

**ALLIANCE/NCSBCS Survey of State & Local Jurisdictions  
on Savings from Application of Information Technology  
in Building Codes Administration & Enforcement Process**

**Purpose:** The purpose of this survey is to promote more effective and efficient building codes administration and enforcement. Information will be gathered from jurisdictions concerning benefits and cost savings being achieved from the acquisition and use of information technology to streamline building code administration and enforcement processes. The data will then be collected and results will be given to participating jurisdictions in a report.

This survey has been designed to capture actual or estimated costs comparison data on the use of information technology (IT) supporting building codes administration and enforcement processes. Jurisdictions that have completed IT projects automating building permitting, site inspections, licensing, or plan submittals or reviews are in a key position to provide this data to help other jurisdictions consider undertaking similar programs.

Even if your jurisdiction has not already applied IT to one or more code administration process, we would appreciate your completing and returning Question IB noting reasons why you were not able to take such action.

A number of jurisdictions receiving this survey may be in mid-process of updating an older information technology application. If this applies to your jurisdiction, please complete the survey using as comparison data information on any projected cost savings to the application of the new hardware or software.

**Instructions:** This survey contains several questions to help ascertain the benefits and actual or approximate cost of operations prior to and following the implementation of IT systems for one or more codes administration or regulatory processes as well as understand expenses realized during the project. In this regard, please feel free to provide any additional information that would help us understand the project costs and benefits.

To facilitate completion of the survey, we have included a worksheet for you to fill-in capturing costs and savings. Please complete and submit one worksheet for each code administration or enforcement process to which you have applied information technology. To give you an idea of the type of data we are seeking, we have provided a sample worksheet for one process (online permitting) that has already been completed. Even if you only have ballpark estimates for the costs and savings, your input will be valuable.

As noted in the transmittal letter, jurisdictions submitting a form will be sent the final report. Please make sure you complete the contact information at the end of the survey.

***Please complete and return by fax at 703 481-3596 by February 28, 2005.***

**Thank you for your time and input!**

**Part I: IT Applications**

A. Has your jurisdiction acquired information technology hardware or software for use in the administration and or enforcement of one of the following building regulatory processes? (Please place a check next to those that apply and provide time (month/year) such software/hardware was either produced or acquired and when it became operational.)

| Check if Applicable | Regulatory Process                                                 | Date Produced/Acquired | Date Operational |
|---------------------|--------------------------------------------------------------------|------------------------|------------------|
|                     | Permit applications & processing                                   |                        |                  |
|                     | Plan submittal & processing                                        |                        |                  |
|                     | Plan Review                                                        |                        |                  |
|                     | Licensing                                                          |                        |                  |
|                     | Inspection Scheduling                                              |                        |                  |
|                     | Conducting Inspections                                             |                        |                  |
|                     | Other Administrative or Enforcement Activities (please list below) |                        |                  |
|                     |                                                                    |                        |                  |
|                     |                                                                    |                        |                  |
|                     |                                                                    |                        |                  |
|                     |                                                                    |                        |                  |
|                     |                                                                    |                        |                  |
|                     |                                                                    |                        |                  |

B. If no to all of the above, please check appropriate boxes below noting reasons why your jurisdiction was not able to apply information technology to any of these processes.

- No demand from customers for such services.
- Lack of funding to support acquisition and operation of IT for these functions.
- Lack of time to review the existing regulatory system and ascertain whether application of IT is either needed or would be helpful
- Current system works fine as is – no complaints (If it isn't broke, don't fix it.)
- Do not have access to information/expertise to make determination if IT would improve codes administration and/or enforcement processes.

**Part II: Benefits**

Above and beyond potential savings in time and staff, most jurisdictions apply IT to their code administration processes to derive other benefits. Listed below are the most frequently cited benefits. Please check all that apply to your application(s) of IT and note any support data.

- Improved jurisdiction economic competitiveness with other jurisdictions.
- Improved overall relationship between jurisdiction and clients.
- Enabled jurisdiction to offer a service that is now available 24/7/365.
- Enabled the jurisdiction to share critical data with other agencies enhancing governments effectiveness and efficiency.
- Enabled jurisdiction to better plan for, respond to, recover from natural and manmade disasters.
- Other (please describe) \_\_\_\_\_

**Part III: Return on Investment** – If you answered yes to any one of the processes listed in Question IA above, please complete the remainder of the survey. You may do so by either completing the attached worksheet or putting your answers where indicated below. (The questions on the worksheet and those indicated below are the same.) A completed sample worksheet is included to serve as a guide to the data we are seeking.

**Please use one worksheet for each process to which you have applied information technology.**

A. The Investment – Software/Hardware Costs

1. What was the cost of your acquisition or production of the above listed software/hardware? \$ \_\_\_\_\_
2. What were your training costs to put the above software/hardware in place? \$ \_\_\_\_\_

B. The Return – Savings Being Achieved in Time/Resources

1. Prior Costs

- a. Before putting the above hardware/software in place, how much time and what manpower resources were required by your **jurisdiction** to carry out each of the code administration/enforcement functions?

\_\_\_\_\_ Time to perform per item\*      \_\_\_\_\_ Manpower

- b. Before putting the above in place, what were the time and manpower resources required by your **clients** to carry out each of the administrative or enforcement functions?

\_\_\_\_\_ Time to perform per item\*      \_\_\_\_\_ Manpower

2. Costs After Putting Hardware/Software In Place

- a. For each of the code administration or enforcement processes that have had information technology applied to it, what are your **jurisdiction's** current time and manpower resources needed to fulfill each process?

\_\_\_\_\_ Time to perform per item\*      \_\_\_\_\_ Manpower

- b. For each of the code administration or enforcement processes that have had information technology applied to them, what are your **clients'** current time and manpower resources need to fulfill each process?

\_\_\_\_\_ Time to perform per item\*      \_\_\_\_\_ Manpower

**\*Item = permit/plan/inspection, etc.**

**Part IV: Documentation or Studies Supporting Cost Savings** – In addition to the information provided under Part III, please answer the questions below as to additional documentation.

A. Does your jurisdiction have a report or access to data concerning the costs and savings being achieved from the application of information technology to your codes administration and enforcement processes?

YES       NO       Not sure

B. Are you able to share any or all of these studies with the Alliance?

YES       NO       Not certain at this time

C. Are you able to be contacted by other jurisdictions wishing to learn from your experience?

YES       NO       Not certain

D. If YES, please check appropriate communication means:

Call (please provide number) \_\_\_\_\_

Online (e-mail address) \_\_\_\_\_

*Thank You for Completing & Returning this Survey to NCSBCS  
either via email or fax: [Cfitch@ncsbcs.org](mailto:Cfitch@ncsbcs.org) or 703 481-3596 (fax)*

If you will fill-in the information below, we will send you a summary of the results:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Agency: \_\_\_\_\_  
Jurisdiction (please include state): \_\_\_\_\_  
Email: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

ALLIANCE/NCSBCS Survey of State & Local Jurisdiction Savings

Cost Comparison Worksheet

Please copy and complete 1 sheet for each process to which IT has been applied and for which data is being reported.

Jurisdiction: \_\_\_\_\_ Individual completing form: \_\_\_\_\_ Date: \_\_\_\_\_

Check process or program being reported: \_\_\_ Permit applications & processing \_\_\_ Plan submittal & processing \_\_\_ Plan Review \_\_\_ Licensing \_\_\_ Inspection scheduling \_\_\_ Conducting inspections \_\_\_ Other: \_\_\_\_\_

1. The Investment – Software/Hardware Costs (estimates or actual)

Total acquisition or production cost: \$ \_\_\_\_\_

Total training cost to make operational: \$ \_\_\_\_\_

Total ownership costs (e.g., infrastructure upgrades, operational reengineering): \$ \_\_\_\_\_

2. The Return – Savings (estimates or actual)

Prior Costs: How much time and how many staff were required to perform this function?

Jurisdiction – Time to perform per item\* \_\_\_\_\_ Staff required \_\_\_\_\_

Customer – Time to perform per item\* \_\_\_\_\_ Employees required \_\_\_\_\_

Costs After Putting Hardware/Software In Place: How much time and how many staff are now needed to perform this function?

Jurisdiction – Time to perform per item\* \_\_\_\_\_ Staff required \_\_\_\_\_

Customer – Time to perform per item\* \_\_\_\_\_ Employees required \_\_\_\_\_

Are there any differences in construction or permit volume or scope of this program between prior period and when IT process became operational? \_\_\_ YES \_\_\_ NO

If yes, what was construction or permit volume or program scope prior? \_\_\_\_\_

What was construction or permit volume or program scope after? \_\_\_\_\_

\*Item = permit/plan/inspection, etc.

Please return to Part IV of survey.

SAMPLE

SAMPLE

SAMPLE

SAMPLE

SAMPLE

ALLIANCE/NCSBCS Survey of State & Local Jurisdiction Savings

**Cost Comparison Worksheet**

*Please copy and complete 1 sheet for each process to which IT has been applied and for which data is being reported.*

Jurisdiction: Anytown

Individual completing form: John Doe

Date: February 14, 2005

Check process or program being report:  Permit applications & processing  Plan submittal & processing  Plan Review  Licensing  
 Inspection scheduling  Conducting inspections  Other: \_\_\_\_\_

**1. The Investment – Software/Hardware Costs (estimates or actual)**

Total acquisition or production cost: \$ 70,000

Total training cost to make operational: \$ 30,000

Total ownership costs (e.g., infrastructure upgrades, operational reengineering): \$ 40,000

**2. The Return – Savings (estimates or actual)**

Prior Costs: How much time and how many staff were required to perform this function?

