



CITY OF ARVADA

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2010-2012

# Information Technology Strategic Plan

*“Providing value through innovative technology and excellent service”*



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## I. Introduction

The Information Technology (IT) Department has prepared this strategic plan in conjunction with other planning documents from the City's Executive Management Team (EMT) and the IT Council.

The intent of this plan is to guide the City of Arvada's information technology resources over time. The rapid changes in the technology can make it hard to quantify in detail so this plan is designed to serve as a framework only. Continual monitoring is necessary to ensure that technology selected meets the identified needs presented by IT customers. This Strategic plan supplements the City of Arvada's Information Technology Business Plan (2-5 year project and resource plan).

Specific objectives of the plan include:

- To summarize technology trends relevant to the City and technology industry.
- To profile current infrastructure, resources, and systems.
- To provide information regarding tactical plans and action steps for upcoming years.
- To identify proposed systems needed to support City goals.

## Vision, Mission, Goals and Guiding Principles

### Good to Great

In the City of Arvada

The Executive Management Team (EMT) has adopted the *Good to Great* concepts for the City of Arvada. This means that our focus is for the organization to be in the pursuit of "greatness" outlined in the book *Good to Great* by Jim Collins. Collins has identified three major components, drawn as intersecting circles that are critical in great organizations. The EMT spent several weeks evaluating these three components and have identified the key areas for the City of Arvada:

- What are we passionate about? - **Excellent Personal Service**
- What are we the best in the world at? - **Partnerships**
- What drives our resource engine? - **Allocating Resources to the "Right Stuff"**

The point where the circles/components intersect is the "hedgehog concept", or the one thing we do and stick to no matter what. In essence, the "hedgehog concept" is the vision of the organization; in Arvada our vision is *"Continuing to Build a Great Community."*



### City Mission Statement

The City of Arvada is a superior customer-oriented organization that provides safety and protection, essential services, recreational opportunities, fiscal accountability, and strives for community enrichment and personal growth. **Adopted 10/94**



## **City Vision Statement**

*Continuing to Build a Great Community. Adopted 07/05*

## **City of Arvada Business Goals**

What the City does:

- Provides government services that are reliable, credible, and accessible in a timely manner
- Assesses satisfaction with the service on an ongoing basis
- Makes improvements on an on-going basis

How the City does this:

- Operates ethically, compassionately, and appropriately
- Is fiscally responsible with all available resources
- Conducts business with a look towards the needs of future generations
- Ensures City services are provided by a highly qualified and well trained work force

## **City of Arvada – Information Technology Department**

The need for technology services for the City has grown over the years with an emphasis on providing more efficient and effective use of city resources. The Department is comprised of 4 divisions: Information Services (IS), Network Systems (NS), Police Systems and General Services (Mail, Print Shop, Reception, and Cashiering Services.)

The Information Technology (IT) Department is responsible for the operation of the City's information and technology services, including IT infrastructure. The City's IT organization must provide ongoing support for client/server and browser based application processing in a sophisticated and secure network environment, replace legacy systems with new applications designed to operate in this environment, and provide an effective, flexible, responsive and secure structure to manage change and address the City's enterprise-wide information needs. Presently, the staffing consists of thirty-two team members, including job shared and non-benefitted positions.



## Strategic Direction

### Technology usage in Municipalities

Many conflicting reports continue to try and predict the future of technology in the public sector. Although opinions differ on the current economy and the future of IT trends the focus has remained the same. Five themes emerge:

1. Utilize technologies that will enhance your organization's capabilities in the areas of community building, collaboration and knowledge sharing.
2. Don't underestimate open source technology and shared / cloud services.
3. Technology will become increasingly accessible to all levels of the community and organization, take advantage.
4. Expect pain with gain as you implement new systems. Business processes need to be changed. Security of systems and information is never ending and especially relevant when implementing new systems.
5. The chief executives must provide leadership on technology initiatives. Technology must be perceived as a core business service, for example web content management is as mainstream as filling potholes.

### ***IT's Brand:***

Great Technology, Great Service **Adopted 08/08/08**

### ***IT's Vision:***

*"Providing value through innovative technology and excellent service"* **Adopted 12/07**

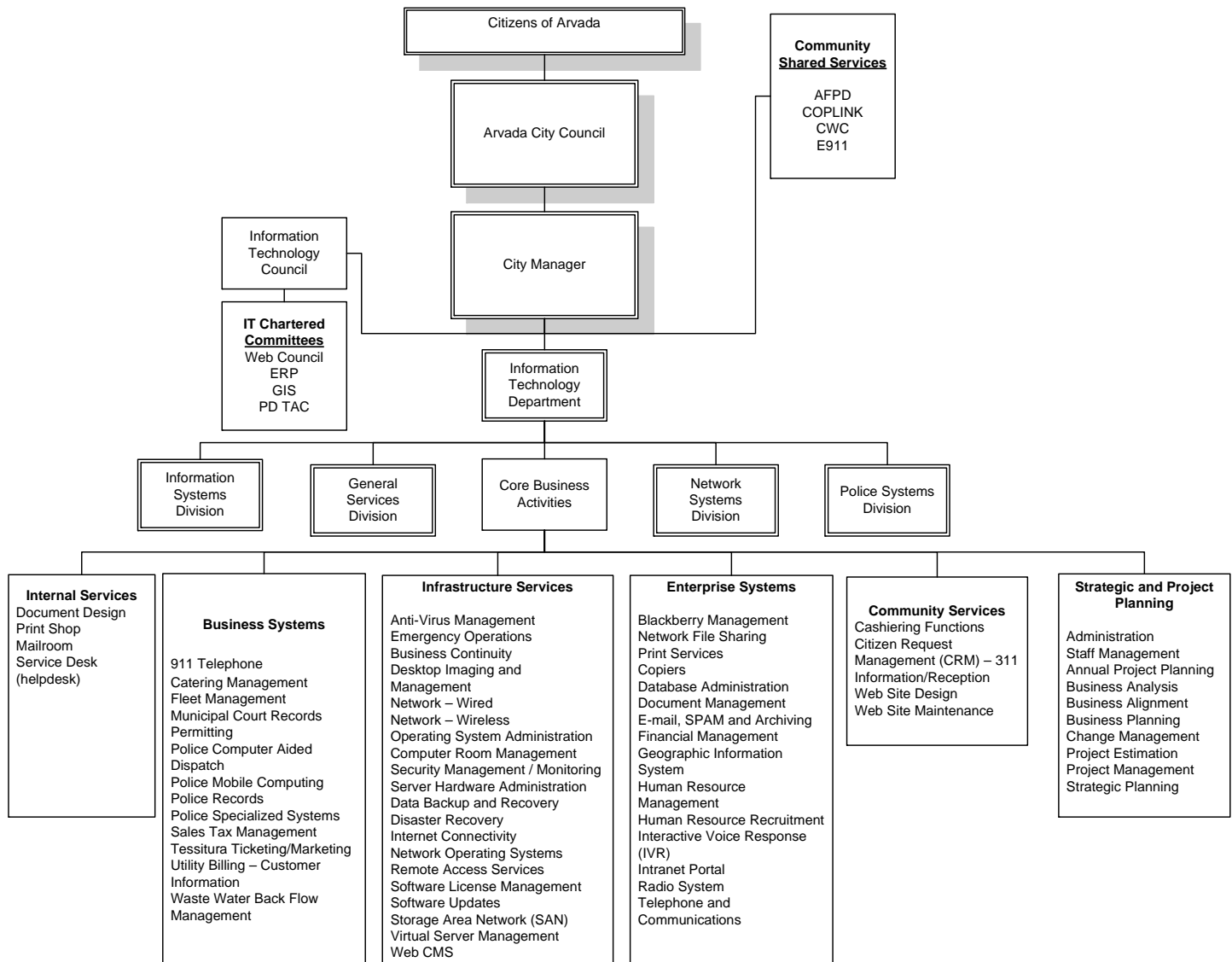
### ***IT's Mission:***

*"We intend to be the best at identifying and implementing technology and business solutions that prove to be effective and efficient to meet the City's business needs. Our employees skills, combined with their commitment to customer service will allow the City of Arvada to become a great technology service organization for the citizens of Arvada."*  
**Adopted 06/01**



## IT Service Chart

**PURPOSE:** To create and maintain the computer infrastructure including hardware, software and telecommunications equipment necessary to support needs of the City of Arvada. Additionally, the Information Technology Department operates all internal mail, print and main reception services for the City.



The I.T. Department is comprised of several divisions of responsibility. Within these divisions the core business activities overlap boundaries. Divisions in IT collaborate in order to provide the best possible service to the organization and to the community. Programs and projects are divided amongst core business activities.



## **Core Business Activities**

IT has six categories for core business activities, each product or service delivered by the IT Department fits underneath one of these categories. They are described as follows:

1. **Internal Services:** These services are used inside the Municipal Corporation such as Print Shop and mail room management
2. **Business Systems:** These services provide specific value to a given department. Examples include the Police Intergraph System, the Utility Billing system, the Tessitura ticketing system and the Courts system.
3. **Infrastructure:** These items are critical to the foundation of technology used around the city and include items such as the routers, switches, wireless AP's, the data cabling, UPS, Storage Area Network (SAN), telecommunications and disaster recovery sites.
4. **Enterprise Systems:** These systems are utilized by the majority of the organization. These include the Oracle Financial System, the Geographical Information System (GIS), desktop and laptop workstations and operating systems, departmental copiers
5. **Community Systems:** These systems are used primarily by our citizens or community partners. These systems include the City's web sites, Citizen Request Management (CRM), 3-1-1 information and e-government payment systems.
6. **Strategic and Project Planning:** Work and processes to manage the resources of the department, project management and budget planning.

The Information Technology Department has adopted methodologies from Information Technology Infrastructure Library (ITIL) and Information Technology Service Management (ITSM) and we have implemented both a rigorous change management practice and service catalogs based on core business activities.



