enforcement agencies, officer safety and the public safety as a whole can be dramatically enhanced. Fingerprints collected at crime scenes can be compared to a much larger database, which results in more crimes being solved. A centralized fingerprint database as well as centralized crime records allows the law enforcement community to operate more efficiently with a full regional crime records picture at their fingertips.

Automated Finger Print Information System			
	Contribution		
	City	County	Total
AFIS System Core	\$ 1,200,000.00	\$ -	\$ 1,200,000.00
AFIS Palms	\$ 915,000.00	\$ -	\$ 915,000.00
AFIS Storage	\$ 81,000.00	\$ -	\$ 81,000.00
AFIS Workstations	\$ 220,000.00	\$ 55,000.00	\$ 275,000.00
Live Scan Systems	\$ 206,000.00	\$ 3,600.00	\$ 209,600.00
2 Finger Fast ID	\$ 400,000.00	\$ -	\$ 400,000.00
AFIS/MARS/Storage	\$ 236,000.00	\$ -	\$ 236,000.00
Live-SCANS - Juvenile	\$ 80,000.00	\$ -	\$ 80,000.00
Maintenance on 5/11 AFIS/LIVEScan	\$ 150,000.00	\$ 9,375.00	\$ 159,375.00
	City	County	Total
<b>Contribution By Gov't Entity</b>	\$ 3,488,000.00	\$ 67,975.00	\$ 3,555,975.00
<b>Amt. to Duplicate</b>	\$ -	\$ 1,202,016.07	
<b>Based on Equipment Used</b>	\$ 2,285,983.93	\$ 1,269,991.07	\$ 3,555,975.00
<b>Equipment deployed (Number of Units)</b>	9	5	14

1. - County Use Only.

The AFIS results are presented graphically below.



### Microwave and Fiber Communications Project

The Microwave Network initiative is intended to allow the County of El Paso to extend its network outreach to over 95% of the County through high speed links that are easily deployed in phases, and more flexible in nature than that of physical networks. The Technology will provide high speed bandwidth to sites that have traditionally used T1 connections through AT&T. By privatizing this network and removing AT&T T1 links, the County can expect to save thousands of dollars annually. This technology will allow a less complex model for the County's external network in regards to build out, expansion and relocation, as and when the need arises.

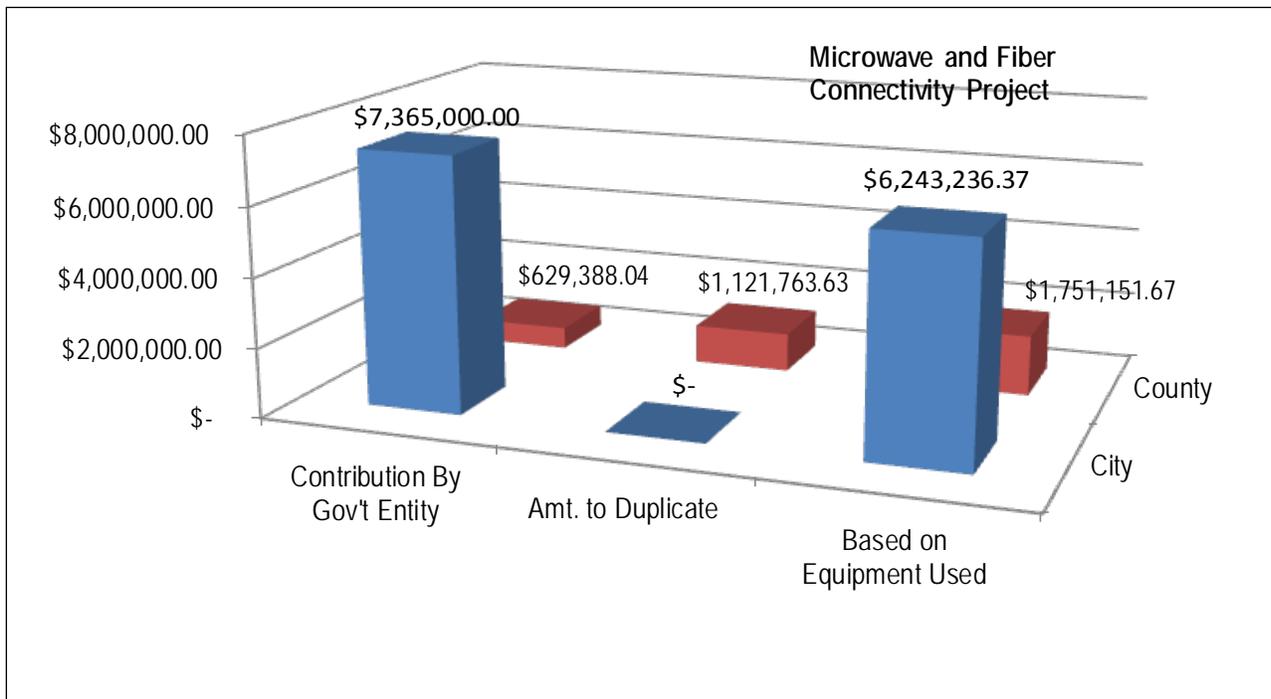
Some of the immediate benefits arising from the microwave and fiber communication project include:

