**AB ASSUREBUY**

*WHITE PAPER*

# E-COMMERCE OPPORTUNITIES

# for

# STATE & LOCAL MUNICIPALITIES

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## INTENDED USE

This paper is intended as an informational guide for state and local municipalities. The primary purpose is to present e-commerce opportunities and techniques to be considered by municipality managers when developing strategic plans for utilizing Internet technologies. Specifically, the issue of commercial transactions involving payments between business or individual constituents and the municipality will be considered.

This paper is not intended to recommend a single company or individual solution for the needs of a municipality. It does, however, recommend the outsourcing of certain e-commerce activities which result in cost savings to taxpayers.

## ABSTRACT

State and local municipalities are complex organizations, combining government, business and technology in a way that is intended to both protect and serve the needs of local constituents. As a result, municipalities require continual and up-to-date feedback from the community to ensure that its limited resources are being expended in the most efficient and effective manner possible.

Just as the industrial revolution changed the shape of towns and created urban centers, and just as the automobile changed the demographics and density of suburban America, the computer revolution and the Internet in general have the propensity to change municipalities by allowing them to interact in an efficient, real-time, environment which has never before existed.

Local government touches the lives of people now more than ever before. Individuals are forced to interact with local government on issues which range from child welfare to protection of the global environment. The world wide reach of the Internet now makes it possible for individuals to ascertain the impact of local decisions on the globally connected, "new" economy. Local politicians must be actively involved in making the switch to the "new" economy. Communities must be seen as leaders in the face of change, rather than followers. Not only do municipalities need to show the future to their constituents but they also need to actively participate in creating that future.

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Community web sites can be an effective means of creating a new bond between constituents and communities. Local politicians can be proactive in using the Internet, not only as a communication tool, but also as a means of performing essential activities such as issuing local permits, providing community service programs, and collecting fees and taxes. In so doing, communities benefit from the cost savings and efficiencies obtained through e-commerce and constituents benefit from an easier, faster, and more efficient way to interact with local government.

## WHAT IS E-COMMERCE?

The term electronic commerce, or e-commerce, has been generally used to describe the interchange of information and goods or services over the Internet. This includes the general use of static web sites which are based upon the processing and transmission of digitized data, including text, sound and visual images that are carried out over open networks, like the Internet, or closed networks, like America On-Line (AOL) or Microsoft Network (MSN), that may include a gateway onto an open network.

For this paper, a newer, more narrow, description of e-commerce will be used. This definition describes e-commerce as the act of engaging in commercial transactions by both individuals and organizations, including the buying and selling of products or services, which are carried out over the Internet. Although a great deal of media attention has focused on on-line retailers selling books, wine and computers, on-line e-commerce transactions also include intangibles such as travel and ticketing services, software, entertainment, banking and on-line trading, insurance, information services, legal services, real-estate services, and health-care. Government services are an excellent example of intangible transactions that may also be completed over the Internet.

## HOW CAN E-COMMERCE HELP THE COMMUNITY?

Changes in new technologies have a dramatic impact on the economy and functions of local municipalities. Part of what makes the Internet so compelling for local municipalities is not that it can simply be used as a means of providing general information to constituents, or that it can be used to complete business transactions, but rather that it can be used to radically transform the effectiveness and operation of the municipality.

A primary purpose of local government is to provide services to the local community. Yet, local municipalities struggle with the ever challenging need to "do more with less". Constituents demand more and better services but are unwilling to pay more taxes. As a result, municipalities constantly strive to become more efficient and cost effective.

As a general rule of business, when operations become more efficient and effective, then lower costs will result. Forrester Research Inc., of Cambridge Massachusetts, estimates that citizens and businesses pay about $450 billion annually in fees and fines to local governments. The cost of collecting and processing those fees is enormous. It is estimated that the average cost of processing a single payment by mail is $40. The same payment, processed electronically by phone is only $15. By using the Internet, the cost of payments can be reduced to under $5, resulting in overall savings of 85 percent or more. This means that an investment of $5,000 to outsource payments to an outside on-line payment processor, could be recouped in under 150 payment transactions. Likely less than one month in a reasonably sized municipality.

