

AGENDA

JOINT INFORMATION TECHNOLOGY AND FINANCE COMMITTEE

Meeting Date: September 12, 2019

Time: 10:00 AM

Location: 125 Worth Street, Room 532

BOARD OF DIRECTORS

CALL TO ORDER

MR. PAGÁN

ADOPTION OF MINUTES

June 13, 2019

CHIEF INFORMATION OFFICER REPORT

**MR. LYNCH
DR. MENDEZ**

ACTION ITEM #1– SUNGARD

**MR. LYNCH
MR. LUTZ**

Authorizing the New York City Health and Hospitals Corporation (the “System”) to execute contract documents as necessary to increase funding for and extend the existing contract with SunGard Availability Services (SunGard) for an alternate data center for disaster recovery, business continuity and associated professional services for a total of \$10,100,000 (which includes \$217,172 contingency) for a three-year term.

ACTION ITEM #2 – CISCO

**MR. LYNCH
MR. LUTZ
MS. DEHART**

Authorizing the New York City Health and Hospitals Corporation (the “System”) to enter into a contract with Dimension Data to provide Cisco SmartNet maintenance to support the inventory of Cisco hardware and software licenses deployed across the System for a total of \$48,906,495, for the period of October 1, 2019 through June 30, 2022; and

Authorizing the System to borrow \$48,906,495.65 from Key Government Finance, Inc. (“Lender”) over a period matching the Dimension Data agreement term with interest at approximately 4.2% with the final rate to be fixed prior to funding based on changes in market rates and to execute a loan agreement, note, security agreement and such other customary documents as are necessary to complete the financing transaction.

OLD BUSINESS

NEW BUSINESS

ADJOURNMENT

NEW YORK CITY HEALTH + HOSPITALS

MINUTES

Meeting Date: June 13, 2019

INFORMATION TECHNOLOGY COMMITTEE

ATTENDEES

COMMITTEE MEMBERS

José Pagán , Chair

Barbara Lowe

Matt Siegler (representing Dr. Mitchell Katz in a voting capacity)

NYC HEALTH + HOSPITALS CENTRAL OFFICE STAFF:

Paul Albertson, Vice President, Supply Chain and Materials Management

Soma Bhaduri, Senior Director, Information Technology

Frederick Corino, Vice President, Finance

Kenra Ford, Senior Assistant Vice President, Office of Medical & Professional Affairs

Colicia Hercules, Chief of Staff, Office of the Chairperson

Barbara Lederman, Assistant Vice President, Information Technology

Jeffrey Lutz, Assistant Vice President, Infrastructure, Information Technology

Kevin Lynch, Senior Vice President, Chief Information Officer

Kim Mendez, Senior Vice President, Chief Health Informatics Officer

Barry Schechter, Assistant Director, Information Technology

Diana Sokolowski, Senior Director, Information Technology

INFORMATION TECHNOLOGY COMMITTEE

Tuesday, June 13, 2019

José Pagán called the meeting to order at 10:00 AM. The minutes of the April 9, 2019 meeting were adopted.

Kevin Lynch thanked the Committee and presented his CIO Report. He started with a list of Health Information Prioritization Committee top eight projects: H₂O (Epic) + Cerner Lab enterprise implementation, Enterprise Resource Planning (ERP / Evolve), Finance, Supply Chain, HR, Payroll, TimeCollection, Nurse Scheduling, Enterprise Radiology PACS Imaging, 340B Pharmacy Split billing, Enterprise Cardiac Monitoring, Capital Restructuring Financing Program (CRFP), Population Health, Digital Healthcare Network, Contact Center, Correctional Health Services EMR project, and Post Acute Care EMR project. He said his report would focus on five of these.

Mr. Lynch showed the H₂O deployment schedule. He said in 43 days, the next deployment would take place at NYC Health + Hospitals/Metropolitan, Lincoln, Belvis, Morrisania, Jacobi, North Central Bronx, and other associated Gotham clinics. We will start training 8000 end-users at these sites this coming Monday. We feel very confident in meeting this challenge thanks to our veteran Super Users and some outside at-the-elbow support.

Mr. Lynch said the next H₂O rollout after this is scheduled to take place at Kings County and associated Gotham sites was pushed from October to December 2019 due to an upgrade taking place in 2020. It makes more sense to teach users the new system rather than have to retrain them. This will allow us to upgrade easier. We are using the production (standard) version of Epic and by doing the rollout this way, it prevents additional, unnecessary work for our IT teams. We included all the site Chief Executive Officers in our discussions.

Matt Siegler said that in his capacity on the Finance Committee, they looked into the effect of the Epic implementation. Compared to many other systems that went live with Epic, we doing much better than the average.

Mr. Lynch said we have thousands of individuals using the system every day for our 4.6 million unique patients. It is working very well for users, patients, and the system. For example, for our Revenue Cycle go-live in October 2018 (Coney Island, Woodhull, Queens, and Elmhurst), our charge capture for these sites was up 20%, resulting in \$15 million in charges.

Mr. Pagán asked if this is an example of us using Epic to its full capacity.

Mr. Lynch said there is a balance. Previously we had 11 different systems. Now, we will have one. But we have to make sure they are well vetted. We use the foundation (standard) version and customization that works for all the sites. It is part of our evolution and we are learning how to use it best.

Kim Mendez said there is a prioritization process. We identify what needs the most attention and focus on those.

Mr. Lynch spoke to the Enterprise Resource Planning (ERP) Update. He said Clairvia, the nurse scheduling system, is now live at Kings County, East New York, Sea View, McKinney, Coney Island, Woodhull, and Cumberland. It will go live at Elmhurst and Queens on June 23, with subsequent go-lives after that. We are getting great feedback from those using it.

Ms. Mendez said by end of 2019 we will be off our legacy systems and using only Clairvia. There will be training using Super Users and others. This is allied with PeopleSoft.

Barbara Lowe asked if it is dynamic. Can it tell users patient information (such as severity) in real time?

Ms. Mendez said it has the capability to view patient acuity. Right now, we are focusing on scheduling. That is based on documentation being input.

Mr. Lynch said the Payroll/eTime go-live is on track for July 5 and the eTime Capture (which will eliminate paper sheets) will be implemented in spring 2020.

Mr. Lynch spoke to Enterprise Radiology Integration Initiative Time Line. He said Queens went live on June 10 and Elmhurst (the last site to get it) will get it in September 2019.