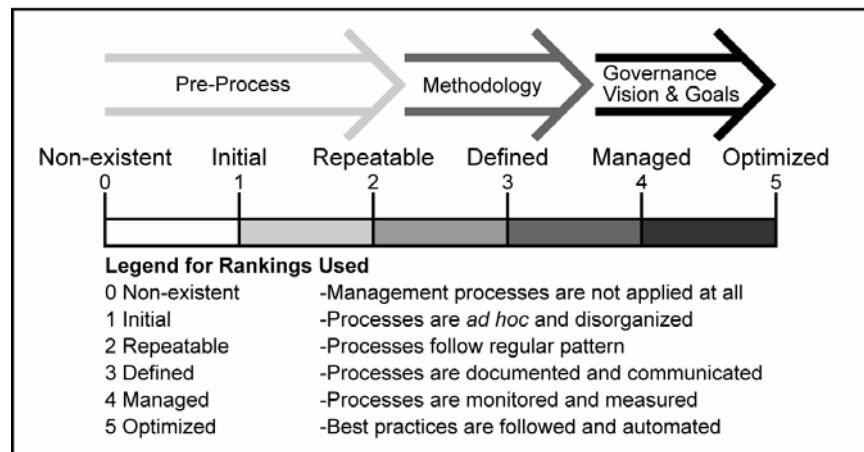
## II. Information Technology Roadmap

### **Technology Maturity Model**

The City of Arvada is maturing. We know we need to continually improve upon our own best practices and formalize high level processes and structures for IT strategic planning, prioritization, decision making and performance measurement. By having these formal processes and structures – such as IT strategy and steering groups – the organization can better:

- Align IT strategy with the business strategy
- Transform high level strategic goals into actual IT projects
- Establish procedures for prioritizing IT projects that are understood and supported by Arvada’s Executive Management Team and IT Council

Overtime, the City of Arvada IT Department has matured from a somewhat chaotic infrastructure to a more proactive one. In the COBIT graph below we currently are minimizing our work on level 2 (Repeatable) and solid in level 3 (Defined) processes and have moved into level 4 (Managed). As we implement ITIL v3.0 we will work towards building and keeping momentum on level 4 (Managed) infrastructures.



**Source:** Control Objectives for Information and related Technology (COBIT).



## **Strengths, Weaknesses, Opportunities and Threats**

<p style="text-align: center;"><u>STRENGTHS</u></p> <ul style="list-style-type: none"> <li>• Smart, dedicated staff</li> <li>• Skilled, motivated staff</li> <li>• Customer oriented focus</li> <li>• Teamwork, cohesive group</li> <li>• Project Implementation success</li> <li>• Centralized staff and resources</li> <li>• Disaster Recovery, data backup</li> <li>• IT Standards</li> <li>• Network speed and reliability</li> <li>• ITIL v3.0 Implementation</li> </ul>	<p style="text-align: center;"><u>WEAKNESSES</u></p> <ul style="list-style-type: none"> <li>• Resource limitation to meet workload</li> <li>• Limited back-up and cross training</li> <li>• Lack of resources dedicated to fully understanding the needs of each internal department</li> <li>• Technical competence in multiple areas</li> </ul>
<p style="text-align: center;"><u>OPPORTUNITIES</u></p> <ul style="list-style-type: none"> <li>• Develop new services to benefit customers and citizens – 3-1-1, web and others</li> <li>• Wireless applications for field workers</li> <li>• Analyze business processes / consolidate systems</li> <li>• Hosted Server / System models</li> <li>• Telecomm cost reductions</li> <li>• Shared Services with internal and external partners</li> <li>• Software as a Service SaaS</li> </ul>	<p style="text-align: center;"><u>THREATS</u></p> <ul style="list-style-type: none"> <li>• E-discovery / technology litigation</li> <li>• Technology security</li> <li>• Staff burnout from heavy workload</li> <li>• Potential resistance to technology standardization as a tool to drive down costs</li> <li>• Loss of resources in the next couple of years due to the economy and retirement</li> <li>• Under utilization of current resources.</li> </ul>

## **Industry Trends**

During the past several years, private and public sectors have felt the urgency to find new ways to budget for IT initiatives. As economic pressures reduce available funds, many IT organizations will focus on maintenance, ongoing operations and open source. This is not necessarily bad news. IT shops will work on completing infrastructure projects and integrating existing systems with new web-enabled front ends. Focus will be on performance, reliability, and security. Another opportunity from this is partnerships. Work with others who are interested in sharing services across agencies. It makes no sense for every local agency to create its own disparate set of systems; sharing services and information, collaborating and consolidating should be a goal.

Recent natural disasters in the Gulf have made us all aware of the potential for disaster. Security of systems and information will be prevalent in the IT industry. Disaster recovery planning and testing are key components.



Web page content that normally is informational in nature should now be reviewed as to its potential in criminal or terrorist use. Web e-commerce and e-government initiatives continue.

Data and technology needs continually grow at the City and this needs to be reviewed and consolidated where possible so that information is easily accessible and duplication of effort and resources do not occur. With the implementation of best of breed applications during the last several years we are seeing less sharing of data and an increase in the existence of “data silos”. This issue complicates cross-departmental sharing, increases overall data storage requirements, and in many cases compromises overall City data integrity. The IT Council plays a continuing role in the prioritization of new technology. A look towards new Open systems will be expanded upon to allow the city to grow technology at reasonable costs.

Information is everywhere and needs to be centrally managed for citizens through a 3-1-1 / CRM system and through data management on the back end.

Wireless initiatives continue to grow and mature. Integration of web services over web compliant devices will continue. Web enabled devices will change from the traditional laptop to tablet to cell phone. Wireless initiatives need to be addressed inside and outside the organization. External wireless initiatives will need to be collaborative in nature.

## ***IT Focus***

### **Overview**

The IT department recognizes that technology and how people use technology are constantly changing. To keep pace with constant change and still be able to meet the City’s business needs in an effective and efficient manner the department has to be willing to adapt its methodologies and processes without compromising the department’s vision, mission, and values. The following focus areas have been identified by the IT leadership team as critical to the future success of the department in the midst of rapid change.

These initiatives are separated in the business plan for the following reasons:

- The leadership team has identified the focus areas as critical to the success of the department and separating the initiatives from other projects in the business plan provides the focus and attention required for the initiatives to be successful
- The initiatives will significantly change “the way we do business” and will therefore be difficult to implement. The importance of the initiatives to the organization’s success will need to be consistently communicated to the department staff to help overcome the natural resistance to change of this magnitude. Separating these initiatives from other projects will help clarify why we are making the changes and the importance of these changes to the department’s success
- The initiatives will not be fully implemented in one year and will require a multiyear focus to be successful. Separating the initiatives in the business plan will facilitate an annual review of the initiatives and allow for required adjustments to the initiatives to be planned and implemented as required



## **Demand Management**

There are always more requests for technology projects than the IT department has resources to implement. The IT department has a process to review and prioritize projects but with increased demands on the department's resources and reduction of budgets is requiring the department to focus on improving and expanding the project prioritization process. In addition, activities related to incident and problem management traditionally have not been prioritized and coordinated in a formal process. The IT department's leadership team has identified that managing the demand on IT resources in an efficient and effective manner is critical to the future success of the department.

The following active and future projects are related to implementing improvements in demand management:

- IT Council
- Internal Project Approval Process
- Change Management (ITIL)
- Service Catalog (ITIL)
- Problem Management (ITIL)
- Incident Management (ITIL)
- Standardization of Web Architecture
- Leadership Training

## **Aligning IT Resources**

The IT department has traditionally been very successful at supporting and maintaining the systems and technology the City depends on. As technology changes, business needs become more complex, and the City is requiring more integration between systems it is becoming increasingly difficult to maintain the current systems and meet the increasing demand for new IT services.

The IT department is shifting its focus from a pure operational management of deployed services to a more strategic view of the entire service life cycle by implementing ITIL Version 3 processes.

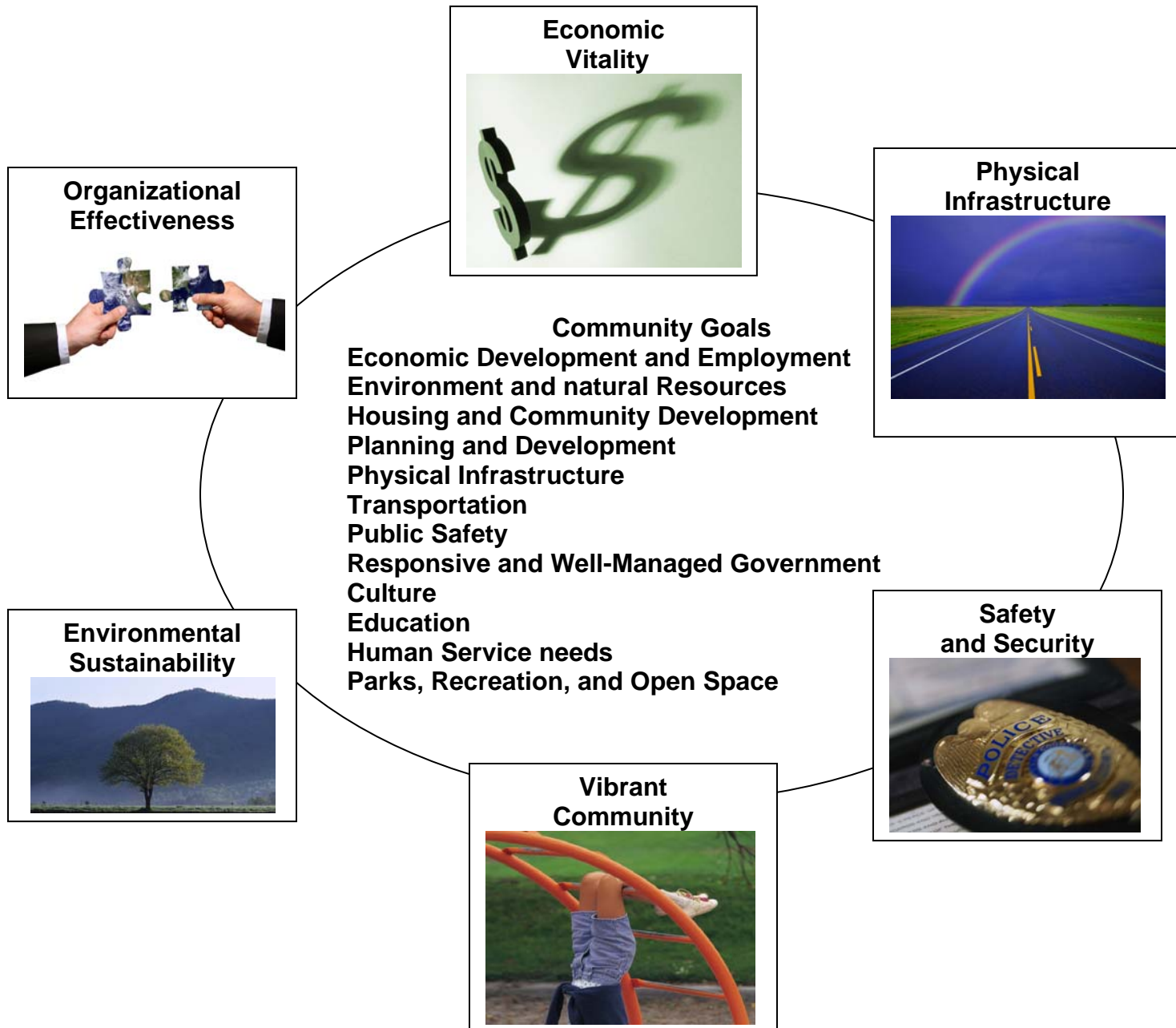
Current and future ITIL Projects:

