



INFORMATION TECHNOLOGY
MASTER PLAN
INITIATIVES

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Coast-to-Coast

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Presented to



Town of Danville

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Gov 2.0

1.1 TOWN MEETING HALL AUDIO/VISUAL

Findings & Observations

- Town is collecting AT&T Peg tax and plans capital improvements related to meeting recording and broadcast
 - ◆ The Town Meeting Hall space presents some A/V challenges

Recommendations

- Develop initial A/V design for review and comment by Council
- Prepare performance based design for RFP to perspective vendors
 - ◆ Implement in phases and as dollars become available
- Consider video streaming and automated agenda software when feasible

Immediate Next Steps

- Develop initial A/V design for review by Council

1.2 COUNCIL VIDEO STREAMING

Findings & Observations

- Town is collecting AT&T Peg tax and plans capital improvements related to meeting recording and broadcast
- Streaming Council meetings to the Internet provides interested parties with another viewing method

Recommendations

- Upon completion of video recording of public meetings, investigate video streaming methods

1.3 TOWN LOBBY KIOSKS

Findings & Observations

- Town currently utilizes a desktop computer in the lobby to provide access to limited permit information
- Many communities use Kiosks to provide residents with online services instead of waiting staff
 - ◆ Maps, permitting, Parks class registration, payments

Recommendations

- Understand potential usage patterns using desktop computers before spending additional funds on Kiosks
- Consider placement / use of kiosks for self service at Town facilities where appropriate such as Town Office, Community Centers and Library

1.4 WEBSITE CONTENT AND METRICS

Findings & Observations

- Staff would like to improve its web tacking capabilities and analysis
- Staff would like to internally publish and better utilize results to improve its web content management

Recommendations

- Implement Google Analytics or comparable software to track website activity
 - ◆ Publish monthly summary reports of Web usage
- Develop a strategy and use of tools to allow the departments to manage frequently changing content on their Web pages (See Website Policies and Procedures)

1.5 WEBSITE UPDATES AND PROCEDURES

Findings & Observations

- IT is working to train staff to perform content updates and remove content
- Training staff to perform website updates directly has been moving forward slowly
- After review of Help Desk tickets, we believe IT is spending one to two hours per day performing website updates

Recommendations

- We recommend that IT should be responsible for consistent design and format, departments should be responsible for up-to-date content
- Policies and update procedures will formalize the website update process and help to eliminate excuses
- We successfully used a similar method at another municipality to develop consensus that updates should be moved to the departments
 - ◆ The procedures also outlined protocols for press releases and other types of communications

Immediate Next Steps

- Assemble website update team
- Inventory types of communications to be published on the website and determine procedure flow
- Assign specific department staff to specific content update requirements
- Inventory all specific content update needs and estimate initial and ongoing labor hour requirements (ongoing should be estimated by labor hours per week to be utilized in staffing resource requirements and assignment decisions)
- Document procedures
- Train staff

1.6 WEBSITE E-INTEGRATION

Findings & Observations

- Electronic services and payments are currently relegated to a small subsection of the website
- Electronic forms and other documents are presented in PDF format for printing by website users

Recommendations

- Review website to reduce the need to jump between standard content and e-Gov content
- Integrate, through cross-referencing and other means, electronic services and payment with website content
- Convert electronic forms to online “fill-able” forms that do not require printing and faxing
 - ◆ Accept electronic submissions when possible
 - ◆ Integrate forms with the Town source document through LaserFiche, SharePoint (example), or Ektron if possible
- Inventory all Town payment options and develop detailed plan to include online payments as an option for each

1.7 WEBSITE DEVELOPMENT / ENHANCEMENTS

Findings & Observations

- Town provides E-Newsletter signup through electronic mail to its constituents for many services: Activity Guide, Danville Today, Press Releases, etc.
- All departments would like more content added, maintained, and frequently updated on the website; examples include:
 - ◆ Field/Facilities Closures
 - ◆ Mowing Schedules
 - ◆ Storm Information
 - ◆ Project Information
 - ◆ Event Updates
 - ◆ Moratoriums
- The backend sign up process and email distribution processes are manual
- RSS provides the ability for interested parties to receive updates whenever a website changes
- Constant Contact is in use on a limited basis for automated signup to interest groups

- The front page of the website is relatively static and does not reflect important town news and events in a timely manner
 - ◆ Residents should have access to many types of alerts through the website
 - Construction and street closings
 - Public safety
 - Ordinance changes
 - Special meetings
- Staff currently working on making the website more news oriented

Recommendations

- Continue work to make website more news oriented
- Consider adding one-way blogging capabilities to add news items
 - ◆ Note: This must be accompanied with a commitment to frequently add news items
- Expand Constant Contact to include more interest groups
- Implement RSS to assist more sophisticated users in getting website updates
- Inventory different applicable alerts and design into website
- Work with interested Departments to provide additional tools and design space to enhance content
- Inventory all specific website enhancement requests/needs by department
- Estimate internal/external resource requirements for initial setup and ongoing updates
- Assign specific staff responsible for maintaining specific Web content
- Train all applicable staff on Web content management policies and tools

1.8 ONLINE SOCIAL COLLABORATION

Findings & Observations

- The Town does not currently utilize social collaboration tools to interact with its constituents
- LinkedIn (Professional Profiles) would be helpful for non-Town personnel to review the background of key Town officials
- Online social collaboration, such as Facebook and Twitter with real-time open blogging was suggested by two departments, including Parks & Recreation and Human Resources
- Many departments discussed concern regarding policy, legal, and resource requirements of maintaining additional social collaboration solutions, such as Facebook and Twitter
- Ektron (Town Web content management tool) has some social collaboration tools

Recommendations

- Consider the benefit and request applicable Town officials to setup and maintain LinkedIn profiles
- Consider setting up an example profile and provide internal training to ease and encourage the setup process
- Consider piloting Facebook and Twitter in the Parks & Recreation department
- Policy and resource requirements should also be considered, estimated, and assigned prior to implementation

1.9 CITIZEN SINGLE SIGN-ON

Findings & Observations

- It is believed citizens/customers would appreciate the ability to have a single registration and maintenance of a single user ID and password for all applicable e-Government solutions the Town provides

Recommendations

- Inventory all citizen sign-on and password requirements of all Town e-Government solutions
- Estimate costs of developing the single sign-on capabilities
- Determine cost/benefit and ongoing resource requirements as new e-Government services are added in the future

DEPARTMENTAL / OPERATIONAL IMPROVEMENTS

2.1 SOFTWARE SELECTION BEST PRACTICES

Findings & Observations

The Town has historically followed a multi-vendor (best-of-breed) approach to application software selection and some equipment purchases. "Multi-vendor" means that each application is selected based on meeting the specific requirements of the user group requesting the application. Integration with other systems, application and technology consistency, and usefulness across the organization are secondary considerations.

The following discussion presents two alternative strategies for information system solutions: integrated enterprise and multi-vendor. Both strategies have their strengths and weaknesses. However, for those government agencies that want to share information across departments and are concerned with the overall cost of ownership, integrated enterprise solutions may be more desirable, assuming the enterprise vendor meets the feature/functionality requirements of the organization and/or specific user group needs. In the event the enterprise vendor has significant feature/functionality deficiencies, the multi-vendor approach may be the appropriate option.

