

### INTEROFFICE MEMORANDUM

June 10, 2013

**MEMO TO:** J. Russell Allen  
City Manager

**FROM:** Gail Roper, CIO and Community Relations Officer  
Nicole Raimundo, IT Chief Operating Officer

**SUBJECT:** Budget Note 41 – Project Budgets for CIP Technology Projects

This memorandum responds to Council’s request for information on the Technology Fund projects funded in the proposed five-year capital improvement program (CIP). Specifically, Council requested information on the project budgets and anticipated timelines. These projects are the result of the Information Technology strategic planning process. During the strategic planning process, departmental business needs were clearly defined, documented, and prioritized. A summary of the business needs, goals, and key strategies can be found on page 16 in the Information Technology Strategic Plan. The Information Resource Management Committee approved projects that meet the departments’ business needs and desired outcomes. These projects are: enterprise land management, enterprise content management, enterprise work management (Cityworks), fiber network, and candidate gateway. Council also requested information on the PeopleSoft upgrade, which is addressed in Budget Note 40.

The Information Resource Management Committee (IRMC) strategic projects follow standard project management methodology using stage gate processes, including the first stage gate for assessment and planning. In the assessment and planning stage, a pre-project team (City staff and/or service vendor) is established to define requirements, identify resources, determine business outcomes, estimate budgets, and identify possible solutions and/or vendors. At the completion of the assessment and planning stage, the IRMC will determine if the project should continue with implementation, such as issuing a request for proposals or continuing with an existing vendor. If the project is approved by the IRMC to move forward, funding for the project is requested for the duration of the implementation, which may be more than one budget year. The assessment and planning stage allows the City to use definitive requirements, proposed budgets and schedules to negotiate payment schedules with vendors based on completed and signed off deliverables.

#### Enterprise Land Management Program

There is currently about \$1,749,618 available for the land management program, and the proposed CIP programs \$1,706,000 million over the next three fiscal years. This total budget of approximately \$3,455,618 is an estimate based on the selected vendor response to a request for proposal. A revised cost proposal for implementation is a deliverable of the assessment phase. The table below summarizes the work to be performed with the programmed funding. Any proposed changes to this project budget will be incorporated into future capital budgets and coordinated with other project funding needs.

	FY 2014	FY 2015 Implementation	FY 2016 Implementation
Project Steps	<ul style="list-style-type: none"> <li>• Execute contract with Energov for Assessment and Strategy.</li> <li>• Deliverables include:                             <ul style="list-style-type: none"> <li>• Business Process Assessment</li> <li>• Technology Assessment</li> <li>• Requirements Gathering</li> <li>• Implementation Strategy</li> <li>• Deployment Strategy</li> </ul> </li> </ul>	Implement Energov software solution Deliverables include; software licensing, technical development and configuration, report writing, application and batch administration, technical testing, training of City of Raleigh developers to configure and maintain the system, training of other system users, knowledge transfer, production of system documentation, provision of technical assistance,	<ul style="list-style-type: none"> <li>• Continued Implementation Energov Software solution</li> </ul>

	FY 2014	FY 2015 Implementation	FY 2016 Implementation
		migration of data to the new system from legacy systems, integration of existing systems with the new system, and provision of deployment support.	
Programmed Budget	\$3,455,618 (\$1,749,618 in existing budget, plus \$671,000 in FY14 CIP)	\$960,000	75,000

**Program Sponsor:** Mitchell Silver, Chief Planning & Development Officer and Planning Director

**Steering Committee Members** represent the following departments: Planning and Development, Community Development, Fire Department, Finance, Development Services, Economic Development, Inspections, Transportation Planning, Urban Design, Public Utilities, Public Works, Real Estate, GIS and IT.

### Background

The City of Raleigh currently uses a large number of separate systems and data sources in its land management activities. Some of these systems lack sufficient functionality, or are not reliable, or are 'at risk' in the sense of being obsolete or unsupported. Some consist of individually maintained spreadsheets or other electronic documents. IRIS, the main system that is being used for land management activities, is widely seen as due for replacement. The management of land data in many disparate points and formats makes it difficult to share data across department lines, raises problems with support and maintenance, and adversely affects the quality, consistency, and reliability of data. As a means of correcting this state of affairs, the City of Raleigh has begun the process of selecting and implementing a new COTS (commercial off-the-shelf) system that is more reliable, has greater functionality, is highly configurable by users, and is user-friendly and accessible to all parties that are involved in the land management enterprise.

