Town of Hanover

Financial Software & Technology Analysis

Division of Local Services / Technical Assistance Section

April 2010

Introduction

The State Division of Local Services (DLS) received a request from the Hanover Board of Selectmen to to assist the town as it begins to consider options for upgrading its financial management software. Consequently, two members of the DLS Technical Assistance Section and the Chief of the DLS Information Technology (IT) Bureau completed on-site visits and interviews with the town administrator, assistant town administrator, IT director, finance department managers and staff, and the public works director, who developed the town's current software. The TA team also reviewed relevant documents including a 2009 report on the town's current financial management system by JFK Systems, L.L.C. (Somerset, MA) and completed independent research on related topics.

This limited scope report is intended to guide the town through a process of assessing its current technology status, establishing criteria to meet future demand and evaluating municipal financial management software packages available in the market place. Included in this report is:

-a description of the town's current technology condition
-a statement of town technology goals
-a description of alternatives courses of action available to the town
-a checklist of essential capabilities and useful software features for finance offices
-a description of a product review process
-a list of potential financial management software vendors

Please be aware that under Department of Revenue policy, when advising municipalities in any capacity, we are not permitted to endorse or otherwise favor one private software vender or service provider over another. This rule applies to the firms known to us and identified in our report, which offer financial management software packages for municipal governments. Nor is it our intent in this report to grade the town's current system or to make a recommendation whether it should be retained and enhanced, or displaced in favor of another software option.

Our purpose is to guide the town through a process where it can establish criteria against which all software modules and packages can be measured, including the town's current software. With this information, decision makers will be in a stronger position to rank vendor products and to make a well-founded recommendation for the future.

Town of Hanover

Located within the Massachusetts South Shore region, the Town of Hanover is 15.6 square miles in area and has a population of approximately 14,000 people. This makes Hanover slightly larger than the average size Massachusetts town. With a population density of 895 people per square mile, the town can be characterized as predominantly rural; however, there are highway corridors where significant commercial/industrial development is concentrated. Approximately 20 percent of the town's total assessed value is attributed to commercial/industrial properties while 80 percent reflects residential properties. This ratio is consistent with the state-wide average for all municipalities. Total property tax revenue n Hanover accounts for 60.9 percent of the town's FY2010 budget of $50,567,918, while state aid is 17.0 percent. These are close, as well, to the allocation of municipal revenues among Massachusetts towns.

In 1996, 1997 and 1998, town voters approved debt exclusions to fund a library project, a new police station and school equipment and building repairs. A $642,126 sewer override passed in 1989 and general operating overrides were approved by voters in 1991 ($1,050,000) and 1998 ($1,230,199).

With State Legislative and local voter acceptance of a new Home Rule charter, the town will move from a three-member board of selectmen/town administrator structure to a five member board of selectmen/town manager government with an open town meeting. A new department of municipal inspections will be created. The collector, town clerk and board of health will become appointed positions. Although town officials will report directly to the town manager, their legal responsibilities will not be affected. Other changes will be implemented to enhance accountability and public access to government. The effective date of the new charter is in May 2010.

Among the government functions located in town hall are board of selectmen, town management and personnel administration offices, all the financial offices, inspectional services, animal control, board of health, town clerk, elections, conservation commission, emergency management, park and recreation committee, planning board, veterans' agent and visiting nurses. The fire department, police department, department of public works, the library and school department all operate in remote locations.

On balance the geography, demographics and government structure in the Town of Hanover are within the norm for Massachusetts communities. The job requirements and expectations placed on local officials do not give rise to unusual technology demands. As in other municipalities, the ability of town personnel to function on computers, take advantage of network capabilities and gain proficiency in software applications is increasingly critical to effective, efficient and responsive government.

Current Technology Status

Up until the mid-1980s, Hanover town government was dependent on financial management software from Computer Productivity Associates (Amherst, MA) running on NCR hardware. However, the town had considerable problems with that system over the years which led to the emergence and evolution of a "home grown" system. As an initial assignment, a public works employee and later IT director, Victor Diniak, was asked to build a water billing package for the Public Works Department, which he did in Microsoft Visual Basic 6 for Access.

That successful program prompted the school department to request a modified version of the package and was followed by a town request to build a tax billing and collection package. Consequently, based on continuing user acceptance, modules for the treasury, accounting, and payroll/personnel functions were developed. All town modules, with the exception of personnel benefits management capability, reached substantial completion in less than two years and have been in use and further enhanced over the last 20 years or so.

The present IT director was hired six years ago as a programmer, is a one-person department and reports to the finance director. By his estimation, he devotes 70 percent of his time troubleshooting usage of the current modules and would prefer writing code necessary to enhance the current software and upgrade it to Visual Basic.NET. Troubleshooting includes myriad activities from minor software defects, to custom report writing or report modification, to W2 reconciliation, to printer errors. Only he and his predecessor, who originally developed the software and is now the DPW director, are capable of performing these functions. In addition, he oversees all town-side software, hardware and network maintenance and upgrades. He reviews and approves all technology related purchases requested by town hall departments. The IT director also developed and manages the town website. He does not provide services to the school department, which has its own IT director on staff.

The current town inventory of computers includes 40-45 desktops in town hall and in departments at remote locations. The town has reached the point when all the PCs use the Windows XP operating system (Microsoft's current plans call for ending support for XP in April 2014.). The town has worked to implement a regular computer replacement program; however, if it were forced to move to Windows 7 operating system only about 10 desktops could make the conversion.

Networking is provided by Windows 2003 Server on one server dedicated to financial and office automation. (Microsoft's "Mainstream" support ends in 2010, with "Extended" support agreements through 2015). A second server is dedicated to the assessor's Vision appraisal software, and a third server is reserved for a permitting application now in the process of implementation.

