IT as a Service (ITaaS)

If IT can be promoted as a service (ITaaS), then governments can begin to more effectively share resources, leverage existing infrastructure and staff, and ultimately save money.

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Executive Summary

"In an era of shrinking budgets and increased need for service improvements, productive partnerships between municipalities make sense. …[C]ommunities are turning to collaboration and shared resources as a way to offer better, more cost-effective programs than they can provide independently" (Regionalization). Information Technology services are expensive, and smaller, governmental organizations are at a disadvantage.

To promote shared cost savings and the efficient use of tax dollars, the City of Tamarac, Florida, has developed IT service offerings – including Consulting Services, Managed Services and Professional Services – which it provides to other governmental organizations. The City of Tamarac has partnered with the City of Dania Beach, the City of Lauderdale Lakes and the Town of Southwest Ranches to provide such services.

"IT as a Service (ITaaS) is a technology-delivery method that treats IT (information technology) as a commodity, providing an organization with exactly the amount of hardware, software, and support that it needs for an agreed-on monthly fee."

Benefits include:, "

- Minimal upfront IT investment
- Regular, predictable expenses
- Financial transparency
- Continuous monitoring of services
- Expert technical support
- Scalability
- Regular software upgrades and patches"

   (What is IT as a Service, para. 1-2)

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Problem Statement

Governments continually encounter issues with ever increasing costs; however, they have limited remedies. They cannot participate in corporate mergers; they are unable to expand their service area; and they cannot repeatedly raise taxes or fees. Smaller governments, traditionally local governments, are at even more of a disadvantage. Startup or base costs for services are the same regardless of the organization's size, and they are not always able to take advantage of large volume offerings or discounts. To compensate, many search out cheaper alternatives, look to modernization with technology or attempt to leverage operational efficiencies or improved processes. Still, these efforts are not always sufficient.

In the State of Florida, "[t]here are 282 cities, 109 towns, and 19 villages[…, for] a total of 410 incorporated municipalities" (List of municipalities). There are 67 counties (Florida Quick Facts), 74 school districts (List of school districts), and over 400 other county-based organizations (i.e. constitutional offices). With a sizeable number of local municipalities and other governmental organizations in the State of Florida, work or services are duplicated to a large extent, and each organization bears the cost of that service – which is not efficient. Technology services are one example. Each governmental organization, no matter how small or large, uses technology to some extent, which necessitates the use of staff (or third party contractors) to manage information technology services and equipment.

If not managed in house, third party vendors are able to provide information technology services; but, the cost for doing so can be high. Governments need a cooperative solution which will pool resources, leverage existing experience and reduce costs.

Recommended Solution

Unless the organization is large, it can be costly to manage and maintain IT entirely in house. Third party consulting fees or costs for outside IT support is high. Governments are inherently not-for-profit. If governments combine resources, promoting collaboration, then the cost-sharing benefits will be great.

Pooling or sharing staff and other resources can promote cost savings and other efficiencies. **The City of Tamarac has developed IT service offerings – collectively referred to as *IT Client Services* – which include Consulting Services, Managed Services and Professional Services.**

Consulting Services include:

- Business Process Analysis
- Network Design and Engineering
- IT Strategic Planning

Professional Services include:

- Technical Support
- Hardware and Software Installation
- Service and Network Management
- IT Project Management
- IT Training

Managed Services include:

- E-government Services and Hosting
- Virtual IT Department
- Remote Network Monitoring

Over the past four (4) years, the City of Tamarac has successfully developed and promoted these services, and has successfully employed their use in surrounding municipalities.

How to Get Started

To offer IT as a Service (ITaaS), the process is straightforward and simple. Start small, develop relationships – and experience – , and then expand.

The process encompasses the following:

- Evaluate Capabilities
- Identify Opportunities

- Define Service Offerings
- Identify Stakeholders
- Define the Project
- Develop a Plan

Evaluate Capabilities

Before an organization can begin to offer IT services to other organizations, the organization first needs to look inward and evaluate…to determine what skillsets they have and where their IT staff excel. The skills, programs, processes, etc… that can be provided to other organizations need to be identified. For example, if an organization has high-level Cisco engineers on staff, then this may be an area identified as a capability – Cisco network engineering.

Answering the following questions may help to identify and evaluate potential capabilities:, "

- What services do our … users and developers want and need to drive innovation?
- Is internal IT truly best positioned to deliver these services to users?
- Can IT deliver these services at a market competitive price?
- How will our processes and policies need to change to support the new services lifecycle?"

(Banafa)

Identify Opportunities

Look for opportunities where others may not. Publicize new programs or ideas when they develop. Know that other organizations may need similar or identical services, and that by combining efforts, the overall costs may decrease. Below are some examples:

1. "**Regionalize New Programs as They Emerge**
   Whether it is through the passage of new state and federal laws, availability of new funding sources, or advances in technology, change can lead to the creation of new municipal services and programs. There is an opportunity as new programs emerge to structure such programs in a way that encourages or even requires some form of regionalization" (Regionalization).

   Programs can be small or large, and should be communicated to peers. With collaborative environments such as FLGISA, or other local government organizations, multiple avenues are available to share valuable information and to promote ideas.

   As an example, after having secured a bid for printer toner cartridges that was more advantageous than other typical office supply channels, the City of Tamarac advertised and made the contract available to surrounding municipalities through a local

cooperative purchasing group/committee for Broward County governments. As a result, the contract was utilized by a number of local governments.

2. "**Take Advantage of Expiring Service Contracts and Staff Attrition**
    One of the most important factors in successfully implementing a shared service project is timing. Regionalizing municipal services often requires restructuring staff assignments…" (Regionalization).

    As one of the forthcoming examples will show, a successful sharing of IT Department Staff can be all about timing. When IT staff changes in smaller organizations, look at these as opportunities to combine IT departments or to share technical staff.

    Many smaller, governmental organizations currently use outside companies to provide IT services. As the contracts expire, this is the ideal time and opportunity to propose sharing IT resources.

3. "**Start with Simpler Projects**
    Municipal officials should take advantage of relatively simple opportunities to work together. Aiming for easy 'win-win' projects can be valuable, particularly if the communities involved do not have a history of working together. Such projects can be a good first step toward building trust and goodwill and developing a culture of collaboration. Furthermore, achieving easy victories together could increase the likelihood of further collaboration on larger, more complicated projects" (Regionalization).

    One example will later illustrate that while state and federal mandates affect many local governments the same, it is possible to use these as opportunities to pool resources and work towards a combined solution. If the new mandate requires the development of a new system, this presents an opportunity for local governments to share in development costs, develop a system that is consistently used throughout the region, and ultimately lower the overall cost to residents.

Define Service Offerings

Service offerings should be designed as solutions to identified opportunities. Services should be based upon already existing capabilities, or use of similar technology. For example, if an organization uses computer systems based on Microsoft Windows and Active Directory, the same organization should not propose to provide technical support for a Novell-based network environment.

When defining services, be specific. Define the process for utilizing or accessing said services. Include appropriate contact information. Determine if the process should vary dependent upon business hours or if different for afterhours service.

If applicable, define methods to monitor the service. Determine appropriate metrics, reporting procedures, and service levels.

Lastly, determine the cost or fee to offer the service. Base the cost or fee on all aspects including electric, HVAC costs, staff costs, travel, procurement-related expenses, etc….

Identify Stakeholders

"Project stakeholders are entities that have an interest in a given project….[They] are individuals and organizations that are actively involved in the project, or whose interests may be affected as a result of project execution or project completion. They may also exert influence over the project's objectives and outcomes." (Project stakeholders, para. 2-3).

It is essential to know who key players are, and to effectively work as a team. Once the stakeholders are identified, it is critical to not only communicate but also to collaborate.

"Projects are performed by people for people, with the key determinants of success being the relationships between project teams and project stakeholders. This web of relationships will either enable or obstruct the flow of information between people and, as a consequence, will largely determine project success or failure" (Bourne).

Define the Project

Having established an open and collaborative environment with stakeholders, work towards defining the project's scope. It is important to conduct a Cost-Benefit Analysis to ensure that the IT service offering will ultimately decrease overall costs. The objective of regionalization or providing IT as a Service (ITaaS) is to realize cost savings and/or improved service levels that would not be possible otherwise. Ensure that there is an acceptable return on investment (ROI).

Next, craft a solid (inter-local) agreement with all parties to avoid future problems. It is important to have a clear understanding of what services are to be provided. In the agreement, define objectives, success criteria, etc…. Set objective, measurable and achievable performance standards. Develop and include Service Level Agreements (SLAs). "SLAs commonly include segments to address: a definition of services, performance measurement, problem management, customer duties, warranties, disaster recovery, termination of agreement [, etc…]" (Service-level agreement).

Last, establish costs and fees that are clear and easily understandable. They should include any startup (non-recurring) costs – broken out by hardware, software, services, etc… -- ; recurring, service-related costs (showing periodicity); ad hoc fees (i.e. trip charge); additional charges for after-hours service; etc…. Also, include any contractual increase in fees, such as after the first two years if costs will increase by a certain percentage. It is important to be clear and to address any potential concerns up front.

Develop a Plan

After stakeholders are identified and the project is clearly defined, form a project committee comprised of key personnel involved in both implementation and ongoing support. The project committee is responsible for developing an implementation or transition plan, along with a timeline for overall project completion as well as due dates for various milestones.

The implementation plan should be specific with project milestones, action items, tasks, responsible/assigned parties, etc…, all well-defined.

The project plan should include appropriate testing procedures, a production rollout plan/schedule and methods to evaluate and review after the project is complete.

ITaaS Today: Examples for Success

ITaaS has not only seen success across the country, but also locally with the City of Tamarac. Governments have begun to more effectively share resources, leverage existing infrastructure and staff, and ultimately save money. Examples include the State of Massachusetts; the City and County of Durham, North Carolina; the Multi-City Innovation Campaign (MCIC) and others…including the City of Tamarac, Florida.

State of Massachusetts

"The Massachusetts Association of Regional Planning Agencies (MARPA) has created a [website - http://www.regionalbestpractices.org] to promote cooperation and foster stronger relationships among the 351 cities and towns in Massachusetts by providing a comprehensive source of information about regionalization" (Regionalization). Successful examples include green energy programs, economic development strategies, solid waste programs and other cooperatively bid projects, each providing substantial cost savings.

City and County of Durham, North Carolina

"The city and county of Durham, N.C., are working jointly on a single open data initiative that will lay the groundwork for residents to access and use the wealth of public data available between the two government organizations. The city and county will share costs as well as a common platform and portal. The project is part of a combined effort by both organizations to reach into the community to bring about business development and new community benefits and services" (Brown). This project will allow residents to visit a single website to easily access information from either organization.

Multi-City Innovation Campaign (MCIC)

"In search of innovative tech and ideas surrounding community health, a group of 25 cities, states and counties has launched a $220,000 campaign -- that intends to do more than simply launch health-related apps. 'We believe that this collaborative approach across jurisdictions is kind of the next frontier. We wanted to experiment with scalability and sustainability,' said Nashville Co-Chief Innovation Officer and MCIC co-organizer Yiaway Yeh…. The event's founding

cities -- Nashville; Boston; Raleigh, N.C.; and Palo Alto, Calif. -- wanted to ensure that the apps created … weren't lost for lack of financial or administrative support. Similarly, they saw a need to incentivize potential government entrepreneurs with a larger market, one that channeled app usage to a wider ecosystem of localities yet also fell just below procurement expenditure thresholds — cities often limited by how much money can be spent on product or service before an RFP process is started" (Shueh).

Successful projects have included "…those that assist with emergency care for high-frequency users, monitor urban pollution, or deal with medical cost transparency, or pedestrian and bike-safety" (Shueh).

City of Tamarac, Florida

The City of Tamarac, Florida, supports regional partnerships between local governments, and has welcomed multiple opportunities to successfully implement and lead programs encouraging their use. Successful examples have included cooperative purchasing agreements with other municipalities; a fleet maintenance agreement with the City of North Lauderdale (where Tamarac completely maintains and repairs all of North Lauderdale's fleet); the development of Open Government hosted web applications – used by the City of Lauderdale Lakes and the City of Dania Beach; and most recently Information Technology support services for the Town of Southwest Ranches. Locations referenced are shown in Figure 1 below.

Figure 1. Map of Broward County, Florida, depicting locations of City of Tamarac partnerships (Google Earth).
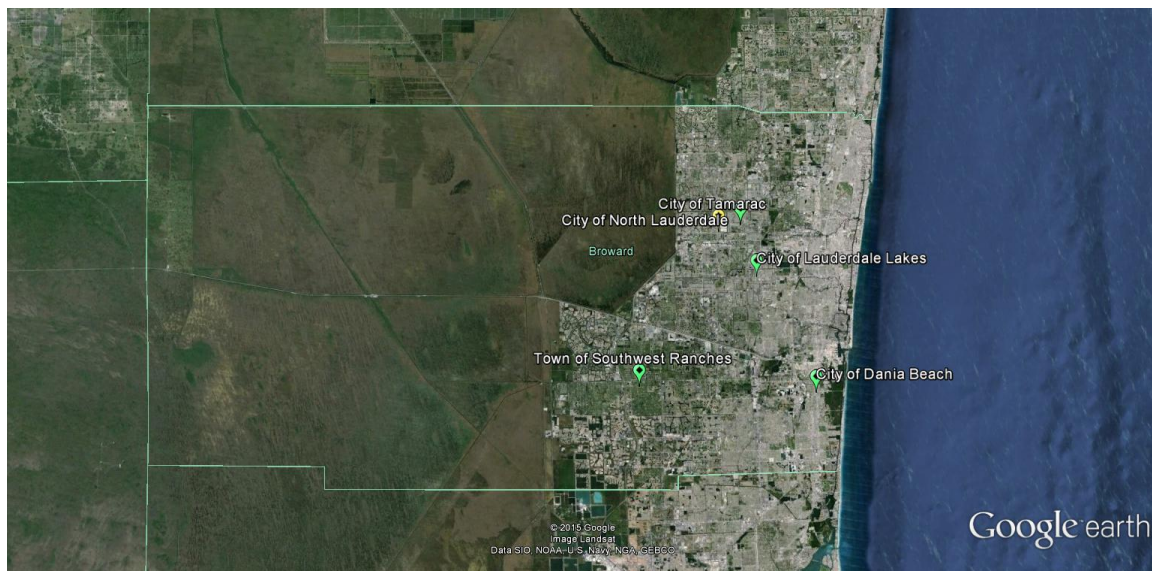
Open Government

On October 11, 2011, the Broward County Board of County Commissioners passed County Ordinance 2011-19 adopting a Code of Ethics for all elected municipal officials in Broward County to become effective January 2, 2012. The ordinance requires all cities in Broward County to do the following:

- Provide systems for lobbyists to register annually
- Provide systems to register contact with lobbyists
- Provide systems to disclose required forms
- Provide systems for public access to above information

At the time, and even today, the City of Tamarac was/is unable to find an out-of-the-box solution that would meet these requirements. The solution needs to not only allow for online lobbyist registrations, but also needs to allow City Staff and lobbyists to record / log all lobbyist visits after registration. Third party solutions are available that provide online (generic) registration capabilities (for as low as $588 per year – http://www.regpacks.com); however, they do not provide the ability to log lobbyist visits at later times, nor allow for lobbyist information, clients and visits to be searchable (which is required by County Ordinance).

Broward County built a web based system to comply with the Ethics Ordinance and provided the above program to the cities that requested it. The program, however, contained a number of program-related issues and bugs, and was not able to process credit card payments online. In addition, Broward County was not willing to assist or to host the application for municipalities.

As the City of Tamarac is committed to providing residents with more effective online services, the City desired to use a web-based application to allow for online lobbyist registration and payments. With a very short timeframe to implement the required changes, the City of Tamarac obtained and corrected the program issues using Microsoft Visual Studio and also sought assistance from a consultant to program the payment integration.

The new lobbyist registration system provides the following functionality (shown in the flow chart below):

Lobbyist Registration Website
• Lobbyist to review and acknowledge Terms of Use

Lobbyist Registration Website
• Lobbyist to enter Lobbyist Contact Information
• Lobbyist to enter Lobbyist's Employer Contact Information
• Lobbyist to create new user account

Lobbyist Registration Website
• Lobbyist to pay annual registration fee
• Email sent to Lobbyist Registration program manager at the City

Lobbyist Registration - Administration Website
• City program manager to review pending lobbyist registration and approve
• Email sent to Lobbyist advising of registration approval

Lobbyist Registration Website
• Lobbyist to add client(s), including Client Contact Information
• Email sent to program manager advising of New Client Added

The City of Tamarac invested a considerable amount of time and money to customize this system to meet the City's needs – approximately $12,000 total between Visual Studio licensing, consulting fees and merchant provider payment integration costs.