- ITIL Version 3 training and certification for all IT staff
- Reorganization of the Support Desk
- Change Management
- Service Catalog
- Incident Management
- Problem Management
- Installation of Configuration Management Database (CMDB)



### III. City Goals and City Council Community Goals

The City of Arvada has 12 City Council Community goals that guide our efforts. We have divided these into 6 City Goal categories depicted below:





## IT Department Related City Council Goals, Objectives and Targets:

### Organizational Effectiveness



*Objectives:*

1. Be proactive in the use of technology.
2. Maximize the use of taxpayer dollars.
3. Continue to strive for high performance within all City departments and divisions.

*2 Year Targets:*

- a. Effective and Efficient Web Systems – more resources to keep up with the demand for services. Re-write the City’s Intranet and Internet sites embracing web 2.0 tools.
- b. Implementation of IT service management strategies to better align with the business and ensure that we add value to the organization.
- c. Police CAD/RMS System – partnering with system owner, re-evaluate the current system and investigate what new systems are available in the marketplace
4. Maximize utilization of available technology for efficiency, effectiveness, and/or public safety.

*2 Year Targets:*

- a. Disaster Recovery – Police and Communication Systems – continue to build redundancy into these key city systems at the disaster recovery site.
- b. 3-1-1 Citizen Service and Information Sharing – to create a repository for organizational information for citizens and staff. Create a central point for phone calls and be able to track requests that come out of these contacts, through to completion. Add Twitter integration.
5. Continue to analyze the City’s organizational structure and municipal policies for effectiveness and efficiency, involving all layers of the organization.

*2 Year Targets:*

- a. Business Process Management – The City needs to evaluate processes they perform now and how they are documented. This will help with the 3-1-1 system implementation and with succession planning.

### Economic Vitality

*Objectives:*

1. Be proactive in the use of technology.

*2 Year Targets:*

- a. Develop web applications that support the efforts of Economic Development., Urban Renewal and other areas to help achieve organizational objectives.
- b. Supporting Community Broadband – to leverage our interests in the global economy by increasing competition in broadband deployment.





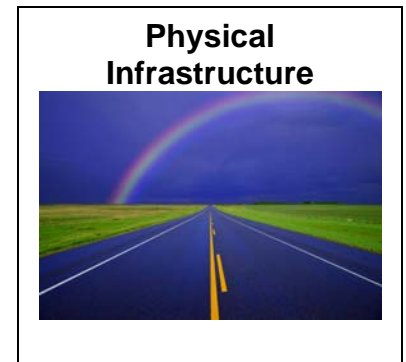
## Physical Infrastructure

### Objectives:

1. Continually manage and monitor data security to safeguard the City's technical assets.

#### **2 Year Targets:**

- a. Perform bi-annual security audits of the City's computer systems and networks
    - i. Implement appropriate changes
    - ii. Implement changes needed for PCI compliance for credit card use.
  - b. Continue testing and expansion of the City's Disaster Recovery (DR) site annually.
  - c. Continue to address E-Discovery needs to include Instant Messaging (IM's) and web 2.0 products.
2. Increase network Bandwidth.
    - a. Increase bandwidth for our internet connection for ingoing and outgoing Internet traffic.



## Safety and Security

### Objectives:

1. Maximize use of available technology for efficiency, effectiveness and public safety.

#### **2 Year Targets:**

- a. Continue work integrating Police and Courts systems to include data integration and e-citations.
- b. Work with Westminster on upgrade/replacement of Radio system.
- c. Continual maintenance and improvement of the Police Department voice and data systems to keep the lines of communication and the flow of information open to assist the Police Department in fulfilling its Public Safety mission



## Vibrant Community

### Objectives:

1. Engage the community to foster participatory government and an atmosphere of inclusion.

#### **2 Year Targets:**

- a. Continue fostering use of Ask Arvada, the citizen request management system, and grow it into a 3-1-1 system.
  - b. Pursue new communication channels with Social Media tools, specifically adding UserVoice and yelp.
2. Partner with the Arvada Center through technology.
    - a. Web site improvements
    - b. Internet distant learning
    - c. New e-commerce opportunities





## Environmental Sustainability

### *Objectives:*

1. Minimize the City's carbon footprint and maximize energy savings through technology. Ensure that we employ environmentally sound measures in utilizing material and energy resources and that procurement criterion includes sustainability specifications.

### *2 Year Targets:*

- a. Energy effective computing environment.
  - i. In 2010 IT is looking at more ways to allow users to use computing technology that is not only energy efficient but will allow users to function more efficiently to help reduce energy needs in a variety of ways via virtualized desktops.
- b. Participate on Sustainability Committee:
  - i. As an active partner in harnessing technology energy consumption.
  - ii. Creating new effective ways to tele-commute from home.
- c. Partner with other jurisdictions to share technology resources.





## IV. Large Project Details

### *Information Systems Division*

#### Initiative 1 – Oracle 12i Upgrade Project

1. **Description:** A complete system upgrade to the Oracle e-business suite of applications. The project will include refreshing hardware, upgrading to the latest back end technology and upgrading each of the modules that make up our ERP system. This is the largest upgrade we have taken on since 2001 and will affect virtually all employees at one point.
2. **Project Benefit:** Two primary goals exist. First is to upgrade to a modern and supportable version that will allow us to run for as many as five years without the need for another costly and comprehensive upgrade. The second goal is to review existing business needs and to implement system changes that will support us in meeting our strategic and business goals.
3. **Potential Barriers and Mitigation Strategy:** Barriers include a shortage of time and available resources to complete the work while meeting the demands of the organization and potential resistance from staff who will be asked to change the way they work. The time issue will be mitigated through careful upfront planning and a commitment on the part of the project team to strict monitoring of deadlines. The change issue will be overcome through training and communication throughout the project.
4. **Economic Engine:** The upgrade will be funded by the computer replacement fund and we are confident that adequate financial resources will be made available to successfully complete this effort. As the Primary Finance and HR application for the City, keeping the system up to date and taking advantage of the functionality will help us to meet financial goals in what is proving to be a prolonged economic downturn.
5. **Staffing Impact:** The project will require a big time commitment from the IT Department, including our Application Administrator, Database Administrator, Project Manager, Network Systems staff and IT Management. It will require even more time from each of the Oracle super users as they oversee the upgrade of each module.
6. **Organizational Impact:** The entire organization will feel the impact of this effort as many processes including time entry will be changed.
7. **Key Components and Partnerships:** Every City Department will be impacted by the upgrade and most employees will require some training. The biggest impact will be felt in Finance, HR and IT as these groups will partner with our vendor Cedar Crestone to deliver the upgrade.
8. **Implementation Strategy:** This project has been approved and blessed by the oracle steering committee. Final SOW documents are being reviewed and the IT Department has begun work on the infrastructure.
9. **Suggested Time Frame for Development:** Formal implementation will begin the third week of April and the project will run for approximately three months. IT staff and project managers are already working on tasks to ready the project for the vendor and super users.



10. **Performance Measures/Key Results:** Deliver the project on-time and within the agreed upon budget. No more than three days downtime and increase functionality.

### **Initiative 2 – Sales Tax System Replacement**

1. **Description:** In order to meet new demands for sales tax program maintenance and to ensure we have a system that is supportable well into the future we will be replacing our current sales tax application. We have not selected a vendor yet but have identified what we think is our best option. A decision will be reached in early 2010 with regard to the preferred system.
2. **Project Benefit:** We expect to install and operate a system that is flexible, easy to manage and supports our current requirements while being configurable to the point that it will function well should we experience any major changes in the way we operate the sales tax collection process in the future.
3. **Potential Barriers and Mitigation Strategy:** At this point the single biggest barrier is the lack of available options that truly meet our needs. During our RFP process we identified only one product that we feel will meet our needs for a price that we can justify. That product is not mature and as a result we have waited to make a final selection until the vendor can demonstrate that the product is capable of meeting our needs now and into the future. We are working closely with the vendor and the City of Durango Colorado, who uses the product, to see if the application will in fact meet our needs.
4. **Economic Engine:** Money has been approved through the budget process for this replacement effort and the expectation is that a new system will help us to increase efficiency and collect more revenue as a result of having a more modern application.
5. **Staffing Impact:** Required resources from the IT Department include our System Administrator, Project Manager and some Network Systems staff for configuration. The Sales Tax staff and a Finance project manager will also be heavily involved in the implementation.
6. **Organizational Impact:** The Sales Tax Division will feel the most impact, however, Utilities, AEDA, GDS and potentially BID will also be impacted as a result of this effort.
7. **Key Components and Partnerships:** The project will be led jointly by Finance and IT with the vendor providing implementation services. Most if not all Sales Tax staff members will be required to work on the project and it will affect, Utilities, AEDA, BID, and GDS divisions for sure.
8. **Implementation Strategy:** The plan is to follow a similar process to the one we used to implement CIS. Funding has been secured and once a vendor is selected we will formalize the project and manage it in an organized fashion.
9. **Suggested Time Frame for Development:** A meeting has been scheduled for February 2010 to discuss the product with Durango and if it is determined that our best course of action is to proceed, we will negotiate a contract with the vendor and begin what will likely be a six to eight month implementation effort.



