

Evolution of the Data Center

Carole Post

New York City Chief Information Officer

Albany, NY
June 9, 2011

1. Shared Services in a Federated Enterprise
2. IT Infrastructure Consolidation
3. Enterprise Virtualization
4. The Cloud

DoITT Overview

DoITT
is

1 Modernizing

Implementing state-of-the-art technology to improve services for New Yorkers

2 Unlocking

Making NYC government more transparent & accountable to New Yorkers

3 Innovating

Employing innovative tools, methods and relationships to empower New Yorkers

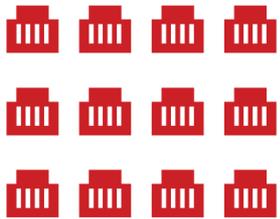
DoITT is...

- 1200+ employees, across 3 boroughs
- Operating Budget = \$360+ million
- Capital Plan = Estimated \$1 billion
- Revenue = \$120 million

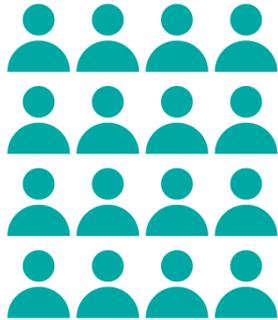
**DoITT
today**

- IT Utility
- Mainframe Systems
- Citywide IT Help Desk
- Network Provider
- Network Security
- Programmers
- Technical Resource
- Webmasters
- Purchasing Agent
- Consultant
- Research & Development
- Partnerships/Community Engagement
- Emergency Responder
- Call Center Operator
- Pay Phone Enforcement
- Cable Franchisor

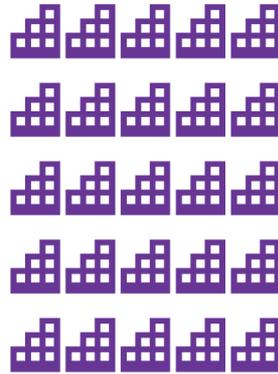
New York City is...



