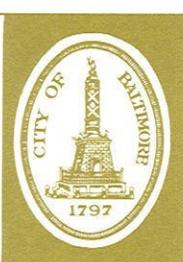


<b>FROM</b>	NAME & TITLE	Michael E. Broache, Chief <i>ME Broache</i>
	AGENCY NAME & ADDRESS	Accounting and Payroll Services 401 E. Fayette St., Room 500
	SUBJECT	City Council Resolution: 08-0076R

CITY of  
BALTIMORE  
**MEMO**



**TO** The Honorable President and  
Members of the City Council  
Room 400 City Hall

DATE: September 23, 2009

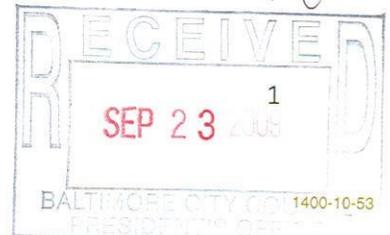
Attn: Karen Randle

The Department of Finance, Bureau of Accounting and Payroll Services, is pleased to respond to your request to provide information regarding CityDynamics, the City of Baltimore's new financial system. This system, which was implemented in March 2009, represents best practices in technology and accounting and positions the City of Baltimore favorably for the future.

While the system encompasses all facets of accounting and financial reporting, the focus of our response will be to address the concerns raised by the Council regarding prompt payment to vendors for goods and services provided to City of Baltimore agencies. Prior to getting into the details of the system and the business process changes implemented, it is important to note that one of main reasons for implementing CityDynamics was to improve the City's process for paying vendors and thus improve overall timeliness of payment. It was also a goal to improve the City's internal control over vendor payments and its ability to monitor vendor invoices as they flow through the City. The Department of Finance, Bureau of Accounting and Payroll Services, takes the timely payment of vendors very seriously and believes that the processes implemented through CityDynamics allow for vendors to be paid quickly and also allows the City to start taking discounts often offered by vendors for prompt payment of vendors.

The processing of invoices is a partnership between vendors, agencies acquiring the goods and services, and the Department of Finance, Bureau of Accounting and Payroll Services. Vendors must provide the City of Baltimore with invoices that clearly and accurately reflect the goods and/or services provided. They must include identifying information on each invoice such as City of Baltimore purchasing authorization document ID, Purchase Order Number, Contract Number, or Expenditure Authorization (EA) number). Agencies must not enter into agreements with vendors or accept the delivery of goods and services until they

*Comments*



receive the appropriate approval and documents. They must provide the vendor with an agency contact person as well as the appropriate procurement document (PO, Contract Number or EA number) and instruct the vendor to include this identifying information on each invoice. In addition, immediately upon receipt of the goods and services agencies must enter their receipts into the appropriate system, particularly CitiBuy. Timely entry of receipt information allows the Bureau of Accounting and Payroll Services (BAPS) to process the invoice immediately upon receipt of the invoice, scanning, and verification. The Bureau of Accounting and Payroll Services is at the end of the vendor interaction and relies upon vendors to provide accurate and timely documents and agencies to receive the goods and services in a timely manner. BAPS cannot pay a bill until agencies provide the authorization to do so and this is normally via an approved receipt of goods and services.

The scanning and electronic workflow processes implemented in CityDynamics not only represent best practices in accounts payable, but they allow BAPS to monitor the flow of invoices throughout the City and follow-up on invoices that have not been paid in a reasonable time.

As with all new systems implementations there have been challenges as the City's workforce adapts to new business processes and challenges. Many City employees do not possess the appropriate level of computer skills and agencies need to address this. In addition, errors have been made by agencies and BAPS staff that have caused confusion and delayed some payments. The City is also learning to operate electronically without much paper flow. This is a significant shift in the way we do business and a challenge to many long term employees. The organization is growing and learning each day and we have statistics to support this.

The Bureau of Accounting and Payroll Services pays over 12,000 payments each month. When invoices associated with CitiBuy Purchase Orders have been properly formatted and agencies enter receipts in a timely manner, vendor payments are made in an average of 22 days. When invoices lack all appropriate information or agencies have not entered receipts in a timely manner then the average time to pay the vendor is 51 days. For Expenditure Authorizations (EA) the average time is 10 days if invoices are properly formatted and agencies enter receipts timely. If invoices are not properly formatted the average time to process an EA invoice is 77 days.