Mr. Lynch said the Post Acute Care EMR (electronic medical record) Update was going on. He said Gouverneur was in Wave 1 and is live with Admissions, Finance, MDS, Clinical, Orders, Secure conversations & Practitioner Engagement phases. He said McKinney and Sea View will be in the summer. Carter and Coler will be the wave after that in fall 2019.

Ms. Lowe asked if this was all integrated.

Mr. Lynch said yes, they are. They are all phases in the same program. Our goal is for it to be seamless.

Mr. Lynch talked to Correctional Healthcare Services EMR Update. He said the Rose M. Singer Center (Women's Facility) and Horizon Juvenile facility are live. The rest of the (men's) facilities will go live in July.

INFORMATION ITEM #1: CABLING

Mr. Lynch introduced Jeffrey Lutz to discuss the Informational Item on cabling. He said even though money for infrastructure has been approved, he wants to bring any significant part of it to the Board.

Mr. Lutz said we are undertaking a Network Refresh project to upgrade the network infrastructure across the enterprise, which is funded through City Capital in the amount of \$160 million. It allows us to replace aging equipment and prepare for new projects like Epic. This is very important for creating WiFi networks as more people go wireless.

Mr. Lutz said to date, \$80 million has been encumbered for network equipment, cabling and services. The remaining \$80 million of capital funds will be used for equipment and services needed to continue the project in Kings County Hospital, Post Acute Care facilities, and Voice Over IP.

Mr. Lutz said the reason for this Informational Item is that we are entering into a contract with G-Systems, Inc. in the amount of \$3,433,639.25 for cabling services at Metropolitan. They do not have wireless around the building as of now. This is for patient and visitors.

Mr. Pagán asked about the timeline.

Mr. Lutz said the emphasis is on Epic-related areas. This will be done by the end of July.

Ms. Lowe asked if this is from the 2020 budget.

Barbara Lederman said we work on five-year budgets and this was approved in 2017 or 2018.

Mr. Lutz says G-Systems has done around 90% of our previous work. They are very familiar with how we work. The contract was procured through a Request for Proposals. He said we received a proposal from one certified M/WBE (minority and women-owned business enterprise) vendor but the proposed price was significantly higher than the selected vendor.

Mr. Lynch said if these items are for more than \$5 million we have to bring it to the Board. But we want to bring these as Informational Items even when they are less than that amount.

ACTION ITEM #1: McAfee Licensing Agreement with DYNTEK SERVICES

Mr. Lynch introduced Soma Bhaduri to address the Applications to Enter into Contract for McAfee Enterprise Licensing Agreement with Dyntek Services, Inc. He said these systems are very important for our users and the system. He then read the resolution:

Authorizing the New York City Health and Hospitals Corporation (the “System”) to enter into an enterprise license agreement (an “ELA”) with Dyntek Services, Inc. (“Dyntek”) to provide McAfee IT security hardware, software, related maintenance and professional services for a three-year term for an amount not to exceed \$19,949,756.08.

Ms. Bhaduri spoke to the Current Industry Threat Landscape and explained why it is critical to have top-level security in this day and age. She gave a list of institutions who have suffered from online ransomware attacks and not being HIPAA compliant. She said by the end of 2016, ransomware delivered via phishing emails had grown by over 97 percent. This has prompted companies to install defensive measures and security software.

Ms. Bhaduri gave justification and an explanation of need of services. She said McAfee has helped us to proactively protect against cyber-attacks and data breaches; significantly reduce and/or prevent hacking occurrences; avoid and quickly mitigate a virus outbreak; HIPAA security compliance; and reduce overall security expenditure. She said this would be our fourth renewal with McAfee. She said the current/historical spend, cost structure, ancillary costs (e.g. interfaces, internal resources) for the system is \$17.14 million for current ELA for products, support and services.

Ms. Bhaduri addressed the slide History of Services: Layered Defense. It lists many capabilities in Network Security, Endpoint Protection, Data Protection, Risk and Compliance, and Services from ELA. Several of these are new. These include Intrusion Prevention System network refresh for all Health and Hospitals facilities for Epic, Cloud Access Security Broker, and Zimperium -Mobile Threat Detection.

Mr. Lynch said we have these systems on our personal devices for protection as well. There are no guarantees but we need to be aggressive in our defense of our devices.

Ms. Bhoduri read the Overview of Procurement. She said NYC Health + Hospitals would seek to enter into contract with Dyntek Services, Inc to provide McAfee Enterprise Licensing Agreement for the next three years, enterprise-wide. This would be for Corporate Offices, 11 acute care hospitals and all associated clinics, five Diagnostic and Treatment centers and associated clinics, five Long Term Care centers, and associated clinics.

Ms. Bhoduri said the contract benefits include improved security automation through behavioral analytics tools to prevent and contain malicious campaigns, including Ransomware. It reduces overall security expenditure and gives us skilled security personnel to augment employees in security department.

Ms. Bhoduri went over the solicitation. It was posted in the City Record and sent to eight certified McAfee re-sellers, including three M/WBE vendors. One M/WBE vendor submitted a “No Bid” response. We did not receive a response from the other two M/WBE vendors.

Ms. Bodhuri went over the bid process. She said Dyntek won with a bid of \$19.9 million. Cipher Techs bid \$23 million, SHI put in no bid, and PCMG was non-responsive.

Ms. Bodhuri went over the IT Committee Approval Request. She gave its details, such as for three years starting July 1, 2019 through June 30, 2022. Its total cost with ELA to include support, new products and services is \$19.95 million. The increase is due to \$3.5 million (funded through City capital) for Intrusion Prevention System hardware required to support Epic and the Network Refresh project. She said due to advancements in security technology, purchase of intrusion prevention system (IPS) hardware reduces our footprint from 74 IPS to 38 throughout the entire enterprise over the next three years. The operating

maintenance costs of \$16 million for renewal of products, services and support, is not an increased cost when compared to the prior ELA.

Ms. Bodhuri listed benefits of the plan. These included utilizing the latest security behavioral analytics tools, NYC Health + Hospitals can manage risks from advancement in cybercrime, including Ransomware.

She said McAfee is used in NYC agencies as part of a layered defense approach including: DOITT and FDNY, as well as the Washington, DC federal government agencies. She said McAfee is also a competitive cybersecurity company used in other healthcare systems including Community Health Systems, Trinity Health, Children's Hospital Of Philadelphia, and the Boston Medical Center. She said that unlike other cybersecurity companies, McAfee products allows us to integrate all of the tools already implemented to one reporting platform to properly analyze and automate in a customized fashion. This allows for reductions in infrastructure interruptions critical for patient care.