Integrated Enterprise Solution

Government agencies typically require a range of software applications to support government business, including: financial accounting, billing, permitting, maintenance and asset management, etc. With an integrated enterprise solution, a single vendor typically supplies all applications. Although these modules can stand alone, the benefit of an integrated enterprise solution is achieved by weaving them together through integrated subsystems.

Multi-Vendor Solution

The alternative to an integrated enterprise solution is a multi-vendor or "best-of-breed" approach. In this approach, an organization acquires individual subsystems to meet its needs. The goal is often to find individual applications or subsystems that specialize in a functional area, with the intent to obtain more features and greater functional capability.

In a multi-vendor situation, integration between subsystems usually does not exist "out of the box". An organization must choose either to make transaction entries manually from one subsystem to another, or to develop and maintain integration programs (interfaces) using internal staff or contractors. Both options require considerable resources above and beyond the cost of initial ownership. In addition, the results are usually less satisfactory than with a solution that offers native integration.

Continuous integration management is a major consideration with a multi-vendor solution for the following reasons:

- There can be multi-vendor support lines to call for help
 - ◆ Who do you call when there is a problem? Will there be finger-pointing?
- Interfaces may need to be retrofitted with each new subsystem or application version release

- Vendors release new versions of their software independent of one another, which may or may not impact the existing interface(s)
- Additional staffing is needed to maintain the internally developed integration environment
- Operating system and database releases could require additional retrofit efforts

Weighing the Pros/Cons of Multi-Vendor Solutions

Organizations contemplating a multi-vendor solution should consider the following questions:

- How will you clearly define the interface/integration requirements between multiple applications/business processes?
- How much of the interface/integration requirements can be defined and estimated before signing new contracts for new systems?
- How will you assess the technical capabilities and feasibility of the different vendors' databases and development tools?
- Will the vendors be motivated to assist you in your interface/integration efforts before and after signing contracts?
- How will you manage the business relationships with numerous vendors?
- Who will integrate the applications?
- Who will maintain the integration when new versions of the applications and operating system are released?

Recommendations

We believe the Town of Danville's application needs can primarily be provided by a limited number of enterprise-wide system(s). These systems may or may not provide all the functionality that "best-of-breed" systems do, but overall, enterprise systems can be cost-effective and may significantly reduce complexity.

Immediate Next Steps

- Consider conducting a Town-wide enterprise application needs assessment that will inventory current and future application needs, current vendors, current potential and/or type of vendors, future selection needs, training needs, resource requirements, etc.
- Utilize the results of the enterprise applications needs assessment to prioritize, estimate, and plan future needs

2.2 APPLICATION SUPPORT BEST PRACTICES

Findings & Observations

- The Town utilizes over 100 different software applications throughout all departments, and the number is growing
- Most Town software applications and systems are underutilized
- The Town does not have documented practices and procedures regarding developing needs for systems/technology, prioritizing and evaluating solutions, and identifying sufficient implementation, ongoing management, and support resources for these solutions
- The Town has insufficient IT resources to effectively ensure quality utilization and increase department process improvements and gain significant efficiencies
- Some departments have taken limited ownership and ongoing support responsibilities for their operational applications

- If IT is to maintain primary responsibility for application implementation, improvements, and ongoing support, additional IT staffing will be required (e.g., business/systems analysts)
- The Town should also make efforts to reduce and/or limit the total number of software vendors, databases, and instances of hardware requirements whenever possible, thereby reducing/limiting overall cost-of-ownership, support requirements, training and reporting needs, and improve overall integration capabilities

Recommendations

- Conduct a complete inventory of software applications/key technology systems utilized at the department level
- Conduct a complete inventory of software applications/key technology needed in the future
- Inventory specific users by software application including current and future use
- Specifically assign a process owner(s), application champion/super user(s), primary business analyst(s) role, application administration/setup and configuration responsibility, and custom/ad hoc report writer(s) for each application
- Key assignments should be responsible for understanding their industry best practices, solutions/processes available, and take the lead in continually assessing and inventorying needs
- Current and future needs can be evaluated and prioritized through a combination of mechanism including a Town-wide IT committee
- The IT Governance strategy and implementation can be an effective forum for departments to become more knowledgeable about technology and how it can be effectively utilized to enhance customer service and create efficiencies throughout Town's business process environments

2.3 OPERATIONAL DEPARTMENT SOFTWARE/SYSTEMS TRAINING

Findings & Observations

- The Town utilizes over 100 Software applications throughout all departments
- Sufficient and proper training is critical to gaining significant/maximum utilization of these various systems, which increases staff efficiency
- In many cases, numerous departments requested additional training in most primary departmental applications, such as: Munis financial/ERP modules, Munis Reporting, LaserFiche, Crystal Reports, GIS, HdL Business License, Web Content Management, etc.

Recommendations/Immediate Next Steps

- Inventory all requested training requirements by specific users, including types of training needed/desired
- Determine internal and external resource requirements/options to fulfill training needs
- Explore and inventory training options for all application software/systems, such as webinars (paid and freely available), paid vendor/Town Web training, on-site, etc.
- Determine/inventory all types and ongoing help solutions, including vendor support, online help, user manuals, Town developed SOPs (standard operating procedures), video training, etc.
- Develop a training plan with priorities, costs, prioritizations, resource assignments, and ongoing tracking mechanisms

2.4 ELECTRONIC COLLABORATION TOOLS

Narrative

Electronic collaboration software can provide effective, flexible, and secure ways of sharing information, including storing, routing and managing documents, use of blogs and wikis, maintaining task lists, managing forms, and creating and managing workflows.

Findings & Observations

- Significant demand for collaboration tools exists in Town departments, with features to include:
 - ◆ Two-way blogging (project only, not public facing)
 - ◆ Message boards
 - ◆ Project plans, task lists and alerts
 - ◆ Document checkout and revision control
- The Town is currently utilizing three systems with overlapping capabilities, including LaserFiche (EDMS), Basecamp (project collaboration), and Ektron (Web content management)
- Basecamp is beginning to be used by some staff for project collaboration
- Collaboration tools can be significant for Gov 2.0 by providing project repositories for:
 - ◆ Internal projects (workflow and tasks management, project management, and program management)
 - ◆ Joint Power Authority projects
 - ◆ Community/neighborhood projects
 - ◆ Town task forces and committees
 - ◆ Document sharing, versioning, searching, document check-in & out, Web access
- Integration with applications would provide added benefits
 - ◆ Electronic document management (LaserFiche)
 - ◆ Website integration
 - ◆ Intranet integration
- Ektron has a project collaboration product
- SharePoint can also be purchased and installed for intranet and can integrate with LaserFiche or other EDMS solutions

Recommendations

- Analyze various software options and select best fit (standard) for Danville, with criteria, including:
 - ◆ Integration with existing applications
 - ◆ Market share and use in surrounding communities
 - ◆ Cost

Immediate Next Steps

- Educate departments on collaboration software capabilities
- Understand when to utilize collaboration software, EDMS, departmental operational applications, website tools, etc.

