



Delivering Value Through Information Technology Services

Information Technology Architecture and Infrastructure Plan

Updated 2007

In order to gain maximum value from its investment in technology the City of Arvada has created an IT Architecture and Infrastructure Plan. This plan augments the Information Technology Strategic and Business Plan.

This governance and standards plan was developed as a tool for the City to use when selecting new technology. It is based on current technology investments, with an eye toward integration and sharing of data across the organization looking at both architecture and infrastructure.

Purpose

To develop a living document that gives a framework for IT decision making that effectively provides IT customers with information and technology required for successfully achieving the City strategic business goals and objectives.

Scope

Identify the necessary resources to support the information needs of the City and AFPD as established by the Information Technology Task Force based on the City's vision, mission, and goals.

Review Schedule

IT Council will review the Strategic and Business Plan each November for the upcoming year.

Roles

IT Department Managers and Director - Oversee the development of the IT Strategic and Business Plan goals. IT Council sets priorities underneath each of the IT Goals that align with the business needs of the City.

How

By aligning the information and business needs of the City with the IT Goals and City Budget processes.

Assumptions

- IT Architecture is vital to the City's Business Practices
- IT is essential to core business functions
- Business needs will be the driving force for IT architecture requirements
- IT Standards, Policies, and Procedures will be enforced city-wide
- A shift in Business Strategy will affect the IT Strategic Plan, which will also affect required IT resources
- The City and AFPD will change procedures to fit purchased software rather than changing the software to fit existing procedures
- The IT industry is highly volatile and will affect City resource requirements, shared services will be utilized where possible.



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Principles

Strategic

- IT Strategic Plan will be a “living,” 1-5 year document, changing standards as needed
- IT Business Plan will be a “living” 1-2 year document, budgeting resources and projects
- IT will focus on the future, projecting as far in advance as possible the long term resource requirements – data, equipment, software
- IT will focus on long-term data (information) needs
- IT will work with partners to utilize shared services

People

- IT will develop employees’ skills to match the requirements of our systems
- IT will maintain a flexible organizational structure, which will change according to business needs

Business

- IT will incorporate Return-on-Investment in all decisions
- IT will incorporate our mission critical systems into the City’s Business Continuation Plan
- IT is moving to an open system environment
- IT will align all enterprise data to an open database environment
- IT will focus on integration over interfacing

Software

- IT will have a “buy” versus “build” philosophy
- IT will “build” software only when mandated by business requirements
- IT will strive to purchase “best of breed” hardware and software
- Software applications that fit into pre-existing suites used by Company will get precedence over other best of breed software
- Purchased software will be implemented as “vanilla” as possible – modifications only as required by law, board policy, or IT Council
- IT will strive to keep purchased software systems current and supported
- IT will strive to keep software systems modern and will monitor and manage the Computer Replacement Fund
- IT will maintain current technology trends – be “leading” edge but not “bleeding” edge



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Information Technology Standards – updated 2007

PC / Desktop

The IT Department supports approximately 600 desktop workstations, approximately 100 laptops and over 200 software titles on its network throughout the City of Arvada. Connectivity support is the main goal. Each desktop is replaced every 4 years. 2008 marks the next time all desktops and laptops are replaced.

Initial PC hardware and software standards were implemented in 1996. An Internal service fund was also created to allow for the standardization and timely replacement of networked PCs, printers, laptops, servers, LAN/WAN equipment and software.

Hardware: Latest processor with 1Gb memory
Software: MS Windows XP SP 2(desktop operating system)
Novell GroupWise (e-mail, collaboration, and scheduling)
MS Office XP (Word, Excel, Access, and PowerPoint)
MS Internet Explorer (web browser) Mozilla (web browser)

Handhelds

The City has standardized on the HP IPAQ Pocket PC and Blackberry handhelds.

Databases

The City has standardized on Oracle database for all new software applications, if possible. Microsoft SQL server and MySQL will remain as alternate databases with MySQL being the future database of choice. Support for legacy databases will continue until these applications are replaced. Please see appendix A for a graphical view of this.

Internet/Intranet

The City has standardized on LAMP technology, or Linux, Apache, MySQL and PHP for the web and content management system.

Telecommunications

The City has standardized on NorTel telephone switches and CallPilot voicemail.