The business outcome of this program is to have in place a software system which fully automates the many interdepartmental activities in the land development process, resulting in an efficient, seamless review/approval process, as well as robust analytical and reporting capabilities to support the planning process. A multi-departmental Steering Committee is in place to manage the specification, purchase and installation of an integrated land planning, licensing, code enforcement, permitting and inspections system that encompasses all business processes related to the land development process. This team consists of representatives from the following departments: Planning and Development, Community Development, Fire Department, Finance, Development Services, Economic Development, Inspections, Transportation Planning, Urban Design, Public Utilities, Public Works, Real Estate and GIS.

### Project Purpose

The City has assembled a multi-departmental team and tasked it with acquiring software and services to design, develop and implement an Enterprise Land Management technology solution. The end goal is a solution that will encompass all business processes related to land development and management, integrating real estate, land planning and analysis, permitting, licensing, and inspections activities. Many interdepartmental activities in the land development process will become automated, resulting in an efficient, seamless review/approval process, and data will be accessible where needed across the enterprise. The system implementation should be fully configured to meet the needs of the City and for City of Raleigh staff to become self-sufficient in supporting operations and further enhancements.

### Project Scope

The intention of this project is to acquire professional services that will provide a detailed assessment, strategy, and recommendation for the implementation of a technology solution that supports the City's Land Management business. These services will be Phase I of the project.

The current schedule would have the City selecting a vendor for Phase I in the spring of calendar year 2013. Implementation is estimated to take 18 months, bringing the projected completion date to mid calendar year 2015.

## Objectives

Implementation of an enterprise land management system will open up the door to a number of benefits; some of these are as follows:

- *Centralizing Land-Based Data:* Land Management data currently resides in many formats and systems and is managed in many different departments and business units. Consolidating this data into a single enterprise land management system will improve the ability for many City of Raleigh departments to collaborate and communicate, giving them the ability to share and use land management data for analytical and planning purposes. It also facilitates easier technical support and system maintenance, simplifies the planning and management of a training program, and reduces duplication of effort.
- *Enabling Greater Productivity:* An enterprise land management system will have features that will enhance productivity, including electronic plan review, configurable workflow, mobile applications for field personnel, and document management capabilities that will help staff manage attachments (such as pictures, plans, or documents) and associate them with cases. Its ability to tie in to our GIS resources will make it a powerful tool for analysis and planning purposes.
- *Improving Public Service:* The development community and the general public will benefit from communications and input tools built into the software, including the use of mobile devices and social media. The public will be able to request and pay for services more easily and conveniently, receive notifications, and monitor the status of inspections, requests or plans. The ability for staff to receive and respond to plans electronically will significantly reduce contractor plan submittal costs as well as improve internal plans routing by staff. This may also be presented as “sustainable” through fewer trips to City offices and paper reductions.

## Deliverables

Expected deliverables will be based on the Phase of the project. Phase I expected deliverables are as follows:

- *Business Process Assessment:* Document the business processes and workflow our organization uses in the course of its land management activities.
- *Technology Assessment:* Identify the gaps between the current and future states of the technology infrastructure and recommend the best technology solution to meet our needs with careful consideration given to existing technology investments.
- *Requirements Gathering:* Work with City staff in identifying and prioritizing requirements.
- *Testing Methodology:* The vendor shall provide a testing methodology for verification and validation of requirements. This will include a test plan that includes a test strategy, sign-off and approval for Functional Testing, System Integration Testing (SIT), and User Acceptance Testing (UAT) as well as positive and negative test scenarios that include pass/fail indicators based on expected and actual result. The vendor will also provide a requirements/Test Matrix (RTM) that maps test scenarios to requirements to ensure adequate coverage.
- *Implementation Strategy:* The vendor shall recommend an approach and a roadmap including implementation plans with a prioritized project plan, costs and timelines, including (at a minimum) those items listed in in the RFP Section 2.05B as Phase II deliverables. Cost should be broken out into software, professional services and infrastructure (initial and ongoing). The recommendation shall also include strategies for training and for integration with other City of Raleigh systems including (but not limited to) those catalogued in Section 3.02 of the RFP, as well as the provision of a detailed personnel matrix which assesses the expected time / resource commitment for Vendor staff and City staff.
- *Deployment Strategy:* The Vendor shall recommend a deployment strategy based on an assessment of business need priorities, existing City technology, and industry best practices.

## Enterprise Work Management (Cityworks)

There is currently about \$27,188 available for Cityworks, and the proposed CIP programs \$228,000 over the next year. This total budget is \$1,062,200. The table below summarizes the work to be performed with the programmed funding. Any proposed changes to this project budget will be incorporated into future capital budgets and coordinated with other project funding needs.