- Analyze software options and select best fit
- Justify software based on potential uses and integration
- Inventory department needs, resources requirements, and assign staff to setup and configure initially
- Train all users

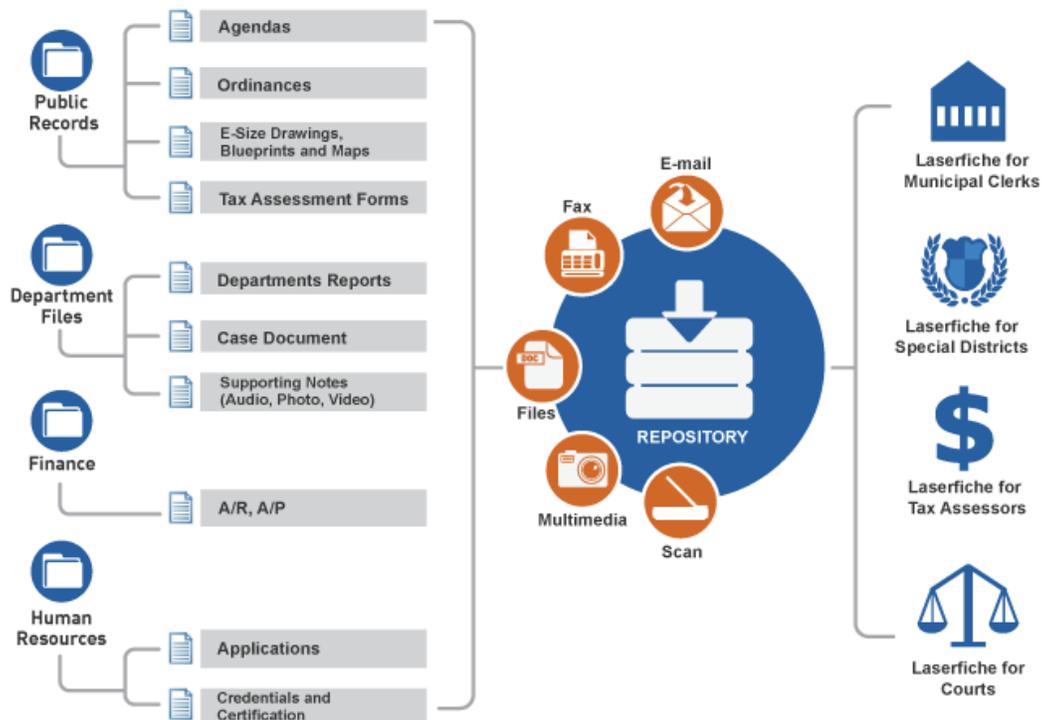
2.5 ELECTRONIC DOCUMENT MANAGEMENT NEEDS ASSESSMENT

Narrative

Electronic Document Management Systems (EDMS), also often referred to Enterprise Content Management Solutions (ECMS), can be utilized for much more than document scanning and storage. Additional uses include:

- Agenda Management
- Enterprise Records Management (including retention management)
- Integrated Document/Process Workflow Management, including Internal Request Management, and Routing and Distribution (A/P, A/R, HR, Project Tracking, etc.)
- Forms Management
- Project/Process Collaboration

The image below is an illustration from LaserFiche, the Town's current document management software vendor, showing additional overall functionality that is available from the company.



<http://www.laserfiche.com/en/Solutions/State%20and%20Local%20Government/Local%20Government.aspx#ProcessesImprovements>

Findings & Observations

- Town departments are primarily utilizing LaserFiche as document scanning and file storage
- Many needs expressed in all the department interviews can be accomplished through overall EDMS capabilities
- The Town recently purchased and began utilizing the LaserFiche WebLink which provides the ability to publish documents on the Town's website
- The image resolution of LaserFiche-scanned plan drawings is poor
- Need to look at configuration, setup, and indexing to improve file organization and retrieval
- Disk partitioning issues
- Town still has significant volume of hard copy files that are costly to retrieve from storage
- Town needs to determine which historical hard copy files need to be digitized or destroyed

Recommendations

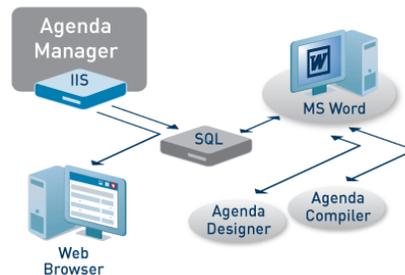
- The Town should consider conducting a needs assessment and process review with the departments to gain an understanding of how the system should work, what configuration changes or specific training would improve staff's ability to utilize the system to its fullest potential, and what other departmental application integration would help improve the departments' business processes
- Conduct a needs assessment to inventory all EDMS user utilization and technical issues/problems, including training needs
- Determine other document management-related needs that are not currently met or previously implemented
- Needs assessment document should be developed in a way that allows LaserFiche to respond to issues/problems to determine the true gap between LaserFiche capabilities and the Town's needs
- If gap is reasonably minor, consider developing an improvement plan to correct the issues, problems, and/or needs and add the software modules and user licenses needed
- Determine what processes are better performed in operational applications, EDMS, electronic collaboration solutions or the Ektron content management solution
- Obtain a proposed scope of services from a qualified consultant
- Utilize an independent consultant for the needs assessment, not a consultant from a company that resells document management solutions
- Determine if LaserFiche can meet the Town's needs for an Automated Agenda Packet system
- If LaserFiche improvements are significant, the Town may want to consider the alternative of selecting and implementing another EDMS vendor with automated agenda management, minutes management, and online meeting video streaming

2.6 AUTOMATED AGENDA MANAGEMENT

Narrative

Automated Agenda Management Systems provide access to information for all departments involved in the agenda process. Staff members submit proposed agenda items online, where they can be automatically routed for approval through pre-configured workflows. Approvers receive e-mail notifications with links to items awaiting review. Town Clerk or other responsible parties add items to meetings, then prepare agendas and publish them to Adobe PDF. Agenda content is available online throughout the process and is easily accessible to those with a role in the process.

LaserFiche (incumbent vendor) Agenda Manager provides the ability to replicate manual processes through a Web interface, including options for conditional routing based on item content. In addition to access for authorized submitters and reviewers, the system can be configured to provide e-mail notification of agenda item status to any individual and to grant observer-only access for oversight. The complete history of all actions taken on an item is also tracked.



<http://www.laserfiche.com/Products/Product%20Modules/Agenda%20Manager.aspx>

Findings & Observations

- Public meeting documentation can be submitted, reviewed, and edited online by department staff
- Clerk can also submit, review, track and maintain version control, and assemble packets online
- Agendas are automatically published online via the process
- Integration to minutes management with Web publishing ability is also available
- Integration to Web-hosted video recording meetings that are synchronized with both the agenda and meeting minutes are available
 - ◆ Also see *Town Meeting Audio/Visual* initiative
- LaserFiche is currently utilized by the Town for document scanning and storage on a limited basis
- LaserFiche has Automated Agenda software and partners with Granicus for minutes management and delivering synchronized streaming video

Recommendations

- Gather requirements for agenda management systems
- Review and analyze alternatives and vendors
- Town should strongly consider standardizing on one vendor solution and its partners for EDMS, automated agenda management, minutes management, and video streaming

Immediate Next Steps

- Conduct an EDMS needs analysis, determine overall system requirements and vendor direction
- Consider conducting a formal EDMS system selection process that includes EDMS, automated agenda management, minutes management, and video streaming
- Obtain competitive pricing and determine multi-year implementation plan

2.7 MUNIS ENTERPRISE APPLICATIONS NEEDS ASSESSMENT

Findings and Observations

- The master planning needs assessment identified numerous application areas in need of additional focused training
- Several Munis application modules are being significantly underutilized
- Extensive use of spreadsheets and similar shadow systems are being used for reporting and/or processes that can likely be automated within the existing applications or with the addition of integrated applications available from the current ERP vendor (Munis)

In order to avoid spending thousands of dollars on unfocused application training that can still leave some processes not automated and/or optimized, we recommend conducting a needs assessment and developing an improvement plan. The needs assessment process inventories current and future functionality requirements by application. The software vendor is then asked to respond as to their capabilities/compliance with Danville's specific requirements. The GAP between the vendor's capabilities and the Town's current usage is then used to develop a customized/focused training and application implementation/re-implementation plan.