- Core network connection redundancy providing high availability to remote sites.
- Cost effective network solutions reducing operating costs in the sum of \$150k to \$200k per year.
- Ring based Metro Ethernet providing high speed data links to remote sites; supporting current applications, and future applications.
- Network independence in regards to not relying on a single vendor/provider for the majority of the County's connectivity as well as the ability to re-design/architect the future of the network at the County's own pace and needs.
- Quick Return on Investment resulting from the nature of the technology used and the location of the core network nodes (estimated 2-4 years).
- Privately owned secure data-links in comparison to publically owned unsecured data-links which prepares the County's infrastructure for current and future networking security guidelines.
- Ability to share networking; thereby, connecting and resources with other County entities in a shared services platform.

Microwave and Fiber Communications Project			
	Contribution		
	City	County	Total
<b>Microwave</b>			
Hardware	\$ -	\$ 629,388.04	\$ 629,388.04
<b>City Fiber Project</b>			
Fiber - City	\$ 7,000,000.00	\$ -	\$ 7,000,000.00
JPD Link	\$ 300,000.00	\$ -	\$ 300,000.00
Sheriff HQ Link	\$ 65,000.00	\$ -	\$ 65,000.00
			\$ -
	City	County	Total
<b>Contribution By Gov't Entity</b>	\$ 7,365,000.00	\$ 629,388.04	\$ 7,994,388.04
<b>Amt. to Duplicate</b>	\$ -	\$ 1,121,763.63	
<b>Based on Equipment Used</b>	\$ 6,243,236.37	\$ 1,751,151.67	\$ 7,994,388.04
<b>Equipment deployed (based on sites)</b>	164	46	210

1. County owes City \$629,388 for the hardware. This analysis considers it paid.

The Microwave and Fiber Communications Project results are presented graphically below.



### Joint Datacenter Project

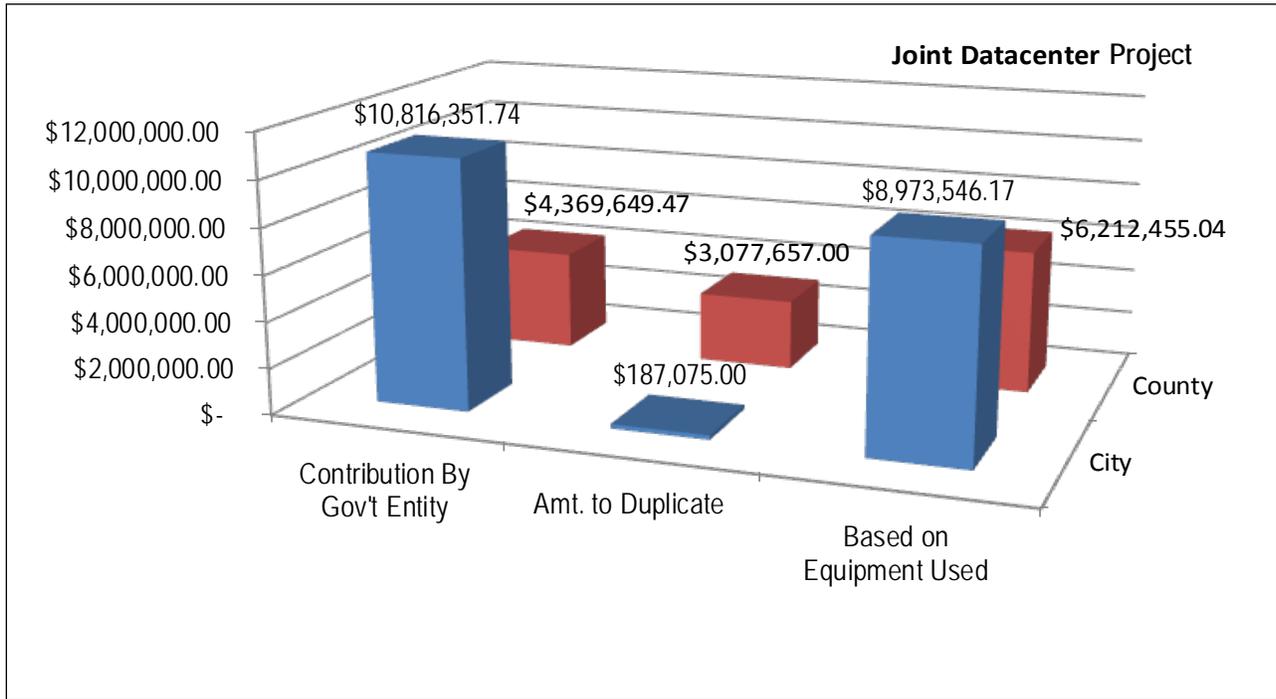
One of the first joint projects under the inter-local agreement was the Disaster Recovery Datacenter for County and City. This project began in early 2010, and through the research and development process, it was decided that the most practical and economical direction was to invest bond monies into a prefabricated datacenter. This decision was made after exploring the possibilities of sharing space at El Paso Community College or leasing space at a Datacenter Co-location in El Paso. After much consideration, Hewlett Packard (HP) demonstrated a superior product and the decisions were made to move forward with a Performance Optimized Datacenter (POD) from HP. In addition to the POD, the County offered to renovate their datacenter space, and create a redundant component for maximum fault tolerance and data availability.