Jurisdiction – Time to perform 3 hours Staff required 1

Customer – Time to perform 8 hours Staff required 1

Costs After Putting Hardware/Software In Place: How much time and how many staff are now needed to perform this function?

Jurisdiction – Time to perform 10 min. Staff required less than 1

Customer – Time to perform 20 min. Staff required less than 1

Are there any differences in construction or permit volume or scope of this program between prior period and when IT process became operational?

YES  NO

If yes, what was construction or permit volume or program scope prior? Generally processed 122 permits/week

What was construction or permit volume or program scope after? Now process 310 permits/week

**3. Benefits**

Improved overall relationship with clients. Enabled jurisdiction to offer 24/7/365 services.

### Summary List of Jurisdictions

Jurisdictions Responding to NCSBCS/Alliance Survey  
on Savings from Application of Information Technology  
in the Building Codes Administration & Enforcement Processes

*(Jurisdictions are listed in order of receipt. Jurisdictions not using I.T. provided reasons as to why they were not.)*

| Jurisdiction                                       | Population   | Use I.T.                                       | Detailed Data Provided | Do Not Use I.T. |
|----------------------------------------------------|--------------|------------------------------------------------|------------------------|-----------------|
| Ventura County, CA                                 | 753,157      | Yes                                            | Yes                    |                 |
| Wilmington, DE                                     | 72,000       |                                                |                        | X               |
| Raleigh, NC                                        | 359,462      | Yes (Doing own study; will provide data later) |                        |                 |
| Carol Stream, IL                                   | 40,730       |                                                |                        | X               |
| Rohnert Park, CA                                   | 42,236       | Yes                                            |                        |                 |
| Gray, ME                                           | 800          |                                                |                        | X               |
| Webb, NY (seasonal 2 <sup>nd</sup> home community) | 3,000-45,000 | Yes                                            | Yes                    |                 |
| N. Middleton Township, PA                          | 10,197       | Yes                                            | Yes                    |                 |
| Grants Pass, OR                                    | 23,000       | Yes                                            |                        |                 |
| Deerfield, MA                                      | 10,000       | Yes                                            |                        |                 |
| Newport News, VA                                   | 180,000      |                                                |                        | X               |
| Lake Oswego, OR                                    | 35,000       | Yes                                            | Yes                    |                 |
| Washington, NC                                     | 9,383        | Yes                                            | Yes                    |                 |
| Surprise, AZ                                       | 30,984       | Yes                                            | Yes                    |                 |
| Durham, NH                                         | 9,024        |                                                |                        | X               |
| State of Iowa, Fire Marshal                        |              |                                                |                        | X               |
| London Grove, PA                                   | 2,500        | Yes                                            | Yes                    |                 |
| Wood Village, OR                                   | 12,300       |                                                |                        | X               |
| Cobleskill, NY                                     | 4,538        | Yes                                            | Yes                    |                 |
| Morehead City, NC                                  | 7,691        | Yes                                            | Yes                    |                 |
| Cannon Beach, OR                                   | 1,508        | Yes                                            | Yes                    |                 |
| Milwaukee, WI                                      | 536,000      | Yes                                            |                        |                 |
| St. Louis County, MO                               | 348,000      |                                                |                        | X               |
| Fairfax County, VA                                 | 1,022,298    | Yes                                            |                        |                 |
| Palmdale, CA                                       | 130,000      | Yes                                            | Yes                    |                 |
| Whittier, CA                                       | 83,680       |                                                |                        | X               |
| Downey, CA                                         | 107,000      |                                                |                        | X               |
| Manhattan Beach, CA                                | 33,893       | Yes                                            |                        |                 |
| Murray, KY                                         | 14,950       |                                                |                        | X               |
| Contra Costa County, CA                            | 948,000      | Yes                                            |                        |                 |
| Garden Grove, CA                                   | 165,000      |                                                |                        | X               |
| Richmond Heights, OH                               | 10,900       | Yes                                            | Yes                    |                 |
| Medina, OH                                         | 25,128       |                                                |                        | X               |
| Sunnyvale, CA                                      | 131,000      | Yes                                            | Yes                    |                 |
| East Longmeadow, MA                                | 14,000       |                                                |                        | X               |
| Santa Monica, CA                                   | 84,000       | Yes                                            | Yes                    |                 |
| Clackamas County, OR                               | 334,000      | Yes                                            | Yes                    |                 |

**Attachment B**

| <b>Jurisdiction</b>                                           | <b>Population</b> | <b>Use I.T.</b> | <b>Detailed Data Provided</b> | <b>Do Not Use I.T.</b> |
|---------------------------------------------------------------|-------------------|-----------------|-------------------------------|------------------------|
| Phoenix, AZ                                                   | 1,321,000         | Yes             | Yes                           |                        |
| Warrenton, MO                                                 | 5,280             | Yes             | Yes                           |                        |
| Chula Vista, CA                                               | 173,000           | Yes             | Yes                           |                        |
| Ross, CA                                                      | 2,310             |                 |                               | X                      |
| Prince George Co., VA                                         | 28,900            | Yes             | Yes                           |                        |
| Louisville, KY                                                | 529,000           | Yes             | Yes                           |                        |
| La Grande/Union County, OR                                    | 22,000            | Yes             | Yes                           |                        |
| State of Colorado, Division of Housing                        |                   |                 |                               | X                      |
| Deschutes County, OR                                          | 153,000           |                 |                               | X                      |
| State of Kentucky, Office of Housing, Building & Construction |                   |                 |                               | X                      |
| Portland, OR                                                  | 529,000           | Yes             | Yes                           |                        |
| Granville, OH                                                 | 3,147             |                 |                               | X                      |
| State of Tennessee, Fire Marshal                              |                   |                 |                               | X                      |
| State of Nebraska, Public Service Commission                  |                   | Yes             |                               |                        |
| Chicago, IL                                                   | 2,849,000         | Yes             | Yes                           |                        |
| Lenexa, KS                                                    | 40,000            | Yes             |                               |                        |
| State of Connecticut, State Building Inspector                |                   |                 |                               | X                      |
| State of Washington, State Building Code Council              |                   | Yes             |                               |                        |
| State of Maryland, Dept. of Housing & Community Develop.      |                   | Yes             |                               |                        |
| State of Florida, Dept. of Community Affairs                  |                   | Yes             | Yes                           |                        |
| St. Louis, MO                                                 | 348,000           | Yes             | Yes                           |                        |
| Akron, OH                                                     | 217,000           | Yes             |                               |                        |
| State of Delaware, Fire Marshal                               |                   |                 |                               | X                      |
| State of Texas, Residential Construction Commission           | 22,725,059        | Yes             | Yes                           |                        |
| Charlotte County, FL                                          | 118,000           |                 |                               | X                      |
| Town of Irondequoit, NY                                       | 52,200            | Yes             | Yes                           |                        |
| Oswego, NY                                                    | 3,900             | Yes             |                               |                        |
| New York City, NY                                             | 8,000,000         | Yes             |                               |                        |
| Los Angeles, CA                                               | 3,600,000         | Yes             | Yes                           |                        |
| State of Rhode Island, State Building Code Commission         |                   |                 |                               | X                      |
| Mequon, WI                                                    | 23,000            | Yes             | Yes                           |                        |
| Appomattox County, VA                                         | 13,070            |                 |                               | X                      |
| Richmond, VA                                                  | 190,000           | Yes             |                               |                        |
| State of Minnesota, Dept. of Administration                   |                   | Yes             |                               |                        |
| State of Pennsylvania, Dept. of Community & Economic Develop. |                   |                 |                               | X                      |
| Fullerton, CA                                                 | 126,000           |                 |                               | X                      |
| Nashua, NH                                                    | 86,000            | Yes             |                               |                        |



Attachment B

| Jurisdiction                                             | Population | Use I.T.                        | Detailed Data Provided | Do Not Use I.T. |
|----------------------------------------------------------|------------|---------------------------------|------------------------|-----------------|
| Murfreesboro, TN                                         | 68,000     | Yes                             |                        |                 |
| Montgomery County, MD                                    | 893,000    | Yes                             | Yes                    |                 |
| Miami-Dade County, FL                                    | 2,250,000  | Yes                             | Yes                    |                 |
| State of Indiana, State Emergency Management Agency      |            | Yes                             |                        |                 |
| Lancaster County, SC                                     | 61,351     | Yes                             |                        |                 |
| Amarillo, TX                                             | 173,000    | Yes                             |                        |                 |
| State of California, Division of the State Architect     |            | Yes                             | Yes                    |                 |
| Indianapolis, IN                                         | 791,000    | Yes                             |                        |                 |
| State of North Carolina, Dept. of Insurance              |            |                                 |                        | X               |
| Holly Springs, NC                                        | 9,129      | Yes                             |                        |                 |
| Omaha, NE                                                | 390,000    | Yes                             |                        |                 |
| State of Oregon, Building Codes Division                 |            | In process of putting in place. |                        | X               |
| Seattle, WA                                              | 563,000    | Yes                             |                        |                 |
| Carmel, IN                                               | 37,000     | Yes                             |                        |                 |
| State of New York, Dept. of State                        |            |                                 |                        | X               |
| State of Wisconsin, Dept. of Commerce                    |            | Yes                             |                        |                 |
| State of Alaska, Dept. of Public Safety                  |            |                                 |                        | X               |
| Pittsburgh, PA                                           | 334,000    | Yes                             | Yes                    |                 |
| Clay County, FL                                          | 140,000    | Yes                             | Yes                    |                 |
| Forsyth County, GA                                       | 98,000     | Yes                             | Yes                    |                 |
| San Antonio, TX                                          | 1,140,000  | Yes                             | Yes                    |                 |
| New Haven, CT                                            | 126,000    | Yes                             |                        |                 |
| State of Missouri, Public Service Commission             |            | Yes                             |                        |                 |
| State of Virginia, Dept. of Housing & Community Develop. |            | Yes                             |                        |                 |
| State of New Mexico, Construction Industries Division    |            | Yes                             |                        |                 |
| State of Ohio, Dept. of Commerce                         |            | Yes                             | Yes                    |                 |
| Santa Clara, CA                                          | 107,000    | Yes                             | Yes                    |                 |
| <b>TOTALS: 101 Responses</b>                             |            | <b>70</b>                       | <b>38</b>              | <b>31</b>       |

**COMPILATION OF DETAILED COSTS & SAVINGS**

from 43 Jurisdictions Responding to the

NCSBCS/ALLIANCE Survey of State & Local Jurisdictions  
on Savings from Application of Information Technology  
in Building Code Administration & Enforcement Processes

February – March 2005

(User Note: In column 1 where an I.T. area is described as “package,” see endnotes for software package functions.)