The Department of Finance, Bureau of Accounting and Payroll Services, believes that we have implemented the right system and business processes for today with flexibility for the future. We continue to work with vendors and employees to resolve the challenges associated with such a major implementation. The key components of CityDynamics and its implementation are documented on the following pages, with the focus on the vendor payment processes.

## CITYDYNAMICS

### Summary:

In March 2009 the Department of Finance, Bureau of Accounting and Payroll Services (BAPS), implemented a state of the art financial system replacing the Integrated Financial System (IFS) that had been operating for forty years. The transition to this system was essential as IFS was written in a software language that is no longer adequately supported and many of the business practices were antiquated and lacked the level of internal control required in today's world. A failure in IFS would have jeopardized the City's ability to pay vendors, process financial transactions, prepare required financial statements and reports supporting grants and City bond issues, bill certain customers, and the City's overall compliance with Generally Accepted Accounting Principles (GAAP). The strategy taken for the replacement of IFS was to acquire a state of the art system that incorporates best practices in business processes and technology and to implement out of the box, only changing where there were City of Baltimore laws or regulations that required a deviation from best practices. Instead of fitting the City's processes to the software the decision was made to change the City's processes to be in line with best practices. This approach provides for a quick and cost effective implementation along with an efficient future upgrade path.

Another key element in the process was to select a vendor that not only had the technical expertise to implement a system of this magnitude but also the ability to guide the City of Baltimore through the significant change process associated with such an endeavor.

The software solution and implementer were selected during a competitive bid process that was completed in October 2007. The vendor selected was RSM McGladrey, a national accounting and consulting firm with strong local presence and experience in government accounting and business processes. The software solution selected was Microsoft Dynamics GP a solution that has been implemented in many organizations both public and private throughout the world. It is a proven system with proven best practices and internal controls.

### CITYDYNAMICS:

CityDynamics replaced the following processes previously performed using IFS:

- All General ledger GAAP accounting
- Implemented a new 26 character account number
- Accounts Payable
- Grant Accounting
- Miscellaneous Billing for non lienable bills
- Financial reporting
- Interface with 35 current City systems that use account numbers
- Converted over 400,000 accounts

### **Major Changes Implemented with CITYDYNAMICS:**

The following changes were made as the result of implementing CITYDYNAMICS to incorporate best practices and effective internal control:

- Change in account structure to allow for better tracking of revenues and expense and more effective reporting. A twenty six character (26) account number replaced the old IFS fifteen (15) character account structure. The new account structure provides consistent meanings for each account segment and provides for better financial reporting and growth as the City implements new programs and activities;
- Replacement of the DPO process for small purchases with an Expenditure Authorization that supports best practices and includes prior approval of all small purchases, electronic workflow, and matching and approval of receipts prior to paying invoice;
- Centralized receipt of all vendor invoices, scanning invoices and electronic workflow to maintain a trail of all invoices and provide mechanisms to follow up and expedite vendor payments. Goal is to move to electronic invoicing for major vendors to eliminate paper flow and expedite payment;
- Elimination of paper reports distributed to agencies and implementation of electronic reports that can be run by agency fiscal employees when needed.

### **Communication and Training:**

Involvement of key high volume users started in November 2007 at the onset of the implementation process. Representatives from DPW, Health, Police, HCD, Recreation and Parks, and Budgets were heavily involved in confirming the design for the new processes.

Once the initial design was developed communication sessions were conducted for agency fiscal employees.

- These sessions started in July 2008 and were held in the CitiStat Room.
  - Monthly meetings were held between July-September 2008
  - Bi-weekly meetings were held between October 2008 and May 2009
  - Monthly meeting started again in September 2009
- City fiscal officers were provided information about the new system, new business processes, given the opportunity to ask questions, and provided homework assignments;

- Fiscal officers were asked to share the information provided at these meeting with members of their leadership teams and other employees involved in processing financial transactions and using reports and financial information in the daily work assignments.
  - Powerpoint presentations were sent via email to all fiscal officers.
- The project team encouraged fiscal officers to schedule project team presentations for their organizations;
- In addition to providing feedback to the project team, providing user lists, providing feedback on the new account numbers, and coordinating training, agency fiscal officers were asked to evaluate the technical computer and accounting skills of their employees.
  - If these skills were lacking, agencies were asked to schedule their employees for basic computer training offered by the Department of Human Resources (DHR).
  - The first slide and ten minutes of each meeting each meeting focused on this requirement and the fact that users not demonstrating these skills would have their access removed.
  - As a Bureau Chief needing to support CityDynamics, I had to assess the skills levels of my team members. Every member of BAPS was sent to multiple DHR computer training courses to improve their computer skills.
  - Prior to the March 1, 2009 implementation of CityDynamics a total of 15 agency meetings were held.
  - Project team members conducted many one on one meeting with agencies to review new accounts and business processes, establish workflows, and discuss how they could leverage the system to meet their objectives.
  - Agency specific meetings were held as requested.