Ms. Lowe said we live in the time of Wikileaks. It seems like cyber security is advancing at such a fast rate.

Ms. Bhoduri said we met the FBI and they feel the same way. This is a huge effort.

Mr. Lynch pointed to the slide called Layered defense controls in place. He said the danger comes from someone answering a phishing attempt. We need this layered defense.

Ms. Bhoduri went through the metrics on the Threat Landscape. This included five ransomware incidents we have contained (thanks to our security), two million SPAM messages blocked per week, and approximately one thousand viruses blocked per week.

Mr. Sigler said there is NYC Cyber Command that does this on a city-wide level.

Motion was passed.

ACTION ITEM #2: MICROSOFT RENEWAL OF SOFTWARE LICENSES, SERVICES, AND MAINTENANCE AGREEMENT

Mr. Lynch read the resolution:

Authorizing the New York City Health and Hospitals Corporation (the "System") to enter into an enterprise license agreement ("ELA") with Microsoft Corporation ("Microsoft") to renew existing software licenses, and associated maintenance and support services for a three year term in an amount not to exceed \$41,554,873 including a 10% contingency.

Mr. Lutz spoke to the presentation called Microsoft Contract: Applications to Renew Maintenance and License Contract. He started with the Microsoft Proposal Overview. He said that like most large organizations, NYC Health + Hospitals relies on a suite of Microsoft software products. These include Office, Windows, Windows Server, Exchange (email), Microsoft SQL Server, and others. The current contract has expired and we are seeking approval to renew the Microsoft agreement for a period of three years.

Mr. Lutz said he spoke with others in the industry with Microsoft. Following negotiations, and despite Microsoft generally increasing pricing 10%-33% (based on conversations with others in the industry), we have obtained a proposal from Microsoft to renew the contract for a three year period without any increase in costs.

Mr. Lutz said Microsoft is moving to a subscription-based model rather than a retail model. Microsoft plans to stop supporting most device-based software. He said the current model for Microsoft licensing ties the license to the device and the software is on the device itself. He added that the future state of the industry ties the license to the user and the software is hosted in the cloud.

Mr. Lutz said the following organizations are currently using cloud-based Microsoft solutions: New York State (120,000 employees), DOITT,(30,000 employees) and MetroPlus (1,300 employees). They have always

been a strong partner for us and they are going to help us with this transition. He said NYC Health + Hospitals needs to prepare to transition to a cloud-based model and the proposed agreement will be a bridge to the cloud based model.

Mr. Lutz said the proposed agreement ties the licenses to the users, not the device. The software, however, remains hosted on the device. He explained that shifting our license types to user-based, rather than device-based, prepares us for the transition to cloud-based licensing. By changing our licensing to this in-between “bridge model” we were able to avoid a 22% pricing increase. Microsoft is incentivizing us to go to the cloud.

Mr. Lutz showed that based on our prior three-year agreement cost (\$37,757,516), our cost would have been 20% higher (\$46,179,199) had we used the old model for a proposed cost. Instead, because of the bridge model proposal from Microsoft, our cost will be \$37,777,515.

Mr. Lutz said EITS will work with Compliance and Legal on plan to migrate to the cloud solution. We keep our emails for 25 years. Our areas of concern include the amount of archived data (155 terabytes) and email storage policy archiving those 25 years of emails. We want it to be secure.

Mr. Lynch clarified that we are archiving our emails. We are not going to migrate 25 years’ worth of emails. We will put in policies to limit emails and not use it as a document storage tool.

Ms. Lowe said many of us send ourselves emails for that reason and she would consider not doing so in the future.

Mr. Lynch said we have 37,000 devices and 45,000 people. We now have to pay per person. We need to leverage our budget as we move to the new model. He pointed out this is strictly for employees and contractors, not patients. Epic has a portal for patients.

Mr. Lutz continued with Other Benefits of Bridge Model. These include allowing users to have access to Microsoft product on up to five devices, including at home. If they leave the company, it will expire in 30 days. He said it allows for no interest installment payments (no finance charges), a cost avoidance of \$500,000. He added that after three years, NYC Health + Hospitals would be able to evaluate other vendor options for email and office services (for example, Google) as these become more mature and more viable competitors enter the market. After three years, Microsoft will continue to mature their licensing options which will also allow NYC Health + Hospitals to explore other licensing options to reduce cost while providing the same service that our end users require.

Mr. Lutz said we are seeking approval to enter into contract with Microsoft for this enterprise-wide software licensing agreement. It is for a three year term, 0% financing agreement, 10% contingency of \$3,777,715, for a total cost of \$41,554,873.

Motion was passed.

There being no further business, the meeting was adjourned at 11:00 AM.

Information Technology Report

Kevin Lynch, Senior Vice President and Chief Information Officer

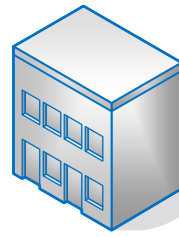
September 12, 2019

Health Information Prioritization Committee top projects

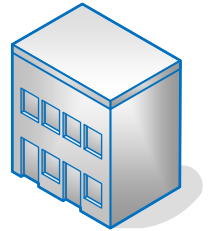
- H₂O (Epic) + Cerner Lab enterprise implementation
- Evolve/ERP (Enterprise Resource Planning) Finance, Supply Chain, HR, Payroll, eTime Collection, Nurse Scheduling
- Enterprise Radiology PACS Imaging
- 340B Pharmacy Split billing
- Enterprise Cardiac Monitoring
- Capital Restructuring Financing Program (CRFP)
 - Population Health
 - Digital Healthcare Network
 - Contact Center
- Correctional Health Services EMR project
- Post Acute Care EMR project