10. **Performance Measures/Key Results:** Deliver the project on-time and within the agreed upon budget. Increase functionality to meet current and anticipated needs.

### **Initiative 3 – Arvada Center Web Presence Re-Design**

1. **Description:** A complete re-design of the look, feel and branding will be completed in conjunction with an upgrade to the Tessitura WEB/API used for on-line ticketing. Approximately 25 percent of ticketing revenue comes through the web site and due to the age and rigidity of the API the buying experience is cumbersome at best
2. **Project Benefit:** This work is necessary to provided much needed flexibility to the on-line purchasing component of the site. Additionally, the Center is looking for a more engaging site with flexibility to promote different items and to provide ever changing content.
3. **Potential Barriers and Mitigation Strategy:** Budget, time, and technology are all potential risks. The budget will likely come from SCFD funds but this has not been determined. Finding staff time, specifically from the Arvada Center, will be an issue and to mitigate we will build schedule around the needs of the business and manage to the agreed upon schedule. Technology may be an issue as the current API is a .net application and we do not have that skill in-house. To combat this we will consider building our own or securing resources to manage the API moving forward.
4. **Economic Engine:** Budget has not been confirmed but will likely come from SCFD. The site is a money maker and if we build it correctly we can expect that on-line revenue will continue to grow and that growth should fund the web development.
5. **Staffing Impact:** This effort will have a big impact on the Arvada Center staff, specifically the operations and marketing units. From an IT perspective it will require concentrated effort on the part of both web developers, the IS manager and the two tessitura support staff members.
6. **Organizational Impact:** The impact to the organization will be minor but other web work and support for other POS and building applications will be impacted at times because of the strain on resources the project will cause.
7. **Key Components and Partnerships:** We will engage a designer and potentially a firm to develop and implement the API. We will work closely with the Center staff, hopefully the yet to be hired person responsible for web and electronic media presence.
8. **Implementation Strategy:** A formal project management process will be used and the project will include several phases, the first being an RFP for design services.
9. **Suggested Time Frame for Development:** This project has yet to be scheduled and the timeframe to complete is still unknown. The first trigger point will likely be when the new position at the Center is staffed.
10. **Performance Measures/Key Results:** Budget and time adherence will be key factors to measure and watch during the project. Website hits and on-line revenue increases will be looked at long term.



### **Initiative 4 – PCI Compliance Implementation**

1. **Description:** This work is a series of projects designed to deal with issues uncovered during the PCI review process in 2009. The projects will range from network reconfiguration (DMZ) to policy and procedure changes by certain business units within the City.
2. **Project Benefit:** The effort is required to come into compliance with the guidelines set forth by the payment card industry. Failure to comply will eventually lead us to losing the privilege to accept major credit cards at our facilities.
3. **Potential Barriers and Mitigation Strategy:** Cost, resistance to change, and available human resources are the major barriers facing this effort. The cost issue will be addressed through diligent budgeting to ensure we get the best value. Resistance to change will be owned by the various business units and the project is structured so that key areas are represented on the team and they will be called upon to gain acceptance within their business unit. Resource availability will be handled through the project prioritization process and once plans are agreed upon we will manage to the schedule.
4. **Economic Engine:** Some funding has been set aside through the budget process and funds will be augmented by the annual security budget.
5. **Staffing Impact:** The project will have heavy impact on the network systems team, project and staff managers and to a lesser extent, application administrators. Finance and other business unit personnel will also play key roles in the effort.
6. **Organizational Impact:** Impact will be felt wherever we accept credit card payments, primarily in Fiancé, the Arvada Center and in the PG&HS department.
7. **Key Components and Partnerships:** We utilized a vendor to identify issues and to build a remediation program. Moving forward Bryan Archer, Erin Green, and Joe Holtz will drive the project from a project management perspective.
8. **Implementation Strategy:** Formal project management processes will be followed and a programmatic approach will be taken. The entire effort will likely span two years.
9. **Suggested Time Frame for Development:** We are currently under way and expect to continue through the end of 2011.
10. **Performance Measures:** Key Results: Success will be measured throughout the project as we come into compliance with each of the issues.

### **Initiative 5 – Permits System Replacement Project**

1. **Description:** This will initially be an investigative project to determine what options we have to replace the current system. We will complete a process to evaluate solutions for both functionality and cost. If viable options exist we will work through the budget process to acquire a replacement product.



2. **Project Benefit:** In phase one our goals will be to determine what if any options we have for replacement and if options exist we will attempt to secure funding for the replacement project. If a replacement effort is approved we will deliver a new system that will be easier to use, with enhanced functionality and be fully supported by the vendor. We will be attempting to acquire a solution that meets the needs of the building division, as well as other areas including planning and development, utilities and other City departments.
3. **Potential Barriers and Mitigation Strategy:** Barriers include a lack of time on the part of the decision makers as day to day efforts and a high volume of work in the permitting area are keeping us all very busy. Additionally, this project could have organizational effect and we will need to engage players from multiple Departments in the process. Finally, funding is and will always be an issue. To mitigate the time and commitment issues we will assemble a project team and carefully plan the timeline around other activities. We will then stick closely to the schedule, particularly in 2010 while we are searching for possible solutions. Funding will be addressed through the budget process so time will be of the essence in determining if viable options exist.
4. **Economic Engine:** The project, if it becomes a replacement effort will require budget and we will need to request dollars through the budget process. We currently pay maintenance on the existing system and hope those dollars will be similar with a new system. The cost will be in acquisition and implementation.
5. **Staffing Impact:** The project will hit all areas of the IT Department with the application administrator and IS Manager having the largest roles in the investigation phase. Implementation will require NS, IS, Service Desk and database support. The BID will need to dedicate resources to the project to ensure success.
6. **Organizational Impact:** The project, when implemented, will likely touch many parts of the business and will require changes to existing workflows and processes. A key goal of the project will be to make us more productive and able to serve our citizens more efficiently.
7. **Key Components and Partnerships:** The project will have a big impact on the Building Inspection Division and will likely touch Community development, Utilities and Finance as well. Most packages are now integrated across the organization and therefore people from across the organization will be involved from the start.
8. **Implementation Strategy:** A formal project management approach will be used with the BID leading the effort during the RFI phase. A cross functional group will evaluate the options and recommend a course of action. If a new system is selected, we will assign business and IT project managers for implementation.
9. **Suggested Time Frame for Development:** In order to align with the budget process we will complete the investigation project by early summer. If a better solution is available and budget is approved we will implement the system during 2011.
10. **Performance Measures/Key Results:** In phase one we will track our performance against our schedule and we will consider the effort a success if we have a decision in time to coincide with the 2011 budget process. Should an implementation take place we will define success criteria as part of the implementation planning process.



### **Initiative 6 – Data Dissemination (Open Data Initiative)**

1. **Description:** The Open Data Initiative is an iterative project designed to support transparency and to make as much government data available to the public in a wide array of formats. We will provide polished data in presentable formats such as PDF, maps and reports and we will make data available in machine readable raw formats designed for programmers to use in the creation of applications.
2. **Project Benefit:** Transparency is the number one goal. As huge push is coming down from the Federal level to make data available to the masses and we expect to be early adopters at the local level. A key goal of the project will be to make data available that can then be wrapped into applications and packaged for consumer use. If done properly, the site will alleviate pressure from the departments to respond to specific FOIA and Open Records Requests, freeing up staff to deal with more strategic efforts.
3. **Potential Barriers and Mitigation Strategy:** Few barriers exist, since the technology is already in place and we have a solid team from the IT and GDS units in the City on board and excited about the effort. We may face issues when we attempt to provide raw data requiring end users to manipulate it, however, we feel strongly that the majority of the people who use the site will be pleased to get the data and will happily format it to meet there specific needs.
4. **Economic Engine:** Because we are leveraging open source technology and utilizing existing content management and mapping applications, no capital investment will be required to bring this effort to life. We will seek funding to sponsor a application contest and to promote the site, but the dollars will be nominal. If done properly we will see cost savings in the form of reduced demand on staff in the fulfillment of data requests for citizens and we will be able to divert the staffers to more important and valuable tasks.
5. **Staffing Impact:** The impact will be felt by the IT and GDS divisions as they prepare the site and post data. Every Department will likely see some additional impact as they publish data to the site. It should be noted that we think the site will actually relieve pressure on the departments and free them up to do other work, not create more work.
6. **Organizational Impact:** The impact will be felt across the organization as they will now have an easy avenue to make important data available to the public in a central location.
7. **Key Components and Partnerships:** Initially this will be a combined effort of the IT and GDS units. All City Departments will be asked to play over time and eventually developers will use the data to provide valuable applications to our citizens
8. **Implementation Strategy:** This effort will follow an AGILE and iterative project management process and will develop over the next two years.
9. **Suggested Time Frame for Development:** Phase one will be completed during the first half of 2010 with additional development taking place for the next two years.
10. **Performance Measures/Key Results:** We will measure site hits, number of applications developed and requests for data.



## **Police Systems Division**

### **Initiative 1 - E-Citation Beta Test and Pilot Project**

#### **1. Description:**

Evaluate feasibility of doing a pilot project for a handheld device to be used by Police traffic officers to prepare and print tickets for traffic offenders. This is called Electronic Ticketing or E-Citations. The PD's mobile computing software provider, VisionTek has been developing a system using handheld devices which are integrated with their mobile computing (wireless) switch. The PD needs to look at this system to judge whether it show enough value to go further and do a pilot project to test and further evaluate its effectiveness and utility.

