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CITY OF FONTANA

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# TECHNOLOGY MASTER PLAN

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SPRING 2006



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## 1.0 CITY VISION FOR TECHNOLOGY

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The role of technology within the City of Fontana is to provide cost effective, stable, and reliable computer systems and related resources to all City departments. It will be easy to use and will integrate workflow and processes among all departments. Technology, as referenced in this document, includes all applications of electronic hardware and software in the areas of telecommunications and the management of information, assets, and documents. Technology will be used to communicate both internally (within the City) and externally (to the public) and will establish an appealing and inviting image of the City consistent with Council goals. Adoption of new technology will result from a cooperative effort among all departments--not just the department specifically designated for technology support--and will be user driven and adhere to reasonable standards. All technology acquired throughout the City will be proven and supportable with the needed resources allocated and provide the necessary training and implementation support through installation, implementation, and deployment and will have on-going customer service to ensure it produces the intended efficiencies.

### 1.1 TECHNOLOGY MISSION STATEMENT

*The mission of the Information Technology Department of the City of Fontana is to provide access and support to technology resources, for both information and communication that is timely, accurate, reliable and secure.*

### 1.2 STRATEGIC GOALS

*The following Goals are presented as targets for the effective implementation of technology resources at the City and are directly related to the City Council's goals and vision for the City. The underlying objectives are specific action items to be undertaken and evaluated during the initial term of this Plan and will be reviewed and amended each year:*

#### 1.2.1 GOAL 1: COMMUNICATION AMONG DEPARTMENTS, CUSTOMERS, VENDORS AND STAFF WILL BE TIMELY AND ACCURATE.

- 1.2.1.1 *Objective 1-1: Provide tools for effective electronic collaboration of meetings through Microsoft Office.*
- 1.2.1.2 *Objective 1-2: Provide an electronic agenda submission and publication system to improve the assembly and distribution of agendas for City Council Meetings, Commission meetings, and other public forums.*
- 1.2.1.3 *Objective 1-3: Establish a process to design and maintain the City's public website to represent all department needs and reflect an appropriate image of the City to the public.*
- 1.2.1.4 *Objective 1-4: Develop a long range plan for connecting all city facilities to the data/voice networks.*

**1.2.2 GOAL 2: INFORMATION IN CITY DATABASES WILL BE READILY ACCESSIBLE TO ALL WITH APPROPRIATE NEED TO VIEW AND/OR USE IT.**

*1.2.2.1 Objective 2-1: Provide a means for access to City informational databases to authorized users independent of the applications that maintain them.*

**1.2.3 GOAL 3: DATA WILL BE COLLECTED AND ENTERED ONLY ONCE INTO INFORMATIONAL DATABASES.**

*1.2.3.1 Objective 3-1: Provide a middleware database platform which manages the flow of information between software applications.*

*1.2.3.2 Objective 3-2: Integrate the position assignments, hiring and terminations in HR with the assignment of network privileges and workstation configuration.*

**1.2.4 GOAL 4: STAFF WILL BE EFFICIENT AND EFFECTIVE IN THE USE OF ALL APPROPRIATE TECHNOLOGY SYSTEMS.**

*1.2.4.1 Objective 4-1: Provide monthly in-service workshops of selected Enterprise applications to update skills, train on new features, or refresh training on seasonal applications.*

*1.2.4.2 Objective 4-2: Analyze critical business processes to 1) document the process and the forms and positions involved; and 2) determine if and where technology might be applied to improve or streamline the process.*

*1.2.4.3 Objective 4-3: Analyze the service requests from the Help Desk to determine where repetitive problems are occurring and develop a proactive remedial strategy for each and improve the response and resolution times for all service requests.*

*1.2.4.4 Objective 4-4: An inventory of assigned equipment will be developed for each Council-authorized position including workstations, PDAs, cell phones, and desktop phones.*

**1.2.5 GOAL 5: CITY TECHNOLOGY ACQUISITIONS SHALL OPTIMIZE THE COORDINATION OF DATA INTERCHANGE WITH EXISTING SYSTEMS IN ALL DEPARTMENTS AND ADHERE TO STANDARDS OF CONNECTIVITY, COMPATIBILITY, AND SUPPORT.**

*1.2.5.1 Objective 5-1: New technology-related projects will be thoroughly analyzed to reflect all relevant costs and resource implications both initially and on-going including training, data conversion/data loading, interfaces with existing applications, compatibility with the City's computing environment, and on-going support.*

1.2.5.2 *Objective 5-2: Information Technology will establish programming standards and guidelines for the development of applications to fill the gaps between “off the shelf” software and the business needs of the City.*

1.2.5.3 *Objective 5-3: Information Technology will define a competitive procurement process and templates for the solicitation of competitive proposals for computer systems that provides realistic initial and on-going costs and integrated and supported applications.*

1.2.5.4 *Objective 5-4: Information Technology will develop a process to evaluate and prioritize projects to ensure the equitable and appropriate distribution of limited resources to the most important projects.*

**1.2.6 GOAL 6: THE CITY WILL REMAIN PREPARED AT ALL TIMES TO TRANSFER THE OPERATION OF MISSION-CRITICAL SYSTEMS TO ALTERNATE COMPUTER SYSTEMS IN THE EVENT OF DISASTER AND PRESERVE THE INTEGRITY OF ALL INFORMATIONAL DATABASES.**

1.2.6.1 *Objective 6-1: A backup “hot site” agreement will be established so that there is a designated computer system that can be used in the event the City’s main computer systems and servers are damaged and inaccessible.*

1.2.6.2 *Objective 6-2: Information Technology will develop a Business Continuity Plan and run a “Disaster Recovery” drill on the hot site for the mission-critical applications of Payroll and Vendor Payments.*

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## **2.0 AREAS OF APPLICATIONS**

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This section of the Plan identifies the areas in which technology is to be applied and for which Information Technology is responsible. All technological areas defined herein must pass through the decision making processes defined in later sections of this document and constitute the scope of the IT department's responsibilities. The particular products and standards used by the City will continuously change as technology changes so are identified in supplemental documents entitled "City of Fontana Information Technology Hardware Standards" and "City of Fontana Information Technology Software Inventory."

### **2.1 CABLING AND INFRASTRUCTURE**

*Low-voltage cabling that carries voice and/or data packets shall be the responsibility of the IT department and follow the standards and protocols set herein. They will adhere to the standards set in the Approved Technology List supplement to this document and be documented with electronic and hard copy diagrams for every City facility.*

#### **2.1.1 DATA CABLES**

This is the cable plant that is used to carry data from the client workstations to the servers and back.

#### **2.1.2 VOICE CABLES**

This is the cable plant used to carry voice traffic from the desktop phones within the City and to the outside world.

#### **2.1.3 CABLE DISTRIBUTION AND MANAGEMENT**

These are the racks and patch panels that interconnect the cable systems throughout the City.

#### **2.1.4 METROPOLITAN AREA NETWORK – FIBER**

This is the network of City-owned fiber that connects facilities throughout the City.

#### **2.1.5 METROPOLITAN AREA NETWORK – CARRIER-BASED**

These are the contracts with external vendors for telephone and/or cable connections to interconnect city networks to each other.

#### **2.1.6 WIDE AREA NETWORK – CARRIER**

These are the contracts with external vendors for telephone and/or cable connections to interconnect city networks to the Internet.

#### **2.1.7 WIRELESS ACCESS**

This includes WiFi, 800 Mhz, cell phone and data coverage throughout the City.

## **2.2 HARDWARE**

*Standards for the configuration of the hardware defined in this section change every month and are maintained in the Approved Technology List supplement to this document.*

### **2.2.1 SERVERS**

Used for file servers, web servers, application servers, voice servers (PBX) and database servers—both centralized and distributed—throughout the City.