The requirements that the vendor is not capable of providing can then be dealt with by other means, such as efficient work-arounds, third-party applications, modifications, change in processes, etc. This process can also be used to inventory all reporting, as well as, integration/interface requirements between other applications, such as CRM, EDMS, website, GIS, etc.

Example modules/functionality that can be improved include:

- Project Accounting
 - ◆ Project Tracking
 - ◆ Contract Tracking
 - ◆ Bonds Tracking
- Munis Office
- Reporting
- Human Resources
 - ◆ Awards Tracking
 - ◆ Training and Certifications Tracking
 - ◆ Equipment Assignments
 - ◆ Benefits Tracking
- Time Tracking
- Work Orders
- ESS (Employee Self-Service)

- Fixed Assets
 - ◆ Equipment Inventory and Assignments
 - ◆ Bar Coding
- User Dashboard

Recommendations

- Obtain consulting services proposal to perform a needs assessment
- Conduct GAP analysis and develop improvement plan
- Acquire new applications and contract for vendor training and implementation services
- Implement and/or re-implement applications and provide customized focused training

2.8 CRM (CITIZEN / CUSTOMER) REQUEST MANAGEMENT

Narrative

Citizen Request Management Solutions are becoming more prevalent in municipalities to receive, track, and manage all types of requests and complaints. These types of solutions can categorize requests, prompt for typical information required, assign/route information to specific staff or departments and track the status, and fulfill overall reporting requirements. Ideal CRM functionality includes:

- Citizen Responsiveness (requests captured, completed, responses to citizens, when & how resolved)
- Prompt Request Routing (Departments/Persons)
- History (Complaints, Requests, Timeliness of Responses, Who Completed, How Resolved, Cost Analysis)
- Inter-Departmental Resource Linking
- Manage Resources
- Bench Marking / Performance-Based Measurements
- Useful in Planning & Budgeting
- GIS Integration
- Online customer surveys

Findings & Observations

- All departments requested CRM capabilities
- Munis Citizen Services can provide some the above functionality
- Munis has development plans to improve its CRM functionality, which would then be integrated to applicable operational applications, such as work orders, code enforcement, business licenses, etc.
- In some cases, staff was considering the need for purchasing additional software solutions to address these needs:

- ◆ Performance Indicators
- ◆ Customer Contact Log
- ◆ Citizen Requests/Complaints
- ◆ Online Surveys
 - Citizen Feedback
 - Citizen Program/Issues Input
 - Inbound Only Blogs

Recommendations

- Determine how Munis' Citizen Services can meet the current needs for Town CRM needs
- Determine if Munis' CRM development plans will adequately fulfill the Town's future CRM requirements
- Consider partnering with Munis to develop the required functionality
- Consider alternative CRM software vendors and required integration to applicable operational applications

2.9 WORK ORDERS APPLICATION – MUNIS IMPLEMENTATION

Findings & Observations

- The Town has been in process of the implementing Munis Work Orders for Maintenance Management
- Other departments may find the work order functionality beneficial in automating other business process (e.g., some types of internal project tracking, event tracking, human resources new hire and termination check lists, etc.)
- Processes/projects that involve work flow assignments to specific staff or departments and tracking of labor, materials, purchases, equipment uses, etc. can be potential candidates
- Maintenance department users appeared to lack understanding of work order system capabilities and their intended utilization of the system soon to be implemented

Recommendations

- Review current setup and configurations with the actual intended users of the system and gain their understanding and buy-in of the system requirements and uses before final user training and go-live
- Inventory other potential uses of the work order solution across departments
- Determine the process owners and application super users, as well as those to receive extended report writing and crystal reports training
- Define the application support needs and assignments of maintaining and continually improving the utilization of the system
- Obtain consulting and Munis assistance as needed when cost-effective

2.10 ONLINE APPLICATION TRACKING – MUNIS IMPLEMENTATION

Findings & Observations

- The Town has purchased, but not yet implemented, Munis Application Tracking
- Munis Application Tracking has capabilities to manage and process the application tracking process in a more automated manner
- Munis Application Tracking has online capabilities so that applicants can submit Town job applications online

Recommendations

- Review current setup and configurations with the actual intended users of the system and gain their understanding and buy-in of the system requirements and uses before final user training and go-live
- Determine the process owners and application super users, as well as those to receive extended report writing and crystal reports training
- Define the application support needs and assignments of maintaining and continually improving the utilization of the system
- Obtain consulting and Munis assistance as needed when cost/beneficial

2.11 ONLINE BIDS MANAGEMENT

Findings & Observations

- Several departments would like to automate the bids management process
- Need vendors to register for bids online
- Need vendors to register to obtain bid documents and central track in a single database
- Would like to improve the inter-departmental communication, processing, and routing of the bids process
- Would like to track the bid results online

Recommendations

- Conduct a needs assessment to define the Town's bids management processes and future requirements
- Consider purchasing and implementing the Munis Bids Management module
- Consider other bids management software solutions and online providers in conjunction with Munis, or instead of Munis if the Munis Bids Management solution does not sufficiently meet the Town's requirements

2.12 LAND MANAGEMENT APPLICATION SUITE

Findings & Observations

- A typical Land Management Suite of Applications includes: Project Planning/Zoning, Permits, Inspections, Code Enforcement, Business Licensing, and Land/Parcel/Address Management
- The existing Permitting and Inspections solution (Permits Plus, originally by Sierra) requires an unusual and unnecessary amount of manual effort, duplicate entries, and shadow systems (separately maintained spreadsheets, databases) to complete the required processes
- The Town also utilizes Permits Plus for limited planning tracking and code enforcement
- Permits Plus is under-utilized
- Permits Plus is no longer available as a new product in the marketplace as it lacks many of the streamlined processes and features that are typically available from other commonly used, integrated, enterprise “packaged” solutions
- Additionally, support for Permits Plus is limited and there may be upcoming issues with PC and Server operating systems that may force the Town to migrate to a new software solution
- The Town should expect significant productivity gains with the implementation of a new, integrated land management enterprise application solution

Recommendations

- Consider purchasing a fully integrated Community Develop Suite of Applications, including Project Planning & Zoning, Permits, Inspections, Code Enforcement, Business License, and Land Parcel Management
- Consider purchase and implementation of the above solutions through Munis in order to increase integration of the Town’s ERP solution and reduce overall software and database vendors
- Mobile inspections application capabilities for field inspectors should also be considered in order to improve efficiencies and utilization of the system
- Significant productivity gains should be realized by these related divisions working from a single fully integrated suite of applications
- Utilize a comprehensive structured system selection process to identify Town of Danville detailed feature/function requirements and build consensus among the sub-departments to select a single solution that fits everyone’s needs