Not only does the use of e-commerce save taxpayer money, municipalities are also providing improved levels of service to the community. Historically, constituents have become accustom to over-complicated and lengthy procedures when dealing with government. The ability to actually engage in and complete business transactions with local government has the potential to make the interaction with government much more convenient and desirable.

Given the increasing need for revenue, municipalities are now offering more ancillary "pay-as-you-use" services than ever before. Promoting these services through conventional channels, such as newsletters, direct mail and advertising is costly. Utilizing the municipality web site to promote new and existing services reduces the cost of conventional advertising, but unless there is a simple, easy and effective way for constituents to take advantage of the services, they will go unused and the opportunity for additional revenue will be lost. Allowing constituents to purchase these services directly on-line, where they are promoted, eliminates the possibility of losing the sale because extra, off-line, effort is required by the purchaser.

In the end, lower costs and greater efficiencies allow municipalities to allocate scarce taxpayer dollars elsewhere. Constituents benefit through expanded services and a more convenient way to interact with local government. Together, this "win-win" situation for municipalities and constituents provides a betterment of the community as a whole. Furthermore, constituents have a more positive attitude toward local

politicians when they perceive the community as actively participating in the "new" economy.


## IS THE COMMUNITY READY?

The mission of the U.S Census Bureau is to be the preeminent collector and provider of timely, relevant, and quality data about the people and economy of the United States. Each year, this agency publishes reams of statistical data informing businesses and communities of the changes in local demographics. According to a recent CommerceNet/Nielsen study, at the end of 1999, over 32% of the US population were classified as Internet users. This number is expected to rise to over 58%, or 165 million users, by the end of 2002.

There are 50 states, over 3,100 counties and over 36,000 local municipalities in the United States. While demographics vary greatly from community to community, each municipality has ample access to information which profiles its constituents. How many people own computers in the community? What is the average income level? How many elderly people are in the community? Do they use computers? All of these questions can be answered, and all of the answers lead to only one conclusion… a resounding "Yes!", your constituents are indeed ready for e-commerce in your local municipality.

Even in areas heavily populated by older Americans, Internet use is on the rise. The *Internet Industry Almanac* reported that the number of people over the age of 50 using computers rose from 29% to 40% between 1995 and 1998. More importantly, of those elderly people with computers, the number using the Internet rose from 18% to 70% during the same period.

Overwhelming evidence is available to prove that implementing e-commerce into a local municipality is no longer a luxury, but a necessity. As the every-day demands on an already fast-paced society increase, constituents welcome the opportunity to complete necessary and often mundane activities, such as shopping and banking, on-line from the luxury of their homes. This appetite for e-commerce extends to transactions with local government as well.


## E-COMMERCE OPPORTUNITIES

To-date, municipal web sites have focused primarily on providing information to the community. In fact, the information provided varies significantly from one community to the next. While general information

regarding the community and local services is a necessary part of the municipal web site, the opportunities outlined in this paper extend the static content and include activities and procedures that allow constituents to engage in real-time commercial transactions with local government.

For purposes of this paper, e-commerce opportunities are divided into the following six categories:

1. Community Information
2. Community Events
3. Community Services
4. Business Services
5. Leisure and Recreation
6. City Purchasing

Each of these categories is further described in the following sections, including a discussion of the current level of implementation in municipal sites and the specific opportunities that might exist.

*Community Information* – An investigation of existing web sites with information about the local community found, in most cases, that pages with simple static information, such as the address and telephone number of the major's office and city departments, general information for tourists, and short descriptions of various community programs are the most common. In the future, these communities should consider offering discussion forums for issues of local interest, bulletin boards, and interactive ways to keep residents informed of available services. To accomplish this, local municipalities should strive for an interconnected, cross departmental view of the community.

*Community Events* – A few of the sites examined offer static calendars of events and activities for the community. Included are items such as city council meetings, local seminars, festivals, and public work schedules. To enhance the functionality of these sections of the web site, the local municipality should allow residents to register for the events and purchase tickets on-line. Offering on-line registration would make it more convenient for the resident and would give the municipality direct feedback regarding events and festivals. A further enhancement would be to provide the ability for residents to post feedback about events directly on the web site.