Servers

The City has standardized on the HP line of servers. An inventory of spare parts available for use in most of the servers and servers boot to the SAN. The standard operating system for servers is dependent on the application being run. Windows 2000 with Service Pack 4 or Windows 2003 with Service Pack 1, NetWare 6.5, Red Hat Linux and VMWare are in place. Please see appendix A for a graphical view.

Network

The City has standardized on Foundry equipment, creating a 1 GB connection to the desktop and a 10 Gb backbone. Wireless access points are utilized where needed.



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Information Technology Procurement Standards

This document is utilized in the following situations:

- When the software requires a server
- When the software is utilized by more than one employee, division or business unit
- When the software requires regular data backup
- When the software is a candidate for the Computer Replacement Fund

How this document is utilized:

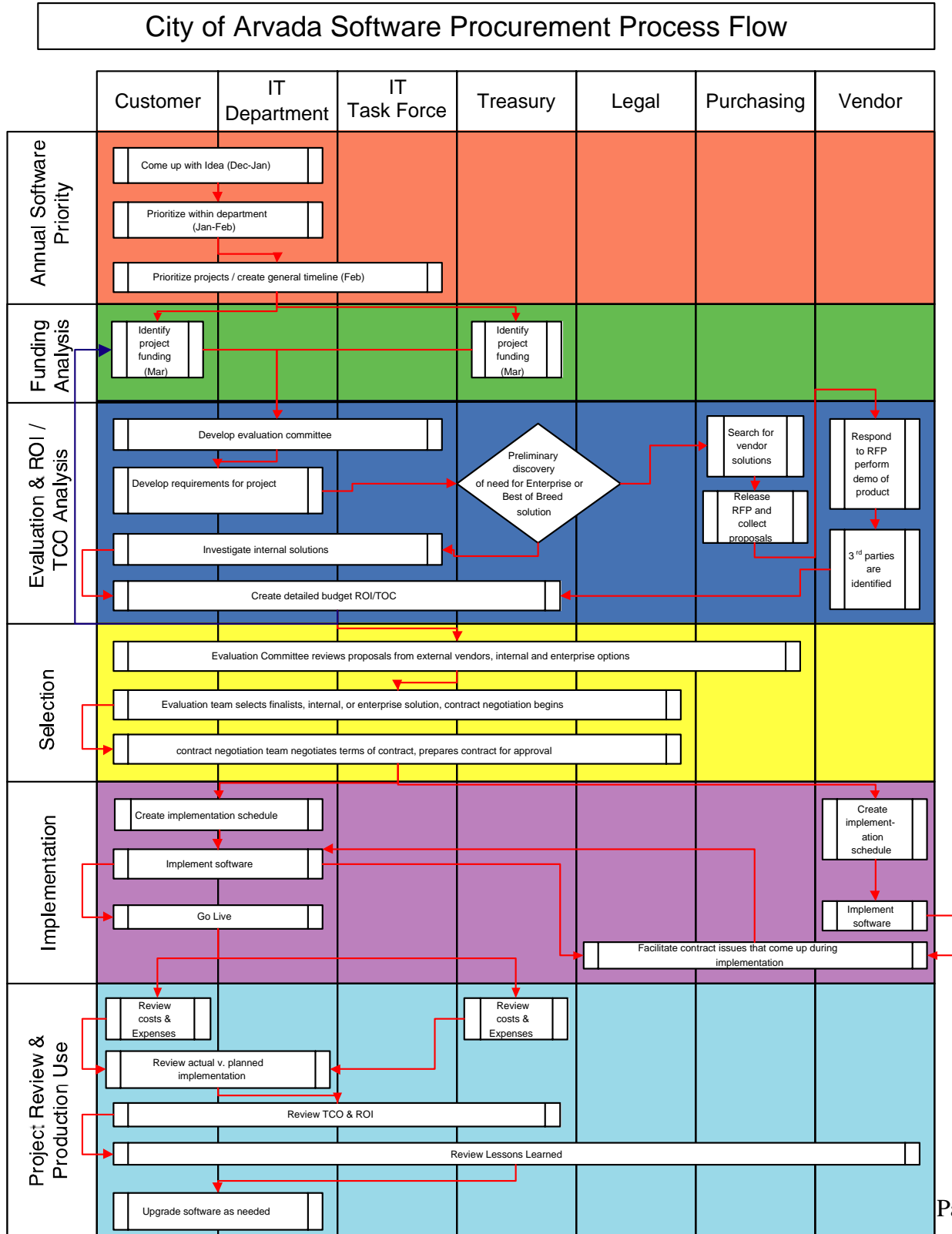
This document is to be used in the evaluation and procurement process to assess how a given software application will fit with the City’s technology infrastructure standards. Vendors will be expected to complete this form as part of the RFP process.