All town hall offices are connected by way of a hardwire network. Departments in remote locations can use web based means (i.e. email and emailed attachments) to communicate with town hall offices, but are otherwise not part of the town hall network and have no access to

town hall software applications. As a result, a decentralized data backup system exists. All data on the central server in town hall is backed up daily to tape which is stored on and offsite. In the case of a disaster, data loss would be limited to one day. If town hall staff save information to their local drive, they are responsible for its backup and safekeeping except that IT is now in the process of implementing backup of unique or changed files on local drives if those PC's are connected to the network. A service to backup server files to the Internet is in place. Departments in remote locations are responsible for backup and storage of all desktop files.

It is our understanding that security is part of the current software through a password at the Access application level. It is possible based on interview comments that the Access security is through the weaker database password level protections. Microsoft Server 2003 Active Directory is partially implemented.

In addition, Microsoft Word and Excel are installed on all desktops. Internet access and email service is available to all employees.

Town meeting appropriations for the IT department in FY2009 and FY2010 are shown below.

Budget: Central Computer	**FY09**	**FY10**
Payroll		
Salaries/appointed officials	$79,668	$81,262
Wages/temporary employees		
Subtotal	$79,668	$81,262
Expenses		
Equipment maintenance		
Software maintenance		
Hardware maintenance		2,000
Contracted services/Comcast		2,000
Contracted services/Domain		250
Other contracted services		31,056
Data processing supplies		5,000
Mileage reimbursement		
Registration fees		
Dues		
Equipment purchase		1,000
Subtotal	$42,900	$41,306
Overall Total	**122,568**	**122,568**

The town capital improvement committee proposed the following town meeting article to fund a computer replacement program at the public schools.

For Capital Budget for Fiscal Year 2010

1. Department: School Department

2. Project Title: Replace "B" and "C" Class Computers District wide

3. Requested Amount: $66,339

4. Description of Project: The Technology Department of the Hanover Public Schools is requesting that the Capital Improvement Committee continue the support in fiscal year 2010 that was granted in the 2009 fiscal year for the replacement of out-dated computers in the district.

It is apparent that viewpoints vary on the adequacy, capability and ease of use of the town's current "home grown" financial software. Differences of opinion exist between department managers and their staff, as well as between IT staff vs. end users. This was made clear in interviews with town personnel, and from comments and responses incorporated into the December 2009 report on the current software completed by JFK Systems, LLC. Most striking was when an end-user stated emphatically that the software cannot perform a particular task and the IT director (or DPW director) responded with equal conviction that it can.

These reactions do not rise to the level of discord, but do point to a communication disconnect between the IT department and software end-users. We understand that the IT director is accessible and responsive. We believe that managers and staff are not dissuaded from expressing their technology concerns. Nonetheless, staff proficiency on the current software is inconsistent across town departments, whether due to lack of training or lack of an interest to learn.

Ultimately, more than in the past, regular and meaningful interaction needs to take place between end-users and IT support if the town is going to reach satisfaction and get the most out of whatever software solution it pursues. The systematic documentation of technology activity, which we discuss later in this report, can help.

In the meantime, it is not our intent to evaluate the town's current software or score staff reactions to it. We expect the town to arrive at its own conclusions after measuring its software together with vendor products against objective criteria. Accordingly, we have provided lists in this report of features, subjects and functions that apply to specified financial areas the town might find in software packages and modules. With a few exceptions, we intentionally have not specified what the town should look for in each item listed. Through an early, internal process, town officials should develop initial expectations which will become more refined with exposure to available options offered by competing vendors.

Town Options

A number of private sector vendors offer financial management software applications, which are currently in use by Massachusetts cities and towns. Competing products give communities wide choices as they evaluate and set out to meet local needs.

To take full advantage of purchased software, computers in town departments must be connected to and communicate through a network of some type(s). In Hanover, all municipal departments are not connected. Town hall offices are on a hardwire network, but the fire, police, library and public works departments are in separate buildings, which are not part of the town hall system. To address this issue, the town is looking to replicate the connectivity advantages of a network by establishing a Virtual Private Network (VPN) which is within the web access capabilities of its current software. Another alternative would be purchasing "software as a service" (SaaS), which is discussed below.

Within the framework of software modules and packages, the Town of Hanover has the options described below as it considers software upgrades and enhancements. In each case, the conversion of data from the existing to a new system will be necessary in what will likely be a costly and labor intensive step. Hardware and operating system improvements may be necessary. Training and support should be planned out, thorough and to some extent ongoing.

No matter what course of action the town chooses, each end user should have the opportunity to take the software module specific to their department for a "test run." In addition, the town should ask vendors for a list of all municipal clients in Massachusetts, so that the town can choose which to contact as a reference.

Procurement. Whatever procurement decision the town makes, it would be subject to the provisions of M.G.L. Chapter 30B, the state Uniform Procurement Act. This general law establishes procedures for local governments when contracting for good or services, including computer software and hardware. The law requires the solicitation of three quotes for purchase contracts in an amount between $5,000 and $24,999. A purchase of $25,000 or more requires the town choose between soliciting sealed bids or issuing a Request for Proposals (RFP). For procuring software, an RFP serves as the more flexible and practical mechanism. Among other watchdog type responsibilities, the Office of the State Inspector General provides guidelines on the implications of and procedures under Chapter 30B.

State Bid List. The town might also research the Commonwealth Procurement and Solicitation System (Comm-PASS). Managed by the State Operational Services Division, Comm-PASS is a clearinghouse of public procurement opportunities for awarding authorities and companies interested in doing business with state and local governments. Municipalities can, at no cost, publish their bid requests valued over $50,000, which are available for review by prospective bidders. This saves a municipality the cost of bidding. The town should also be aware that the State bid list tends to offer greater hardware, than software, selections.

Financing. As a practical matter, the town has three payment options for software and hardware purchases. If funds exist within the budget, the town can pay outright and in full at the time of purchase. The town might also consider a capital outlay expenditure exclusion or it might borrow the amount needed to make a purchase.

A capital exclusion, allowed under Proposition 2½ (M.G.L. C. 59, §21C7, clause j), would enable the town to raise additional tax revenue, in one year only, to cover the entire amount needed to pay the software and/or hardware cost. For this to occur the selectmen must place the capital exclusion question on a town ballot and residents must approve it, both by majority vote. The grant of spending authority by town meeting can be in advance of and contingent upon voter approval of the capital exclusion, or it can occur after the ballot question is decided.