*Community Services* – There are many opportunities for a local municipality to enhance its offering of community services with e-commerce transactions. Listed below are a few of the examples uncovered during the investigation:

a) **On-line Payment of Water Bills**
Rather than requiring that water bills be paid in person or by mail, it would be more convenient for residents to pay these bills over the Internet, regardless of the method used to collect the meter reading. In fact, under certain circumstances, the resident may be able to read the meter themselves and provide the meter reading and payment on-line to the local water department.

b) **Parking Stickers**
Many municipalities require residents to obtain a city or village parking permit for their automobiles. These permits usually need to be renewed once a year. The process of purchasing and renewing these permits could be made much more convenient through an on-line form which collects both the renewal information and a resident's credit card information. Once the on-line renewal is entered and the payment is approved, an e-mail can be sent directly to the municipal office responsible for mailing out the stickers. The entire process should never take more than a couple of days.

c) **Pet Registration Fees**
Some municipalities investigated offer an on-line pet registration form that can be printed and mailed in with a check. Given the low dollar amount usually required for such registrations, and the high cost of processing the payments by mail, these payments naturally lend themselves to automatic, on-line processing by credit card.

d) **Building Permits**
To reduce the time required to obtain a building permit, it would be possible to provide the form and accept payment on-line. In cases where additional, supporting documents are required, they could be mailed to the local office as before. The difference would be that the payment had already been received and processed. Receipt of the additional documents would simply trigger the release of the permit. Again, as in other examples, accepting the initial information and the payment electronically through the municipal web site, saves the community money by eliminating unnecessary handling of documents and paper payments.

e) **Parking Ticket Payments**
Several cities investigated are now offering on-line payment of parking tickets. Larger cities, like New York, are very advanced in this form of e-commerce with the community. A resident simply

needs to have the parking ticket number and a credit card to complete the entire transaction on-line within seconds.

f) Bicycle Licenses
Not all communities charge a fee for registering bicycles. For those that do, collection of the payment and registration through the Internet is certainly more efficient than dealing with paper mail-in forms and payments. Even when no fee is required, registration on-line is still more efficient than any conventional form of registration.

g) Library Fees
Again, the requirement of fees associated with libraries varies by community. However, fines on overdue items or fees for library programs are excellent examples of e-commerce opportunities for the local library.

h) Donations
Often, local communities partner with organizations and charities that seek donations. These donations can also be accepted by credit card over the Internet. For example, the United Way "Harvest for Hunger" program in Cleveland (www.havestforhunger.org) already provides the opportunity to donate money on-line.

*Business Services* – While municipalities are becoming more active in offering interactive community services for residents, many seem to have forgotten about the businesses in their community. Businesses also engage in commercial transactions with local government, including the acquisition of business licenses, permits, records and payment of taxes. Today, almost all business use the Internet on a regular basis. Nearly all business users engage in on-line transactions with customers and suppliers on a daily basis. As a result, businesses are even more eager than individuals to engage in e-commerce activities with the local government. Aggressive use of Internet technology by the community is one way to lure new businesses into the area. For most businesses, fast service and easy access to local government offers a unique competitive advantage to the community.

*Leisure and Recreation* – In addition to local festivals, the community usually has access to a wide variety of leisure and recreational programs and activities. Sometimes, these programs are offered by the local park district and other times they are offered directly by the municipality. Whether a resident wishes to take a local dance class or rent the picnic shelter by the river, all of these transactions involve fees that can easily be collected on-line at the municipal web site. Convenience is the objective

here. Most residents view their leisure time as a rare commodity. Certainly, it is undesirable to have to spend a lot of time planning for leisure, which by its very nature involves relaxation. Residents welcome the opportunity for efficient and easy access to local leisure activities. Other examples of services that fall into this category include swimming passes, hunting/fishing licenses, boating permits and event tickets.

*Municipality Purchasing Activities* – Not only does local government engage in transactions with residents and local businesses, but suppliers to local communities can also enhance their relationship with the municipality through the use of e-commerce. City purchasing activities, especially the requirement to obtain bids for many of the community's outsourced services, are especially well suited to on-line transactions. These relationships may not involve actual on-line payments, but certainly involve the real-time exchange of information required by both parties in the bidding process. Examples currently in use by state and local municipalities throughout the country include requests for proposals (RFP's), online purchasing bids, city project proposals, and city service contracts.

