

ROI SERIES

ROI HIGHLIGHTS

- Realized 137% ROI
- Expected total benefits of \$105 M
- Implemented tighter budget controls and accountability across 70 departments
- Boosted labor productivity in finance, purchasing and warehouse operations
- Lower excess stock and inventory costs
- Shortened delivery time to housing developments
- Minimized HUD funding risks
- Strengthened emergency preparedness

ORGANIZATION PROFILE



New York City Housing Authority
New York City
www.nyc.gov/nycha

The New York City Housing Authority (NYCHA) provides decent and affordable housing in a safe and secure living environment for low- and moderate-income residents throughout the five boroughs. NYCHA is the largest public housing Authority in North America.

Employees
14,000

Board of Directors
Tino Hernandez, Chairman
Earl Andrews Jr., Vice Chairman
JoAnna Aniello, Member

General Manager
Douglas Apple

New York City Housing Authority Streamlines Budgeting and Procurement on Single-Instance Business Platform, Earns 137% ROI

EXECUTIVE SUMMARY

The New York City Housing Authority (NYCHA) oversees North America's largest public housing program. In addition to managing more than 2,700 residential buildings, NYCHA administers a citywide Section 8 rent-subsidy program and a broad range of educational, recreational and job-training initiatives. The Authority's funding comes from a combination of government subsidies and grants, rent from tenants, and other sources. About 420,000 people—5.2% of the city's population—live in NYCHA housing developments in five boroughs.

In 2002, NYCHA launched a broad-based initiative to upgrade its business systems to support cost-saving improvements such as more sophisticated budgeting and financial management, a more efficient procurement program, and a streamlined materials management system, among other capabilities. Called Project B.E.S.T. for Business Enterprise Systems Transformation, the investment replaced NYCHA's aging IT infrastructure—a fragmented and expensive-to-maintain mix of software applications and vendors—with a consolidated platform running a single-instance of Oracle E-Business Suite.

According to a recent study by independent consulting firm Shack & Tulloch, Inc., NYCHA has realized significant operational and strategic benefits from the investment. Key improvements include the introduction of department-level budgeting and enhanced financial control for 70 business units (while reducing staff); reduction of inventory and other costs at warehouses; faster delivery of supplies to housing developments; reduction of maverick spending and other savings from automated procurement; and increased labor productivity due to the integrated computing platform.

The study estimates NYCHA will realize cumulative benefits of more than \$105 million over the life of the B.E.S.T. project, translating into a net present value of \$60.2 million. NYCHA will achieve payback on its investment in about 2.5 years, the study projects, and earn an overall return on investment of about 137%.

**ORACLE
PRODUCTS AND SERVICES**

- Oracle Public Sector Budgeting
- Oracle Financials
- Oracle Cash Management
- Oracle iProcurement
- Oracle Purchasing
- Oracle Grants
- Oracle Fixed Assets
- Oracle Human Resources
- Oracle Inventory
- Oracle Order Management

// Public sector entities are challenged to provide high quality services in an era of diminished resources. //

Douglas Apple
General Manager
New York City Housing
Authority

PROJECT BACKGROUND

Early in the planning process, administrators recognized that NYCHA's aging and fragmented computing infrastructure couldn't support the range of sophisticated new functions—such as department-level budgeting—that would be key to the success of the transformation. Plus, the computing systems themselves were growing more costly and difficult to maintain. “NYCHA faced significant challenges,” said John Saggese, director, IT - B.E.S.T. for NYCHA. “We had a myriad of homegrown and vendor legacy systems that were difficult and increasingly expensive to maintain and upgrade, and did not meet management’s information needs.”

The Authority started implementing the project in early 2002 and by September 2003 had consolidated operations on an integrated platform of Oracle E-Business Suite applications. The Authority now runs its core accounting, budgeting, procurement, and materials management functions on a single instance of Oracle applications.