The town can borrow to pay the software and/or hardware cost. M.G.L. C. 44, §7, cl. (29) authorizes towns to issue bonds and incur debt "for the development, design, purchase of computer software incident to the purchase, installation and operation of computer hardware and other data processing equipment and computer assisted integrated financial management and accounting systems." The borrowing can be for a term up to five years. An appropriation funded through a bond authorization requires a two-thirds vote of town meeting. Once bonds are issued, other appropriations are necessary to account for the annual debt service payments.

If the town has excess levy capacity or other untapped financing sources, it can cover the debt service on the bonds within the annual budget and without raising taxes. Otherwise, it has the option of seeking voter approval of a debt exclusion under Proposition 2½ (M.G.L. C. 59, §21C7, clause j) to raise additional tax revenue to pay the debt service. Once again the selectmen would have to place the question on the town-wide ballot, by two-thirds vote, and town-wide approval would require a majority vote in the affirmative. The additional property taxes would be removed after five years when the term of the bond ends. When this option is exercised, the bond authorization by town meeting is often approved contingent on the approval of the debt exclusion by town voters. If the debt exclusion vote fails, the bond authorization is null and void. There have also been occasion when a town will place the question before the voters and if approved, then go to town meeting for approval of the bond authorization.

Internal Evaluation Process. This report is intended to help guide the town through a process of evaluating its financial software options. Before reaching the point where the information we provide is of value, the town needs to complete some internal preparation. We suggest a simple series of steps which mirrors a process the town has, in part, followed in the past relative to a software decision. The town should alter the sequence or substance of the steps as it deems appropriate.

1) *Assign a project manager*. At this stage independent research and input from staff across many departments are needed and a decision making process must be developed. These and other early tasks might best be assigned to the assistant town administrator, who has already been involved in all staff interviews that we conducted. Later, when a

software decision is made and installation procedures are to begin, project management responsibilities should shift to the IT director. The selectmen can make this appointment and initiate the process. We would expect the assistant town administrator to provide regular progress reports to the town administrator (or town manager), who would in turn keep the selectmen up-to-date.

A committee could be formed by the selectmen as an alternative with the assistant town administrator as chair. An important task then becomes settling on a manageable size and ensuring that a balance of viewpoints can be achieved.

2) *Meet with end-users by individual department*. Using the contents of this report as a tool, the project manager together with the IT director should meet with managers and staff in each department which has a stake in the software decision, including the school department. Discussion should focus on the computer needs of the department to fulfill its legal mandate, as well as on software capabilities, which can lead to greater effectiveness and efficiency. Software features and capabilities should be prioritized.

3) *Meet with end-users together*. Municipal finance offices are interdependent. The ability of one to complete its work effectively can influence the timely completion of tasks in another. Therefore, it makes sense to review software priorities for each department in a meeting with all managers who will use the software in some capacity. Also discussed should be technology based tasks that cross departments. They include the budget process, payroll and accounts payable procedures. A discussion about decentralizing these tasks would also arise. Through one or more of these meetings all staff will have equal input into the process out of which threshold requirements for the town's financial management software should emerge. Training and support expectations should be part of the conversation.

4) *Develop a timeline*. Whether the town chooses to enhance its current software or purchase a new package, a decision-making/installation timeline must be developed. The first date to establish should be the date on which the "new" system will be fully implemented. The timeline should work backwards from there. We suggest a July 1 start date. Factored-in will be a decision whether to run parallel systems for a certain period of time.

5) *Identify vendors; complete threshold evaluation of software; create short list*. We have included in this report a partial list of financial software vendors who do business with Massachusetts municipalities. Placement on the list is not an endorsement, but merely reflects those companies whose product we have encountered when completing financial management reviews throughout the state. The town might consider these

vendors and identify as many others as it can, and using its threshold requirements, reduce the list to manageable number. A visit to each vendor's website would be informative and if municipal clients in Massachusetts are listed, a call to one or two may help in the selection process. Finance department managers might be asked to help with the screening process, but should be assigned to research vendors with whom they are unfamiliar.

6) *Communicate with vendors and arrange demonstrations*. If, after visiting websites and speaking with clients, threshold or other pertinent questions remain unanswered, the initial screening process can continue with telephone interviews. A list of standard questions should be developed for this purpose. Invitations to present a demonstration can be based on a pre-determined number, or by the number of vendors who score strongly. Keep in mind that demonstrations are time consuming. We suggest the town request an overall presentation to an audience of all end-users, followed by separate reviews of the various modules with each finance department.

7) *Meet with end-users together*. Once demonstrations are complete, staff reactions should be vetted in a meeting. Pros and cons of each vendor product, as well as those of the current software, can be discussed. Follow-up questions can be identified and pursued. Ideally, consensus can be reached.

8) *Make preliminary report to selectmen, finance committee and town manager*. A formal presentation should be made to the selectmen, and to the finance committee on the results of the search process. Decisions can then be made on further action.

Purchase options. Described below are the various options available to the town relative to financial management software. They include:

I. Further Develop and Upgrade the Existing Software
II. Purchase a Fully Integrated Financial Management Software Package
III. Purchase Individual Software Application Modules for Specific Purposes
IV. Purchase Web-Based Software as a Service

Not discussed is the option to do nothing.

I. Further Develop and Upgrade the Existing Software

Among the town's choices is to retain its current software. Modules are now in use by the accountant (general ledger), the treasurer (voucher), collector (receipts) and payroll/benefits

administrator (payroll) as well as the water department. Critical to this course of action would be a commitment to upgrade the software and address, through programming and training, issues raised by end users.

The town's current financial software is written in Visual Basic 6 for Access, running on a Windows 2003 server with Microsoft XP PC's as clients. Visual Basic 6 is no longer supported by Microsoft, but while the town might not confront obsolescence issues when purchasing computers with Windows 7, such issues will probably arise with later operating systems. That would allow for five-to-ten years before Visual Basic 6 should be an issue. Although a significant undertaking, we would expect that a conversion to the .NET version of Visual Basic will be necessary within that five to ten year period. In regard to data storage and management, the town might also choose to migrate from its current Microsoft Access to an advanced version of the SQL Server.