Formal classroom training started on January 6, 2009. Training was designed to give users an overview of the system and new business processes. Sessions were focused on specific roles and tasks within the system.

- The goal was to provide training as close to go live as possible so agencies could begin using the skills they developed during training;
- Users were provided the opportunity to practice in a non production database environment;
- In total close to 800 users were trained prior to go live on March 1, 2009.

During the last two weeks of February, one hour refresher courses were conducted to provide those previously trained the opportunity to practice their skills and ask questions in an organized classroom environment.

Prior to implementation:

- CITYDYNAMICS mailbox was established and staffed by project team members. Users were encouraged to send their questions, issues and problems to this email address;
- Each agency was provided a specific phone contact number to call if they wanted to talk with someone about the system;
- Agencies were also assigned a project team member as a point of contact and these individuals visited each agency during initial implementation and through the end of March. Six month follow up sessions are currently being conducted;
- Training documents were available on the City's intranet site, including an online demo/walkthrough of the entire Expenditure Authorization (EA) process.

In the months since implementation, the project team has been focused on providing as much one on one support to users as possible. Follow-up training sessions have been conducted. New training on how to use the reporting features of CityDynamics has been a focus as well. The project is now in the post implementation period conducting scheduled training courses and staffing the CityDynamics mailbox. Monthly agency meetings continue.

#### **Major Implementation Challenges:**

As with any system implementation the City of Baltimore experienced some challenges. This is not unusual as the organization moves from one way of doing business for forty years to another. Since the system was implemented with only minor modifications the actual business processes worked as designed and they have been very few actual systems issues.

- There have been challenges with employees understanding the new business practices and using the new tools;
- There has been a resistance to change and a desire to do business the way we have always done it.
  - Much of the resistance has come from the enforcement of certain basic internal controls that are key to any modern financial system;
  - The system forces internal control including segregation of duties, approvals and consistency within the application.
- Many City agencies have assigned accounting and invoice processing tasks to the lowest level employees in their organizations, many of which do not possess the basic computer skills to effectively utilize modern systems.

- Agencies were informed early in the process, July 2008, of the need for their employees to be able to operate in the electronic processing world and were encouraged to evaluate whether their employees would be able to effectively perform once paper oriented tasks using the computer.
- Agencies were encouraged to schedule their employees for basic computer training courses offered by the Department of Human Resources.
  - In the areas where we are experiencing the most challenges, we are finding that the employees do not possess the basic computer skills to operate Windows based applications.
    - We have spent a significant amount of time and project team resources providing one on one sessions to demonstrate how to use basic Windows features;.
    - We often visit the same people multiple times until they grasped these basic tasks.
- Another challenge is convincing City employees that they do not need paper for everything.
  - The systems are designed to allow for the use of electronic data;
  - Employees need to get accustomed to using this electronic data and reduce their reliance on paper documents;
  - The replacement of paper with electronic processes and documents is best practice.

#### **Accounts Payable/Vendor Payments In CITYDYNAMICS:**

One of the major areas of change in CITYDYNAMICS is the complete reengineering of the accounts payable and invoice payment process to incorporate appropriate internal controls and best practices. As expected it is also the most visible process resulting from this implementation.

As a matter of history, the City receives goods and services and processes resulting invoices from three major business processes with their own set of rules, some of which are driven by the charter. The separate processes are:

- Purchases that are administered under the policies of the Bureau of Purchase;
- Purchases that are administered for contracts by the Department of Public Works and Department of Transportation;
- Small purchases under \$5,000 that are controlled via Administrative Manual Policy.

In an ideal world there would be one system that processes all transactions from procurement to vendor payment for each of these key types of purchases. Just as there are best practice principles that guide accounting processes there are similar best practices that guide operations in the

procurement world. These best practices often force organizations to implement separate solutions for the procurement function. The City of Baltimore operates in the world where procurement processes are handled separately using three separate systems.