TIGHTER CONTROL OVER BUDGETS

NYCHA determined that to get spending under control and manage assets more effectively it would need to move beyond its legacy budgeting system. “Previously, the Authority had an annual budget with funding provided to departments on a first-come first-serve basis,” said Jose Mercado, director of NYCHA's department of budget and financial planning. “Detailed tracking during the year was lacking, making it impossible to prioritize expenditures.”

The move to Oracle Public Sector Budgeting, one of a number of Oracle E-Business Suite modules NYCHA installed as part of the transformation project, enabled the Authority to set up 70 department-level budget centers and manage the entire set of budgets on a single instance of the application. NYCHA can allocate funding to specific line-item programs and set spending goals for each allocation. According to Felix Lam, NYCHA's chief financial officer, the system helped the Authority “instill more effective management control and accountability.”

For example, the Oracle system supported NYCHA's implementation of multi-year budget plans and semi-annual reviews that help NYCHA “close gaps and reprioritize spending,” Mr. Mercado said. “They give managers the opportunity to assess operations and explore cost reduction and revenue production opportunities.” Already the Authority has launched several initiatives designed to improve revenue performance. “These would not have been explored with our previous information system,” Mr. Mercado added.

// The new departmental budget process significantly improves financial controls and enables better economic decision-making. //

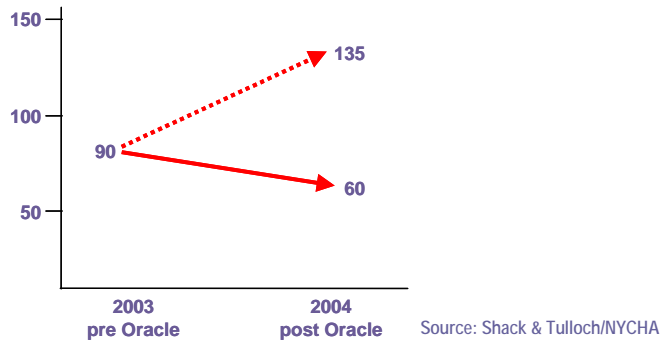
Douglas Apple
General Manager
New York City Housing
Authority

The Authority initially thought it would need to boost staffing significantly to manage the more sophisticated budgeting system as well as comply with new financial-reporting requirements from the U.S. Department of Housing and Urban Development (HUD). "Original estimates were that the number of financial analysts could double," said Mr. Lam. The Shack & Tulloch study used a more conservative estimate, assuming the Authority would need to add 45 full-time equivalent (FTE) employees at a cost of about \$2.7 million.

But instead of adding staff, the Authority actually reduced staffing by about 30% following the implementation, thanks to the CFO's strong commitment to control project related expenses and the system's streamlined single-instance budgeting environment. As shown in Figure 1, the combination of avoided costs and staffing reductions is saving NYCHA an estimated \$4.5 million annually. At the same time, the system's built-in HUD compliance capability is minimizing NYCHA's risk of losing tens of millions in federal funding.

FIGURE 1: AVOIDED STAFFING INCREASE, PLUS STAFF REDUCTION, SAVES \$4.5 MILLION

NYCHA needs fewer FTEs to run its expanded budgeting system



AUTOMATED GRANTS ACCOUNTING

Government grants represent a critical source of funding for NYCHA, contributing some \$500 million, or 79%, of the Authority's capital budget. In the past, though, NYCHA often had difficulty tracking grant expenditures, mainly because its grant-accounting application wasn't fully integrated with the general ledger. "Our previous sub-system operated separate from, and often at odds with, our general ledger system," said Lloyd Kass, deputy director of NYCHA's department of budget and financial planning.

Mr. Kass said that by adding the Oracle Grants module into its Oracle suite, NYCHA "finally has full integration with the general ledger" and can monitor spending in real-time and comply with government reporting requirements. NYCHA also uses the grants module to track the Authority's five-year capital commitment plan.