NYC H+H

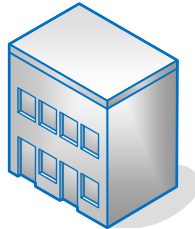
Acute Facilities



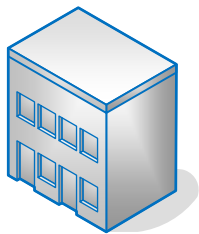
North Central Bronx



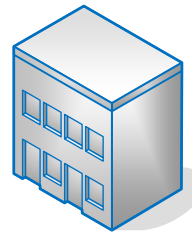
Jacobi



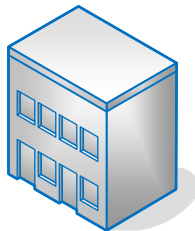
Lincoln



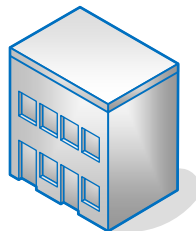
Harlem



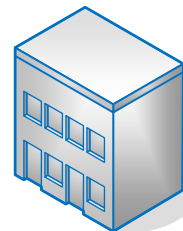
Metropolitan



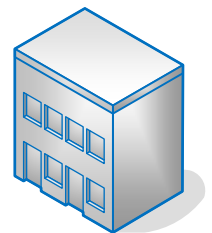
Bellevue



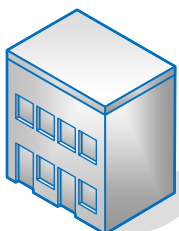