#### **2. Project Benefit:**

Should this system succeed in all tests, next steps would involve integration with the Police Records System and the Municipal Court's Full Court System. Additionally, a version of the software would be developed so that all officers can do E-Citations on their MDCs. Huge gains in workflow and much more efficient utilization of staff time would be the reward for a fully successful outcome. Also, summons written will be legible leading to fewer disputed tickets and smoother workflow for staff trying to read citations.

#### **3. Potential Barriers and Mitigation Strategy:**

This is development of new technology using both software and hardware that Arvada is unfamiliar with. However, Arvada has partnered with a vendor that we have had a long term, quality relationship to build this solution. Additionally, PD personnel can be resistant and skeptical of new technology. PD leadership must be very involved in this and help plan the Beta Testing and Pilot.

#### **4. Economic Engine:**

Minor impact on budget. Most costs will be "soft costs". Some cost sharing with vendor of negotiable amounts will occur, with funds to be taking from small equipment operating budget.

#### **5. Staffing Impact:**

Major impact to Police Business Analyst who will be directly involved in development

#### **6. Organizational Impact:**

A successful E-Citation implementation will set the stage for a more efficient workflow not only in PD but in the Municipal Court. This could prove to free up staff time and ultimately increase the ease and amount of collected fines.

#### **7. Key Components and Partnerships:**

VisionTEK, Police Patrol and IT – for development and testing. Police records and Municipal courts for acceptance of format and data.

#### **8. Implementation Strategy:**

Steps for implementation will include: 1) Development of prototype software on Motorola handheld device 2) program wireless connectivity to printers in Records and Courts, connection to server and CBI 3) Test reliability of printing via Bluetooth to mobile printer 4) Field test for reliability, ease of use, ability to scan licenses, communications functionality. 6) Begin beta test with a generally stable system

**9. Suggested Time Frame for Development:**

Since this is new development of software and employing equipment never utilized by staff, the time frame will be approximately one year and probably subject to delay and additional time needed.

**10. Performance Measures/Key Results:**

No citations are lost. Time for officer to issue summons is no greater than when hand written. Citations print from the field on Courts and Records printers. Handheld works smoothly and does not “lock up” during summons writing.

**Initiative 2 - MDC Replacement****1. Description:**

As per replacement schedule, Panasonic Toughbook Mobile Computers in police vehicles and used in other PD mobile environments are due for replacement. This project includes everything from procurement tasks through configuration, testing and installation.

**2. Project Benefit:**

The mobile computers in police cars are over four years old and obsolete. The manufacturer's warranty has expired and they are becoming an ever increasing service problem. New technology promises better performance and improvement in the wireless communication capability of the device.

**3. Potential Barriers and Mitigation Strategy:**

New technologies from wireless connectivity may present configuration problems – mitigated by thorough testing. Adhering to increased security measures may cause login procedures to be cumbersome – mitigated by testing and training.

**4. Economic Engine:**

Funding is on a four year model and funds are put away on a yearly basis in the computer replacement fund for this scheduled procurement. Grant received from E911 Authority to reimburse cost of 69 computers at \$3600. each.

**5. Staffing Impact:**

All Police Systems staff will be impacted.

**6. Organizational Impact:**

Development of a reliable image will involve Patrol, Dispatch, and GDS staff as well as PD IT staff.

**7. Key Components and Partnerships:**

Finance – Purchasing, Legal (for contract to purchase), PD Patrol (customers, and for testing), City Geo Data Service (for mapping component), Vendors – AT&T, Panasonic, Intergraph, Netmotion

**8. Implementation Strategy:**

1) Procurement of Panasonic 69 CF-30s 2) Creating image for use on most MDCs 3) test image on bench 4) field test image on patrol 5) transfer AT&T subscriptions and install

**9. Suggested Time Frame for Development:**



Three months to develop and test image and then prepare devices for deployment. Actual installation of the new MDCs will be completed during the course of one week to minimize impact to PD operations.

10. **Performance Measures/Key Results:**

Key results will be minimal impact to police operations and minimal service related issues after installation.

**Initiative 3 - Police System to Court System Interface**

1. **Description:**

In house development of an I/LEADS export to Full Court Import of municipal traffic citation data, thus eliminating dual, redundant entry to two systems. The intent of this project is to develop an interface between the two systems so that data entered into the I/LEADS system will flow into the Full Court System, thereby eliminating redundant dual entry.

2. **Project Benefit:**

At present, when a Police Officer writes a municipal court summons, whether it is for a traffic or criminal violation, the ticket is written on a multi-copy paper form. Copies of that ticket are then forwarded to Police Records and the Municipal Court for data entry. Much of the data entered are the same in both systems. Such duplicate entry is clearly an example of an inefficient workflow. This project will attempt to build an interface which alleviates duplicate entry and thus the wasted staff time and effort and thus there are clearly instances of redundant entry.

## ***Network Systems Division***

**Initiative 1 – Cloud Computing**

1. **Description:**

Cloud computing has gone from a buzzword to reality for forward think business's.. While this is still a maturing technology on many fronts the city can take advantage of one of the most established and widely available cloud applications, email. While this make sense for the first cloud application IT will continue monitoring and evaluating other cloud computing options such as storage and productivity applications like word processing, spreadsheets, collaboration tools, etc..

2. **Project Benefit:** Choosing email as the first application to move the cloud has many benefits

1. Scalability
2. resource sharing
3. flexibility
4. reliability and fault tolerance
5. its utility based in that we pay for the services we need.
6. built in spam
7. reduce our infrastructure costs: disk spaces, servers, backup, etc
8. works on most handheld devices
9. collaboration tools like voice and chat

3. **Potential Barriers and Mitigation Strategy:** To reduce and discover potential barriers a test group will be setup to use the cloud based email application most likely GMAIL. Buts some barriers to watch for are:



1. Internet bandwidth- mitigation may be increase bandwidth or better prioritize internet bandwidth with hardware devices.
2. No voice mail integration-mitigation wait till the city upgrades to a VoIP phone system to have better access to voice mail or access voice mail thru the web based callpilot.
3. Training of end users – this may not be a huge barrier as most users already have some sort of web based email
4. Setting up and utilizing the email system in a similar way our current email system is used – examples shared calendars for resources
5. syncing our current email with GMAIL while we make the conversion.
6. If the city decides to move how will all the data moved of kept for archival purposes.

4. **Economic Engine** The economic impact should be minor and will more than likely result in a cost savings. For example our

- Current email system costs \$23.75 per users
- Current SPAM blocking cost \$11.00 per user
- Current email archiving cost about \$8.00 per user
- Current disk space used by email is about 5 TB for a cost of about \$20K in disk space
- 16 hours a week to manage

The cost to move to GMAIL with virtually unlimited disk space is \$50.00 per users per year plus an additional cost for email archive and virtually no systems management.

5. **Staffing Impact:** This should, after implementation free up resources to work on other tasks.

6. **Organizational Impact:** This will have significant organizational impact. All users will be able to collaborate more freely, have better access to their email, calendar, and address book.

7. **Key Components and Partnerships.** The key partner ship will be with the cloud computing vendor.

8. **Implementation Strategy:** Start with a 15 to 20 user test pilot group and work on a plan for full implementation.

9. **Suggested Time Frame for Development:** About 8 to 12 months

10. **Performance Measures/Key Results:**

1. Easy to use and setup
2. Reduction and better utilization of IT staff

### **Initiative 2 – Desktop Virtualization**

1. **Description:** Desktop virtualization will be a turning point in the way IT manages desktop systems and supports the computing needs of the organization. Desktop virtualization is a computing model that breaks apart the components that make up the robust stand alone desktop experience to create a computing environment that is extremely adaptive - easier to manager and available from just about anywhere. In essence, the Operating system, Applications and User profiles are broken apart and can be put together in virtually any combination.



2. **Project Benefit:** This technology offers I.T. greater options in managing, deploying, and securing Operating systems, applications, and user profiles network-wide. The benefit for the City staff is that end users can have a familiar computing experience that is available virtually anywhere on almost any device thus allowing management to rethink the way they have their staff work and to be more productive for the citizens. Energy savings can also be a benefit.

3. **Potential Barriers and Mitigation Strategy:**

Nbr	Risk	Mitigation
1	The existing cost model for computer replacement and other hardware replacement does not support a virtual environment	Need to change the way the current computer replacement model work to fund this new approach.
2	Utilizing some IT staff members to work on this project effort as their sole priority. Since our resources are limited, other projects may not be addressed or completed.	This project is a huge work effort comparable to changing the police system or financial system. It will take up to a year or more and will require dedicated staff resources with the right aptitude for this work effort and whose sole priority is to work on this project. Other sources to help with the work load may be considered such as contract labor.
3	Dealing with outages without adequate redundancy	The system needs to be built as redundant as possible.
4	Not changing our support and help desk operations to align with this environment	Good analysis of the types of calls that come to the service desk will be important to make necessary changes in our support operations.
5	Not addressing other affected IT staffing responsibilities to align with this environment.	This will create a new system that needs to be managed differently than our current desktop model. Changes in job duties and job descriptions will be necessary.
6	Changes with the process for deploying upgrades and new software releases	A few things need to come into play here: <ul style="list-style-type: none"> <li>• Good communication</li> <li>• IT staff understand this technology and how it changes the way their systems are supported</li> <li>• Utilizing good change management practices will be a must.</li> </ul>
7	Not aligning our current change management process for workstations and applications	Processes need to be created so replacement, upgrades, etc can be handled as efficiently as possible.
8	Lack of Disk Space	Good upfront analysis of what will be



		required
8	Lack of Servers (how much processing/memory)	Good upfront analysis of what will be required
9	The number of applications to package and be virtualized	From experience, we know that not all applications can be virtualized but there may be other options. The number of applications the city uses makes this a very large effort and needs to be methodically planned out. What are the other options? Application virtualization enables the deployment of software without modifying the local operating system or file system. It allows software to be delivered and updated in an isolated environment ensuring the integrity of the operating system and all applications. Application conflicts – and the need for regression testing are significantly reduced. A single application can be bundled and deployed to multiple operating system versions. Applications are easier to provision, deploy, upgrade, and rollback.
10	End-user not accepting the change	In order to make this change seamless for the end user, communication, open houses will need to occur to address the concerns and to demonstrate first hand the experience they will get with a virtual machine.