// From a materials management perspective, it was critical that an enterprise system provide labor and asset productivity, while at the same time improving service to our tenants. //

Natalie Rivers
Deputy General Manager
for Administration
New York City Housing
Authority

INTEGRATED MATERIALS MANAGEMENT

The single-instance Oracle platform links NYCHA's financial and budgeting departments with the Authority's sprawling materials management operation that keeps housing developments supplied with everything from refrigerators and stoves to fire extinguishers and doorknobs.

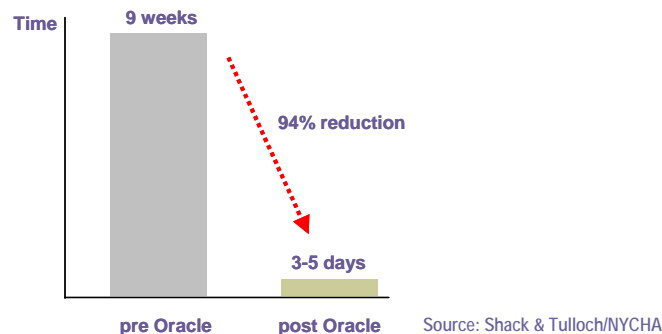
Previously, NYCHA employed three standalone systems to run its materials management processes—one each for procurement, warehousing and inventory management. For many tasks, such as requisitions, the Authority still used paper forms, causing delays and leaving managers with no easy way to check on order status. Not infrequently, housing superintendents assumed late orders had been lost and submitted new requisitions. The result: many developments built up stores of excess inventory and the Authority overspent its budget.

EASY ONLINE REQUISITIONS, FASTER DELIVERY

NYCHA employees now purchase supplies through easy-to-navigate online catalogs. The system handles approvals electronically and tracks orders from request to delivery. "The iProcurement module is a great timesaver," said Terry Eichenbaum, deputy director, purchasing division. Using conservative assumptions (Aberdeen Group, Industry Week, Shack & Tulloch), the study calculated that NYCHA is saving about \$50 per requisition, adding up to about \$1.5 million per year.

Robert Podmore, NYCHA's deputy general manager for operations, said the switch to Oracle's automated procurement and order-management systems has translated into faster deliveries to the housing developments. The Oracle applications, he said, "allow us to provide more responsive service to the developments." Natalie Rivers, deputy general manager for administration, agreed: "The new system means we can better meet tenants needs while at the same time being more productive from a labor and inventory standpoint," she said. Figure 2 shows the decrease in delivery times following the implementation.

FIGURE 2: FASTER DELIVERIES TO HOUSING DEVELOPMENTS



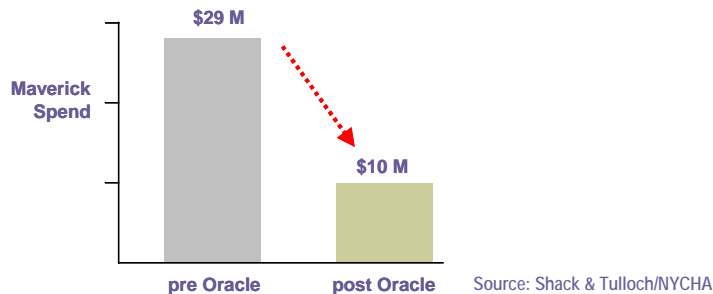
// We have seen increased productivity in warehouse operations, we have eliminated physical inventory, and automated our procurement process. All of which has resulted in significant labor productivity improvement. //

Natalie Rivers
Deputy General Manager
for Administration
New York City Housing
Authority

ELIMINATING EXCESS INVENTORY BUILDUP

By integrating department-level budgeting with Oracle's iProcurement application, NYCHA can place hard caps on spending and give housing superintendents real-time updates on requisitions. "Development superintendents have real time visibility into the status of their orders," said Ms. Rivers, deputy direct of administration. The move has eliminated double ordering of supplies and equipment and is helping to reduce an estimated \$46 million of excess inventory at NYCHA's housing developments. The reduction is expected to save NYCHA about \$3 million in inventory obsolescence and shrinkage expenses. Tighter control of spending also helped NYCHA reduce unauthorized "maverick" spending, as shown in Figure 3.