Prior to the implementation of CityDynamcis, all vendor invoices were sent to agencies for their review, preparation of paper receiving documents and approved prior to being sent to BAPS for payment. The agencies were very comfortable with this process as it allowed them to have complete control over when a vendor would be paid. While this may appear to be a good thing, it actually caused problems that were invisible to many in the organization and actually contributed to the City's image of not paying vendors in a timely manner. Invoices would routinely sit in agencies for months before being sent to BAPS for payment. This was obvious to BAPS as we would runs statistics that showed that on the average invoices were in the agency between 58-67 days prior to being sent to BAPS for processing. BAPS would often get calls from vendors wanting to know the status of payments and BAPS did not know where the invoices were as the agency had complete control. The other issue in the old process was that one person could control the ordering, receipt and approval process thus providing an environment where fraud could occur.

Best practices in procurement and vendor payment rely upon basic internal controls. These controls require that:

- Individuals requisitioning and ordering goods and services should not also approve these transactions;
- Goods and services should not be ordered and received until all approvals have been obtained;
- Goods and services should be formally received in systems when they are actually delivered using appropriate receiving documents. Waiting for an invoice to enter receipts decreases the effectiveness of this basic control;
- Receipts are independently approved;
- Invoices are paid only upon acknowledgement of an approved receipt. Invoice payment is an independent process from receipt of goods and/or services.

The practices implemented with CITYDYNAMICS and CitiBuy are in compliance with the above best practices. They tightened up the flow of invoices and enforce basic internal control principles. Vendors are instructed to send all invoices to BAPS. They are instructed to include the City's Purchase Order number or Expenditure Authorization number on all invoices sent to the City of Baltimore. Including this information streamlines the payment process.

The scanning software is linked to Optical Character Recognition (OCR) software that interprets vendor invoices, collects certain key data (such as PO number, vendor, invoice number and amount) stores this data for later use in accounting processes once approved for payment. Upon verification of this information invoices are sent to a folder where they are either worked by BAPS staff (for CitiBuy and Contract Payment invoices) or they are electronically matched to an EA and

electronically forwarded to the designated agency employee responsible for entry and approval of receipt of goods and/or services and authorization for vendor payment.

For the process to work effectively agencies need to enter receipts into CitiBuy when the goods and services are delivered. In addition, agencies need to ensure that they are acting on invoices sent to them electronically in a timely manner.

The system was designed to eliminate the need for paper copies of invoices to be sent throughout the City and to centrally control invoices. All invoices are scanned within 24 hours of receipt in BAPS.

- Invoices can be viewed by agencies once the workflow process starts, meaning once an invoice is sent to an agency's folder they can see the invoice. There should not be a need to print the invoice.
- When BAPS receives the invoice from the vendor the invoice is entered into CitiBuy, approved for payment normally within one day of invoice entry, and payment sent to the vendor the next day.
- In the case of CitiBuy purchases, the agency will only see an electronic invoice when they have not entered receipts upon actual receipt of the goods and/or services or when there is insufficient amount left on the purchase order to pay the vendor.
  - If everything is in order when BAPS receives the invoice from the vendor, the invoice is entered into CitiBuy by BAPS;
  - Approved for payment normally within one day of invoice entry;
  - Payment sent to vendor the next day.
  - Entire process from receipt of invoice, scanning, verification and invoice entry and payment is completed in an average of twenty-two (22) days as long as agencies have entered receipts and there is sufficient funding:
    - When the agency has not completed receipt or there is insufficient funding the above process takes an average of fifty-one (51) days.
    - Overall average time to pay a CitiBuy invoice is twenty four (24) days.
- For small purchases using the Expenditure Authorization process:
  - After scanning and verification, invoices are electronically matched using the EA number from the invoice and sent to the agency designated approvers for receipt entry and final approval;
    - Separate individuals in the agency enter the receipt and approve the invoice for payment

- Once this process has been completed in the agency, the invoice is electronically returned to BAPS where one final review is performed and payment is scheduled, which normally occurs the next day.
- The entire expenditure authorization process can be completed in an hour if all agency personnel are available to approve the EA and invoice.
  - The average time to process an EA when all approvals and documents have been received is ten (10) days;
  - When all information has not been included on an invoice the time frame for payment averages seventy seven (77) days;
  - Overall average time to pay and EA invoice thirteen (13) days

Payments made to contractors for project managed by DPW and Transportation departments are only made upon authorization from the project manager in these organizations. This process is manual in nature although invoices ultimately end up in the CityDynamics system and the electronic filing cabinet.

