



**Capitol Region Council of Governments
Back Office Service Sharing: Cost Reductions And
Service Quality Improvements**

December 2013

**Management
Partners**





December 20, 2013

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Dear Mr. Wray:

Management Partners is pleased to transmit the Back Office Service Sharing report, based on our analysis of potential shared services among the member municipalities of the Capitol Region Council of Governments (CRCOG).

As you will see, there are a number of opportunities to increase efficiency and effectiveness in the administrative functions of local government through a collaborative, regional approach. In some cases, this will enable CRCOG members to obtain a higher level of service in key support areas, and in others, allow them to reduce cost by leveraging economies of scale. In all of the approaches recommended, the emphasis has been on identifying common needs and finding innovative ways to address them.

Sincerely,

A handwritten signature in black ink, appearing to read "Gerald E. Newfarmer", written in a cursive style.

Gerald E. Newfarmer
President and CEO



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Introduction

The Capitol Region Council of Governments (CRCOG) has recognized an opportunity to reduce costs and increase efficiency by assessing the feasibility of a shared services approach for administrative functions of Towns within the Capital Region. In many instances the systems and processes for “back office” functions are similar for each community, but lack the efficiency that larger organizations can realize and in some cases are unavailable or underserved in smaller communities. Grant funding was secured to conduct a comprehensive study of these areas for improvement on a regional basis.

CRCOG retained the services of Management Partners to assist with facilitating the study, and a total of 23 jurisdictions agreed to participate. Their participation included providing background materials such as annual budgets and tables of organization, participating in field interviews with project staff, and completing an extensive data survey.

In the first phase of the project, Management Partners and CRCOG staff collected and reviewed the budgets and organization charts of the participating jurisdictions to understand different approaches to service organization and funding. Using that information, Management Partners staff interviewed representatives of each jurisdiction. The focus of the interviews was to gather perceptions about the various respondents regarding potential areas of service sharing that they felt would yield the best results, either in terms of cost sharing or in service quality. Using that information, we identified eight broad service areas for greater review through data collection.

Based on the data collection and review and the results of the survey, we have assessed each of the service areas. This report summarizes those assessments and provides recommendations for the best potential areas for sharing. In relative order of importance, the eight that will require various levels of implementation effort are:

1. Information Technology Services
2. Electronic Document Management

3. Financial Management Systems
4. Human Resources Management
5. Facilities and Asset Management
6. Fleet Maintenance
7. Property Tax Assessment
8. Procurement Expansion

While we present these recommendations in order of relative priority, it does not mean that one necessarily follows the other. Instead, it is reasonable to assume that several projects could operate simultaneously with the start-up participation of only a few members.

The interviews and discussions of the CRCOG Project Steering Committee highlight several factors that are fundamental to the prioritization of services and to the CRCOG-based implementation model. These include:

- There is strong support for the service delivery role of the Capitol Region Council of Governments. Well over half of the participants stated their assumption that back-office regional cooperation would occur principally under the aegis of CRCOG, either as the direct service delivery agent or as the facilitator of such service.
- Even in the discussions about specific service topics there was an underlying assumption that technology support would be critical to any delivery model.
- Within each broadly defined service area, there are multiple individual service tasks, some of which may be more amenable to regional cooperation than others. This mirrors the recent CRCOG survey of human resource management sharing.
- While one of the principal drivers of the project is the potential for cost savings, an equally important consideration needs to be enhancement of capability. Many of the participating towns and cities have minimal staffing and operational resources assigned to any given service area. For instance, staff members may perform multiple duties, some of which might be included in a regional model and some of which probably would not. As a result, some towns and cities may not experience a substantial cost reduction with regional cooperation. The value for those towns and cities lies in the ability to provide services more effectively and to have a greater capacity for financial and operational management.
- Improvement of many, if not most, of the service topics listed by the towns and cities relies on information technology that does

not currently exist, except within a limited number of the larger towns and cities. As a result, any large regional cooperation opportunity is going to require a commitment to a regional technology strategy. Some relevant examples include:

- The majority of the participating towns and cities use the same financial management system. However, they use different versions and different application modules.
- Almost all discussed the need for greater technical support. Additionally, the system being used is a moderately capable second tier financial system, with limited capability for the more robust financial management demands which the towns and cities are facing. Simply servicing those systems regionally yields little benefit; advantage is to be gained in a more expansive enterprise resource strategy (ERP) that the towns and cities individually would be unable to afford.
- Similarly, virtually none of the interviews indicated any meaningful human resources information systems or document management system, again both essential components of effective management.

Shared Services—Value and Quality

The underlying premise of the value of sharing services is the concept of creating economies of scale. As an organization grows, it is able to provide more units of service at a lower cost per unit. The reason for this is that there are two elements of the cost of a public service. The first is the fundamental cost incurred in deciding to provide a service, or the entry cost. The second is the cost of actually performing the service, or the unit of service cost.

For example, a town provides accounts payable and accounts receivable services. Under generally accepted accounting principles, the town has to have two clerks—one for billing (invoicing) and one for receipts (receivables). These two persons are the entry cost to the financial service; the work cannot be performed without them. Let's say, for the sake of argument, that the town pays the payables clerk \$30,000 per year, and the clerk process 4,000 accounts payable transactions per year. Commonly accepted industry standards call for a payables clerk to be able to process 9,500 transactions per year. In this case, the clerk is being only 42 percent (4,000 divided by 9,500) productive. The remaining 58% of the time is base, or entry, cost. Overall, the town is paying \$7.50 per accounts payable transaction.

Now, let's assume that the neighboring town is in a similar situation, two clerks due to separation of duties, with the accounts payable clerk processing 5,000 transactions per year for the same salary. This means that the average cost per transaction is \$6.00. If the two towns were to share the payables function, they would be performing 9,000 transactions per year. This is still within the work norm for a single clerk. Only one payables clerk would be necessary for both towns. By sharing the service, the productive time increases to 95 percent, and the cost per transaction falls to \$3.33. Together, the two towns have saved \$30,000. They have done this by creating a larger mass of work that can be done with the same, or fewer personnel or equipment. This is the core premise: to achieve cost effectiveness, there needs to be a mass of work sufficient to consume the capacity.

There are three types of cost savings inherent in shared services. The first is actual financial savings. This occurs when the participating jurisdictions achieve a physical cost reduction that can be recorded in the annual budget. The second cost savings is future cost avoidance. This occurs when the jurisdictions anticipate that they will incur new costs for services unless they act to change the service cost model. The third type of cost savings is in the area of opportunity cost. This means that savings in one service area allow the government to shift those saved resources to other services that are in need of additional staffing or equipment. The savings in one area allows for improved services in another without an increase in cost.

There are many different approaches to estimating the cost value of service sharing. Most start with an assumption of a ten percent savings and grow exponentially. The experience of the CRCOG's project consultant manager, who has studied shared services for nearly 40 years, is that initial savings are usually about eight percent, increase to the 15 to 18 percent range if four to six units participate, and can increase to between 25 to 30 percent if there are ten or more participants, assuming that all participants agree to the same service structure and delivery systems. These savings get lost rapidly if there is not a high level of cooperation.

While cost factors are usually the principal drivers behind shared services, cost should not always be the primary motivator. Service quality is also an important factor. Quality has a cost to it. During our interviews, many of the cities and towns talked about their desire to improve the quality of the services they provide but expressed frustration that did not have the size or resources to move increase service quality. The coming together of multiple cities and towns to share resources, either using savings from other sharing or recognizing the need for some additional investment, enables those towns to improve services. For example, many of the local government use a common financial management system. That system has been in use for many years and has proven to be a reliable workhorse. However, neutral industry assessments show other systems available with greater capability. Individually, these newer systems may be beyond the resources of a city or town; together, there is a greater ability for the upgrade.

Analysis of Principal Shared Service Opportunities

This section begins with a general overview of the principal forms of service sharing that might be most appropriate for the services under consideration. The starting point is to understand the advantages and disadvantages of the particular approach. Then, we provide a summary table that reflects which sharing alternative or alternatives might be most appropriate for each respective service. It is important to note that the concept of a service bureau is the only approach that appears beneficial for all eight service areas. For this reason, our analysis places more emphasis on that model but also uses secondary models, particularly fee for service and brokered service, as techniques to finance specific service lines within the service bureau.

While there are many different variations of shared services that local governments might consider, this project has considered the four approaches most directly related to the scope of the work. They are:

- Inter-jurisdictional contracts
- Fee for service
- Brokered service
- Service bureau

There are two parts to this overview. The first is a brief description of the sharing option, an example that is already in place within the Capitol Region Council of Governments, and a summary of the advantages and disadvantages of each. The second part is a summary of which approaches may be considered most appropriate for each of the services under study.

Principal Shared Service Approaches

Inter-jurisdictional Contract—Two or more political subdivisions agree to provide services jointly and enter into an inter-local agreement that describes the service or services to be provided, identifies the service provider, establishes the performance standards, and establishes the

pricing. An example in place is the Avon and Canton Shared Services Agreement for Assessment, Social Services, and Animal Control.