### **2.2.2 NETWORK CONTROL & SECURITY DEVICES**

These are routers, switches, and other network devices that manage and protect traffic on the City's data and voice networks.

### **2.2.3 COMPUTER WORKSTATIONS**

These are the designated computer workstations, laptops/notebooks, and tablet computers assigned and justified to each position in the City.

### **2.2.4 TELEPHONE SYSTEMS**

This is the voice communication system in use at the City. It includes PBXs and all desktop and cell phones, and radio devices.

### **2.2.5 PERSONAL DATA ACCESSORIES**

These are the devices assigned to positions designed to synchronize information with email and/or other systems (service requests, etc.) either wirelessly or via direct synchronization with an assigned workstation.

## **2.3 SYSTEM SOFTWARE AND UTILITIES**

*All of the software and firmware used by the above devices exclusive of application-specific software is managed and maintained according to the City's standards and conform to manufacturer specifications and recommendations. The tools and utility software identified in this section constitute the Departmental software for the IT department and is used to provide interfaces and integration between Enterprise and Departmental applications and to fill functional gaps in software purchased from outside sources. The specific products and applications supported by Information Technology are defined and updated in the Approved Technology List supplement to this document.*

### **2.3.1 SERVER OPERATING SYSTEMS**

These are the operating systems running on the file, application, database, voice and web servers at the City.

### **2.3.2 WORKSTATION OPERATING SYSTEMS**

These are the operating system versions currently supported for desktop workstations, laptop/notebook computers, and tablet computers in use throughout the city.

### **2.3.3 PDA OPERATING SYSTEMS**

These are the currently supported operating systems for PDAs in use throughout the City.

### **2.3.4 APPLICATION DEVELOPMENT LANGUAGES**

These are the programming languages currently supported by Information Technology and upon which the Program Development Standards (supplement to this document) are based. Whether the software is developed by Information Technology, department staff, or outsourced, these standards are designed to provide the necessary documentation to ensure continuity of support whenever the developer of the software is no longer available.

### **2.3.5 PBX SOFTWARE**

This is software that is used to manage the telephone PBXs and desksets throughout the City. This includes call management and accounting.

### **2.3.6 DATABASE ENGINES**

These are the supported database engines for all of the Informational Databases defined in Section 2.4 Informational Databases.

### **2.3.6 GIS MAINTENANCE & MANAGEMENT TOOLS**

These are the tools to manage and update the City's geobase and the layer of tabular information and graphics linked to it.

### **2.3.7 WORKFLOW TOOLS**

These are diagramming and workflow and routing engines that assist in the definition and tracking of business processes in the City.

### **2.3.8 WEBSITE MANAGEMENT TOOLS**

These are the software tools that are used for the design and content management of the City's Internet and Intranet websites.

### **2.3.9 INTERNET MONITORING TOOLS**

These are tools used to manage and monitor access to outside websites from within the City's network.

### **2.3.10 NETWORK SECURITY TOOLS**

These are firewalls and intrusion detection systems that keep SPAM, Viruses, and Spyware out of our network at both the server and client levels.

### **2.3.11 NETWORK DIAGRAMMING TOOLS**

These are programs that document the topology of all City cable plants and networks.

### **2.3.12 AD HOC/QUERY REPORT WRITERS**

These are the report writing tools that allow users to access the informational databases in Section 2.4 Informational Databases outside the normal packaged reports and queries that come as part of the delivered packaged software.

## **2.4 INFORMATIONAL DATABASES**

*While all of these databases reside on servers in Information Technology and are managed by Information Technology, custodial responsibilities for granting access and maintain appropriate procedures for data input and integrity resides with the department where the data originates.*

### **2.1.4 FINANCE**

This database contains all of the financial information, both confidential and public, related to operating the City. The Custodian for this information is the Management Services Director or his/her designee.

### **2.4.2 PERSONNEL**

This database contains all of the personnel information, both confidential and public, related to employees of the City. The Custodian for this information is the Human Resources Director or his/her designee.

### **2.4.3 ASSETS**

This database contains all of the fixed and mobile assets information of the City. The Custodian for this information is the Public Works Director or his/her designee.

### **2.4.4 GEOBASE**

This database contains the geographic database of the city and all of the attributes and layers built on in. The Custodian for this information is the City's GIS Coordinator.

### **2.4.5 PUBLIC RECORDS**

This database contains the archive of reports, correspondence, ordinances, resolutions, and other documents considered part of the public record in the City. The City Clerk is the Custodian for this information.

### **2.4.6 INCIDENTS**

This is the database of incidents related to Public Safety in the City. The Police Chief is the Custodian for this information.

### **2.4.7 EVENT REGISTRATION**

This database is used to record all of the events and citizen participation sponsored by the Community Services department. The Community Services Director is the Custodian for this database.

## **2.5 ENTERPRISE APPLICATIONS**

*These are computer software systems that are used for general business functions throughout the City and are not part of a specific department application.*

### **2.5.1 DESKTOP OFFICE SYSTEMS**

- A. Word Processing
- B. Electronic Spreadsheets
- C. Presentations and Graphics
- D. Email
- E. Calendaring

### **2.5.2 WEB BROWSERS**

- A. Internet Web Browser

### **2.5.3 MESSAGING AND COLLABORATION**

- A. Document Collaboration
- B. Meeting Collaboration
- C. Instant Messaging
- E. Web conferencing

### **2.5.4 VOICEMAIL**

- A. Telephone voicemail

### **2.5.5 INTERNET (WEB) SERVICES**

- A. Web Content Management

### **2.5.6 INTRANET (WEB) SERVICES**

- A. Web Content Management

### **2.5.7 DOCUMENT MANAGEMENT**

- A. Document Imaging
- B. Document Retrieval
- C. Document Archiving & Retention

### **2.5.8 GRAPHICS AND DIAGRAMMING TOOLS**

## **2.6 DEPARTMENTAL APPLICATIONS**

*These are applications that are operated for the benefit of each department, even though access to some modules may be distributed to other departments. The policies and procedures necessary to integrate the technology into the departments business processes are developed, managed, and enforced by the departments. Information Technology provides the platform support and whatever interfaces and integrations are necessary.*

### **2.6.1 MANAGEMENT SERVICES**

- A. Accounts Payable

- B. Accounts Receivable
- C. General Ledger
- D. Budget Preparation
- E. Budget Modeling
- F. Budget Management
- G. Fixed Assets
- H. Payroll
- I. Purchasing
- J. Position Budgeting
- K. Cashiering
- L. Sewer Billing

#### **2.6.2 HUMAN RESOURCES**

- A. Employee Information Maintenance
- B. Applicant Tracking
- C. Benefits Management
- D. Position Control
- E. Employee Self Service

#### **2.6.3 COMMUNITY DEVELOPMENT**

- A. Development Applications

#### **2.6.4 ENGINEERING**

- A. Computer Aided Design & Drawing
- B. Geobase layers

#### **2.6.5 BUILDING & CODE COMPLIANCE**

- A. Permits
- B. Plan Tracking
- C. Code Enforcement
- D. Weed Abatement Management System (WAMS)

#### **2.6.6 PUBLIC WORKS**

- A. Facility Maintenance
- B. Equipment Maintenance
- C. Vehicle Maintenance
- D. Work Order Management
- E. Asset Inventory
- F. Parts Inventory
- G. Sidewalk Maintenance
- H. Pothole Management
- I. Sewer Management

**2.6.7 COMMUNITY SERVICES**

- A. Class Registration
- B. Facility Reservations
- C. Web Payments/Registration