FIGURE 3: MAVERICK SPENDING DROPS



PICKING UP DISCOUNTS

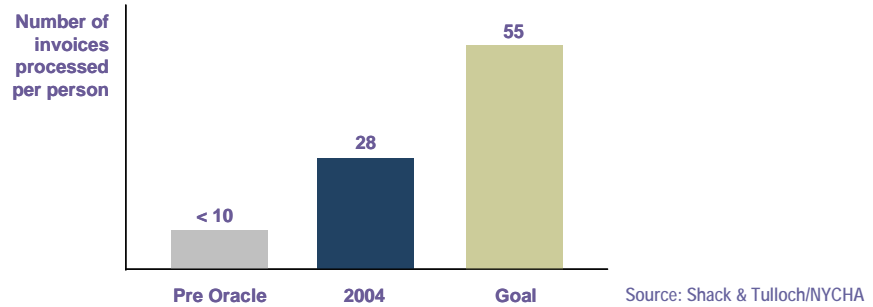
NYCHA is realizing additional savings by switching to electronic payments for more purchases and by setting the system to automatically capture early-payment discounts. NYCHA is expecting to expand the base of payments that qualify for discounts, which means it will be on track to save as much as \$2 million per year by 2009.

According to the study, NYCHA's automated payables process has been responsible for an estimated 180% increase in labor productivity, with employees now processing nearly 30 invoices per day compared to less than 10 prior to the B.E.S.T. implementation, as shown in Figure 4. "We have a target of doubling productivity further in the next couple of years," said Ahmad Thabet, deputy director of NYCHA's accounts payable division. "Plus automation frees up people for more challenging work."

// We now have a good central inventory system that we can rely on and eventually we'll have full visibility into our storerooms so we respond even more quickly to emergencies. //

John Saggese
 Director IT - B.E.S.T
 New York City Housing
 Authority

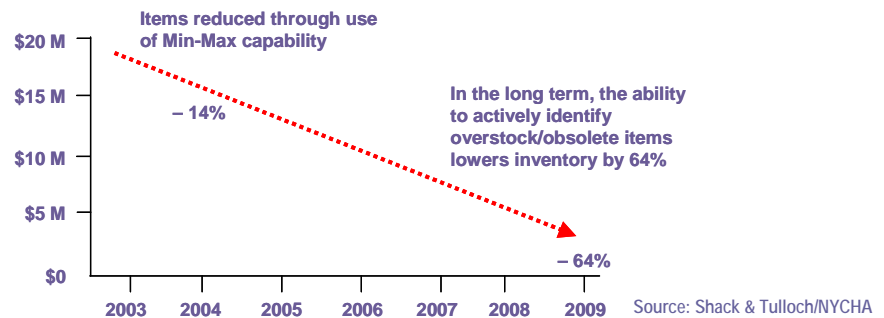
FIGURE 4: GREATER INVOICING PRODUCTIVITY



TIGHTER WAREHOUSE MANAGEMENT

In addition to addressing excess inventory, the Authority introduced a "min-max" inventory system to automatically replenish critical supplies as well as prevent overstocking. NYCHA now keeps inventory near optimal levels year-round, cutting the value of inventory it carries by 14% and reducing back orders by 70%.

FIGURE 5: INVENTORY REDUCTIONS



"We've made significant strides," says Gary Smith, NYCHA's director of materials management. "Before we made this change, most items were out of the targeted min/max parameter." and helped boost the efficiency of warehouse workers. "Our pick labor productivity improved by 59% in the last year," Mr. Smith said.