4. **Economic Engine:** Use of the funds already accumulated in the replacement fund for the replacement of desktop computers would be used for the project. The idea being that the method for replacing computers would evolve and this new approach would be the next evolution while keeping the same funding method. Would there be a cost impact to future funding?

5. **Staffing Impact:** This project effort will require work from a variety of IT staff members and will take a substantial commitment in time and learning. This newly established environment for computing management will necessitate a dedicated system administrator, so a position change in IT may be necessary. Also, the stability of the computing environment would improve and therefore allow for a change in the current support model.

6. **Organizational Impact:** This will have a big impact on the organization. For the IT Department the impact will allow for:



- provisioning of new desktops in minutes instead of hours
- Repairing or swapping hardware and/or client PCs with no data loss or need for data migration
- Extend the usable life of desktop PCs as client machines
- Reduce IT costs due to more [efficient application deployment](#) and fewer end-user tech support calls

For the other departments the above benefits have a direct impact on the efficiency of their business

- Repairing or swapping hardware and/or client PCs with no data loss or need for data migration will mean less down time for the end user.
- Extending the usable life of desktop PCs as client machines will have a direct impact on budgets
- Technology will provide end-users with superior real-time access from any remote location
- Create a environment that will allow managers to rethink how their employees work- work from home, in the field, use a laptop, thin clients, etc..

7. **Key Components and Partnerships:** While the goal is to keep what the end users sees and experiences as similar as possible there will be some changes. Examples: Users may no longer need a full desktop, some users could switch to a laptop or thin client, users may be able to work from home or in the field.. Having end users add software applications and make changes may not be possible depending on the setup. The entire city is a stake holder- new ways of conducting business will be possible, the days of this is “my computer” will be gone. This setup creates a flexible computing tool to be used in new ways so management and staff will need to be involved to determine the best setup for their business needs.

8. **Implementation Strategy:**

There will be multiple efforts that will happen concurrently.

First-

- Evaluate and compare the current Citrix VDI solution with VMware View comparing manageability, end user experience, application compatibility, price, etc.

Second-

- Evaluate the current VMware and Citrix Environment and build it to be as reliable as possible and document the weak points and risks.
- Evaluate products for user profile management and implement a solution. This product should at a minimum allow for one profile for each user, no matter how many Windows desktops and/or applications they log in to and no matter where those application / desktops are located, have the ability to save user settings on application launch and shutdown, allows personalized workspaces to be presented to users without compromising the speed of their logon process. Users receive the necessary settings at the very moment the application is launched. This will be done prior to efforts put into an Application Streaming/virtualization tool. This is necessary as this has been the biggest concern about expanding this technology into other areas.



- Determine how this can be funded through the current desktop replacement funding and create a model for funding the new environment

Third-

- Evaluate user groups that can use thin client, purchase thin clients, measure power savings and utilize funding from a grant for Green Initiative.

Forth-

- Evaluate the expansion of XenApp server for the application virtualization piece and package a few of the most widely used applications or do more research on a better method for application streaming and virtualization.

Fifth-

- Evaluate the current support structure and change if necessary to be able to maintain and support this new environment.

Sixth-

- Establish an ITIL process for continual process improvement.

9. **Suggested Time Frame for Development:** This is an 18 month project starting in the 1<sup>st</sup> qtr of 2010.

#### 10. **Performance Measures/Key Results:**

Performance measures

- Use the service desk tool to measure help desk calls related to computer OS issues
- Thru surveys measure the satisfaction of the users experience of this technology at work and at remote locations
- Measure and compare power consumption of thin client devices to desktops
- Measure costs of the current PC replacement model to that of VDI

Key Results

- Having one profile for each user, no matter how many Windows desktops and/or applications they log in to and no matter where those application / desktops are located with the ability to save user settings on application launch and shutdown rather than OS boot up or shut down as a end result
- The ability for a help desk / administrator to roll back the application portion of the user profile vs. the entire profile to quickly fix problems

### **Initiative 3 – Phone System replacement and technology change to a VoIP system**

1. **Description:** The city's current phone system will have reached its planed life expectancy in 2011. Since the cost of maintaining a traditional PBX is high, it no longer makes sense to continue to maintain this legacy equipment. Aside from the cost factor, replacement with a VoIP system will keep the city in line with current technology for phone systems. There have been great advances in internet technology making VOIP more stable. The reliability of VoIP phone systems, the manner in which users operate them and the quality of the sound are now virtually identical to that of landline telephone systems. A VoIP system can completely change not only how the city communicates, but how business is conducted.

#### 2. **Project Benefit:**

**a. The Integration of Audio and Data**

VoIP combines audio and data, allowing users to interact with data while using audio capabilities. This has unlimited potential when it comes to business users. Statistics show that the combination of audio and data is not only popular, but on the rise. For example video calls can allow for better communications.

**b. VoIP can save money**

- **Reduction in hardware, software and maintenance costs**
- VoIP integrates data and video with voice. With the increasing use of wireless for working in the field or using broadband at home remote workers would be more productive overall. Integrating our phone system to work over the Internet will create more room for flexibility with customers and enhance our customer service.
- VoIP numbers can be set so as to simultaneously ring on the IP phone, landline, as well as cell phone. If not answered, it will be automatically diverted to voice mail. This can greatly increase productivity.
- Many of the T1 lines that are used to connect to remote offices could be changed out with broadband internet connections for a significant cost savings.
- This type of phone system makes it very simple to perform common administrative tasks like adding new employees or managing employees that have moved.
- By offering both voice and data applications through a converged data network will help bring down both the number and the complexity of networks that IT needs to manage.



**3. Potential Barriers and Mitigation Strategy:**

Initial cost of implementing the new technology

There should be enough saved in the replacement fund to cover this upgrade. There is funding for the network and the phone system combined.

Reliability of service, quality of voice calls and security

Careful planning at the beginning of the project will reduce many problems that could arise. Our current network was planned out to be able to do QoS (Quality of Service) for a VoIP system in the future but some minor upgrades may need to be made.

Training on the new system for all employees

Change is difficult for most people so a good training and transition plan needs to be in place.

Location of the new equipment

The data center has been completely redone and should be able to handle the new equipment. Minor modifications may be necessary.

Power outages will affect alarm systems

Integrate with Alarm System

Power outages will affect data and phone

If there is a power outage in an area that brings down the computer network, you will also lose VoIP capability. Need to plan for switches to be on the generator and have good UPS's installed. Understand clearly from the VoIP provider exactly how far we will be able to scale up and at what cost.

Expandability

When buying the VoIP system, cover all the points with the provider to ensure that it will be fully compliant

911 calls

RFP not being written properly where we alienated vendors

We need to think outside the (VoIP) box and think of all the other IP communications that may take place over our network i.e. video, wireless, collaboration, and others.

Thinking outside the box- don't just focus don't just focus on VoIP

Make sure calls can be encrypted.

Secure phone calls

Evaluate current network usage

Network Bandwidth availability

**4. Economic Engine:** For the last eight years funds have been set aside to replace the current phone system as well as funds have been allocated for five years to replace the network equipment.

**5. Staffing Impact:** This change will have a significant impact in multiple aspects for IT department. Much effort will be required for planning and implementing this new technology. A significant effort will be needed to train and transition the city staff to use the new phone system appropriately and efficiently.



6. **Organizational Impact:** This project can have a significant impact on the organization. Management and staff will be able to communicate in more creative ways. Offering both voice and data applications through a converged data network that is accessible from just about any place will require management and staff to be visionaries to come up with new ways of efficiently conducting business.
7. **Key Components and Partnerships:** The entire city staff will be stakeholders in this project. Participation from all department and divisions will be needed to make this successful.
8. **Implementation Strategy:** Starting with coming up with requirements, write up an RFP, pick a vendor, maybe evaluate or do a trial, working on a conversion and implementation plan, cut over. This is a high level strategy including plan review and approval
9. **Suggested Time Frame for Development:** Starting in the fourth quarter of 2010.
10. **Performance Measures/Key Results:** Uptime- measure availability 99.99%



## V. Appendices

### *Appendix A -Information Technology Council*

#### **Purpose**

The Information Technology Council (ITC) oversees the information technology investment for the City of Arvada. Members of the ITC are appointed by the IT Director and are accountable to the Executive Management Team (EMT). The council will:

1. Provide strategic leadership for IT operations of the City of Arvada through the alignment of IT strategic objectives and activities with corporate strategic objectives and processes.
2. Prioritize IT investment initiatives and resolve resource allocation issues based on project prioritization.
3. Ensure open communications between the IT department and the other functional units of the City of Arvada so as to promote collaborative planning.

#### **Roles**

*IT Managers and Director* - Oversee the development of the Infrastructure Plan and ensure that it supports the Architecture Charter. Serve as members on IT Council.

*IT Council members* – Create strategy, policy and standards regarding technology project selection, prioritization and implementation. Work on funding, resources and populate IT Chartered Committees

Members of the council include:

- The Deputy City Manager or a designated representative of the City Manager's office.
- The Director of Information Technology
- The Director of Human Resources
- The Director of Finance
- Additional line managers of key departments
  - Arvada Center
  - Police
  - Public Works
- Ad hoc members: experts on particular business process or technologies
  - Geo Data Services
  - Enterprise Service



**How projects come to the IT Council**

- The council shall review all proposals for IT investments with the following criteria and rating scales:

- **Organizational Impact**

▪	<u>Low</u>	1	2	3	4	5	<u>High</u>
	One Division			Entire Organization			

- **Project Resource Hours**

▪	<u>Low</u>	1	2	3	4	5	<u>High</u>
	Less than 1 FTE			Greater than 480 FTE hours			

- **Projected costs**

▪	<u>Low</u>	1	2	3	4	5	<u>High</u>
	Less than \$3,000			Greater than \$50,000			

- **IT Impact**

▪	<u>Low</u>	1	2	3	4	5	<u>High</u>
	Vendor only support			1 or more IT FTE required			

- **Mandated by Law**

▪	<u>Low</u>	1	2	3	4	5	<u>High</u>
	No Mandates			Mandatory			

**TOTAL Possible – 25**

- Overall scores of 18 or higher will be reviewed by the IT Council
- This includes proposals from within IT services as well as proposals from other departments that have a significant IT component.