**2.6.8 PUBLIC SAFETY**

- A. Computer Aided Dispatch
- B. Records Management Systems
- C. Automatic Vehicle Locator
- D. Automated Reporting System
- E. Booking
- F. Wants and Warrants

**2.6.9 CITY ADMINISTRATION**

- A. Document Control/Management
- B. Electronic Agenda

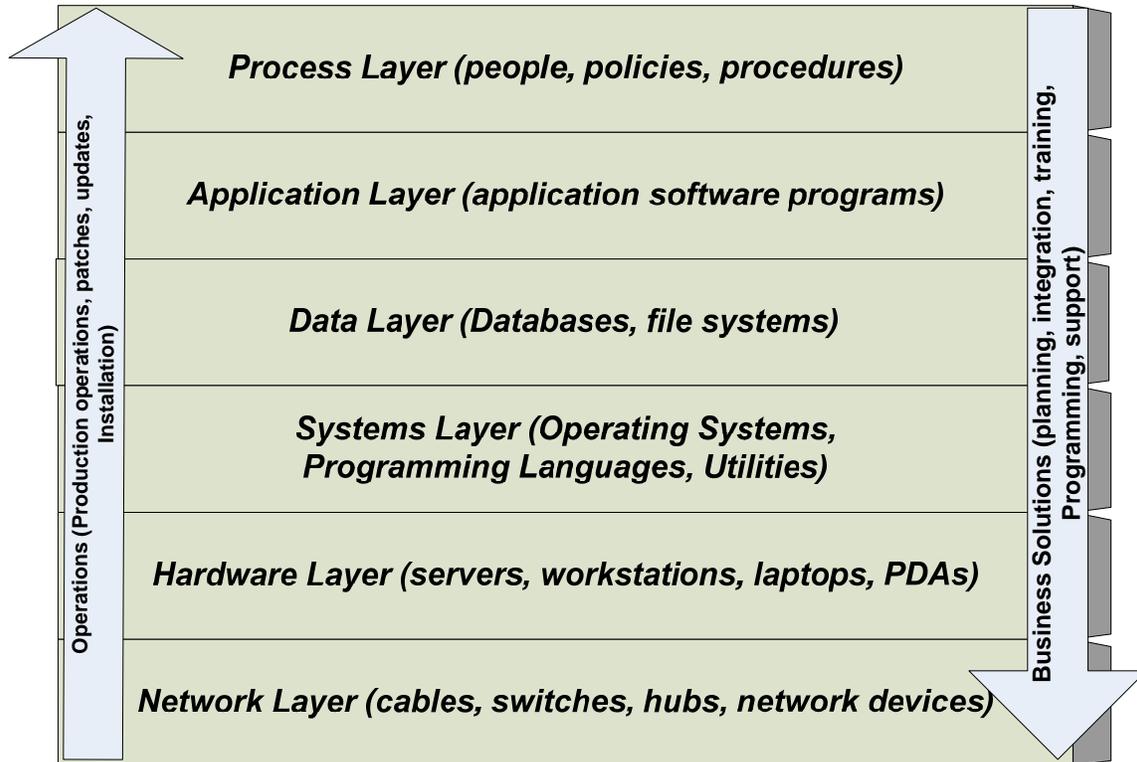
**2.6.10 REDEVELOPMENT**

- A. Fund Raising/Donor Management

### 3.0 ORGANIZATIONAL COMMITMENT

In order to address the Goals and Applications identified in the previous section, the City must provide the resources (people, facilities, equipment, and funding) necessary to support them. In this section the resource requirements commensurate with the prior two sections will be identified.

The previous two sections can be summed up in the following diagram which represents the “layers” of technology and their interdependencies and how the technology department, called “Information Technology” (IT) supports them:



#### 3.1 STAFFING

*People are the key to the success of any organization, but identifying their functional responsibilities is necessary to ensure that people with the right training, experience, and skillsets are put into the positions required by the organization. In this section the functional job descriptions will be defined that are necessary to carry out the objectives of this Plan. The actual number of employees may be more or less than the number of functional job descriptions because some can be shared by a single individual and others may have multiple people assigned. The actual organization chart and Position Control assignments will not be part of this Plan, but will be part of the City policies and procedures generated from this Plan.*

##### 3.1.1 DEPARTMENT MANAGEMENT

The technology department, called “Information Technology” (IT) will have a department status within the City’s organizational structure so that cross-departmental functions can be coordinated and facilitated directly from the City Manager’s

perspective. The Administration function in the department is the chief information officer for the City and directs the strategic, tactical, and operational aspects of the department.

### *3.1.1 Information Technology Director*

*This position is the department strategist which works with other department heads to ensure that appropriate technology resources are deployed throughout the City to assist other departments to achieve their goals. It provides the vision, leadership, and perspective to equitably allocate and support technology resources in all departments.*

#### **Goals Addressed:**

- 1.2.1 Communication among departments, customers, vendors and staff will be timely and accurate.**
- 1.2.2 Information in city databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.3 Data will be collected and entered only once into informational databases.**
- 1.2.4 Staff will be efficient and effective in the use of all appropriate technology systems.**
- 1.2.5 City technology acquisitions shall optimize the coordination of data interchange with existing systems in all departments and adhere to standards of connectivity, compatibility, and support.**
- 1.2.6 The city will remain prepared at all times to transfer the operation of mission-critical systems to alternate computer systems in the event of disaster and preserve the integrity of all informational databases.**

### *3.1.2 Network/Operations Division Manager*

*This position manages the network infrastructure and operations resources within the department and provides Customer Support for all operational aspects of the department. This position works closely with the Information Systems Manager to coordinate updates, patches and other maintenance and repair functions so that disruption to the normal operation of business applications is minimized. It is also monitoring the effectiveness of the technology and the procedures and providing direction and leadership in keeping pace with technological advances in networks and computer operations.*

#### **Goals Addressed:**

- 1.2.1 Communication among departments, customers, vendors and staff will be timely and accurate.**
- 1.2.4 Staff will be efficient and effective in the use of all appropriate technology systems.**
- 1.2.6 The city will remain prepared at all times to transfer the operation of mission-critical systems to alternate computer systems in the event of disaster and preserve the integrity of all informational databases.**

**Application Areas:**

- 2.1 CABLING AND INFRASTRUCTURE**
- 2.2 HARDWARE**
- 2.3 SYSTEM SOFTWARE AND UTILITIES**

**3.1.3 Information Systems Division Manager**

*The Information Systems Division is responsible for supporting all of the City's informational databases and the applications that maintain and access them. The Manager position coordinates data, program and process integration among all of the City's applications and works closely with the Network/Operations Division Manager in maintaining the security and integrity of all of the City's systems. The position also oversees the development of computer applications including web applications, interfaces between Commercial Off The Shelf (COTS) computer systems at both the Enterprise and Department levels, and specialty programming necessary to fill functional gaps which are not addressed by the COTS applications.*

**Goals Addressed:**

- 1.2.1 Communication among departments, customers, vendors and staff will be timely and accurate.**
- 1.2.2 Information in city databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.3 Data will be collected and entered only once into informational databases.**
- 1.2.5 City technology acquisitions shall optimize the coordination of data interchange with existing systems in all departments and adhere to standards of connectivity, compatibility, and support.**

**Application Areas**

- 2.4 INFORMATIONAL DATABASES**
- 2.5 ENTERPRISE APPLICATIONS**
- 2.6 DEPARTMENTAL APPLICATIONS**

**3.1.2 NETWORK ADMINISTRATION**

Network Administration is responsible for the design, operation, and maintenance of the physical layer of the City's network, including cables, hubs, routers, and external Wide Area Network services.