Advantages include:

- Easy approach to implement service sharing
- Not restricted to any number of entities
- Works from existing relationship experience

Disadvantages include:

- Can result in multiple agreements in a given region
- Economies of scale limited by number and size of participants
- Historically poor performance by local governments in managing service contracts
- Increase in number of participants can make service management cumbersome
- Can be perceived as giving up “local control” to another agency

Fee for Service—One agency provides a service for another agency and charges a fee for that service based on unit cost. One example would be a joint fuel purchase. Advantages include:

- Easy approach to implement service sharing
- Not restricted to any number of entities
- Limited financial commitment by either party

Disadvantages include:

- Can result in multiple agreements in a given region
- Economies of scale limited by number and size of participants
- Can result in creation of inter-jurisdictional competition if one agency starts “shopping” for best deal.
- Limited financial certainty since sharing is based on single transactions

Brokered Service—One agency serves as a wholesale agent on behalf of other agencies. The server agency enters into an agreement with a vendor who agrees to provide a given server to any participant at pre-established rates. The server agency then receives an administrative fee for acting as wholesaler and manager. An example locally is ezIQC. Advantages include:

- Minimal start-up costs, usually proposal process for securing service providers
- Financial risks are deflected to the vendors
- Flexible approach to service sharing across large geographic areas, particularly when technology solutions are not available
- Works well when a few vendors have widely varying price points for same or similar service among multiple jurisdictions

Disadvantages include:

- Managing the brokered agreement to assure service fee reimbursement
- Managing the brokered agreement for service quality

Service Bureau—A single agency provides one or more services to other agencies that pay for the service on a subscription basis. Pricing alternatives may include an aggregate flat fee, a flat fee per type of service, or a base fee and unit cost fee for specific services. CRCOG's Purchasing Service is an existing example. Advantages include:

- Most effective approach to providing a mix of common services among multiple jurisdictions
- Creates greatest level of economies of scale and consistent quality of service across all of the participants; more of a regional economy rather than a local economy

Disadvantages include:

- Most difficult approach to establish
- Considerable financial risk if there is a large front-end capital investment
- Individual economies of scale will vary according to size and existing service resources of any given participant

Viable Shared Service Options by Sharing Approach

The preliminary interviews and data survey focused on eight principal service areas:

1. Document management;
2. Facilities maintenance (asset management);
3. Financial management;
4. Fleet management;

5. Human resources;
6. Information technology;
7. Procurement; and
8. Property assessment.

Each of these areas is amenable to some form of the four service sharing approaches considered in this report. The following table lists each service area, indicates which approaches are most applicable, and provides comments relating to each. It is important to note that the Service Bureau approach is the only approach that appears to be viable for all eight of the service areas.

Table 1. Shared Service Areas by Sharing Approach

Service Area	Service Approach				Comments
	Inter-jurisdictional Contract	Fee for Service	Brokered Service	Service Bureau	
Electronic Document Management	✓	✗	✗	✓	It is apparent that most of the participants had difficulty distinguishing between document retention and an interactive use of electronic documents for ongoing services. Field research has clearly demonstrated the potential cost savings of an electronic document management system (EDMS) approach.
Facilities and Asset Management	✓	✓	✓	✓	This service can be approached in many different ways. Most of the reporting agencies indicate they are using a relatively inexpensive, web-enabled application, <i>Facility Dude</i> , for facilities management. This is a good system that is gaining a large market share. It is questionable whether CRCOG could offer any improvements on this application except possibly a user price reduction.
Financial Management	✓	✗	✓	✓	The majority of users report having some version of MUNIS, now Tyler Technologies. A review of costs and users indicates a wide variation in cost per user, lending strength to an argument that, at a minimum, brokered services would result in better pricing. More advantageous, though, would be a common application that is administered centrally and supported to provide better user support.

Service Area	Service Approach				Comments
	Inter-jurisdictional Contract	Fee for Service	Brokered Service	Service Bureau	
Fleet Maintenance	✓	✓	✓	✓	Most of the jurisdictions did not report common fleet maintenance systems. The wide geographic distribution of fleet facilities diminishes the feasibility of shared fleet maintenance. About half of the communities reported using CRCOG's fuel purchasing services. A rudimentary analysis showed a financial value in doing so.
Human Resources Management	✓	✓	✗	✓	The survey for this project did not probe heavily into the human resources area since CRCOG recently performed a more detailed survey. That survey indicated strong support for CRCOG services in overall human resources management, policy development, and wage and classification services.
Information Technology Services	✓	✗	✓	✓	Technology services varied widely among the cities and towns, based largely on size and complexity. There was a general feeling that the participants did not necessarily see value in additional IT investment, although most recognized they need to make some improvements in their data management.
Procurement Expansion	✓	✓	✗	✓	Most, but not all, of the participants reported using some parts of CRCOG's procurement services. Interviews, more than the surveys, indicate interest in expanded procurement capabilities from CRCOG.
Property Tax Assessment	✗	✗	✓	✓	This area showed the most consistent pattern. Virtually all reporting communities indicated using the Vision Property Appraisal system and using contract assessors either for required reassessments or ongoing adjustments. It would be valuable to consider use of a CRCOG-based technology bureau for a common, updated application. Further, the contracting services might lend themselves to a brokered contract, similar to ezIQ.

The remainder of this report provides a broader assessment of each service area, and gives recommendations about how the Capitol Region Council of Governments might provide service sharing. We describe each service area in relative order of importance.

Opportunity 1: Information Technology Services

This section of the report presents the basis for our recommendation that CRCOG create a technology services bureau, available to its members and to any other political subdivision that might be interested in participating. In considering a service bureau, there are several elements to the recommendation. These include:

- Principal components of a service bureau;
- Issues influencing a service bureau; and
- Guiding principles.

Principal Components of a Technology Services Bureau

The following discussion defines each of the principal components of a technology services bureau, and then provides comments relating to our field observations, survey information, and industry practice information.

Data Access and Communications—The means by which a user accesses the technology services bureau, including such means as Digital Subscriber Line (DSL), cable broadband, T-1 lines, and fiber broadband. The latter two alternatives are the most viable approach for any wide-area technology service, both because of their speed and their large bandwidth.

Data Management/Hosting—The means by which data are stored and accessed. In a network environment, it typically refers to the bank of network servers configured to hold and process data. In a service bureau model, the bureau can manage the data in several different ways: using dedicated servers for each bureau participant; common servers by application, with data segregation by participant; and a common server system in which applications and data are comingled physically to maximize storage space and access speed, relying on unique data keys to separate the data at the time of access.

Once the structure has been established, the actual hosting can be done through a variety of approaches:

- Local hosting with physical servers;
- Local hosting with virtual servers; and
- Vendor hosting.

The advantage of local hosting with physical servers is that the technology bureau has absolute control over all aspects of its data management systems. The principal disadvantages are the capital cost of acquiring and implementing the services (although server costs have dropped dramatically in the last several years) and the need to retain a maintenance workforce for all times when the servers are in use. An offset to this latter issue is the use of contract maintenance. Another issue with a local system is the need to have a disaster back-up plan, including back-up equipment and switching.

A fully hosted solution has less capital start-up since the bureau is just renting space in a larger server bank. There are still start-up costs in configuring and implementing the applications and data structure. In a fully hosted environment, the hosting vendor has full responsibility for maintenance and operation of the system. Fully hosted systems have their own disaster recovery backup.

User Applications—These are the software packages that users run in their normal course of business. They include the full range of applications from basic word processors and email systems to enterprise solutions.

The typical approach is to license applications, but a new approach is growing in popularity, Software as a Service (SaaS), where the user pays a fee to use a given application via web services. Data can either be retained locally or, more commonly, is also stored through the web hosting service.

The primary advantage of SaaS is the considerably lower cost of entry into the market since there is no one-time licensing fee. Similarly, because the SaaS applications are maintained and upgraded regularly, there is no upgrade fee. The weakness of this approach is the almost total lack of customization and the reliance on the external hosting service for fail-safe service and security.

Applications Support—All software applications require some form of ongoing support. These range from simply assuring that upgrades to operating systems and email systems are installed on a regular basis to

advanced programming on critical financial or safety applications. There are three approaches to providing support:

- Own-source support;
- Contracted support; and
- Host service support (when using hosted services, including SaaS).

The most cost effective approach to applications support will be to contract for services.

User Support—User support relates to help provided to individual users in their daily operations. It includes everything from fixing a locked-up computer, to equipment replacement and installation, to helping users figure out how to use a feature of their email system.

Most user support systems consist of two levels of service. Tier One is basic, easy to resolve issues. It usually also includes hardware configuration and repair. Tier Two is more complex problem resolution and requires more experienced personnel.

The general rule of thumb for staffing a user help desk is approximately one person for each 125 users, with a ratio of three tier one staff to one tier two. Staffing can be provided through own-source support or contracted support, using an outside firm. Lastly, each jurisdiction could provide its own user support.

Disaster Recovery—This relates to more than routine data backup. It is the planning for recovery from a catastrophic failure of the technology system. The failure could be the result of any event that causes the entire system to fail or to otherwise be unavailable, including natural disasters that damage the bureau or prevent staff access, to fire or explosion, or any similar event.

There are certain mandatory principals for disaster recovery:

1. All data and applications essential for continued emergency operations must be mirrored and stored at a location that will not be affected by the event causing the catastrophic failure.
2. There must be a switching system that will allow essential individual users access to the mirror, regardless of their location or the mirror location.
3. All essential users must have remote computing capacity available at all times.

4. There must be a documented plan designating data, applications, and users that are considered essential.

There is no acceptable alternative to a complete disaster recovery plan and system. If the bureau has its own server equipment and switching systems, then a complete disaster recovery plan is essential and must be in place prior to the system going live.