Time and costs to maintain the system on a recurring annual basis are minimal. Actual storage space used is less than 1 GB. The web applications are hosted on already existing virtual servers and are backed up using the City existing backup systems. Any additional development or programming is currently performed in house, and is not frequent. Merchant provider fees are approximately $15 per month dependent upon the number of transactions. All costs are typically covered by annual lobbyist registration fees.

As a result of the County Ethics Ordinance, every city in the county has to comply with the above requirements. As such, the City of Tamarac has offered to host the Ethics Disclosure and Lobbyist Registration web-based applications for other cities.

The service offering includes the following:

• Custom Open Government web site for each city, hosted on the City of Tamarac's system.
• On-line payment processing for annual lobbyist registrations.

The system is provided as is, without any modifications to the current level of functionality, at a cost of $1,200 per year. The City of Tamarac uses Elavon for on-line payment processing and fees incurred from their services are not included in this solution.

To promote this service, the City has given presentations at multiple venues including the Broward County Municipal Clerks Association meetings, and has generated interest from many municipalities including the City of Dania Beach, the City of Lauderdale Lakes, the City of Miramar, the City of Wilton Manors, the Town of Davie, and the Town of Southwest Ranches. The program and service has also been recognized by the Broward County Inspector General's Office, and used as an example at various government-related conferences.

This service offering for hosted Ethics Disclosure and Lobbyist Registration web-based applications is currently used by the City of Lauderdale Lakes and the City of Dania Beach. Outside of the City of Tamarac, both have been using the system for three (3) years, and as a result, the City of Tamarac has been able to recoup $7,200 of its initial $12,000 in costs. The City of Tamarac expects to recover all costs after a five (5) year period.

If a municipality were to develop their own solution providing the same features and functionality as that of the City of Tamarac, they also may spend $12,000 or more, not accounting for the time to develop and deploy the solution. The City of Tamarac's hosted solution costs $1,200 per year. Based on this cost, it would take a municipality ten (10) years to recover their initial development costs. The hosted solution from the City of Tamarac provides a much faster implementation time in addition to providing an organization with cost savings.

For reference, a copy of the *Hosted Services Agreement* is attached as *Exhibit 1*.

Town of Southwest Ranches – Managed IT Services

Overview

Many smaller organizations in the area are relying on private entities for their technology services. Recognizing this as an opportunity, the City of Tamarac began exploring strategic partnerships with other communities to extend its professional IT services.

In 2012, the City of Tamarac began offering a hosted Open Government solution to the City of Lauderdale Lakes and to the City of Dania Beach. Similarly, the City of Tamarac began working with the Town of Southwest Ranches in late 2012 to develop an inter-local agreement (ILA) that would extend information technology support services beyond the boundaries of the City of Tamarac.

The key components of the inter-local agreement (ILA) included:

- Procurement, design and installation of a new server infrastructure including a VMware ESXi virtual environment.
- Procurement, design and installation of a new network infrastructure.
- Procurement, design and installation of a new Cisco VoIP telephone system.
- Procurement, design and installation of "Cloud" based Microsoft Office 365 and SharePoint services.
- Procurement and installation of new PCs.
- Migration of the Town of Southwest Ranches' systems and data from their prior third party service provider to the new environment.
- Transition of technology support services to the City of Tamarac IT Service Desk.

The inter-local agreement (ILA) was designed for an initial term of five (5) years, with automatic one (1) year renewals thereafter. The proposed service costs were based on the historical trend of information technology service demands of Tamarac's Staff and correlated to twenty-five (25) users. A markup for third party services and products supplied by the City of Tamarac was also included in the ILA. Startup, non-recurring costs were $79,238.70 for hardware, software, system design, installation and setup. Recurring, annual costs for Information Technology support services are $18,000 (with increases in future years), and recurring, annual costs for software licensing, subscriptions and maintenance and support contracts are approximately $11,621. The total first year cost to the Town of Southwest Ranches was $108,860.39.

The Town of Southwest Ranches paid approximately $77,593 per year for technology services through their prior vendor Connections for Business. By using the City of Tamarac as their technology services provider, the Town will pay approximately $57,685 per year (factoring in both recurring and non-recurring costs). Overall, the Town of Southwest Ranches will realize approximately $19,908 per year in cost savings.

Problem Statement

The Town of Southwest Ranches information technology services were provided by a third party vendor, *Connections for Business*. The contract with Connections for Business was to expire on July 1, 2013. Due to the poor service received, the Town of Southwest Ranches began to pursue other options in an effort to improve service levels and potentially reduce expenses.

In addition, the Town's computers were dependent on their Internet connection for access to Citrix (hosted by Connection for Business). The Town's staff experienced excessive down time due to drops in Internet service and other connection issues that their past provider was unable to explain.

Furthermore, the Town's phone system was maxed out and additional phone lines were unable to be added. The phone system was outdated and their past third party provider had outsourced service issues to yet another third party company.

Recommended Solution

The City of Tamarac has a good relationship with the Town of Southwest Ranches and their staff. Some of the staff had worked at the City of Tamarac previously and, as such, were aware of the quality IT services and solutions that Tamarac provides. In pursuit of another option for Information Technology support services, the Town of Southwest Ranches contacted the City of Tamarac for assistance.

Following the process described earlier, the City of Tamarac responded by providing Southwest Ranches with a viable and cost effective solution for technology services.

Evaluate Capabilities

The City of Tamarac was able to identify capabilities (and processes) that its staff excels at, including installation and support services, network design and architecture, technical expertise and familiarity with software and processes used by both Tamarac and Southwest Ranches. The City of Tamarac has a Windows-based environment running Microsoft products, uses Cisco equipment for both network and telephony infrastructure, etc…. Both organizations are in a similar business – local government – with the same or similar service offerings, are close in physical proximity, and use like software applications. Having capabilities that align with the needs of Southwest Ranches made for a successful partnership.

Identify Opportunities

The opportunity presented – to provide technology services for the Town of Southwest Ranches – showed great potential, had the possibility for both organizations to save money, and could be used as a successful model for future partnerships.

Define Service Offerings

The City of Tamarac initially developed a new Client Services model providing the following services:

- Consulting Services
    - Business Process Analysis
    - Network Design and Engineering
    - IT Strategic Planning
- Professional Services
    - Technical Support
    - Hardware and Software Installation
    - Server and Network Management
    - IT Project Management
    - IT Training
- Managed Services
    - E-government Services and Hosting
    - Virtual IT Department
    - Remote Network Monitoring

This new model then allowed Tamarac to better structure the solution proposed for the Town of Southwest Ranches.

Identify Stakeholders

In order for this project to succeed, it was important to identify key personnel and their responsibilities, defined as follows:

City of Tamarac

- Director of Information Technology
    - Contract review/approval, fee study/determination
- Assistant Director of Information Technology
    - Contract development; define/develop service offerings; systems architecture, design, development, implementation; point of contact for project implementation
- Director of Financial Services
    - Contract review/approval, fee study/determination
- Purchasing and Contracts Manager
    - Contract development
- Network Administrator
    - Implementation

Town of Southwest Ranches

- Town Administrator
    - Contract review/approval, define services needed
- Finance Administrator
    - Contract review/approval, define services needed
- Assistant Finance Administrator

     o   Contract review/approval, define services needed, point of contact for project implementation

Define the Project

As this was to be structured as an inter-local agreement (ILA), it was important to have a solid agreement in place to define the complete scope of work, including service offerings.

The City of Tamarac was to provide a turnkey solution that would replace and enhance the technology used by the Town of Southwest Ranches, including the network infrastructure, servers and software, and provide remote monitoring and information technology support services to maintain the environment moving forward.

The project was designed to completely replace and rebuild all of the Town's computer systems, including replacement of all user workstations.

The following services were provided at the initiation of the project:

Consulting Services

Network Design and Engineering – The City of Tamarac designed and engineered a new network, server and telephone system infrastructure.

- The network core consists of one (1) managed Cisco 3560X switch with 48 10/100/1000 PoE ports, is covered by three (3) years of Cisco SMARTnet for 7x24x4 hardware / software technical support and assistance, and runs Enhanced Interior Gateway Routing Protocol (EIGRP) to route between vlans.
- A Cisco ASA 5505 Firewall is placed at the network edge to secure the network from outside access. The firewall is covered by a three (3) year Cisco SMARTnet contract for 24x7x4 maintenance and support.
- A Cisco 2911 Integrated Services Router (ISR) with voice bundle is used to run and support Cisco Unified Communications Manager Express for the telephone system (with licensing for up to fifty (50) phones) and Cisco Unity Express for the voicemail system (with licensing for up to fifty (50) mailboxes). The Cisco 2911 ISR includes a T1 voice card for to accept a PRI, a FXO card for Survivable Remote Site Telephone (SRST) and a FXS card for fax services. The Cisco 2911 ISR is covered by three (3) years of Cisco SMARTnet for 7x24x4 hardware / software technical support and assistance.
- A Dell PowerEdge R420 server is used to create virtual servers. The server is covered by five (5) years of Dell ProSupport for 7x24 hardware / software technical support and assistance, a Dell Mission Critical Package, which includes 4-hour 7x24 on-site service with emergency dispatch, and a Dell hardware warranty.
- VMware ESXi 5 Standard software is utilized to create virtual servers. The virtual environment hosts the necessary servers to run core network services including Active Directory, DNS, DHCP, Exchange, SQL, etc.... One (1) processor license for VMware vSphere 5 Standard has been purchased including

Production Support for 3 Years. The VMware vSphere license is a one-time, non-recurring purchase. The initial purchase also includes the first three (3) years of maintenance and support.

- All virtual servers run Microsoft Windows 2012 Server Standard. Two (2) processor licenses for Microsoft Windows Server DataCenter including Software Assurance (SA) have been purchased for the Dell PowerEdge server. The Microsoft Windows Server DataCenter License is a one-time, non-recurring purchase; however, Software Assurance (SA) is renewed every three (3) years. The initial purchase includes the first one (1) year of SA. The Microsoft Windows Server DataCenter Licensing Software Assurance (SA) is renewed every three (3) years, with the renewal of the City of Tamarac's Microsoft Enterprise Agreement.

- To ensure redundancy, two domain controllers (virtual servers) are used to replicate all Active Directory-based data.

- Backups are configured using vSphere Data Protection (VDP), included with the VMware virtualization software, to backup locally as well as remotely to the City of Tamarac.

- An Uninterruptable Power Supply (UPS) is used to best protect the network infrastructure against surges and temporary power outages. One (1) APC Smart-UPS RT 1500VA Tower Online UPS is used, along with an APC UPS Network Management Card to allow for remote monitoring. The expected lifetime of a UPS battery is three (3) years, at such time when it will need to be replaced as part of routine maintenance.

- Workstations are setup with Microsoft Windows 7 Enterprise and Microsoft Office 2013 Professional, and joined to the Active Directory domain. Based on the total quantity of workstations, twenty-five (25) Microsoft Windows 7 Upgrade Licenses and Software Assurance (SA) have been purchased. The Microsoft Windows Upgrade License is a one-time, non-recurring purchase; however, Software Assurance (SA) is renewed every three (3) years. The initial purchase includes the first one (1) year of SA. The Microsoft Windows Upgrade Licensing Software Assurance (SA) is renewed every three (3) years, with the renewal of the City of Tamarac's Microsoft Enterprise Agreement.

- Email and file services are migrated to Microsoft's Office 365 cloud service (Subscription Plan E3).   Microsoft Office 365 provides secure, anywhere access to email and calendars, Office Web Apps, instant messaging, conferencing, and file sharing. Based on the total quantity of workstations/users, twenty-five (25) Microsoft Office 365 (Plan E3) Subscription Licenses have been purchased. The Microsoft Office 365 Subscription License is a one (1) year subscription, and is renewed annually.

- The central IT Data Closet is secured using a security keypad.

Professional Services

Hardware and Software Installation – The City of Tamarac installed and configured new hardware and software to support operations.

- The City of Tamarac installed and configured the following equipment:
  - One (1) Cisco Catalyst 3560X switch as the network core.
  - One (1) Cisco ASA 5505 Firewall at the edge of the network.
  - One (1) Cisco 2911 Integrated Services Router (ISR) to support run Cisco Unified Communications Manager Express and Cisco Unity Express.
  - One (1) Dell PowerEdge R420 Server with rack shelf and monitor.
  - Eight (8) Dell OptiPlex 7010 desktop computers.
  - Six (6) Dell Latitude E6330 laptop computers.
  - One (1) APC Smart-UPS RT 1500VA Tower Online UPS with network management card.
  - One (1) Schlage Electronic Keypad Lever.
  - Existing network patch cables / wires are used to connect workstations to the network switch.
  - Appropriate cable management and grounding are used and installed.
- The City of Tamarac installed and configured the following software:
  - Cisco Unified Communications Manager Express and Cisco Unity Express are installed and configured on the Cisco 2911 Integrated Services Router (ISR).
  - VMware ESXi 5 Standard is installed and configured on the Dell PowerEdge R420 Server to host the virtual environment.
  - Eight (8) virtual servers are created and run Microsoft Window 2012 Standard. They are as follows:
    - Two (2) Domain Controllers to provide Active Directory services, DNS services, DHCP services and group policy services.
    - One (1) Print Server to provide print management services.
    - One (1) Application Server to host the Microsoft Exchange Active Directory Synchronization Tool.
    - One (1) Application Server to host Microsoft Exchange Server to provide seamless management of the Office 365 service.
    - One (1) Application Server to host Microsoft SQL Server to provide database services for the records management system and financial system.
  - Microsoft Office 365 is configured, and existing email is migrated to the new service.
  - Workstations are setup with Microsoft Windows 7 Enterprise.
  - Microsoft Office 2013 is installed on workstations, and configured to access Microsoft's Office 365 hosted services for email and file storage.

Server and Network Management – The City of Tamarac configured the appropriate features and functionality on the new server and network infrastructure to support remote monitoring and management capabilities.

- The City of Tamarac configured the appropriate VLAN functionality, routing service, network services, and SNMP functionality for remote management and monitoring, on the Cisco Catalyst core network switch. The City of Tamarac manages the switch, making necessary configuration updates as needed, and remotely monitors the switch on an ongoing basis.

- The City of Tamarac configured the appropriate security-related functions, features, access lists, network address translation (NAT), port address translation (PAT), network routes and mappings on the Cisco ASA firewall, along with a VPN connection between the Town of Southwest Ranches and the City of Tamarac for ongoing, remote network management and monitoring. In order to facilitate the VPN connection between the Town of Southwest Ranches and the City of Tamarac for remote management and monitoring, Southwest Ranches was required to procure (at their expense) at minimum one (1) static IP address from their Internet Service Provider (ISP). The City of Tamarac assisted Southwest Ranches in procuring the needed static IP address, and configured the Internet router and firewall appropriately once made available.

- The City of Tamarac configured the Dell PowerEdge server for remote monitoring.

- The City of Tamarac configured the UPS for remote management and monitoring.

- The City of Tamarac remotely manages and monitors the VMware virtual environment to ensure that it remains healthy, actively troubleshooting any issues that may occur and applying upgrades and patches as needed.

- The City of Tamarac remotely manages and monitors the servers present in the virtual environment to ensure they remain healthy, actively troubleshooting any issues that may occur and applying upgrades and patches as needed. The City of Tamarac also performs any necessary additions, deletions, modifications or updates to Active Directory as needed, including the creation of new user accounts, etc….

The following services are provided on an ongoing basis:

Managed Services
Virtual IT Department – The City of Tamarac provides the Town of Southwest Ranches with Information Technology Support Services. A Service Level Agreement (SLA) was created that defines the following:

- Purpose
- Scope of services
- Service portfolio

- Support hours
- Service request prioritization
- Performance measurement
- Processes and procedures
- Scheduled maintenance

Remote Network Monitoring – In order to facilitate the appropriate alerting and response measures, where possible, the City of Tamarac configured all network infrastructure, servers, workstations, and other equipment for remote monitoring, thereby providing the means to automatically generate and open service requests for problems as they arise.

The term of the agreement is for five (5) years initially, with automatic one (1) year renewals thereafter.

Costs of services, billing and payment procedures were defined, including future year increases, trip charges, ad hoc charges, etc….

The Service Level Agreement (SLA) was developed to set clear expectations as to the responsibilities of the City of Tamarac and timeframes for response. It defines the following:

Scope of Services
The City of Tamarac IT Department will support the day-to-day IT operations of the Town of Southwest Ranches, along with ancillary applications and systems.