It should be noted that the goal of the system was to implement electronic transaction processing. As a result of this certain best practices were implemented:

- The ability to print invoices is limited to those invoices that have gone through the process and have been paid.
- All agency personnel with access to CityDynamics can access the electronic filing cabinet, review and if necessary print invoices after payment.
- Allowing invoices to be printed prior to completion of the process could allow an opportunity for duplication of payments.

Using scanning and electronic workflow as designed in CityDynamics, management of BAPS knows where invoices are at all times. The application provides various reporting tools that can be used to develop invoice aging reports that can be used to determine if management actions are needed to move invoices and pay vendors:

- Reports showing invoices over 30 days old that are currently in employee folders are forwarded to these employees each week asking them to take action.
- If no action is taken then the report is sent to their managers.
- These reports are also used to develop indicators to assist management in improving business processes and monitoring results.

A significant benefit from implementing CityDynamics is that the City can now accept electronic invoices from vendors. Electronic invoicing improves overall payment timelines and in many cases can be used as a negotiation tool in getting better prices from vendors. BAPS used the data from the scanning process to identify a major issue with the volume of invoices from two major vendors,

Deer Park and Xerox. Deer Park was sending over 650 individual invoices, many with less than \$5.00 due, each month to the City for processing. Since the amount of work to receive the goods and enter the invoice in CitiBuy, is the same regardless of the size of the invoice, this was backing up the entire invoice payment process. Effective July 2009, working with Purchases and Deer Park management, we were able to develop an electronic process for bottled water purchases. This process has allowed Deer Park to be paid within a week of receiving their invoice and has helped the City's image of paying on time. We are currently working with Purchases and Xerox to implement a similar process for the over 800 individual Xerox invoices we receive each month. This new process is scheduled to be in place by the end of the calendar year.

One of the goals of BAPS management is to reach out to other vendors, especially high volume vendors, to offer electronic invoicing. The more electronic invoices we can process the more time we will have to address the invoices from vendors with less sophisticated accounting and billing systems thus improving our overall payment processing timeline.



Department of Finance  
**Bureau of Purchases**

# City Council Hearing

Resolution 08-0076R September 24, 2009

**Joseph D. Mazza**  
Assistant City Purchasing Agent  
Acting City Purchasing Agent

- The Bureau of Purchases shares the view that employees should not have to wait extended periods of time to process and receive their supplies and equipment.
- To that end, the bureau has undertaken several initiatives since July 2007 to reduce requisition processing time.
  - We put in place a modern automated purchasing system called BuySpeed Online, referred to locally as CitiBuy.
  - We reorganized the bureau to focus on our customers by assigning buyers to specific agencies, rather than to a type of product or service.
  - We set performance standards for ourselves and made service commitments to our customers.
  - We established an operations unit within the bureau to quickly screen incoming requisitions.
  - We implemented G2B punch-out capability.
  - We became a data-driven organization by aggressively using management reports generated from CitiBuy data.

- These are the service commitments we made to our customers.

<i>Release</i>	<i>Quote</i>	<i>Informal</i>	<i>Formal</i>
Purchase off an existing Master Blanket	Expenditure of \$5,000 or Less	Expenditure of \$5,000 to \$25,000	Expenditure of Over \$25,000
Average of 7 Days	Average of 14 Days	Average of 45 Days	Average of 90 Days