Depending on the amount of time devoted to the effort, a conversion to .NET is likely to be a one-to-two year process. If the work is completed by the town's IT director, the town will incur other costs to meet routine, ongoing technology needs. An alternative or parallel approach is to contract out major enhancements, after developing a detailed requirements specification and scope document in the form of a RFP (Request for Proposals). Selecting a programming firm from among approved vendors on the state ITS33 blanket contract list would simplify procurement**.** Once complete, the town would have a more enhanced version of its current software.

(The town could consider sharing this software with other municipalities under an open source licensing arrangement in which all participating communities have the right to share enhancements developed by other participants. Other small-medium-sized towns have the same need for inexpensive, full-featured software customized to Massachusetts requirements, but provision for support and training is the critical constraint on such possibilities.)

Another major hurdle will involve addressing the concerns of end users. Not all staff are persuaded that the applications they now rely on, as current programmed, are capable to meeting department needs. In some instances, the programming is not in place, while in others, training may be at issue. In either case, an open and honest dialogue is necessary to arrive at a plan to bring the software up to user expectations.

We would anticipate that the town would pursue this course, e.g., further developing its current software, in much the same way as if it were exploring the products of outside vendors, keeping the following consideration in mind.

The advantage of custom software is that it can potentially be designed and programmed for, exactly what Hanover departmental users specify. Commercial products are designed for a broad range of users in many states and can include features or functionality that either are not needed or are not ideal for Hanover users. That is one of the significant pluses associated with custom software. However, right now, the town's current software probably lags behind some

commercial products in use in Massachusetts municipalities relative to the features and range of reports already available.

A significant minus is the reality that a one or two person IT department is hard pressed to play the simultaneous roles of technical writer, designer, programmer, tester, report developer, installer, trainer, advocate, network administrator, webmaster, helpdesk, and general troubleshooter.

If a major custom programming effort is deemed the most cost effective and/or most desirable alternative, the town should be realistic about the responsibilities assigned to the principal programmer, whether town employee or outside contractor, if the job is to be done right. The town's good fortune in securing such quality services from town employees in the past should not be considered a realistic expectation for future plans.

II. Purchase a Fully Integrated Financial Management Software Package

In this case, a software application would be purchased and installed onto town hall servers. Departments would transfer and exchange data through the town hall network. A fully integrated software package would include an array of standard applications, or modules, developed for virtually all city and town financial functions. Its primary advantage is that data entered into the system at one point is accessible to other departments that have the responsibility to review, verify and post the information to the municipality's official record. In addition, raw data or reports can be created centrally and viewed, in a read-only format, by managers and staff in all municipal offices. Relieved of re-keying data, staff time becomes available for other tasks and errors that result from multiple data entry are eliminated. The exchange of financial information improves communication and complementary records of town financial activity located different offices are in agreement and up-to-date.

III. Purchase Individual Software Application Modules for Specific Purposes

Venders also offer stand-alone applications designed for a specific financial function, i.e., municipal accounting or payroll/personnel management. The software module would be installed onto the town servers, but only the departments using the application would have access to it. The town might also have the option of purchasing web-based versions of the individual modules. This "software as a service" alternative is discussed on the next page.

Although less frequently seen, a community can choose to mix and match special purpose applications from different vendors, or in the case of Hanover, to install a new module for use in one office and retain parts of the town's current software in other offices. In either case, additional programming is often times necessary to enable the electronic transfer and exchange of data between and among finance-related offices. Without a "bridge," information must be re-keyed into the stand-alone system of any office needing the data. Alternatively, the vendor may

be able to convert data for the town, but usually at a cost. Or, information may be shared by using the Excel export or import function; as long as there is confidence that transition errors do not occur. This is less of a problem in Hanover because its IT director is an experienced programmer.

The benefit of purchasing something less than a fully integrated software system is a lower capital investment. If web-based modules are an option, the initial investment and operating costs could be lower still. Lastly, if the vendor offers a full range of finance-related modules, the town would be better able to development a long-term plan to expand the use of financial management software in town government.

IV. Purchase Web-Based Software as a Service

Software as a Service (SaaS), sometimes synonymous with cloud computing, refers to the purchase of a service where the vendor provides Internet access to either a fully integrated financial management package or an individual software module for a specific purpose. Associated with the application service providers (ASP) of the mid-1990s, the concept is neither new technology nor specific to municipalities. In the context of this report, town departments would have full access, over the Internet, to a financial management software package or individual applications for a specific purpose, but the application and town data would reside with the vendor in a remote location. This is in contrast to the traditional municipal practice of purchasing a software application outright, and having it installed on a town hall server. In the latter case, stored data would normally remain on-site with the application.

There are advantages to utilizing SaaS. The town would have the same software functionality of a locally installed application, but it avoids upfront capital costs for software "ownership", as well as for network wiring, servers, and other network hardware or infrastructure. Updates, patches and other software maintenance would occur automatically and without cost to the town. Data backups would occur nightly as well. Because multiple clients access the service at a centralized location, where most delivery issues will arise, the vendor has an incentive to ensure the stability and reliability of the system. As a result, the burden on local in-house, or contracted, technology support would be lessened. Web-based access also allows any authorized person to use the software from any computer anywhere with an Internet connection, sparing the town the expense and upkeep of cable connections between remote buildings and a town hall server.

There are concerns as well. Most often mentioned are those involving the ability to retrieve data and data security. Since the town is entirely dependent on the Internet for access to its financial or other software, if the vendor has a single data center, any disruption of the connection could be problematic. Disaster recovery plans should show how the town financial applications can be restored under different scenarios. Town officials would then have to judge both the reasonableness of those plans and the acceptability of possible downtime compared to

scenarios that could affect a network based system in town hall were it destroyed by fire, flood, power surge, etc. Bandwidth is a factor as Internet transmission speeds are slower than data exchange rates between computers on a town hall network. Part of the evaluation process should be a demonstration of system performance in a range of data intensive functions using either a copy of a database from a similar or larger community or through actual access to such a community's system. And, the town would want the ability to extract data - 24/7 - in a non-proprietary format so it can be used in a different program.