	FY 2014 Implementation
Project Steps	Expected deliverables of the Cityworks implementation are: <ul style="list-style-type: none"> <li>• Cityworks Server AMS Installation.</li> <li>• Existing User Upgrade</li> <li>• Business Process Analysis &amp; Redesign</li> <li>• Software Configuration &amp; Localization</li> <li>• Data Migration</li> <li>• Documentation</li> <li>• System Integrations</li> <li>• Training &amp; Training Manuals</li> <li>• Testing</li> <li>• Deployment</li> </ul>
Programmed Budget	\$1,062,200 (\$834,200 is existing contract with \$27,188 available, plus \$228,000 in FY14 CIP)

**Program Sponsors: Carl Dawson, John Carman, Diane Sauer and Fred Battle**

**Steering Committee Members** represent the following departments: Public Utilities, Public Works, Parks & Recreation, Solid Waste Services, Finance, Fire, Emergency Communications, Legal, IT and Public Affairs

### Background

Cityworks is a GIS-centric work order management system. This system will streamline maintenance operations and expand asset management capabilities for the City's Public Utilities, Public Works, Solid Waste and Parks and Recreation departments. Cityworks will integrate with a number of core City business applications, including PeopleSoft (payroll, HR, finance), Oracle (customer care and billing system), the new master address database, and SeeClickFix.

This City has contracted with Woolpert via an RFP process to implement Cityworks enterprise wide. The amount of the contract awarded was \$834,200. The additional funding request is for assistance with the integration of Cityworks with PeopleSoft as well as a contract technical writing resource for the creation of training manuals and user guides specific to each departments implementation/configuration.

### Project Purpose & Scope

The purpose of this project is to continue the implementation of Cityworks software across the City organization in a coordinated and enterprise manner. The critical components of this effort include analysis and design of enterprise configuration, installation and implementation of Cityworks AMS, upgrade of existing users, configuration and localization of the software, migration of reference data and specified asset data into the new software, required process reengineering, integration with required external systems, test plan development and acceptance testing, and project management of these responsibilities and activities.

### Objectives

The following business objectives for this project are in direct support of the City's strategic plan to systemically managing work requests whether they are periodic, calendar based or on demand. It is important that the business is able to monitor, report and obtain statistics of the data captured for work orders.

- Enter daily work activities into a single system that will permit the department to receive reimbursement (citizen, DOT) and, allow management to view labor billing, material use and schedules.
- Departments will be able to perform cross department service requests and track the status and who closed out the request.

- Allows for continuous improvement of the system as there are changes in the workplace.
- Manage different asset classes for management reporting purposes and improve business intelligence based on data in the system.
- Capture work order related data to produce accurate regulatory reports that allow us to minimize staff time and comply with State and Federal requirements.
- Collect and report out business metrics in various formats (heat maps, graphs, tabular reports) that are based on accurate historical data, allowing us to communicate levels of service.
- Track and report on the history of an asset or equipment indefinitely. An asset is a component that a department they uses to perform their function, such as, a pump at a water station for utilities, a length of water main pipe, or a top layer of streets for public works
- Identify areas of reoccurring work orders on common assets and subcomponents

### Deliverables

Expected deliverables of the Cityworks implementation are:

- Cityworks Server AMS Installation.
- Existing User Upgrade
- Business Process Analysis & Redesign
- Software Configuration & Localization
- Data Migration
- Documentation
- System Integrations
- Training
- Testing
- Deployment

### NCNGN Fiber Program

There is currently about \$1,549,341.14 available for the NCNGN Fiber program, and the proposed CIP programs \$2,005,000 over the next five fiscal years. This total budget of roughly \$3,554341.14 is an estimate based on the information currently available. The table below summarizes the work to be performed with the programmed funding. Any proposed changes to this project budget will be incorporated into future capital budgets and coordinated with other project funding needs.

	<b>FY 2014 Implementation</b>	<b>FY 2015 Implementation</b>	<b>FY 2016 Implementation</b>
Project Steps	<ul style="list-style-type: none"> <li>• Complete construction of 125-mile fiber backbone. Deliverables include:               <ul style="list-style-type: none"> <li>○ <i>Fiber optic network infrastructure</i></li> <li>○ <i>As-built Technical Drawings</i></li> <li>○ <i>GIS data representing locations and attributes of infrastructure</i></li> </ul> </li> <li>• Contract with company to provide Fiber-Optic Network Planning Services. Deliverables include:               <ul style="list-style-type: none"> <li>• <i>Business Plan</i></li> <li>• <i>Network Plan</i></li> <li>• <i>Market Analysis</i></li> <li>• <i>Technical Plans</i></li> <li>• <i>Phased Timeline for Implementation</i></li> <li>• <i>Operations Plan</i></li> <li>• <i>Network Expansion Plan</i></li> <li>• <i>Financial Plan</i></li> </ul> </li> <li>• Contract with engineering firm. Deliverables include               <ul style="list-style-type: none"> <li>○ <i>Network technical drawings</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Contract with Construction Company to build out Fiber Optic Network based on planning and engineering work previously completed. Deliverables include:               <ul style="list-style-type: none"> <li>○ <i>Fiber optic network infrastructure</i></li> <li>○ <i>As-built Technical Drawings</i></li> <li>○ <i>GIS data representing locations and attributes of infrastructure</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Continue building out Fiber Optic Network based on planning and engineering work previously completed. Deliverables include:               <ul style="list-style-type: none"> <li>○ <i>Fiber optic network infrastructure</i></li> <li>○ <i>As-built Technical Drawings</i></li> </ul> </li> <li>• <i>GIS data representing locations and attributes of infrastructure</i></li> </ul>
Programmed Budget	\$3,455,618 (\$1,549,341.14 in existing budget, plus \$1,045,000 in FY14 CIP)	\$240,000	\$240,000