Our review of the interviews with the participating cities and towns and their data survey responses indicate that a technology services bureau operated by the Capitol Region Council of Governments would have a high likelihood of success.

Recommendation 1. Create an Information Technology Service Bureau within CRCOG's Municipal Services Division.

Issues Influencing the Recommendation for a Technology Bureau

Our project research considered several different technology applications used by the participating jurisdictions. The primary application is financial management, but we also considered human resources information systems, electronic document management, fleet management, properties and asset management, and property assessment. Other applications included police records management, fire information management, public works and work order systems, customer relations management systems, and customer billing.

We also inquired about staff support for various technology systems and costs associated with technology management.

There are several observations from these data that inform our recommendations for a technology service bureau. Among these are:

- There is a great diversity among the technology systems in use. While a few of the larger communities had invested substantial resources into their technology, most respondents had low-end systems, relying primarily on contract support.
- While most of the communities expressed varying levels of dissatisfaction with their systems, there does not appear to be any driving commitment to make substantial changes. Two elements seemed to be in play:

- The communities have been able to make do with their current systems; while they understand the value of being able to use technology for work improvement, they felt that there was a need to demonstrate the advantages of new technology.
- The cities and towns understood that this project was primarily an effort to achieve cost savings, and there was a common feeling that technology improvements would result in greater costs.
- The communities are nervous about the impact of change on established systems and work processes.
- The diversity of spending by the cities and towns indicates that the larger communities would probably see cost reductions and the smaller communities would see cost increases based on current service levels.
- The most commonly used applications across the cities and towns are:
 - Tyler Technologies (MUNIS) in various versions for financial management:
 - Communities reporting a Human Resources Information System (HRIS), of which there were few, were using their financial application for that purpose.
 - Price ranges for financial management software was quite variant, even when allowing for unlimited users.
 - Vision for property assessment.
 - Facility Dude, a relatively inexpensive web-based application, was commonly cited for facilities management.

While the larger communities may wish to participate in the bureau for cost savings, the primary market for this service will be middle-sized cities and towns.

Unless there is some form of capital grant infusion to start the bureau (including both hardware and software), there is little likelihood that participating jurisdictions will rush to abandon current systems unless the applications replicate what is already in place; therefore, implementation of the bureau would need to be a phased approach, minimizing initial capital and start-up infrastructure.

In general, the communities are comfortable with contract support systems, and this should be replicated.

Additional Recommendations for a Technology Services Bureau

Because there are many different approaches to designing a services bureau, the following discussion addresses each component part and then provides a recommendation on how participating cities and towns could best address the technology element. We note that there is no one best way to design a bureau. There are many variables which will ultimately influence how the bureau might evolve. Chief among these variables are the number of cities and towns that participate, the potential for start-up capital, and available hosting services that could provide several different options.

Data Access and Communications

The State of Connecticut is currently developing plans for the Nutmeg Network, a state-wide, government broadband communications network. Preliminary information indicates that this should be the primary means by which a CRCOG technology services bureau should communicate.

Recommendation 2. Leverage the Nutmeg Network to assure secure, high speed access to internet-based services and data centers.

Data Management/Hosting

If grants or state appropriations are available or if there are sufficient communities willing to share the start-up costs in return for some profit sharing, the first, and most secure, approach to hosting would be to acquire a data management center of sufficient capacity, using either physical servers or virtual services. As a rule of thumb based on the survey data, plans for an initial hardware center should anticipate approximately 1 terabyte for each participant with more than 150 users and 0.5 terabyte for each other user.

If capital start-up funds are not available, then CRCOG should secure the services of a hosting service. This could be a large governmental unit, an institution of higher education, a commercial enterprise that is willing to share its IT capacity, or a contracted service acquired through competitive request for qualifications (RFQ). If using a commercial host, we have

provided CRCOG with an industry white paper that lists the primary hosting services and an assessment of their relative capacities.

If self-hosting, there should be at least one staff person per each 10 servers. If the CRCOG uses this approach, it will also need to contract for a mirrored disaster recovery service.

If contracting for the hosting, then CRCOG will need a contract manager to supervise the work.

Recommendation 3. Create a shared data management center and back-up system, either by creating one for the region or contracting for the service.

User Applications

As with hosting, the strategy depends on available start-up capital. If there is sufficient start-up capital, then CRCOG should give first consideration to acquiring specific software leases; this approach still yields the greatest localized customization and management capabilities as well as the greatest control over application and data security.

If capital start-up revenue is not available, then CRCOG should consider a SaaS approach to application development. This would provide robust software without a large up-front capital commitment, something that would be attractive to participating jurisdictions.

CRCOG should begin with a relatively limited selection of core applications, get implementation completed effectively, and then consider expansion to other applications.

The initial investments should include:

- Financial system ERP,
- Human Resources Information System (not just payroll), particularly focusing on the capability of a human resources management service recommended in this report,
- Budgeting,
- Procurement (focusing primarily on an expansion of CRCOG's procurement services), and
- Electronic document management.

Second tier systems could include:

- Integration of CRCOG's current land management/code enforcement systems,
- Public works and work order management,
- Fleet management, and
- Customer relations management.

An important element of a shared applications approach is the emphasis on uniformity of application. Costs are directly proportional to the level of complexity caused by customization.

Recommendation 4. Identify applications to share across a number of jurisdictions.

Applications Support

CRCOG should contract with the application vendor or a licensed vendor representative for each application for applications support. CRCOG will need one staff person to supervise the ERP relationship and one staff person to supervise the other relationships.

Recommendation 5. Establish a contract for multi-jurisdictional applications support.

User Support

CRCOG should contract for all user support services, either with a single contractor or multiple contractors divided among the participants by proximity. There will need to be a contract administrator who serves as the first line of communication.

Recommendation 6. Establish a contract for multi-jurisdictional user support.

Disaster Recovery

IF CRCOG hosts its own service, it will need to contract for mirrored disaster recovery; otherwise, recovery should be included in any private hosting agreement.

Staffing

In addition to the operating/support staff members identified in this table, CRCOG will also need a core management team to lead the

technology bureau. At a minimum, this should include a full-time technology services director and a marketing representative. The marketing staff can be either part-time or contracted.

Recommendation 7. Hire a staff to implement and manage the information technology service bureau.

Governance

The technology bureau should be a division of CRCOG's Municipal Services Department, managed and supervised by the department director.

The success of almost every technology system involves a high level of customer interface. The more successful systems have a user committee consisting of representatives of each participating agency; this committee has the task of developing and managing a multi-year strategic information systems plan, establishing common priorities for new initiatives, and representing the bureau to the respective agencies.

Recommendation 8. Once the service bureau is operational, establish a user committee to establish strategic direction for the bureau.

Financial Model

Operating revenue structure should consist of a combination of base service fee and fee-for-service.

The base fee should include the administrative staffing and infrastructure for the service bureau. This would be divided among the participating jurisdictions on a split basis, with half of the revenue coming equally from each participant and the other half coming on a relative sharing basis such as total workforce.

Assuming application support and help desk support would be performed through a contractor, the fee charges would include a pass-through of the fee charge plus an administrative fee.

Charges for use of specific applications would be dependent on the basis for the application license. If the license is for a fixed number of users, then the participation fee would be for the users plus an administrative fee. If the application does not have a user limit, then the participant fee would be a split fee structure in which there is a commonly shared base fee plus a fee per local user, again with an administrative fee.

The purpose behind the split fee system in which there is a common base and then some form of per unit cost is to keep the entry costs as low as possible for smaller jurisdictions while also achieving cost savings for larger ones.

While the implementation recommendation is for the use of a SaaS approach unless there is capital start-up funding, CROCOG should not invest heavily in this model without a commitment from several participants, increasing the likelihood of longer term participants and success.

Opportunity 2: Electronic Document Management

An electronic document management system (EDMS) goes well beyond document retention, which is what most local governments think of when they discuss document management. EDMS means the use of electronic documents on a daily basis in lieu of hard copy documents and files. Because of the vast organizational potential for electronic document management, the technology industry has begun to consider the system in the context of enterprise strategies. As a result, EDMS is increasingly being considered as Enterprise Content Management (ECM). For the purpose of this analysis, we combine the two concepts. There are many well-established benefits to a viable EDMS:

- The likelihood of documents getting lost is greatly minimized.
- Because all documents are digitized, they do not require separate filing structures and the government can reduce both its file cabinets and valuable floor space wasted with file cabinets.
- Documents are retained more securely; there is less likelihood of theft or damage by fire or other disaster.
- Staff do not have to waste time looking for documents, which may be laying on someone else's desk or misplaced.
- Work activity that requires multiple participants can occur simultaneously, thus speeding up processing and improving customer satisfaction.
- There is a demonstrated cost savings. Some industry studies show as much as an hour a day savings per staff person, gained from not having to process various papers manually.

Principal Elements of an EDMS

As with most electronic applications, an EDMS consists of many different elements. Similar to the concept of a technology services bureau, there are many different ways that a user can structure an EDMS strategy. The

following describes each component and provides our observations relevant to that component part.

Network Infrastructure—This is the means by which digital documents are transferred from an entry point to storage, and then retrieved from storage to a user. An EDMS environment is required to process a large volume of materials quickly. For this reason, it is important that the EDMS run over a very high-speed, reliable, broadband system.