**COUNTIES – Large-size County (Population 500,000 to 1 million or more)**

| Jurisdiction/<br>IT Area                                                                                                     | COSTS                                                      |                                                        |                                                        | TIME/STAFF PRIOR TO I.T. IN PLACE                                                                     |                                 |                                 |                                 | TIME/STAFF AFTER I.T. IN PLACE         |                                 |                                 |                                 | Difference<br>Construct<br>Volume |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|----------------------------------------|---------------------------------|---------------------------------|---------------------------------|-----------------------------------|
|                                                                                                                              | Acquisition                                                | Training                                               | Total<br>Ownership                                     | Jurisdiction                                                                                          |                                 | Customer                        |                                 | Jurisdiction                           |                                 | Customer                        |                                 |                                   |
|                                                                                                                              |                                                            |                                                        |                                                        | Time to<br>perform                                                                                    | Manpower                        | Time to<br>perform              | Manpower                        | Time to<br>perform                     | Manpower                        | Time to<br>perform              | Manpower                        |                                   |
| <b>Ventura Co., CA</b><br>Permit/Insp Pkg                                                                                    | \$150,000                                                  | \$10,000                                               | Included                                               | System in place in 1997. Has reduced staff by 3 and saved \$1 million in costs while workload up 80%. |                                 |                                 |                                 |                                        |                                 |                                 |                                 | Yes                               |
| <b>Contra Costa Co., CA</b><br>Package                                                                                       | \$800,000                                                  | No                                                     | N/A                                                    | Replaces an existing system. Do not have comparative data.                                            |                                 |                                 |                                 |                                        |                                 |                                 |                                 |                                   |
| <b>Montgomery Co. MD</b><br>All processes pkg<br>Plan review<br>Inspect scheduling<br>Permit apply<br>Online info            | \$7.3M                                                     | \$500,000                                              | \$7.8 M                                                | 10 days<br>8-10 min<br>25 min<br>½ day                                                                | 2<br>8<br>1<br>1                | 10 days<br>N/A<br>N/A<br>N/A    | N/A<br>N/A<br>N/A<br>N/A        | 1 day<br>online<br>20 min<br>15-30 min | 2<br>2<br>1<br>1                | 1 day<br>N/A<br>N/A<br>N/A      | N/A<br>N/A<br>N/A<br>N/A        | No<br>No<br>No<br>No              |
| <b>Miami-Dade Co., FL</b><br>Permit apply<br>Inspect scheduling<br>Unsafe Struct Sys<br>Plan submittal<br>Enf support system | \$500,000<br>\$240,000<br>\$55,000<br>\$30,000<br>\$45,000 | \$2,000<br>\$60,000<br>\$12,000<br>\$2,000<br>\$10,000 | \$18,000<br>\$577,200<br>\$2,000<br>\$5,000<br>\$5,000 | N/A<br>N/A<br>N/A<br>N/A<br>N/A                                                                       | N/A<br>N/A<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A<br>N/A<br>N/A        | N/A<br>N/A<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A<br>N/A<br>N/A | Yes<br>Yes<br>Yes<br>Yes<br>Yes   |

**COUNTIES – Medium-size County (Population 100,000 to 500,000)**

| Jurisdiction/<br>IT Area                  | COSTS       |           |                    | TIME/STAFF PRIOR TO I.T. IN PLACE                                                                                                         |          |                    |          | TIME/STAFF AFTER I.T. IN PLACE |          |                    |          | Difference<br>Construct<br>Volume |
|-------------------------------------------|-------------|-----------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|----------|--------------------------------|----------|--------------------|----------|-----------------------------------|
|                                           | Acquisition | Training  | Total<br>Ownership | Jurisdiction                                                                                                                              |          | Customer           |          | Jurisdiction                   |          | Customer           |          |                                   |
|                                           |             |           |                    | Time to<br>perform                                                                                                                        | Manpower | Time to<br>perform | Manpower | Time to<br>perform             | Manpower | Time to<br>perform | Manpower |                                   |
| <b>Clackamas Co.,<br/>OR</b><br>Package 2 | \$175,000   | \$20,000  | \$20,000           | Savings in time and 2 staff positions to conduct work. Added cost of I.T. administration, \$40,000 annual savings plus savings to client. |          |                    |          |                                |          |                    |          | Yes                               |
| <b>Clay Co., FL</b><br>Insp sch-conduct   | \$50,000    | Inclusive | Included           | 4 hrs                                                                                                                                     | 2        | 8 hrs              | 1        | 4 hrs                          | 2        | 2 hrs              | 1        |                                   |

**COUNTIES – Small-size County (Population below 100,000)**

| Jurisdiction/<br>IT Area                               | COSTS       |          |                    | TIME/STAFF PRIOR TO I.T. IN PLACE                                                        |          |                    |          | TIME/STAFF AFTER I.T. IN PLACE |          |                    |          | Difference<br>Construct<br>Volume |
|--------------------------------------------------------|-------------|----------|--------------------|------------------------------------------------------------------------------------------|----------|--------------------|----------|--------------------------------|----------|--------------------|----------|-----------------------------------|
|                                                        | Acquisition | Training | Total<br>Ownership | Jurisdiction                                                                             |          | Customer           |          | Jurisdiction                   |          | Customer           |          |                                   |
|                                                        |             |          |                    | Time to<br>perform                                                                       | Manpower | Time to<br>perform | Manpower | Time to<br>perform             | Manpower | Time to<br>perform | Manpower |                                   |
| <b>La Grande/Union<br/>Co., OR</b><br>Permit-Licensing | \$4,000     | \$250    | Included           | 35 min                                                                                   | 1        | 35 min             | 1        | 15 min                         | 1        | 15 min             | 1        | Yes                               |
| <b>Lancaster Co., SC</b><br>All process pkg 3          | \$15,000    | \$5,000  | N/A                | Cost savings not recorded. Productivity increased and time reduced to perform functions. |          |                    |          |                                |          |                    |          |                                   |
| <b>Forsyth Co., GA</b><br>Insp scheduling              | \$35,000    | Included | Included           | 5-10 min                                                                                 | 1        | N/A                | N/A      | Less 1 min                     | 1        | 5-10 min           | 1        | No                                |
| <b>Forsyth Co., GA</b><br>Insp conduct                 | Included    | Included | Included           | 30 min                                                                                   | 1        | N/A                | N/A      | 20 min                         | 1        | N/A                | N/A      | No                                |

CITIES – Large-size City (Population 300,000 or more)