Phase One began at the datacenter located at the MDR building. In an effort to upgrade connectivity, the County, with the Commissioner's Court and City Council approval placed orders for Cisco network infrastructure hardware, software and performed an implementation of these services at the MDR datacenter. HP, also with the Commission's and Council approval, outfitted this MDR datacenter with servers, storage and performed implementation services. The end result was the MDR datacenter being outfitted to serve as the disaster recovery datacenter for both the County and City after the completion of Phase Two described below.

Phase Two consisted of the acquisition of an HP POD datacenter outfitted with HP servers and storage. The Cisco network infrastructure within the POD consisting of hardware, software and implementation services was to be deployed and connected back to MDR via City fiber. Once the services on the network were in place, the systems would be able to have automated failover in the event the POD datacenter suffers a failure and including a complete disaster where the POD datacenter is lost. At the end of Phase Two, the POD datacenter will serve as the primary production datacenter for both the County and City.

Joint Datacenter Project			
	Contribution		
	City	County	Total
<b>Phase I</b>			
HP Servers	\$ 1,900,000.00	\$ 898,000.00	\$ 2,798,000.00
MDR Data Center	\$ -	\$ 187,075.63	\$ 187,075.63
Cisco Network Equipment	\$ 976,574.00	\$ 224,398.00	\$ 1,200,972.00
<b>Phase II Datacenter</b>			
Active Power (Electrical Backup)	\$ 1,100,000.00		\$ 1,100,000.00
POD (Datacenter Component)	\$ 1,200,000.00		\$ 1,200,000.00
SOW for services	\$ 418,035.00		\$ 418,035.00
POD Misc	\$ 7,550.00		\$ 7,550.00
Earthwork/MEP	\$ 304,043.84		\$ 304,043.84
Fiber Connections	\$ 23,030.00		\$ 23,030.00
Fencing	\$ 24,999.00		\$ 24,999.00
POD Servers and Storage		\$ 1,225,941.03	\$ 1,225,941.03
Storage MDR		\$ 553,073.00	\$ 553,073.00
Blades MDR		\$ 144,867.04	\$ 144,867.04
EVA8400/SVSP		\$ 136,606.00	\$ 136,606.00
Cisco POD Network Upgrades		\$ 527,402.01	\$ 527,402.01
Cisco MDR to County		\$ 472,286.76	\$ 472,286.76
<b>Phase II Hardware</b>			
POD Servers and Storage	\$ 2,299,999.99		\$ 2,299,999.99
Storage MSC	\$ 111,668.74		\$ 111,668.74
Storage MDR	\$ 478,712.99		\$ 478,712.99
Blades MDR	\$ 645,602.30		\$ 645,602.30
BTO SW	\$ 349,562.01		\$ 349,562.01
Cisco Network	\$ 976,573.87		\$ 976,573.87
	<b>City</b>	<b>County</b>	<b>Total</b>
<b>Contribution By Gov't Entity</b>	\$ 10,816,351.74	\$ 4,369,649.47	\$ 15,186,001.21
<b>Amt. to Duplicate</b>	\$ 187,075.00	\$ 3,077,657.00	
<b>Based on Equipment Used</b>	\$ 8,973,546.17	\$ 6,212,455.04	\$ 15,186,001.21
<b>Equipment deployed (based on racks)</b>	13	9	22

The Joint Datacenter Project results are presented graphically below.