**Program Sponsor:** Gail Roper, Chief Information and Community Relations Officer, Cary, Carrboro, Chapel Hill, Durham, Raleigh, Winston-Salem, Duke University, North Carolina State University, University of North Carolina at Chapel Hill, and Wake Forest University

## **Background**

In 2007, the City's Public Works Department began planning for a fiber-optic traffic signal network that was to receive funding from the Federal Government. Upon becoming aware of this effort, The Information Technology Department requested to partner with Public Works to install approximately 125 miles of 24-strand fiber-optic cabling alongside the Public Works network. This construction effort, known as the "IT Fiber Backbone", is expected to be completed in late summer or early fall of 2013, and once in place, the backbone must be connected to City facilities in order to create a functional network. These facilities are known as "Last Mile" facilities, because in order to connect these facilities to the Fiber Backbone, an additional length of connecting fiber must be run. The fiber that connects the facilities to the backbone (which may be under or over one mile length) is generally known as the "last mile".

The project was originally envisioned to connect only City of Raleigh facilities to the fiber network, but the planned scope changed considerably when the IT Department began investigating expansion of the network by partnering with organizations outside of the City. In early 2013, the program was renamed the NCNGN (North Carolina Next Generation Networks) Program to reflect this broadening of scope, which included potential partnering with a number of local organizations (examples being Wake County and local medical facilities). At an even higher level, the City of Raleigh is currently working with a number of other cities (Cary, Carrboro, Chapel Hill, Durham, Raleigh, and Winston-Salem) and universities (Duke University, North Carolina State University, the University of North Carolina at Chapel Hill, and Wake Forest University) in a united effort to create a regional high-speed broadband network.

## **Program Purpose**

The NCNGN Program can be viewed as having essentially three 'layers' consisting of:

*City Facilities* - The first of the layers represents the connection of selected City of Raleigh facilities together via fiber-optic cabling and hardware to create a municipal network. The advantage of having this network in place means that the connected facilities will no longer need to use the network resources and infrastructure of service providers such as Time-Warner and AT&T. Using these service providers comes at a cost, and the more bandwidth is needed, the more the City must pay for its use. By reducing its dependence on service providers, it is currently estimated that the City can save over \$400,000 per year if approximately 50 City facilities are connected to our municipal fiber network. Another advantage is that the City will be getting much faster, higher capacity infrastructure to work with and will not need to be concerned with periodic fee increases for using the existing service providers. This higher capacity will allow a number of City departments to expand services and innovate in ways that are not possible (or very expensive) when using the current service providers.

*Partner Facilities* – The City has the ability to expand its network beyond City facilities so that non-City organizations can also make use of it. There are currently limits on who the City could partner with in this kind of arrangement, because of State of North Carolina legislation (House Bill 129), which places restrictions on the extent to which municipalities can compete with private service providers. Expanding the network out where possible means that the City is able to collect revenue from these users. In exchange the users get access to the speed and capabilities of a high-speed fiber network for competitive prices. A particularly attractive source of revenue for the City is called E-Rate funding, which is federal money for which the City could be eligible if the network were expanded to Wake County K-12 schools and public libraries. Beyond the revenue, however, there are other potential advantages of sharing network infrastructure with non-City organizations. One such advantage is the ability to connect City of Raleigh and Wake County Public Safety departments with area hospitals to form a Public Safety network that allows for improved Public Safety service delivery.