The same system allowed NYCHA to move from a labor-intensive annual physical inventory to a "perpetual" inventory system. "With the perpetual cycle count system we achieved a 100% accuracy rate in our external audit," said Ms. Rivers. "That was something we never, ever achieved when we did a costly annual physical inventory."

// With the move to one instance, using Oracle's integrated applications, NYCHA has a single source of truth for management and operating information. //

Bob Marano
Director, Application
Development
New York City Housing
Authority

Administrators also say the new inventory system will strengthen NYCHA's ability to respond to large-scale emergencies in the city. "We were first responders on site at Ground Zero," said Mr. Saggese, the IT-B.E.S.T. director. "Everyone was asking for gloves, boots, masks and equipment. It would have been great to know the exact location of all NYCHA's supplies and equipment, to be able to respond even more quickly. We now have a good central inventory system that we can rely on and eventually we'll have full visibility into our storerooms so we respond even more quickly."

COST-EFFICIENT IT ENVIRONMENT

The study showed that the move to a single-instance system saved money because it simplified NYCHA's computing environment and allowed the Authority to support the applications with fewer people. "Our legacy platform was a conglomerate of systems that we had built up over 10 to 15 years," said Bob Marano, director of application development for NYCHA. "The environment was very costly to maintain or modify."

Self-service tools also cut IT's workload, managers said, by letting more users run reports and update the system on their own. NYCHA now runs its IT operations with about 57% fewer people, and it freed up about six other non-IT employees in functional departments who had been primarily IT-focused.

ROI SUMMARY

According to estimates prepared by Shack & Tulloch, NYCHA will realize benefits totaling more than \$105 million over the life of the B.E.S.T. project. The benefits include an estimated \$64.5 million from productivity improvements (including labor savings from more efficient business processes), \$39.5 million from optimized materials management (including better pricing from electronic payments, early discounts, and reduced maverick spend), and about \$1.8 million from better asset productivity (including lower inventory costs). Figure 6 summarizes the estimated costs and benefits of the B.E.S.T. project.

**ABOUT
THE ROI SERIES**

This study is one of a series of investigations into the costs and business returns of IT investments, with a focus on Oracle technology and applications. It is intended to serve business executives and managers who are evaluating technology investment options.

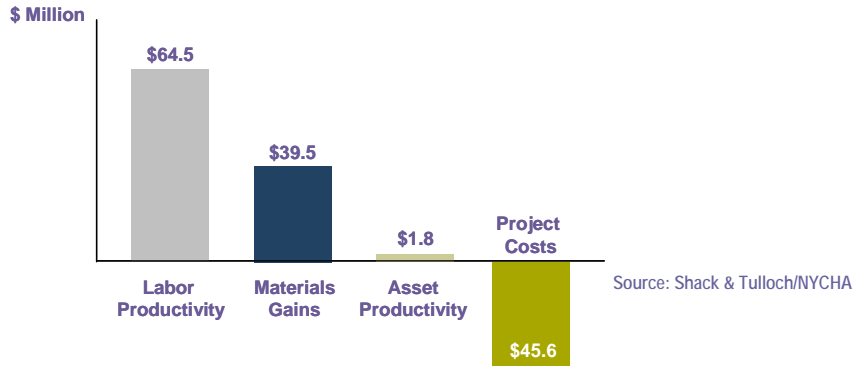
Research and analysis for this study was conducted by Shack & Tulloch, an independent consulting firm, and was based on interviews with executives at New York City Housing Authority, review of planning documents, and searches of industry literature. ROI calculations use industry standard assumptions regarding the time value of money.

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FIGURE 6: SUMMARY OF COSTS AND BENEFITS



The study estimates a net present value of \$60.2 million for the project, translating into a 137% return on investment and a payback of period of 2.5 years. As shown in Figure 7, the B.E.S.T. project began generating positive cash flow in 2004, as labor productivity, materials management efficiencies, and other gains offset initial investment costs.

FIGURE 7: ESTIMATED CASH FLOW FOR B.E.S.T. PROJECT