**Subcommittees of IT Council**

Establish cross-discipline chartered committees in order to further investigate and provide technology recommendations back to the IT Council.

- Web Council
- Oracle Steering Committee
- Police Department Technology Advisory Committee
- GIS



## **Appendix B - Performance Measures**

Since 2007 the following performance measures have been met, unless otherwise noted.

### **PERFORMANCE MEASURES – Information Systems**

- Maintain computer system availability at 98% during normal business hours
- Maintain Telephone system availability at 99% during normal business hours
- Monitor employee participation in technical and personal development training annually to be 90% or better.

### **PERFORMANCE MEASURES – Network Systems**

- Maintain 99.98% access to network for file access and printing
- Provide 99.98% access to Internet for internal/external Web access and internet e-mail
- Resolve 75% or better of helpdesk calls at first contact
- Keep employee participation in technical and personal development training at 90% or better

### **PERFORMANCE MEASURES – Police Systems**

- Maintain 99.99% functionality for Computer Aided Dispatch System, Police Radio System, and E911 phone system.
- Provide a 99% availability of Police Records Management System to all Police Department personnel.
- Provide 96% up time for Police Department Mobile Computer System.
- Assure that 95% of the area of the City provides wireless connectivity for the Police Department Mobile Computers.

### **PERFORMANCE MEASURES – General Services**

- Turn around all requests for print in less than 5 business days with 90% of work being performed within 24 hours
- Be the low cost provider for all duplication and design services work – note: no longer tracked 2009
- Provide highly available convenience copiers with 99% uptime



## Appendix C - IT Metrics

Highlights of metrics tracked by the City of Arvada IT Department:

### Service Desk Tickets

The Service Desk tickets include all incidents and problem tickets.

- 2008 – 6,207 tickets were completed – 20 % increase from 2007
- 2009 – 7,871 tickets were completed – 27% increase from 2008
- 2010 – 6,417 tickets were completed through Sep 2010 – 10% increase from 2009

### IT Resource Hours

Trend from 2009 to 2010 is that system support is becoming more efficient and staff is able to dedicate more time to value added services to customers

#### 2009

- IT Staff logged 44,731 hours towards system support and IT projects (not including print shop and front desk)
- 75% of time was logged to system support and remaining 25% to projects

#### 2010

- Through September 2010 IT staff logged 31,944 hours towards system support and IT projects (not including print shop and front desk)
- 68% of time was logged to system support and remaining 32% to projects

### Project Metrics

Trend for 2010 is more projects are finishing on-schedule and on-budget.

2009	Nbr	%
Total Proposed Projects	90	
Project Canceled	24	27%
Total Projects Worked	66	
In Progress	14	21%
Completed	52	79%
Late Projects	38	58%
Over Budget	16	24%

2010 (Through Sept)	Nbr	%
Total Proposed Projects	58	
Project Canceled	12	21%
Total Projects Worked	46	
In Progress	22	48%
Completed	24	52%
Late Projects	15	33%
Over Budget	7	15%

### IT Staff and Budget Comparisons

- IT budget as a percentage of total City budget = 3.64%
- IT staff as a percentage of total City staff = 2.09%
- Rate of IT turnover = 1.99% over a six year period



## CRM – Customer Relationship Management System

FAQs and Service Requests from Ask Arvada

- Total FAQ Views 2008 – 16,995
- Total FAQ Views 2009 – 60,582
- Total FAQ Views 2010 – 58,962 (to October)
- Total Service Requests resolved 2008 – 3,159
- Total Service Requests resolved 2009 – 5,000
- Total Service Requests resolved 2010 - 5,866

Note: FAQ’s usage is high which helps keep actual requests for service low

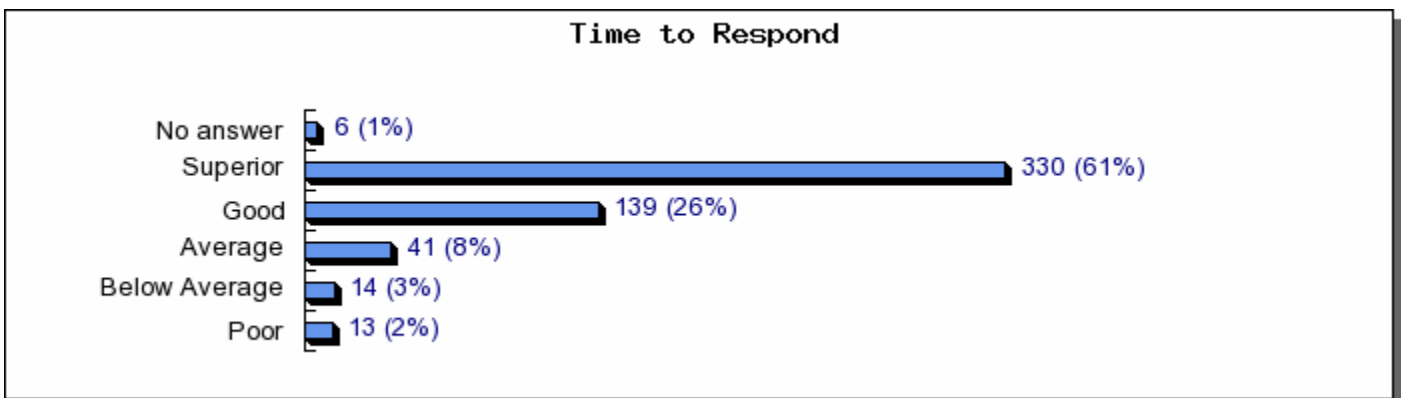
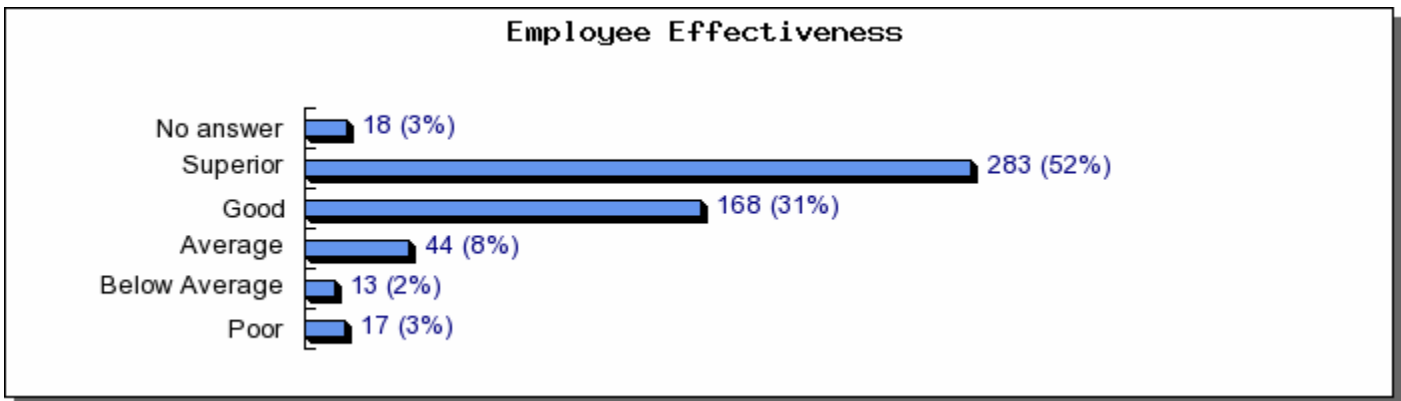
## CRM Surveys - Customer Satisfaction Survey Results

2010 to date CRM Survey Results

- Employee Effectiveness Good or Superior = 84%
- Time to Respond Good or Superior = 87%
- Employee Courtesy Good or Superior = 87%
- Expectations met or exceeded = 86%

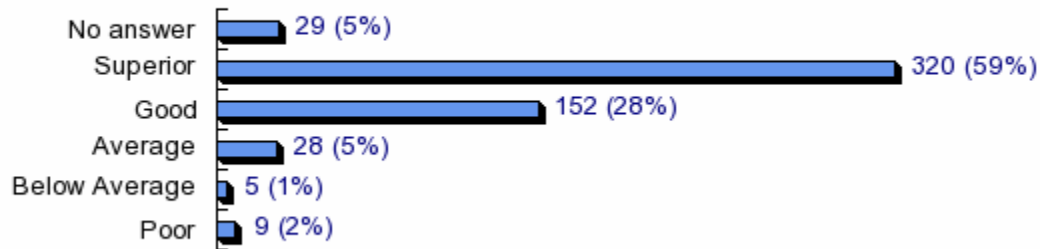
**For Date Period From 01/01/2010 through 10/13/2010**

543 Surveys filled out this time period. 5760 Requests closed this time period with 1850 surveys sent.

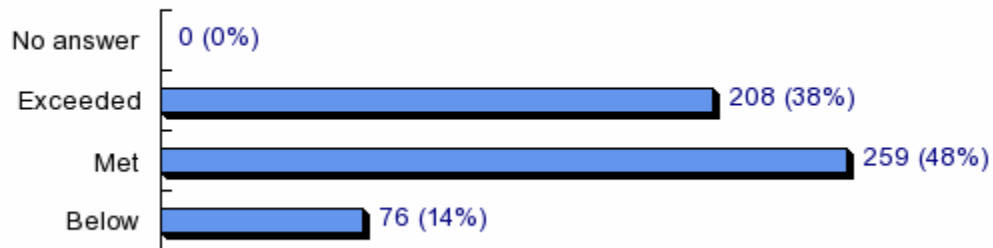




### Employee Courtesy



### Expectations Met





### Appendix D - Experienced Staff

The process utilized in the formulation of our strategic plan incorporated many of the concepts outlined by Jim Collins in his book “*Good to Great*.”