Woodhull



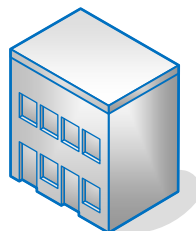
Elmhurst



Queens

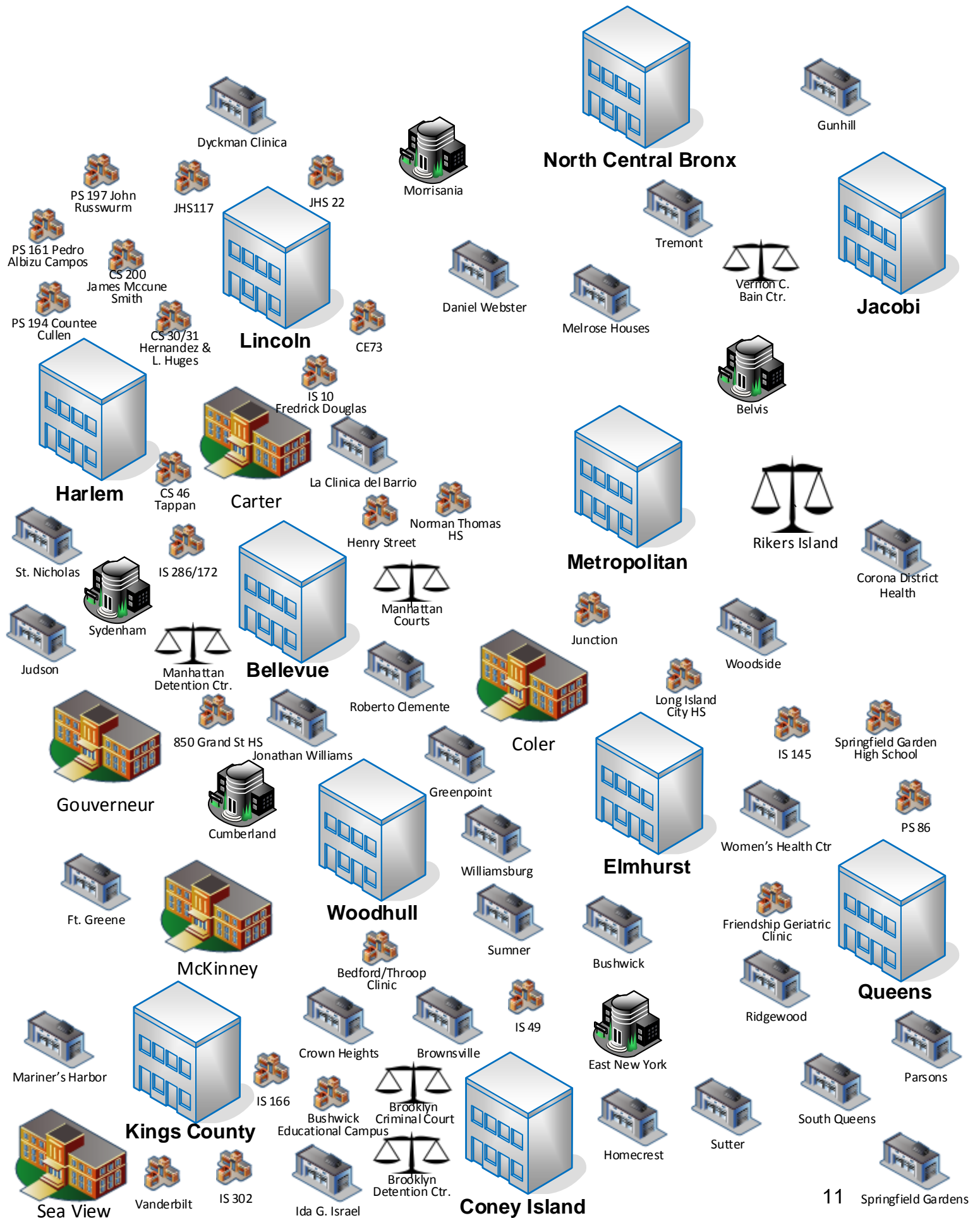


Kings County



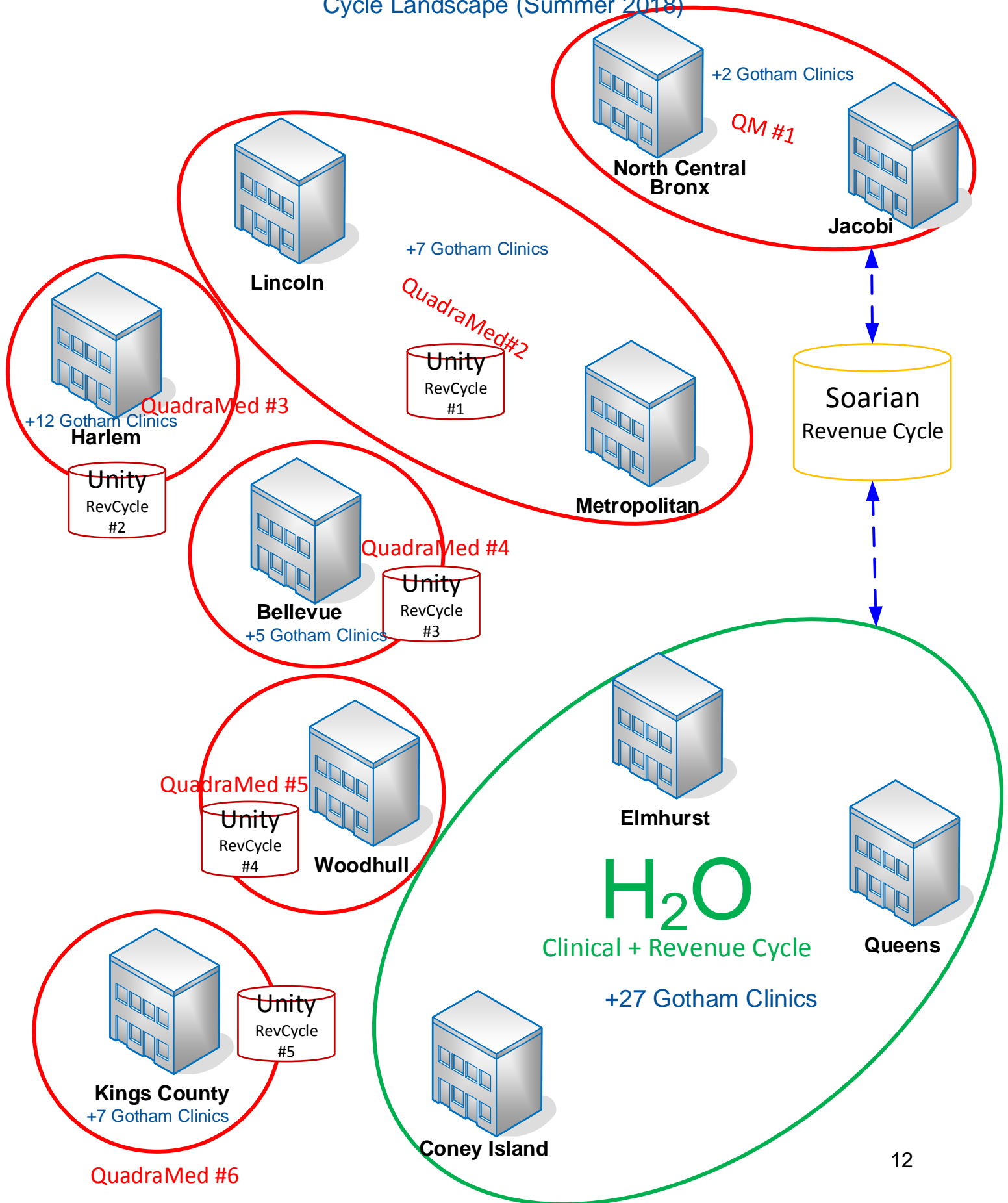
Coney Island

Acute Facilities + Post Acute Care + Correctional Health Services+ Gotham Health Facilities



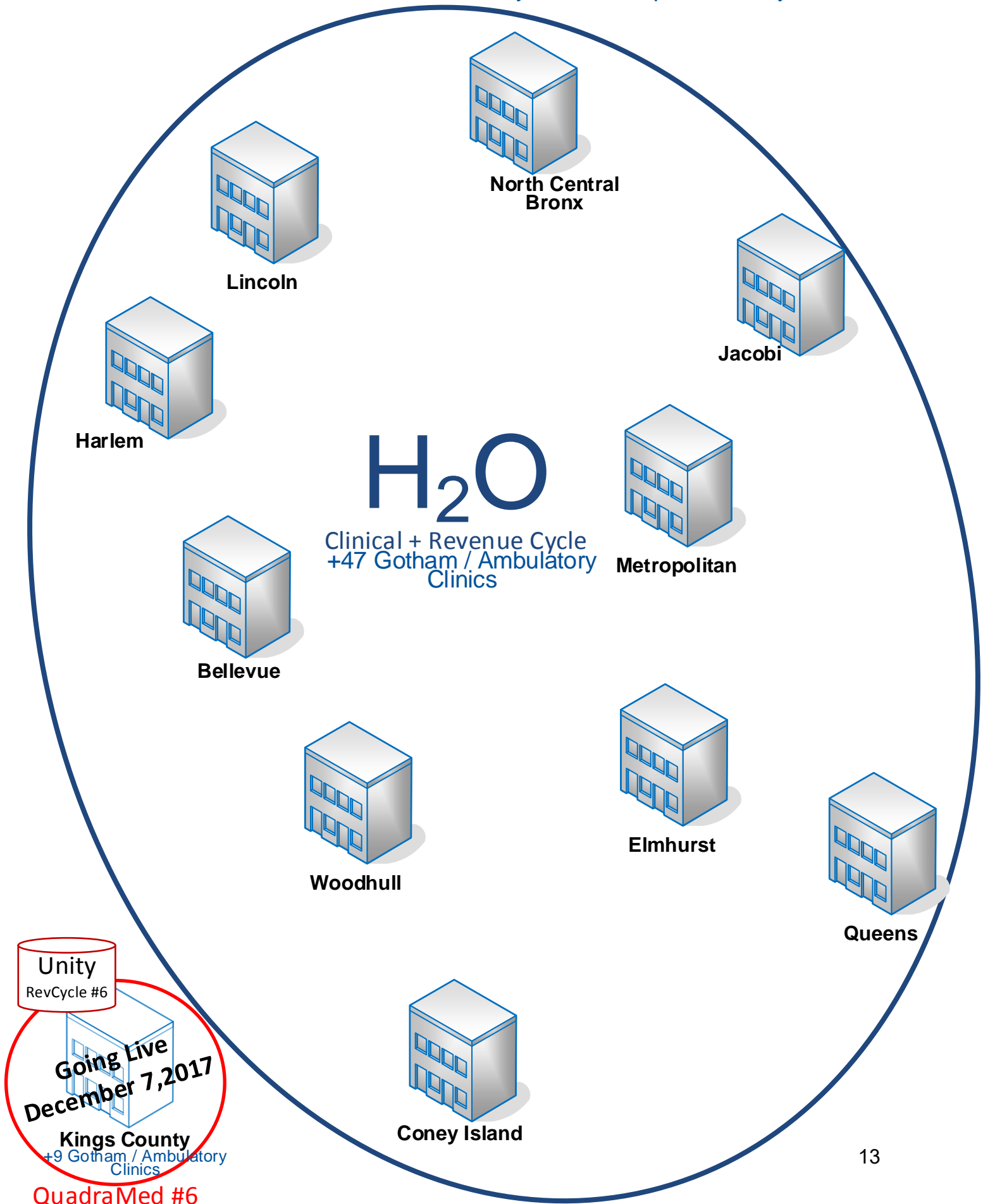
NYC H+H

Current Electronic Medical Record + Revenue
Cycle Landscape (Summer 2018)