**Goals Addressed:**

- 1.2.1 Communication among departments, customers, vendors and staff will be timely and accurate.**
- 1.2.6 The City will remain prepared at all times to transfer the operation of mission-critical systems to alternate computer systems in the event of disaster and preserve the integrity of all informational databases.**

**Application Areas:**

- 2.1 CABLING AND INFRASTRUCTURE**
- 2.2 HARDWARE**

3.1.2.1 PUBLIC SAFETY SYSTEMS NETWORK  
ADMINISTRATION

*Because of the unique nature of public safety (police/fire) systems with mobile devices and specialized tools, specific knowledge and experience is critical to provide technical support for the highly secured and very volatile environment. This function is responsible for designing, enhancing, securing, and maintaining the network and all of the devices connected within it.*

3.1.2.2 NETWORK/HARDWARE TECHNICIAN

*There are many different types of network and computer devices in a municipal network requiring different skills in different disciplines. Technical support in each of these disciplines is necessary according to the variety, quantity, and complexity of the environment.*

3.1.2.3 TELECOMMUNICATIONS SPECIALIST

*This position is responsible for configuring the telephone PBX system and the moves, adds, and changes for desktop telephones. It also supports any city-owned and issued cell phones or PDA/Phone (so-called "Smartphone") devices. This also supports the following application(s):*

- 2.5.4 Voicemail

3.1.3 SYSTEMS ADMINISTRATION

System Administration is responsible for the operating systems, utilities, and desktop standards for the servers and workstations throughout the City. This position is also responsible for network security policies and patch/update management for all Enterprise systems. This function works closely with Network Administration as backup for the security functions and is cross-trained in all relevant areas.

**Goals Addressed:**

- 1.2.2 **Information in City databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.4 **Staff will be efficient and effective in the use of all City-supplied technology systems.**
- 1.2.5 **City Technology acquisitions shall optimize the coordination of data interchange with existing systems in all departments and adhere to standards of connectivity, compatibility, and support.**
- 1.2.6 **The City will remain prepared at all times to transfer the operation of mission-critical systems to alternate computer systems in the event of disaster and preserve the integrity of all informational databases.**

**Application Areas:**

- 2.2 **HARDWARE**
- 2.3 **SYSTEM SOFTWARE AND UTILITIES**
- 2.5 **ENTERPRISE APPLICATIONS**

### *3.1.3.1 DESKTOP SUPPORT*

*All of the software applications, operating systems and utilities that are part of the City's standard desktop configuration are installed and supported by this function. It includes the necessary tracking for license, patch and password management.*

### *3.1.3.2 MOBILE APPLICATIONS SUPPORT*

*Several departmental applications involve mobile (wireless) applications specific to certain applications such as the mobile data computers in the police cars, wireless data access from Code Enforcement laptops, and PDAs that are deployed throughout the City.*

## **3.1.4 CUSTOMER SUPPORT**

Customer Support is responsible for the staffing, management, planning and analysis of customer support functions including support for all City-provided computer equipment and software. This includes ensuring that all City-supported systems are secure and reliable and that problem areas are resolved and analyzed and appropriate remedies put in place.

### **Goals Addressed:**

**1.2.4 Staff will be efficient and effective in the use of all City-supplied technology systems.**

**1.2.6 The City will remain prepared at all times to transfer the operation of mission-critical systems to alternate computer systems in the event of disaster and preserve the integrity of all informational databases.**

### **Application Areas:**

**2.1 CABLES AND INFRASTRUCTURE**

**2.2 HARDWARE**

**2.3 SYSTEM SOFTWARE AND UTILITIES**

**2.5 ENTERPRISE APPLICATIONS**

### *3.1.4.1 Help Desk Supervisor*

*This position monitors the incidents reported through the Help Desk/Call Center and ensures that incidents/problems are addressed and resolved in a timely manner.*

### *3.1.142 Help Desk/Call Center Technician*

*This position is the first contact for all technology related problems whether hardware, software, or procedural. They attempt to resolve problems directly through the Knowledgebase or other reasonable diagnostic techniques or dispatch the work order to the appropriate IT resource or outsource vendor.*

### 3.1.5 TRAINING

Training is an essential function that reviews the trends of incidents and service requests and determines where additional training would be beneficial in reducing reported problems. Works with vendors of both Enterprise and Departmental applications to find appropriate training classes and then arranges for training sessions, sign-ups and tracking for all technology related training including IT staff development training.

**Goals Addressed:**

- 1.2.4 Staff will be efficient and effective in the use of all City-supplied technology systems.**

**Application Areas:**

- 2.3 SYSTEM SOFTWARE AND UTILITIES**  
**2.5 ENTERPRISE APPLICATIONS**  
**2.6 DEPARTMENTAL APPLICATIONS**

*3.1.5.1 Training Coordinator*

*This position is responsible for determining when training is needed and coordinates both end user and staff development training for the other city departments and IT department respectively.*

### 3.1.6 WEB ADMINISTRATION

The Web Coordinator is responsible for collecting, combining, and coordinating the web pages for each department and works with the Systems Administrator and Database Administrator for connectivity, security, and data access requirements.

**Goals Addressed:**

- 1.2.1 Communication between Sites, departments, customers, Vendors and among staff will be timely and accurate.**  
**1.2.2 Information in City databases will be readily accessible to all with appropriate need to view and/or use it.**  
**1.2.4 Staff will be efficient and effective in the use of all City-supplied technology systems.**

**Application Areas:**

- 2.3 SYSTEM SOFTWARE AND UTILITIES (2.3.8 Website Management Tools)**  
**2.5 ENTERPRISE APPLICATIONS (2.5.5 INTERNET (WEB) SERVICES; 2.5.6 INTRANET (WEB) SERVICES)**

*3.1.6.1 Web Developer*

*This position is responsible for technical design and support of the city's web sites (both Internet and Intranet) and for the tools provided the departments for content management. Works closely with Systems & Programming and Database Administration for informational access to city databases and systems that use web/browser interfaces. This position supports the following application(s):*

- *2.5.5 Internet (Web) Services*
- *2.5.6 Intranet (Web) Services*

### 3.1.7 GIS ADMINISTRATION

The City's geographic database file is the foundation for almost all of the information managed by the City. This function requires the coordination of data interchange among multiple systems in multiple departments and ensuring that data is timely, accurate, and consistent with the needs of each department. This functions interacts closely with the Database Administration to maintain the integrity of all City information and systems.

**Goals Addressed:**

- 1.2.1 **Communication between Sites, departments, customers, Vendors and among staff will be timely and accurate.**
- 1.2.2 **Information in City databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.3 **Data will be collected and entered only once into informational databases.**

**Application Areas:**

- 2.3 **SYSTEM SOFTWARE AND UTILITIES**
- 2.4 **INFORMATIONAL DATABASES**

#### 3.1.7.1 GIS Technician

*This role provides data entry, validation, and programming for the City's geobased systems.*

### 3.1.8 DATABASE ADMINISTRATION

This function requires a strong technical foundation in database structure, configuration, installation and practice. Knowledge and experience in major relational database languages and applications, specifically Microsoft SQL Server. There must be attention to detail and customer service. Coordination with Applications, Systems, GIS and Web resources is essential.