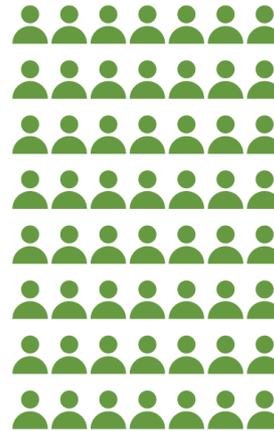
MORE THAN 120
Government Offices



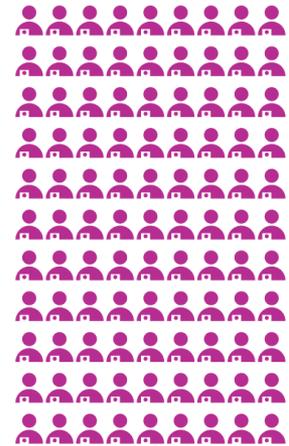
350,000
City Employees



230,000
Businesses



8 MILLION
Residents

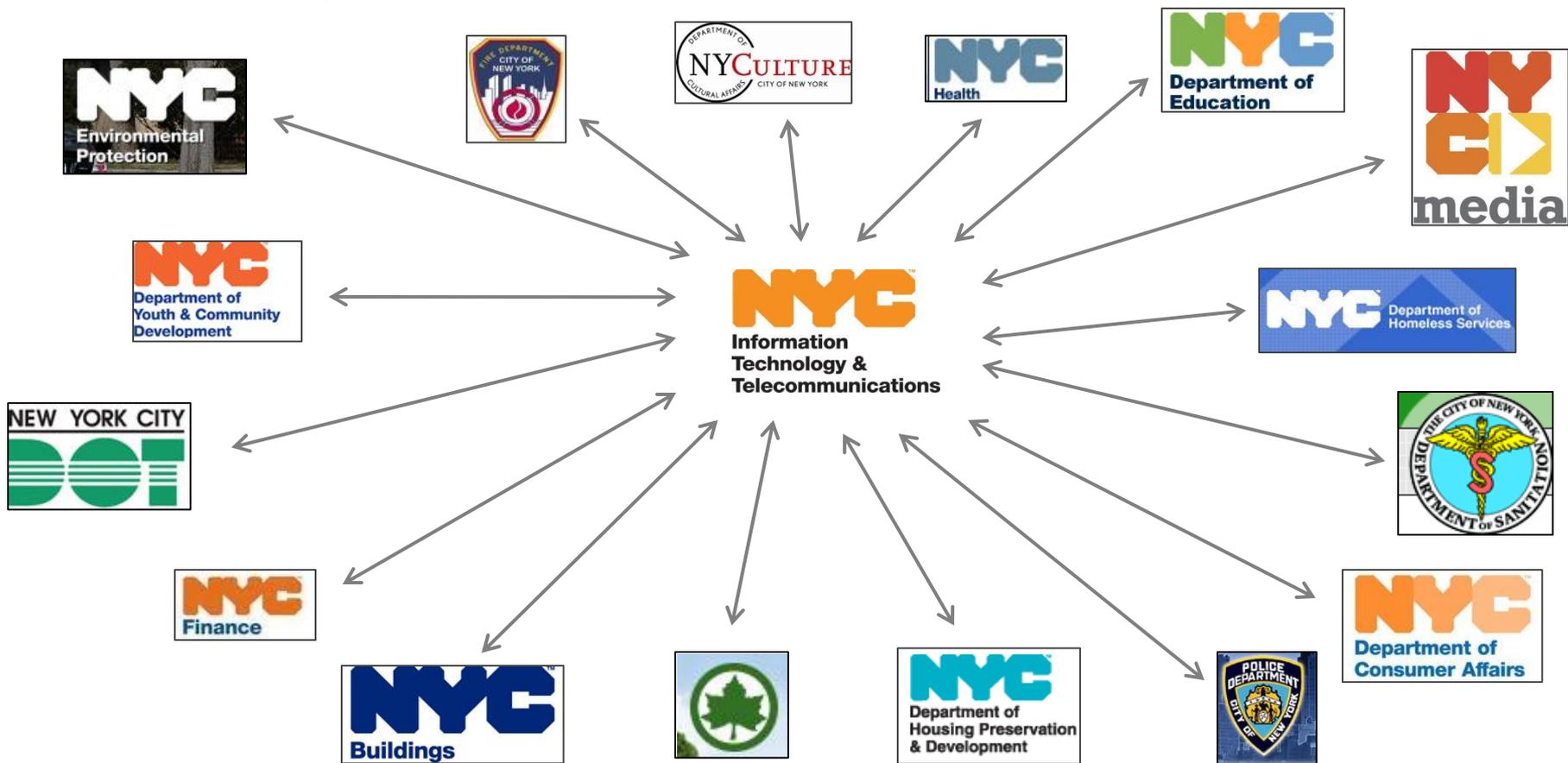


48 MILLION
Visitors

1. Shared Services in a Federated Enterprise

IT Shared Services in a Federated Enterprise

DoITT – NYC’s IT service provider – serves 45 Mayoral Agencies and a wealth of additional City boards, offices and commissions.



How are we getting there?

- Efficiency Report: *A Plan to Consolidate and Modernize Back-Office Operations*

1. Real Estate



2. Payments and Revenue



3. Fleet Operations



4. Human Resources



5. **Information Technology**



Where we arrived.

NYC Simplicity

NYC Simplicity is the City's plan to make government more customer-focused, innovative, and efficient.

CUSTOMER-FOCUSED

Making City government easier to navigate.

[Learn more](#)

INNOVATIVE

Introducing new ideas and technology into City operations.

[Learn more](#)

EFFICIENT

Streamlining operations and using new technology and data to guide decision-making.

[Learn more](#)

How do we find balance?

Centralized



Vs

Federated



Benefits:

- Unified management, maintenance and standards
- Economies of scale
- Solutions developed once and shared by many

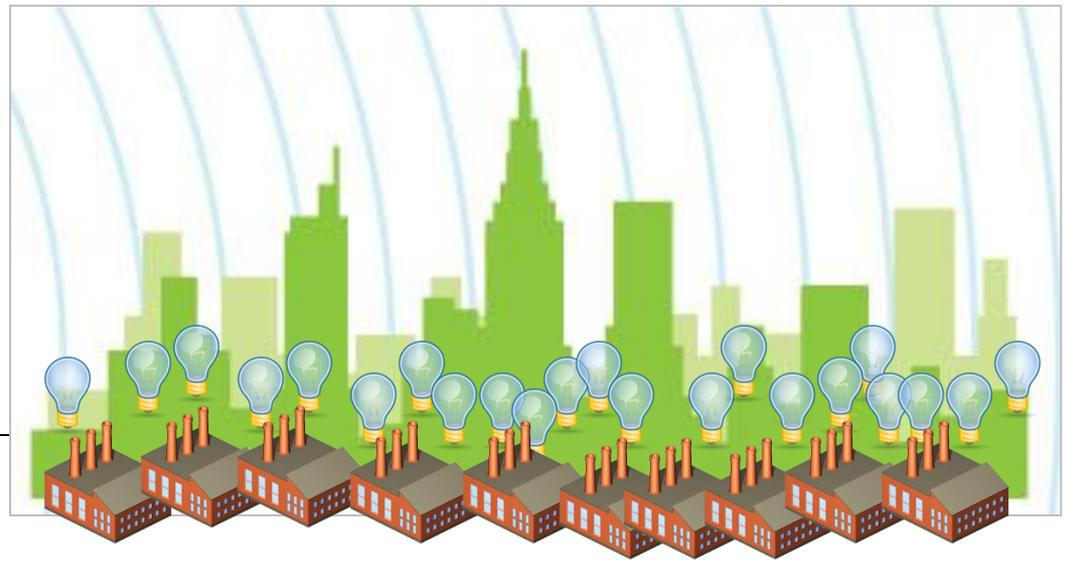
Benefits:

- Nimbleness and flexibility
- Individualized and customized solutions
- Autonomy for agency leadership

Not every house in NYC needs its own power source...

We are a connected city.