*North Carolina Next Generation Project Service Area (Note: This effort is also referred to as 'Gig.U' because the universities involved in this effort belong to an organization of that name. The purpose of Gig.U is to accelerate the deployment of ultra-high speed networks to leading U.S. universities and their surrounding communities.)* – On February 1, 2013, the participants involved in the NCNGN effort (listed in the 'Background' section) released a Request for Proposals under the Triangle J Council of Governments. The objective of the RFP was to enable the participants to engage with one or more vendors to design, build, operate, support, and manage one or more next-generation ('next gen' is defined as plans beginning with 100 mbps wireless service and up to 1 gbps or higher wired service) communications network solutions. The network(s) envisioned in this plan will enhance coverage and capacity to businesses, homes, governments, and institutions within the region, luring businesses to the region, fostering innovation, and improving citizen access to the Internet. The intention is that the network will be "open access", meaning that the network(s) will be accessible by all retail service providers. Being mindful of potential future developments, the RFP also stated that the vendor should demonstrate a clear and continuous upgrade path for the network(s) to meet future consumer demand and service developments.

### **Program Scope**

In order to create the network envisioned under this program, it will be necessary to contract with one or more vendors to plan, design, and construct the network. The project will be divided up into several phases in which the construction of the Fiber Backbone and the last mile fiber will take place. By agreement between the IT and Public Works departments, the design of the Fiber Backbone is constrained by the design of Public Works' Traffic Signal network, but the design of the Last Mile Fiber is dependent on the IT department identifying City facilities, analyzing the potential costs to connect them to the Fiber Backbone, and prioritizing them in order of connection. Before the network becomes functional, the City will have to determine how to provide for its operation, maintenance, and repair. Decisions on what resources and funding that will be used to do so will be dependent on the outcome of the NCNGN/Gig.U effort; the vendor(s) chosen through the RFP process are expected to bear all the capital costs of the network(s) (including design, engineering, construction, and equipment costs up to the end user drop point), as well as the operating and maintenance costs, including insurance and relevant taxes.

### **Objectives**

- Enjoy cost savings by eliminating the need to use service providers for a substantial portion the City's networking needs. The current estimate is that the City will save approximately \$400,000 per year once 50 sites are connected. While there are more than 50 facilities currently in use by the City of Raleigh organization, for various reasons (such as the fact that some of these facilities are rented rather than owned) we do not envision running fiber to all of them.
- Make use of fiber optic technology to create a fast, high capacity network using infrastructure that will be viable for the long-term.
- Enable City departments to expand capacity and services not currently available (for example, tying in the fiber network to parking meters or Police surveillance cameras).
- Partner with other organizations to further increase service capacity and to bring in revenue to support, repair, maintain, and expand the network.
- Bring competitively priced high-speed broadband to the region, thereby increasing the quality of life by promoting economic development, innovation, as well as educational, health care, and public safety benefits.

### **Deliverables**

The deliverables associated with this task include:

- Planning services to create the overall design of the network.
- Engineering services to translate the design into a construction plan.
- Construction services to build the network.
- Planning services with regards to supporting, maintaining, and repairing the network once operational.
- Fiber optic network materials (including conduit, fiber cabling, splice enclosures, among others).
- Servers, software, and power supply materials to support the network.

## Enterprise Content Management

There is currently about \$770,000 available for Enterprise Content Management, and the proposed CIP programs \$2,800,000 over the five years. This total budget currently estimated at \$3,570,000. The table below summarizes the work to be performed with the programmed funding. Any proposed changes to this project budget will be incorporated into future capital budgets and coordinated with other project funding needs.

	<b>FY 2014 Implementation</b>	<b>FY 2015 Implementation</b>	<b>FY2016 Implementation</b>	<b>FY 2017 Implementation</b>	<b>FY2018 Implementation</b>
Project Steps	<ul style="list-style-type: none"> <li>• Develop and issue RFP</li> <li>• Select implementation vendor</li> <li>• Purchase software</li> <li>• Develop Contracts Workflow</li> <li>• Create Project Repository</li> <li>• Central Policies and Procedures Repository</li> </ul>	<ul style="list-style-type: none"> <li>• Integrate Cityworks</li> <li>• Implement Citizen Requests</li> <li>• Integrate CC&amp;B</li> <li>• Integrate PeopleSoft</li> <li>• Grants Repository</li> </ul>	<ul style="list-style-type: none"> <li>• Integrate Land Management</li> <li>• City Clerk's Taxonomy</li> <li>• Central Personnel Files Taxonomy</li> <li>• eForms</li> </ul>	<ul style="list-style-type: none"> <li>• City Clerk's Office migration and backfile conversion</li> <li>• Purchasing BID process</li> <li>• Implement Central HR Files</li> <li>• Digital signatures pilot</li> </ul>	<ul style="list-style-type: none"> <li>• ECRM enhancement functionality for enterprise support functions</li> <li>• ECRM enhancement functionality for business unit support functions</li> </ul>
Programmed Budget	\$3,570,000 (\$770,000 in existing budget, plus \$0 in FY14 CIP)	\$1,000,000	\$ 1,800,000	\$x	\$x

**Program Sponsors: John Carman, Jayne Kirkpatrick, Chief McGrath, Joyce Munro, Gail Smith, and Gail Roper**

**Steering Committee Members:** Will be selected once project is initiated

### Background

An Enterprise Content Management (ECM) high-level assessment (HLA) was conducted for the City of Raleigh by IQ Business Group in April–December 2012 to review current and future electronic document and records management requirements. Interviews with City staff and a study of the current systems and projected applications growth provided the background information necessary to develop an overall Enterprise Content and Records Management (ECRM) strategy and roadmap for the City.