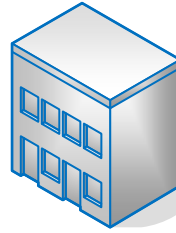
NYC H+H

Electronic Medical Record + Revenue Cycle Landscape Post July 27, 2019



NYC H+H

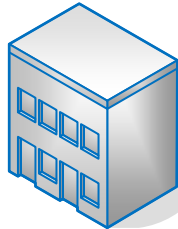
EMR future state



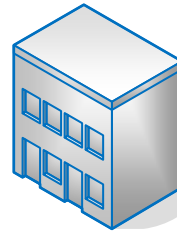
North Central Bronx



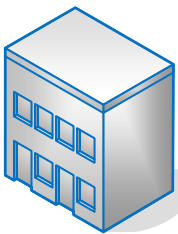
Jacobi



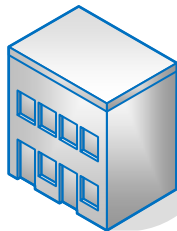
Lincoln



Metropolitan



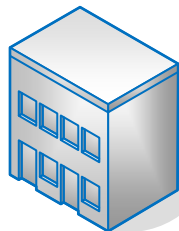
Harlem



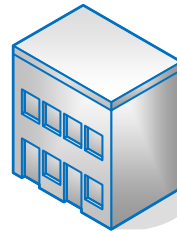
Bellevue

H₂O Clinical & Revenue Cycle

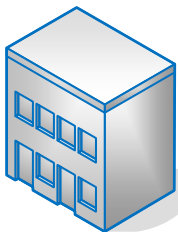
+56 Gotham / Ambulatory Clinics



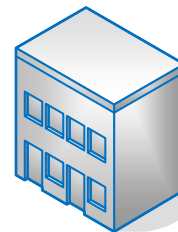
Woodhull



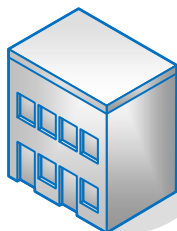
Elmhurst



Kings County



Queens



Coney Island

H₂O + Cerner Lab Enterprise Implementation Update

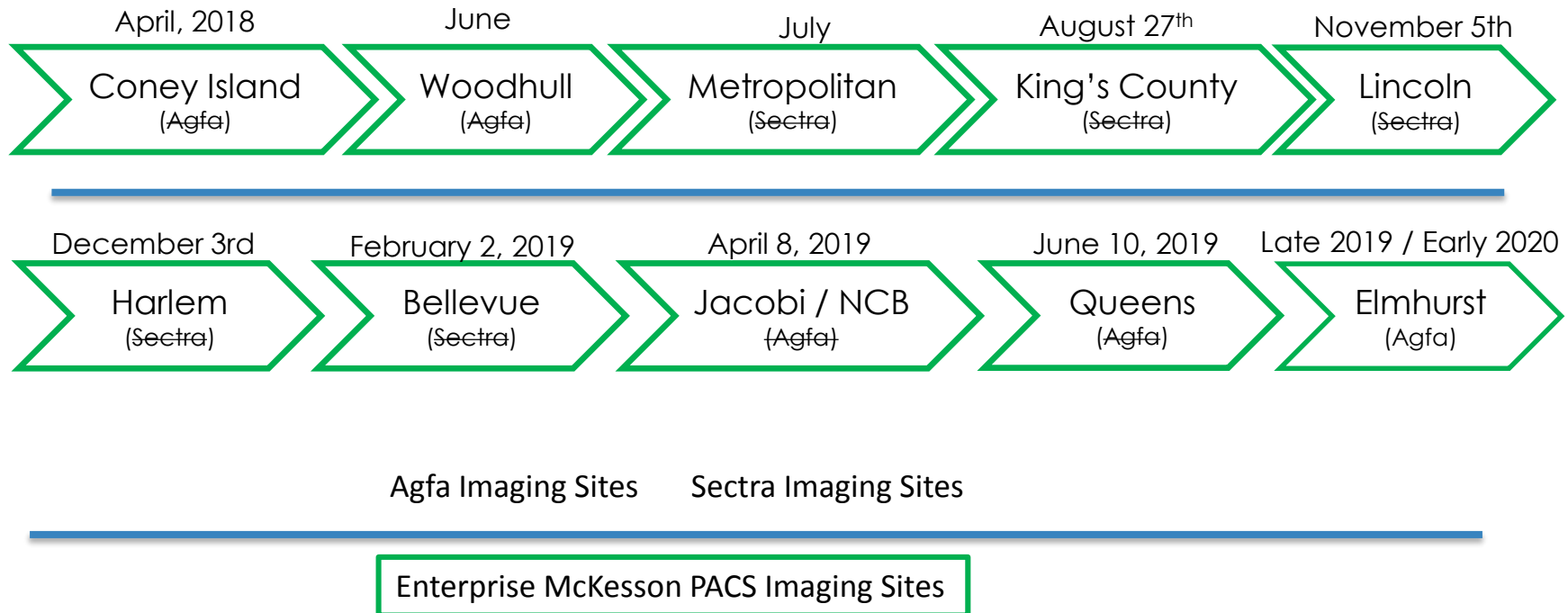
- 10 Acute Care Centers + 47 Gotham / Ambulatory Care sites Live
- Over 43K + unique users
- 6,500 average daily users; Peak users = 9,900
- 4.7M unique patients
- October 2018 Go Live locations:
 - +20% Charge Capture
 - +\$40M cash collection
- March 2019 Go Live locations:
 - +15% Charge Capture
 - +\$1M cash collection
- July 2019 Go Live locations:
 - +\$22% Charge Capture

ERP Update

Clairvia – Nurse Scheduling

- LIVE – Kings County, East NY, SeaView, McKinney, Coney Island, Woodhull, Cumberland
- LIVE – Elmhurst & Queens: Wave 1c
- LIVE – Bellevue, Sydenham & Gouverneur: Wave 1d
- Harlem, Coler & Carter: Wave 1e - 9/15/19
- Metropolitan, Lincoln & Morrisania: Wave 1f 10/13/19
- Jacobi, NCB, & Belvis: Wave 1g 11/10/19
- LIVE - Payroll went live on July 5th
- eTime Capture – Spring 2020

Enterprise Radiology Integration Initiative Time Line



Post Acute Care EMR Update

- **LIVE – Gouvernuer:** Admissions, Finance, MDS, Clinical, Orders, Secure conversations & Practitioner Engagement, and EMAR
- **LIVE – McKinney and Seaview:** Admissions, Finance, MDS, Clinical, Orders, Secure conversations & Practitioner Engagement, and EMAR
- **Carter & Coler:** – Wave 1-3 - Fall 2019