**Goals Addressed:**

- 1.2.1 **Communication between Sites, departments, customers, Vendors and among staff will be timely and accurate.**
- 1.2.2 **Information in City databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.3 **Data will be collected and entered only once into informational databases.**
- 1.2.6 **The City will remain prepared at all times to transfer the operation of mission-critical systems to alternate computer systems in the event of disaster and preserve the integrity of all informational databases.**

**Application Areas:**

- 2.3 **SYSTEM SOFTWARE AND UTILITIES**
- 2.4 **INFORMATIONAL DATABASES**

#### 3.1.7.1 Database Administrator

*This position works equally with the Networking and Infrastructure group and the Systems and Programming and Business Practices (Business Analysts) group. Its primary function is the coordination and*

*communication of information contained in the city's informational databases with the applications and queries needed by the users.*

### 3.1.9 SYSTEMS & PROGRAMMING

Even though the primary source for computer systems is from commercial, off-the-shelf software (COTS), there is no single source for all of the different types of applications and disciplines in a municipal environment. In addition to filling the gaps where no suitable products exist, software development is necessary to interface and integrate the applications to eliminate redundancy and improve accuracy. This function must establish appropriate programming and documentation standards, determine the appropriate programming language and tools to be used, and oversee the design, development, testing, documentation, and deployment of the software whether it is done within the department, by another department in the City, or outsourced to a contract programmer.

**Goals Addressed:**

- 1.2.2 Information in City databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.3 Data will be collected and entered only once into informational databases.**
- 1.2.4 Staff will be efficient and effective in the use of all City-supplied technology systems.**
- 1.2.5 City Technology acquisitions shall optimize the coordination of data interchange with existing systems in all departments and adhere to standards of connectivity, compatibility, and support.**

**Application Areas:**

- 2.3 SYSTEM SOFTWARE AND UTILITIES**
- 2.4 INFORMATIONAL DATABASES**
- 2.5 ENTERPRISE APPLICATIONS**
- 2.6 DEPARTMENTAL APPLICATIONS**

#### 3.1.9.1 Programmer/Analyst

*This position develops the code for "gap" applications and/or interfaces between COTS and other applications under the direction and supervision of the Systems & Programming Supervisor.*

#### 3.1.9.2 Report Writer

*This position develops reports using the City's report-writer software against the queries extracted from the Information Databases managed by the Database Administrator. Reports follow the same protocols and standards as other application software development.*

### 3.1.10 BUSINESS PRACTICE MANAGEMENT

Because of the variety and complexity of the different computer applications deployed throughout the City as either Enterprise Applications (2.5) or Departmental Applications (2.6), most applications involve processes that span multiple departments and impact multiple databases or applications. Although this function does not establish business processes in each application area or department, it represents the City-wide interests of ensuring that business practices within the City are not in conflict and optimize the use of technology to improve staff productivity. It

conducts Workflow Workshops, manages implementation and upgrade projects, documents and enforces interface and integration standards, and provides the technical support for both Enterprise and Departmental applications. It also assists in the specifications for and acquisition of new software and systems and assists departments in preparing New Technology Requests and Project priority requests for submission to the appropriate committee(s).

**Goals Addressed:**

- 1.2.1 Communication between Sites, departments, customers, Vendors and among staff will be timely and accurate.**
- 1.2.2 Information in City databases will be readily accessible to all with appropriate need to view and/or use it.**
- 1.2.3 Data will be collected and entered only once into informational databases.**
- 1.2.4 Staff will be efficient and effective in the use of all City-supplied technology systems.**
- 1.2.5 City Technology acquisitions shall optimize the coordination of data interchange with existing systems in all departments and adhere to standards of connectivity, compatibility, and support.**

**Application Areas:**

- 2.4 INFORMATIONAL DATABASES**
- 2.5 ENTERPRISE APPLICATIONS**
- 2.6 DEPARTMENTAL APPLICATIONS**

*3.1.10.1 Business Analyst – Business Applications*

*This position provides technical support for all of the Management Services Departmental applications:*

- *2.6.1 Management Services (12 modules)*

*3.1.10.2 Business Analyst – Human Resource Applications*

*This position provides technical support for all of the HR Departmental applications:*

- *2.6.2 Human Resources (5 modules)*

*3.1.10.3 Business Analyst – Land Management Applications*

*This position provides technical support for all of the Development Services Departmental applications (Sections 2.6.3).*

- *2.6.3 Community Development (3 modules)*
- *2.6.4 Engineering (2 modules)*
- *2.6.5 Building & Code Compliance (4 modules)*

*3.1.10.4 Business Analyst – Maintenance Applications*

*This position provides technical support for all of the Public Works Departmental applications (Sections 2.6.6).*

- *2.6.6 Public Works (9 modules)*

*3.1.10.5 Business Analyst – Recreation Applications*

*This position provides technical support for all of the Community Services Departmental applications:*

- *2.6.7 Community Services (3 modules)*

*3.1.10.6 Business Analyst – CAD/RMS Applications*

*This position provides technical support for all of the Public Safety Departmental applications:*

- *2.6.8 Public Safety (6+ modules)*

*3.1.10.7 Business Analyst – Desktop Applications*

*This position provides technical support for all of the Enterprise Desktop applications:*

- *2.5.1 Desktop Office Systems (5+ modules)*
- *2.5.2 Web Browsers (1 module)*
- *2.5.3 Messaging and collaboration ( 4 modules)*

*3.1.10.8 Business Analyst – Document Management Applications*

*This position provides technical support for all of the Enterprise Document Management applications:*

- *2.5.7 Document Management (3 modules)*
- *2.6.9 City Administration (2 modules)*

*3.1.10.9 Business Analyst – Redevelopment Applications*

*This position provides technical support for all of the Redevelopment applications:*

- *2.6.10 Redevelopment (1 modules)*

**3.2 FUNDING**

*Funding for technology is based on two factors—Platform and Enterprise applications and Departmental applications. Platform and Enterprise application support costs are all of the costs associated with the acquisition, management, maintenance and support of all of the hardware and software defined in Sections 2.1 Cabling and infrastructure, 2.2 Hardware, 2.3 System Software and Utilities, 2.4 Informational Databases, and 2.5 Enterprise Applications. These costs include all of the overhead associated with the support of the Departmental applications, but not the direct costs of the application support itself.*

**3.2.1 INTERNAL SERVICE FUND – ENTERPRISE APPLICATIONS**

The cost supporting the network platform and all of the baseline applications are divided across the organization based on the number of workstations assigned to each department. These costs will include:

**Salaries:**

*Management*  
*Network Administration*  
*System Administration*  
*Customer Support*  
*Database Administration*  
*GIS Administration*

**Equipment:**

*Server and workstation depreciation costs*

**Software Licenses:**

*Server and workstation operating systems and utilities*  
*MS Office Suite*  
*Desktop Utilities*  
*Database engines*

**Maintenance/Support Agreements:**

*Hardware Maintenance agreement (out-of-warranty)*  
*Software Maintenance/support agreements*  
*Training (IT Staff Development and End-user training)*

### 3.2.2 DEPARTMENTAL APPLICATIONS

Each departmental application has its unique support requirements, which should be fully defined before the acquisition and factored into the on-going or recurring budget costs as part of the implementation. Platform support, if the system is consistent with the City's standards (per the Approved Technology List), is covered as part of the baseline IT support per 3.2.1 above. Technical support for the application will include installation and integration of the software into the City's server farm, data integration with other systems and databases, and the facilitation of procedural integration with other departmental and enterprise systems through periodic workflow workshops. Application support will be provided from within the department, again based on analysis before the acquisition and factored into the total system cost (via the NTR process) so that if additional staffing is needed, it is included as part of the department budget as recurring costs.

Technical support is part of the IT staffing formula and depends on the nature and scope of the departmental application as to whether it is a single (or multiple) dedicated resource or split between two or more other departmental applications.