Whenever data is placed on the web, questions about security are legitimately raised. To protect its interests, the town should determine what data security standard its information is held in by the vendor. The point has also been made that because SaaS vendors retain data from multiple clients, sometimes in a single location, they devote far greater resources to firewall security, redundant backups and other protections than a municipality. The same conclusion is drawn when vendors use a third-party for data storage, i.e., a so-called "server farm". The town needs to know the specifics of all contractual arrangements involved in the storage and processing of their web-based data. It is typical for software firms to purchase hosting and server services from firms that specialize in large data centers, which might be located anywhere in the country or in other countries.

Service level agreements (SLA) typically define the relationship between a municipality and a SaaS vendor. Charges might be structured as a subscription fee or on a utility computing basis. The former is a pre-set, fixed amount for the service over a particular period. The latter is a charge based on actual usage of the service.

When considering the SaaS option, we encourage the town to probe topics listed below. If satisfied with information collected and responses provided, the SaaS product may have standing as a viable option. These questions would be in addition to those specific to the overall software performance and to the individual finance department modules under consideration by the town.

<u>Questions concerning Software as a Service</u>

1. Will the vendor provide a demonstration of the product over the Internet that shows performance as well as features?
2. Is training provided and to what extent?
3. How often will upgrades be made? Will there be notice? Training?
4. What technology support must the town provide?
5. Is a Service Level Agreement (SLA) available? Are the terms negotiable?
6. What guarantees and limitations on liability are included in service agreements?
7. What is the level of security that protects town data?
8. Has vendor security ever been breached?
9. Has any data stored by the vendor ever been lost internally or corrupted?

10. Does anyone other than town designated persons have access to stored town data?
11. Where is town data stored? (City, town, state, country?)
12. Does the town have full-time access to its data?
13. Can the town copy or extract its stored data in a non-proprietary format?
14. Is stored data backed-up? How often and by what means?
15. Does the vendor and subcontractors have tested disaster plans? Does the vendor offer extra cost data and application recovery services?
16. How long have all vendors involved in the service been in business?
17. What portion of the company's business are municipal contracts?
18. Can the vendor provide a list of Massachusetts clients?
19. What happens to town data if the company fails or discontinues the SaaS product?
20. How will the town be charged for services? Are there alternate pricing structures?
21. What is the SaaS pricing history?
22. What other fees are related to the SaaS?

Risks Associated with Reliance on a Private Vendor

The purchase of an integrated financial management package or major individual applications along with associated conversion, support, and hardware costs represents a significant town investment. It typically comes with the expectation of a stable vendor relationship for five to ten years, after which, a comparable re-investment might be necessary. However carefully the town proceeds in evaluating and selecting a vendor, the reality of the software marketplace is that any vendor might 1) go out of business for reasons not apparent during the evaluation, or more likely, 2) be acquired by another firm.

Sometimes such acquisitions have a marginal or positive effect on the products and services delivered to a town. Other times, the effect is negative for any number of reasons, e.g. the firm is interested in a different market like county or large city governments, or the firm is interested in only parts of the acquired firm that have nothing to do with municipal software. It is not uncommon for a municipality to make a major investment only to find out a year or two later that while they have rights to the software installed on their network they have lost the underlying firm as a business partner to support and maintain that software over time.

Given this environment, it is in the town's interest to carefully itemize and, to the extent possible, plan for those risks through the calculation of costs and benefits associated with a particular strategy and the negotiation of protective contract provisions. A long term solution is a desirable objective, but there are no guarantees associated with either high or low cost alternatives. Therefore, if the town has the ability to "hedge its bets" and still meet its operational needs for a specified period of time, officials should consider the option and not feel compelled to deliver an overall solution for the longer term.

Threshold Information

Threshold information will help the town complete an initial screening of potential software vendors and products. We recommend the following information as useful. The town should, of course, add to, remove from or amend the list as it deems appropriate.

General Information

Product name:
Company name:
Headquarters location:
Year founded:
Ownership history:
All product lines:
Number of municipal clients:
Number of states:
Massachusetts location:
Years in Massachusetts:
Municipal clients in Massachusetts:
Massachusetts % of total business:
Fully integrated software package:
Individual modules only / function
Software as a Service:
Software Platform:

Available Modules

Listed below are municipal financial management primary software modules that should be of interest to the town. Be aware that not all vendors offer all modules.

General Ledger	Accountant
Account Receivable	Collector
Cash Receipts	Treasurer
Property Assessment/Appraisal	Assessors
Budget	
Payroll	
Personnel / Human Resources	
Purchase Order System	

Primary modules may include some or all of the following features or capabilities.

Benefits
Betterments
Budget Preparation / Forecasting
Check Reconciliation
Employee Accrued Time
Enterprise Management
Inventory / Equipment Management
Facility Management
Financial Reporting
Fixed Assets
Fleet Maintenance
Fund Accounting
GIS
Grant Accounting
Pension Tracking
Permits, Licensing & Inspections
Project/Contract Costing & Management
Resident Request/Response Manager
Service Request / Work Order System
Tax, Excise, Utility & Misc. Billing
Tax Title

System requirements - Minimum/Preferred

	Minimum	Preferred
Servers		
Operating system		
CPU		
Memory		
Local hard disk space		
Desktop Computers		
Operating system		
CPU		
Memory		
Local hard disk space		

General Topics

The three topics discussed below reflect features of financial management software packages which address aspects of municipal operations that typically cross departments and tend to impact town government on a global basis.

Remote Data Entry. Decentralized, or remote entry, allows data entry at the department level of information that is routinely submitted to other offices to be reviewed, verified and acted upon. Once in the financial system through remote entry, the need to re- key the information is eliminated which frees up staff time to accomplish other important tasks. As a financial control, the data is formally posted to the system, by the person authorized to do so, only after the keyed-in information is received in hardcopy with required signatures and reconciled to computer entries.