Service Portfolio
The following represents the service offerings provided by the City of Tamarac IT Department:

- Computer, Equipment and Software Services
- Employee Support Services
- Telephony Services

Support Hours
IT support services are available on Monday thru Friday, from 8:00 AM to 5:00 PM EST, excluding holidays.

If support is required outside of business hours as previously defined, additional charges apply.

Service Request Prioritization
Service request prioritization determines how the incident or service request will be handled by IT support staff. Priority levels are determined based on the Impact and Urgency of each service request, as shown in the table below.

Urgency →				
Impact ↓	**(1) Urgent**	**(2) High**	**(3) Normal**	**(4) Low**
(1) Affects Business	(1) Emergency	(2) High	(3) Medium	(4) Normal
(2) Affects Group	(2) High	(3) Medium	(3) Medium	(4) Normal
(3) Affects Department	(3) Medium	(3) Medium	(3) Medium	(4) Normal
(4) Affects User	(4) Normal	(4) Normal	(4) Normal	(5) Low

Impact represents the business impact of an incident or service request. For example, a request may affect the business, a group, a department or a single user.

Urgency prescribes how quickly a resolution is needed. For example, the urgency may be classified as Urgent, High, Normal or Low.

After the Impact and Urgency of the incident or service request are determined, the Priority will be assigned as Emergency, High, Medium, Normal or Low, each with characteristics as defined below:

Emergency Priority

Target Response Time: 1 Hour

Target Resolution Time: 4 Hours

The incident or service request will be resolved or responded to irrespective of support hours.

If support is required outside of business hours as previously defined, additional charges may apply.

If an initial response is not provided to the Town of Southwest Ranches within one (1) hour, the incident or service request will be escalated, and the City of Tamarac's IT Manager will be notified.

High Priority

Target Response Time: 4 Hours

Target Resolution Time: 1 Day

If an initial response is not provided to the Town of Southwest Ranches within two (2) hours, the incident or service request will be escalated, and the City of Tamarac's IT Manager will be notified.

Medium Priority

Target Response Time: 1 Day

Target Resolution Time: 2 Days

If an initial response is not provided to the Town of Southwest Ranches within four (4) hours, the incident or service request will be escalated, and the City of Tamarac's IT Manager will be notified.

Normal Priority

Target Response Time: 2 Days

Target Resolution Time: 3 Days

If an initial response is not provided to the Town of Southwest Ranches within one (1) day, the incident or service request will be escalated, and the City of Tamarac's IT Manager will be notified.

Low Priority

Target Response Time: 3 Days

Target Resolution Time: 5 Days

If an initial response is not provided to the Town of Southwest Ranches within one (1) day, the incident or service request will be escalated, and the City of Tamarac's IT Manager will be notified.

Response Time describes the elapsed time from the moment an incident is first reported by, or a service request first received from the Town of Southwest Ranches, until the first moment that the City of Tamarac's IT Department responds / acknowledges such request by email, phone or other means, and then begins the troubleshooting process.

Resolution Time describes the target maximum amount of time for resolution of the incident or service request.

The prioritization levels previously defined are intended for standard, day-to-day issues or requests. Projects may be assigned longer resolution times, dependent upon the request and the Town of Southwest Ranches' requirements.

Performance Measurement
The City of Tamarac IT Department has identified the following performance measurements which it consistently endeavors to meet or exceed:

Performance Measures	FY 2014 Actual	FY 2015 Forecast	FY 2016 Target	FY 2017 Target	FY 2018 Target
Average time to completion of IT Service Desk requests (hrs)	26	≤ 30	≤ 30	≤ 30	≤ 30
Percentage of time systems available during regular working hours	99.50%	≥ 99.5%	≥ 99.5%	≥ 99.5%	≥ 99.5%
Backup success rate	72.30%	≥ 95%	≥ 95%	≥ 95%	≥ 95%
Customer satisfaction (IT Surveys)	98.17%	≥ 97%	≥ 97%	≥ 97%	≥ 97%

Processes and Procedures

The City of Tamarac IT Service Desk may be contacted for assistance by phone, email or web.

Phone support is available by contacting the IT Service Desk at (954) 597-4900 .

Email support is available by emailing support@tamarac.org .

Web support is available at https://support.tamarac.org .

Any service request received outside of support hours will be processed the following business day.

Scheduled Maintenance

To ensure the smooth operation and continuing availability of all technology in use, the City of Tamarac IT Department conducts periodic and routine maintenance, which may include the application of hotfixes, software patches, hardware and software upgrades, server reboots, etc….   Any such maintenance activities may occur each week on Sundays, between the hours of 8:00 PM and 11:00 PM EST. During such time, any affected systems may be temporarily unavailable. Outside of routine maintenance, any other service related activities, which may affect the availability of services or functions, will be scheduled in advance with the Town of Southwest Ranches' approval.

Cost for services (as would be charged to the Town of Southwest Ranches) were defined in the inter-local agreement (ILA).

Startup Costs

The total, non-recurring, Initial Project Startup Cost was $79,238.70.

Hardware	*$54,256.33*
Software	*$1,882.55*
Services	*$23,099.81*

Information Technology Support Services

Support Services

- The monthly, recurring cost for Information Technology Support Services is $1,500.00, during the first two (2) years of the Agreement.
- For each successive year, the amount is increased by 3%.

Trip Charges

- For onsite visits, as requested by the Town of Southwest Ranches, a Trip Charge of $100.00, will be charged.

After Hours Service

- For services performed outside of Support Hours, and as requested by the Town of Southwest Ranches, a fee of $150.00 per hour will be charged.

Hardware Maintenance and Support Contracts

The initial hardware purchases include an initial covered period / contract for hardware maintenance and support. Based on the contracts and covered periods, the following charges will apply during specific years of the agreement, as defined below:

Year 3	*$3,489.86*
Year 4	*$287.50*
Year 5	*$575.00*

Software Licensing, Subscriptions and Maintenance and Support Contracts

The initial software purchases include an initial covered period / contract for software maintenance and support. Based on the contracts and covered periods, the following charges will apply during specific years of the agreement, as defined below

Year 1	*$11,621.69*
Year 2	*$11,621.69*
Year 3	*$12,545.14*
Year 4	*$9,075.56*
Year 5	*$9,075.56*

The projected cost of the agreement for the initial term of five (5) years was $230,835.98:

Year 1	*Total*	*$108,860.39*
Startup Costs		$79,238.70
Information Technology Support Services		$18,000.00
Software Licensing, Subscriptions and Maintenance and Support Contracts		$11,621.69

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Year 2	*Total*	*$29,621.69*
Information Technology Support Services		$18,000.00
Software Licensing, Subscriptions and Maintenance and Support Contracts		$11,621.69

Year 3	*Total*	*$34,575.00*
Information Technology Support Services		$18,540.00
Hardware Maintenance and Support Contracts		$3,489.86
Software Licensing, Subscriptions and Maintenance and Support Contracts		$12,545.14

Year 4	*Total*	*$28,459.26*
Information Technology Support Services		$19,096.20
Hardware Maintenance and Support Contracts		$287.50
Software Licensing, Subscriptions and Maintenance and Support Contracts		$9,075.56

Year 5	*Total*	*$29,319.64*
Information Technology Support Services		$19,669.08
Hardware Maintenance and Support Contracts		$575.00
Software Licensing, Subscriptions and Maintenance and Support Contracts		$9,075.56

Develop a Project Implementation Plan

Using the City of Tamarac's Information Technology Service Desk, the project was appropriately catalogued with progress (including all activities and steps) monitored and tracked.

A project timeline was developed and included as part of the inter-local agreement (ILA).

Alternative Solutions

Based on their prior, unsatisfactory experience with Connections for Business, the Town of Southwest Ranches did not research or obtain pricing from further third parties for technology services. They were greatly interested in pursuing a relationship with the City of Tamarac instead.

As part of the project design phase, the City of Tamarac, in concert with the Town of Southwest Ranches, made the decision to rebuild all technology infrastructure at the Town, allowing for a fresh start. The decision was made to utilize the same equipment, hardware and software that were already in use at the City of Tamarac. By doing so, it streamlined and made support for these products easier as Tamarac's staff already had ample experience supporting them.

With regards to system architecture, the City of Tamarac explored the following:

Network Infrastructure

- Network switch model
- Feature set needed
- Routing protocols to use
- Firewall model
- Internet service providers (including costs and services) – multiple vendors were selected for redundancy

Server Infrastructure

- Server model, specifications and components
- VMware software licensing / feature set needed
- Email software to use – hosted or onsite
- Email archiving service to use (including costs)
- File storage solution – hosted or onsite

Telephony Infrastructure

- Telephone service provider (including costs and services)
- Cisco software versions / feature sets needed (including costs and services)

Strategic Alignment

The City of Tamarac is committed to leading the nation in quality of life through safe neighborhoods, a vibrant economy, exceptional customer service, and recognized excellence. In order to achieve this, the City of Tamarac has defined five (5) goals as part of its Strategic Plan:

GOAL #1 - INCLUSIVE COMMUNITY

The City of Tamarac is committed to providing programs and services that meet the needs of an increasingly diverse community.

GOAL #2 – HEALTHY FINANCIAL ENVIRONMENT

The City of Tamarac will utilize financial management to develop and maintain a healthy financial environment, encouraging and supporting economic development and redevelopment.

GOAL #3 – DYNAMIC ORGANIZATIONAL CULTURE

The City of Tamarac will create and sustain a culture conducive to development and retention of a skilled workforce.

GOAL #4 - CLEAR COMMUNICATION

The City of Tamarac will ensure effective communication within the organization and throughout the City, and enhance the visibility of City programs and services.

GOAL #5 – A VIBRANT COMMUNITY

The City of Tamarac will provide resources, initiatives and opportunities to continually revitalize our community and preserve the environment.

Prior to the inception of any project, the activity must be aligned with the City's Strategic Plan.

The inter-local agreement (ILA) with the Town of Southwest Ranches to provide technology services meets these goals.

GOAL #1 - INCLUSIVE COMMUNITY

The City is committed to developing partnerships.

GOAL #2 – HEALTHY FINANCIAL ENVIRONMENT

This project encourages innovative management practices, leverages tax dollars by identifying alternative funding sources, utilizes technology to automate the delivery of services and information and seeks regional solutions to local challenges.

GOAL #3 – DYNAMIC ORGANIZATIONAL CULTURE

This project provides IT staff with opportunities to learn and develop, fosters teamwork and collaboration and pushes IT staff to provide a high level of service.

GOAL #4 - CLEAR COMMUNICATION

This project promotes recognition of high performing programs and services, enhances visibility of City programs and services, and utilizes technology to provide up to date information.

GOAL #5 – A VIBRANT COMMUNITY

In order to provide a high quality, affordable place to live, it is important to find and implement programs that overall save money. This project generates additional revenues for the City of Tamarac, better utilizes staffing resources, and ultimately saves money.

The Information Technology Department (IT) is a strategic partner with all City Departments in the provision of high quality services to the citizens of Tamarac. In accordance with the City's Strategic Plan, IT is committed to the best and efficient use of technology in support of the City's Vision, Mission and Strategic Goals.

Milestones

As part of the project design and planning, a timeline including milestones was developed.

Startup

Upon completion of pre-planning activities, procurement and delivery of applicable hardware, the project was to last approximately twelve (12) weeks.

Milestones

Milestones were identified for the following:

- Procurement
- Data Gathering / Analysis
- Physical Environment Setup
- User Workstation Setup / Configuration
- Server and Virtual Environment Setup / Configuration
- Network Setup / Configuration
- Telephone System Setup / Configuration
- Office 365 Setup / Configuration
- Information Technology Support Services Setup / Configuration
- Data Migration
- Application Migration

Weekly project meetings were held throughout the implementation of the project.

Benefits Analysis

Regionalization essentially provides two basic – and important – benefits: increased efficiency of services done through the pooling of resources, and cost savings for those organizations involved.

The inter-local agreement (ILA) with the Town of Southwest Ranches provides many benefits.

City of Tamarac

This project generates $18,000 per year in additional revenues for the City of Tamarac. These additional revenues helped subsidize the hiring of an additional technical support representative. Increasing the number of IT staff helps to provide better and more responsive IT support for users.

Town of Southwest Ranches

By contracting with the City of Tamarac for technology services, the Town of Southwest Ranches is able to save approximately $19,908 per year overall. Also, as part of this project, the Town now has all new infrastructure – servers, telephone system, phones, workstations, etc… – and better service. Also being a local government, City of Tamarac staff are familiar with government services and operations, and are therefore better able to understand the Town's needs and solutions.

Budget Summary

City of Tamarac

As part of the project design, the City of Tamarac solicited quotes from multiple vendors and service providers in an effort to provide the Town of Southwest Ranches with the most cost effective solution.

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All equipment and services were included as part of the project start up costs. A markup was also included as part of the proposal in order to cover indirect costs related to staff time, etc… (i.e. time of Financial Services staff to review contracts, make and process related purchases).

It was important to show that the project was successful, did not cost the City of Tamarac extra, but in fact raised additional revenue.   Upon project completion, a report was developed to show total net revenue:

Total Expenses (Actual)   *$63,350.63*

Total Revenue (Actual)   *$85,408.44*

Total Net Revenue   ***$22.057.81***

Town of Southwest Ranches

Prior to implementation of the project, the Town of Southwest Ranches had spent a considerable amount of money with their prior service provider, Connections for Business.

Connections for Business Cost Breakdown				
Contract Period	**Services**	**Labor**	**Equipment**	**Total**
July 1, 2010 - June 30, 2011	$50,520.00	$1,401.25	$6,157.54	$58,078.79
July 1, 2011 - June 30, 2012	$73,102.47	$4,335.00	$15,220.45	$92,657.92
July 1, 2012 - June 30, 2013	$75,933.14	$2,002.50	$4,108.86	$82,044.50
Total 3 Year Cost				**$232,781.21**

Due to the poor service received, the Town pursued other options in an effort to improve service levels and potentially reduce expenses.

Connections for Business – Contract Details
- The annual cost of the Town's initial contract with Connections for Business was $50,520.00. The Town, however, exceeded the contract amount every year.
- Labor costs were billed at a rate of $155.00 per hour. Labor costs were for onsite visits at Town Hall, which included installation of any new hardware; computers, monitors and printers.
- Connections for Business' cost for additional data storage was $5.00 per 1 GB per month. At that time, the Town had added $1,050.00 a month ($12,600.00 annually) in additional storage space since the start of their prior contract. The original contract cost was based on users and needs from 2010. The additional cost difference was the addition of users since the start of the contract.
- While the initial contract was $50,520.00, their annual cost ultimately exceeded $75,000.00 – not including equipment. This number was otherwise expected to continue to increase in future years.

The City of Tamarac's proposal provided the Town with the potential for considerable cost savings.

City of Tamarac Cost Breakdown				
Contract Period	Services	Licensing	Maintenance	Total
July 1, 2013 - June 30, 2014	$18,000.00	$11,621.69	$79,238.69	$108,860.38
July 1, 2014 - June 30, 2015	$18,000.00	$11,621.69	$0.00	$29,621.69
July 1, 2015 - June 30, 2016	$18,540.00	$12,545.14	$3,489.86	$34,575.00
July 1, 2016 - June 30, 2017	$19,096.20	$9,075.56	$287.50	$28,459.26
July 1, 2017 - June 30, 2018	$19,669.08	$9,075.56	$575.00	$29,319.64
Total 3 Year Cost				$230,835.97

City of Tamarac – Contract Details

- The Maintenance cost above included one-time, startup costs for new equipment totaling $79,238.69.
- The proposed ILA for five (5) years of services will cost as much as three (3) years with Connections for Business.
- The ILA costs included new PCs and new telephones.
- Labor costs are billed at $100.00 per call out. Labor costs are for onsite visits at Town Hall, which include installation of any new hardware; computers, monitors and printers.
- The ILA was based on current users and current storage capacity. Additional storage capacity can be purchased at $0.19 for each additional GB per month (as compared to $5.00 per GB per month with Connections for Business).

As part of the project, the Town of Southwest Ranches also changed their telephone service provider and Internet Service Provider, providing additional, annual savings of approximately $7,788.00.

Prior Internet and Telephone Service Providers Cost Breakdown				
Service Provider	Service	Monthly Cost	Months	Annual Cost
Comcast	Internet	$377.00	12	$4,524.00
Mitel	Telephone	$1,400.00	12	$16,800.00
Total Annual Cost				$21,324.00

New / Current Internet and Telephone Service Providers Cost Breakdown				
Service Provider	Service	Monthly Cost	Months	Annual Cost
Comcast	Internet	$377.00	12	$4,524.00
XO Communications	Telephone & Internet	$751.00	12	$9,012.00
Total Annual Cost				$13,536.00

The FY2013 budget for the Town of Southwest Ranches included $106,000.00 allocated for IT and telephone services. As the Town already expected to spend approximately $86,000.00 by July 2013, for services with Connections for Business, they were able to apply $20,000 towards the purchase of new equipment. The remainder of the ILA startup costs were paid using the fund balance for FY2013, then recovering the costs with the savings realized in FY2014.