| Jurisdiction/<br>IT Area                  | COSTS       |               |                    | TIME/STAFF PRIOR TO I.T. IN PLACE                                                                                                                                                            |          |                    |          | TIME/STAFF AFTER I.T. IN PLACE |          |                    |          | Difference<br>Construct<br>Volume |
|-------------------------------------------|-------------|---------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|----------|--------------------------------|----------|--------------------|----------|-----------------------------------|
|                                           | Acquisition | Training      | Total<br>Ownership | Jurisdiction                                                                                                                                                                                 |          | Customer           |          | Jurisdiction                   |          | Customer           |          |                                   |
|                                           |             |               |                    | Time to<br>perform                                                                                                                                                                           | Manpower | Time to<br>perform | Manpower | Time to<br>perform             | Manpower | Time to<br>perform | Manpower |                                   |
| <b>Phoenix, AZ</b><br>Inspec scheduling 4 | \$94,000    | \$25,000      | \$200,000          | 5 min                                                                                                                                                                                        | 3        | 5 min              | 3        |                                | Less 1   |                    | Less 1   | Yes                               |
| Plan review                               | \$800,000   | \$80,000      | \$1.5 M            | So far automation has not saved time. It has increased efficiency of regulatory process and increases volume of work.                                                                        |          |                    |          |                                |          |                    |          | Yes                               |
| Remote insp                               | \$200,000   | \$100,000     | \$1 M              | So far automation has not saved time. It has increased efficiency of regulatory process and increases volume of work.                                                                        |          |                    |          |                                |          |                    |          | Yes                               |
| SIRE-document                             | \$25,000    | \$5,000       | \$300,000          | New systems – No data currently available.                                                                                                                                                   |          |                    |          |                                |          |                    |          |                                   |
| <b>Louisville, KY</b>                     |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Permit apply                              | \$32,500    | \$2,500       | \$35,000           | 2 hrs                                                                                                                                                                                        | 2        | 1 hr               | 1        | 30 min                         | 1        | 30 min             | 1        | Yes                               |
| Plan submit                               | \$32,500    | \$2,500       | \$35,000           | 2 hrs                                                                                                                                                                                        | 1        | 1 hr               | 1        | 1 hr                           | 1        | 1 hr               | 1        | Yes                               |
| Licensing                                 | \$32,500    | \$2,500       | \$35,000           | 2 hrs                                                                                                                                                                                        | 4        | 1 hr               | 1        | 1 hr                           | 1        | 30 min             | 1        | No                                |
| Conduct inspec                            | \$32,500    | \$2,500       | \$35,000           | 1 hr                                                                                                                                                                                         | 2        | 1 hr               | 1        | 1 hr                           | 1        | 1 hr               | 1        | Yes                               |
| <b>Portland, OR</b>                       |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| All process pkg                           | \$950,000   | Inclusive     | Included           | Comparative data not available. Current system replaces an older system.                                                                                                                     |          |                    |          |                                |          |                    |          |                                   |
| <b>Chicago, IL</b>                        |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Permit-plan-insp sch                      | \$4 M       | \$300,000     | Included           | 45 min                                                                                                                                                                                       | 70       | 8 hrs              | 200      | 30 min                         | 50       | 2.5 hrs            | 200      | Yes                               |
| <b>St. Louis, MO</b>                      |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Permit-plan-lic-inspect pkg               | \$2.5 M     | Inclusive     | Included           | City maintains centralized I.T. and covers the costs. Benefits include reducing time to process all code administration items.                                                               |          |                    |          |                                |          |                    |          |                                   |
| <b>Los Angeles, CA</b>                    |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Permit apply                              | \$276,510   | \$3,000       | \$33,043           | 14 min                                                                                                                                                                                       | 1        | 2 hr               | 1        | 0                              | 0        | 10 min             | 1        | Yes                               |
| Plans application                         | \$81,600    | \$8,160       | \$39,640           | 1 hr                                                                                                                                                                                         | 1        | 4 hr               | 1        | 5 min                          | 1        | 5 min              | 1        | Yes                               |
| Licensing                                 | \$52,457    | \$2,400       | \$21,931           | 12 min                                                                                                                                                                                       | 1        | 72 min             | 1        | 5 min                          | 1        | 65 min             | 1        | Yes                               |
| Insp sch-IRFIS 5                          | \$14,895    | \$0           | \$20,043           | 3.5 min                                                                                                                                                                                      | 1        | 3.5 min            | 1        | 0                              | 0        | 3 min              | 1        | Yes                               |
| Insp sch-AIRS                             | \$199,170   | \$6,000       | \$33,043           | 3.5 min                                                                                                                                                                                      | 1        | 3.5 min            | 1        | 0                              | 0        | 3.5 min            | 1        | Yes                               |
| Insp sch-ICBS                             | \$179,170   | \$12,000      | \$33,043           | 3 min                                                                                                                                                                                        | 1        | 0                  | 0        | 0                              | 0        | 0                  | 0        | Yes                               |
| Conduct inspect                           | \$48,960    | \$8,160       | \$63,300           | 10 days                                                                                                                                                                                      | 3        | 12 days            | 1        | 3 days                         | 3        | 3 days             | 1        | Yes                               |
| Code enf-disasterEn                       | \$1,850,000 | \$13,000      | \$97,000           | 10-25 hrs                                                                                                                                                                                    | 1        | 3 min              | 1        | 10-25 hrs                      | 0        | 3 min              | 1        | Yes                               |
| Inform util-PPR                           | \$14,695    | \$0           | \$12,026           | 10 min                                                                                                                                                                                       | 1        | 70 min             | 1        | 0                              | 0        | 3 min              | 1        | Yes                               |
| Inform util-IPAr                          | \$14,695    | \$0           | \$12,026           | 5 min                                                                                                                                                                                        | 1        | 5 min              | 1        | 0                              | 0        | 2 min              | 1        | Yes                               |
| <b>Pittsburgh, PA</b>                     |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Permit-License pkg                        | \$78,000    | \$5,000       | N/A                | Cost savings would be greater if funding were available to purchase upgrades. Greatest savings are from data retrieval and reporting. There is little savings from permitting and licensing. |          |                    |          |                                |          |                    |          |                                   |
| <b>San Antonio, TX</b>                    |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| All process pkg                           | \$11M       | 600 staff hrs |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Data only available for:                  |             |               |                    |                                                                                                                                                                                              |          |                    |          |                                |          |                    |          |                                   |
| Commercial permits                        |             |               |                    | 40 min                                                                                                                                                                                       | 1        | N/A                | N/A      | 25 min                         | 1        | N/A                | N/A      |                                   |
| Trade permits                             |             |               |                    | 4.3 min                                                                                                                                                                                      | 1        | N/A                | N/A      | 3.3 min                        | 1        | N/A                | N/A      |                                   |

**CITIES – Medium-size City (Population 100,000 to 299,999)**

| Jurisdiction/<br>IT Area                                                                                                                      | COSTS                                                                           |                                                                           |                                                                                | TIME/STAFF PRIOR TO I.T. IN PLACE                                         |                                |                                                        |                                            | TIME/STAFF AFTER I.T. IN PLACE                                |                                |                                                       |                                            | Difference<br>Construct<br>Volume      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------|--------------------------------|-------------------------------------------------------|--------------------------------------------|----------------------------------------|
|                                                                                                                                               | Acquisition                                                                     | Training                                                                  | Total<br>Ownership                                                             | Jurisdiction                                                              |                                | Customer                                               |                                            | Jurisdiction                                                  |                                | Customer                                              |                                            |                                        |
|                                                                                                                                               |                                                                                 |                                                                           |                                                                                | Time to<br>perform                                                        | Manpower                       | Time to<br>perform                                     | Manpower                                   | Time to<br>perform                                            | Manpower                       | Time to<br>perform                                    | Manpower                                   |                                        |
| <b>Palmdale, CA</b><br>Permit-plan-inspec<br>pkg                                                                                              | \$100,000                                                                       | \$10,000                                                                  | N/A                                                                            | 30 min                                                                    | 3                              | 30 min                                                 | N/A                                        | 10 min                                                        | 2                              | 10 min                                                | N/A                                        | N/A                                    |
| <b>Sunnyvale, CA</b><br>Permit-Plans Pkg                                                                                                      | \$50,000                                                                        | Minimal                                                                   | N/A                                                                            | 30 min                                                                    | 2                              | 30 min-3 hrs                                           | N/A                                        | 5 min                                                         | 1                              | 3-10 min                                              | 1                                          | N/A                                    |
| <b>Chula Vista, CA</b><br>Permit apply-proces<br>Plan submit<br>Licensing<br>Inspec scheduling<br>Conduct inspec<br>Gov reports               | \$38,182<br>Incl above<br>Incl above<br>Incl above<br>Incl above<br>Incl above  | \$10,000<br>Incl abov<br>Incl abov<br>Incl abov<br>Incl abov<br>Incl abov | \$95,369<br>Incl above<br>Incl above<br>Incl above<br>Incl above<br>Incl above | 3 hrs<br>1 hr<br>1.5 hrs<br>30 min<br>30 min<br>6 hrs                     | 1<br>1<br>3<br>1.5<br>5<br>1   | 1.5 hrs<br>30 min<br>30 min<br>20 min<br>20 min<br>N/A | 1<br>1<br>1<br>1,5<br>5<br>N/A             | 30 min<br>30 min<br>30 min<br>10 min<br>10 min<br>1 hr        | 1<br>1<br>3<br>.5<br>15<br>1   | 30 min<br>15 min<br>20 min<br>15 min<br>15 min<br>N/A | 1<br>.5<br>3<br>.5<br>15<br>N/A            | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| <b>Santa Clara, CA</b><br>Plan submit-process<br>Plan review<br>Licensing<br>Inspect scheduling<br>Inspect conduct<br>Document imaging<br>GIS | \$100,000<br>\$500<br>\$60,000<br>\$30,000<br>\$25,000<br>\$50,000<br>\$400,000 | \$10,000<br><br>\$5,000<br><br><br>\$10,000                               | \$300,000<br>over 5 yrs<br>\$80,000<br>\$25,000                                | 70 min<br>Test stage<br>10 min<br>5 min<br>15 min avg<br>10 min<br>15 min | 1<br><br>1<br>1<br>1<br>1<br>1 | N/A<br><br>N/A<br>N/A<br>N/A<br>N/A<br>N/A             | N/A<br><br>N/A<br>N/A<br>N/A<br>N/A<br>N/A | 10 min<br><br>5 min<br>Less 1 min<br>10 min<br>1 min<br>1 min | 1<br><br>1<br>1<br>1<br>1<br>1 | N/A<br><br>N/A<br>N/A<br>N/A<br>N/A<br>N/A            | N/A<br><br>N/A<br>N/A<br>N/A<br>N/A<br>N/A | No<br><br>No<br>No<br>No<br>No<br>No   |