← **Central Grid**
vs
Individual Power Sources
↓



IT LEADERSHIP

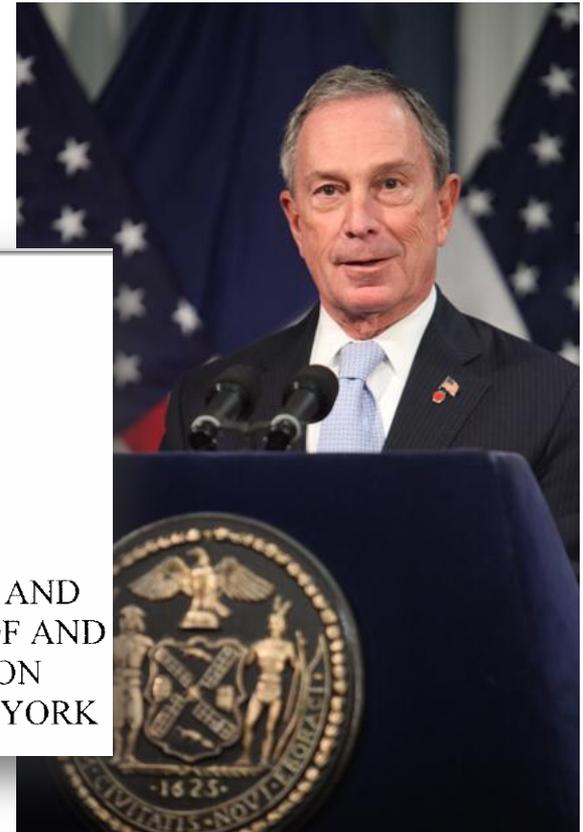


THE CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK, N.Y. 10007

EXECUTIVE ORDER No. 140

October 20, 2010

AUTHORIZING THE DEPARTMENT OF INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS TO CONSOLIDATE THE INFRASTRUCTURE OF AND ESTABLISH COORDINATED CITYWIDE POLICIES FOR INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS FOR THE CITY OF NEW YORK



Executive Order

- IT is currently managed in a decentralized manner across dozens of agencies
- A consolidated and coordinated approach will allow the City to:
 - Standardize platforms
 - Improve service delivery
 - Reduce IT costs
 - Enable agencies to focus on their core missions



Strategies for balance: EO 140 Overview

1. Provides for Infrastructure consolidation including deadlines for e-mail hosting (Dec 2010) and help desk (June 2011)
2. Provides for adoption of IT policies and standards that have Citywide implications
3. Retains application development with agencies with review process to mitigate redundancies and encourage re-use of existing tools
4. Requires performance reporting and metrics by DoITT for hosted services
5. Provides for two governing bodies:
 - Strategic Governance Board – Deputy Mayors and oversights
 - Technology Governance Board – Agency IT and business reps

Sticks

Carrots

Citywide IT Policies & Standards being explored by EO Governance Boards:

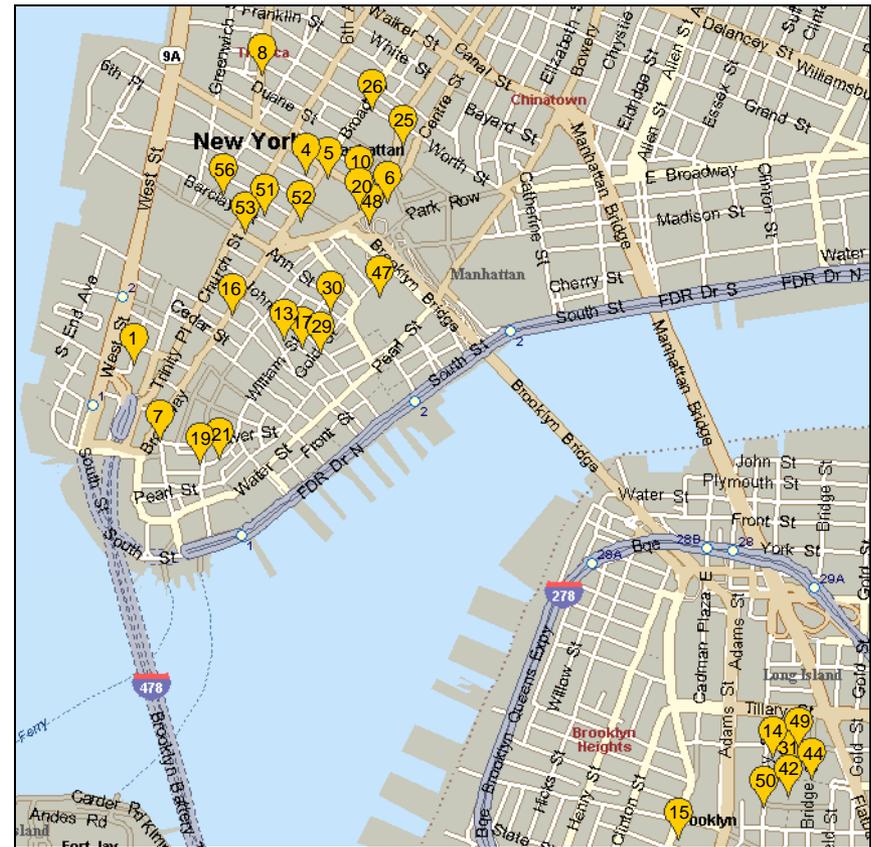
1. Security Policy
2. Architecture Platform Standards
3. Citywide Contracts
4. Mobile Strategy
5. GIS
6. Service Level Agreements

2. IT Infrastructure Consolidation

CITIServ: IT INFRASTRUCTURE CONSOLIDATION

Today...

- Fragmented across 83 City entities
- More than 60 unique data centers of varying sizes and conditions
- Suboptimal disaster recovery, security planning, and 24/7 support



Why we need CITIServ...