Storage System—This is the server structure that stores the EDMS data. Because of the large volume of data being managed, the storage system of an EDMS system must be both large and speedy in operation. Fortunately, there are many different varieties of servers—physical and virtual—which have sufficient capacity and interactive speed that this does not need to be an issue.

EDMS Management Application—This is the software that actually runs the document management system. It is a large database manager that is capable of text and graphical image storage and integration. There are many different EDMS applications available. EDMS applications approach storage and retrieval in many ways. Some are standalone systems that operate in a separate IT window. Others integrate directly into operating software and become invisible to the user. Both approaches work well; it is principally a matter of size of files necessary and cost sensitivity.

Indexing System—The effectiveness of an EDMS or any large data application is the ability of the application to store large amounts of data together. When the materials are needed, the system is responsible for locating the data records and assembling them for use. The location system is an indexing system; it is the means by which the user tells the computer how to store the information. The equivalent to an EDMS indexing system is the chart of accounts in a financial management system. All EDMS systems have some form of indexing system, and the better ones allow the user to define the storage index to be used. This usually requires a data manager who has extensive experience in complex data indexing.

Recommendations for a CROG Electronic Document Management System

Our review of the interview notes and respondent surveys indicates a strong need for a viable EDMS. It is possible for each city and town to

have its own system, but this can prove to be duplicative and expensive. Most of the industry leading applications rely on a user-based fee structure, with declining rates based on the number of users. Thus, a large consortium of users will have a lower per-user cost. Additionally, an EDMS requires an administrative staff structure that would need to be duplicated in a separate system environment.

For these reasons, we recommend that CRCOG take leadership in creating an area consortium for EDMS, connected to the Technology Services Bureau discussed earlier in this report.

Recommendation 9. Cooperatively purchasing an Electronic Document Management System (EDMS) and providing service support to municipalities.

Network Infrastructure

The planned Connecticut government broadband network should be sufficient in capacity to support an area-wide EDMS system, and we recommend reliance on that system.

Storage System

The storage system will be highly variable, depending on the number of participating cities and towns and the types of data that will be stored. This sizing should be included in the server sizing recommendation in the technology bureau.

One important server consideration for EDMS is the potential time lag in data transmission, even if measured in milliseconds, of active records for on-screen use.

EDMS Management Application

There are many different EDMS applications available on the market. Several of them are associated with specific ERP solutions. However, the industry leaders in EDMS are all systems that stand alone but integrate into other applications.

We recommend that CRCOG develop a detailed needs definition for an EDMS and then give first consideration to a strong stand-alone system.

Recommendation 10. Develop a needs definition for a request for information that could be issued to identify viable systems.

Indexing System

CROCOG will need to develop a viable cross-jurisdiction indexing system. The cross-jurisdictional component can be achieved with a jurisdiction code. Beyond that, CROCOG should convene a technical committee of participating jurisdictions to develop a common code. The most effective systems are those that use common codes rather than separate coding for each operational unit.

Recommendation 11. Establish a committee to develop a common indexing code.

Staffing

A CROCOG-based system will require three administrative positions. These will include a document system manager, a database manager, and an indexing manager. The role of the system manager is to assure overall operation of the EDMS and to work with respective application managers to achieve product integration. The role of the database manager is to assure data integrity. The role of the indexing manager is to develop and maintain the indexing system to be used; this latter position is best filled by an individual who has extensive experience in document indexing.

Governance

Once set up, the EDMS service does not require any formal governance structure beyond that of the recommended technology services bureau user committee. It should maintain, though, a technical users committee to assist with ongoing indexing questions.

Financial Model

It is to be expected that most of the EDMS vendors will apply some form of user-based licensing system, combined with an entry license. In this case, CROCOG should secure the subscription of several jurisdictions for participation, assuming no grant funds are available for the startup costs. User fees should be based on a prorated allocation of the initial license and the individual user fees, adjusted for administrative fees to cover the administrative costs of staffing and operations.

Opportunity 3: Financial Management Systems

For the purposes of this report, financial management refers to an enterprise resource planning (ERP) solution rather than simply a traditional accounting system. Elements to consider when discussing an ERP solution include the types of modules to be included, system licensure, and operating costs and benefits.

Principal Elements of an ERP Solution

The following are the core parts of an ERP solution:

General Ledger—This module maintains the master records of all financial transactions and serves as the starting point for any financial system. This is the essential core of any financial management system.

Accounts Receivable—This module handles all transactions relating to the intake of funds. It includes billing and receipting. If the system accepts credit card payments, this module would also be responsible for card transactions. This is essential to any financial management system. To the extent possible, this module should be fully automated so the user can process all transactions electronically with an automated approval system.

Accounts Payable—This module handles all transactions relating to the payment of funds. It includes receipt of vendor invoicing, goods or services receipting, and payment approvals. It needs to be connected to a purchasing system for verification of goods and services. Most vendor registrations also occur within this module. This is essential to any financial management system. To the extent possible, this module should be fully automated so that the user can process all transactions electronically, with an automated approval system. An increasing trend is for vendors to submit all invoices electronically with online access.

Purchasing—This module is responsible for all procurement functions, including verification of bid processing, issuance of purchase orders, receipting of goods, and interface with accounts payable for vendor

verification and payment authorization. It also frequently is used for inventory control. To the greatest extent possible, this process should be fully automated so that all procurement transactions are performed electronically, with digital approvals.

While the purchasing module should be part of an ERP solution, there are still some stand-alone packages which are designed for data integration.

Budgeting—This module processes development of the budget and translation of the general ledger transactions into budget summaries based on the chart of accounts. While the principal ERP vendors have now integrated budgeting into the package, it is still quite common to see separate budgeting modules or applications.

Fixed Assets—This is the recording of all fixed assets. There are two possible elements. One is the recording of operating assets such as computer equipment, desks, etc. These assets should be connected to the procurement system for ease of data entry and need to generate both the ledger record as well as the asset tag. The second element is fixed capital assets; the system needs to be able to capture those data consistent with GASB 34 rules. As with budgeting, it is still very common to see separate fixed asset systems.

Performance Reporting—A new concept in public management is the electronic capture of performance data, such as units of work. At a minimum, performance reporting can be based on charts of accounts which have unique project identifiers. At best, these systems integrate with work order management systems to capture work directly. While a number of ERP solutions claim to have elements of performance reporting, it is uncommon to see fully robust systems in place. Users typically need to develop a separate performance reporting system and “bolt on” to the financial system. More enhanced systems can be designed by changing account code structures so that costs and work units are aligned in the budgeting module.

Human Resources—In an ERP, human resources relates primarily to financial transactions relating to employees. The better systems will provide more detail about overall employee data. Most ERP systems are designed around financial rather than employee systems. As a result, HRIS implementation is often last in line for implementation and weaker in capacity. Many users rely on other HRIS solutions that can integrate as necessary. Opportunity 4 delves into more detail about Human Resources functions.

Customer Relations Management—Traditional customer relations management has been a fully stand-alone system. However, common parlance now relates to customer relations management in a manner similar to work order management, the connection being that the work order is generally triggered by a customer call and concludes with a customer notification. Work order systems are stronger in ERP applications which are constructed primarily around field operations, of which there are only a few.

Other Modules—The strength of an ERP system is the system's ability to permit other applications to link into the core structure. For example, public works systems such as Maximo have the ability to connect with many ERP financial systems. Land management systems are increasingly able to connect permit transactions to the general ledger. Even though ERP solutions have progressed greatly over the past 15 years, it must be remembered that each system starts from some core module, either financial or human resources. There are no true ERP systems designed around secondary management systems such as public works or land management, largely because of the complexity of those systems. While most of the public-oriented ERP solutions now have these various modules, those are not primary to the system and are usually not as effective as a system designed for a specific purpose.

Observations relating to Financial Management and ERP Solutions

The service sharing survey showed several interesting dynamics that influence any service sharing capacity. These include:

- Seventeen of the respondents reported using some form of financial management system; of these 17, there were eight different applications reported. Of the different applications, nine were Tyler Technology's MUNIS (in differing versions), two were Novak, and there was one each of the remaining systems.
- Of the eight different systems, we can identify three, Tyler Technology, SunGard, and Microsoft GP, as being considered ERP solutions.
- There is a wide range of licensing practices and costs, some of which appear to be related to government size and others for which there is no apparent relationship.

- Within the MUNIS group of cities, there is variation among user licensing patterns as well as licensing costs.
- Considering just those jurisdictions that reported their licensing costs for financial, payroll, and budgeting systems and the total financial and payroll transactions for the previous year, the cost per transaction varied from \$1.04 to \$3.53. Within the MUNIS group, the cost range was \$1.20 to \$3.53.
- The strength of an ERP solution is not just in the goal of reducing technology costs, but also in maximizing employee productivity. The notion is that more productive employees can result in reduced or stabilized work forces. Depending on the data source used, the average cost per financial transaction, including both technology and staffing, ranges from between \$3.00 to \$6.00 per transaction for industry leaders. While we did not attempt a per transaction average by jurisdiction because of limited statistical precision, an aggregate average cost per transaction (using an annual average salary and fringe benefit cost of \$40,000 per FTE), was slightly over \$9.00 per transaction.
- At least one of the responding jurisdictions indicated its plans to issue a request for proposals for a new system in the near future.
- While the jurisdictions indicated general satisfaction with their respective systems during our interviews, there was a common theme of dissatisfaction with vendor support.