Current Components for City of Arvada IT Infrastructure		
Network Infrastructure	Hardware Infrastructure	Software
<input type="checkbox"/> 100/1000/10000 Ethernet Switches	<input type="checkbox"/> Server Hardware (Intel or AMD)	<input type="checkbox"/> MS XP, 2003, Vista
<input type="checkbox"/> 802.11x Foundry AP's	<input type="checkbox"/> Workstations (Intel or AMD)	<input type="checkbox"/> RedHat, MS 2003, Vmware, Netware
<input type="checkbox"/> Nortel Routers	<input type="checkbox"/> HP Business Class network printers	<input type="checkbox"/> GroupWise Email
<input type="checkbox"/> Iprism Web Filter	<input type="checkbox"/>	<input type="checkbox"/> LDAP
<input type="checkbox"/> Cisco PIX	<input type="checkbox"/> Fiber Channel or iSCSI SAN	<input type="checkbox"/> XML
	<input type="checkbox"/> McData Switches	<input type="checkbox"/> SMTP
		<input type="checkbox"/> Oracle
		<input type="checkbox"/> MS SQL
		<input type="checkbox"/> Apache
		<input type="checkbox"/> Cold Fusion
<p>OR Hosted Solution</p> <p>Please Explain Hosted Solution:</p>		



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Technology Procurement Process