Before

After



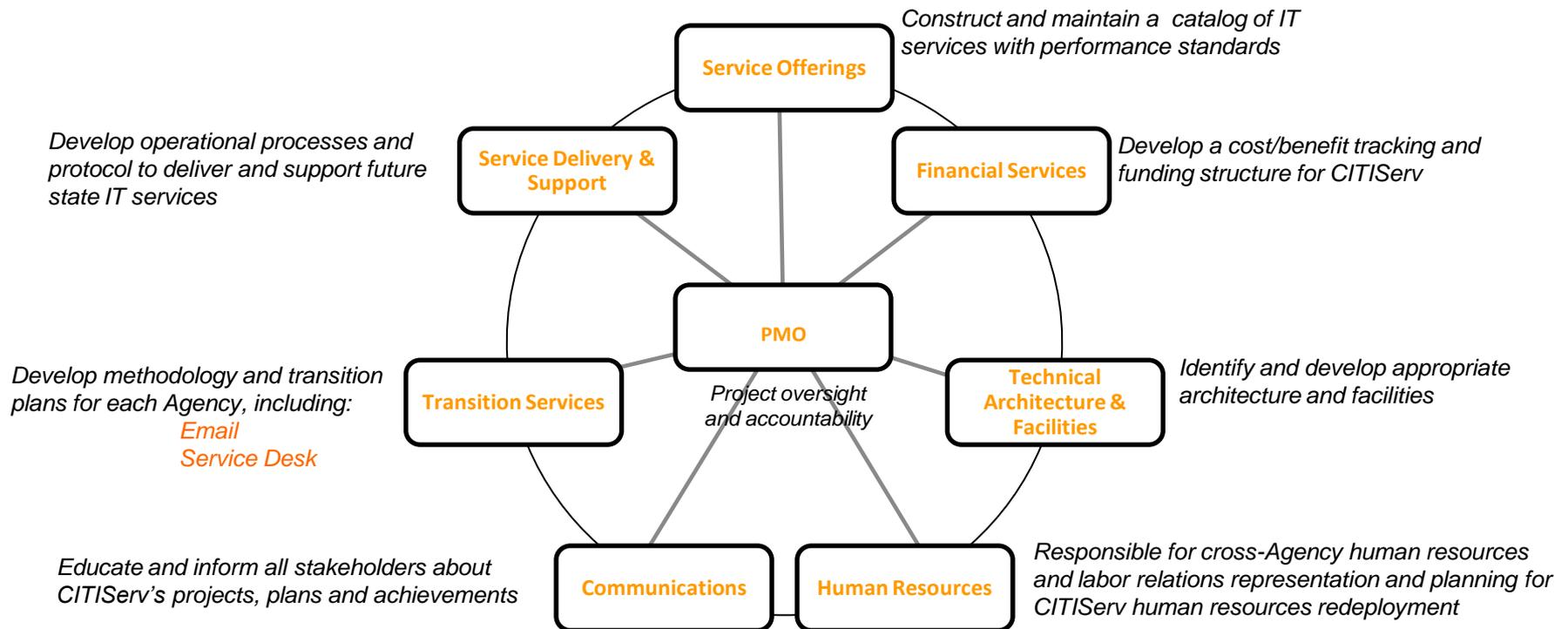
- Unified data center operations and disaster recovery facilities
- Improved space rationalization

- Consistent levels of service
- Decreased carbon footprint and green IT

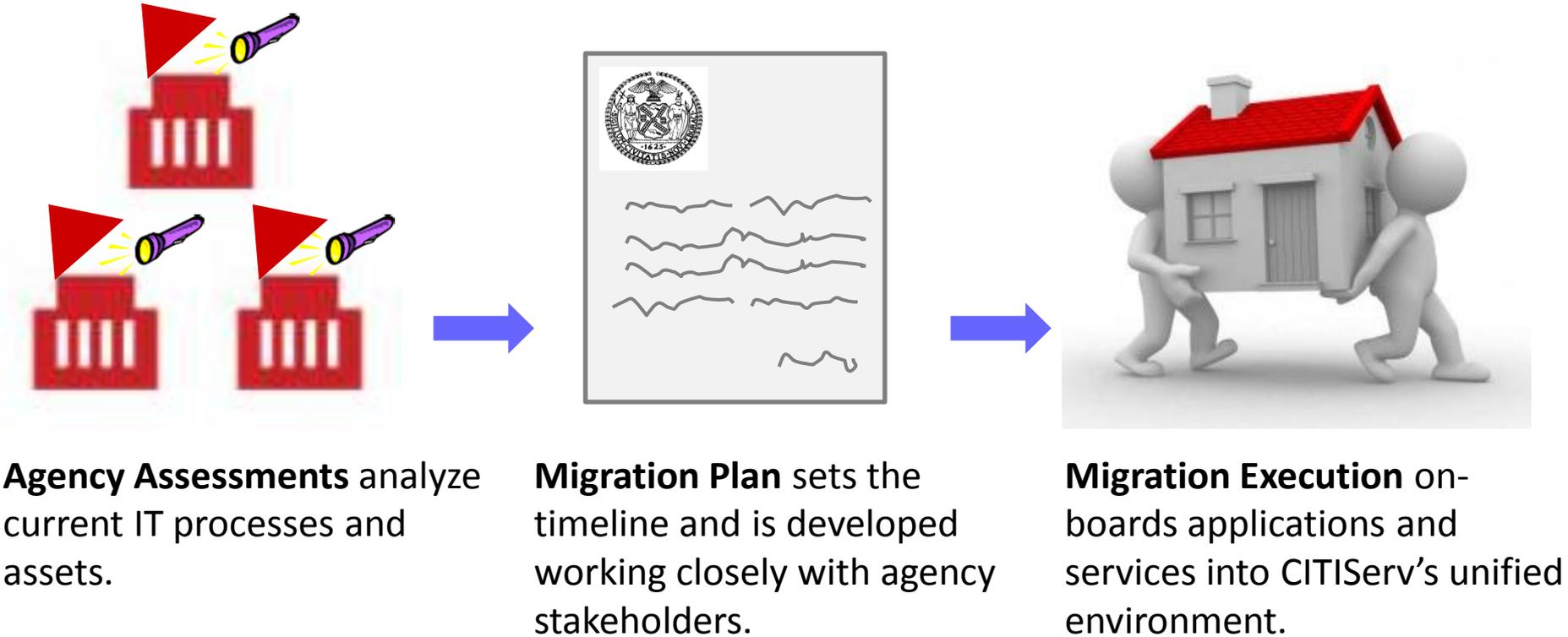
CITIServ Program Governance

Objective:

- Ensure timely and effective oversight for each unique project workstream
- Install a governance structure emphasizing seven key workstreams with several oversight entities led by a single point of accountability



The CITIServ Process



End State for IT Shared Services

1. *Provisioning IT Services*

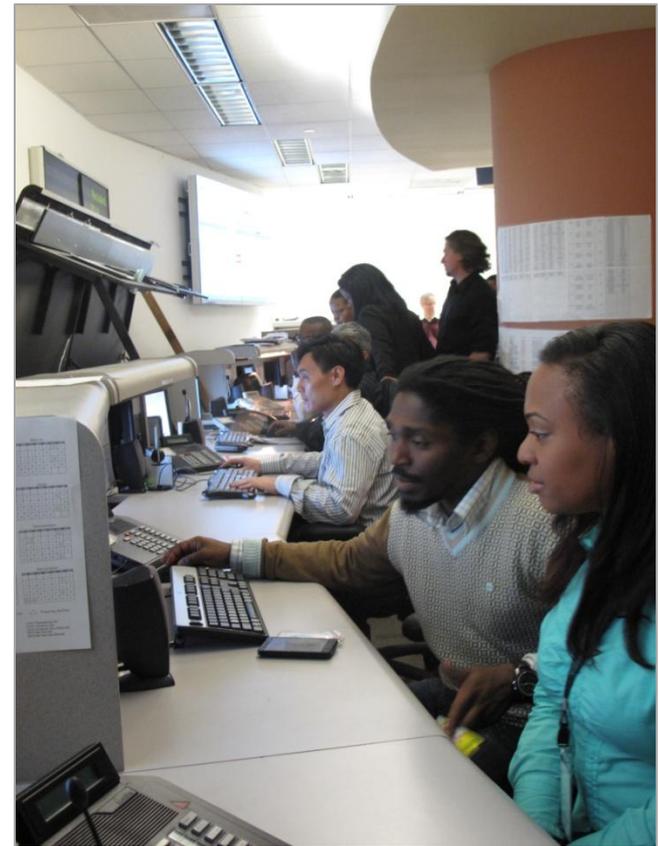
Comprehensive, electronic service catalog with request services and tracking

2. *IT Help Desk Services*

Tier 1 support, 24x7, using state-of-the-art ticketing and tracking tools

3. *Performance Measures and Metrics*

Service Level Agreements (SLA's), where appropriate, plus visibility into performance, transparency and predictability using modern performance reporting tools