IQ Group conducted a high level review of current City operations and an assessment of requirements related to paper-based processes and collaboration; electronic content storage, retrieval workflow and processing; records management; collaboration with internal and external parties; and integration with line of business systems. Interviews were conducted with over 200 representatives from selected business units to collect business workflow, current system, and document process and volume requirements necessary to make a recommendation for an ECRM strategy, implementation sequence and potential product solutions. The specific goals of the study included:

- Recommend a strategy that represents industry best practices;
- Recommend a list of ECM Vendor solution's that can address requirements for the City based on ECRM requirements, number of users and volume of content;
- Develop both a high level business case and cost justification; and
- Insure that the resultant system has the capability to add and manage future application requirements.

The City of Raleigh wishes to formulate a digital content and records management (Enterprise Content and Records Management [ECRM]) strategy, which will enable employees to fulfill information requests, improve business processes, raise levels of service, and increase compliance by utilizing digital capture, storage, records retention, retrieval and workflow functionality. A primary goal is to identify a solution that

will address current issues around paper, electronic content, processes, collaboration, records management, security and remote access. The chosen solution must meet the needs that were found across the entire City while still being affordable.

### **Project Purpose & Scope**

The purpose of this project is to select and implement the appropriate ECM software solution across the City organization in a coordinated and enterprise manner based upon the recommendations made by the ECM Assessment vendor. The critical components of this effort includes the selection of the appropriate solution and implementation vendor, implementation of the required program governance, prioritization of the recommended implementation projects, and implementation of each recommended project.

### **Objectives**

Implementation of Enterprise Content Management will provide the City of Raleigh with the following benefits:

- *Implement a City-wide ECRM platform:*  
An enterprise platform for document, records, and content management can better support the mission of the City and its departments, close the gaps in current functionality, mitigate or eliminate risks, integrate with ERP and line of business systems to increase productivity and reduce costs.
- *Integrate the ECRM platform with PeopleSoft, the new Land Management solution, Oracle's Customer Care & Billing, Cityworks and other line of business systems:*  
Integration with ECRM technology will increase efficiencies, reduce storage file maintenance while enabling documents stored digitally to be managed according to the City's records management policies and retention schedules; and, be shared and searched by all staff (who have appropriate permissions) outside of individual application views.
- *Develop a City-wide Records Management Plan:*  
An enterprise records management plan that focuses on the City's statutory requirements, is inclusive of both paper and all electronic records, enables all business units to utilize a common dictionary, and can be utilized to implement an automated records management system, will result in significant time savings to staff and much greater assurance related to records compliance.
- *Utilize eForms to provide higher levels of service:*  
The conversion of forms to eForms and placing them on the City's Intranet or public facing internet as appropriate will shorten the processing cycle and increase levels of service to constituents, partners and staff. eForms can be used to eliminate redundant recording or keying of information into line of business systems; and, to provide higher levels of service to City constituents by enabling self service applications.
- *Automate business processes using ECRM workflow:*  
The implementation of image-based and born digital workflows to support business processes related to the project life cycle, financial management, accounting, human resources, auditing, procurement, contracts, grants, City programs, facilities management, permitting and registration, as well as enterprise governance processes will reduce cycle time, improve efficiency, and provide status reporting.

### **Deliverables**

Expected deliverables of the Enterprise Content Management program will include:

- Implementation of ECM software solution
- Implementation of required program governance team(s)
- Central repository
- Automated records management
- PeopleSoft Integration
- Cityworks Integration
- Contracts Workflow
- CC&B Integration
- Land Management Integration
- Citizens Requests Implementation
- City Clerk's Office Migration and Backfile Conversion

- Central Personnel Files Implementation
- Purchasing Bid Process

### Wanova (Windows 7 Transition) Project

The Wanova phase I budget is \$297,000 for 1,000 devices for the initial rollout. Windows 7 will be rolled out as part of the lease replacement process. Re-evaluation of funding will occur as an on going process, as we understand the implementation time per device. The table below summarizes the work to be performed with the programmed funding. Any proposed changes to this project budget will be incorporated into future capital budgets and coordinated with other project funding needs.