Immediate Next Steps

- Conduct a detailed needs assessment (application feature/function requirements specific to the Town of Danville)
- Conduct further vendor research for qualified and affordable vendors to be invited to propose
- Issue an RFP
- Manage/facilitate a vendor proposal process
- Manage/facilitate a proposal review process
- Manage/facilitate demonstration processes
- Make a final vendor selection
- Review and negotiate contract
- Oversee implementation
- Conduct post-implementation reviews

2.13 CENTRALIZED LAND/PARCEL MANAGEMENT

Findings & Observations

- The Town uses multiple geo-based applications, such as: work orders, permits, code enforcement, planning (future), business licenses, GIS, etc.
- The address/parcel information is not synchronized and numerous problems due to inconsistencies and lags in updating information from the county occur
- The Town could realize significant productivity gains and improved accuracy by using a common centralized database to populate any new or changed information

Recommendations

- Consider utilizing the GIS database for the master address/parcel records. All updates of information from external and internal sources should first be done through the GIS system by GIS staff. Then updates to other systems would be done using the GIS master information.
- Strict control of who is authorized to make updates of this information should be enforced and typically limited only to GIS staff
- Additionally, limiting the number of vendor provided geo-based vendor provided applications (e.g., single Town-wide work order solution and an integrated land management suite of applications) will also help simplify the processes and improve accuracy and efficiencies

2.14 GIS NEEDS ASSESSMENT

Findings and Observations

- Numerous departments expressed the need for GIS integration with their operational applications and the ability to query maps and related reports without having to make requests through IT
- Field staff would like mobile access to GIS information and mapping
- Need the ability to self-print maps from the Town's GIS application for Crime Analysis
- GIS land parcel data is needed to populate HDL database for more current and consistent records
- Would like to link LaserFiche to GIS
- Need integrate GIS with all geo-based operational applications, such as: planning, permitting, inspections, code enforcement, business license, work orders, CRM, etc.
- Town lacks adequate GIS staffing (currently handled part-time by three staff members)

Recommendations

- Conduct a needs assessment to inventory GIS requirements for all departments, including:
 - ◆ Additional GIS applications, such as non-GIS-technician viewer applications
 - ◆ Other operational application integration needs
 - ◆ Additional user licenses
 - ◆ Additional hardware
 - ◆ Technical and user training needs
- Make GIS integration a requirement for all new geo-based software application procurements

- Create and fund a minimum of one full-time GIS technician that reports within the IT Department

Immediate Next Steps

- Obtain a proposed scope of services from a qualified consultant
- Utilize an independent consultant for the needs assessment, not a consultant from a company that resells GIS solutions

2.16 ELECTRONIC PLAN REVIEWS

Findings & Observations

- Building and Planning would like to utilize electronic plan submittal and review processing
- Multiple solutions are available, including purchased and online hosted solutions
- Most solutions may not be practical to integrate with the Town's current/future Land Management Suite of Applications
- Online solutions may be purchased in a traditional manner or paid on a per page and project/permit basis

Recommendations

- Explore solution options and capabilities
- Consider cost/benefit of available solutions
- Consider partner vendors (if available) with current Town software vendors to increase potential and ease of integration as applicable

2.17 BUSINESS LICENSE SOFTWARE UTILIZATION

Findings and Observations

- Business license functions are not integrated with the Munis financials or other department applications
- The Town uses HdL Business license software as a stand-alone solution
- The HdL solution has online payment capabilities for license renewals
- The Town would like to expand the utilization of the business license module and database to gather and track information on businesses that would be helpful to other departments, such as Building and Economic Development
- Need to ensure that HdL online and credit card processing are PCI compliant
- Would like to fully integrate business licenses with GIS for geo-based reporting and mapping
- Can see a future need for integrating the Permitting, Finance, and Business Licenses systems

Recommendations

- Review current utilization, functionality availability, and needs of all applicable departments

2.18 CLASS SOFTWARE UPGRADE

Findings & Observations

- Parks & Recreation is planning to upgrade to the latest version of the Class Parks & Recreation software
- Parks & Recreation would like to add the POS (Point of Sale) module to improve functionality and efficiencies of taking payments and managing the cash receipts process
- Improvement of the facilities reservation process is desired
- Improvement of notification reservation/maintenance conflicts is desired

Recommendations

- Inventory all improvements and additional module requirements for the Class Parks & Recreation system
- Obtain budget, timing, and resource requirements

2.19 PARKING ENFORCEMENT AND COLLECTIONS SOFTWARE

Findings & Observations

- The Town has purchased and implemented IParq for parking permits
- Police would like to purchase and implement IParq citations and collections modules with handheld units field use that have printing capabilities

Recommendations

- Obtain and clarify complete implementation and ongoing costs for the IParq parking enforcement and collections processes
- Determine the cost/benefit of creating and implementation of an electronic file that can be downloaded to the county versus manually entering citation information once per week
- Determine the process owners and application super users, as well as those to receive extended report writing training
- Define the application support needs and assignments of maintaining the system on an ongoing basis
- Obtain cost and resource requirements to accomplish needs both for improvement implementation and ongoing system maintenance and application support, including ad hoc/custom reporting writing
- Consider replacing HdL business licenses with the new land management suite of applications in order to maintain a fully integrated solution and reduce overall software vendors and databases. Note: HdL is also a potential candidate for the Land Management Suite of Applications

2.20 SQUAD CAR VIDEO RECORDING

Findings & Observations

- Squad car video recording increases public safety by recording interaction between Police and the public
- Automating the movement of the recording from the squad to the station eliminates issues related to individuals handling recordings
- Some systems come with multiple cameras for front, rear, and prisoner recording
 - ◆ Also, systems may come with collision detection sensor

Recommendations

- Investigate alternative systems for video recording and gather requirements
- Develop RFP and select vendor
 - ◆ Leverage and expand existing wireless to transmit video from squads to digital storage

2.21 SECURITY SURVEILLANCE VIDEO STREAMED TO SQUAD CARS

Findings & Observations

- Streaming surveillance video to squad cars can increase officer safety by providing a preview of the incident before arrival onsite
- Confidentiality is maintained by providing control of video feed to the owner
- Potential locations include
 - ◆ Town facilities, including parks
 - ◆ Businesses
 - ◆ School District
 - ◆ Requires 4G wireless at a minimum

Recommendations

- Initially, configure commanders and command vehicle(s) to view surveillance video
- After pilot, draft detailed procedures for use and roll out to squads

2.22 AUTOMATIC VEHICLE LOCATORS

Findings & Observations

- Automatic Vehicle Locators (AVL) can improve productivity by tracking the location and route of Town vehicle
- When integrated with computer aided dispatch, AVL can decrease police response time by providing exact location information of squads

Recommendations

- Investigate potential benefits of specific application of AVL
- Gather requirements for AVL and investigate potential vendors
- Develop RFP and select vendor

IT GOVERNANCE

3.1 IT GOVERNANCE

Findings & Observations

- TAG Committee recently formed
 - ◆ Committee provides some project guidance and sponsorship
- Additional communication of IT project priorities and schedules would be useful
 - ◆ All department heads should understand IT project priorities and due dates
 - ◆ A dynamic inventory of IT projects would be helpful