The remote entry feature works best when invoice information is keyed-in by departments as part of the accounts payable process or to initiate a purchase order requisition. Departments that accept payments over-the-counter can record their receipts in the system. Remote entry of employee timesheet information can also help streamline the payroll process.

Implementation requires a certain level of computer proficiency. Typically, department managers assign the responsibility to one staff person, who would receive the necessary training and have access to support. Also necessary is a network

Budget Module/Forecasting. Historically, towns have moved from paper and pencil to Excel spreadsheets to organize municipal expenditures, identify revenues and develop annual budgets. Municipal software vendors now offer budget modules to accomplish the same purposes with added benefits, including the ability to tie into the town accounting system. Departmental appropriation requests can be entered remotely into a pre-designed working budget format. By creating a single budget location, one person has authority to make changes, which is an important organizational tool and control. Some budget modules allow financial forecasting and the capability to run what-if scenarios. Most important, once the annual budget is approved by town meeting, fiscal year beginning balances for departments and funds can be automatically rolled into the general ledger chart of accounts.

Report Capability. The capacity of financial software to generate reports is a critical consideration and a universally important function to end-users. In this respect, vendor products offer a catalog of standard reports, which often evolve in response to client input and to DOR requirements. The town should carefully examine standard reports assigned to each financial function to determine if they meet local needs.

The range of standard reports is either incorporated into the financial software package or is available through by a third-party report writer application, such as Crystal Reports. If a stand alone report-writer is associated with finical management modules, separate training will be a necessary consideration.

If these options fall short, the ability to create and produce custom reports becomes important. Toward this end, the town should know whether raw data can be extracted in a

format that can be transferred to other software through an import/export function, so that it can then be sorted, analyzed and presented, as well as saved and transmitted, i.e., via email.

The accountant's general ledger should be carefully examined. The ability to generate custom reports from raw data is directly related to the organization and level of detail in the town's chart of accounts. Therefore, early on discussions should take place within departments to establish a list of desired reports. The chart of accounts then needs to be designed with sufficient account detail to provide the data needed fro the reports.

Lastly, it is useful to know if each office where software is installed has the ability to generate its own reports or if all, or some, offices must rely on a central administrator to produce reports for them.

Security. From a financial management perspective, security management protects the integrity of data and gives staff valuable desktop access to information that originates in other departments. Town officials should carefully examine systems for setting password protections, approval rights and read-only screen access. The ability to produce reports should be restricted to areas of need and relevance for personnel. Access to employee files and other data protected by privacy laws need to be addressed. Included should be a discussion of data back-up procedures and protocols for disaster recovery.

Technology Support. The range of opinions noted earlier on the town's current software points, on one hand, to a communication disconnect between and among the IT department, department heads and some software end-users. On the other hand, our experience suggests that it is also a common outcome when users must rely on one or two persons to exclusively support software and perform certain tasks. This is not to say that users of commercial software fare better. These users do benefit from access to informal support from their counterparts in other communities using the same software in addition to whatever formal support is available from the vendor by phone, email, or written documentation. Still, vendor support is not always available when needed or adequate in response to problems.

Regardless of the town's choice of a software option, some level of in-house support will be necessary. To achieve an effective technology support function, issues and relationships that have taken shape under the current system must be examined and improved on. Toward that end, a more structured approach to software support can help determine if the underlying problem is software capabilities, technical aptitude or knowledge, unspoken or unclear policies, or confused or inconsistent expectations. A technology log, sometimes referred to as a tracking or work order system, can help clarify these issues.

A work order system is a useful tool for organizing and scheduling responses to support requests from town departments. A standard form ensures that needed information for an effective response is provided, and places some responsibility on employees to be specific about their requests. Exceptions will occur, in the instance of emergencies and long-term projects, but precisely stated, dated requests allow the support provider to create sequence, priorities and fairness. Core information in a work order system includes a log of when requests are submitted,

how solutions progress, when issues are resolved, and how IT department time is spent. A record of user support issues and requests can be helpful in identifying common areas where staff need more training or software improvements are required.

Most effective in other communities has been the implementation of a web-based portal through which all technology requests must pass. The IT director can then review, prioritize and respond to users with solutions, or inform them when their problem will be addressed. The software becomes a valuable time management and record keeping tool.

When support requests involve more complicated programming issues or rise to the level of a departmentally essential correction or enhancement, the departmental user must also be willing to sit down with the programmer and specify precisely what is needed and by when. These initial requirements and any modifications agreed to during the course of software development should be documented and, if warranted, accompanied by sample screens or report mock-ups.

Accountant

The accountant has the legal obligation to track all financial activity of a municipality. She maintains required independent records and follows well-defined procedures that document the flow of money into and out of municipal accounts. She oversees the system of checks and balances established by statute to monitor and protect local assets. The office reviews payroll and vendor warrants and maintains the general ledger where receipts, expenditures and all other town financial transactions are recorded. Cash and debt need to be regularly reconciled with the treasurer and receivables need to be reconciled with the collector. The office must have the capacity to produce expenditure and revenue reports, and track employee accrued sick leave and vacation time.

Among required submissions to DOR, the accountant completes and files the town's annual Schedule A by October 31 and submits an accurate year-end Balance Sheet (for Free Cash certification). The accountant prepares and submits Form 941 to DOR on a quarterly basis. Finally, the accountant works with the assessors and town clerk in the preparation of the town's Tax Recap Sheet.

In Hanover, the accountant is also the town finance director and serves as the town's chief procurement officer. As chief procurement officer, she ensures that town departments comply with state procurement laws (M.G.L. c. 30B). In role as finance director, she oversees manages town finance-related offices and oversees all financial activity.