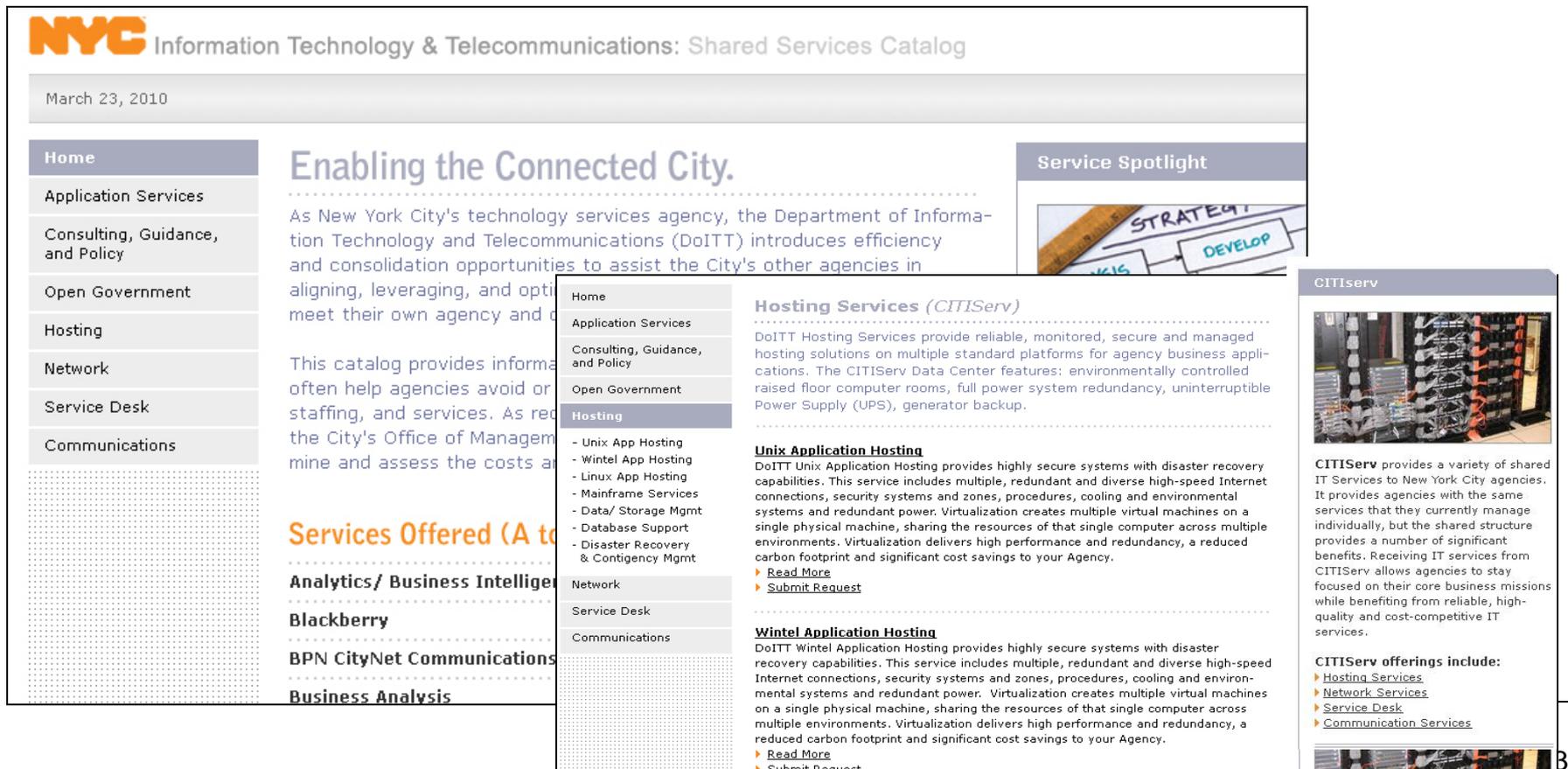


NYC's Citywide Service Desk

1. Provisioning IT Services...

SERVICE CATALOG

A clear listing of enterprise wide services with a clear access point.



NYC Information Technology & Telecommunications: Shared Services Catalog

March 23, 2010

Home

- Application Services
- Consulting, Guidance, and Policy
- Open Government
- Hosting
- Network
- Service Desk
- Communications

Enabling the Connected City.

As New York City's technology services agency, the Department of Information Technology and Telecommunications (DoITT) introduces efficiency and consolidation opportunities to assist the City's other agencies in aligning, leveraging, and optimizing their own agency and data center resources.

This catalog provides information that often help agencies avoid or reduce staffing, and services. As required by the City's Office of Management and Budget, we mine and assess the costs associated with each service.

Services Offered (A to Z)

- Analytics/ Business Intelligence
- Blackberry
- BPN CityNet Communications
- Business Analysis

Service Spotlight



Hosting Services (CITIServ)

DoITT Hosting Services provide reliable, monitored, secure and managed hosting solutions on multiple standard platforms for agency business applications. The CITIServ Data Center features: environmentally controlled raised floor computer rooms, full power system redundancy, uninterruptible Power Supply (UPS), generator backup.

Unix Application Hosting

DoITT Unix Application Hosting provides highly secure systems with disaster recovery capabilities. This service includes multiple, redundant and diverse high-speed Internet connections, security systems and zones, procedures, cooling and environmental systems and redundant power. Virtualization creates multiple virtual machines on a single physical machine, sharing the resources of that single computer across multiple environments. Virtualization delivers high performance and redundancy, a reduced carbon footprint and significant cost savings to your Agency.

[Read More](#)
[Submit Request](#)

Wintel Application Hosting

DoITT Wintel Application Hosting provides highly secure systems with disaster recovery capabilities. This service includes multiple, redundant and diverse high-speed Internet connections, security systems and zones, procedures, cooling and environmental systems and redundant power. Virtualization creates multiple virtual machines on a single physical machine, sharing the resources of that single computer across multiple environments. Virtualization delivers high performance and redundancy, a reduced carbon footprint and significant cost savings to your Agency.

[Read More](#)
[Submit Request](#)

CITIServ



CITIServ provides a variety of shared IT Services to New York City agencies. It provides agencies with the same services that they currently manage individually, but the shared structure provides a number of significant benefits. Receiving IT services from CITIServ allows agencies to stay focused on their core business missions while benefiting from reliable, high-quality and cost-competitive IT services.

CITIServ offerings include:

- [Hosting Services](#)
- [Network Services](#)
- [Service Desk](#)
- [Communication Services](#)

2. IT Help Desk Services: Shared Services Support, Ticketing and Tracking System

Remedy
Enterprise Service Management ? Help

Quick Links

- [Create Request](#)
- [Search for Request](#)
- [Search Task](#)
- [Track Assets](#)

Other

Support Console

The City of New York

Assigned Requests Show All

Request ID	Summary	Re	Stal	Frio	Gro	Ass
HD00257257	Please reinstate BIS User ID and Password for BIS Test Environment	Ich	Ass	Lo	DO	DO
HD00257245	Request for a Domain Admin Account	dy	Ass	Lo	DO	DO
HD00256754	DDE School Zone Finder website error See Attached	egr	Ass	Lo	DO	DO
HD00253739	Add server 161.185.1.38 as an asset to Mainframe DBA Team	tcoll	Woj	Lo	DO	tcoll

Console View Group

Flashboards Refresh

All Open Requests by Priority

Escalated Cases

Escalated Cases By Group By Category

Last Refresh 4/24/2009 8:29:23 AM

Remedy

Help Desk Case

The City of New York

Summary* Remedy - Troubleshooting Case ID+ HD00351461

Description* REMEDY LOGIN

CTI Search+

Category* Application

Type* Client/Server

Item* Remedy

Assigned Agency* DOITT

Assigned Group* DOITT:Remedy Admin

Individual+ Anatashia Simon

Case Type* Incident

Status* Resolved

Pending

Closure Code

Priority* Low

Request Impact Low

Requester Information | Activity | Duplicates | Solutions | Tasks | Attachments | Problem Management | Notification List | History | Services Impacted