**CITIES – Small-size City (Population 20,000 to 99,999)**

| Jurisdiction/<br>IT Area                                                                | COSTS                  |                       |                         | TIME/STAFF PRIOR TO I.T. IN PLACE                                                                             |                      |                                     |                                 | TIME/STAFF AFTER I.T. IN PLACE      |                                 |                                   |                                 | Difference<br>Construct<br>Volume |  |
|-----------------------------------------------------------------------------------------|------------------------|-----------------------|-------------------------|---------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------|---------------------------------|-------------------------------------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------------|--|
|                                                                                         | Acquisition            | Training              | Total<br>Ownership      | Jurisdiction                                                                                                  |                      | Customer                            |                                 | Jurisdiction                        |                                 | Customer                          |                                 |                                   |  |
|                                                                                         |                        |                       |                         | Time to<br>perform                                                                                            | Manpower             | Time to<br>perform                  | Manpower                        | Time to<br>perform                  | Manpower                        | Time to<br>perform                | Manpower                        |                                   |  |
| <b>Surprise, AZ</b><br>Permit/plans ck<br>Inspect sch/enf Pkg                           | \$350,000              | \$50,000              | Included                | Records have not been kept but overall did not save time. Major benefit has been improved services to client. |                      |                                     |                                 |                                     |                                 |                                   |                                 |                                   |  |
| <b>Lake Oswego, OR</b><br>Permit-plan-insp                                              | \$28,000               | \$2,500               | Included                | 1 hr                                                                                                          | 2.5                  | N/A                                 | N/A                             | 30 min                              | 1                               | N/A                               | N/A                             | N/A                               |  |
| <b>Santa Monica, CA</b><br>Permits<br>Plan submittal<br>Licensing<br>Inspect scheduling | \$75,000<br>Incl above | \$20,000<br>Incl abov | \$250,000<br>Incl above | 45 min<br>30 min<br>30 min<br>5 min                                                                           | 3<br>1.5<br>3<br>1.5 | 2 hrs<br>30 min<br>30 min<br>15 min | 1<br>Less 1<br>Less 1<br>Less 1 | 15 min<br>30 min<br>30 min<br>1 min | 1<br>Less 1<br>Less 1<br>Less 1 | 1 hr<br>30 min<br>30 min<br>5 min | 1<br>Less 1<br>Less 1<br>Less 1 | No<br>No<br>No<br>No              |  |
| <b>Irondequoit, NY</b><br>Permit-inspec pkg                                             | \$10,000               | \$1,000               |                         | Data not recorded. I.T. use has enhanced effectiveness of functions and saved funds/time for city.            |                      |                                     |                                 |                                     |                                 |                                   |                                 |                                   |  |
| <b>Mequon, WI</b><br>Permit-inspec pkg                                                  | \$2,395                | \$0                   | \$2,500                 | 3 hrs                                                                                                         | 2                    | N/A                                 | N/A                             | 30 min                              | 2                               | N/A                               | N/A                             | No                                |  |
| <b>Nashua, NH</b><br>Permit-plan rev-insp<br>pkg                                        | \$70,000               | Inclusive             | Included                | The returns on investments were not measured but productivity increased.                                      |                      |                                     |                                 |                                     |                                 |                                   |                                 |                                   |  |

TOWNS – Townships, Boroughs (Population Less than 20,000)

| Jurisdiction/<br>IT Area                                         | COSTS       |           |                    | TIME/STAFF PRIOR TO I.T. IN PLACE                                                                                           |          |                    |          | TIME/STAFF AFTER I.T. IN PLACE |          |                    |          | Difference<br>Construct<br>Volume |
|------------------------------------------------------------------|-------------|-----------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|----------|--------------------|----------|--------------------------------|----------|--------------------|----------|-----------------------------------|
|                                                                  | Acquisition | Training  | Total<br>Ownership | Jurisdiction                                                                                                                |          | Customer           |          | Jurisdiction                   |          | Customer           |          |                                   |
|                                                                  |             |           |                    | Time to<br>perform                                                                                                          | Manpower | Time to<br>perform | Manpower | Time to<br>perform             | Manpower | Time to<br>perform | Manpower |                                   |
| <b>Webb, NY</b><br>Permit<br>Inspect svcs                        | \$28,000    | Inclusive | Included           | 2 hrs                                                                                                                       | 1        | 1-8 hrs            | 1        | 15 min                         | 1        | 15 min to<br>1 hr  | 1        | No                                |
| <b>N. Middleton, PA</b><br>Inspect scheduling                    | \$3,000     | Inclusive | Included           | 1 hr                                                                                                                        | 2        | N/A                | N/A      | 10 min                         | 1        | N/A                | N/A      | N/A                               |
| Permit apply                                                     | \$3,000     | Inclusive | Included           | 1 hr                                                                                                                        | 2        | N/A                | N/A      | 10 min                         | 1        | N/A                | N/A      | N/A                               |
| Conduct inspect                                                  | \$3,000     | Inclusive | Included           | 1 hr                                                                                                                        | 2        | N/A                | N/A      | 10 min                         | 1        | N/A                | N/A      | N/A                               |
| <b>Washington, NC</b><br>Permit processing                       | \$6,000     | Inclusive | Included           | 30 min                                                                                                                      | 2        | N/A                | 1        | 10 min                         | 1        | N/A                | 1        | Same                              |
| <b>Durham, NH</b><br>Permit apply                                | \$1,880     | N/A       | N/A                | Savings in time or staff have not been documented, but services have been improved for both client and jurisdiction.        |          |                    |          |                                |          |                    |          |                                   |
| <b>London Grove, PA</b><br>Permit<br>Inspect scheduling          | \$800       | \$200     | Included           | 43 min                                                                                                                      | 1        | N/A                | N/A      | 15 min                         | 1        | N/A                | N/A      | No                                |
| <b>Cobleskill, NY</b><br>Permit apply                            | \$5,000     | \$3-5,000 | \$10,000           | 1 hr                                                                                                                        | 1        | 3 hrs              | 1        | 15 min                         | 1        | 1 hr               | 1        | 20% incr                          |
| Inspect scheduling                                               | \$1,000     | \$1,500   | \$2,500            | 30 min                                                                                                                      | 1        | N/A                | N/A      | 15 min                         | 1        | N/A                | N/A      | 20% incr                          |
| Master plan                                                      | \$1,000     | \$3,000   | \$4,000            | 12 hrs                                                                                                                      | 1        | N/A                | N/A      | 1 hr                           | 1        | N/A                | N/A      | No                                |
| File archive index                                               | \$1,000     | \$3,000   | \$4,000            | 3-6 hrs                                                                                                                     | 1        | N/A                | N/A      | 15 min                         | 1        | N/A                | N/A      | No                                |
| <b>Morehead City, NC</b><br>Permit process                       | \$4,350     | \$250     | \$435              | 1 hr                                                                                                                        | 1        | 1 hr               | 1        | 15 min                         | 1        | 1 hr               | 1        | No                                |
| <b>Cannon Beach, OR</b><br>Permit-license-<br>inspect scheduling | \$20,000    | Inclusive | Included           | 2 hrs                                                                                                                       | 1        | 4 hrs              | 1        | 30 min                         |          |                    |          |                                   |
| <b>Richmond Heights, OH</b><br>Package 6                         | \$15,000    | \$0       | N/A                | City has achieved a 40% savings in time to perform these functions.                                                         |          |                    |          |                                |          |                    |          | Yes                               |
| <b>Warrenton, MO</b><br>Permit package                           | \$2,500     | \$1,250   | Included           | Detailed data not available. Automation has enabled them to do more with half the staff and do a better job of enforcement. |          |                    |          |                                |          |                    |          | Yes                               |
| <b>Prince George Co. VA</b><br>Permit-insp pkg                   | \$76,350    | \$17,350  | Included           | 26 hrs                                                                                                                      | 3        | 14 hrs             | 1        | 6 hrs                          | 3        | 6 hrs              | 1        | Yes                               |



STATES

| Jurisdiction/<br>IT Area                              | COSTS       |           |                    | TIME/STAFF PRIOR TO I.T. IN PLACE                                                                                                      |          |                    |          | TIME/STAFF AFTER I.T. IN PLACE |          |                    |          | Difference<br>Construct<br>Volume |
|-------------------------------------------------------|-------------|-----------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|----------|--------------------------------|----------|--------------------|----------|-----------------------------------|
|                                                       | Acquisition | Training  | Total<br>Ownership | Jurisdiction                                                                                                                           |          | Customer           |          | Jurisdiction                   |          | Customer           |          |                                   |
|                                                       |             |           |                    | Time to<br>perform                                                                                                                     | Manpower | Time to<br>perform | Manpower | Time to<br>perform             | Manpower | Time to<br>perform | Manpower |                                   |
| <b>State of Maryland</b><br>Code database             | \$200,000   | \$50,000  |                    | Database replaces manual code identification/review and enables the state to effectively track code adoptions and oversee 10 programs. |          |                    |          |                                |          |                    |          |                                   |
| <b>State of Florida</b><br>Permit app-plan rev        | \$2.5 M     | Inclusive | Included           | This website was developed to address new legislative requirements so no time savings can be determined.                               |          |                    |          |                                |          |                    |          |                                   |
| <b>State of Texas</b><br>Licensing                    | \$10,000    | Inclusive | Included           | 8 hrs                                                                                                                                  | 3        | 1 hr               | 1        | 15 min                         | 3        | 15 min             | 1        | Yes                               |
| <b>State of California</b><br>DSA<br>Docu Mgmt Wkflow | \$300,000   | Inclusive | Included           | 1.5 hr                                                                                                                                 | 1        | 1-2 wk             | 1        | 5 min                          | 1        | 5 min              | 1        |                                   |
| <b>State of Ohio DOC</b><br>Permit app-process        | \$200,000   | \$112,000 |                    | 10 min                                                                                                                                 | 1        | 30 min             | 1        | 10 min                         | 1        | 30 min             | 1        |                                   |
| Plan submittal                                        | \$200,000   | \$112,000 |                    | 10 min                                                                                                                                 | 1        | 30 min             | 1        | 10 min                         | 1        | 30 min             | 1        |                                   |
| Plan review                                           |             |           |                    | 2 hrs                                                                                                                                  | 1        | 2 hrs              | 1        | 1 hr                           | 1        | 1 hr               | 1        |                                   |
| Insp sch-conduct                                      | \$350,000   | \$42,000  |                    | 1 hr                                                                                                                                   | 1        | 1 hr               | 1        | 30 min                         | 1        | 30 min             | 1        |                                   |

**Endnotes:**

- ① **Contra Costa County, CA** – Package includes: permit applications & processing, plan submittal & processing, plan review, inspection scheduling & inspections.
- ② **Clackamas County, OR** – Package includes: permit application & processing, plan submittal & tracking, inspection scheduling, code compliance & enforcement.
- ③ **Lancaster County, SC** – All processes package includes: permit applications & processing, plan review & licensing.
- ④ **Portland, OR** – All processes package includes: permit applications & processing, plan submittal & processing, plan review, inspection scheduling & conducting, zoning & land use, enforcement tracking.
- ⑤ **Los Angeles, CA** – Software developed for:
  - IRFIS – Internet Request for Inspection Subsystem
  - AIRS – Automated Inspection Request System
  - ICBS – Inspection Call Back Subsystem
- ⑥ **Richmond Heights, OH** – Package includes: \$10,000 permit application & processing package that also covers tracking inspections, plan review & processing, and a \$5,000 package that covers housing & business maintenance.