## CHALLENGES AND ISSUES IN IMPLEMENTING E-COMMERCE

The National League of Cities (www.nlc.org) recently commissioned a survey on the major factors affecting America's cities. NLC researchers interviewed more than 60 officials in 30 cities invited to participate in the project. The 30 cities were carefully chosen to be representative of the broad diversity of cities nationwide. The study showed that cities share many of the same challenges and cited six key issues facing cities today, including dealing with the "new" economy and limited revenue generating capacity. Both of these issues can be addressed through better strategic implementation of e-commerce strategies in local communities.

Even with overwhelming evidence pushing local communities toward e-commerce, many internal challenges still exist. Large municipalities often have a Chief Information Officer (CIO) to concentrate on technology strategies. Many small communities, however, are lucky to simply have a person they can call the City Information Technology (IT) Manager. The first challenge is to find the right person to champion the Internet strategy. This person must not only have technical insight, but must also understand politics, strategy and the needs of the local constituents. Without assigning the e-commerce strategy to someone possessing those skills, the project may lose focus, lose visibility, or worse yet, lose the support of the local community.

The second challenge is to successfully unite the various municipal departments into adopting a cohesive e-commerce strategy. In order for the project to achieve its goal, the municipality must present a "common face" to the community. This means that all local departments should participate in adopting a strategy which provides a single point of interface for the community while meeting the diverse needs of each individual aspect of local government.

Another challenge is strictly financial in nature. Credit cards remain the preferred method of conducting transactions over the Internet. Unfortunately, many local governments have only recently become accustom to this form of transaction. Others still accept only checks or cash. To accept credit cards, either over the Internet or otherwise, a local government must first obtain a credit card merchant account. The merchant account allows the municipality to accept credit cards and instructs the credit card companies on where the funds should be deposited. The local bank is a good place to starting looking for this service.

The integration of new forms of payment into existing systems may seem like a challenge to many communities. If implemented properly, e-commerce strategies can easily and seamlessly integrate with existing computer and accounting systems. This is especially true if the municipality works with a recognized e-commerce provider with experience in processing electronic transactions.

Perhaps the biggest challenge is identifying where to start. It is critical to remember that local government is not afforded the opportunity to re-invent the wheel or to be technological pioneers. For this reason, it is recommended that the municipality choose an experienced technology partner to which it can outsource the integration and processing of e-commerce transactions from the Internet. The benefits of choosing such a partner include significant cost savings, faster implementation, domain expertise and access to robust features, including security and credit card fraud prevention. Perhaps most important, outsourcing allows internal resources to focus on other, more important issues.

Finally, start simple. Implement a few services at a time and then add others as time goes by. Develop a reusable strategy that can be replicated through the various municipal departments. As time goes by, enhanced operational efficiencies will result in lower costs, allowing the savings to be used to implement larger projects.

## CASE STUDIES

### *City of Indianapolis (www.indygov.org)*

The City of Indianapolis is one of the most advanced municipalities in terms of services and information available online. By comparison, it seems that for all municipalities, the information is mostly static and informational for the residents. Additionally, it seems that the size of the municipality dictates the functionality of the web site. The City of Indianapolis is a large city, and that translates into a larger budget for e-commerce initiatives. Similarly, their web presence does offer a large amount of static information for review and navigation.

As for the use of e-commerce, Indianapolis offers more financial transactions on-line than most of their peers, including very large cities. The residents of Indianapolis who need to make a property tax payment, can go the web site and complete that transaction in real-time with a credit card. In fact, the on-line instructions for making tax payments lists the on-line payment option first, over mail, phone, and in-person payments. On-line payment offers a secure and efficient way of completing this transaction for residents without the extra manual efforts required by other forms of payment.

In additional to the annual property tax payments, parking violators can take advantage of the on-line ticket payment service to settle their outstanding fines. The violator can search an on-line database of outstanding tickets to determine if their ticket is still outstanding, and then make payment through an on-line secure credit card transaction. This saves a tedious and time consuming trip to the city courthouse and is certainly beneficial for those parking violators that live outside Indianapolis.

Another area of transactions that has been automated by the city of Indianapolis is on-line requests for building permits. Should a business or a resident of Indianapolis need electrical, plumbing, heating and cooling, right of way, or structural permits, they can complete an application on-line and receive the permit information to post via e-mail. They can print and post the permit rather than traveling to the city offices to apply in person. A natural extension to this model would be to someday offer the payment of associated fees on-line as well.