One of the first concepts introduced in the book is “*first who, then what*.” The Arvada Information Technology Department has a long tradition of retaining, selecting, hiring and training some of the best employees available in the workforce. We will continue to make this a priority. The Information Technology Department is a service related business and the quality of services we provide is dependant on the quality of our employee body.

Ultimately we are all in the “people” business and as such the employees are our most valued resource. Because the employee body has not changed much over the years we have been able to keep experienced employees busy working on day to day issues as well as tackling newer and more complex projects. Our low turnover rate allows our organization to excel and provide great technology married with great service.

**City of Arvada Termination Report**

<b>Department</b>	<b>Employees that left</b>	<b>Number of total FTE's</b>	<b>Turnover Rate</b>	<b>Year</b>
Information Technology	1	28	3.57%	2010
	0	28	0.00%	2009
	1	25	4.00%	2008
	0	25	0.00%	2007
	1	23	4.35%	2006
	0	22	0.00%	2005
6 year Average			<u>1.99%</u>	

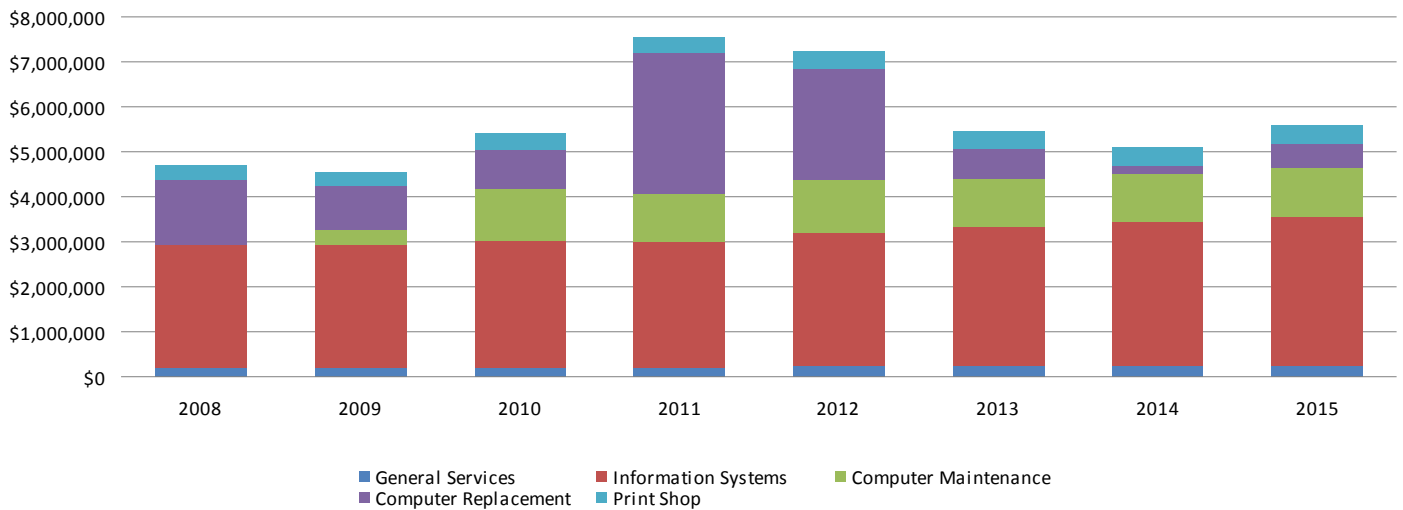


## Appendix E – IT Budgets and Resources

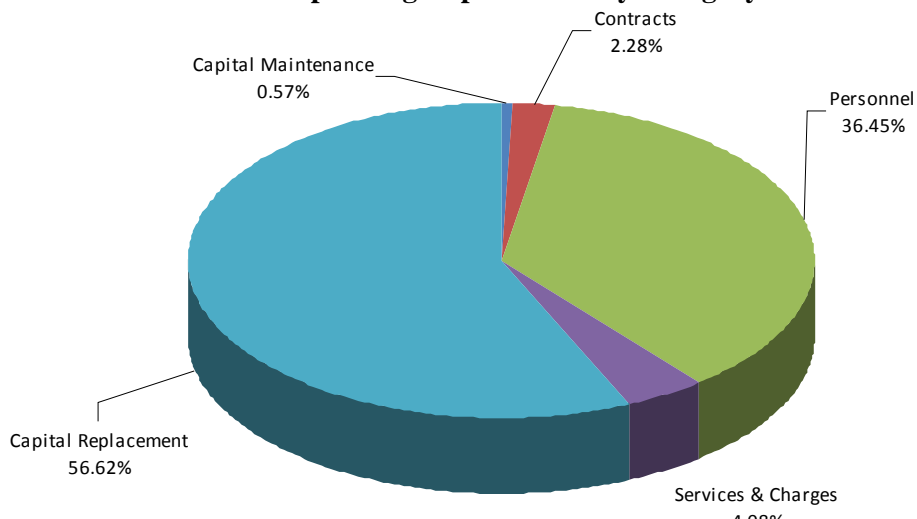
### IT Budget Model

Fund	Fund Desc		2009	2010	2011	2012	2013	2014	2015
01	General Fund	General Services	202,573	222,473	219,271	226,060	233,106	237,916	242,807
		Information Systems	2,731,955	2,827,260	2,782,511	2,996,583	3,120,815	3,216,169	3,306,460
52	Computers	Computer Maintenance	354,406	1,110,274	1,069,666	1,163,523	1,045,576	1,072,604	1,109,665
		Computer Replacement	952,517	885,933	3,118,550	2,467,450	671,450	159,450	524,450
53	Print Shop	Print Shop	301,085	358,668	367,530	380,655	393,718	405,459	417,653
			4,542,536	5,404,608	7,557,528	7,234,271	5,464,665	5,091,598	5,601,035

**Operating Expenditures by Division**



**2011 Operating Expenditures by Category**





### Computer Replacement Fund – Asset Management

The City of Arvada has had a computer replacement fund in place since 1999. Because of this model we don't need to compete each budget cycle for essential technology against the other needs of the organization. We have a full inventory and chargeback system in place to safeguard our technology's future. The fund charges back on individual inventories or on divisional systems. Our methods are based on (LLA) Low Level Allocation and (HLA) High Level Allocation.

Unit Cost of desktops and laptops per year – 4 Year life

Unit Cost of Monitors, UPS – replaced upon failure

Unit Cost of MDC for PD – 4 Year life

Unit Cost of Laser Printers- replaced upon failure

Desktop PC Software, Office other software

Cost per PC for Network Hardware

Cost per PC for Network software

Fileservers Per PC in replacement fund

Price per users for SPAM/Zen

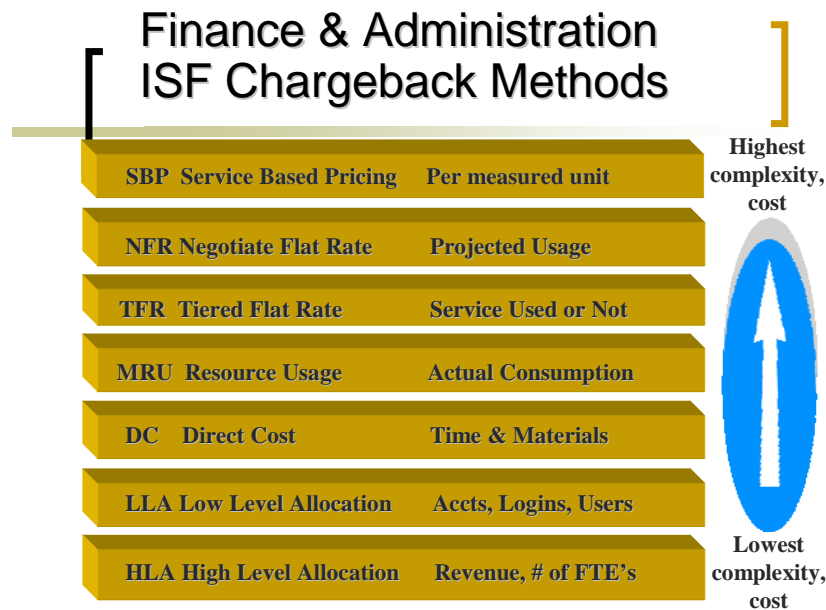
Price per GroupWise Users

Price per Netware Users

Price per FTE Finance system

Price per FTE Phone System

Our goal is to get to Service Based Pricing:



Source unknown - Jefferson County Colorado provided this graphic for a presentation done by Jeffco, Arvada and Ft Collins for CGAIT relating to use of Internal Service Funds

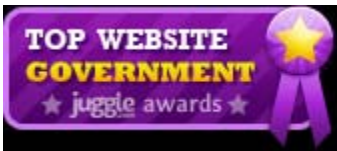


## Appendix F - Awards and Recognitions

The City of Arvada IT organization prides itself on providing great technology and great service to our internal organization and the community which we serve. Like a good umpire in baseball, an IT department is doing well when nobody notices they are there, and we do enjoy the silence. That being said, it is nice from time to time to be recognized for your efforts, and over the years our team has been honored from time to time for the hard work they put in on a daily basis. Below is a partial listing of the recognition our team has received:



The Center for Digital Government has honored the City of Arvada six times since 2002 as a top ten digital city including a second place ranking in 2009



In 2010 Juggle.com selected Arvada's website as a Top Government Website after reviewing more than 30,000 sites



In 2008 the Alliance for Innovation recognized the City of Arvada as a recipient of its "Outstanding Achievement in Innovation" award for our CRM system known as "Ask Arvada."



The Center for Digital Government awarded the City of Arvada with its best of breed distinction for our Intranet in 2002



In 2006 The National Association of Telecommunications Officers and Advisors (NATOA) selected the City of Arvada as its third place finisher for government access television station websites



IT staff members have been designated City of Arvada employee of the month seven times and in 2002 we had a member of our team recognized as the City of Arvada employee of the year



IT Staff and the Police Chief were selected at annual International Chiefs of Police Association technology conference for their project detailing steps that were taken to organize and deploy an innovative multi-jurisdictional Law Enforcement information sharing system, COPLINK