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## 4.0 TECHNOLOGY DECISION MAKING

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All City investments in computer and related technologies should be analyzed for technical integrity and equitably distributed to areas of need. The acquisition process should be structured to **encourage and expedite** new applications of technology in appropriate areas, but evaluated against established standards and criteria so that it can be effectively implemented and supported over the long term.

### 4.1 TECHNOLOGY COMMITTEES

*As an internal service department in the City, the IT Department is responsible to ensuring the seamless interchange of information and processes in all City departments. Projects that are a high priority for one department may be impacted by high priority projects for another department, so coordination and compromise is necessary so that IT resources can be effectively allocated to projects for the overall benefit of the City. To this end, several planning and operating committees will be established so that these issues can be discussed and decided in an open forum.*

#### 4.1.1 EXECUTIVE TECHNOLOGY REVIEW COMMITTEE (ETRC)

For high level technology policies and annual distribution of technology resources City-wide, there shall be a representative committee that performs the following functions at least once each year:

- ***Reviews the Technology Master Plan to see if it is still relevant to current technical, fiscal, and political realities.***
- ***Reviews the Evaluation Criteria for New Technology Requests***
- ***Allocates technology resources throughout the City through budget and organizational (staffing) policies.***
- ***Reviews/Approves NTR Priority list from TAG.***

Membership on the ETRC is comprised of the following:

- ***City Manager***
- ***Deputy City Managers***
- ***Department Heads***
- ***IT Director is the non-voting chair***

#### 4.1.2 TECHNOLOGY ADVISORY GROUP (TAG)

This is a working subcommittee to the ETRC to which IT reports its internal project activities and which adjusts priorities according to overall City needs. Activities of the TAG include:

- ***Monthly IT Project review meetings***
- ***Review Incident ticket statistics for prior month***
- ***Review Operational project lists and priorities for prior month and next month (software, OS upgrades, patches and fixes)***
- ***Review Acquisition/Development (NTR) project research and priorities for prior and next month***
- ***Workflow Workshop requests***
- ***Desktop and/or document management issues***

The TAG shall be responsible for applying the evaluation criteria to each submitted NTR form after it has passed through the appropriate approvals and analysis. Each criterion score shall be applied by unanimous committee consensus, with no dissenting votes permitted. The departmental representative from the department submitting the Initiative shall act as advocate and negotiate with the rest of the committee for a unanimous committee position. The list of rated projects, ordered descending by criteria score (multiplied by the weighting factors) and, for those with equal criteria scores, ascending by cost, shall be forwarded to the ETRC via the Project Priorities worksheet for review and approval.

The content of the Project Priorities worksheet shall include:

- *Reference # - Unique NTR project reference*
- *Project – Brief title of the project*
- *Description – Synopsis of the project in a few sentences*
- *Originated by – Person who submitted the original NTR request*
- *Status – New project, follow-on project, re-submitted project, etc.*
- *Department(s) involved – Which department(s) is(are) most affected by this project*
- *Notes/comments*
- *Justification statement – Brief description of the expected benefits of the project*
- *IT Resource Req. – Specify the IT resource requirement in person-months for the next fiscal year*
- *Budgeted Department – Out of which department budget(s) are the funds coming*
- *Indirect Costs – from the NTR worksheet, what are the indirect (labor) costs from the department and IT. These costs do not directly affect the budget, but impact resources and their availability for other projects.*
- *Direct Costs – What is the Direct Cost total from the NTR worksheet. This will be the expected budget impact of the project.*
- *Prioritization Criteria Scores – TAG consensus rating of the project in each of the criteria areas*

Membership on the TAG Committee shall be by Department Head invitation and should include representation from Division Managers, administrative support staff, and technical IT liaison staff, though not all from the same department. Membership shall be rotated on an annual basis.

#### 4.1.3 GIS STEERING COMMITTEE

This is a committee of departmental representatives which deals with the prioritization of GIS related tasks. It is chaired by the GIS Administrator and meets regularly on a monthly basis. Regular agenda items shall include, but not be limited to the following:

- ***Status of outstanding ETRC-approved NTR initiatives***
- ***New and in-process Technology Initiatives***
- ***Maintenance and support issues, problem reports & statistics***

- ***Policy deployment and enforcement***
- ***Training schedules***

Membership in the GIS Steering Committee shall be by appointment made by Department Heads, and attendance at the monthly meetings by the primary designee or an alternate is mandatory. At a minimum, membership will include representatives from:

- ***GIS Administrator***
- ***Public Safety***
- ***Public Works***
- ***Development Services***
- ***Engineering***

#### **4.1.3 WEB COORDINATING COMMITTEE**

This committee will be responsible for determination of the design and content of the City's external web site as well as the internal web site, the Intranet. In addition to representatives from each department or division, which may have an interest in what goes into the City web sites, IT will chair the committee and schedule its regular meetings. Since some of the web functions may be outsourced, a representative from the outsourcing company may periodically be invited to participate in meetings. Regular agenda items shall include, but not be limited to the following:

- ***Content review and update***
- ***Website visitor feedback***
- ***New applications/pages***
- ***Performance, security and design concerns***

Membership in this committee will be by appointment by the Department Heads.

#### **4.1.4 PROCESS IMPROVEMENT TEAMS**

As computer systems become ingrained in the daily business operations of the City, there will be processes that span departments that negatively impact one or more departments. When such issues become apparent, the IT Department may form a Process Improvement Team to analyze workflow and come up with recommendations for Business Process Reengineering. In some cases, this will involve integrating different technologies or retraining staff in the use of some systems. The PIT Crew will be facilitated by IT staff and develop appropriate new procedures that may become Technology Projects to be prioritized by the TAG and/or ETRC.

### **4.2 CITY TECHNOLOGY STANDARDS**

The City will establish standards for technology that can be supported wherever they are implemented. These standards are set by the ETRC and published as part of the NTR process defined herein. The IT Department is responsible for enforcement and adherence to these standards. The following standards guidelines will be published as part of the Administrative Policies and Procedures:

- ***Minimum configuration (hardware and operating system) for operating Desktop and Laptop computers***
- ***Recommended database engine(s)***
- ***Recommended desktop software (word processing, spreadsheet, email, etc.)***
- ***Recommended peripheral devices (printers, PDAs, etc.)***

*There are cases in which adherence to standards may not yield the best solution. In these isolated cases, a non-standard solution may be approved through the normal NTR process.*

*These standards will be published regularly on the City's intranet site in a document called the "Approved/Obsolete Technology List." Obsolete technology on this list cannot be purchased without an NTR justifying the need, though just because an item is on this list does not mean it should be replaced until it has reached the end of its useful life.*

#### **4.2.1 APPROVED TECHNOLOGY LIST**

The IT Department will maintain an Approved Technology database which shall be published and which may be used by departments to purchase technology (both hardware and software) that has been approved by the ETRC and which can be appropriately supported by the city. This list shall include the name and manufacturer of the products, recommended source for purchase, initial purchase costs including internal service fund charges for setup and administration, on-going costs (both internal and external) for support, and the name and telephone number for each level of support (Tier 1, Tier 2, and Tier 3) for the product.

#### **4.2.3 OBSOLETE TECHNOLOGY LIST**

The IT Department will maintain an Obsolete Technology database of technology products (hardware and software) being phased out. These products do not mean that if the product is in use that it needs to be replaced, but that no new purchases will be approved without a complete NTR evaluation and approval.