Permits are not the only reports available online. Any person with access to the World Wide Web and a credit card can purchase a variety of public information. This information includes incident reports, traffic accident reports, and criminal histories from the police and sheriff's departments. This facilitates the process of gathering information needed for insurance

claims or for new employee background checks by businesses. The net revenues from these reporting services should steadily rise both from an increase in requests over time and from a reduction in the staff needed to fill the automated requests.

In additional to the police department, the county court has made several of their commonly requested reports available online. These reports include copies of marriage certificates, tax warrants, and criminal name searches. These automated efficiencies improve both application and turn around time for the customer.

As the size of the resident database grows, and the integration between disparate departments of the city increases, more functions will become available to residents on-line. Logical transactions include water bill payment, city parking sticker applications and purchases, pet licenses, public festival tickets, and library fee payment.

## *City of Philadelphia (www.phila.gov)*

The city of Philadelphia is a good example of a larger community that has successfully implemented on-line strategies that include the opportunities outlined in this paper. For example, the residents of Philadelphia can log on to the web site and pay their quarterly water bills with a credit card. They can also log on to apply for various types of licenses, some of which are sent to them through the mail once they have been paid and others whereby the resulting documents are sent by e-mail.

The city of Philadelphia has integrated other government run operations into their web site. The International Airport and the Public Library are both available on-line through the city of Philadelphia web site. The airport section is only static information with a link to the official airport web site, but the library offers a fully functional search engine to locate a book and/or author in any of the member libraries of the Philadelphia public library system. The ability for late fee payment, however, is still missing from this site.

These sites represent a good use of financial transaction processing, as well as the ability of a municipality to publish a large amount of static information on-line for their residents. The ultimate goal for the municipalities is the ability to build community through the Internet. This includes contact information for elected offices, and the ability to generate an e-mail to send to the official. Additionally, on-line chat forums that focus on specific community relevant topics would allow a free exchange of opinions and information among the community residents.

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**Indianapolis offers a good example of an on-line community chat forum, including the ability to chat with the governor at scheduled times. These are similar to the popular fireside chats that officials have made popular recently, but they put people on more of a level playing field. Both sides have an ability to present information, and the viewing public has a right to see the information and ideas that are exchanged.**


## CONCLUSIONS

**In preparing this paper, the authors have researched hundreds of municipal web sites throughout the United States and Canada. Unfortunately, for most, a dismal e-commerce showing exists. Today, it seems that the majority of local municipalities are still perfecting static web sites that do little more than praise local politicians and provide on-line access to the community newsletter.**

**Even Yahoo's guide to "The Best on the Web" shows just how far our municipalities have to go. The caption on the Yahoo! web site, located at www.zdnet.com/yil/content/mag/9803/civic.html reads, "We picked out a few cities with the most wired civic services departments, and a trend we hope will inspire the rest." Here is the list:**

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|---|---|
| Portland, OR *(3-D Tour of the City)* | Indianapolis, IN *(Pay City Parking Tickets)* |
| Sacramento, CA *(Crime Statistics On-line)* | Atlanta, GA *(Loan Guaranty Forms On-line)* |
| Long Beach, CA *(Buy City Souvenirs)* | Albuquerque, NM *(E-mail Requests for Pothole Repairs)* |
| Milwaukee, WI *(View Rogue's Gallery)* | New Orleans, LA *(Read Minutes of City Meetings)* |
| Buffalo, NY *(Read the City Budget)* | Jacksonville, FL *(Property Values On-line)* |
| Cleveland, OH *(Browse the City Library)* | |

The municipality web site should ultimately focus on making the lives of the community residents better. Dealing with the municipality is often a necessity rather than a luxury in their lives and anything to make that process easier and more comfortable will ultimately make the relationship between resident and municipality better.

Time is pressing. Municipalities must act quickly to recognize the potential which lies before them. They must take advantage of the Internet to remain efficient and competitive by implementing infrastructure and services which make the municipality part of the "new" economy.

"Every municipal web site should be driven by self-service applications from which citizens can get more than just information. Advanced knowledge of constituent needs facilitates the provision of superior service which in turn, makes for happy voters – a good thing to have come election time."

*– Sean Laughlin, Oracle Corporation Canada, Inc.*

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