	<b>FY 2014 Implementation</b>	<b>FY 2015 Implementation</b>	<b>FY2016 Implementation</b>	<b>FY 2017 Implementation</b>
Project Steps	<ul style="list-style-type: none"> <li>• Establish a Virtual VMWare Mirage server and load the 1,000 endpoint PC licenses</li> <li>• Establish an endpoint PC disk storage location using existing hardware</li> <li>• Complete a Wanova (Windows 7 Transition) Pilot Project with deployment of VMWare Mirage on upto 250 endpoint PCs</li> <li>• Test endpoint PC recovery and backup of the Pilot Project PCs</li> <li>• Complete a methodical deployment of Wanova (Windows 7 Transition) on the remaining Information Technology (IT) Department supported endpoint PCs</li> <li>• Document the testing results</li> <li>• Document the Software Configuration</li> <li>• Document the infrastructure architecture that supports the Wanova (Windows 7 Transition) project</li> <li>• Document System Integrations</li> <li>• Conduct and Document Training</li> <li>• Document the Wanova (Windows 7 Transition) Project</li> <li>• Transition the Wanova (Windows 7 Transition) Project to production support</li> </ul>	Ongoing Implementation	Ongoing Implementation	Ongoing Implementation
Programmed Budget	\$297,000 (\$0 in existing budget, plus \$297,000 in FY14 CIP)	\$x	\$x	\$x

**Program Sponsor: Gail Roper**, Chief Information and Community Relations Officer  
Enterprise wide –All Departments

### Background

The City of Raleigh Information Technology (IT) Department supports approximately 2,000 user endpoints (laptops and desktop computers). Support for the Police, Fire, Emergency Communications, and Convention Center departments is provided by staff within those specific departments. Approximately 88% of the endpoints currently supported by IT utilize the Microsoft Windows XP operating system. Since Microsoft has indicated that it will no longer provide support for the Windows XP operating system beginning in April 2014, the City of Raleigh requires that all current Windows XP endpoints be migrated to the Windows 7 operating system well before Microsoft ceases support for Windows XP.

An initiative began in 2011 to address the migration of user endpoints from Windows XP to Windows 7. An Image Strategy Team was formed to conduct an analysis and found that the migration from Windows XP to Windows 7 could not be performed as a simple software upgrade using the current deployment and software distribution methods used at the City since the migration from Windows XP to Windows 7 requires a full installation of the Windows 7 operating system. Research was conducted on several commercially available Windows 7 migration tools including the Lenovo InPlace Migration Tool. The Windows 7 migration tools available are costly and in most cases are only used for the sole purpose of

migrating to Windows 7 providing no additional value to the customer. For example, the initial cost estimates for purchasing and configuring the Lenovo tool for the City's Windows 7 migration were estimated to be approximately \$203,000.

During the analysis for the Windows 7 migration, it became apparent that the City required an overall strategy for deployment and application management before the Windows 7 migration could occur. The current toolset was not sufficient to support a Windows 7 migration or future citywide application upgrades. Through further analysis and discussion with the Gartner Group, several deployment and application management tools with Windows 7 migration capability were recommended for investigation. The team evaluated several tools and determined that the VMWare Mirage product (formally Wanova Mirage) was the most robust in that it would not only provide deployment and application support but could easily be used to perform the Windows XP to Windows 7 migration as well without requiring the purchase of an additional Windows 7 migration specific tool. No other tools researched had the same functionality found in VMWare Mirage as it was unique in how it managed applications and system restorations as well as how it performs an in-place Windows XP to Windows 7 migration. During the summer of 2012, VMWare purchased Wanova showing that the product is well positioned to be a key player in the virtual environment marketplace.

The team conducted an onsite proof of concept study with staff from VMWare in August through September of 2012. Approximately 12 use cases were performed to simulate how the VMWare Mirage product would be utilized to perform user support as well as perform a Windows XP to Windows 7 migration within the City. The team found that the results from the use cases executed met or exceeded expectations.

The VMWare Mirage software product is a desktop management solution that provides centralized, single-image management through a unique layering technology so that IT only has to manage, patch, and ensure compliance of a single copy of Windows and a single copy of each application – instead of trying to manage thousands of diverse end points. VMWare Mirage also allows the image to run locally on a PC, allowing users to take advantage of native PC performance.

Centralized images vastly improve desktop backup and recovery, as well. The entire end point is backed up, not just the data, so users access an exact image of their desktop including personal applications, files, and personalization in the event of a system failure. Additionally, image centralization improves help desk break-fix support such as, malware repair, application repair, and registry issues. Other benefits include asset management reporting capabilities and image storage for compliance enforcement and support.