A related consideration regarding an ERP solution is the upcoming requirement for all cities and towns in Connecticut to use a common chart of accounts. This may require considerable reworking of established financial reporting within the different systems. However, this requirement can also establish the groundwork for a common ERP solution relying on the common chart of accounts.

Recommendations for a Shared Financial Management/ERP Solution

The observations from the data analysis and the State's change to a common chart of accounts have led us to recommend that CRCOG take

the lead in developing a uniform financial management/ERP solution for voluntary participation. Key elements of this recommendation include:

Enrollment

Moving to a common ERP solution is a difficult task, with many decisions to be made. The first step is to secure the agreement of a sufficient number of potential participants to justify the effort. We suggest that a starting group of three to five would be sufficient. Any fewer would not create a sufficient mass and too many more would seriously complicate the process.

Recommendation 12. Convene a group of interested parties to explore, plan, and implement a shared Financial Management System or Enterprise Resource Planning (ERP) system that incorporates the new required Uniform Chart of Accounts for municipal government and boards of education.

System Selection

While half of the participating cities and towns currently use one system, CRCOG needs to use its preliminary enrollment group to conduct a thorough selection process to determine whether to rely on that current common system or select a different one. The process needs to include a full needs definition and requirements statement that describes precisely the desired system, a competitive selection process that affords vendors the opportunity to present how their systems best meet the needs definition, and a selection based on needs compliance, pricing, implementation, and support.

System Alternatives

There are many different ERP vendors available for consideration. We have provided CRCOG with a white paper that describes the principal vendors and their respective strengths and weaknesses. Various analytical comparisons of vendors show a marked difference in pricing between “high end” solutions such as Oracle, SAP, and some versions of iFor, and middle market vendors such as Microsoft Dynamics, SunGard, and Tyler. We recommend that CRCOG will get better value for its investment by focusing on the middle market.

Licensing, Hosting, or Software as a Service

There are three current approaches to software selection. Licensing is the procurement of a license for operation of the application on the user's own equipment. Hosting is licensing to use a full version of the application on the equipment of a third party, or host. Software as a Service is not a license; rather, it is the rental of the application hosted by the vendor. We have provided CROCOG a white paper on these options, and discuss them further in the section on an Information Technology Bureau.

Information Technology Bureau

Earlier in this report we recommended that CROCOG create an information technology services bureau. This ERP recommendation is inherent in that discussion.

Staffing

CROCOG will need an ERP manager to run the overall application and to manage its use. Additional staffing will depend on the acquisition model that CROCOG chooses to use.

Governance

Policy oversight of this service could be included within the information technology bureau.

Financial Model

The most ideal condition would be receipt of grant funds to acquire the licensing and hardware for the application. Failing that, the user pricing will need either to capitalize the investment or be based on SaaS rental. If the system operates in a limited user environment, then ongoing pricing would be based on the allocation of user licenses. If it operates in an unlimited user license, then pricing can be based on a variety of options, the most common of which is the relative number of transactions.

Opportunity 4: Human Resources Management

Based on our interviews and data collection and, most importantly, a CRCOG survey of membership approximately a year ago, human resources management appears to be one of the most viable options for a CRCOG-based shared service.

Principal Components of a Human Resources Management System

Of all of the services considered in this study, human resources management has the greatest number of individual services and has the greatest variation of how a human resources management system could be shared. The following summarizes the components, identifies alternatives, and includes relevant observations and comments.

Human Resources Information System—This is the general technology infrastructure by which an employer retains all pertinent employee information. This includes private information, benefits administration, compensation, promotions and disciplinary actions, time and attendance, and related information. HRIS applications exist in both stand-alone format and integrated with enterprise resource planning solutions. A growing feature of HRIS applications is web-enabled employee self-reporting and information gathering.

Over half of the members responding to the CRCOG survey expressed a position of being very or extremely interested in this service area. This includes creating a web portal for employee self-service.

Personnel Policies and Procedures—This is the set of written documents that provides employees with guidance on expected behavior as well as rules and regulations. The regulations are guided by local policy and ordinance, labor agreements, state and federal law, and prevailing court rulings. Typically, human resources policies and procedures need to be reviewed and updated on an annual basis to keep concurrent with external requirements. A written statement of human resources policies

and procedures should exist for every local government, regardless of size.

Most local governments traditionally have a limited scope employee handbook, although many have begun to use an organizational intranet on which policies and procedures are posted, where they are web-enabled and searchable.

Industry state of the art is a web-enabled system that notifies employees of changes and requires employees to verify changes by passing short tests on the changed subject matter. A well-written set of personnel policies and procedures is an essential part of an effective human resources management system, and a first line of defense for employees and employers in the case of accusations of wrongdoing.

A large majority of members responding to the CROCOG survey expressed strong interest in CROCOG assisting with human resource policies and procedures.

Time and Attendance—This is the process for tracking an employee's attendance at work, including start and end times as well as lunch and break times. While not critical for employees who are exempt from the provisions of the Fair Labor Standards Act, it is essential for non-exempt employees. A second aspect of time and attendance is the actual payment process. The simplest form for time and attendance is a manual time sheet completed by each employee during the day.

Current trends use electronic time systems that require an employee to log in either on a computer or through an electronic identification card, and the timing is then reported electronically to a computerized system.

While most financial systems have payroll modules, many local governments find that contract payroll services are a cost effective approach to payroll management. Manual systems of time and attendance are some of the most expensive internal business processes of local governments. They require employee or supervisor time entry, usually reentry of data by clerical staff at the division or department level, second entry at the jurisdiction level and then at least two levels of verification.

Employee Recruitment and Departure—This is the process by which an employer recruits for an employee, screens applicants, selects potential candidates for interview, and negotiates employment. It is also the process of managing the departure of an employee, including reversing

the employee information systems. Very small units of government usually rely on department directors or senior staff to perform this duty.

A second alternative, found mostly in small to middle size communities, is that the departments are responsible for the work but human resources staff maintain the formal records.

There is an ongoing debate within the human resources community about the effectiveness of a fully centralized human resources function in a larger community versus continued distribution of the responsibility to user departments. The risks of a decentralized system include insufficient advertisement or advertisement in ineffective sources, lack of correct information and validation of same, inadequate reference checking, lack of standard evaluation procedures, and the potential for violating law relating to employment or termination.

There was not strong support in the CRCOG survey for assistance in recruitment services.

Employee Appraisal—This is the process by which an employer conducts a periodic assessment of the performance of a given employee. While much has been said of performance-based appraisals, the vast majority of local government appraisals remain characteristic based. A minimum standard of appraisal is a form completed by a supervisor, then reviewed by the employee. There may or may not be any association with compensation changes. A more advanced system relates to specific performance goals, again with or without compensation relationship.

The most advanced system is one in which the appraisal relates both to performance and career enhancement. This system focuses more on employee growth than corrective action. Generally, employee appraisal is not well-executed in local government, generally because there is no common standard for performance, nor is there usually any valid relationship between a standardized form and actual job performance expectations.

This was not addressed specifically in the CRCOG survey, but can be considered part of the policies and procedures discussion.

Employee Discipline—Discipline is the progressive means of addressing infractions and poor performance. It follows a set of rules providing for different levels of discipline for infractions. Key to the disciplinary process is the application of due process. Even if an employee is “at-will,” failure to apply due process in a progressive system can result in adverse

effects. Most local governments have some form of disciplinary process, although the rules and standards are often not expressly stated. The application of discipline can occur at three levels: the department level, at a central human resources level, or at the executive level.

Disciplinary processes are often defined by labor contracts; in this instance, local governments need to be very precise about the processes and disciplines. Proper discipline must be timely and commensurate with the offense. One of the greatest problems in local government is that disciplinary procedures and standards are often not well defined. This causes a delay in the administration of the disciplinary process and can result in uneven enforcement.

This was not addressed in the CRCOG survey but could be considered as part of legal services (which did not receive strong support) and labor negotiations (for which half of the respondents indicated that they were extremely or very interested).

Benefits Administration—For the purpose of this analysis, benefits administration refers to the application of specific cost-based employee benefits, including leave time, health insurance, and the like. One pattern of benefits administration is for the local government to contract with a third party to provide the insurance for life, health, dental, vision, and the like. A second pattern is for the local government to fully self-administer the program. A third pattern is self-funding, with a third-party administrator.

Of the various human service areas included in the CRCOG survey, benefits administration typically had the lowest support for CRCOG involvement.

Non-insurance Benefits—This area relates to non-cash programs designed to provide second benefits to employees. Examples would be wellness programs, education incentives, and the like. There are many different approaches to providing these kinds of incentives, with no consistent pattern. As with other benefits, responding local governments did not indicate strong support for CRCOG involvement in this area except in the areas of wellness and safety compliance.

Grievance Administration—Grievance administration goes beyond disciplinary consideration. It is the adjudication of complaints that provisions of existing labor contracts or non-labor policies and procedures have been violated. Usually, most local governments have these processes spelled out in general and very specifically in labor

contracts. While the CRCOG survey did not address this issue area directly, it could be considered to fall within the purview of labor negotiations and legal services.

Wage and Classification—Almost universally in local government, employee compensation is built on the structure of a wage and classification system. This system consists of three elements:

1. The job description is the document that details the requirements of a job, the necessary skills, the types of work performed, and the means of supervision. Some governments use very broad job descriptions, then provide more detailed work definitions for specific jobs that fall within the same description.
2. The job classification system is the means by which all of the jobs in the government are organized according to their similarity for work, responsibility, and market requirements. Typically, between eight and ten different job descriptions will fall within the same comprehensive classification.
3. The pay plan is the assignment of wage rates and ranges to each job classification.