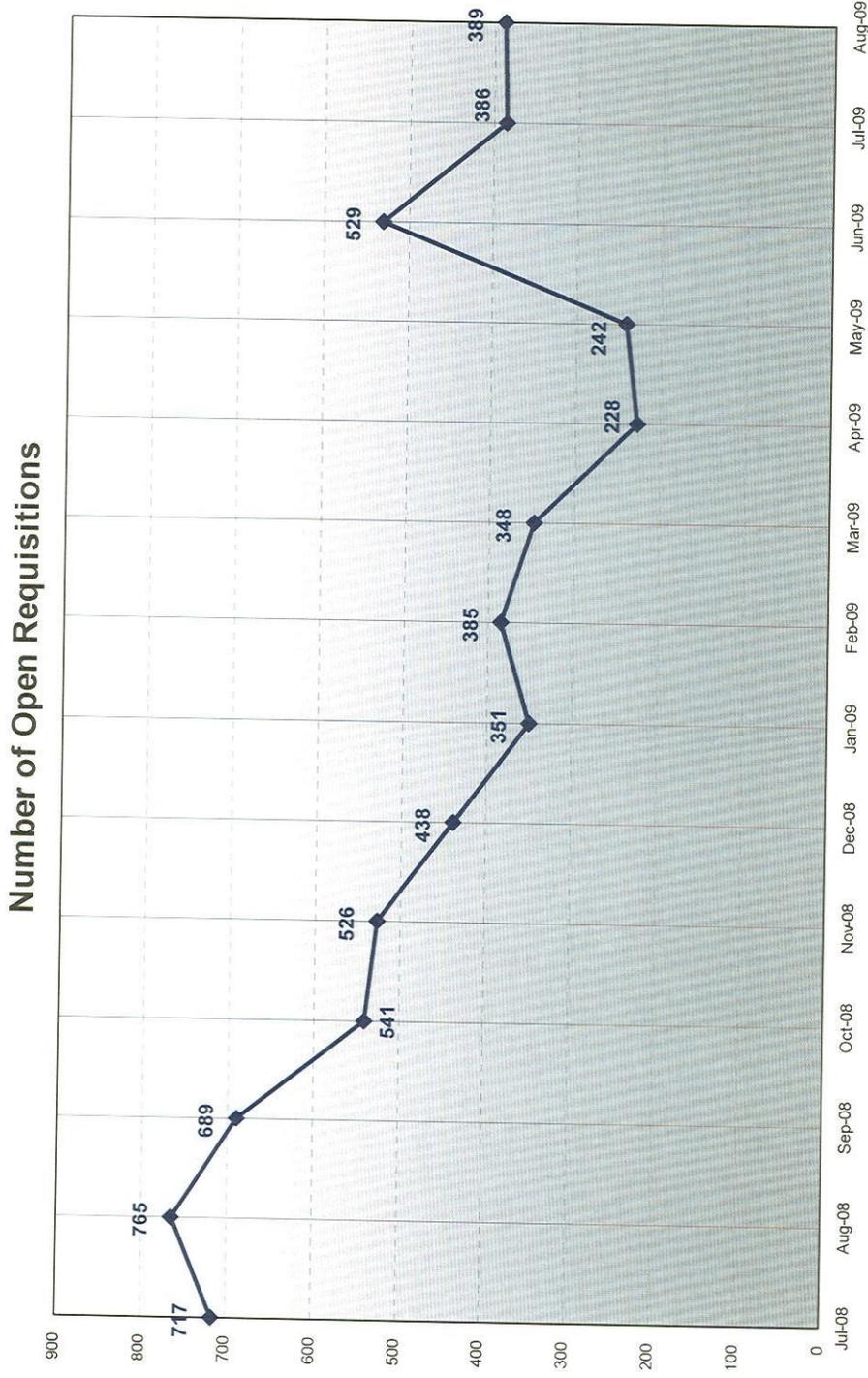
- We also set goals for ourselves not only to meet these average turnaround times, but to complete the large majority of our requisitions at or below the average time commitment.

<i>Release</i>	<i>Quote</i>	<i>Informal</i>	<i>Formal</i>
90% within 7 Days	90% within 14 Days	70% within 45 Days	70% within 90 Days

- We are pleased to report that for five months in a row we have met both of these goals.