**Fusion Center**

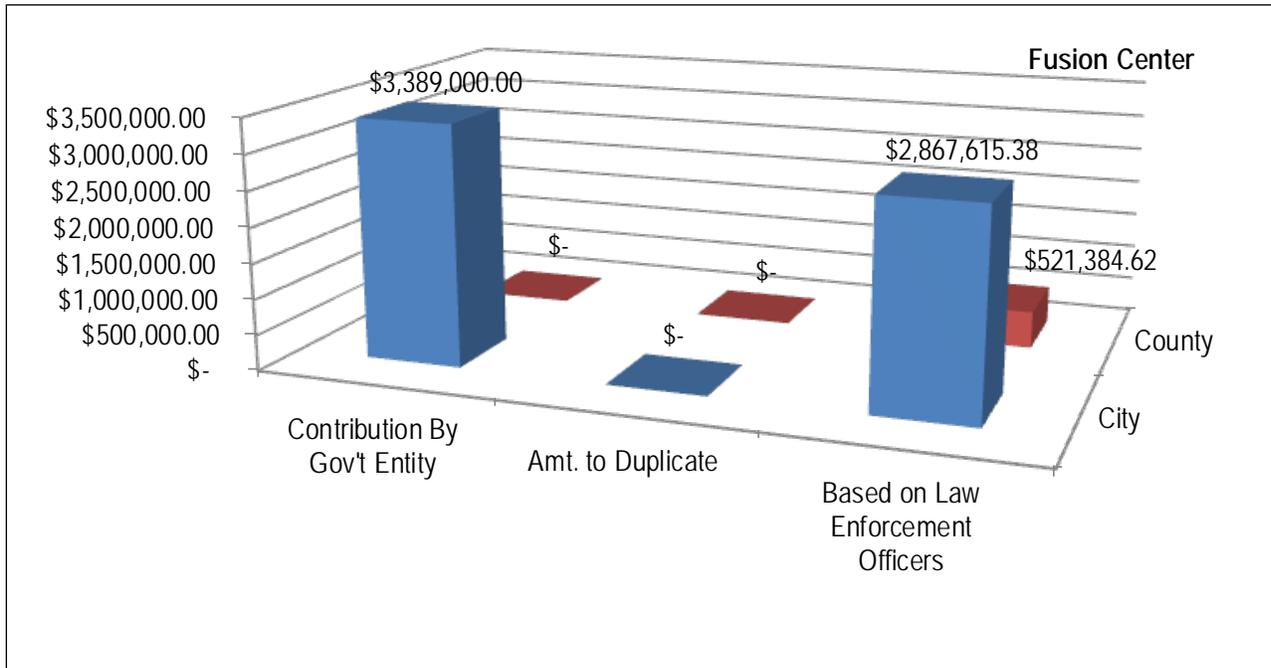
A Regional Fusion Center provides benefits that incident reporting and crime analytics in individual law enforcement agencies cannot provide. The establishment of a Fusion Center combines incident reporting from regional law enforcement agencies, the 911 District, and even fire and GIS information into one central information database which can greatly benefit the entire region.

The success of a Regional Fusion Center depends primarily on participation by regional agencies dedicated to public safety. One important example of this is predictive analysis of crime. Predictive analysis and modeling essentially depend on "connecting the dots" within a region in order to identify and address "hot spots" and patterns. Without full participation by all agencies in a region, the missing "dots" can lead to less accurate results and diminish the usefulness of the information. However, full participation, provides the largest amount of information, thereby enhancing the ability of the participating entities to provide increased public safety. Cooperation between agencies in contributing information to a Regional Fusion Center is also of paramount importance.