Current Case Solution

Summary corrected user profile

Details corrected user profile

Root Cause

Resolution Method

[Propose Solution](#) [List Possible Solutions](#)

Save | Print Case | Reports | Bulletin Board | Reminders

Create Change | Close

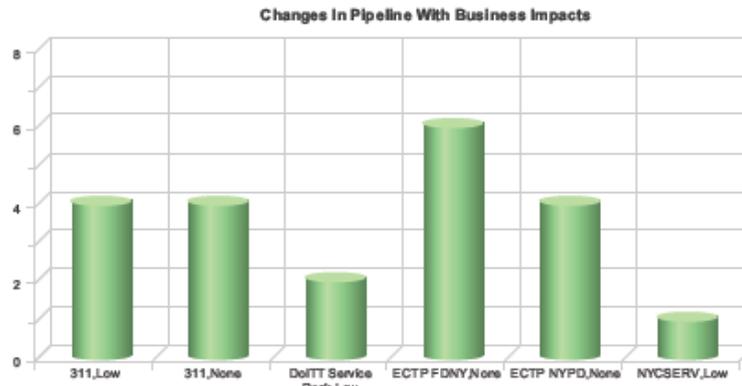
[Help](#)

3. Performance Measures and Metrics: User Transparency

ILLUSTRATIVE

Changes Scheduled Current Week

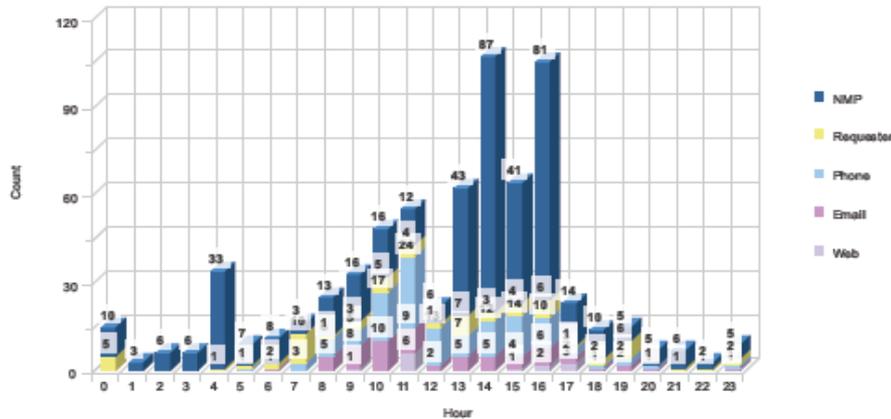
The following graph illustrates pending changes (next 7 days) with a high impact to a business or agency. The following table identifies the specific change and responsible group.



Business Impact	Changes	Business Risk
311	4	Low
	4	None
DoITT Service Desk	2	Low
ECTP FDNY	6	None
ECTP NYPD	4	None
NYCSEV	1	Low

Incident Creation By Hour - Yesterday

The following charts illustrate the number of incidents created via the Service Desk and supporting automatic discovery products on a per hour basis.



Shared Contracts...

ENTERPRISE LICENSING AGREEMENTS

THE WALL STREET JOURNAL. NEW YORK

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TOP STORIES IN New York

Kosher Inspectors Eliminated

NEW YORK | OCTOBER 21, 2010

City Sets Deal With Microsoft

New York Sees \$50 Million in Savings

Article | Stock Quotes | Comments

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By JOSEPH DE AVILA

Microsoft Corp. will provide New York City with an array of computer services under a five-year agreement announced Wednesday, a coup for the tech giant in its race against Google Inc. for municipal contracts.

The agreement, unveiled at a City Hall news conference by Microsoft CEO Steve Ballmer and Mayor Michael Bloomberg, will consolidate all previous agency-by-agency service arrangements with Microsoft into a single citywide contract. The agreement is expected to save the city \$50 million over five years.



The New York Times Business Day
Technology

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citi Earn cash whatever with the

Microsoft and New York in Software Deal

By ASHLEE VANCE
Published: October 20, 2010

New York City has put the squeeze on [Microsoft](#), negotiating a bulk software purchase that should lower technology costs for the city and give government workers access to more modern applications.



Enlarge This Image

Instead of having dozens of agencies buy business software from Microsoft, New York has set up a citywide, 100,000-person deal that it says will save \$50 million over five years. Mayor [Michael R. Bloomberg](#) and [Steven A. Ballmer](#), Microsoft's chief executive, announced the agreement Wednesday morning at City Hall, hailing it as a "first of its kind" arrangement with a value of about \$20 million a year.

"I am sorry if you are looking for a story of

The previous arrangement "was complicated, cumbersome and needless to say not very cost effective," said Mr. Bloomberg. "The economic downturn forces governments and companies to look and see whether what they've been doing is really necessary, and to



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insider

a daily newsletter on government action of importance to business.

Today's News Tuesday, August 31, 2010

Catching Greg Ball

The state GOP has forsaken Republican Assemblyman Greg Ball in his bid to replace state Sen. Vincent Leibell, who is retiring. But only recently has it begun to put money behind its designated candidate in the primary. Since January, Ball has spent more than \$300,000 campaigning for the state Senate seat. Mary Beth Murphy, a Town of Somers supervisor in Westchester, spent a mere \$25,000 in the same period. It was only in mid-July that state Republicans began to close the spending gap. They've invested \$55,922 in Murphy's campaign in the past month. With two weeks before the primary, Murphy has \$34,000 in cash compared with Ball's \$50,000.