#### **4.2.4 POSITION INVENTORY LIST**

Each Council-approved position will have a designated inventory of technology related equipment, the cost for which shall be budgeted as part of the Internal Service Fund for Technology. These technology devices will include:

- *Desktop computer*
- *Laptop/Toughbook computers*
- *Mobile Data Computers*
- *Desktop telephones*
- *Cell phones*
- *Personal Data Accessory (PDA)*
- *Pagers*
- *Digital Cameras*
- *Digital recorders*
- *Printers*

### **4.3 TECHNOLOGY PROJECTS**

*The City has established a process whereby technology needs can be addressed on an on-going basis at any level of the organization. It is not possible for any one person or department to keep pace with changing technologies that may affect any or all areas of Agency operations. Therefore, the Agency must have a straightforward procedure to allow suggestions or 'Technology Initiatives' to be appropriately*

*reviewed and either approved, denied, or deferred based on their alignment with Agency goals.*

#### **4.3.1 PROPOSAL FORMAT**

When anyone in the City initiates a New Technology Proposal request, the focus should be on the problem/issue to be solved rather than the product or technology used to solve it. When there is a specific product or solution in mind, it will need to be analyzed both technically and functionally to be sure that all of the cost and support issues are adequately addressed. The most critical concerns are: Connectivity, Compatibility, and Support.

The "New Technology Request" form is an EXCEL spreadsheet that is used to collect all of the relevant information necessary for processing the request through the appropriate channels. The form has four sections, or worksheet tabs, all of which need to be completed before the Request can be submitted as a "Project" to be prioritized and processed. It is expected that the departmental submitter will complete the first two tabs (except for the section that imports costs from other worksheets) and that IT will assist with the scoping and costing in the other worksheets.

##### **A. New Technology Request**

This section of the form is usually filled out by the requestor and explains the problem and what solution or solutions have already been considered, if any. It should also indicate what the funding source for the project is. This will serve as the cover sheet for the request package that will be used throughout the approval process.

City of Fontana New Technology Request Fiscal Year 2005-06						
<b>TYPE OF REQUEST</b>			<b>PROJECT INFORMATION</b>			
Reference Number:	<input type="checkbox"/> Initial	Project Title:	Option:	<input type="checkbox"/> Option 1	Priority	
	<input type="checkbox"/> Amendment					
<b>TYPE OF PROJECT</b>			<b>REQUESTOR - FUNDING INFORMATION</b>			
	<input type="checkbox"/> Carryover Project	Account:	Department:		Location	
	<input type="checkbox"/> New Project					
<b>PROJECT CLASSIFICATION</b>			Requested by:			
	<input type="checkbox"/> Replacement					
	<input type="checkbox"/> New					
<b>DESCRIBE THE PROBLEM/ISSUE TO BE RESOLVED:</b>						
<b>DESCRIBE YOUR PROPOSED SOLUTION:</b>						
<b>SYSTEM COST BREAKDOWN</b>						
(Use Technology Project Cost Worksheet)						
		<b>Direct Costs</b>		<b>Indirect Costs</b>	<b>Resource (Hrs)</b>	
1	Taxable System Costs	\$0			<i>Initial</i>	
2	Direct (Outsourced) Labor	\$0	Dept =>	\$0	0.00	
5	Shipping/Transportation/Travel	\$0	IT =>	\$0	0.00	
6	Applicable Sales Tax	\$0			<i>On-going</i>	
	<b>TOTALS</b>	<b>\$0</b>	Dept =>	\$0	0.00	
7	Annual Maintenance/Support costs	\$0	IT =>	\$0	0.00	
<b>INITIALS</b>						
<b>APPROVALS</b>						
TSD	Dept/Site Administrator	Tech Advisory Group	ETRC			
		1st	2nd:			
Date:	Date:	Date:	Date:	Date:		
<b>Success Factors*</b>			<b>Plan Objectives</b>			
Council Commitment		<b>Goal</b>	<b>Obj</b>	<b>Comment</b>		
Adequate Funding		Communication				
Integrated city-wide		Accessible Information				
Adeherence to stds		Normalized data collection				
Adequate Training		Effective, efficient staff				
Adequate Resources		Technology acquisition policy				
Process improvement		Disaster Preparedness				
Staff retention						
Realistic schedule						
* Good (verified/documented); marginal; poor (possibly inadequate)						

Figure 1 - NTR Form, 'REQUEST' worksheet

At the bottom of the sheet are lists of "Success factors" (from the 2001 Technology Plan) and Plan Objectives. This section is to remind the submitter to focus on the goals of the Plan (i.e. how it fits into the City's overall goals) and that we have done everything possible to ensure the project's success.

B. FEATURES

For any product or service that is purchased, there should be very specific functional expectations that should be documented and part of the contract, PO or other agreement with the vendor. This list of features should also be used as the basis for comparison among the various solution options that are considered and to include as deliverables in the contract. It will help those not familiar with the product understand the anticipated benefits that will result if the project is successful.

City of Fontana New Technology Request Features Worksheet				Project Reference:			
				Option:			
				Option 1			
Module/ Component	Feat No.	Feature Description	Value Rating	Catalog Reference	Vendor Compliance	Project Cost	Score
<b>Application Software:</b>							
			1				0
							0
							0
							0
							0
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							0
<b>Special Features/Projects:</b>							
							0
							0
							0
							0
							0
							0
							0
							0
							0
	<b>Total</b>	<b>Total</b>				<b>\$0</b>	<b>0</b>

Figure 2 - NTR Form 'FEATURES' worksheet

C. COST SHEET

With most technology projects, it is easy to overlook costs that might be associated with successful implementation and deployment. Often, the sales people downplay or avoid discussing some of these costs which might cause the buyer to hesitate to move forward with the purchase. Nonetheless, it is important that all of the technical and financial issues be disclosed before the purchase is approved so that the project does not fail due to underfunding. IT Business Analysts or other support staff will assist in the completion of this information so that all of the initial and on-going cost and resource implications are considered.

City of Fontana						Project Reference:					
TECHNOLOGY REQUEST COST WORKSHEET						Trip Cost:	\$	500	Option:		
						Daily Rate:	\$	1,200	Option 1		
						Per Diem:	\$	250			
						Labor Costs					
Mfg	Model/Version	Description	Source/Supplier	Product Cost	Delivery/Shipping Cost	Days	Cost	Trips	Days On-site	Est. Travel Costs	
<b>Initial Costs</b>											
<b>Application Software:</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
				\$0			\$0			\$0	
<b>Hardware:</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
<b>Network Requirements:</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
<b>System Software/Utilities:</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
<b>Data Conversion</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
<b>Training</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
<b>Consulting/Implementation Support:</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
<b>Interfaces/Integration Costs</b>											
							\$0			\$0	
							\$0			\$0	
							\$0			\$0	
			Features/Special Project Costs	\$0							
<b>Total Initial Costs</b>				\$0	\$0	0	\$0	0	0	\$0	

Figure 3 - NTR Form 'COST SHEET' Initial Costs worksheet

These costs are divided into several categories:

- *Application Software – What software products are required*
- *Hardware – Any additional hardware (servers, workstations, devices, etc.) required*
- *Network Requirements – Issues of bandwidth, security, external vs. internal access*
- *System Software/Utilities – What database engine, report writer, operating system, etc. are required*
- *Data Conversion – How will data be loaded into the system*
- *Training – Who will train and how many will be trained*
- *Consulting/Implementation – Procedural integration, process reengineering, workflow, configuration ,setup, etc.*
- *Interfaces/Integration – Does it need to get or feed data from other systems and is it creating redundant processes or data*

Each category can have an initial cost (e.g. license fee), labor days (either on or off site) and travel expenses.

In addition to the initial costs, there are on-going costs that must be factored into future year budgets. These recurring costs will inflate the operating costs of the City and so should be justified by cost savings in other areas. They fall into the same categories as the initial costs, though not necessarily identical items under each.