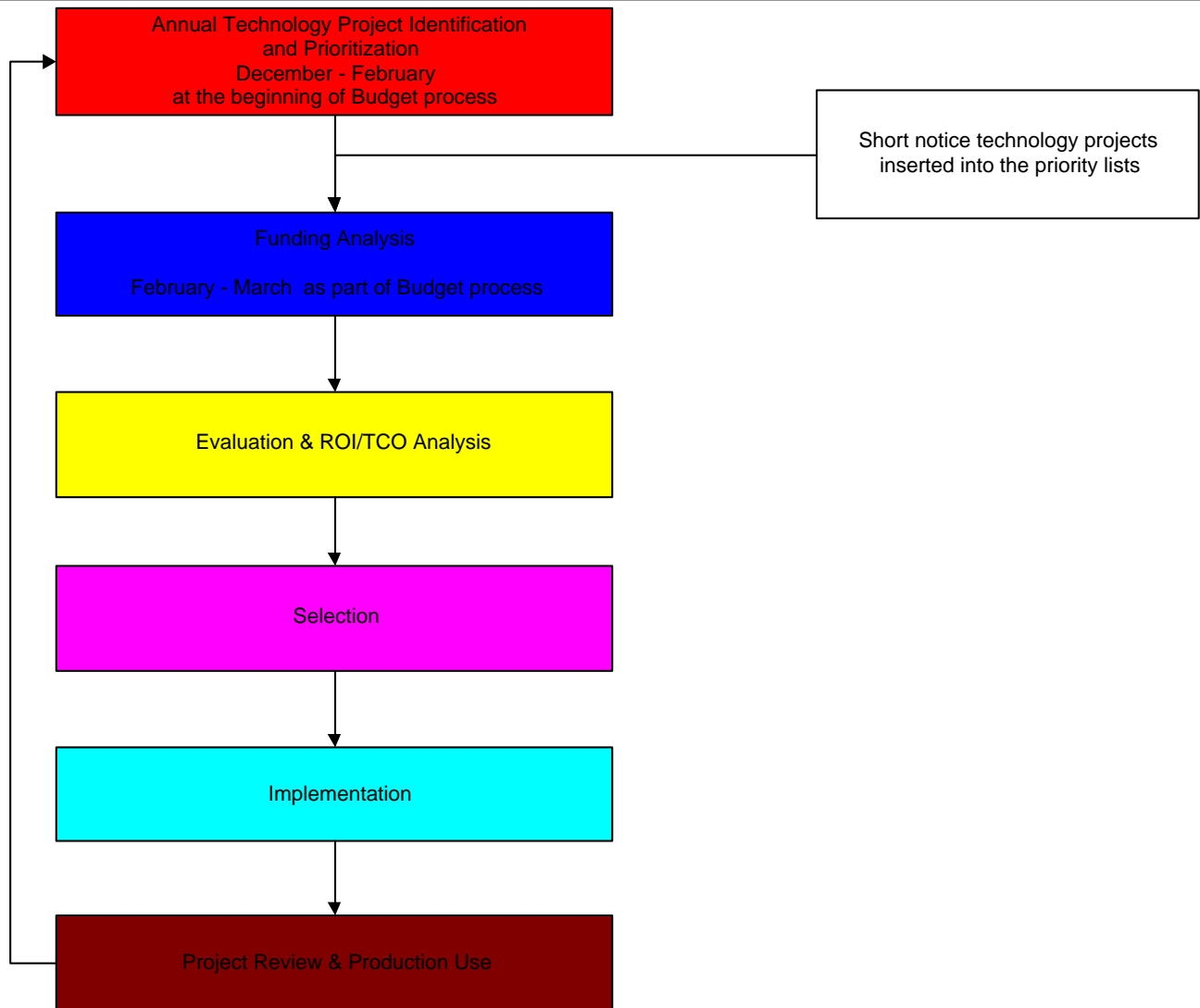




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30,000 Foot View of Technology Procurement Process

- This Process should be utilized in the following situations:
- When the software requires a server
 - When the software will be utilized by more than one employee, division or business work unit
 - When the software requires regular data backup
 - When the software is a candidate for the replacement fund





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Information Technology Council

Purpose

To develop Information Technology's Infrastructure Plan that is a 1 to 2 year document that defines and prioritizes necessary projects that will support City future endeavors.

Scope

To identify and investigate how new technology addresses the City's current and future needs.

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 (sub-committees of IT Council)

How

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

Definitions and Terms

Assumption - trends in industry and business that bound IT's decision-making

Best of Breed – software and/or equipment which is an identifiable market leader that incorporates best practices, industry standards, and long term vision into the product offering

Bleeding Edge – unproven technology in the infancy stage of the product life cycle

Build – in-house development

Leading Edge – proven technology still in the growth phase of the product life cycle

Open Systems - vendor independent hardware and software architecture that allows for centralized sharing of data

Principle - a fundamental doctrine defining the direction for IT decision-making

Resource – people, technology, hardware, software, and money

Software Suite – a set of tightly interrelated software applications

Vanilla – the installation of software as delivered from the vendor without modification

















































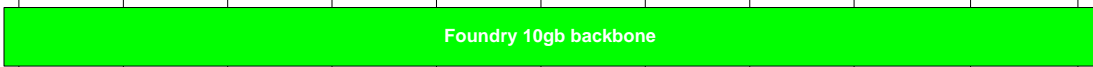


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Appendix A - Systems Architecture Standards for Current Systems

The IT Department strives to make this matrix as “green” as possible. This allows us to utilize existing resources such as staff and their skills, software maintenance agreements and IT standards as much as possible.

The IT Council makes project decisions based on the best interest of the organization, and utilizes this chart as a guide.

Component	City of Arvada System Architecture Information September - 2007												Primary Support Group
Application	Document management	Courts	Police System	Sales Tax and Utility Billing	Web Services	Financial System	Permits	Arvada Center Constituent Management	Waste-water	GIS	E-Mail	Telco	Information Systems
Database	 MS SQL	 Oracle	 Oracle	 Pick	 MYSQL	 Oracle	 Oracle	 MS SQL	 Oracle	 Oracle	 Novell	 Nortel	
Desktop O/S	 XP	 XP	 XP	 XP	 XP	 XP	 XP	 XP	 XP	 XP	 XP	 Nortel 3900 Series	Combo IS and Network Support
Server H/W Platform	 Intel	 Intel	 Intel	 HP	 Intel	 Intel	 Intel	 Intel	 Intel	 Intel	 Intel	 Nortel and Intel	
Server O/S	 Win 2000	 Win 2000	 Win 2000	 HPUX	 Linux	 Linux	 Linux	 Win 2000	 Linux	 Linux	 Net-ware	 Nortel	Network Systems
Network													
Legend	<p>Items in Green are fully supported IT standards Items in Blue are supported, however less in-house expertise exists Items in Purple are supported but support may be contracted and systems are used because they are the best platform for a given application Items in Red are targeted for replacement</p>												



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Appendix B

Current Organization Chart