Feasibility Summary

This initiative showed (and continues to show) great potential. Financially, the Town of Southwest Ranches expected to save money, making this very advantageous to them. They had already budgeted funds that were more than sufficient to cover the expected costs.

Prior to the ILA, the City of Tamarac was already in need of an additional technical support representative; however, full funding for the position was unavailable. The new revenue generated allowed the City of Tamarac to hire an additional technical support representative with the position now subsidized by the Town of Southwest Ranches ILA. This additional staff member has improved the level of IT service provided.

Business Impact Analysis

Analyzing business functions, the inter-local agreement (ILA) with the Town of Southwest Ranches had both an Operational Impact and a Business Process Impact.

Operational Impact

From an operations perspective, the ILA had the most impact on Customer Service and Resources, as summarized below:

Operational Impact	
Impact Area	**Severity (0-5)**
Community Response	1
Customer Service	3
Departments	0
Fiscal	1
Legislation / Regulatory	1
Resources	3
Other	0
* Ranked from 0 (lowest) to 5 (highest)	

Community Response   (Severity: 1)

This project does not directly affect the community; however, it does have an indirect effect. As utilization of IT staff / resources is increased as a result of providing support

to the Town of Southwest Ranches – or what amounts to another department of twenty-five (25) users --, the overall response time and resolution time may also have increased if not managed appropriately. Although not primarily an external facing department, IT acts in a supporting role to other departments which do interface directly with the community. If response time and resolution time increase, it could inhibit other departments' services or interactions with the public. However, the addition of a new technical support representative has helped to mitigate this potential issue.

Customer Service   (Severity: 3)

As utilization of IT staff / resources is increased as a result of providing support to the Town of Southwest Ranches – or what amounts to another department of twenty-five (25) users --, the overall response time and resolution time may also have increased if not managed appropriately. It is important to ensure that customers are kept up-to-date and informed of the status of their service requests, even if response time increases. Otherwise, customer service may suffer. The service level agreement (SLA), included as part of the ILA, details and defines expectations with regards to response time and resolution time. In addition, the SLA specifies submission procedures as well as escalation procedures for service requests.

Departments   (Severity: 0)

Existing departments within the City of Tamarac are not affected by this project, other than possible impacts to Community Response, Customer Service, or Resources.

Fiscal   (Severity: 1)

This project has minimal fiscal impact to both the Town of Southwest Ranches and the City of Tamarac. The Town of Southwest Ranches will realize approximately $19,908 per year in cost savings. The City of Tamarac will generate approximately $18,000 in additional, annual revenue.

Legislation / Regulatory   (Severity: 1)

The inter-local agreement (ILA) needed to be approved by both the City of Tamarac City Commission and the Town of Southwest Town Council; however, the process was minimal, and the ILA was ultimately approved without objection or issue.

Resources   (Severity: 3)

As utilization of IT staff / resources is increased as a result of providing support to the Town of Southwest Ranches – or what amounts to another department of twenty-five (25) users --, the overall response time and resolution time may also have increased if not managed appropriately. However, the addition of a new technical support representative has helped to mitigate this potential issue.

Other   (Severity: 0)

No other issues have been identified that may generate an operational impact.

Business Process Impact

The ILA has a minimal impact on processes. The City of Tamarac had previously implemented ITIL best practices for service management, change management, etc.... The most challenging impact in this respect will be continuance to adhere to these processes if and when the number of service requests increases.

Business Process Impact		
Process Name	**Process Description**	**Severity (0-5)**
IT Service Desk	Request submission, escalation	1
Change Management	System configuration changes	1
* Ranked from 0 (lowest) to 5 (highest)*		

IT Service Desk   (Severity: 1)

As part of the ILA, both service request submission as well as escalation procedures were identified. It is important to adhere to these procedures so that the additional influx of service requests may be appropriately managed and receives a timely response.

Change Management   (Severity: 1)

With Change Management procedures already in place, the procedural change will now be to include Town of Southwest Ranches' staff in the approval process prior to implementing changes.

Conclusion

Today's problems – mostly centered around shrinking budgets and the expectation of government to do more with less – require out-of-the-box thinking. These problems, although seemingly unsolvable, are not insurmountable. If an organization is flexible and open to new ideas, then regionalization of government services can be a potential solution...and a success.

Change requires flexibility and acceptance that mistakes may be made along the way...and then again that additional change may be necessary. To perfect a process or solution requires the willingness to try, and to adapt.

Open Government

During the development of the Open Government web applications, the City of Tamarac had to modify internal processes to work best with the newly developed software. To achieve its goal of providing lobbyist registration services online, staff had to be trained on the new process and the City's code was revised to reflect new lobbyist registration procedures and fees. The intent of the new County Ordinance could have been met simply by posting searchable PDF files on the City's website and requiring lobbyists to pay by cash or check; however, as many of the goals of the City's Strategic Plan promote the increased use of online (and automated) services, IT staff was easily able to receive approval of funds from the City Manager's Office for development of online web-based applications. The project was successful, simplifies the process for both lobbyists and staff, and reflects the City's commitment to transparency in government.

Town of Southwest Ranches - Managed IT Services

In November 2012, the City of Tamarac was approached by the Town Administrator of Southwest Ranches to inquire about sharing IT resources and services. The Town was previously spending a large amount of money on IT services, and both he and the Town Council were exploring all avenues for cost savings. Prior to this, the City of Tamarac had previously executed Inter-Local Agreements (ILAs) for Fire Rescue closest unit response and for fleet maintenance services; however, this proposed agreement would go one step further, to the point of providing full (IT) departmental services and equipment to another organization.

The City of Tamarac – including the City Commission, the City's Executive Team, and City Staff – is very progressive and fully embraces the concepts of a High Performance Organization (HPO), including openness to new ideas and commitment to being efficient and cost effective. The City's Vision, Mission, Values and Strategic Plan are aligned and also commit to the same. When receiving the inquiry and proposal from the Town of Southwest Ranches, City Staff was open to the potential opportunity and began to research actual costs and benefits.

Although not necessarily resistance, but more so apprehension was initially felt by City staff. As departments and staff began to learn of the proposed agreement, their primary concern was the responsiveness and availability of IT staff in regards to troubleshooting City issues. As the number of City staff and use of technology continued to increase in the City, so too did the response time to resolve technical issues. The City's IT Department had requested additional staffing, but was previously unable to gain additional staff due to budget constraints. However, given the proposed agreement, the additional revenues now made it possible to add an additional IT position. Concerns were alleviated once the additional position was added.

Presentations were made both to the City of Tamarac City Commission and to the Town of Southwest Ranches Town Council, detailing all aspects – including technical specifications – of the proposed agreement. The response from the City of Tamarac City Commission was very favorable; as the project would generate additional revenues for the City, provide future cost savings, alleviate staffing concerns and promote resource and cost sharing amongst governments. The Town of Southwest Ranches Town Council was also enthusiastic about the opportunity to save money and improve their level of service.

Throughout the process of developing the agreement, both City staff and Town staff were supportive. Frequent and honest communication – in good faith – throughout the initial process as well as during implementation helped to ensure success. All concerns were identified up-front and addressed as part of the agreement. At minimum, both parties participated in weekly update calls with follow-up emails identifying project status, next steps and task assignments. Good project management was essential, and managed through the IT Service Desk Projects Module.

The setup and configuration was made to be as close and similar to Tamarac's systems as possible. During the implementation, technical issues did surface that required configuration changes. As examples, the initial plan was to use Microsoft Active Directory Federation Services (ADFS) to provide single sign-on across the environment, and for Microsoft Office 365 services. However, after discussing further with the vendor, it was determined that a simpler method of achieving the same was available using a separate synchronization tool. The initial plan also called for using Microsoft SkyDrive for file storage. Though, during implementation, size limitations became known, and it was necessary to transition to using Microsoft SharePoint Online for file storage. Additional costs were involved as part of the changes; however, because good communication was always maintained, it was easy to effectuate the necessary changes.

The project did not encounter any major technical obstacles. Changes in the plan though were made along the way, and the project was very successful. It has allowed both organizations to save money and improve their level of service.

Key Points

Regionalization of government services using the concept of IT as a Service (ITaaS) is a viable option and solution for shrinking budgets and service improvements. Ensuring success requires

(1) the ability to be flexible and open to change; (2) good and honest communication; (3) attuned project management skills; and (4) the willingness to try.

The success of projects such as the City of Tamarac's Open Government solution and Town of Southwest Ranches – Managed IT Services has proven that it is possible to effectively promote IT as a Service. These projects have helped the City of Tamarac and other municipalities to more effectively share resources, leverage existing infrastructure and staff, and ultimately save money.

Exhibit 1 – Ethics Ordinance – Hosted Services Agreement

CITY OF TAMARAC

HOSTED SERVICES AGREEMENT

This Hosted Services Agreement ("Agreement") is made and entered by and between the City of Tamarac, a municipal corporation with principal offices located at 7525 NW 88th Avenue, Tamarac, FL 33321-2401 (the "City"), and the City of Lauderdale Lakes, a municipal corporation, located at 4300 NW 36th Street, Lauderdale Lakes, FL 33319, (the "User"), setting forth the terms and conditions subject to which the City will provide Service(s) to the User, as defined below. The Effective Date of this Agreement shall be the date of the last signature below.

I.   **Hosted Service(s) to be Provided**

a. Disclosure Documents Web Application

- The City will host the Disclosure Documents web application for the User, and provide the User with access to the application's two (2) sub-sites:

    1. Public access and search function.

    2. Administrative access to upload disclosure documents.

- The City will provide the User with web links to the aforementioned sub-sites, which may be placed in HTML iframes on the User's web site.

- Customizations

    1. The following items will be customized by the City for the User:

        a. Commissioner names/districts will be updated to reflect officials currently in office.

        b. Disclosure Types may be updated to reflect the city-specific names/terminology of the documents to be uploaded.

        c. The User shall inform the City of and provide the City with all updates to Commissioner names/districts and disclosure types.

        d. Timeframe for customization will be determined and mutually agreed upon by both parties at the time when service is rendered.

    2. The Disclosure Documents application is otherwise provided as is, and any further modifications will be considered outside the scope of this Agreement.

b. Lobbyist Registration Web Application

- The City will host the Lobbyist Registration web application for the User, and provide the User with access to the application's two (2) sub-sites:

    1. Lobbyist and public access, providing lobbyists with the ability to register, manage clients, and log visits with City officials, and providing the public with the ability to search for and view lobbyists, clients and visits with City officials;

    2. Administrative access, providing the User's staff with the ability to manage lobbyists, log visits with City officials, manage registration periods, manage City contacts and view reports.

- The City will provide the User with web links to the aforementioned sub-sites, which may be placed in HTML iframes on the User's web site.

- Payment Processing

    1. The City will create a new merchant account with the City's current merchant provider, to be used solely for the purpose of recording and processing all payment transactions for the User.

    2. The City will be responsible for and assume the cost of the standard, monthly, recurring charge required to maintain the new merchant account.

    3. The User will be responsible for all transaction processing fees incurred, that of which will be subtracted from payments made to the User as part of the Lobbyist Registration payments.

    4. Payments received and processed online through the Lobbyist Registration web application will be made by either Visa or MasterCard.

    5. Payments received, less all transaction processing fees, will be remitted to the User within thirty (30) days of receipt.

- Customizations

1. The following items will be customized by the City for the User:

   a. The web application will be updated to reflect the User's name, location, contact information, logo, and local ordinance number(s), where applicable.

   b. Commissioner names/districts will be updated to reflect officials currently in office.

   c. Registration fee and period will be changed to reflect those applicable to the respective User.

   d. The User shall inform the City of and provide the City with all updates to User's name, location, contact information, logo, local ordinances, Commissioner names/districts and registration fee and period.

   e. Timeframe for customization will be determined and mutually agreed upon by both parties at the time when service is rendered.

2. The Lobbyist Registration application is otherwise provided as is, and any further modifications will be considered outside the scope of this Agreement.

c. Technical Support

   • Technical Support shall be available on Monday thru Friday, from 8:00 AM – 5:00 PM EST, excluding holidays, by contacting the City's IT HelpDesk by phone at (954) 597-3900, or by email at support@tamarac.org .

II. Cost of Service

a. The cost of the Services provided shall be $1,200.00, per year, to be paid annually.

b. The City reserves the right to make adjustments to the cost of service annually upon renewal, contingent upon the actual cost to the City.

III. Terms of Service

The City's Hosted Service (the "Service"), is provided to the User under the terms of this Agreement and any written amendments thereto. The User expressly agrees to the following terms and conditions:

a. Contract Term and Renewals

- The Initial Term of the Agreement shall be one (1) year from the Effective Date of the Agreement.

- The Initial Term and any Renewal Term(s) shall collectively be referred to herein as the "Term".

- This Agreement shall automatically renew for successive one (1) year periods, subject to payment of applicable fees, unless either party notifies the other party of its intention not to renew no less than thirty (30) days prior to the expiration of the Initial Term or Renewal Term.

b. Billing / Payment

- Initial payment shall be due no later than thirty (30) days following the Effective Date of the Initial Term.

- The City shall notify the User of the fees for the Renewal Term by sending an invoice to the User thirty (30) days prior to the start of the Renewal Term.

- Payment for each Renewal Term shall be due no later than thirty (30) days from the invoice date.

c. Termination for Convenience

- Either party may terminate this Agreement at any time for convenience upon thirty (30) days written notice to the other party. In the event that the User terminates this Agreement for convenience, no fees for the current Term of Service will be refunded. In the event that the City terminates for convenience, any fees for the remainder of the current Term of Service shall be refunded on a pro-rata basis.

d. Termination for Cause

- In the event that a party commits a material breach of any term or condition of this Agreement, the "non-breaching" party may give written notice of intention to terminate this Agreement, following a thirty (30) day period to cure the breach.

e. Effect of Termination or Expiration

- Upon termination or expiration of this Agreement, the User will be provided with a complete copy of its stored data .

f. Non-Discrimination & Equal Opportunity Employment

- During the performance of the Service, the City and the User, shall not discriminate against any employee or applicant for employment because of race, color, sex, religion, age, national origin, marital status,

political affiliation, familial status, sexual orientation, or disability, if qualified.

g. Independent Contractors

- Each party is and shall remain an independent contractor and nothing in this Agreement shall be deemed or construed to create an employer/employee, joint venture, or partnership relationship between the City and the User. Neither party shall have any authority to inure any obligations on behalf of the other party or to make any promise, representation, or to contract of any nature on behalf of the other party.

h. Notice

- Whenever either party desires or is required under this Agreement to give notice to any other party, it must be given by written notice either delivered in person, sent by U.S. Certified Mail, U.S. Express Mail, air or ground courier services, or by messenger service, as follows:

  <u>City</u>
  City of Tamarac
  Information Technology
  7525 NW 88th Avenue
  Tamarac, FL 33321

  <u>User</u>
  City of Lauderdale Lakes
  Financial Services Department
  c/o City Manager's Office
  4300 NW 36th Street
  Lauderdale Lakes, FL 33319

- Notices shall be effective upon receipt or upon attempted delivery, where receipt is refused.

i. Indemnification

- User is a municipal agency as defined in §768.28, Florida Statutes, and agrees to be fully responsible for the acts and omissions of its agents or employees to the extent permitted by law while they are employed by User. Nothing herein is intended to serve as a waiver of sovereign immunity by any party to which sovereign immunity may be applicable. User shall furnish City with written verification of liability protection in accordance with state law prior to or at the time of execution of this Agreement. Nothing herein shall be construed as consent by a state agency or political subdivision of the State of Florida to be sued by third Parties in any matter arising out of this Agreement.

- City is a municipal agency as defined in §768.28, Florida Statutes, and agrees to be fully responsible for the acts and omissions of its agents or employees to the extent permitted by law while they are employed by the City of Tamarac. Nothing herein is intended to serve as a waiver of sovereign immunity by any party to which sovereign immunity may be applicable. City shall furnish User with written verification of liability protection in accordance with state law prior to or at the time of execution of this Agreement. Nothing herein shall be construed as consent by a state agency or political subdivision of the State of Florida to be sued by third Parties in any matter arising out of this Agreement.