There are a number of different wage and classification systems in use. The most common commercial systems are the Hay System, the Mercer System, and the Archer System. Many local governments will use their own system.

A wage classification system that is gaining ground within local government is the concept of banding. Rather than using classification structures that have a limited number of descriptions and which have specific pay steps within each range, a band usually encompasses a larger number of jobs and sets only an entry, mid-point, and top level salary.

The CRCOG survey showed very strong support for CRCOG assistance with wage and classification. This is supported by the survey data which showed most of the responding government did not have formal human resources systems, relied principally on outside help, and did little in the way of classification. Most have not done any reclassification work for long periods of time, although industry standards recommend full wage and classification studies every five to seven years.

Employee Relations—This is the labor relations functions of human resources. It includes labor negotiations, contract administration, and

contract related grievance administration. Most middle-size and smaller communities contract with labor counsel for this function. Fifty percent of the members responding to the CRCOG survey indicated they were either extremely interested or very interested in this service.

Training—Training considers all aspects of employee development. Most local governments provide some form of employee training, but few have a systematic approach to career development and related training. While 73% of the CRCOG survey respondents indicated extreme interest or very high interest, CRCOG staff have indicated that previous efforts to provide training programs have had limited success.

Observations Relating to Human Resources Services

Analysis of the data relating to human resources management among the participating cities and towns leads to the conclusion that this service area could be implemented the quickest, have the greatest flexibility in service delivery options, and yield some of the highest cost and service benefits in the long term. Observations relating to this conclusion are:

- Review of budgets and Interviews with the participating cities and towns indicate concern among many of the jurisdictions that their human resources models are insufficient, either in terms of resources or capabilities.
- Available information shows that many of the cities and towns would like to achieve contemporary norms for effective human resources management but do not have the resources or professional backgrounds to do so. As a result, they do as much as they can but acknowledge their limitations.
- The CRCOG human resources survey conducted in 2012 shows that half or more of the 25 responding members are either extremely interested or very interested in many different potential human service offerings.
- The character of the human resources service area lends itself to many different approaches to shared service delivery in a CRCOG service model. This includes a range from functioning as a contract human resources department to numerous different services that could be provided on a limited, one-time contract basis.
- While a shared service provider would eventually want to implement a strong human resources information system,

many of the initial start-up activities could be performed with low-end technology that is already available, particularly the use of Excel spreadsheets or Access databases.

Recommendations for a Shared Human Resources System

Based on the observations above, we recommend that CRCOG take an immediate leadership role in creating a multi-functional shared human resources program as part of its Municipal Services Division. CRCOG should offer a full-range human resources department to interested communities while using elements of such a department to provide individual services on a fee-for-service basis. For example, wage and classification would ordinarily be part of a full-service department; still, it is a service that could be offered to a single jurisdiction under a project contract.

Recommendation 13. Provide human resource management services through the CRCOG to interested municipalities.

Human Resources Information System

Ultimately, an HRIS will be an important tool for a full-service human resources department, and the cost of such a system should be included in a full-service subscription. If a government wishes to acquire HRIS services through the COG but not be part of the full human resources delivery, then this should be provided through the information services bureau discussed earlier in this report.

Personnel Policies and Procedures

This is a core function of a full-service department. The recommended approach would be for CRCOG to develop a single policies and procedures statement for all participants, and then provide a customized addendum for full-service participants as part of the service subscription. On a fee-for-service basis, the human resources unit could provide a fully customized set of policies and procedures.

Recommendation 14. Assign the establishment of personnel policies and procedures that could be used in member jurisdictions to human resources services staff of CRCOG to implement.

Time and Attendance

Basic time and attendance management is part of a human resources system, while payroll functions can be part of either human resources or finance. In this instance, we recommend that CRCOG develop and implement a standardized time and attendance system that would be part of the HRIS. CRCOG could couple this with a contract for a payroll service to provide pay for participating jurisdictions.

Recommendation 15. Develop and implement a standardized time and attendance system.

Employee Recruitment and Departure

There are several different aspects to this service element. As a subscription service, CRCOG would be responsible for employee recruitment and departure, but actual employee selection would be the responsibility of the respective city or town. CRCOG could conduct recruitment in several different ways:

1. Specific recruitment for an individual position, with unique resumes/applications for the position;
2. Maintenance of a common application pool just for a subscriber city or town;
3. Maintenance of a common application pool for all subscribers; and
4. Recruitment and selection for a community on a fee-for-service for an individual position.

This service could be provided through a combination of CRCOG staff, professional recruiters, and agreements with the area workforce development board.

Recommendation 16. Establish a recruitment assistance process, through CRCOG human resources.

Employee Appraisal

CRCOG could develop a uniform employee appraisal form with multiple parts and could conduct performance appraisals for its members as an extension of the appraisal service. The appraisal form should have elements of standard performance characteristics by job classification but should also have the ability for individual local governments to establish objective performance criteria to be included. This service would be

provided routinely for full service subscribers and on a fee basis for other jurisdictions.

Employee Discipline

The management of the employee disciplinary process could be part of the full-service human resources unit; however, the application of specific discipline should be the final decision and implementation responsibility of the subscriber government. We do not recommend that this service be provided for jurisdictions who are not full service subscribers because of potential liability in administering policies and procedures that were not developed by CRCOG.

Benefits Administration

There are too many different benefit programs in place for CRCOG to administer them in a cost-effective manner, and it is unlikely that the communities would be able to develop a uniform set.

Non-insurance Benefits

CRCOG would be able to provide non-insurance benefits, such as wellness programs and risk management programs for local governments. In the full-service environment, CRCOG would be able to provide a specified number of program courses or safety inspections, with additional programs on a subscription basis. Other communities could participate by paying registration for the various programs.

These services could be provided through third-party contractors.

Grievance Administration

Grievance administration is rightly part of the employee relations process, which is typically separate from human resources management. While some communities may wish to involve their human resources provider in the grievance administration process, we have serious reservations about that role.

Wage and Classification

This is a core activity of a human resources department, performed either directly by local staff or through regular maintenance contract. There are several different service approaches that CRCOG might use:

- Customized job descriptions for each jurisdiction;
- Pool of job descriptions for common jobs;
- Use of traditional classification systems;
- Use of banding systems for broad classification;
- Limitation of wage and classification to non-bargaining unit personnel; and
- Drafting of customized descriptions and classifications in support of labor agreements.

For full-service subscribers we recommend that CRCOG offer a full wage and classification review every five years and more frequently by special fee. The service would be provided by specific contract fee for other jurisdictions.

Recommendation 17. Hire a qualified third-party provider to conduct the wage and classification services.

Employee Relations

The employee relations process is typically separate from human resources management. While some communities may wish for their human resources to participate in the employee relations process, we have serious reservations about that role because it could diminish employee perception that the human resources provider is neutral.

Training

While many cities and towns identified training as having potential for shared services, individual training programs could prove to be prohibitively expensive. Additionally, there are many other agencies within Connecticut that perform various levels of training for local governments. Any service broker would be entering into a highly competitive market. A stronger role would be to serve as a clearing house for available training rather than to be a director provider of training services.

Staffing

Start-up staffing for this service would include one human resources administrator and one human resources professional. Industry standards for a full-service human resources department are approximately one professional position for each 125 to 150 positions served. Since the recommended service would not include benefits administration, we

suggest a staffing standard of one professional to each 200 to 225 positions served. This standard assumes that non-benefit administration and wage and classification services would be contracted and that the individual local governments would be responsible for payroll entry.

Governance

Daily governance of this service would come within the purview of CRCOG's Municipal Services Department. CRCOG may wish to use an advisory body to assist with decisions relating to services to be provided and acceptable service levels.

Financial Model

We recommend a split fee system for the full-service offering. In this system, we suggest that one-third of the costs be split equally among the participating jurisdictions and the remaining two-thirds be divided based on the number of employees being served. This approach recognizes that many of the potential participants have small current investments in human resources management and would be price sensitive until they see actual value.

Opportunity 5: Facilities Maintenance

While many of the participating cities and towns identified some form of facilities maintenance and asset management, neither the interviews nor the surveys showed much consistency in what the participants were seeking. Given the wide range of diversity in locations, types of facilities, provider contractors, and maintenance software applications, it would appear to be a difficult endeavor to develop an area-wide support solution for facilities management.

Relevant Observations

Our observations of the interviews and data surveys indicate:

- There is a wide diversity in the number and size of public buildings maintained by the various cities and towns.
- Most of the cities and towns use some form of general maintenance contract plus specialized contracts for such areas as electrical system, heating, ventilation, and cooling systems; and custodial services.
- There appears to be ongoing concern over utility costs and management, there does not seem to be any single unifying theme about how to approach the question.
- Many of the cities and towns have found a web-based, relatively low-cost, but generally effective maintenance package called FacilityDude. This application is a fully web-enabled system that has seen dramatic market growth in both the public and private sectors.
- The other primary facilities applications in use are the facilities modules of the financial management packages, particularly Tyler Technology's MUNIS, in use.
- One of the areas that seem to be most desired is energy audits and corrective strategies.

Recommendations for Facility and Asset Management

If for no other reason than the complex contracting environment that already exists within the facilities management subject area, we do not think that this service area should be a high priority for area-wide service sharing. It might operate better in the short term through a series of individual service agreements among contiguous governments where there is the potential for shared contracting of specialty services.