Accountant - General

General Ledger
UMAS based
Compatibility with other software modules
Decentralized entries
Search parameters
Reporting capability

Accountant - Areas of Capability

Review invoices - create warrant
Review payroll - create warrant
Review departmental receipts - post
Generate departmental expenditure reports
Generate revenue reports
Rollover year end fund balances to new fiscal year
Generate 1099s
Encumber throughout the fiscal year

Configure general ledger to match Schedule A
Trial balances
Balance sheets
Grants management
Fixed asset management
Quarterly DOR reports??? 241s??
Vendor file management

Accounts Payable / Purchase Order System

Accounts payable and a purchase order system fall within the accountant's responsibilities, but are discussed separately for the purposes of this report. Although we would expect an accounting module to offer the option, implementation of a purchase order system is not essential to the process of approving invoices and making payments to vendors.

The establishment of an accounts payable process should begin with timing considerations. A deadline should be set for the submission of invoices to the accounts payable clerk. To spread the workload, towns will sometimes alternate weeks when generating vendor warrants for town department and for the school department. This schedule works best when the town manager has warrant signing authority, which will be the case in Hanover when its new government structure is implemented.

If the accounts payable software allows remote data entry, each department would key-in invoice information, which would be accessible to the accounts payable clerk. Original hardcopies of invoices should be assembled and forwarded to the clerk with a cover sheet signed by the department head. The cover sheet would include basic vendor and payment information and may be generated by the software. The accounts payable clerk or the accountant would complete the statutorily required verification process before approving the payments. If a payment request exceeds the balance of funds in the account to be charged, the software should automatically indicate as much. If the flag appears when invoice information is remotely entered, department managers or staff should not have authority to override the rejection.

Absent remote data entry, departments should be provided with a standardized cover sheet created in Excel. Most frequently used vendor numbers for each department can be pre-printed on that department's form. Staff should have the ability to copy and paste other vendor numbers from a master file located on a shared drive. In the case of a new vendor, a request supported by backup documentation should be made of the accountant for a number.

A purchase order (PO) system is a financial control. The process typically begins with a requisition for a PO by the department manager or staff person. If completed electronically, the system will immediately indicate whether funds exist in the account to be charged. The accountant would then fulfill her statutory responsibility to verify that the intended purchase is one consistent with the purposes of account to be charged and that there is no indication of fraud.

This is also an opportunity to determine whether procurement rules apply to the purchase. The purchase amount is encumbered in the accounting system either at the department or review level. Once approved, the department prints or electronically sends the PO to the vendor. When the good or service is received, the vendor invoice is submitted together with the PO to the accountant.

As noted, the system should prevent the department from by-passing a flag if there are insufficient funds in an account to cover the intended purchase. Also, the town should consider implementation of a PO threshold. Meaning, a PO would not be required for a purchase below a certain price level.

Features of an accounts payable / purchase order system can include the following:

Accounts Payable

Security controls
Due to - due from
Flag duplicate invoices
Allocate vendor payments to multiple accounts/funds
Flag over expended accounts
Track vendor activity
Identify and process 1099s
Track quotes
Keep multiple years open
Vendor creation rules
Separate checks to single vendor
Single vendor check for multiple invoices
Partial payment
Application of discounts

Purchase Order System

Combine multiple requisitions into single PO
Allocate PO charges to multiple accounts/funds
Automatic PO numbering
Unlimited POs in a fiscal year/unlimited open POs
Include comments
Attach documents, worksheets
Multiple lines on PO
Multiple levels of approval
Automatically encumber in general ledger
Flag over expended accounts
Flag duplicate purchase orders
Tie purchases to asset inventory
Allow partial delivery of good or service
Track PO progress/Bid and quote tracking

Treasurer

A town treasurer is custodian of all town funds, unless statutes direct otherwise. The office receives departmental turnovers, as well as other payments to the town, and ensures that deposits to town bank accounts are made daily. Money received is posted to the financial software receipts module and reported to the accountant on a regular basis. A cash book and debt schedule are maintained allowing the treasurer and staff to monitor the town's cash standing and manage the investment, disbursement and borrowing of cash. An annual cash flow budget also helps advance this purpose. On the receipt of approved payroll and vendor warrants, the treasurer prints, signs and readies checks for distribution. At year end, the treasurer produces and distributes employee W-2 forms. The treasurer reconciles cash internally to monthly bank statements and externally with the town accountant, and reconciles debt on a less frequent basis with the accountant. The treasurer's office also maintains a record of tax titles and pursues payments for outstanding balances through a process leading to foreclosure.

Among finance-related offices, the treasury department is among the lighter users of financial management software. Primary functions to look for in a treasurer module include:

Treasurer

Cash receipts
Batch reporting
Cash book
Check reconciliation
Decentralized receipt entry
Search parameters
Tax title
Search parameters
Reports

Payroll

The payroll function in Massachusetts municipalities is sometimes housed in the treasurer's office, in the accountant's office or it might be a free standing department. No matter where it resides, DOR advocates a process as follows.

Every employee should complete a time sheet which, at the end of the pay period, shows how many hours, by day, were worked and what type of pay was earned, i.e., regular time, overtime, vacation, sick, compensated, etc. It is acceptable for a designated office staff person to log time for all employees, but the employee's signature verifying the information should be required on a printed copy of the timesheet. Where staff have routine access to a computer, the timesheet should be created as an Excel spreadsheet. The exception occurs if the town has implemented an electronic timesheet system with authenticated employee signatures.

The employee time sheet information should then be consolidated in a summary sheet created in Excel. It would list each employee in the department and totals hours during the pay period assigned to regular time, overtime, vacation, sick, compensated time, etc. The summary sheet would be signed by the department manager and delivered to the town payroll administrator who would enter the information into the payroll system, or into the software of an outside payroll service. The timesheets would remain in each department.

In a fully decentralized system, employee timesheet information would be entered at the department level only and confirmed by authenticated electronic signatures.

If Excel spreadsheets or payroll software is used, then an exception based system can be implemented. The default software setting is regular hours and entries would be required only for those occasions when something other than regular time needs to be recorded for an employee. Essential to any electronic system is the capacity to account for employee accruals and leave balances. The system should serve as a central record of employee sick leave, vacation time, compensated time and all other leave categories. Up-to-date balances should be available by category and by employee, and the information should be provided to employees with their paychecks.