- Notwithstanding anything to the contrary contained herein, in no event shall User hold harmless or indemnify the City from liability, suits, cause and causes of action, trespasses, damages, judgments, executions, claims and demands of any kind whatsoever, in law or equity, which may result from or arise out of the negligent acts of the City, its employees, agents, and/or servants.

- Notwithstanding anything to the contrary contained herein, User and City shall, at all times, be entitled to the benefits of sovereign immunity as provided in Section 768.28, Florida Statutes, and common law. Nothing contained in this Agreement shall be construed as a waiver of sovereign immunity.

- Notwithstanding anything to the contrary contained herein, the terms and conditions of this Article shall survive the expiration or termination of this Agreement.

j. Venue

- This Agreement shall be governed by the laws of the State of Florida as now and hereinafter in force. The venue for actions arising out of this Agreement is fixed in Broward County, Florida.

k. Waiver

- Any provision in this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof or affecting the validity or enforceability of such provisions in any other jurisdiction. The non-enforcement of any provision by either party shall not constitute a waiver of that provision nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

l. Severability

- If any provision of this Agreement is found by a court of competent jurisdiction to be invalid, all other provisions of this Agreement shall remain in full force and effect.

m. Force Majeure

- Neither party shall be liable to the other for its failure to perform under this Agreement, except for payment obligations, during any period in which performance is delayed due to circumstances beyond its control and without its negligence, provided that the party experiencing the delay promptly notifies the other of the delay.

n. Assignment

- Neither this Agreement nor any rights or obligations under this Agreement may be assigned or otherwise transferred by either party to a third party, in whole or in part, without the express prior written consent of the other party, which consent shall not be unreasonably withheld; provided however that no consent shall be necessary with respect to any assignment in connection with a merger or acquisition, or the sale of substantially all of the assets, of the assigning party. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of the parties and their respective permitted successors, executors, representatives, heirs, administrators and assigns.

o. Modification

- It is further agreed that no modifications, amendments or alterations in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

p. Drafting

- This Agreement has been negotiated and drafted by all parties hereto and each party has had the opportunity to consult with legal counsel. The parties agree that this Agreement shall not be more strictly construed against any party because of such party's preparation of this Agreement.

q. Headings

- Headings herein are for convenience of reference only and shall not be considered in any interpretation of this Agreement.

BY SIGNING BELOW, THE PARTIES AGREE TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT.

For City: For User:

Signature _____   Signature _____

Name   _Keith Glatz_____   Name   _____

Title   _Purchasing & Contracts Manager_ Title   _____

Date   _3/8/2012_____   Date   _____

Exhibit 2 – Town of Southwest Ranches Inter-Local Agreement (ILA)

CITY OF TAMARAC

INTERLOCAL AGREEMENT FOR INFORMATION TECHNOLOGY RELATED SERVICES

The City of Tamarac is pleased to provide a turnkey solution that will replace and enhance the technology used by the Town of Southwest Ranches, including the network infrastructure, servers and software, and provide remote monitoring and information technology support services to maintain the environment moving forward. The following agreement details the scope of work to be provided.

INTERLOCAL AGREEMENT BETWEEN THE CITY OF TAMARAC AND THE TOWN OF SOUTHWEST RANCHES FOR INFORMATION TECHNOLOGY RELATED SERVICES

THIS INTERLOCAL AGREEMENT made and entered into on the _____day of _____, 2013, by and between:

The CITY OF TAMARAC, a Florida municipal corporation, hereinafter referred to "TAMARAC";

and

The TOWN OF SOUTHWEST RANCHES, a Florida municipal corporation, hereinafter referred to as "SOUTHWEST RANCHES". TAMARAC and SOUTHWEST RANCHES may be collective referred to as the "PARTIES".

NOW, THEREFORE, in consideration of the mutual terms, covenants, promises, and payments hereinafter set forth, TAMARAC and SOUTHWEST RANCHES agree as follows:

IV.   **Client Services to be Provided**

    a.   Initial Project Startup Services

        The following services are provided at the initiation of the project, and include the following, as further defined in Appendix A. Initial Project Startup Services.

        • Consulting Services

            1. Network Design and Engineering – TAMARAC will design and engineer a new network, server and telephone system infrastructure that will be used to facilitate SOUTHWEST RANCHES' operations.

- Professional Services

    1. Hardware and Software Installation – TAMARAC will install and configure new hardware and software to support SOUTHWEST RANCHES's operations.

    2. Server and Network Management – TAMARAC will configure the appropriate features and functionality on the new server and network infrastructure to support remote monitoring and management capabilities.

- Project Timeline

    1. Upon completion of pre-planning activities, procurement and delivery of applicable hardware, the project will last approximately twelve (12) weeks. The estimated dates for beginning and conducting the Project will be mutually agreed upon by both TAMARAC and SOUTHWEST RANCHES after receipt of applicable payments due upon execution of the contract.

b. Managed Services

The following services are provided on an ongoing basis as part of this Agreement, and include the following:

- Virtual IT Department

    1. TAMARAC will provide SOUTHWEST RANCHES with Information Technology Support Services, as defined and governed by the Service Level Agreement (SLA), as included herein Appendix B.

- Remote Network Monitoring

    1. In order to facilitate the appropriate alerting and response measures, where possible, TAMARAC will configure all network infrastructure, servers, workstations, and other equipment for remote monitoring, thereby providing the means to automatically generate and open service requests for problems as they arise.

V.   Terms of Service

TAMARAC's Client Services ("Services") are provided to SOUTHWEST RANCHES under the terms of this Agreement and any written amendments thereto. SOUTHWEST RANCHES expressly agrees to the following terms and conditions:

a. Contract Term and Renewals

- The Initial Term of the Agreement shall be five (5) years from the Effective Date of the Agreement, with each year of the Initial Term referred to herein as Year 1, Year 2, Year 3, Year 4 and Year 5.

- The Initial Term and any Renewal Term(s) shall collectively be referred to herein as the "Term".

- Following the Initial Term, this Agreement shall automatically renew for successive one (1) year periods, subject to payment of applicable fees, unless either party notifies the other party of its intention not to renew no less than ninety (90) days prior to the expiration of the Initial Term or Renewal Term. SOUTHWEST RANCHES will be advised of the costs for any future Renewal Terms one hundred eighty (180) days prior to the expiration of the Initial Term, or prior to the expiration of any subsequent Renewal Term.

b. Cost of Services, Billing and Payments

- Startup Costs

    1. Startup Costs, as detailed in Appendix C. Cost of Services, Section I. Startup Costs, incorporate the initial, non-recurring costs for Consulting Services, including Network Design and Engineering; Professional Services, including Hardware and Software Installation, and Server and Network Management; as previously defined in Section I. Client Services to be Provided, Sub-section A. Initial Project Startup Services.

    2. Startup Costs are non-recurring costs, due upon execution of the Agreement.

- Information Technology Support Services

    1. Information Technology Support Services incorporate recurring costs for Managed Services, including a Virtual IT Department and Remote Network Monitoring, as previously defined in Section I. Client Services to be Provided, Sub-section B. Managed Services.

    2. Fees for Information Technology Support Services include recurring and non-recurring costs, and are further defined in Appendix C. Cost of Services, Section II. Information Technology Support Services. Recurring charges are due monthly, in advance of the next month of service. Non-recurring charges are due within thirty (30) days following receipt of an invoice from TAMARAC (Net 30 Terms).

3. Payment for the first month of recurring fees associated with Information Technology Support Services is due upon execution of the Agreement, and each successive month thereafter on the first day of each month.

4. TAMARAC shall notify SOUTHWEST RANCHES of recurring fees due by sending an invoice to SOUTHWEST RANCHES.

- Hardware Maintenance and Support Contracts

    1. Hardware Maintenance and Support Contracts are services sold by third parties (hardware vendors) that provide for technical support and replacements for equipment during a covered period.

    2. Fees for third-party Hardware Maintenance and Support Contracts are recurring costs, and are further defined in Appendix C. Cost of Services, Section III. Hardware Maintenance and Support Contracts.

- Software Licensing, Subscriptions and Maintenance and Support Contracts

    1. Software Licensing and Subscriptions are legal instruments governing the use or redistribution of software during the covered period. Software Licensing and Subscriptions are sold by third parties (software vendors) that provide a contractual right to use such software. Software Maintenance and Support provides for technical support from applicable software vendors, as well as access to future upgrades during a covered period.

    2. Fees for third-party Software Licensing, Subscriptions and Maintenance and Support Contracts include recurring and non-recurring costs, and are further defined in Appendix C. Cost of Services, Section IV. Software Licensing, Subscriptions and Maintenance and Support Contracts.

    3. Fees, both recurring and non-recurring, for third-party Software Licensing, Subscriptions and Maintenance and Support

Contracts are due within thirty (30) days following receipt of an invoice from TAMARAC (Net 30 Terms).

- Additional Charges

    1. Any equipment or parts needed as part of ongoing maintenance, repairs, replacements, or as a result of new installations or systems, not otherwise covered by applicable vendor service contracts, as approved by SOUTHWEST RANCHES, will be paid for by SOUTHWEST RANCHES.

    2. Payment for any Additional Charges incurred is due within thirty (30) days following receipt of an invoice from TAMARAC (Net 30 Terms).

- Invoicing and Payments

    1. Invoices shall be sent to:

        Town of Southwest Ranches

        13400 Griffin Road

        Southwest Ranches, FL 33330

    2. SOUTHWEST RANCHES shall make payment to TAMARAC within thirty (30) calendar days after receipt of each invoice. Payment shall be sent to the attention of:

        City of Tamarac

        Financial Services

        Attn: Accounts Receivable

7525 NW 88th Avenue

Tamarac, FL 33321

- Projected Cost of Service

  1. The projected cost of service during the Initial Term is as follows*:

Year 1	**Total $108,860.39**	Startup

     Costs $79,238.70
     Information Technology Support Services $18,000.00
     Software Licensing, Subscriptions and $11,621.69
          Maintenance and Support Contracts

Year 2	**Total $29,621.69**	Information

     Technology Support Services $18,000.00
     Software Licensing, Subscriptions and $11,621.69
          Maintenance and Support Contracts

Year 3	**Total $34,575.00**	Information

     Technology Support Services $18,540.00
     Hardware Maintenance and Support Contracts $3,489.86
     Software Licensing, Subscriptions and $12,545.14
          Maintenance and Support Contracts

Year 4	**Total $28,459.26**	Information

     Technology Support Services $19,096.20
     Hardware Maintenance and Support Contracts $287.50
     Software Licensing, Subscriptions and $9,075.56
          Maintenance and Support Contracts

Year 5	**Total $29,319.64**	Information

     Technology Support Services $19,669.08
     Hardware Maintenance and Support Contracts $575.00
     Software Licensing, Subscriptions and $9,075.56
          Maintenance and Support Contracts

     * Costs are based on projections as defined in Appendix C. Cost of Services, and do not include Additional Charges as may be incurred during the Initial Term, nor include ancillary Trip Charges or charges for After Hours Service.

  2. **The projected cost of the Agreement during the Initial Term, based upon the cost for Startup Services; Information Technology Support Services; Hardware Maintenance and Support Contracts; and Software Licensing, Subscriptions and Maintenance and Support Contracts; not including any Additional Charges, ancillary Trip Charges or charges for After Hours Service, is $230,835.98.**

c. Non-Discrimination & Equal Opportunity Employment

- During the performance of the Service, TAMARAC and SOUTHWEST RANCHES shall not discriminate against any employee or applicant for employment because of race, color, sex, religion, age, national origin, marital status, political affiliation, familial status, sexual orientation, or disability, if qualified.

d. Independent Contractors

- Each party is and shall remain an independent contractor and nothing in this Agreement shall be deemed or construed to create an employer/employee, joint venture, or partnership relationship between TAMARAC and SOUTHWEST RANCHES. Neither party shall have any authority to inure any obligations on behalf of the other party or to make any promise, representation, or to contract of any nature on behalf of the other party.

e. Use of Information / Ownership of Documents

- SOUTHWEST RANCHES shall be required to work in harmony with TAMARAC and other consultants relative to providing information requested in a timely manner and in the specified form. Any and all work products, documents, records, disks, original drawings, specifications or other information developed as a result of this Agreement shall become the property of SOUTHWEST RANCHES upon completion for its use and distribution as may be deemed appropriate by SOUTHWEST RANCHES. Except as specifically authorized by SOUTHWEST RANCHES in writing, information and other data developed or acquired by or furnished to TAMARAC or consultants in the performance of this Agreement shall be used only in connection with the services provided SOUTHWEST RANCHES. Any and all information concerning personnel records or otherwise privileged information protected by applicable privacy and public records laws shall be considered confidential, and TAMARAC shall take commercially reasonable measures to protect such confidential information. TAMARAC may not divulge or disclose any confidential information, unless so required by order of a court of competent jurisdiction.

f. Ownership of Equipment

- All equipment and licensing purchased as part of this Agreement shall become the property of SOUTHWEST RANCHES.

g. Notices

- Unless otherwise specified herein, all notices and other communications required or permitted under this Agreement shall be in writing and given by: hand delivery; registered or certified mail, return receipt requested; overnight courier, or facsimile to:

    TAMARAC
    City of Tamarac
    Information Technology
    Attn: Levent Sucuoglu
    7525 NW 88th Avenue
    Tamarac, FL 33321

    With a copy to City Attorney at the following address:

    Goren, Cherof, Doody & Ezrol, P.A.
    3099 East Commercial Blvd., Suite 200
    Fort Lauderdale, FL 33308

    SOUTHWEST RANCHES
    Town of Southwest Ranches
    Office of the Town Administrator
    Attn: Andrew Berns
    13400 Griffin Road
    Southwest Ranches, FL 33330

or to such other address as any party may designate by notice complying with the terms of this Section. Each such notice shall be deemed delivered:

on the date delivered if by personal delivery of overnight courier;

on the date upon which the return receipt is signed or delivery is refused or the notice is designated by the postal authorities as not deliverable, as the case may be if mailed; and

on the date of transmission with confirmed answer back if by fax.

h. Insurance

- TAMARAC shall furnish SOUTHWEST RANCHES with written verification of liability protection in accordance with state law prior to or at the time of execution of this Agreement. TAMARAC shall maintain such insurance in full force and effect during the life of this Agreement. TAMARAC shall provide to SOUTHWEST RANCHES's Risk & Safety Manager or designee certificates of all insurances required under this section prior to beginning any work under this Agreement.

i.   Indemnification

- SOUTHWEST RANCHES is a municipal agency as defined in §768.28, Florida Statutes, and agrees to be fully responsible for the acts and omissions of its agents or employees to the extent permitted by law while they are employed by SOUTHWEST RANCHES. Nothing herein is intended to serve as a waiver of sovereign immunity by any party to which sovereign immunity may be applicable. SOUTHWEST RANCHES shall hereby add TAMARAC as an additional insured. SOUTHWEST RANCHES shall furnish TAMARAC with written verification of liability protection in accordance with state law prior to or at the time of execution of this Agreement. Nothing herein shall be construed as consent by a state agency or political subdivision of the State of Florida to be sued by third Parties in any matter arising out of this Agreement.

- TAMARAC is a municipal agency as defined in §768.28, Florida Statutes, and agrees to be fully responsible for the acts and omissions of its agents or employees to the extent permitted by law while they are employed by TAMARAC. Nothing herein is intended to serve as a waiver of sovereign immunity by any party to which sovereign immunity may be applicable. TAMARAC shall hereby add SOUTHWEST RANCHES as an additional insured. TAMARAC shall furnish SOUTHWEST RANCHES with written verification of liability protection in accordance with state law prior to or at the time of execution of this Agreement. Nothing herein shall be construed as consent by a state agency or political subdivision of the State of Florida to be sued by third Parties in any matter arising out of this Agreement.

- Notwithstanding anything to the contrary contained herein, SOUTHWEST RANCHES and TAMARAC shall, at all times, be entitled to the benefits of sovereign immunity as provided in Section 768.28, Florida Statutes, and common law. Nothing contained in this Agreement shall be construed as a waiver of sovereign immunity.

- Notwithstanding anything to the contrary contained herein, the terms and conditions of this Article shall survive the expiration or termination of this Agreement.

j.   Termination

- Each party is authorized to terminate this Agreement, with or without cause, by providing the other party ninety (90) days notice of its intention to terminate the agreement. In the event that SOUTHWEST RANCHES terminates this Agreement for convenience, no fees for the current Term of Service will be refunded. In the event that TAMARAC terminates for convenience, any fees for the remainder of the current Term of Service shall be refunded on a pro-rata basis. All fees for any additional costs incurred (such as those for equipment or parts needed

as part of ongoing maintenance, repairs replacements, or as a result of new installations or systems) remain due upon receipt of an invoice from TAMARAC.

