

Making Advanced Technology Affordable for Small Towns A Case Study in Joint Purchasing and Cloud Computing: Royalston and the Community Software Consortium

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Small New England towns have the same basic functions to perform as the largest cities and counties elsewhere. Massachusetts residents want to preserve home rule and the traditions of town meeting governance, created in the 17th century and sustained over three centuries. Such preservation, however, has made performance of the aforesaid basic functions less than efficient. Small towns with few resources could manage with written ledgers and hand calculators when that was all that the work required. As state regulations and requirements, not to mention state agencies' own drive for low cost efficiencies, forced cities and towns to automate and digitize, a steadily widening "digital divide" increasingly put smaller towns at risk. Most often, they had neither the staffing nor the resources to safely or effectively use advancing technologies to perform basic functions. Small town government in the marketplace of governmental technology is an anomaly. Vendors of products and services compete throughout the country to win contracts with jurisdictions whose typical size is equivalent to the largest Massachusetts cities. The choices for towns under 10,000 residents have been few and problematic in recent years.

Now, the continuing evolution of technology offers a potential game-changing set of alternatives. So-called cloud computing, where data, application programs, and IT expertise are centralized allows small town officials to consider doing away with all but simple desktop, laptop, or tablet computers and a printer or two. Even more important than not having to buy and upgrade network equipment is the possibility of essential town data being automatically protected by experts instead of by the good intentions of untrained volunteers. For these and many other reasons, cloud computing is the inevitable future of municipal computing for most Massachusetts towns (and, soon enough, cities).

But how might a very small town take immediate advantage of this potential solution to a longstanding and growing problem? Part of the answer is "not alone". Another part is to find at least one town with the personnel and leadership to act decisively in their own interest as well as for other towns. The Community Software Consortium (hereafter the CSC) was formed by over 70 Massachusetts cities and towns almost twenty years ago to apply joint purchasing strategies to acquiring advanced technologies for its member communities. All communities benefited equally from resulting savings, i.e. purchase prices and service contract costs did not vary by community size. For at least the last five years, if not longer, the CSC has contemplated moving applications and data "to the cloud", as the realities of local system administration and the desire of members to be freed from the constraints of client-server computing kept members and their advisors looking for cheaper, simpler ways of hosting and supporting the basic functions of assessors and collectors/treasurers. The Community Innovation Challenge Grant program offered an opportunity, and the Town of Royalston stepped forward to be the lead applicant on behalf of all CSC member communities.

Arguably, any member community could have volunteered for such a role. What made Royalston a good choice?

- In size, location, and resources, it is typical of the towns which have the greatest need. If the resulting solutions work for Royalston, they can work for any town no matter how small, poor, or remote.
- Royalston was fortunate to have an official with the training, experience, and aptitude to take on overall project management, on-going requirements specification, and detailed testing and quality assurance.
- Royalston has an informed and supportive executive leadership, ready to "make things happen" to get the project off the ground and to maintain the focus on project objectives over time.

The Town of Royalston, on the New Hampshire border equidistant between Boston and the New York state line, has about 1,200 residents and collects or receives about \$2 million in annual revenues. The Selectboard manages town affairs, while a mix of mostly part-time and a few full-time officials perform essential functions of government. Acting on its own, a town like Royalston faces daunting hurdles in obtaining advanced technologies specific to town operations. The town can simply not afford to license industry-leading software from major vendors, and those vendors are not anxious to make marketing calls to a remote town hall where the resulting contract would be small and the support requests many.

The CSC has observed, over the years, not only a consolidation of major municipal software vendors aiming increasingly at the large jurisdiction market, but also the disappearance of small firms catering to exclusively to small towns. With numerous invitations to see and settle on various proprietary packages, the CSC has preferred, whenever possible, to develop and support its own software solutions, available without licensing cost to member communities. On-site and remote desktop support has met requests for assistance over the years with active state support, but the cost and speed advantages of administering one database and one set of application modules on one set of central servers has been obvious but until recently unattainable.

In winning a Community Innovation Challenge Grant, Royalston was given the opportunity to put these assumptions and projections to the test. The CSC's existing billing and collection program for real and personal property plus motor vehicle excise was re-written from the ground up in .NET Internet-friendly programs tied to a Microsoft SQLServer database. Existing BusinessObjects business intelligence tools (custom query & reports) were successfully linked to the new database. Complementary programs for computer assisted mass appraisal and personal property valuation were set up in so-called terminal emulation mode so they could work for users in the cloud, tied to a central database, without a complete re-write. A dashboard in Microsoft Sharepoint pulled the different components together, with a custom look for each participating community. Along the way, Royalston addressed enhancement requests of collectors in member towns, ensuring that the resulting product was not just a copy of past functionality, but included everything that member collectors had recently asked for. The Community Innovation Challenge Grant program came with regular progress report requirements and firm deadlines. Royalston's part-time collector and former CSC board member, Rebecca Krause-Hardie acted as project manager throughout, and the grant phase finished on target and within budget. The software is now in "beta" testing, i.e. in actual use in a production environment going through an entire year's worth of activity to identify any bugs or issues. Royalston has elevated its financial operations to the cloud successfully, and other CSC member communities have lined up to follow. Their investment in advanced technology, now that Royalston has led the way, will be limited to any Internet-ready device, anywhere. These communities will be able to concentrate on their work, leaving the technicalities to someone, somewhere.