Should the membership express interest in CRCOG becoming more involved in this area, longer term strategies might involve development of a joint pricing agreement with FacilityDude, including that application's utility cost management features; integration of facilities management with a common ERP solution, as recommended earlier in this report; or brokered contract services, similar to CRCOG's ezIQC program, for utility cost inventory analyses.

Recommendation 18. Convene a working group to identify and implement facilities management service sharing between individual member jurisdictions.

Recommendation 19. Develop a joint pricing agreement to increase efficiency and reduce license and maintenance fees.

Recommendation 20. Broker a contract service for ongoing utility assessment and reduction strategies.

Opportunity 6: Property Tax Assessment

Property assessment appears to be the most consistent of all of the service areas included in the survey. Sixteen of the participant cities and towns reported current dates for property assessment. The current statute for property assessment allows for a full revaluation every ten years. According to the town respondents, most reassess parcels every five years. The towns reported a mix of responses regarding how assessments are administered. They have a choice between performing in-house assessments, contracted services, and using both alternatives. Most appear to use some form of both alternatives.

Relevant Observations

Respondents reported a range of annual cost for contracted assessment from \$10,800 to up to \$750,000. This appears to be dependent on a number of factors such as the number of parcels, full or partial revaluation, and types of contracted services including private appraisals, mailings, and photos, and similar service mixes.

All but one of the respondents reported a software system for property assessment use VISION 6.0 or better.

Recommendations for Property Tax Assessment

The survey did not collect information on user licenses and fees for the VISION software. However, if that software shows the same trend as the wide distribution for the financial systems, then it can be expected that cost savings could be achieved in negotiating a single license fee arrangement.

Recommendation 21. Negotiate a reduced licensing and maintenance fee for software.

Rather than individual contracts secured by each jurisdiction, the wide range of contracting for assessment services could easily lend credence to

a brokered contract in which CRCOG would represent multiple jurisdictions in negotiating a common agreement.

Staffing

It appears that current CRCOG staffing might be sufficient at the outset, but one additional position might be required within a year of expanding the service range.

Governance

The CRCOG model for using an advisory group for brokered services would appear to be useful for this service area.

Financial Model

Revenue would derive from administrative fees for a reduced software maintenance agreement and for brokered contract services.

Opportunity 7: Fleet Maintenance

As with facilities maintenance, the fleet maintenance activity among the participating cities and towns is quite diverse. Typically, sharing fleet services falls within several primary categories. Our review of the interviews and data collection shows that, for the most part, there is minimal immediate opportunity for extensive sharing in most of these categories.

Opportunities for Fleet Sharing

The following presents several different opportunities for fleet sharing among the participating cities and towns.

Facility Sharing—This opportunity relates to the ability of two or more participants to share a common fleet maintenance facility. The data indicate two problems with this possibility. The first is the wide distribution of the existing facilities, which will minimize sharing due to added travel time to move equipment. The second is that most of the facilities are sized sufficiently for the respective user government. Only in one case did the number of bays largely exceed the industry norm for the size of the community or fleet.

Equipment Sharing—This relates to sharing of equipment on an as-needed basis among governments. Typically, this sharing relates to large, specialty equipment that is expensive to buy and/or maintain. All of the reporting jurisdictions indicate relatively small inventories of heavy equipment, and interviews indicate a reasonable frequency of equipment sharing already exists.

Joint Maintenance Contracting—This option relates to two or more jurisdictions entering into a contract with a private vendor to provide maintenance services. Typically, private firms prefer to enter into maintenance contracts in which they use the excess capacity (both facilities and staff) already under their control. Little or no value is gained if the private vendor simply supplies its own staff at existing facilities.

Joint Equipment Procurement—Joint procurement means that two or more governments join together to purchase motor fleet equipment to obtain a better price. The interviews and data indicate that this already occurs, primarily through the State purchasing agreements. However, local governments around the country are finding that reasonably large purchasing consortia are actually able to secure better pricing than state contracts.

Joint Fueling—The ability of local governments to reduce costs through joint fuel purchases is a common practice. Most, but not all, of the participating communities indicate they already participate in a joint fuel purchasing consortium, most commonly CRCOG's program. The average cost per gallon appears to reinforce the value of joint purchasing.

Joint Parts Procurement—Joint parts procurement means that local governments work together to acquire fleet parts. This can be done either by one jurisdiction purchasing parts and reselling them to another or through a joint purchasing contract. We note that many cities and towns acquire office supplies on a just-in-time basis through State or regional bids. However, it does not appear that any similar arrangement exists for automotive parts. If this is the case, this would be an excellent service expansion opportunity for CRCOG's Purchasing Service.

Recommendations for Fleet Maintenance Sharing

Based on our observations and the most common approaches to sharing, we see only a limited area of opportunity for wide, area-based sharing. These opportunities include:

- Expansion of the fuel purchasing program through expanded marketing and cost benefit analysis;
- Expansion of the CRCOG Purchasing Program to include just-in-time fleet parts procurement; and
- As an experiment, CRCOG's Purchasing Program may wish to assemble a fleet purchasing package to determine if it is possible to achieve prices that are better than the State contract.

Beyond these opportunities, it could benefit individual local governments to continue to pursue joint equipment sharing when possible.

Recommendation 22. Expand the Capitol Region Purchasing Council (CRPC) fuel purchasing program.

Opportunity 8: Procurement Expansion

We consider expansion of shared services for procurement to be something that can be implemented quickly, with minimal effort, and little or no additional resources. CRCOG already has a Procurement Service that most of the responding cities and towns use. Our assessment of this opportunity is that CRCOG could easily expand this service offering and should act to do so at the earliest opportunity.

The respondents to the shared services survey showed a wide range in staff allocations for purchasing and the number of purchasing transactions completed annually. There are three sources of potential costs savings and operational efficiencies in public procurement. These include the staff costs for procurement staff, the costs of inventory, and the potential for reduced prices for goods and services.

Relevant Observations

Staff Costs—These are the full time equivalencies of staff that perform the procurement function. Where a local government fully distributes its purchasing among user departments, those governments usually do not account for staff equivalencies assigned to purchasing duties. The vast majority of the respondents indicated less than one full-time equivalent staff assigned to the procurement function. Several reported staffing loads that appear to indicate the number of personnel who perform purchasing functions rather than an allocation of time for that function. It is a safe assumption that each respondent uses between 0.25 and 1.0 full time equivalents for purchasing functions. There is little consistency between staff to workload ratios for the purchasing function.

Cost of Inventory—Many local governments will retain an inventory of goods. The most common of these are central office supplies, fleet parts, police equipment, and public works supplies. The maintenance of large inventories is a considerable cost burden for local governments, and most have sought over the past years to reduce those inventories as much as

possible. Most of the respondents indicated no significant general inventory. The survey did not include fleet inventory.

Cost of Goods and Services—This is the price that local governments incur for the purchase of supplies and materials. There are typically two strategies for reducing these costs. One is for prompt payment discounts, frequently as much as 2% for payment within two weeks of receipt of merchandise. The second is through reduced costs per unit through large quantity purchasing. Most of the jurisdictions reported using one or more joint purchasing arrangements to reduce costs. Two-thirds of the respondents reported using CRCOG's general purchasing services, and 85% reported using CRCOG's fuel purchasing agreements.

Recommendations for Procurement Expansion

The survey data indicate some potential additional value from expanding CRCOG's purchasing services.

While the respondent governments did not appear to have committed large staff resources to the purchasing function, the wide range of workload relative to staff indicates that greater work would be accomplished with a fewer number of full-time equivalent employees who were dedicated solely to the purchasing function. The result is that the individual governments may not be operating with maximum staff efficiency.

If CRCOG were to assume full purchasing responsibility for most of the responding jurisdictions, it should be able to achieve staff efficiencies in a number of ways:

Recommendation 23. Offer CRCOG staff as a contract purchasing provider to smaller communities.

Staff dedicated exclusively to the function can be expected to execute more purchasing transactions than persons assigned only part-time, thus reducing the FTE staff loads necessary.

It is highly probable that many of the purchasing transactions performed by each jurisdiction are duplicative of other jurisdictions. This will again reduce the staff workload, requiring fewer persons to accomplish the same transaction.

CRCOG's current joint purchasing efforts appear to be in a limited number of goods. CRCOG should actively expand that list of opportunities.

Recommendation 24. Expand the existing joint purchasing opportunities.

Staffing

It would appear that current CRCOG staffing might be sufficient at the outset, but one additional position might be required within a year of expanding the service range.

Governance

The current CRCOG model works well and does not need to be changed.

Financial Model

The revenue base for this service should be a percentage of procurement prices.

Summary of Analysis and Recommendations

The following table presents the various services in relative order of importance, our judgment regarding potential risk of entry into the sharing market, and our assessment of immediate and long-term cost reduction and service benefits. We apply these assessments based on overall benefits for all participants rather than an individual, or sub-group of, individual participants. Our suggested order of priority relates to the long-term benefits of each service for both cost reduction and service quality improvement.