- Live - Rose M. Singer Center (Women's Facility) April 30
- Live - Horizon Juvenile facility May 28
- Live - Men's facilities late July

2019 Calendar end Milestones

- 9/15/19: Clairvia Nurse Scheduling at Harlem, Coler & Carter
- 10/13/19: Clairvia Nurse Scheduling at Metropolitan, Lincoln & Morrisania:
- 10/14/19: Post Acute Care EMR project at Carter & Coler
- 11/10/19: Clairvia Nurse Scheduling at Jacobi, North Central Bronx, & Belvis
- 12/7/19: Kings County - H₂O + Cerner Lab enterprise implementation

RESOLUTION

Authorizing the New York City Health and Hospitals Corporation (the “System”) to execute contract documents as necessary to increase funding for and extend the existing contract with SunGard Availability Services (SunGard) for an alternate data center for disaster recovery, business continuity and associated professional services for a total of \$10,100,000 (which includes \$217,172 contingency) for a three-year term.

WHEREAS, the System currently has a contract with SunGard to provide an active alternate data center for disaster recovery and business continuity that expires October 31, 2019; and

WHEREAS, SunGard hosts mission critical servers and computer systems and customized solutions for NYC Health + Hospitals under the contract; and

WHEREAS, an active redundant data center mitigates the impact of outages allowing the hospitals to continue to function with minimal disruption; and

WHEREAS, the extension of the existing contract is required to allow sufficient time to conduct a competitive solicitation and contract award process, plan, prepare and design a transition and then migrate to a new data center with the selected vendor (if other than SunGard) prior to the expiration of such extension; and

WHEREAS, the Senior Vice President/Chief Information Officer will be responsible for the supervision, management and reporting of the proposed contract.

NOW THEREFOR, IT IS RESOLVED that New York City Health and Hospitals Corporation be and hereby is authorized to execute contract documents as necessary to increase funding for and extend the existing contract with SunGard Availability Services (SunGard) for an alternate data center for disaster recovery, business continuity and associated professional services for a total of \$10,100,000 (which includes \$217,172 contingency) for a three-year term.

EXECUTIVE SUMMARY

BACKGROUND:	<p>The accompanying Resolution requests approval to both extend and increase the contract with SunGard Availability Services (SunGard) for total not to exceed amount of \$10,100,000 (which includes \$217,172 contingency) for a three-year term for SunGard to continue to provide an active redundant data center for disaster recovery and business continuity. The extension is required to allow sufficient time to conduct a competition, plan, prepare and design a transition and then migrate to a new data center with the selected vendor, should the incumbent vendor SunGard not be selected.</p> <p>NYC Health + Hospitals has a current contract with SunGard to provide a Tier 4 Backup Data Center for the Corporate Data Center located in Jacobi Hospital. Under the contract, SunGard provides space, power and environmentals, including cabinet space, caged cabinets, power, cabling, and professional services in an alternate active Data Center. SunGard also provides disaster recovery services, managed IT services and information availability consulting services. SunGard also assists the NYC Health + Hospitals with conducting annual disaster recovery mainframe planning and testing.</p> <p>Data center tier standards measure the quality and reliability of a data center's server hosting ability. Tier 4 data centers are considered the most robust and are less prone to failures. SunGard has provided customized solutions for the NYC Health + Hospitals for the last four years without any service interruption.</p>
NEED:	<p>NYC H+H can be severely impacted by application, hardware or data center outages that may be caused by any number of events, such as electrical outages. An active redundant data center allows for continuous availability of clinical applications, including Epic, and business applications during outages/failures. Extending the contract with SunGard mitigates the impact of outages allowing the hospitals to continue to function with minimal disruption.</p>
PROPOSAL:	<p>NYC Health + Hospitals would enter into a three year agreement with SunGard Availability Services for data center hosting at a cost of \$274,523 a month and not to exceed of \$10,100,000 with a \$217,172 contingency to cover any future growth or expansion of this environment. The monthly amount is approximately a 50% savings over the existing \$548,365.70 monthly amount.</p>
FINANCING:	<p>The System intends to pay for the cost of the proposed contract of the System's operating funds</p>
PROCUREMENT:	<p>The original contract was procured through the Greater NY Hospital Association (GNYHA) third party contract. The extension is pursuant to the OP 100-5.</p>
MWBE STATUS:	<p>Waived. Limited subcontracting opportunities. Is substantially a lease which, if classified formally as a lease, would be exempt.</p>