- Notice shall be provided as required by Section II. Terms of Service, Sub-section G. Notices.

k. Governing law; Venue

- The validity, construction, and effect of this Agreement shall be governed by the laws of the State of Florida.

l. Dispute Resolution

- In the event that a claim, objection or dispute arising out of the terms of this Agreement is unable to be resolved between the parties, both parties agree to submit to non-binding mediation using a third party mediator, acceptable to both parties. The mediator shall strive to resolve such claim, objection or dispute prior to any party seeking court action.

- In the event that mediation is unsuccessful, such claim, objection or dispute   shall be litigated in the Seventeenth Judicial Circuit in and for Broward County, Florida.

m. Entire Agreement

- This agreement contains the entire understanding of the Parties relating to the subject matter hereof superseding all prior communications between the parties whether oral or written. This Agreement may not be altered, amended, modified, or otherwise changed nor may any of the terms hereof be waived, except by written instrument executed by both Parties. The failure of a party to seek redress for violation of or to insist on strict performance of any of the covenants of this Agreement shall not be construed as a waiver or relinquishment for the future of any covenant, term, condition or election but the same shall continue and remain in full force and affect.

n. Severability

- Should any part, term or provision of this Agreement be by the courts decided to be invalid, illegal or in conflict with any law of this State, the validity of the remaining portions or provisions shall not be affected thereby.

o. Uncontrollable Forces

- Neither TAMARAC nor SOUTHWEST RANCHES shall be considered to be in default of this Agreement if delays in or failure of performance shall

be due to Uncontrollable Forces, the effect of which, by the exercise of reasonable diligence, the non-performing party could not avoid. The term "Uncontrollable Forces" shall mean any event which results in the prevention or delay of performance by a party of its obligations under this Agreement and which is beyond the reasonable control of the nonperforming party. It includes, but is not limited to fire, flood, earthquakes, storms, lightning, epidemic, war, riot, civil disturbance, sabotage, and governmental actions.

- Neither party shall, however, be excused from performance if nonperformance is due to forces, which are preventable, removable, or remediable, and which the nonperforming party could have, with the exercise of reasonable diligence, prevented, removed, or remedied with reasonable dispatch. The nonperforming party shall, within a reasonable time of being prevented or delayed from performance by an uncontrollable force, give written notice to the other party describing the circumstances and uncontrollable forces preventing continued performance of the obligations of this Agreement.

p. Assignment

- TAMARAC shall not assign or transfer its rights, title or interests in the Agreement without SOUTHWEST RANCHES' prior written approval.

q. Signatory Authority

- TAMARAC shall supply SOUTHWEST RANCHES with copies of requisite documentation evidencing that the signatory for TAMARAC has the authority to enter into this Agreement.

- SOUTHWEST RANCHES shall supply TAMARAC with copies of requisite documentation evidencing that the signatory for SOUTHWEST RANCHES has the authority to enter into this Agreement.

IN WITNESS WHEREOF, CITY OF TAMARAC and TOWN OF SOUTHWEST RANCHES, have executed this Agreement the day and year first above written.

ATTEST: CITY OF TAMARAC

_____   _____
Patricia Teufel, CMC   Signature

Interim City Clerk

_____   _____
Date   Date

Approved as to form and legal sufficiency

_____
Samuel S. Goren, City Attorney

_____
Date

ATTEST: _____   **TOWN OF SOUTHWEST RANCHES**

_____

Type Name of Authorized Agent

_____

Signature of Town Clerk   Authorized Signature

_____

Erika Gonzalez-Santamaria, CMC   Type/Print Name & Title
Town Clerk

_____

Date   Date

(CORPORATE SEAL)

APPENDIX A

Information Technology

Initial Project Startup Services

I.   Consulting Services

A. Network Design and Engineering

1. The network core will consist of one (1) managed Cisco 3560X switch with 48 10/100/1000 PoE ports, covered by three (3) years of Cisco SMARTnet for 7x24x4 hardware / software technical support and assistance, and will run Enhanced Interior Gateway Routing Protocol (EIGRP) to route between vlans.

2. A Cisco ASA 5505 Firewall will be placed at the network edge to secure the network from outside access. The firewall is covered by a three (3) year Cisco SMARTnet contract for 24x7x4 maintenance and support.

3. A Cisco 2911 Integrated Services Router (ISR) with voice bundle will be used to run and support Cisco Unified Communications Manager Express for the telephone system (with licensing for up to fifty (50) phones) and Cisco Unity Express for the voicemail system (with licensing for up to fifty (50) mailboxes). The Cisco 2911 ISR will include a T1 voice card for to accept a PRI, a FXO card for Survivable Remote Site Telephone (SRST) and a FXS card for fax services. The Cisco 2911 ISR will be covered by three (3) years of Cisco SMARTnet for 7x24x4 hardware / software technical support and assistance.

4. A Dell PowerEdge R420 server will be used to create virtual servers. The server is covered by five (5) years of Dell ProSupport for 7x24 hardware / software technical support and assistance, a Dell Mission Critical Package, which includes 4-hour 7x24 on-site service with emergency dispatch, and a Dell hardware warranty.

5. VMware ESXi 5 Standard software will be utilized to create virtual servers. The virtual environment will host the necessary servers to run core network services including Active Directory, DNS, DHCP, Exchange, SQL, etc…. One (1) processor license for VMware vSphere 5 Standard will be purchased including Production Support for 3 Years. The VMware vSphere license is a one-time, non-recurring purchase. The initial purchase also includes the first three (3) years of maintenance and support.

6. All virtual servers will run Microsoft Windows 2012 Server Standard. Two (2) processor licenses for Microsoft Windows Server DataCenter including Software Assurance (SA) will be purchased for the Dell PowerEdge server. The Microsoft Windows Server DataCenter License is a one-time, non-recurring purchase; however, Software Assurance (SA) is renewed every three (3) years. The initial purchase includes the first one (1) year of SA. The Microsoft Windows Server DataCenter Licensing Software Assurance (SA) is renewed every three (3) years, with the renewal of TAMARAC's Microsoft Enterprise Agreement.

7. To ensure redundancy, two domain controllers (virtual servers) are needed to replicate all Active Directory-based data.

8. Backups will be configured using vSphere Data Protection (VDP), included with the VMware virtualization software, to backup locally as well as remotely to TAMARAC.

9. An Uninterruptable Power Supply (UPS) will be used to best protect the network infrastructure against surges and temporary power outages. One (1) APC Smart-UPS RT 1500VA Tower Online UPS will be used, along with an APC UPS Network Management Card to allow for remote monitoring. The expected lifetime of a UPS battery is three (3) years, at such time when it will need to be replaced as part of routine maintenance.

10. Workstations will be setup with Microsoft Windows 7 Enterprise and Microsoft Office 2010 Professional, and joined to the Active Directory domain. Based on the total quantity of workstations, as provided by SOUTHWEST RANCHES, twenty-five (25) Microsoft Windows 7 Upgrade Licenses and Software Assurance (SA) will be purchased. The Microsoft Windows Upgrade License is a one-time, non-recurring purchase; however, Software Assurance (SA) is renewed every three (3) years. The initial purchase includes the first one (1) year of SA. The Microsoft Windows Upgrade Licensing Software Assurance (SA) is renewed every three (3) years, with the renewal of TAMARAC's Microsoft Enterprise Agreement.

11. Email and file services will be migrated to Microsoft's Office 365 cloud service (Subscription Plan E3).   Microsoft Office 365 provides

secure, anywhere access to email and calendars, Office Web Apps, instant messaging, conferencing, and file sharing. Based on the total quantity of workstations/users, as provided by SOUTHWEST RANCHES, twenty-five (25) Microsoft Office 365 (Plan E3) Subscription Licenses will be purchased. The Microsoft Office 365 Subscription License is a one (1) year subscription, and is renewed annually.

12.   The central IT Data Closet will be secured using a security keypad.

II.   Professional Services

A.   Hardware and Software Installation

1. TAMARAC will install and configure the following equipment:

a. One (1) Cisco Catalyst 3560X switch as the network core.
b. One (1) Cisco ASA 5505 Firewall at the edge of the network.
c. One (1) Cisco 2911 Integrated Services Router (ISR) to support run Cisco Unified Communications Manager Express and Cisco Unity Express.
d. One (1) Dell PowerEdge R420 Server with rack shelf and monitor.
e. Eight (8) Dell OptiPlex 7010 desktop computers.
f. Six (6) Dell Latitude E6330 laptop computers.
g. One (1) APC Smart-UPS RT 1500VA Tower Online UPS with network management card.
h. One (1) Schlage Electronic Keypad Lever.
i. Existing network patch cables / wires will be used to connect SOUTHWEST RANCHES's workstations to the network switch.
j. Appropriate cable management and grounding will be used and installed.
k. Additional Technical Specifications may be found in Appendix D.

2. TAMARAC will install and configure the following software:

a. Cisco Unified Communications Manager Express and Cisco Unity Express will be installed and configured on the Cisco 2911 Integrated Services Router (ISR).
b. VMware ESXi 5 Standard will be installed and configured on the Dell PowerEdge R420 Server to host the virtual environment.
c. Eight (8) virtual servers will be created and will run Microsoft Window 2012 Standard. They are as follows:

1) Two (2) Domain Controllers to provide Active Directory services, DNS services, DHCP services and group policy services.
2) One (1) Print Server to provide print management services.

3) Two (2) Active Directory Federation Services Servers to provide users with Single Sign-On access to email and file services hosted as part of Microsoft's Office 365 Plan.

4) One (1) Application Server to host the Microsoft Exchange Active Directory Synchronization Tool.

5) One (1) Application Server to host Microsoft Exchange Server to provide seamless management of the Office 365 service.

6) One (1) Application Server to host Microsoft SQL Server to provide database services for the records management system and financial system.

d. Microsoft Office 365 will be configured for SOUTHWEST RANCHES, and existing email will be migrated to the new service.

e. Up to twenty-five (25) workstations will be setup with Microsoft Windows 7 Enterprise.

f. Microsoft Office 2010 will be installed on up to twenty-five (25) workstations, and configured to access Microsoft's Office 365 hosted services for email and file storage.

g. Additional Technical Specifications may be found in Appendix D.

B. Server and Network Management

1. TAMARAC will configure the appropriate VLAN functionality, routing service, network services, and SNMP functionality for remote management and monitoring, on the Cisco Catalyst core network switch. TAMARAC will manage the switch, making necessary configuration updates as needed, and remotely monitor the switch on an ongoing basis.

2. TAMARAC will configure the appropriate security-related functions, features, access lists, network address translation (NAT), port address translation (PAT), network routes and mappings on the Cisco ASA firewall, along with a VPN connection between SOUTHWEST RANCHES and TAMARAC for ongoing, remote network management and monitoring. In order to facilitate the VPN connection between SOUTHWEST RANCHES and TAMARAC for remote management and monitoring, SOUTHWEST RANCHES will be required to procure (at SOUTHWEST RANCHES's expense) at minimum one (1) static IP address from their Internet Service Provider (ISP). TAMARAC will assist SOUTHWEST RANCHES in procuring the needed static IP address, and will configure the Internet router and firewall appropriately once made available.

3. TAMARAC will configure the Dell PowerEdge server for remote monitoring.

4. TAMARAC will configure the UPS for remote management and monitoring.

5. TAMARAC will remotely manage and monitor the VMware virtual environment to ensure that it remains healthy, actively troubleshooting any issues that may occur and applying upgrades and patches as needed.

6. TAMARAC will remotely manage and monitor the servers present in the virtual environment to ensure they remain healthy, actively troubleshooting any issues that may occur and applying upgrades and patches as needed.   TAMARAC will also perform any necessary additions, deletions, modifications or updates to Active Directory as needed, including the creation of new user accounts, etc….

APPENDIX B

Information Technology Support Services

Service Level Agreement (SLA)

The City of Tamarac Information Technology Department (IT) works with all City Departments, citizens, businesses and customers in an effort to make effective use of technology, to provide users with service and support and to ensure the availability and reliability of computer systems. IT maintains a robust enterprise network and telephone system as well as the underlying infrastructure consisting of a high speed fiber optic network, wireless communications, and server-class computer systems that enable TAMARAC to provide high quality services to our customers. Disaster recovery planning and provision for business continuity are part of the IT Department's responsibilities along with on-going technology training services.

TAMARAC is committed to utilizing technology to automate the delivery of services and information, and to provide up to date information to the community, as stated in Goal #2 and Goal #4 of TAMARAC's Strategic Plan. It is crucial that computer systems and software operate reliably and without interruption to enable TAMARAC to consistently provide customers with excellent service.

The IT Department strives to provide the appropriate technology tools to deliver the best possible services to citizens. As the system replacement cycles get extended, the IT Department endeavors to maintain its technology at optimal status to minimize service interruptions and downtime.

Purpose

This Service Level Agreement (SLA) is between the City of Tamarac Information Technology Department (IT), and the Town of Southwest Ranches. The purpose of this document is to formalize the arrangement between the City of Tamarac IT Department and the Town of Southwest Ranches, for the delivery of specific Information Technology Support Services, at specific levels of support.

This document is controlled jointly by the City of Tamarac IT Department and the Town of Southwest Ranches. Any modifications to this agreement require the review and approval of each party. This document will remain in effect until replaced with an updated version. It will be reviewed annually.

Scope of Services

The City of Tamarac IT Department will support the day-to-day IT operations of the Town of Southwest Ranches, along with ancillary applications and systems.

Service Portfolio

The following represents the service offerings provided by the City of Tamarac IT Department:

Computer, Equipment and Software Services

Employee Support Services

Telephony Services

Support Hours

IT support services are available on Monday thru Friday, from 8:00 AM to 5:00 PM EST, excluding holidays.

If support is required outside of business hours as previously defined, additional charges may apply, as defined in Appendix C. Cost of Services, Section II. Information Technology Support Services, Sub-section C. After Hours Service.

Service Request Prioritization

Service request prioritization determines how the incident or service request will be handled by IT support staff. Priority levels are determined based on the Impact and Urgency of each service request, as shown in the table below.

	Urgency →			
Impact ↓	**(1) Urgent**	**(2) High**	**(3) Normal**	**(4) Low**
(1) Affects Business	(1) Emergency	(2) High	(3) Medium	(4) Normal
(2) Affects Group	(2) High	(3) Medium	(3) Medium	(4) Normal
(3) Affects Department	(3) Medium	(3) Medium	(3) Medium	(4) Normal
(4) Affects User	(4) Normal	(4) Normal	(4) Normal	(5) Low

Impact represents the business impact of an incident or service request. For example, a request may affect the business, a group, a department or a single user.

Urgency prescribes how quickly a resolution is needed. For example, the urgency may be classified as Urgent, High, Normal or Low.

After the Impact and Urgency of the incident or service request are determined, the Priority will be assigned as Emergency, High, Medium, Normal or Low, each with characteristics as defined below:

_____

Emergency Priority

Target Response Time: 1 Hour

Target Resolution Time: 4 Hours

The incident or service request will be resolved or responded to irrespective of support hours.

If support is required outside of business hours as previously defined, additional charges may apply, as defined in Appendix C. Cost of Services, Section II. Information Technology Support Services, Sub-section C. After Hours Service

If an initial response is not provided to SOUTHWEST RANCHES within one (1) hour, the incident or service request will be escalated, and TAMARAC's IT Manager will be notified.

High Priority

Target Response Time: 4 Hours

Target Resolution Time: 1 Day

If an initial response is not provided to SOUTHWEST RANCHES within two (2) hours, the incident or service request will be escalated, and TAMARAC's IT Manager will be notified.

Medium Priority

Target Response Time: 1 Day

Target Resolution Time: 2 Days

If an initial response is not provided to SOUTHWEST RANCHES within four (4) hours, the incident or service request will be escalated, and TAMARAC's IT Manager will be notified.

Normal Priority

Target Response Time: 2 Days

Target Resolution Time: 3 Days

If an initial response is not provided to SOUTHWEST RANCHES within one (1) day, the incident or service request will be escalated, and TAMARAC's IT Manager will be notified.

Low Priority

Target Response Time: 3 Days

Target Resolution Time: 5 Days

If an initial response is not provided to SOUTHWEST RANCHES within one (1) day, the incident or service request will be escalated, and TAMARAC's IT Manager will be notified.

_____

Response Time describes the elapsed time from the moment an incident is first reported by, or a service request first received from SOUTHWEST RANCHES, until the first moment that TAMARAC's IT Department responds / acknowledges such request by email, phone or other means, and then begins the troubleshooting process.