City of Fontana										Project Reference:					
TECHNOLOGY REQUEST COST WORKSHEET										Trip Cost:	\$	500	Option:		
										Daily Rate:	\$	1,200			
										Per Diem:	\$	250	Option 1		
										Labor Costs					
Mfg	Model/Version	Description	Source/Supplier	Product Cost	Delivery/Shipping Cost	Days	Cost	Trips	Days On-site	Est. Travel Costs					
<b>On-going Costs</b>															
<b>Application Software:</b>															
											\$0		\$0		
											\$0		\$0		
											\$0		\$0		
											\$0		\$0		
<b>Hardware:</b>															
		Annual Maint									\$0		\$0		
		Depreciation									\$0		\$0		
											\$0		\$0		
											\$0		\$0		
											\$0		\$0		
<b>Network Requirements:</b>															
		Security									\$0		\$0		
											\$0		\$0		
<b>System Software/Utilities:</b>															
		Annual license/sppt									\$0		\$0		
											\$0		\$0		
											\$0		\$0		
<b>Training</b>															
		Vendor/User Conf									\$0		\$0		
		In-service training									\$0		\$0		
		New hire orientation									\$0		\$0		
											\$0		\$0		
											\$0		\$0		
											\$0		\$0		
<b>Total On-going Costs</b>					\$0	\$0	0	\$0	0	0	\$0		\$0		

Figure 4 0 NTR Cost Sheet - On-going costs section

D. INDIRECT COSTS

Another often overlooked aspect of a technology project is the internal resource requirements. This includes not only support from IT, but release time for training for the school/department staff for the implementation and deployment (also known as "backfill").

City of Fontana New Technology Request Indirect Cost Worksheet			Project Reference:							
			Option: Option 1							
			TSD Resource Costs				Departmental Resource Costs			
Mfg	Model/ Version	Description	Resource	Person- hours	Rate	Indirect Cost	Resource	Person- hours	Rate	Indirect Cost
<b>Initial Costs</b>										
<b>Application Software:</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Hardware:</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Network Require</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>System Software/Utilities:</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Data Conversion</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Training</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Consulting/Implementation Support:</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Interfaces/Integration Costs</b>										
						\$0				\$0
						\$0				\$0
						\$0				\$0
						\$0				\$0
<b>Total Initial Costs</b>						0.00	\$0		0.00	\$0

Figure 5 - NTR Form, 'INDIRECT COSTS' worksheet – Initial cost section

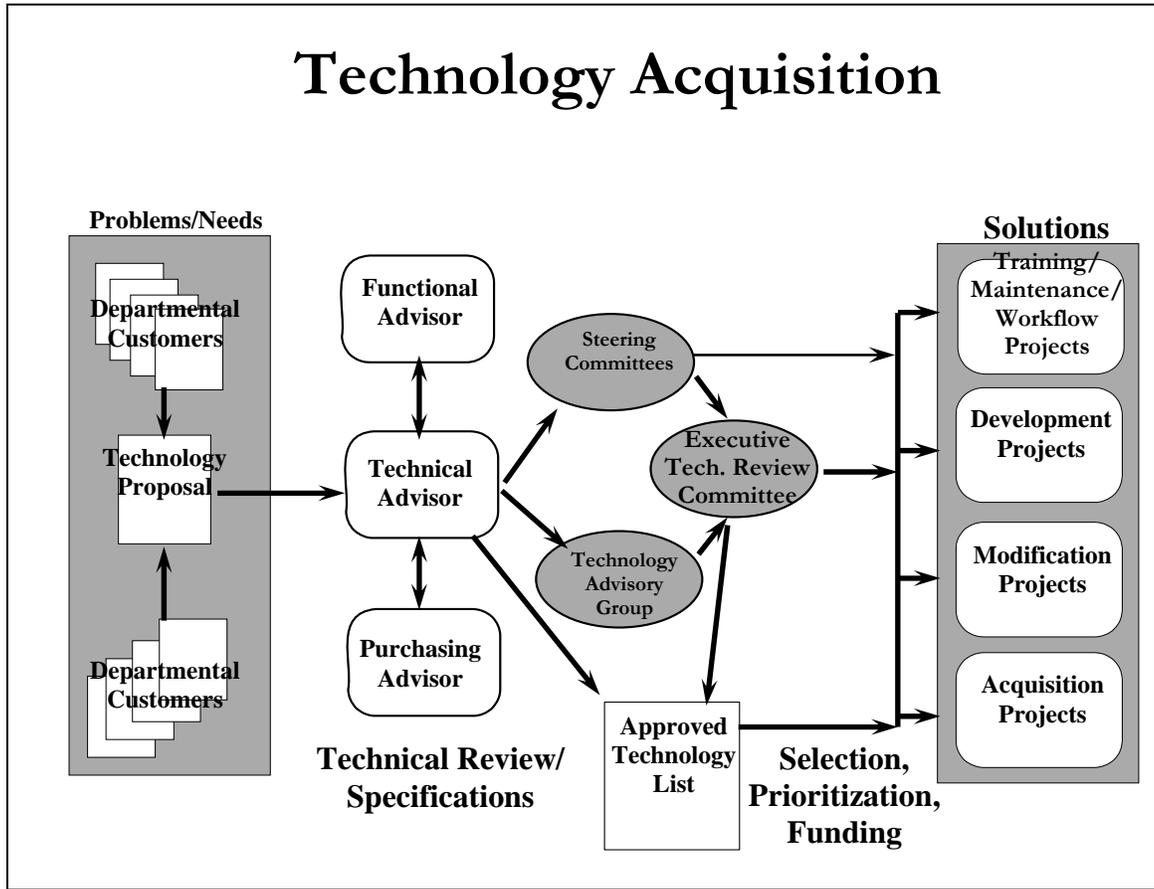
For each category and item in the Cost section, there is likely a commensurate on either IT or Department staff. For example, the installation of the software onto the server environment will need to involve IT staff even if the work is being done by outside consultants.

As with the Direct Costs, the Indirect Costs have on-going implications to consider as well. Below is the section of the worksheet that helps to itemize and analyze the on-going indirect costs of the project.

City of Fontana New Technology Request Indirect Cost Worksheet			Project Reference:						
			Option:						
			Option 1						
Mfg	Model/ Version	Description	TSD Resource Costs			Departmental Resource Costs			
			Resource	Person- hours	Rate	Resource	Person- hours	Rate	Indirect Cost
<b>On-going Costs</b>									
<b>Application Software:</b>									
									\$0
									\$0
									\$0
									\$0
<b>Hardware:</b>									
		Annual Maint							\$0
		Depreciation							\$0
									\$0
									\$0
									\$0
									\$0
<b>Network Requirements:</b>									
		Security							\$0
									\$0
									\$0
<b>System Software/Utilities:</b>									
		Annual license/sppt							\$0
									\$0
									\$0
<b>Training</b>									
		Vendor/User Conf							\$0
		In-service training							\$0
		New hire orientation							\$0
									\$0
									\$0
<b>Total On-going Costs</b>					0.00			0.00	\$0

Figure 6 - NTR Form, 'INDIRECT COSTS' worksheet - On-going costs section

4.3.2 TECHNOLOGY ACQUISITION WORKFLOW



Once the NTR form has been vetted (i.e. flow through the functional and technical review) it can then be passed to the appropriate approval level for prioritization. If a solution to the problem already exists or is on the Approved Technology List, it can be immediately processed for acquisition or implementation, pending availability of necessary IT and Department resources. Depending on the scope of the project (direct and indirect costs), it passes through a committee review. For example, if it is a GIS related project, the GIS Steering committee will prioritize it. If it is a Web related project, the Web Committee will prioritize it.