## Contacts in Jurisdictions Using I.T.

| Jurisdiction          | Population                 | Contact Name      | Phone               | Email                                                                                                |
|-----------------------|----------------------------|-------------------|---------------------|------------------------------------------------------------------------------------------------------|
| Ventura County, CA    | 753,157                    | Jack Phillips     | 805 654-2787        | <a href="mailto:Jack.phillips@ventura.org">Jack.phillips@ventura.org</a>                             |
| Raleigh, NC           | 359,462                    | James Tschupp     | 919 980-3702        | <a href="mailto:James.Tschupp@ci.raleigh.nc.us">James.Tschupp@ci.raleigh.nc.us</a>                   |
| Rohnert Park, CA      | 42,236                     | Peter Bruck       | 707 588-2257        | <a href="mailto:Pbruck@rpcity.org">Pbruck@rpcity.org</a>                                             |
| Webb, NY              | 3,000-45,000<br>(seasonal) | Andrew Getty      | 315 369-3001        | <a href="mailto:Towcodes@eagle-wireless.com">Towcodes@eagle-wireless.com</a>                         |
| N. Middleton Twsp, PA | 10,197                     | Paul Fegley       | 717 243-8550        |                                                                                                      |
| Grants Pass, OR       | 23,000                     | Carl Dependahl    | 541 474-6355        |                                                                                                      |
| Lake Oswego, OR       | 35,000                     | Robert Poskin     | 503 635-0287        |                                                                                                      |
| Washington, NC        | 9,383                      | Allen Pittman     | 252 975-9352        | <a href="mailto:Apittman@washingtonnc.ws">Apittman@washingtonnc.ws</a>                               |
| Surprise, AZ          | 30,984                     | Forrest Fielder   | 623 875-4314        | <a href="mailto:Forrestf@surpriseaz.com">Forrestf@surpriseaz.com</a>                                 |
| London Grove, PA      | 2,500                      | Shane Kinsey      |                     | <a href="mailto:Skinsey@londongrove.org">Skinsey@londongrove.org</a>                                 |
| Cobleskill, NY        | 4,538                      | Pamela Tichy      | 518 234-4661        | <a href="mailto:Pecceo@midtel.net">Pecceo@midtel.net</a>                                             |
| Morehead City, NC     | 7,691                      | Rick Schulz       | 252 726-6848<br>x38 |                                                                                                      |
| Cannon Beach, OR      | 1,508                      | Stephanie McGuire |                     | <a href="mailto:Mcguire@ci.cannon-beach.or.us">Mcguire@ci.cannon-beach.or.us</a>                     |
| Milwaukee, WI         | 536,000                    | Martin Collins    |                     | <a href="mailto:MCOLLI@milwaukee.gov">MCOLLI@milwaukee.gov</a>                                       |
| Fairfax County, VA    | 1,022,298                  | Stephen Garnier   | 703 324-1536        | <a href="mailto:Stephen.garnier@fairfaxcounty.gov">Stephen.garnier@fairfaxcounty.gov</a>             |
| Palmdale, CA          | 130,000                    | Shane Walter      |                     | <a href="mailto:Swalter@cityofpalmdale.org">Swalter@cityofpalmdale.org</a>                           |
| Contra Costa Co., CA  | 948,000                    | William Smith     |                     | <a href="mailto:wsmith@bi.cccounty.us">wsmith@bi.cccounty.us</a>                                     |
| Richmond Heights, OH  | 10,900                     | Robert Rodic      | 216 383-6312        | <a href="mailto:Rarodic@richmondheightszoning.com">Rarodic@richmondheightszoning.com</a>             |
| Sunnyvale, CA         | 131,000                    | Ali Fatapour      | 408 730-7432        | <a href="mailto:Afatapour@ci.sunnyvale.ca.us">Afatapour@ci.sunnyvale.ca.us</a>                       |
| Santa Monica, CA      | 84,000                     | Ted Drago         |                     | <a href="mailto:Ted.drago@smgov.net">Ted.drago@smgov.net</a>                                         |
| Clackamas Co., OR     | 334,000                    | Dick Polson       | 503 353-4748        | <a href="mailto:Dickp@co.clackamas.or.us">Dickp@co.clackamas.or.us</a>                               |
| Phoenix, AZ           | 1,321,000                  | Amy Barko         |                     | <a href="mailto:Amy.barko@phoenix.gov">Amy.barko@phoenix.gov</a>                                     |
| Warrenton, MO         | 5,280                      | R. V. Soderholm   |                     | <a href="mailto:Soderholm.r.warrenton.mo@centurytel.net">Soderholm.r.warrenton.mo@centurytel.net</a> |

## Attachment D

| Jurisdiction             | Population | Contact Name                    | Phone        | Email                                                                                                                                                                      |
|--------------------------|------------|---------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chula Vista, CA          | 173,000    | Karen Wooten                    |              | <a href="mailto:Kwooten@ci.chula-vista.ca.us">Kwooten@ci.chula-vista.ca.us</a>                                                                                             |
| Prince George Co., VA    | 28,900     | Julie Walton                    | 804 733-2636 | <a href="mailto:Jwalton@princegeorgeva.org">Jwalton@princegeorgeva.org</a>                                                                                                 |
| Louisville, KY           | 529,000    | Paul Nicholson                  | 502 574-2986 | <a href="mailto:Paul.nicholson@loukymetro.org">Paul.nicholson@loukymetro.org</a>                                                                                           |
| La Grande/Union Co., OR  | 22,000     | Chris Ruddell                   | 541 962-1317 |                                                                                                                                                                            |
| Portland, OR             | 529,000    | Ann Kohler                      | 503 823-7886 |                                                                                                                                                                            |
| Chicago, IL              | 2,849,000  | James Thurmond                  | 312 746-8094 | <a href="mailto:James.thurmond@cityofchicago.org">James.thurmond@cityofchicago.org</a>                                                                                     |
| Lenexa, KS               | 40,000     | Eirene Oliphant                 | 913 477-7703 | <a href="mailto:Eoliphant@ci.lenexa.ks.us">Eoliphant@ci.lenexa.ks.us</a>                                                                                                   |
| St. Louis, MO            | 348,000    | Randy Mourning                  | 314 622-3318 |                                                                                                                                                                            |
| State of Texas           | 22,725,059 | Stephen Thomas<br>Duane Waddill | 512 463-1040 | <a href="mailto:Stephen.thomas@trcc.state.tx.us">Stephen.thomas@trcc.state.tx.us</a><br><a href="mailto:Duane.waddill@trcc.state.tx.us">Duane.waddill@trcc.state.tx.us</a> |
| Irondequoit, NY          | 52,200     | Curtis Hill                     |              | <a href="mailto:Chill@irondequoit.org">Chill@irondequoit.org</a>                                                                                                           |
| Mequon, WI               | 23,000     | Cynthia Mott                    | 262 236-2920 | <a href="mailto:Cmott@ci.mequon.wi.us">Cmott@ci.mequon.wi.us</a>                                                                                                           |
| Richmond, VA             | 190,000    | Claude Cooper                   | 804 646-6629 | <a href="mailto:Coopercg@ci.richmond.va.us">Coopercg@ci.richmond.va.us</a>                                                                                                 |
| Nashua, NH               | 86,000     | Michael Santa                   |              | <a href="mailto:Santam@ci.nashua.nh.us">Santam@ci.nashua.nh.us</a>                                                                                                         |
| Montgomery Co., MD       | 893,000    | Shahriar Amiri                  | 240 777-6230 | <a href="mailto:Shahriar.amiri@montgomerycountymd.gov">Shahriar.amiri@montgomerycountymd.gov</a>                                                                           |
| Miami Dade County, FL    | 2,250,000  | Laura Manos                     | 786 315-2345 | <a href="mailto:Manos@miamidade.gov">Manos@miamidade.gov</a>                                                                                                               |
| State of Indiana, SEMA   |            | Dave Moses                      | 317 232-1426 | <a href="mailto:Dmoses@sema.state.in.us">Dmoses@sema.state.in.us</a>                                                                                                       |
| Lancaster Co., SC        | 61,351     | C. Jevan Williams               | 803 285-1969 | <a href="mailto:Jwilliams@lancastercountysc.net">Jwilliams@lancastercountysc.net</a>                                                                                       |
| Amarillo, TX             | 173,000    | Cary Finney                     |              | <a href="mailto:Cary.finney@ci.amarillo.tx.us">Cary.finney@ci.amarillo.tx.us</a>                                                                                           |
| State of California, DSA |            | David Noronha                   |              | <a href="mailto:David.noronha@dgs.ca.gov">David.noronha@dgs.ca.gov</a>                                                                                                     |
| Holly Springs, NC        | 9,129      | Ricky Blackmon                  |              | <a href="mailto:Ricky.blackmon@hollyspringsnc.us">Ricky.blackmon@hollyspringsnc.us</a>                                                                                     |
| Carmel, IN               | 37,000     | Jeff Kendall                    |              | <a href="mailto:Jkendall@ci.carmel.in.us">Jkendall@ci.carmel.in.us</a>                                                                                                     |
| Pittsburgh, PA           | 334,000    | Wayne Bossinger                 | 412 255-2179 | <a href="mailto:Wayne.bossinger@city.pittsburgh.pa.us">Wayne.bossinger@city.pittsburgh.pa.us</a>                                                                           |
| Clay County, FL          | 140,000    | David Conner                    | 904 269-6307 |                                                                                                                                                                            |
| Forsyth Co., GA          | 98,000     | Kathy Lamb                      | 770 205-4574 | <a href="mailto:Khlamb@forsythco.com">Khlamb@forsythco.com</a>                                                                                                             |
| New Haven, CT            | 126,000    | Andrew Rizzo                    | 203 946-7690 | <a href="mailto:Arizzo@newhavenct.net">Arizzo@newhavenct.net</a>                                                                                                           |
| State of Missouri, PSC   |            | Ron Pleus                       |              | <a href="mailto:Ron.pleus@psc.mo.gov">Ron.pleus@psc.mo.gov</a>                                                                                                             |