### **Project Purpose & Scope**

The purpose of this project is to upgrade the Information Technology (IT) Department supported endpoint PCs from Windows XP to Windows7. The Wanova (Windows7 Transition) Project will be completed by December, 2014.

Migration will begin with a pilot project that initially implements VMWare Mirage on 250 endpoints which includes the Human Resources Department, Finance Department, and Executive Management. Once the initial set of endpoints are operational and provide benefit to the City, the remaining endpoint PCs will be methodically migrated using VMWare Mirage throughout the City.

Due to the reduction of the time required for deployment and application support through VMWare Mirage, no additional staff would be required to perform the Windows XP to Windows 7 migration. Current deployment team members could serve in this role since they have acquired experience with VMWare Mirage eliminating the need to procure supplemental staff specifically for the Windows 7 migration. During analysis of the Windows7 migration, it was determined that if VMWare Mirage was not used it would require two additional full time supplemental staff to perform the upgrade using current tools and processes.

## Objectives

The following business objectives for this project are in direct support of the City's strategic plan to systemically managing work requests whether they are periodic, calendar based or on demand. It is important that the business is able monitor, report and obtain statistics of the data captured for work orders.

- Complete the migration of Windows XP endpoint PCs to Windows7.
- Provide an improved backup and recovery solution for City endpoint PCs.
- Enable a more efficient and reduced cost method for remote endpoint management of City PCs by the Information Technology (IT) Department.
- Reduce the amount of resources required to deploy endpoint PCs thus, saving the City money.

## Deliverables

Expected deliverables of the Wanova (Windows 7 Transition) Project are:

- Establish a Virtual VMWare Mirage server and load the 1,000 endpoint PC licenses
- Establish an endpoint PC disk storage location using existing hardware
- Complete a Wanova (Windows 7 Transition) Pilot Project with deployment of VMWare Mirage on upto 250 endpoint PCs
- Test endpoint PC recovery and backup of the Pilot Project PCs
- Complete a methodical deployment of Wanova (Windows 7 Transition) on the remaining Information Technology (IT) Department supported endpoint PCs
- Document the testing results
- Document the Software Configuration
- Document the infrastructure architecture that supports the Wanova (Windows 7 Transition) project
- Document System Integrations
- Conduct and Document Training
- Document the Wanova (Windows 7 Transition) Project
- Transition the Wanova (Windows 7 Transition) Project to production support
- Close-out the project

## Candidate Gateway Project

**Project Sponsor: Steve Jones**, Human Resources Director

The Candidate Gateway project budget is \$865,000 based on the original selected vendor proposal. The table below summarizes the work to be performed with the programmed funding. Any proposed changes to this project budget will be incorporated into future capital budgets and coordinated with other project funding needs.

	<b>FY 2014 Implementation</b>
Project Steps	Expected deliverables of Candidate Gateway TAM implementation are: <ul style="list-style-type: none"><li>• Contract with vendor for implementation services</li><li>• Implementation of solution</li></ul>
Programmed Budget	\$865,000 (\$650,000 in available funding, plus \$215,000 in FY14 CIP)

## Background

The City of Raleigh's Human Resources Department's currently performs the acquisition of new talent through a manual process by having candidates complete a paper application and submit it in person, via fax, or by mail. An automated candidate recruitment process is desired that will provide potential candidates with the ability to create a profile, review available position offerings, and apply electronically for positions in a fashion similar to such products such as Monster.com. An automated solution will also provide functionality that can integrate with the City's PeopleSoft Human Capital Management module to allow information electronically captured during the recruitment process to automatically be importing for the onboarding process and setup of new employees.

Within the Oracle PeopleSoft application, Candidate Gateway/Talent Acquisition Manager functionality is available. The Human Resources department issued an RFP in 2012 to solicit proposals from potential

vendors to configure and implement the Candidate Gateway/Talent Acquisition Manager modules. Four vendors submitted proposals. From the proposal submitted, Cedar Crestone was the preferred vendor of choice. The proposal price was \$865,000. During the timeframe of the proposal review, Oracle announced the purchase of TALEO, which was a leader in the Talent Management arena providing Software as a Service (SAAS) solution.

The City of Raleigh decided to not proceed with the implementation of the PeopleSoft Candidate Gateway and Talent Acquisition Manager solution until the TALEO product could be evaluated fully to determine the best solution for the City. A review of each solution is currently in process. Oracle is working with the City to schedule a demonstration of TALEO functionality and is preparing cost information so that each option can be compared.

### **Project Purpose & Scope**

Once the appropriate product solution is determined, a project will be initiated to configure and implement the required functionality.