Recommendations

- Develop overall IT Project Inventory (Separate Exhibit)
- Revise TAG Committee focus to:
 - ◆ Determine priorities based on limited IT resources
 - ◆ Annual IT budget review and prioritization
 - ◆ IT Policy review
- Involve all departments in an IT committee for Town IT communication, education, and collaboration

Immediate Next Steps

- Develop inventory of IT projects, maintain the inventory, and publish monthly

INFRASTRUCTURE IMPROVEMENTS

4.1 COMPUTER ROOM IMPROVEMENTS

Findings & Observations

- The existing UPS operates at 90%+ capacity
- Most dual power supply devices are plugged into the UPS as one power source and directly into an unprotected circuit as the second power source
 - ◆ Limited power protection increases the probability of device failures and shortens device life-cycles
- Seismic bracing has not been implemented
- Over the course of time, some basic maintenance items, such as fireproofing, have lapsed
- The computer room is very full
 - ◆ Reorganization would be quite difficult
- Server consolidation will eventually reduce space requirements
 - ◆ Current generation servers utilize 30% to 50% more power than the previous generation

Recommendations

- Power distribution in the computer room should be redesigned
 - ◆ Each device should have access to two (2) UPS protected circuits
- A list of basic maintenance items for the computer room should be developed and remediated
- Seismic bracing should be designed and implemented for computer racks and power distribution
- Some thought should be given to room organization to improve space utilization

Immediate Next Steps

- Develop design of computer room power distribution and seismic bracing for bid
- Develop list of computer room maintenance items for staff remediation
- Implement power distribution system

4.2 NETWORK IMPROVEMENTS

Findings & Observations

- Single existing core switch is scheduled for replacement
- Server consolidation requires:
 - ◆ Many network connections (at least 6 per server)
 - ◆ Routing changes
- The addition of video surveillance will require routing changes
- Backup and planned disk consolidation will require more network connections

Recommendations

- Consider move to redundant core switches
 - ◆ Include revised VLAN plan
 - Create separate backup VLAN
 - ◆ Move routing to core switches

Immediate Next Steps

- Purchase redundant core switches
- Design VLANs with server consolidation and video in mind

4.3 SERVER CONSOLIDATION

Findings & Observations

- Danville has many single purpose servers
- The SQL server creates a bottleneck, causing occasional response time problems
- The interfacing applications server is also very busy
- Many of the servers in use are more than five (5) years old and under-powered
- Three (3) new servers have been purchased to consolidate the existing servers utilizing virtualization
 - ◆ Virtualization can also provide the basis for disaster recovery planning

Recommendations

- Analyze current server performance to help develop plan for consolidation (what goes where)
- Complete Disaster Recovery Restoration Matrix (See Disaster Recovery Planning) to assist in selection of appropriate virtualization software
- Work with a subject matter expert to understand design parameters of virtualization

Immediate Next Steps

- Implement critical dependencies prior to beginning virtualization
 - ◆ Computer room power
 - ◆ VLANs & core switches
 - ◆ Backup agents
- Develop design and plan for consolidation
- Consider moving SQL server to new server temporarily
 - ◆ Until virtualization design is complete
- Implement critical dependencies prior to beginning virtualization
 - ◆ Computer room power
 - ◆ VLANs & core switches
 - ◆ Backup agents

4.4 COMPUTER EQUIPMENT REPLACEMENT

Findings & Observations

- The computer equipment replacement budget has been significantly reduced
- IT responded by virtualizing desktops where possible
- Remote sites connected by T1 cannot undergo desktop virtualization due to speed constraints
- Remote sites have many PCs that were purchased more than five (5) years ago
 - ◆ Current desktop purchase recommendation is 4GB of memory, primarily due to virus protection software requirements
- Standard desktop replacement cycles have lengthened to five (5) years during the current recession
- Standard laptop replacement cycles have lengthened to four (4) years
- IT has purchased equipment to virtualize desktops in PD
- Desktop virtualization reduces support costs and increases IT productivity
- Not all mobile data computers in PD have been replaced
 - ◆ Estimate five (5) more to replace

Recommendations

- Continue desktop virtualization at Town Hall
 - ◆ Exceptions would be Engineering, AutoCAD, GIS, and IT workstations
- Develop detailed equipment replacement schedule and budget
 - ◆ Desktops every five (5) years
 - ◆ Laptops every four (4) years
 - ◆ Servers every five (5) years
 - ◆ Network equipment every seven (7) years
 - ◆ UPS batteries every three (3) years
- Replace older remote office desktops with newer PCs with 4GB of memory
- Replace PD mobile data computers as quickly as budget allows

4.5 WAN IMPROVEMENTS

Findings & Observations

- The Maintenance facility appears to be a logical site for a backup computer room
- Parks facilities served by VPN over the Internet have intermittent problems
- Existing T1s are cost effective, but provide limited bandwidth to remote sites
- Existing T1s cannot support:
 - ◆ Virtual desktop
 - ◆ More than a single video camera display at Town Hall
 - ◆ Data replication for backup data center
- May be able to utilize wireless from Maintenance to Town Hall using a 40' tower

Recommendations

- Consider implementation of fiber optic-based product to Maintenance for backup computer room
- Consider upgrading sites with VPN over the Internet to T1
- If bandwidth constraints reduce effectiveness of video surveillance, consider compression appliances, such as Riverbed Steelhead
- Depending upon bandwidth requirements, bond additional point-to-point T1s

Immediate Next Steps

- Implement T1s to replace Internet based VPN connectivity
- Determine best alternative for high speed (100Mb or more) connectivity to Maintenance
- Model bandwidth requirements for video surveillance before installation and determine bandwidth solution

4.6 WEBSITE TO REMOTE DATA CENTER

Findings & Observations

- The website was recently moved to Town Hall for improved control
- Existing Internet facing servers are very full
- Website configuration can be simplified by moving the website to a remote server
- Hosting the website remotely improves disaster recovery capabilities
 - ◆ If Town Hall were to become unavailable, a remote website could still be used as the Town's communications vehicle

Recommendations

- Consider moving the website to a remote server at a secured data center within the region
- T1 connectivity may be required to facilitate integration between website front end(s) and the internal applications

Immediate Next Steps

- Develop list of pros and cons for moving website to a remote data center
- Gather estimated costs
- Determine course of action and move if appropriate

4.7 EXCHANGE UPGRADES

Findings & Observations

- ClientFirst identified some Exchange maintenance that will reduce space requirements and speed backups
- Town currently uses Exchange 2003
 - ◆ Town limits Exchange mailbox size
- An archiving solution will be required for compliance with FIOA and other State mandates
- Exchange 2010 is readily available and Service Pack 1 will probably be released this fall

Recommendations

- Implement ClientFirst suggestions to eliminate extra database
- Eliminate Exchange mailbox size limitations
- Plan to upgrade to Exchange 2010 in 2011/2012 budget year
 - ◆ Purchase Enterprise version to acquire archiving capabilities

Immediate Next Steps

- Implement ClientFirst suggestions to eliminate extra database
- Eliminate Exchange mailbox size limitations

4.8 CENTRAL IRRIGATION CONTROLS

Findings & Observations

- Centrally controlling irrigation and sprinkler settings can reduce water consumption and save staff time

Recommendations

- Investigate costs and benefits of central control of irrigation and sprinkler settings