**Attachment D**

| <b>Jurisdiction</b>                 | <b>Population</b> | <b>Contact Name</b>  | <b>Phone</b>        | <b>Email</b>                                                                         |
|-------------------------------------|-------------------|----------------------|---------------------|--------------------------------------------------------------------------------------|
| <b>State of Virginia,<br/>DHCD</b>  |                   | <b>Emory Rodgers</b> | <b>804 371-7151</b> | <a href="mailto:emory.rodgers@dhcd.virginia.gov">emory.rodgers@dhcd.virginia.gov</a> |
| <b>State of New Mexico,<br/>CID</b> |                   | <b>Lisa Martinez</b> |                     | <a href="mailto:Lisa.martinez@state.nm.us">Lisa.martinez@state.nm.us</a>             |
| <b>State of Ohio, DOC</b>           |                   | <b>Jeff Tyler</b>    | <b>800 523-3581</b> |                                                                                      |
| <b>Santa Clara, CA</b>              | <b>107,000</b>    | <b>Sheila Lee</b>    | <b>408 615-2404</b> | <a href="mailto:Slee@ci.santa-clara.ca.us">Slee@ci.santa-clara.ca.us</a>             |

**NCSBCS/ALLIANCE Survey of State & Local Jurisdictions  
on Savings from Application of Information Technology  
in Building Codes Administration & Enforcement Process**

**TABULATION OF RESPONSES TO SURVEY QUESTIONS**

**Part I: A&B**

**Part II**

**Part IV**

**February – March 2005**

March 11, 2005

TOTAL # RESPONSES: **101**    TOTAL USING I.T.: **70**    SUBMITTING DETAILED DATA: **37**    NOT USING I.T.: **31**

**Part I: I.T. Applications**

C. Has your jurisdiction acquired information technology hardware or software for use in the administration and or enforcement of one of the following building regulatory processes? (Please place a check next to those that apply and provide time (month/year) such software/hardware was either produced or acquired and when it became operational.)

| Check if Applicable | Regulatory Process                                                                                                                                                                                                                 | Date Produced/Acquired | Date Operational |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------|
| <b>63</b>           | Permit applications & processing                                                                                                                                                                                                   |                        |                  |
| <b>36</b>           | Plan submittal & processing                                                                                                                                                                                                        |                        |                  |
| <b>29</b>           | Plan Review                                                                                                                                                                                                                        |                        |                  |
| <b>52</b>           | Licensing                                                                                                                                                                                                                          |                        |                  |
| <b>59</b>           | Inspection Scheduling                                                                                                                                                                                                              |                        |                  |
| <b>30</b>           | Conducting Inspections                                                                                                                                                                                                             |                        |                  |
| <b>29</b>           | Other Administrative or Enforcement Activities (please list below)                                                                                                                                                                 |                        |                  |
|                     | (NOTE - OTHER IDENTIFIED INCLUDED: Document Imaging, GIS, General Complaint Handling, Workflow, Code Violations & Enforcement, Code Change Submittals, Property Maintenance, Parcel tracking, Federal Mandated Reports Processing) |                        |                  |

D. If no to all of the above, please check appropriate boxes below noting reasons why your jurisdiction was not able to apply information technology to any of these processes.

- 4** No demand from customers for such services.
  
- 29** Lack of funding to support acquisition and operation of I.T. for these functions.
  
- 10** Lack of time to review the existing regulatory system and ascertain whether application of I.T. is either needed or would be helpful
  
- 8** Current system works fine as is – no complaints (If it isn't broke, don't fix it.)
  
- 9** Do not have access to information/expertise to make determination if I.T. would improve codes administration and/or enforcement processes.



**Part II: Benefits**

Above and beyond potential savings in time and staff, most jurisdictions apply I.T. to their code administration processes to derive other benefits. Listed below are the most frequently cited benefits. Please check all that apply to your application(s) of I.T. and note any support data.

- 19** Improved jurisdiction economic competitiveness with other jurisdictions.
- 55** Improved overall relationship between jurisdiction and clients.
- 37** Enabled jurisdiction to offer a service that is now available 24/7/365.
- 38** Enabled the jurisdiction to share critical data with other agencies enhancing governments effectiveness and efficiency.
- 30** Enabled jurisdiction to better plan for, respond to, recover from natural and manmade disasters.
- 25** Other (please describe)

**NOTE OTHER INCLUDED:**

- 12 Better enforcement 12
- 3 Allows state to provide greater statewide code uniformity
- 6 Allows staff to work on other required duties with the time saved
- 1 Comply with federal mandates

**Part III: Return on Investment** – If you answered yes to any one of the processes listed in Question IA above, please complete the remainder of the survey. You may do so by either completing the attached worksheet or putting your answers where indicated below. (The questions on the worksheet and those indicated below are the same.) A completed sample worksheet is included to serve as a guide to the data we are seeking.

**NOTE: SEE ATTACHMENT C FOR SUMMARY OF DETAILED ROI INPUT IN RESPONSE TO QUESTIONS IN PART III**

**Part IV: Documentation or Studies Supporting Cost Savings** – In addition to the information provided under Part III, please answer the questions below as to additional documentation.

E. Does your jurisdiction have a report or access to data concerning the costs and savings being achieved from the application of information technology to your codes administration and enforcement processes?

**3** YES

**57** NO

**3** Not sure

F. Are you able to share any or all of these studies with the Alliance?

**4** YES

**25** NO

**8** Not certain at this time

G. Are you able to be contacted by other jurisdictions wishing to learn from your experience?

**53** YES

**5** NO

**9** Not certain

**DETAILED ANALYSIS OF RETURN ON INVESTMENT  
FOR ONLINE PERMIT PROCESSING IN THREE SAMPLE JURISDICTIONS**

**How to Use This Attachment:**

**The following pages provide data (F-1), Return on Investment calculation methodology (F-2) and Return on Investment calculations for online permit processing for the jurisdictions of Los Angeles, CA (F-3), Chula Vista, CA, (F-4), and Cobleskill, NY (F-5).**