All employees would be coded in the system to assign the correct withholdings to gross pay. The system would generate appropriate reports for reconciliation and verification purposes. Once approved and posted, a payroll warrant would be printed. It should list each employee receiving compensation with either gross or net pay indicated. Withholding amounts, totaled by withholding category, should be separately listed.

Timesheets should not be completed before the close of the pay period to which they apply. Checks should not be issued prior to selectmen approval of the payroll warrant. By law, no more than seven days can pass between the end of the pay period and payment to employees.

On the next page is a list of topics that should be covered during the town's review of payroll software modules. It is not necessary inclusive. We also recognize that some of the topics might be appropriate to the treasurer, benefits administrator or personnel administrator.

Payroll

Exception based
No limits on wage types
Incorporate salary and wage grades / steps
Payroll records content / maintenance
Security features
Decentralized timesheet data entry
Various pay periods
Multiple pay sources for employee
Unlimited deduction types / withholding
Tax exempt earnings
Deferred compensation plans
Unemployment compensation / workers comp
Accrual accounting/Employee access
Auto adjust for step increases, COLAs, longevity
Payroll warrant format / content
Interface with accounting function
State / Federal tax forms production
Search parameters
Reports

Collector

A municipality's tax collector possesses the authority to collect real and personal property taxes, excises, betterments and certain other charges added to and committed as taxes. If a town accepts M.G.L. c. 41, §38(a), the position becomes a town collector, and then will have the authority to collect all monies due to the community. The collector receives commitments from the assessors and payments from residents, which can arrive through a lockbox, electronically, by mail or over-the-counter. Collections need to be counted, posted to taxpayer accounts and either turned over to the treasurer or deposited daily. Delinquent accounts need to be pursued and then moved efficiently into the treasurer's tax title accounts. If paid, penalties and interest need to be calculated. To be successful, a tax collector must maintain an up-to-date receivable control that is reconciled internally and then externally with the town accountant monthly. The collector needs to receive a record of approved abatement and exemptions from the assessors. Credit reports should be run as appropriate and research needs to be completed to confirm legitimate refunds due to residents. The office must also have access to taxpayer account histories in order to deliver municipal lien certificates as required by law.

The list below identifies topics that financial software used by the collector should address.

Collector

Billing capabilities
Receipts system
Cash register
Police details
Betterments
Receivable control
Penalties and interest calculation
Refund (credit) reports
Ability to print receipts
MLC
Tax taking process/Flag tax titles
Abatements
Exemptions
Bounced checks
Lockbox compatible
Online payments
Scanning wands
Checking scanning
Multiple addresses
Search parameters
Reports

Assessors

The board of assessors' office is responsible for valuing all the town's real and personal property, assigning tax payments to owners, and generating the commitment authorizing the tax collector to collect real estate tax and motor vehicle excise payments.

To ensure that residents are taxed equitably and accurately, the office maintains and updates property records with information received in response to mailings, from deeds and through the on-site inspection of sale properties and properties where a building permit has been issued. Additional information is gathered during an on-going property measure and list program. Upon resident application, assessors act on and track exemptions and abatements. They estimate new growth and conduct classification hearings. The board of assessors set the tax rate, recommends the annual overlay, and provides levy information for use in the Tax Recap Sheet submitted to DOR. The office is also required by DOR to document an annual property value adjustment analysis and to prepare for State certification of property values every three years.

The assessor's office is also a limited user of the town's financial management software. Interaction is in four areas.

Commitments. When the assessors commitment real estate taxes, the motor vehicle excise, betterments or other charges to the collector, individual accounts of those obligated to pay need to be transferred to the collector. If the assessor's appraisal application is compatible with the collection software, the transfer will be seamless. If not, a bridge will have to be programmed, possibly by the collection software vendor at a cost.

Abatements and Exemptions. When the assessors have access to the financial management software, when approved abatement and exemptions are entered into the system, they will be immediately recorded on the collection side. Certificates, or lists, of abatements and exemptions must still be sent from the assessors to the collector in hardcopy.

Budget. The assessors will need to enter the financial software if the town uses the budget module and departments are required to enter annual appropriation requests through the remote access feature.

Expenditures. The assessors will need to enter the financial software if departments are required to enter invoices for payment, or use the purchase order system, through the remote access feature. With on-screen read-only access, the assessors would be able to monitor the department's expenditure report at any time.

Human Resources

The term human resources is often used synonymously with personnel administration and, depending on the vendor, software may include benefits administration and payroll functions. In the report, we separately discuss payroll, but will include benefits administration in this section. The list below indicates the range of information that might be maintained in a human resources module

Human Resources

Employee personal information
Dependent status
Education / Training
Certifications
Awards / commendations
Job history
Special skills / licenses
Background checks
ADA conditions
I-9 information
FMLA information
EEOC information
Contract terms
Union status
Benefits
Attendance / Accruals
Performance reviews
Salary / wage history
Disciplinary actions
Terminations
Link to payroll system
Search parameters
Reports

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This report was prepared by the
Department of Revenue Division of Local Services:

Robert G. Nunes, Deputy Commissioner & Director of Municipal Affairs

Frederick E. Kingsley, Bureau Chief
Municipal Data Management and Technical Assistance Bureau

David Davies, Director of Information Technology
Information Technology Bureau

Joe Markarian, Director
Technical Assistance Section

Zachary Blake, Project Manager
Technical Assistance Section

In preparing this review,
DLS received information from following individuals:

Stephen H. Rollins, Town Administrator
Andrew Port, Assistant Town Administrator/Planner
Thomas D. Nee, Director, Information Technology
Victor Diniak, DPW Director/Former IT Director
Finance Director/Accountant
Joan Port-Farwell, Treasurer/Collector
Kelly Craig, Payroll/Benefits Administrator
Wanda Barron, Personnel Administrator
Robert Brinkmann, Assistant Assessor
Anthony Marino, Building Inspector/Acting Health Agent
Joanne McDonald, School Business Manager
Michael Purdy, School Director of technology
Pegge Powers, Senior Clerk Accounts Payable
Khristine Mandeville, Assistant Town Accountant