4.9 SERVER DISK CONSOLIDATION

Findings & Observations

- Currently, server disk is purchased and managed as a part of each server
 - ◆ Some servers are disk constrained
 - ◆ Others have lots of disk
- Managing disk is difficult and time consuming in a distributed environment
- The ability to utilize central disk storage to replicate files and take snapshots reduces risk during upgrades and speeds implementations

Recommendations

- Consider consolidating server disk to a storage area network
- Disk consolidation will reduce support costs and improve flexibility
 - ◆ The ability to create copies or snapshots of disk will reduce risk and speed upgrades

4.10 WIRELESS EXPANSION AND GUEST WIRELESS

Findings & Observations

- Town provides wireless access and guest wireless on a limited basis
- Current limits are implemented by sign-on duration
- Parks wishes to have Guest Access at more facilities
- Each of the three wireless sites have a separate controller and are managed separately

Recommendations

- Revise limits on Guest wireless to bandwidth utilization instead of duration
- Implement a "Splash Page" for legal acceptable use agreement for all guest use
- Expand wireless to additional facilities based on need
- Implement Cisco Wireless Control System for overall management of wireless at all sites

Immediate Next Steps

- Revise limits on Guest wireless to bandwidth utilization instead of duration
- Implement a "Splash Page" for legal acceptable use agreement for all guest use

4.11 CENTRAL FACILITIES LIGHT MANAGEMENT

Findings & Observations

- Field Lighting
- Online Requests / Payments
- The current version of CLASS provides for a connection to facilities for lighting management

Recommendations

- Investigate cost and benefits of integration between CLASS and facilities for managing lights

4.12 IN-GROUND TRAFFIC MONITORING

Findings & Observations

- Peer municipalities utilize traffic monitoring to regulate and react to traffic bottlenecks
 - ◆ Many municipalities have SCADA traffic control rooms

Recommendations

- Investigate cost of monitoring traffic at key points in Town

SECURITY

5.1 SECURITY IMPROVEMENTS

Findings & Observations

- Separate confidential letter was delivered to the Town covering items requiring immediate remediation
 - ◆ Minimal issues identified
- Squad MDC replacements moving slowly
- Very limited video surveillance implemented at one park
 - ◆ Staff must go to the park to retrieve video
 - ◆ High demand for additional video surveillance
- Access Control Security implementations have been ongoing
 - ◆ Parks would like additional access control at restrooms
- Town aware of PCI requirements for credit card processing, no action taken to date
- Authorization to access applications and create system sign-on informal
 - ◆ Limited procedures developed for security related items
- Server and desktop Microsoft patch maintenance good
 - ◆ Application patches not applied regularly (see Productivity Improvements)
- Logs are not archived and reviewed on a regular basis

Recommendations

- Purchase Toughbooks in bigger batches to reduce install and support time
- Video surveillance standards should be developed before major implementations are undertaken
 - ◆ Standardize on cameras, UPS, PoE switches, wireless products, and management software
 - ◆ Camera implementations and enhancements will occur over the next several years
 - ◆ Based on current scope, assume \$30,000 per park facility
- Develop PCI compliance plan to outline necessary steps and budget amounts
 - ◆ Implement plan over the following two to three years
- Develop policies and procedures for critical security related items
 - ◆ Firewall updates, Remote access, server and PC builds, incident response
- Upon conclusion of PCI compliance, conduct a formal IT Security Review

Immediate Next Steps

- Remediate initial security findings
- Develop video security standards
 - ◆ Begin implementation of video security
- Purchase remaining Toughbooks if budget allows
- Develop PCI compliance plan
- Begin work on IT security related procedures

5.2 SECURITY ACCESS CONTROL IMPROVEMENTS

Findings & Observations

- Town does not have standards for card key access to specific buildings or areas
- Providing card key access difficult because each individual seems to have unique requirements

Recommendations

- Develop standards by department for access to facilities and, if necessary, rooms within buildings

PRODUCTIVITY

6.1 IMPROVE IT PRODUCTIVITY

Findings & Observations

- Staff productivity rate (time available for new projects) is approximately 33%
 - ◆ Administration & Management 1,000 hours per year
 - ◆ Help Desk 2,500 hours
 - ◆ Website Maintenance 500 hours
 - ◆ New Project Work and Enhancements 2,000 hours
- Limited opportunities for formal training (understandable because of economy)

Recommendations

- Hiring of part-time help desk support should really help
 - ◆ May wish to expand to second part-time person
- User empowerment key
 - ◆ Learn to recognize repetitive tasks, train and enable users to handle
- Revise purchasing to buy "batches" of PCs
 - ◆ Utilize imaging software to create images of all PCs
- Implement desktop applications software patching and imaging
- Continue implementation of virtual desktops at Town Hall
- Complete implementation of WhatsUp Gold & NetFlow
- Review help desk tickets monthly and identify user training opportunities

Goals

- At end of year one – productivity level of 45%
- At end of year two – productivity level of 55%
- At end of year three – productivity level of 60%

Immediate Next Steps

- Purchase patch distribution and imaging software
- Make concerted effort to complete Network Management Implementation
 - ◆ CF to provide sample alerts/alarms matrix

6.2 IT STAFFING

Findings & Observations

- Information Systems is responsible for many functions with the Town:
 - ◆ Office supplies
 - ◆ Coffee service
 - ◆ IT supplies
 - ◆ Copiers and faxes
 - ◆ Audio Visual for conference rooms & meeting spaces
 - ◆ Access control security
 - ◆ Video surveillance
 - ◆ MUNIS table and configuration updates
 - ◆ Munis new application implementations
 - ◆ Permits Plus application support, setups, and configurations
 - ◆ Website updates
 - ◆ Crystal Reports ad hoc reporting for all departments
 - ◆ GIS
- Website enhancements could easily be a full-time job
 - ◆ Required to meet Gov 2.0 goals
- GIS extremely underserved
- IT handles most ad-hoc reporting in their spare time
- Only 2,000 hours are available in IT for new project work each year
- IT performs most applications business analysis
- Additional applications implementation project management required

Recommendations

- Empower staff to:
 - ◆ Order office supplies
 - ◆ Provide their own coffee service
 - ◆ Order IT supplies
 - ◆ Call the fax maintenance company
 - ◆ Setup Audio Visual for conference rooms & meeting spaces
 - ◆ Perform Website updates
- Consider full-time webmaster
 - ◆ Or could add part-time person for specific projects
- GIS departmental needs should be documented and resource requirements measured
 - ◆ See GIS Needs Assessment
- Consider full-time GIS technician position
- Ad-hoc reporting should be inventoried and resource requirements for support measured
- Add at least one part-time IT help resource
 - ◆ Will free up nearly 1,000 hours of IT time for project work

- Consider one or two full-time IT Management Analyst positions to assist departments with implementing, enhancing, maintaining, providing ad hoc reporting, and supporting enterprise operational applications, such as Munis (accounting, human resources), land management modules, EDMS, etc.