## Three Examples: Large/Medium/Small Local Jurisdictions

| Jurisdiction/<br>IT Area | COSTS                    |                       |                                 | TIME/STAFF PRIOR TO I.T. IN PLACE |                       |                              |          | TIME/STAFF AFTER I.T. IN PLACE  |          |                                 |          | Difference<br>Construct<br>Volume |
|--------------------------|--------------------------|-----------------------|---------------------------------|-----------------------------------|-----------------------|------------------------------|----------|---------------------------------|----------|---------------------------------|----------|-----------------------------------|
|                          | Acquisition <sub>1</sub> | Training <sub>2</sub> | Total<br>Ownership <sub>3</sub> | Jurisdiction                      |                       | Customer                     |          | Jurisdiction                    |          | Customer                        |          |                                   |
|                          |                          |                       |                                 | Time to<br>perform <sub>4</sub>   | Manpower <sub>5</sub> | Time to perform <sub>6</sub> | Manpower | Time to<br>perform <sub>7</sub> | Manpower | Time to<br>perform <sub>8</sub> | Manpower |                                   |
|                          |                          | ②                     | ③                               | ④                                 | ⑤                     | ⑥                            |          | ⑦                               |          | ⑧                               |          |                                   |
| <b>Los Angeles, CA</b>   |                          |                       |                                 |                                   |                       |                              |          |                                 |          |                                 |          |                                   |
| Permit apply             | \$276,510                | \$3,000               | \$33,043                        | 14 min                            | 1                     | 2 hr                         | 1        | 0                               | 0        | 10 min                          | 1        | Yes                               |
| Plans application        | \$81,600                 | \$8,160               | \$39,640                        | 1 hr                              | 1                     | 4 hr                         | 1        | 5 min                           | 1        | 5 min                           | 1        | Yes                               |
| Licensing                | \$52,457                 | \$2,400               | \$21,931                        | 12 min                            | 1                     | 72 min                       | 1        | 5 min                           | 1        | 65 min                          | 1        | Yes                               |
| Insp sch-IRFIS           | \$14,895                 | \$0                   | \$20,043                        | 3.5 min                           | 1                     | 3.5 min                      | 1        | 0                               | 0        | 3 min                           | 1        | Yes                               |
| Insp sch-AIRS            | \$199,170                | \$6,000               | \$33,043                        | 3.5 min                           | 1                     | 3.5 min                      | 1        | 0                               | 0        | 3.5 min                         | 1        | Yes                               |
| Insp sch-ICBS            | \$179,170                | \$12,000              | \$33,043                        | 3 min                             | 1                     | 0                            | 0        | 0                               | 0        | 0                               | 0        | Yes                               |
| Conduct inspect          | \$48,960                 | \$8,160               | \$63,300                        | 10 days                           | 3                     | 12 days                      | 1        | 3 days                          | 3        | 3 days                          | 1        | Yes                               |
| Code enf-disasterEn      | \$1,850,000              | \$13,000              | \$97,000                        | 10-25 hrs                         | 1                     | 3 min                        | 1        | 10-25                           | 0        | 3 min                           | 1        | Yes                               |
| Inform util-PPR          | \$14,695                 | \$0                   | \$12,026                        | 10 min                            | 1                     | 70 min                       | 1        | hrs                             | 0        | 3 min                           | 1        | Yes                               |
| Inform util-IPAr         | \$14,695                 | \$0                   | \$12,026                        | 5 min                             | 1                     | 5 min                        | 1        | 0                               | 0        | 2 min                           | 1        | Yes                               |
|                          |                          |                       |                                 |                                   |                       |                              |          | 0                               |          |                                 |          |                                   |
| <b>Chula Vista, CA</b>   |                          |                       |                                 |                                   |                       |                              |          |                                 |          |                                 |          |                                   |
| Permit-apply process     | \$38,182                 | \$10,000              | \$95,369                        | 3 hrs                             | 1                     | 1.5 hrs                      | 1        | 30 min                          | 1        | 30 min                          | 1        | Yes                               |
| Plan submittal           | Incl abve                | Incl abve             | Incl abve                       | 1 hr                              | 1                     | 30 min                       | 1        | 30 min                          | 1        | 15 min                          | .5       | Yes                               |
| Licensing                | Incl abve                | Incl abve             | Incl abve                       | 1.5 hrs                           | 3                     | 30 min                       | 1        | 30 min                          | 3        | 20 min                          | 3        | Yes                               |
| Inspect scheduling       | Incl abve                | Incl abve             | Incl abve                       | 30 min                            | 1.5                   | 20 min                       | 1,5      | 10 min                          | .5       | 15 min                          | .5       | Yes                               |
| Conduct inspections      | Incl abve                | Incl abve             | Incl abve                       | 30 min                            | 5                     | 20 min                       | 5        | 10 min                          | 15       | 15 min                          | 15       | Yes                               |
| Gov reports              | Incl abve                | Incl abve             | Incl abve                       | 6 hrs                             | 1                     | N/A                          | N/A      | 1 hr                            | 1        | N/A                             | N/A      | Yes                               |
| <b>Cobleskill, NY</b>    |                          |                       |                                 |                                   |                       |                              |          |                                 |          |                                 |          |                                   |
| Permit apply             | \$5,000                  | \$3-5,000             | \$10,000                        | 1 hr                              | 1                     | 3 hrs                        | 1        | 15 min                          | 1        | 1 hr                            | 1        | 20% incr                          |
| Inspect scheduling       | \$1,000                  | \$1,500               | \$2,500                         | 30 min                            | 1                     | N/A                          | N/A      | 15 min                          | 1        | N/A                             | N/A      | 20% incr                          |
| Master plan              | \$1,000                  | \$3,000               | \$4,000                         | 12 hrs                            | 1                     | N/A                          | N/A      | 1 hr                            | 1        | N/A                             | N/A      | No                                |
| File archive index       | \$1,000                  | \$3,000               | \$4,000                         | 3-6 hrs                           | 1                     | N/A                          | N/A      | 15 min                          | 1        | N/A                             | N/A      | No                                |

**For the purpose of calculating representative Return on Investment (ROI) figures, the following definitions apply:**

$$\text{Return on Investment (ROI)} = \frac{\text{Total Ownership Cost}_3 \text{ \$}}{(\text{Annual Benefit to Gov't} + \text{Annual Private Sector Benefit}) \text{ \$/Yr}}$$

$$\text{Total Ownership Cost}_3 \text{ \$} = \text{Acquisition Cost}_1 \text{ \$} + \text{Training Cost}_2 \text{ \$}$$

**With regard to benefits expressions, only the time savings resulting from the application of I.T. will be accounted. For the sake of establishing quantitative ROI figures, the qualitative components detailed in Part IV, section 4, of the report (pages 10 & 11) have been excluded.**

$$\text{Annual Benefit to Government (\$/Yr)} = \frac{(\text{Prior Time to Perform}_4 - \text{After Time to Perform}_7) \text{ Hrs}}{\text{Permit}} \times \frac{(\text{Man-hour Rate}) \text{ \$}}{\text{Hr}} \times \text{Permit Volume} \times \frac{\text{Permits}}{\text{Yr}}$$

$$\text{Annual Benefit to Private Sector (\$/Yr)} =$$

$$(\text{Prior Time to Perform}_6 - \text{After Time to Perform}_8) \text{ Hrs} \times \frac{(\text{Man-hour Value}) \text{ \$}}{\text{Hr}} \times (\text{Prior Time to Perform}_4) \text{ Hrs/Permit} \times \text{Permit Volume} \times \frac{\text{Permits}}{\text{Yr}}$$

**If known, the volume of permits issued by the jurisdiction should be used. If necessary, the following assumption could be applied:**

$$\text{Permit Volume} \frac{\text{Permits}}{\text{Yr}} = \frac{2000 \text{ Hrs/Staff-Yr} \times \text{Manpower}_5 \text{ Staff}}{(\text{Prior Time to Perform}_4) \text{ Hrs/Permit}}$$

**If known, the burdened man-hour rates for applicable staff should be used. Likewise, private sector rates applicable to the region should be used as well. If necessary, the following assumptions could be applied:**

Assumptions:

Government Man-hour Rate = \$40/Hr

Private Sector Man-hour Value = \$40/Hr

Using the above methodology, the following three examples are provided:

**Los Angeles, CA\***

$$\text{Total Ownership Cost} = \$276,510 + \$3,000 = \$279,510$$

$$\text{Annual Benefit to Government} = \frac{(14/60 - 0) \text{ Hrs}}{\text{Permit}} \times \frac{\$40}{\text{Hr}} \times \frac{2000 \text{ Hrs/Staff-Yr} \times 1 \text{ Staff}}{14/60 \text{ Hrs/Permit}} = \$80,000/\text{Yr}$$

$$\text{Annual Benefit to Private Sector} = \frac{(2 - 10/60) \text{ Hrs}}{\text{Permit}} \times \frac{\$40}{\text{Hr}} \times \frac{2000 \text{ Hrs/Staff-Yr} \times 1 \text{ Staff}}{14/60 \text{ Hrs/Permit}} = \$628,571/\text{Yr}$$

$$\text{ROI} = \frac{\$279,510}{\$80,000/\text{Yr} + \$628,571/\text{Yr}} = .39 \text{ Yrs}$$

\* Los Angeles has provided NCSBCS with their own ROI calculations using a slightly different methodology. The Los Angeles ROI calculations, however, come up with even greater ROI than those shown above. Los Angeles noted that their system's development costs and one year maintenance cost divided by annual cost savings to the city and to the customer = a payback of costs within .13 years in 2002. .13 year = approximately 1 & 1/2 months.

**Chula Vista, CA – Permit Application & Processing**

Total Ownership Cost = \$95,369/3 (Assumption: 1/3 of total costs is applicable to the permitting process.)

$$\text{Annual Benefit to Government} = \frac{3 \text{ Hrs} - .5 \text{ Hrs}}{\text{Permit}} \times \frac{\$40}{\text{Hr}} \times \frac{2000 \text{ Hrs/Staff-Yr} \times 1 \text{ Staff}}{3 \text{ Hrs/Permit}} = \$66,667/\text{Yr}$$

$$\text{Annual Benefit to Private Sector} = \frac{1.5 \text{ Hrs} - .5 \text{ Hrs}}{\text{Permit}} \times \frac{\$40}{\text{Hr}} \times \frac{2000 \text{ Hrs/Staff-Yr} \times 1 \text{ Staff}}{3 \text{ Hrs/Permit}} = \$26,667/\text{Yr}$$

$$\text{ROI} = \frac{\$95,369/3}{\$66,667/\text{Yr} + \$26,667/\text{Yr}} = .34 \text{ Yrs}$$

**Cobleskill, NY – Permit Applications**

Total Ownership Cost = \$10,000

Annual Benefit to Government =  $\frac{1 \text{ Hr} - .25 \text{ Hr}}{\text{Permit}} \times \frac{\$40}{\text{Hr}} \times \frac{2000 \text{ Hrs/Staff-Yr} \times 1 \text{ Staff}}{1 \text{ Hr/Permit}} = \$60,000/\text{Yr}$

Annual Benefit to Private Sector =  $\frac{3 \text{ Hrs} - 1 \text{ Hr}}{\text{Permit}} \times \frac{\$40}{\text{Hr}} \times \frac{2000 \text{ Hrs/Staff-Yr} \times 1 \text{ Staff}}{1 \text{ Hr/Permit}} = \$160,000/\text{Yr}$

ROI =  $\frac{\$10,000}{\$60,000/\text{Yr} + \$160,000/\text{Yr}} = 0.05 \text{ Yrs}$

**Overall, an ROI figure of .33 years seems typical. To restate, the cost of implementing permit application and processing software is recouped in four months.**