Resolution Time describes the target maximum amount of time for resolution of the incident or service request.

The prioritization levels previously defined are intended for standard, day-to-day issues or requests. Projects may be assigned longer resolution times, dependent upon the request and SOUTHWEST RANCHES requirements.

Performance Measurement

The City of Tamarac IT Department has identified the following performance measurements which it consistently endeavors to meet or exceed:

Performance Measures	FY 2011 Actual	FY 2012 Forecast	FY 2013 Forecast	FY 2014 Target
Average time to completion of IT ServiceDesk requests (hrs)	17	25	20	< 30.00
Percentage of time systems available during regular working hours	100%	100%	100%	100%
Customer satisfaction (IT Surveys)	97%	97%	97%	> 95.00%

Processes and Procedures

The City of Tamarac IT Service Desk may be contacted for assistance by phone, email or web.

Phone support is available by contacting the IT Service Desk at (954) 597-4900 .

Email support is available by emailing support@tamarac.org .

Web support is available at https://support.tamarac.org .

Any service request received outside of support hours will be processed the following business day.

Scheduled Maintenance

To ensure the smooth operation and continuing availability of all technology in use, the City of Tamarac IT Department conducts periodic and routine maintenance, which may include the application of hotfixes, software patches, hardware and software upgrades, server reboots, etc.… Any such maintenance activities may occur each week on Sundays, between the hours of 8:00 PM and 11:00 PM EST. During such time, any affected systems may be temporarily unavailable. Outside of routine maintenance, any other service related activities, which may affect the availability of services or functions, will be scheduled in advance with SOUTHWEST RANCHES's approval.

APPENDIX C

Information Technology

Cost of Services

I.   Startup Costs

   A. The total, non-recurring, Initial Project Startup Cost is $79,238.70 .

   B. Initial Project Startup Costs include the following:

	Hardware Related, Non-Recurring Costs			
#	**Item**	**Qty**	**Year 1**	
			Price	**Total**
1	Dell PowerEdge R420 Server[1]	1	$5,389.57	$5,389.57
2	Cisco Catalyst 3560X Switch[2][†]	1	$8,315.22	$8,315.22
3	Cisco 2911 Integrated Services Router with Voice Bundle[2][†]	1	$9,775.00	$9,775.00
4	Cisco ASA 5505 Firewall[2]	1	$1,268.22	$1,268.22
5	Dell OptiPlex 7010 Desktop Computer[3]	8	$847.84	$6,782.70
6	Dell Latitude E6330 Laptop Computer[3]	6	$1,439.40	$8,636.39
7	Cisco Unified IP Phone 7962G[4][†]	18	$389.71	$7,014.82
8	Cisco Unified IP Phone 7942G[4][†]	13	$318.41	$4,139.36
9	Cisco Unified IP Phone Expansion Module 7915[4][†]	2	$336.24	$672.47

10	APC Smart-UPS RT 1500VA Tower Online UPS	1	$1,033.24	$1,033.24
11	APC UPS Network Management Card	1	$262.20	$262.20
12	Schlage Electronic Keypad Lever	1	$148.35	$148.35
13	Computer Monitor for Server	1	$128.80	$128.80
14	Rack Shelf for Server	1	$172.50	$172.50
15	Cable Management	1	$230.00	$230.00
16	Network Wiring	1	$230.00	$230.00
17	Grounding	1	$57.50	$57.50

Total Hardware Related, Non-Recurring Costs	$54,256.33

[1] The item listed includes five (5) years of manufacturer 24x7x4 hardware warranty/support.

[2] The item listed includes three (3) years of manufacturer 24x7x4 hardware warranty/support.

[3] The item listed includes four (4) years of manufacturer 24x7 hardware warranty/support with Next Business Day (NBD) onsite service after initial remote diagnosis.

[4] The item listed includes three (3) years of manufacturer 8x5xNBD hardware warranty/support.

† The item(s) listed are equipment or parts thereof the telephone system to be installed, and/or provide services necessary to support its operation.

Software Related, Non-Recurring Costs			
#	Item	Qty	Year 1
			Price	Total
1	VMware vSphere 5 Standard License for 1 processor + Production Support for 3 Years[1]	1	$1,882.55	$1,882.55

Total Software Related, Non-Recurring Costs	$1,882.55

[1] The VMware vSphere license is a one-time, non-recurring purchase. The initial purchase also includes the first three (3) years of maintenance and support.

Services Related, Non-Recurring Costs		
#	Item	Qty	Year 1

			Price	Total
1	Network / Server Engineering, Setup and Configuration[1]	80	$100.00	$7,999.95
2	Telephone System Engineering, Setup and Configuration[2] †	40	$150.00	$6,000.00
3	User Workstation Setup and Configuration[3]	40	$55.00	$2,199.86
4	Microsoft Office 365 Setup and Configuration[4]	80	$86.25	$6,900.00

Total Services Related, Non-Recurring Costs	**$23,099.81**

[1]   Services include physical server installation, VMware ESXi installation and configuration, Microsoft Windows Server setup and configuration, Microsoft Active Directory installation and configuration, group policy setup, DNS setup, DHCP setup, print server setup, Microsoft Active Directory Federation Services setup, Microsoft Exchange Active Directory Synchronization Tool setup, network switch installation and configuration, firewall installation and configuration, UPS installation and configuration, network wiring and grounding.

[2]   Services include installation and upgrade of user workstations to Microsoft Windows 7, along with network/domain configuration.

[3]   Services provided by third party consultant include the setup and configuration of Microsoft's cloud-based Office 365 solution for email, file sharing, calendaring, etc.…

†   The item(s) listed are equipment or parts thereof the telephone system to be installed, and/or provide services necessary to support its operation.

II.   Information Technology Support Services

   A. Support Services

      1. **The monthly, recurring cost for Information Technology Support Services is $1,500.00, during the first two (2) years of the Agreement.**

      2. **For each successive year, the amount shall be increased 3%.**

   B. Trip Charge

      1. **For onsite visits, as requested by SOUTHWEST RANCHES, a Trip Charge of $100.00, will be charged.**

   C. After Hours Service

      1. **For services performed outside of Support Hours, as defined in Appendix B. Service Level Agreement (SLA), and as requested by SOUTHWEST RANCHES, a fee of $150.00 per hour will be charged.**

III. Hardware Maintenance and Support Contracts

   A. The initial hardware purchases, as defined in Appendix C. Cost of Services, Section I. Startup Costs, may include an initial covered period / contract for hardware maintenance and support. Based on the aforementioned contracts and covered periods, the following charges will apply during specific years of the Initial Term, as defined below:

Year 3	**Total**	**$3,489.86**
Cisco Catalyst 3560X SMARTnet Renewal*[†]		$1,011.22
Cisco 2911 ISR SMARTnet Renewal*[†]		$1,150.00
Cisco ASA 5505 Firewall SMARTnet Renewal*		$115.00
Cisco IP Phone 7962G SMARTnet Renewal*[†]		$661.99
Cisco IP Phone 7942G SMARTnet Renewal*[†]		$478.10
Cisco IP Phone Expansion Module 7915 SMARTnet Renewal*[†]		$73.55

Year 4	**Total**	**$287.50**
APC Smart-UPS Battery Replacement*		$287.50

Year 5	**Total**	**$575.00**
Dell PowerEdge R420 Server Warranty Renewal*		$575.00

*   The costs shown above are estimated. The actual costs will be determined at the time of hardware maintenance and support contract renewal, or as incurred.

†   The item(s) listed are equipment or parts thereof the telephone system to be installed, and/or provide services necessary to support its operation.

IV.   Software Licensing, Subscriptions and Maintenance and Support Contracts

A. The initial software purchases, as defined in Appendix C. Cost of Services, Section I. Startup Costs, include an initial covered period / contract for software maintenance and support. Based on the aforementioned contracts and covered periods, the following charges will apply during specific years of the Initial Term, as defined below:

Year 1   Total $11,621.69
   Microsoft Office 365 (Plan E3) Subscription Licenses $6,679.20
      Microsoft Windows Server DataCenter 2Proc Licensing $2,229.97
         Software Assurance (SA)*
      Microsoft Windows Upgrade Licensing $1,581.25
         Software Assurance (SA)*
      Microsoft Exchange Server Standard Licensing $328.05
         Software Assurance (SA)*
      Microsoft SQL Server Standard Licensing $415.96
         Software Assurance (SA)*
      Microsoft SQL Client Access Licensing $387.27
         Software Assurance (SA)*

Year 2   Total $11,621.69   Microsoft
Office 365 (Plan E3) Subscription Licenses $6,679.20
      Microsoft Windows Server DataCenter 2Proc Licensing $2,229.97
         Software Assurance (SA)*
      Microsoft Windows Upgrade Licensing $1,581.25
         Software Assurance (SA)*
      Microsoft Exchange Server Standard Licensing $328.05
         Software Assurance (SA)*
      Microsoft SQL Server Standard Licensing $415.96
         Software Assurance (SA)*
      Microsoft SQL Client Access Licensing $387.27
         Software Assurance (SA)*

Year 3   Total $12,545.14
   Microsoft Office 365 (Plan E3) Subscription Licenses $6,679.20
      Microsoft Windows Server DataCenter 2Proc Licensing $2,229.97
         Software Assurance (SA)*
      Microsoft Windows Upgrade Licensing $1,581.25
         Software Assurance (SA)*
      Microsoft Exchange Server Standard Licensing $328.05
         Software Assurance (SA)*

Microsoft SQL Server Standard Licensing $415.96
          Software Assurance (SA)*
Microsoft SQL Client Access Licensing $387.27
          Software Assurance (SA)*
VMware Production Support (1 Processor) Renewal* $923.45

Year 4   Total $9,075.56

Microsoft Office 365 (Plan E3) Subscription Licenses $6,679.20
    Microsoft   Windows   Server   DataCenter   2Proc   Licensing
        $955.65
          Software Assurance (SA)*
Microsoft Windows Upgrade Licensing $955.94
          Software Assurance (SA)*
Microsoft Exchange Server Standard Licensing $140.58
          Software Assurance (SA)*
Microsoft SQL Server Standard Licensing $178.23
          Software Assurance (SA)*
Microsoft SQL Client Access Licensing $165.97
          Software Assurance (SA)*

Year 5   Total $9,075.56

Microsoft Office 365 (Plan E3) Subscription Licenses $6,679.20
    Microsoft   Windows   Server   DataCenter   2Proc   Licensing
        $955.65
          Software Assurance (SA)*
Microsoft Windows Upgrade Licensing $955.94
          Software Assurance (SA)*
Microsoft Exchange Server Standard Licensing $140.58
          Software Assurance (SA)*
Microsoft SQL Server Standard Licensing $178.23
          Software Assurance (SA)*
Microsoft SQL Client Access Licensing $165.97
          Software Assurance (SA)*

*   The costs shown above are estimated. The actual costs will be determined at
       the time of software maintenance and support contract renewal, or as
       incurred.

APPENDIX D

Information Technology

Technical Specifications

I.   Hardware

A. Cisco Catalyst 3560X switch

#	Item	Description	Qty
Core Layer 3 Switch			
1	WS-C3560X-48PF-S	Cisco Catalyst 3560X 48 Port Full PoE IP Base	1
2	CON-SNTP-3560X4FS	Cisco SMARTnet 24X7X4 Cat 3560X 48 Port Full PoE IP Base - 3 YEARS	1
3	CAB-3KX-AC	Cisco AC Power Cord for Catalyst 3K-X (North America)	1
4	S356XVK9T-12255	Cisco CAT 3560X IOS Universal with Web Based Dev Mgr	1
5	C3KX-PWR-1100	Cisco Catalyst 3K-X 1100W AC Power Supply	1

B. Cisco ASA 5505 Firewall

#	Item	Description	Qty
Firewall			
1	ASA5505-UL-BUN-K9	Cisco ASA 5505 Appliance with SW, UL Users, 8 ports, 3DES/AES	1
2	CON-SNTP-AS5SBK9	Cisco SMARTnet 24X7X4 ASA5505-UL-BUN-K9 - 3 YEARS	1

C. Cisco 2911 Integrated Services Router (ISR)

#	Item	Description	Qty
Integrated Services Router			
1	C2911-CME-SRST/K9	Cisco 2911 UC Bundle w/PVDM3-16 FL-CME-SRST-25 UC License PAK	1
2	CON-SNTP-2911CMST	Cisco SMARTnet 24X7X4 2911 Voice Bundle w/ UC License PAK - 3 YEARS	1
3	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	1
4	VWIC3-1MFT-T1/E1	Cisco 1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	1
5	VIC2-2FXO	Cisco Two-port Voice Interface Card - FXO (Universal)	1
6	VIC3-2FXS/DID	Cisco Two-Port Voice Interface Card- FXS and DID	1
7	ISM-SRE-300-K9	Cisco Internal Services Module (ISM) with Services Ready Engine	1
8	CON-SAU-ISRE300	Cisco SW APP SUPP + UPGR Internal Services Module (ISM) with SRE - 3 YEARS	1
9	SCUE-ISM-8.6-K9	Cisco Unity Express Release 8.6	1
10	CUE-LANG-ENU	Cisco Unity Express - North American English	1
11	FL-CUE-MBX-5	Cisco Unity Express License - 5 Mailbox - CUCM and CUCME	10
12	FL-CUE-PORT-2	Cisco Unity Express License - 2 Port	2
13	FL-CUE-NR-PORT-2	Cisco Unity Express License - Non Re-hostable - 2 Port	1
14	PVDM3-16U64	Cisco PVDM3 16-channel to 64-channel factory upgrade	1
15	FL-CME	Cisco Communications Manager Express License	1
16	FL-CME-SRST-25	Cisco Communication Manager Express or SRST - 25 seat license	1
17	MEM-2900-512U1.5GB	Cisco 512MB to 1.5GB DRAM Upgrade (1GB+512MB) for Cisco 2901-2921	1
18	PWR-2911-AC	Cisco 2911 AC Power Supply	1
19	CAB-AC	Cisco AC Power Cord (North America) C13 NEMA 5-15P 2.1m	1

20	FL-CME-SRST-25	Cisco Communication Manager Express or SRST - 25 seat license (included with bundle)	1
21	PI-MSE-PRMO-INSRT	Cisco Insert Packout - PI-MSE	1
22	SL-29-IPB-K9	Cisco IP Base License for Cisco 2901-2951	1
23	SL-29-UC-K9	Cisco Unified Communication License for Cisco 2901-2951	1
24	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	1
25	MEM-CF-256MB	Cisco 256MB Compact Flash for Cisco 1900 2900 3900 ISR	1

D. Telephones

#	Item	Description	Qty
Telephones			
33	CP-7962G-CCME	Cisco UC Phone 7962 with 1 CCME RTU License	18
34	CON-SNT-CP7962	Cisco SMARTnet 8X5XNBD Cisco Unified IP Phone 7962 - 3 YEARS	18
35	CP-7942G-CCME	Cisco UC Phone 7942 with 1 CCME RTU License	13
36	CON-SNT-CP7942	Cisco SMARTnet 8X5XNBD Cisco Unified IP Phone 7942 - 3 YEARS	13
37	CP-7915=	Cisco 7915 UC Phone Grayscale Expansion Module	2
38	CON-SNT-CP7915	Cisco SMARTnet 8X5XNBD 7915 IP Phone Grayscale Expansion Module - 3 YEARS	2
39	CP-SINGLFOOTSTAND=	Cisco Footstand kit for single 7914 7915 or 7916	2
40	CP-PWR-CUBE-3=	Cisco IP Phone power transformer for the 7900 phone series	2
41	CP-PWR-CORD-NA=	Cisco 7900 Series Transformer Power Cord North America	2

E.   Dell PowerEdge R420 Server

#	Description	Qty
Dell PowerEdge R420 Server		
1	PowerEdge R420 (225-2987)	1
2	Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, 4 Year Extended (938-5544)	1
3	ProSupport: 7x24 HW / SW Tech Support and Assistance, 5 Year (938-5584)	1
4	Dell Hardware Limited Warranty Plus On Site Service Initial Year (939-8097)	1
5	Dell Hardware Limited Warranty Plus On Site Service Extended Year (939-8107)	1
6	MISSION CRITICAL PACKAGE: Enhanced Services, 5 Year (939-8197)	1
7	Dell ProSupport. For tech support, visit http://support.dell.com/ProSupport or call 1-800-945-3355 (989-3439)	1
8	Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year (996-2161)	1
9	On-Site Installation Declined (900-9997)	1
10	Proactive Maintenance Service Declined (926-2979)	1
11	Deployment Consulting 1 Yr 1 Case Remote Consulting Service (996-3179)	1
12	Shipping Material, PowerEdge R420 (331-7127)	1
13	PCIE Riser for Chassis with 1 Proc (331-7124)	1
14	Intel Ethernet I350 DP 1Gb Server Adapter (430-4443)	1
15	On-Board Broadcom 5720 Dual Port 1GBE (430-4715)	1
16	iDRAC Port Card (421-5340)	1
17	iDRAC7 Enterprise (421-6085)	1
18	3.5" Chassis with up to 4 Cabled Hard Drives and Embedded SATA (318-2080)	1
19	SAS Cable for 3.5" in Cabled Chassis (331-6957)	1
20	Bezel-4/8 Drive Chassis (318-1431)	1