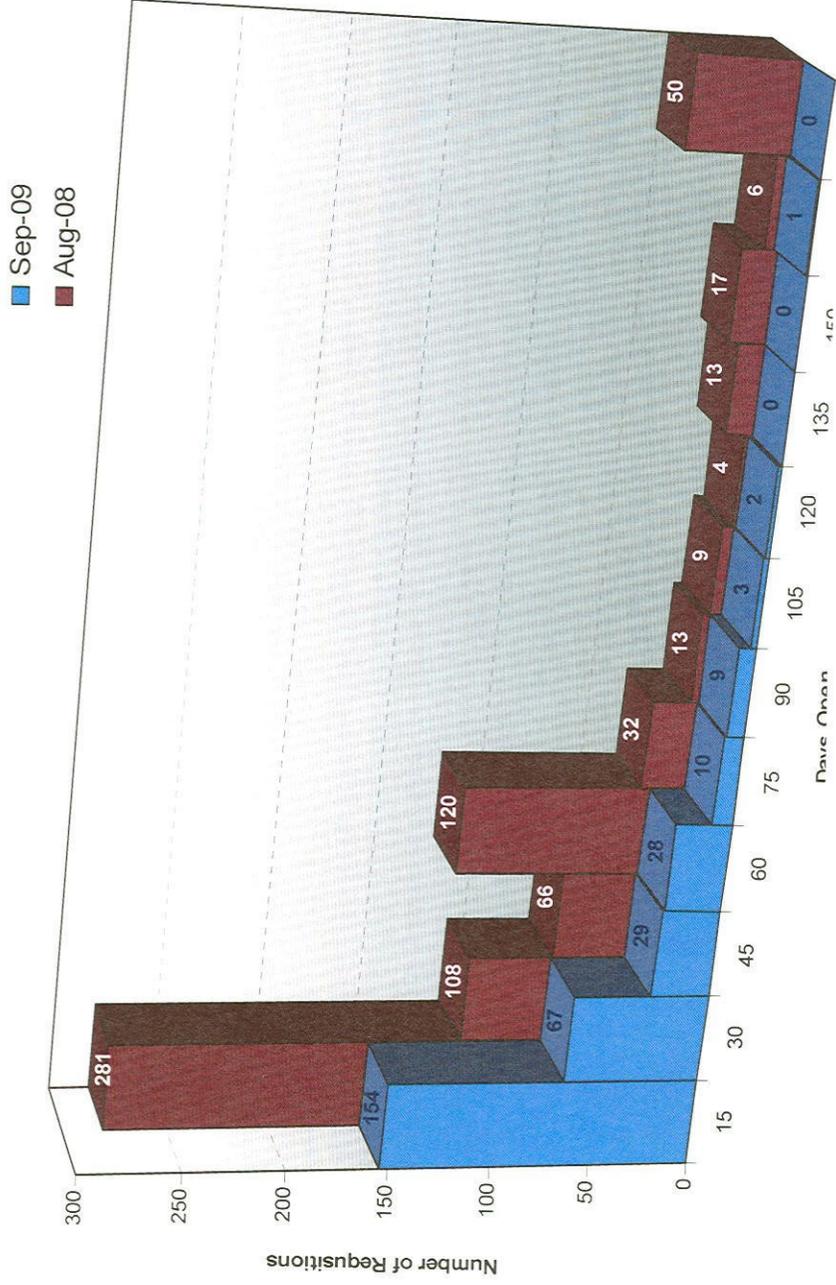
	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09
Release	Average Turnaround Time (days)	3.2	2.6	3.7	2.5	2.4	3.0	2.5
	Goal	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Quote	Track	On						
	% of Items Meeting Commitment	91.6%	94.3%	89.5%	95.7%	93.5%	91.7%	94.5%
Informal	Goal	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
	Track	On	On	Off	On	On	On	On
Formal	Average Turnaround Time (days)	5.3	4.7	6.0	5.5	4.8	5.0	3.6
	Goal	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Informal	Track	On						
	% of Items Meeting Commitment	90.8%	96.1%	92.0%	96.3%	95.8%	96.2%	98.9%
Formal	Goal	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
	Track	On						
Formal	Average Turnaround Time (days)	51.2	52.8	56.9	37.3	37.0	29.7	29.1
	Goal	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Informal	Track	Off	Off	Off	On	On	On	On
	% of Items Meeting Commitment	54.9%	55.0%	65.3%	78.3%	78.3%	88.7%	85.7%
Formal	Goal	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
	Track	Off	Off	Off	On	On	On	On
Formal	Average Turnaround Time (days)	64.7	102.8	96.1	79.1	34.3	44.8	38.2
	Goal	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Formal	Track	On	Off	Off	On	On	On	On
	% of Items Meeting Commitment	75.0%	53.3%	61.5%	70.0%	95.7%	76.8%	95.7%
Formal	Goal	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
	Track	On	Off	Off	On	On	On	On

- We have reduced our backlog of requisitions to be processed by 46% from 717 as of July 2008 to a more manageable level of 389 at the end of August 2009.\*



- We have also reduced the age distribution of our open requisitions, with only 6 open for more than 90 days as of **September 2009**. This is compared to our earliest data set from **August 2008**, when we had many more open requisitions, including 99 older than 90 days.

Open Requisitions Citywide



- I would like to emphasize the Bureau of Purchases' commitment to consistently deliver the right good or service, at the right time, to the right place, and at the right price.
- This concludes our formal presentation.
- We would be happy to answer any questions at this time.