Immediate Next Steps

- Purchase patch distribution and imaging software
- Make concerted effort to complete Network Management Implementation
 - ◆ CF to provide sample alerts/alarms matrix
- Utilize IT Staff meeting to review help desk tickets monthly
 - ◆ Develop procedures and push repetitive tasks to staff

6.3 IT TRAINING

Findings & Observations

- IT Department has had limited formal training opportunities due to poor economy
- All Microsoft products have refreshed at least once since formal training was provided
- Staff has completed all available Ektron training
- Many projects will require new skill sets within IT for optimal success
- Formal class room training provides many benefits over books or videos

Recommendations

- Consider basic Cisco networking course for IT staff
 - ◆ Some knowledge transfer of Cisco networking basics to IT staff would be beneficial
 - VLAN assignment, wireless management, rate limits, access lists
- Incorporate four (4) hours of knowledge transfer/training at the conclusion of consultant projects
- Consider purchasing DVD VMware class
- Consider Microsoft certification track for Information Systems Analyst
- Encourage Information Systems Technician to continue taking some website programming classes
- Consider Project Management Book of Knowledge-based project management refresher for IT Manager

Immediate Next Steps

- ClientFirst to outline training plan by IT staff member

6.4 DUAL MONITORS

Findings & Observations

- Many staff utilize a single monitor
- Recently, Pan Logic, the virtual desktop appliance vendor, incorporated dual monitor support into their software
- Studies show dual monitors improve staff productivity 20% to 30%
- Our experience has been that staff requires 30 days to understand how to use the technology and then productivity improves
 - ◆ Initial rollouts in Finance have quickly moved to all knowledge workers and management at other clients

Recommendations

- Implement dual monitors on a pilot basis to understand best use and productivity improvements
- Implement as PCs are replaced or more quickly if demand requires

6.5 UNIFIED MESSAGING

Findings & Observations

- Interviews showed a strong desire for integrated messaging between voice mail, electronic mail, and fax
 - ◆ At other municipalities, departments have benefited significantly

Recommendations

- Complete the full conversion of the Town phone system to VoIP
- Discuss integrated messaging implementation options with telephone vendor
- Review implementation options to verify public records compliance
 - ◆ Most municipalities do not want voice mail to be "FOIA-able"

Immediate Next Steps

- Discuss implementation options with telephone vendor
- Determine best implementation design for Danville
- Purchase, implement, and train staff

6.6 TELEPHONE CALL ROUTING REVIEW

Findings & Observations

- Town requires staff answer incoming calls to published numbers
- Call forwarding between departments generates discontent
- Plans to forward published numbers in the event of a problem at Town Hall do not exist

Recommendations

- Consider conducting a review of published number call routing to determine:
 - ◆ If existing methods are sufficient
 - ◆ If additional reporting is required
 - ◆ If call center functionality would improve productivity
 - ◆ Develop alternatives for transfer of published numbers for Disaster Recovery

Immediate Next Steps

- Inventory published numbers and document call answering protocols

6.7 MOBILE ACCESS IMPROVEMENTS

Findings & Observations

- High user demand for remote access to applications
 - ◆ Multiple device types requested:
 - iPhones
 - Laptops
 - Toughbooks
- Remote access to electronic mail is provided
- There is no policy outlining who can utilize remote access or how remote access requests are approved
- IT has remote access to systems
- Previous implementations show significant time savings when electronic work orders are accessed through mobile computing devices
 - ◆ Reduced time spent retrieving work orders
 - ◆ Reduced communications time
- Mobile devices can also improve productivity of inspection personnel

Recommendations

- Develop a remote access policy
 - ◆ CF to provide samples
- Develop procedure for users to synch iPhones to electronic mail
- Expand terminal server application to include appropriate Munis modules
- Pilot remote access/field computing with selected Department

6.8 MOBILE / FIELD APPLICATION ACCESS

Findings & Observations

- Maintenance supervisors and Building and Planning Inspectors have need to access operational applications while working in the field
- Maintenance supervisors and inspectors would reduce non-productive travel time and transportation expenses
- Citizen and customer services would be enhanced and more timely in many situations
- This primarily a hardware and secure wireless networking issue as software applications that use browser technology will require no additional software
- Software programs that are not yet browser based will required a remote access software solution, such as Terminal Services

Recommendations

- Inventory mobile / field computer needs by specific staff and applications needed
- Estimate costs and resources of hardware and network setup
- Estimate one-time and ongoing monthly costs of cellular service provider
- Establish ruggedized laptop standards and include hardware in the PC Replacement planning and budgeting
- Have ruggedized laptop users replace their current PCs with laptops and provide docking stations with monitors and keyboard when staff are working in the office

6.9 USER TRAINING – PRODUCTIVITY & OFFICE SOFTWARE

Findings & Observations

- Appears Town staff underutilizes electronic mail and Outlook
- Many departments spoke of needing additional MS Office application training, such as Word, Excel, PowerPoint, Publisher, etc.
- Departments consensus was that classroom setting training held during normal business hours by an outside trainer would be most effective
- Additional PowerPoint training for:
 - ◆ Department Managers
 - ◆ Professional staff

Recommendations

- Conduct a survey by user what training would be helpful to determine actual need and planned attendees
- Consider developing custom training for required applications
 - ◆ Four hours each:
 - Beginner
 - Intermediate
 - Advanced

- Consider PowerPoint training
 - ◆ Develop consistent:
 - Backgrounds
 - Colors
 - Formatting
 - ◆ Customize training for Town Management & Board Presentations
- Consider class attendance a factor in performance evaluations. This can be accomplished by having department management involved and agreeing to which classes each employee would benefit from.

Immediate Next Steps

- Inventory specific training needs by each individual staff member
- Select training vendor to develop customized training
 - ◆ Develop outline and approve
 - ◆ Develop course work and dry run with pilot group
 - ◆ Schedule all through course(s)Emergency Preparedness
 - ◆ Productivity

6.10 VOIP TELEPHONE CONVERSION

Findings & Observations

- The Town's phone system is only 50% converted to VOIP
- Three Mitel SX2000 light PBX switches are being maintained

Recommendations

- Complete the full conversion of the Town phone system to VOIP
- Provide redundant VOIP controllers to the network

EMERGENCY PREPAREDNESS

7.1 EMERGENCY PREPAREDNESS - BACKUPS AND DISASTER RECOVERY

Findings & Observations

- Full backups occur each weekend
 - ◆ Incremental backups each day
 - ◆ File servers back up directly to tape
 - ◆ Current tape drive is obsolete
 - Two generations behind
- Backups remain in the tape drive and are not taken offsite
- A Disaster Recovery Plan has been drafted
 - ◆ Recovery priorities and timeframes developed by IT without Departmental input

Recommendations

- Immediately begin weekly offsite storage of tapes
 - ◆ Encrypt tapes before sending offsite
 - ◆ Utilize third-party, such as Iron Mountain
 - ◆ Develop tape rotation procedure in conjunction with records retention requirements
- Enhance backup systems by:
 - ◆ Implementing backup to disk, followed by backup to tape
 - Will reduce backup and restore times
 - ◆ Replace backup tape library
 - ◆ Purchase virtualization agent for backups
- Develop draft disaster recovery timeframes by application for review
- Investigate use of Maintenance computer room as DR site
- Recovery times probably lead to remote server & remote storage of virtual server images
- Consider the Maintenance facility for the backup IT computer room
- Utilize consultant to advice in Disaster Recovery Plan development

Immediate Next Steps

- Encrypt backup tapes
- Investigate alternatives for offsite tape storage and select vendor
- Develop bill of material for backup improvements, purchase and install
- Utilize CF provided disaster recovery timeframe matrix and modify for Danville
- TAG Committee to agree on recommended recovery priorities