21	RAID 1 for H310 (2 HDDs) with Cabled Chassis (331-7176)	1
22	PERC H310 Integrated RAID Controller (342-3528)	1
23	Heat Sink, PowerEdge (317-9826)	1
24	Intel Xeon E5-2430 2.20GHz, 15M Cache, 7.2GT/s QPI, Turbo, 6C, 95W (319-0021)	1
25	No Additional Processor (331-4611)	1
26	8GB RDIMM, 1333 MT/s, Low Volt, Dual Rank, x4 Data Width (317-9644)	2
27	1333 MHz RDIMMs (331-4422)	1
28	Performance Optimized (331-4428)	1
29	4TB 7.2K RPM Near-Line SAS 6Gbps 3.5in Cabled Hard Drive (342-5297)	2
30	Electronic System Documentation and OpenManage DVD Kit for R420 (331-7129)	1
31	DVD+/-RW, SATA, INTERNAL (313-9091)	1
32	No Rack Rails or Cable Management Arm (330-3522)	1
33	Dual Hot Plug Power Supplies 350W (331-7022)	1
34	Power Distribution Board for Hot Plug Power Supplies (331-7027)	1
35	Power Cord, NEMA 5-15P to C13, 15 amp, wall plug, 10 feet / 3 meter (310-8509)	2
36	No Operating System (420-6320)	1
37	No Media Required (421-5736)	1

F.   Dell OptiPlex 7010 Desktop Computer

#	Description	Qty
Dell OptiPlex 7010 Desktop Computer		
1	Base Unit: OptiPlex 7010 Ultra Small Form Factor EPA Base (225-2816)	8
2	Processor: 3rd Gen Intel Core i3-3220 Processor (Dual Core, 3.30GHz, 3MB, w/ HD2500 Graphics), Dell OptiPlex 7010 (319-0466)	8
3	Memory: 4GB, NON-ECC, 1600MHZ DDR3,1DIMM,OPTI (319-0218)	8
4	Keyboard: Dell USB KB,ENG,OPTI (331-8142)	8
5	Monitor: No Monitor Selected, Dell OptiPlex (320-3704)	8
6	Video Card: Intel Integrated Graphics w/DP/DVI, OPTI (320-3778)	8
7	Hard Drive: 500GB 2.5 3.0Gb/s SATA with 16MB DataBurst Cache, OptiPlex 9010 USFF (342-4135)	8
8	Operating System: Windows 7 Home Premium,No Media, 32-bit, Optiplex, English (421-5395)	8
9	Operating System: Windows 7 Label, OptiPlex, Fixed Precision, Vostro Desktop (330-6228)	8
10	Operating System: Dell Client System Update (Updates latest Dell Recommended BIOS, Drivers, Firmware and Apps),OptiPlex (421-5334)	8
11	Operating System: Software, DDPA (Dell Data Protection Access), version 2.3, OptiPlex x010 (421-8276)	8
12	Mouse: Dell MS111 USB Optical Mouse,OptiPlex and Fixed Precision (330-9458)	8
13	TBU: Intel Standard Manageability, Dell OptiPlex 7010 (331-6245)	8
14	CD-ROM or DVD-ROM Drive: 8X SlimLine DVD-ROM, Dell OptiPlex (318-0619)	8
15	CD-ROM or DVD-ROM Drive: Thank you for Choosing Dell (318-2231)	8
16	Sound Card: Heat Sink, Mainstream, Dell OptiPlex Ultra Small Form Factor	8

(331-1182)

17	Speakers:	Dell AX510PA black Stereo Speaker Bar Flat Panel DisplayDell Optiplex/Precision (313-6742)	8
18	Cable:	OptiPlex 7010 Ultra Small Form Factor Up to 90 Percent Efficient Power Supply (331-6369)	8
19	Cable:	Regulatory label, Mexico, for OptiPlex 7010 Ultra Small Form Factor (331-6371)	8
20	Cable:	Enable Low Power Mode for EUP Compliance, Dell OptiPlex (330-7422)	8
21	Documentation Diskette:	Documentation, English and French, Dell OptiPlex (331-2030)	8
22	Documentation Diskette:	Power Cord, 125V, 2M, C13, Dell OptiPlex (330-1711)	8
23	Bundled Software:	No Productivity Software, Dell OptiPlex, Precision and Latitude (421-3872)	8
24	Factory Installed Software:	No ESTAR Settings, OptiPlex (331-8325)	8
25	Feature	No Resource DVD for Dell Optiplex, Latitude, Precision (313-3673)	8
26	Service:	Dell Limited Hardware Warranty Plus Service Extended Year(s) (995-4303)	8
27	Service:	Dell Limited Hardware Warranty Plus Service Initial Year (995-4093)	8
28	Service:	ProSupport: Next Business Day Onsite Service After Remote Diagnosis 3 Year Extended (995-2473)	8
29	Service:	ProSupport: Next Business Day Onsite Service After Remote Diagnosis Initial Year (995-0923)	8
30	Service:	Thank you choosing Dell ProSupport. For tech support, visit http://support.dell.com/ProSupport or call 1-866-5 (989-3449)	8
31	Service:	ProSupport : 7x24 Technical Support , 3 Year Extended (995-2633)	8
32	Service:	ProSupport : 7x24 Technical Support , Initial (995-1553)	8
33	Misc:	Chassis Intrussion Switch, Dell OptiPlex Ultra Small Form Factor and Desktop (317-2828)	8

34	Misc:	1 W ready mode - exceeds FEMP 3W recommendation. Mode can be disabled in BIOS. OptiPlex (310-1959)	8
35	Misc:	No Quick Reference Guide, Dell OptiPlex (310-9444)	8
36	Misc:	Shipping Material for System, Ultra Small Form Factor, Dell OptiPlex x010 (331-1271)	8

G. Dell Latitude E6330 Laptop Computer

#	Description	Qty
Dell Latitude E6330 Laptop Computer		
1	Dell Latitude E6330 (225-2821)	6
2	3rd gen Intel Core i5-3320M Processor (2.6GHz, 3M cache, Upgradable to Intel vPro technology), Dell Latitude E6330 (318-1956)	6
3	4.0GB, DDR3-1333MHz SDRAM, 2 DIMMS, Dell Latitude (317-6239)	6
4	Internal English Dual Point Keyboard, Latitude E (332-0035)	6
5	Documentation (English), Dell Latitude and Precision Workstations (332-0472)	6
6	Tech Setup Guide, English, Dell Latitude E6230,E6330 (331-6665)	6
7	Intel HD Graphics 4000, Dell Latitude E6230/E6330/E6430S (320-3775)	6
8	320GB 5400rpm Hard Drive 7mm, Dell Latitude E6X30 (342-4941)	6
9	No Dell ControlVault, No Fingerprint Reader, No Smartcard Reader and No Contactless Smartcard Reader (342-4416)	6
10	13.3 in HD(1366x768) Anti-Glare LED, Dell Latitude E6330 (320-3711)	6
11	Windows 7 Home Premium, 32-bit, with Media, Latitude, English (421-8024)	6
12	Windows 7 Label, Latitude, Vostro and Mobile Precision Notebooks (330-6322)	6
13	Software, DDPA (Dell Data Protection Access), version 2.3, Dell Latitude EXX30 (421-8718)	6
14	US - 3 foot Flat Power Cord, Dell Latitude (330-4016)	6
15	90W 3-Pin, AC Adapter, Dell Latitude EXX30 (331-5829)	6
16	8X DVD+/-RW, Dell Latitude E4 (318-1732)	6
17	8X DVD+/-RW Bezel, Dell Latitude E63X0/E64X0/E65X0/ATG (318-0466)	6
18	Thank you for Choosing Dell (318-2231)	6
19	Dell Webcam Central Software Dell Latitude/Mobile Precision (421-1201)	6
20	Light Sensitive Webcam and Noise Cancelling Digital Array Mic, Dell Latitude E6330 (320-3190)	6

21	Dell Wireless 1504 802.11g/n Single Band Wi-Fi Half Mini-card, Dell Latitude E4/Mobile Precision (430-4639)	6
22	No Intel vPro Technology Advanced Management Features, Dell Latitude E6330 (331-6508)	6
23	6-Cell (65WH) Primary Lithium Ion Battery, (3.0Ah) ExpressCharge Capable for Latitude E4 (312-1627)	6
24	E-Port, 130W Simple Port Replicator, USB3.0 for Latitude E-Family (331-6313)	6
25	Energy Star Enabled/E-PEAT, Latitude E6X30 (331-6213)	6
26	No Productivity Software, Dell OptiPlex, Precision and Latitude (421-3872)	6
27	Basic Hardware Service: Next Business Day Onsite Service After Remote Diagnosis 3 Year Extended (994-3234)	6
28	Basic Hardware Service: Next Business Day Onsite Service After Remote Diagnosis Initial Year (994-3194)	6
29	Dell Limited Hardware Warranty Plus Service Extended Year(s) (994-2554)	6
30	Dell Limited Hardware Warranty Plus Service Initial Year (994-2544)	6
31	Dell ProSupport Service Offering Declined (991-2878)	6
32	Accidental Damage Service (988-7689)	6
33	CompleteCare Accidental Damage Protection, 4 Year (993-9631)	6
34	Intel Core i5 Processor (331-1633)	6

H. APC Smart-UPS RT 1500VA Tower Online UPS

General Information	
Manufacturer	American Power Conversion Corp
Manufacturer Part Number	SURTA1500XL
Manufacturer Website Address	www.apc.com
Brand Name	APC
Product Line	Smart-UPS
Product Series	RT
Product Model	SURTA1500XL
Product Name	SMART-UPS RT 1500VA (120V) UPS
Product Type	Dual Conversion Online UPS
Technical Information	
Plug/Connector Type	NEMA 5-15P
Receptacles	6 x NEMA 5-15R - Battery/Surge-protected
Power Description	
Load Capacity	1.50 kVA/1.05 kW
Input Voltage	110 V AC
Input Voltage Range	90 V AC to 150 V AC Mains Operation
Input Voltage Range	120 V AC Nominal
Output Voltage	120 V AC Nominal
Frequency	50 to 60 Hz Input
Waveform Type	Sine Wave
Surge Energy Rating	540 J

Management	
Network Management	Optional
Overload Protection	verload Protection Mains Oper
Alarm	On Battery
Alarm	Overload
Alarm	Low Battery
Bypass Switch	Automatic
Emergency Power OFF	Yes
Battery Management	Intelligent Battery Management

Controls/Indicators	
Status Indicators	tatus Ind tatus Indicatorsrs tatus Indicatorsrs Ma tatus Indi tatus Indicat tatus Indicatorsrs tatus Indic

Interfaces/Ports	
Interfaces/Ports	1 x DB-9 RS-232 Serial
Interfaces/Ports	1 x USB
Modular Slots	1 x SmartSlot

Battery Information	
Batteries	Spill-proof, Maintenance-free Sealed Lead Acid User Replaceable Hot-swappable
Backup/Run Time	0.14 Hour 1.05 kW Full Load
Backup/Run Time	0.37 Hour 525 W Half Load

Additional Battery Connections	1
Environmental Conditions	
Temperature	32°F (0°C) to 104°F (40°C) Operating
Temperature	-4°F (-20°C) to 122°F (50°C) Storage
Humidity	0 to 95% Relative Humidity Storage
Humidity	0 to 95% Relative Humidity Operating
Altitude	0 ft to 50000 ft Storage
Altitude	0 ft to 10000 ft Operating
Thermal Dissipation	393 BTU/h
Physical Characteristics	
Color	Black
Height	3.0"
Width	17.0"
Depth	22.0"
Power Cord/Cable	6 ft
Form Factor	Tower
Weight (Approximate)	61.00 lb
Miscellaneous	
Package Contents	ackage Contentsate)ticsng ackage Contentsate) ackage Contentsate) ackage Contentsate)ti ackage Contents ackage Conte ackage Conten

Additional Information	⬚dditional Informationcsng Operating Lead Acid User Replaceable Hot-swappableis Initial Year (99
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Warranty	
Limited Warranty	2 Year
Parts Warranty/Labor	2 Year

I. **APC UPS Network Management Card**

General Information	
Manufacturer	American Power Conversion Corp
Manufacturer Part Number	AP9630
Manufacturer Website Address	www.apc.com
Brand Name	APC
Product Name	UPS Network Management Card
Product Type	UPS Management Adapter
Technical Information	
Proprietary Slot Type	SmartSlot
Ports	1 x RJ-45 Network
Management	**Scheduling:** Customize shut down and reboot of connected equipment and UPSs. **Data logging:** Identify problematic trends before they escalate or export the data log for analysis. **Event logging:** Pinpoint the timing and sequence of events leading up to an incident with the event log. **Run command file:** Run command file on shutdown sequence as well as start-up sequence. **Remote UPS management:**

Enable management of your UPS by connecting it directly to the network.

Browser Accessible:

View the user interface with a browser. Provides quick access from anywhere on a secure network.

Enterprise management system compatible:

Manage your APC devices from a single system by forwarding SNMP traps (events) to your preferred enterprise management system.

Reboot equipment remotely:

Saves dispatching technicians to remote locations.

Operating System Shutdown:

Prevents possible data corruption by performing graceful, unattended operating system shutdown in the event of an extended power outage.

Protocols	HTTP
Protocols	Telnet
Protocols	SNMP
Protocols	SSH
Protocols	SSL

Security Features	**Password Security:** User-selectable password protection prevents unauthorized access. **Three-tier user access:** Control user access on three levels including read only, device and administrator. **Radius support:** Use an existing radius server to securely authenticate, authorize, and

account for your APC device.

PowerChute Network Shutdown:

Reliable network-based shutdown of multiple servers.

Physical Characteristics	
Height	1.5"
Width	4.8"
Depth	4.5"
Weight (Approximate)	2.82 oz

Miscellaneous	
Additional Information	**Integrates with InfraStruXure Central:** An IT-ready, scalable monitoring system that collects, organizes, and distributes critical alerts, surveillance video and key information, providing a unified view of complex physical infrastructure environments from anywhere on the network. **Flash upgradeable firmware:** Install maintenance releases of firmware remotely using FTP. **Notification:** Be notified of problems to ensure crucial situations are dealt with in a timely manner.
Compatibility	ompatibilityf p UPS ompatibilityf p ompatibilityf ompatibility Units
Green Compliant	Yes

Green Compliance Certificate/Authority	RoHS

II.   Software

A. Cisco Unified Communications Manager Express (CUCME)

Software data sheets can be found at the following location:
http://www.cisco.com/en/US/products/sw/voicesw/ps4625/prod_literature.html

One (1) Cisco Communications Manager Express license
Fifty (50) seat licensing for CUCME and SRST

Full part list including licensing shown in Appendix D., Section I. Hardware, Sub-Section C. Cisco 2911 Integrated Services Router (ISR).

B. Cisco Unity Express (CUE)

Software data sheets can be found at the following location:
http://www.cisco.com/en/US/products/sw/voicesw/ps5520/prod_literature.html

One (1) Cisco Unity Express license
Fifty (50) mail box licenses for CUE
Six (6) port licenses for CUE

Full part list including licensing shown in Appendix D., Section I. Hardware, Sub-Section C. Cisco 2911 Integrated Services Router (ISR).

C. VMware ESXi 5 Standard

Product information can be found at the following location:
http://www.vmware.com/products/vsphere/esxi-and-esx/overview.html

#	Item	Description	Qty
Vmware ESXi 5 Standard			
1	VS5-STD-C	VMware vSphere 5 Standard 1 Proc 32GB-VRAM	1
2	VS5-STD-3P-SSS-C	VMware Production Support/Subscription vSphere 5 Standard 1 Proc 3 Year	1

June 8, 2015

D. Microsoft Office 365

Product information can be found at the following location:
http://office.microsoft.com/en-us/

#	Item	Description	Qty
Microsoft Office 365			
1	UT6-00005	Microsoft Office 365 (Plan E3) - Subscription license (12 months) - 1 user - EA Subscription - Win, Mac - All Languages	25

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