Fusion Center			
	Contribution		
	City	County	Total
Fusion Ctr. Software Costs - (Est.)			
Software General	\$ 974,000.00	\$ -	\$ 974,000.00
ESRI	\$ 15,000.00	\$ -	\$ 15,000.00
I2 - Coplink	\$ 380,000.00	\$ -	\$ 380,000.00
Subscriptions	\$ 20,000.00	\$ -	\$ 20,000.00
Fusion Ctr. Hardware Costs City (EST.)	\$ 2,000,000.00	\$ -	\$ 2,000,000.00
	City	County	Total
<b>Contribution By Gov't Entity</b>	\$ 3,389,000.00	\$ -	\$ 3,389,000.00
<b>Amt. to Duplicate</b>	\$ -	\$ -	
<b>Based on Law Enforcement Officers</b>	\$ 2,867,615.38	\$ 521,384.62	\$ 3,389,000.00
<b>Number of Law Enforcement Officers</b>	1,100	200	1,300

1. The project was entirely grant funded. The City worked to obtain the grant on behalf of the community.
2. Due to the need for multi-agency participation, the center would never be duplicated if the parties would separate.
3. Law enforcement groups benefit prorata.

The Fusion Center Project results are presented graphically below.



**NeoGov**

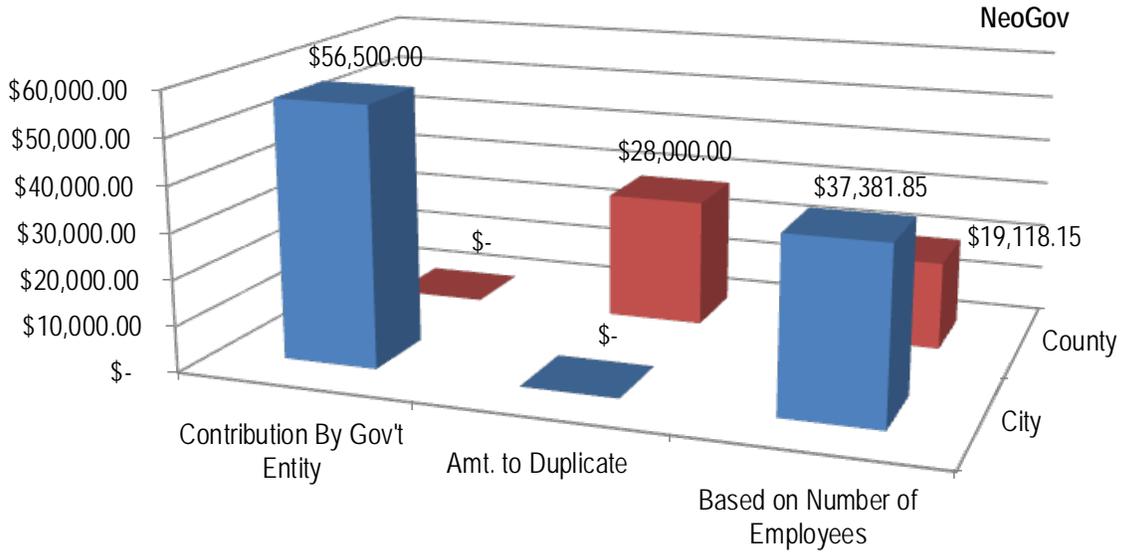
NEOGOV automates the County's and City's hiring and performance evaluation process, including position requisition approval, automatic minimum qualification screening, test statistics and analysis, and EEO reporting.

The County purchased NeoGov and leveraged the scale of the City investment in this product to secure a better price based on volume. In addition to the savings, the City NeoGov experts shared their knowledge of the product and the various installation issues, thereby reducing the amount of time to have a working product.

NeoGov			
	Contribution		
	City	County	Total
Insight Enterprise user License (Annual)	\$ 36,000.00	\$ -	\$ 36,000.00
NeoGov (TMS) License	\$ 15,000.00	\$ -	\$ 15,000.00
Setup / Implementation	\$ 3,000.00	\$ -	\$ 3,000.00
Online Training	\$ 2,500.00	\$ -	\$ 2,500.00
	City	County	Total
<b>Contribution By Gov't Entity</b>	\$ 56,500.00	\$ -	\$ 56,500.00
<b>Amt. to Duplicate</b>	\$ -	\$ 28,000.00	
<b>Based on Number of Employees</b>	\$ 37,381.85	\$ 19,118.15	\$ 56,500.00
<b>Number of Employees</b>	5,600	2,864	8,464

1. This is an annual license fee for software use. The fee is for the period 9/15/10 to 9/14/11 and the same amount is due annually.

NeoGov results are presented graphically below.