Table 2. Summary of Potential Shared Service Opportunities

Service Area	Risk of Entry	Capital Start-Up Requirement	Immediate Benefit		Longer Term Benefit	
			Cost Reduction	Service Quality Improvement	Cost Reduction	Service Quality Improvement
1: Information Technology Services	High	Medium to High (1)	Low	Medium	High	High
2: Electronic Document Management	Medium	Medium	Low	Medium	High	High
3: Financial Management Systems	High	Medium to High (2)	Low to Medium (3)	Medium	High	High
4: Human Resources Management	Low	Low to Medium (4)	Low (5)	Medium	Medium	High
5: Facilities and Asset Management	Low	Low	Low	Low	Low	Medium
6: Property Tax Assessment	Low	Low	Low to Medium	Medium	Medium	Medium
7: Fleet Maintenance	Low	Low	Low	Low	Low	Medium
8: Procurement Expansion	Low	None	Medium	Medium	Medium	Medium

¹Start-up costs will vary according to strategies for hosting services and entry technology.

²Start-up requirements will vary according to use of local licensing or Software-as-a-Service approach.

³*Cost benefits will vary according to financial management system acquired and cost of implementation.*

⁴*Start-up requirements will vary according to decision to start with ERP-based human resources information system or use more manual start-up processes.*

⁵*Immediate cost benefits are limited by what appear to be below-normal expenditures for human resources services in many of the participating jurisdictions.*

Implementation Considerations

The following summarizes the suggested financial model, startup staffing for the service bureau, and governance considerations for each service area.

Information Technology Services—Both capital startup and operating costs for a technology services bureau are highly variable. At this point, the most fixed cost is the development of the broadband communications network necessary to support the system. Current plans are for the State to develop the system and to establish per user charges.

The other principal costs will be capital costs of data storage, maintenance, and operation. These costs will be highly variable, depending on the decision about how to host the bureau, the number of participants, and the volume of data. These costs cannot be known until a startup group agrees to participate. At that time, a detailed user survey can determine actual system needs.

Over time, staffing could include:

- Technology Services Director
- Marketing Representative (part-time or contracted)
- Network administrator (if self-hosted) or Hosting Contract Manager
- ERP Manager (see Financial Management)
- EDMS Manager (see EDMS below)
- Applications Manager for all other applications managed
- Help Desk Contract Manager

The technology bureau should be a division of CRCOG's Municipal Services Department, managed and supervised by the department director.

The success of almost every technology system involves a high level of customer interface. The more successful systems have a users' committee consisting of representatives of each participating agency; this committee has the task of developing and managing a multi-year strategic

information systems plan, establishing common priorities for new initiatives, and representing the bureau to the respective agencies.

Electronic Document Management—It is to be expected that most of the EDMS vendors will apply some form of user-based licensing system, combined with an entry license. In this case, CRCOG should secure the subscription of several jurisdictions for participation, assuming no grant funds available for the startup costs. User fees should be based on a prorated allocation of the initial license and the individual user fees, adjusted for administrative fees to cover the administrative costs of staffing and operations.

Depending on the structure of services, staffing in this area could include:

- EDMS Manager (See Technology Services Bureau)
- Database Manager
- Indexing Manager

Once set up, the EDMS service does not require any formal governance structure beyond that of the recommended technology services bureau policy board. It should maintain, though, a technical users committee to assist with ongoing indexing questions.

Financial Management Systems—The most ideal condition would be using grant funds to acquire the licensing and hardware for the application. Failing that, the user pricing will need either to capitalize the investment or be based on SaaS rental. If the system operates in a limited user environment, then ongoing pricing would be based on the allocation of user licenses. If it operates in an unlimited user license, then pricing can be based on a variety of options, the most common of which is the relative number of transactions.

Depending on the structure of services, staffing in this area could include:

- ERP Manager
- Applications support staff dependent on licensing model used.

Policy oversight of this service would be included within the information technology bureau.

Human Resources Management—We recommend a split fee system for the full-service offering. In this system, we suggest that one-third of the costs be split equally among the participating jurisdictions and the remaining two-thirds be divided based on the number of employees being served.

This approach recognizes that many of the potential participants have small current investments in human resources management and would be price sensitive until they see actual value.

Staffing would include:

- Human Resources Manager
- Human Resources Professional
- One additional human resources professional for each 200 to 225 employees included within the system.

Daily governance of this service would come within the purview of CRCOG's Municipal Services Department. CRCOG may wish to use an advisory body to assist with decisions relating to services to be provided and acceptable service levels.

Facilities and Asset Management—Finance program through administrative fees charged against service costs. Staff would be a brokered services manager (shared among Facilities, Property Assessment, and Fleet Maintenance). The program could be incorporated within the CRCOG Purchasing Program.

Property Tax Assessment—Revenue would derive from administrative fees for a reduced software maintenance agreement and for brokered contract services. As with Facilities and asset management, the staff would be a brokered services manager. The CRCOG model for using an advisory group for brokered services would appear to be useful for this service area.

Fleet Maintenance—Finance program through administrative fees charged against service costs. Staff would be the brokered services manager and the program could be incorporated within the CRCOG Purchasing Program.

Procurement Expansion—Continue to use existing fee structure for expanded services. Establish service cost contracts, with administrative fees, for individual procurement service contracts. Use current staff at outset; but may need to add one purchasing professional for each 3,000 to 3,500 purchase orders processed.

Regardless of which services the participants decide to implement, whether one service or several simultaneously, implementation planning will be very important. The starting point will be to secure the willingness of a number of participants sufficient to justify the effort and to share the startup costs that may exist. The startup groups do not necessarily need

to be large. Depending on the service, the start group could be as small as three of four jurisdictions, particularly if entry costs are minimal.

Typically, when considering shared services there are several underlying issues that need to be addressed in start-up. These include:

- Identifying participants who are ready to change current systems or work methods and are willing to participate in the startup costs if the overall return on investment yields positive financial results. An example is several communities who have decided to change their financial management systems within the next year or two.
- Having the political will to make the change. This is one of the most difficult issues to overcome. An example is the perception that using a service bureau to perform human resources functions results in a loss of control even when policies and decisions relating to human resources always remains with the individual government.
- The belief that every shared service has to result in cost savings for every local government. This is just not possible. Each sharing arrangement will have a different mix of cost and service benefits. The purpose of using multiple services is that benefits can be gained in the aggregate of all the services. Participants need to enter into a sharing arrangement that the overall system will, over time, yield benefit.

Conclusion

The Capitol Region Council of Governments (CRCOG) has been a convener and facilitator of service sharing programming for local governments since 1968. CRCOG is proud to be a place that local governments turn to when they seek to leverage their power as a group to address common local government challenges.

Based on our analysis of information available through the budgets of the participating cities and towns, direct interviews, the shared services survey, and the CRCOG survey on human resources, we conclude that the eight service areas under study provide a large array of sharing opportunities. Some of the opportunities are new, which may require substantial capital start-up and attendant risks but which can also be approached in an incremental fashion. Other opportunities present many different service options with minimal start-up costs but are based on some level of initial participation. Others are service opportunities that expand on the current shared service offerings of the CRCOG. Each has its own risk and reward.

CRCOG is focused on leveraging the Nutmeg Network to bring best practice and innovative technology solutions to municipalities in a way that saves them money and enhances the quality of their local service delivery to residents. With this strong history to build on, there are many additional opportunities to save costs and improve quality through regional shared services.

Attachment A – List of Recommendations

- Recommendation 1.** Create an Information Technology Service Bureau within CRCOG’s Municipal Services Division.
- Recommendation 2.** Leverage the Nutmeg Network to assure secure, high speed access to internet-based services and data centers.
- Recommendation 3.** Create a shared data management center and back-up system, either by creating one for the region or contracting for the service.
- Recommendation 4.** Identify applications to share across a number of jurisdictions.
- Recommendation 5.** Establish a contract for multi-jurisdictional applications support.
- Recommendation 6.** Establish a contract for multi-jurisdictional user support.
- Recommendation 7.** Hire a staff to implement and manage the information technology service bureau.
- Recommendation 8.** Once the service bureau is operational, establish a user committee to establish strategic direction for the bureau.
- Recommendation 9.** Cooperatively purchasing an Electronic Document Management System (EDMS) and providing service support to municipalities.
- Recommendation 10.** Develop a needs definition for a request for information that could be issued to identify viable systems.
- Recommendation 11.** Establish a committee to develop a common indexing code.
- Recommendation 12.** Convene a group of interested parties to explore, plan, and implement a shared Financial Management System or Enterprise Resource Planning (ERP) system that incorporates the new required Uniform Chart of Accounts for municipal government and boards of education.
- Recommendation 13.** Provide human resource management services through the CRCOG to interested municipalities.
- Recommendation 14.** Assign the establishment of personnel policies and procedures that could be used in member jurisdictions to human resources services staff of CRCOG to implement.
- Recommendation 15.** Develop and implement a standardized time and attendance system.
- Recommendation 16.** Establish a recruitment assistance process, through CRCOG human resources.
- Recommendation 17.** Hire a qualified third-party provider to conduct the wage and classification services.
- Recommendation 18.** Convene a working group to identify and implement facilities management service sharing between individual member jurisdictions.

Recommendation 19. Develop a joint pricing agreement to increase efficiency and reduce license and maintenance fees.

Recommendation 20. Broker a contract service for ongoing utility assessment and reduction strategies.

Recommendation 21. Negotiate a reduced licensing and maintenance fee for software.

Recommendation 22. Expand the Capitol Region Purchasing Council (CRPC) fuel purchasing program.

Recommendation 23. Offer CRCOG staff as a contract purchasing provider to smaller communities.

Recommendation 24. Expand the existing joint purchasing opportunities.