Mayor to his bureaucracy: Just DoIT

The data-driven, technology-focused Bloomberg administration has slowly raised the profile and prominence of the city's Department of Information Technology and Telecommunications.

First the mayor created the agency's signature program, 311; now, through an executive order he plans to sign after Labor Day, recalcitrant agencies will be required to give up control of their spending on computers and other information technology.

The executive order formalizes DoITT's power to manage the city's IT. Just as the Office of Management and Budget controls the allocation of city money, DoITT will now control the allocation of the city's technology resources.

3. Enterprise Virtualization

vmware Contract Case Study



- In 2008, DoITT negotiated a citywide license agreement with vmware, which allows agencies to request licenses from a **shared pool**.
 - 5 year citywide projection = 2,200 licenses
 - 2 year actual allocation = 3,600 licenses
- The contract includes support and professional services.
- Agency usage benefits CITIServ program for consolidation.

Virtualization Benefits in NYC

Cost Savings

- The usage by agencies has far exceeded expectations and has resulted in \$18 million in savings/cost avoidance over 24 months and reduced the need for hardware procurement.

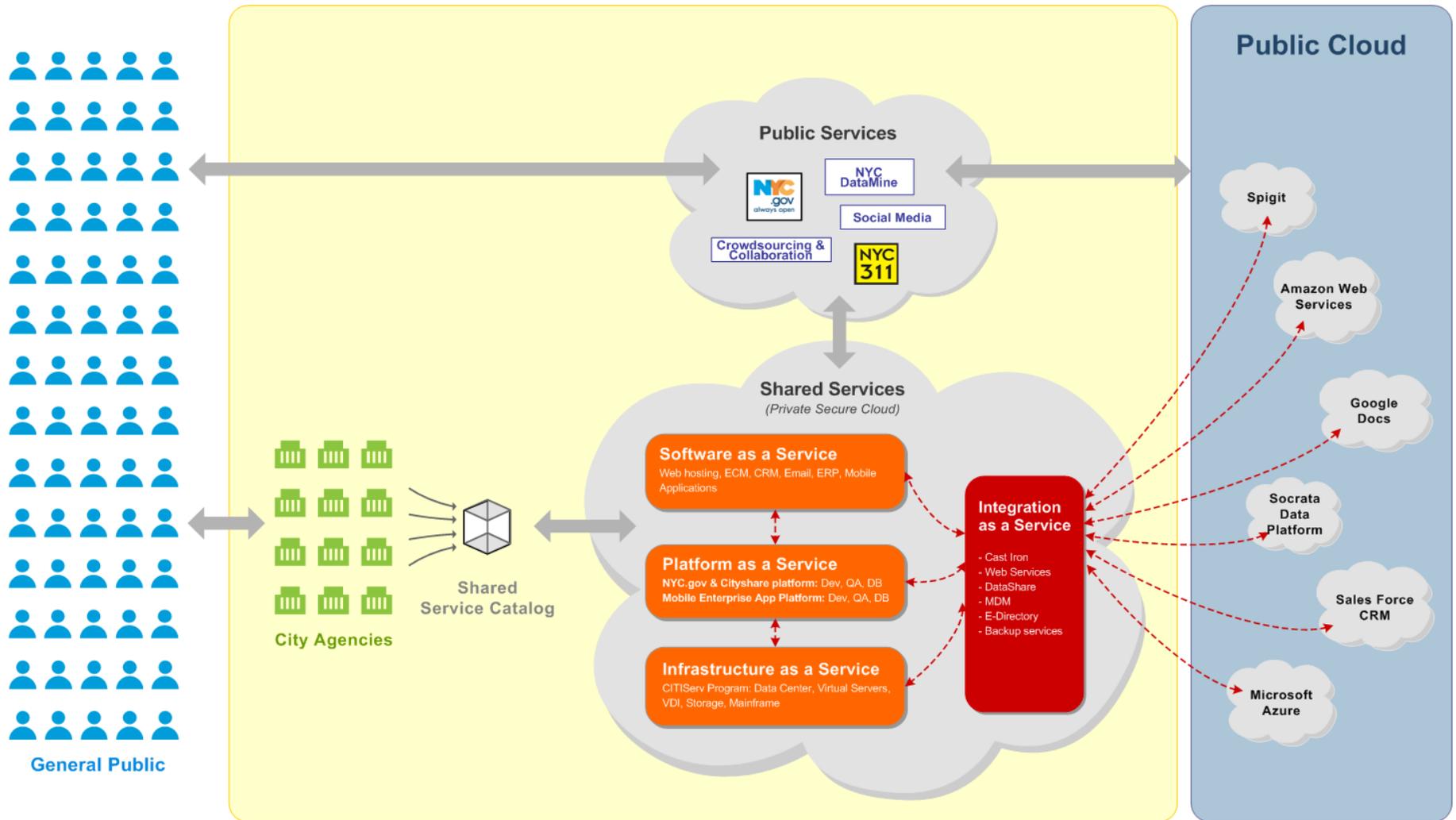
Green Savings

- The computing power of NYC's new state-of-the-art data center is as robust as previous facilities, but uses only 1/3 of the space, power and cooling needs.



4. The Cloud

Cloud Scenario



Common Goals... Common Solutions



NYC Information Technology & Telecommunications: www.nyc.gov/doitt

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Technology & Telecommunications](http://www.facebook.com/NYC Information Technology & Telecommunications)



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