**In Motion**

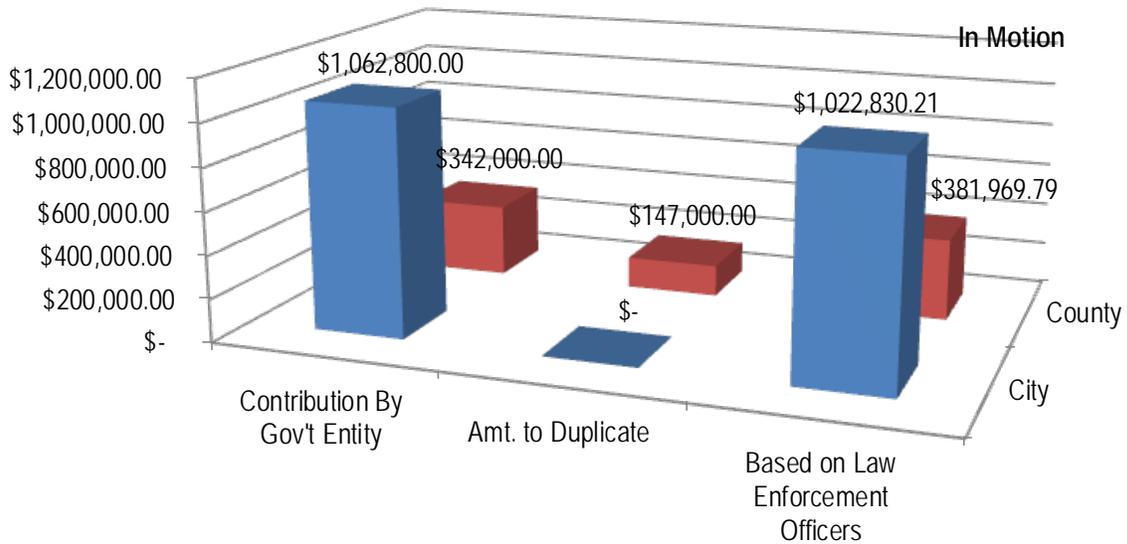
In Motion Technology allows a vehicle to operate as its own wireless network by establishing a mobile gateway that can support multiple wireless devices for use by officers in the field. In essence, the vehicle becomes the officer's own personal "hot spot". Historically, devices that were installed in public safety units were outfitted with wireless cards that allowed them to connect to a network in order to transmit data and operate on-board software. A major disadvantage of this methodology was that each device required a separate wireless cellular card which, in turn, carried separate monthly access charges.

As more devices were developed, it became apparent that it would be more cost-effective to allow them to share a single gateway. A reliable on-board system coupled with reliable wireless infrastructure decreases network dis-connectivity and increases uptime, thereby allowing the officer to take full advantage of all the tools at his or her disposal. As new technologies are introduced that enhance public safety, reliable connectivity is of paramount importance. As with other regional initiatives, when multiple agencies in a single region can share the networking technology as well as the infrastructure that supports it, a significant cost savings can be realized. That, however, is secondary to the fact that increased reliability of the on-board devices leads to increased public safety.

In Motion			
	Contribution		
	City	County	Total
Software General	\$ 60,000.00	\$ -	\$ 60,000.00
Servers / Systems	\$ 87,000.00	\$ -	\$ 87,000.00
In Motion Unit Costs (Fire and PD)	\$ 915,800.00	\$ -	\$ 915,800.00
In Motion Unit Costs (Sheriff)	\$ -	\$ 342,000.00	\$ 342,000.00
	City	County	Total
<b>Contribution By Gov't Entity</b>	\$ 1,062,800.00	\$ 342,000.00	\$ 1,404,800.00
<b>Amt. to Duplicate</b>	\$ -	\$ 147,000.00	
<b>Based on Law Enforcement Officers</b>	\$ 1,022,830.21	\$ 381,969.79	\$ 1,404,800.00
<b>Number of Units Installed</b>	482	180	662

1. The funding was provided by the 911 district.
2. All project funding was provided by a UASI grant; therefore, the City and County expended no funds of their own. Dollars shown represent benefits only.

The In Motion Project results are presented graphically below.



### **Next Steps and Recommendations**

The first step in an ongoing effort by ITD is to continue to track cost savings and cost avoidance. Going forward, this document will be used as a baseline against which cost savings and cost avoidance will be tracked.

ITD recommends that steps be taken to move forward towards a consolidated IT department, with the guidance from both the Commissioners and Councilors from both entities, including the financial and legal teams, to smoothly move forward with this transition. Additionally, both the City and County should continue to work together to better seek cost savings in IT projects of similar nature.