SunGard Availability Services – Alternate Data Center

Information Technology Committee Meeting

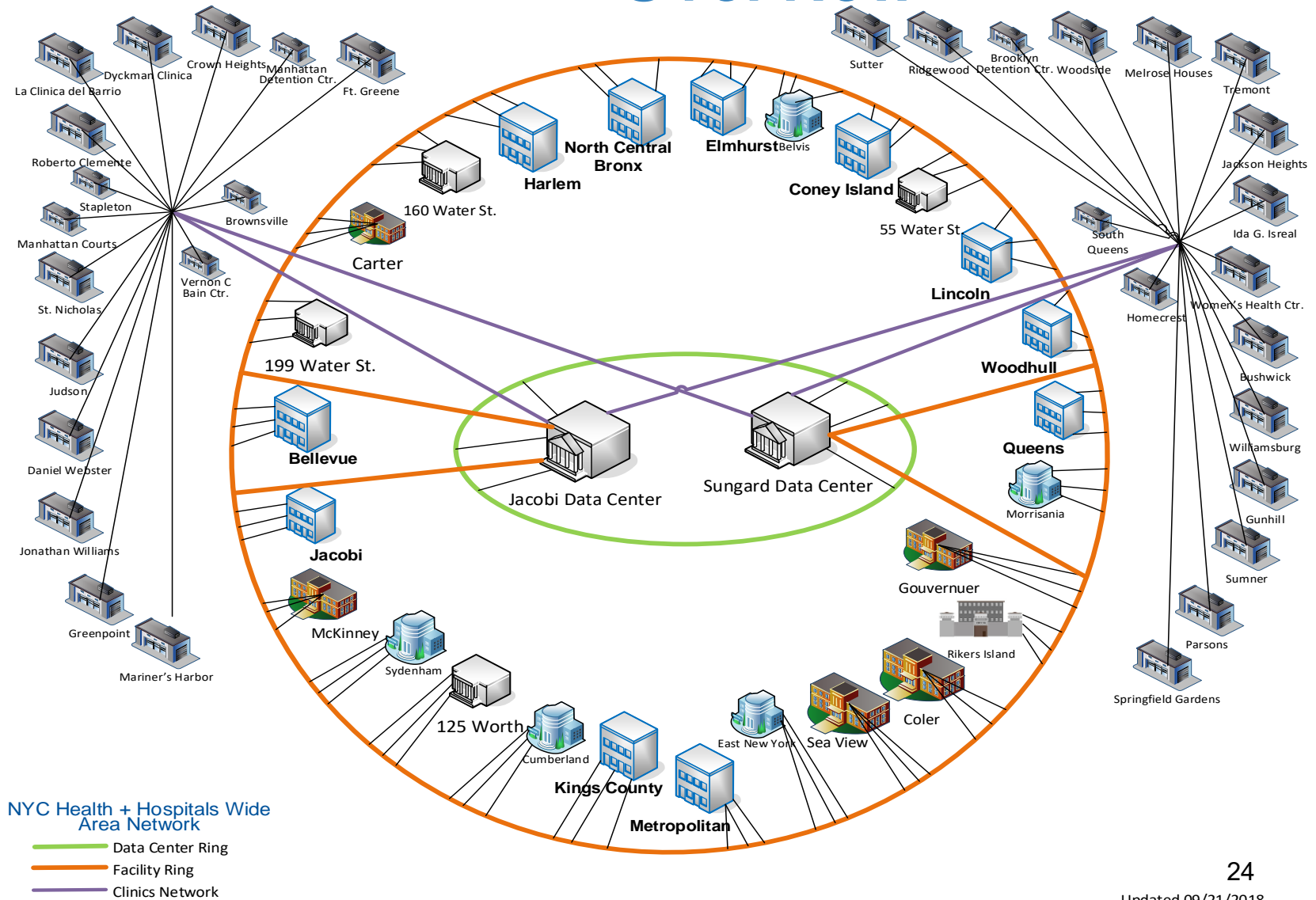
September 12, 2019

Kevin Lynch
Senior Vice President
Chief Information Officer

Jeffrey Lutz
Assistant Vice President Infrastructure



Data Center and Connectivity Overview



Background Summary

Current SunGard contract, provides hosting of mission critical servers and computer systems in an active redundant data center. Previously procured via GNYHA third party contract, expires October 31, 2019. NYC Health + Hospitals has been in contract with Sungard since 2009.

- Applications/services provided include Epic, PeopleSoft, Email, Phone, Internet
- Hosting provided for all NYC Health + Hospital locations and affiliates including MetroPlus, Correctional Health, OneCity Health

Physical and Virtual Server Inventories:

Jacobi

Physical	628
x86 Servers (OSI)	196
x86 VM Hosts	388
Unix and Midrange	44
Virtual	2,768
x86 based VM (OSI)	2,500
Midrange LPAR or OSI	268

Storage	
Raw Capacity	10,934
Allocated Capacity	6,582

Sungard

Physical	496
x86 Servers (OSI)	51
x86 VM Hosts	400
Unix and Midrange	45
Virtual	1,959
x86 based VM (OSI)	1,717
Midrange LPAR or OSI	242

Storage	
Raw Capacity	10,806
Allocated Capacity	6,268

Sungard Availability Services

■ Company Overview

- Employs over 3,000 professionals across 12 countries including North America, United Kingdom, Canada, Ireland, France, India, Belgium, Luxembourg and Poland
- Provides more than 5 million square feet of hardened, secure operations space
- Has 18 mobile facilities staged in strategic locations
- Manages 90 hardened IT facilities connected by a redundant, global dedicated network backbone
- Is an aggressive adopter of green technology, researching and adopting best-of-breed components for our infrastructure and systems

■ Services Include

- Infrastructure and Resilience Consulting
- Managed Cloud and Hybrid IT
- Cloud and Physical Infrastructure Recovery
- Managed Services and Colocation

■ Customers

- In the same facility:
 - Local Healthcare: Mount Sinai Health System, NYU Langone, New York Presbyterian, Health Care Association of New York State, Inc (HANYS)

■ NYC Health + Hospitals History / Relationship

- Colocation in Carlstadt, NJ since 2009
- Data Center experienced no outage during superstorm Sandy
- Provided alternative site hosting NYC H+H and MetroPlus



Request

- Spending authority in the amount of \$10.1 million, made up of:
 - \$274,523 monthly payment (\$3,198,276 annually)
 - Current payments \$548,365.70 monthly (\$6,580,388.40)
 - \$217,172 contingency for any future growth or expansion
- Extension of the contract term for three-years to allow sufficient time to conduct a solicitation, plan, prepare and design a transition and then migrate to a new data center with the selected vendor
 - Currently working with Gartner on Data Center Strategy to be shared in future session.
- Decrease of current contract spending by approximately 50% while still providing the same services to NYC Health + Hospitals today.

Proposed Three Year Plan

NYC H+H Information Technology Team and Gartner team has developed a 3-year roadmap outlining the various tasks and timelines to implement the data center strategy

	2019		2020				2021				2022				2023			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preparatory Activities: Approvals, budget appropriations, and H+H staffing plan																		
Foundational Activities: Select SI, Migration planning, selection of Colo Provider and facilities buildout																		
Migration Activities I: Sungard to new colocation (secondary) site																		
Migration Activities II: Jacobi to new colocation (primary) site																		

Solicitation

- Original procurement in 2009 was done using a GNYHA third party contract following an open solicitation.
- Sungard is a sole source and the current incumbent for this service and is the only one that can provide this service without having to relocate the entire data center to another facility.
- Currently working with Gartner on Data Center review and strategy of both Sungard and Jacobi data centers. Gartner is a long-time consulting partner and has helped the enterprise on many projects.
- Plan to return to CRC for request to start solicitation process and will share results of Gartner study and future strategy at that time.
- Leveraged OGS contract, Gartner study and review of our current plans for the data center in negotiating extension with Sungard.

IT Committee Approval Request

- We are seeking approval to enter into contract with Sungard for Data Center Hosting:
 - Three Year Contract (expires: October 31, 2022)
 - Immediate implementation upon contract approval
 - Extension of current agreement, with 50% reduction in costs, but no change in service
 - Total contract value: \$ 10.1 million (\$217,172 contingency)

Questions?

RESOLUTION

Authorizing the New York City Health and Hospitals Corporation (the “System”) to enter into a contract with Dimension Data to provide Cisco SmartNet maintenance to support the inventory of Cisco hardware and software licenses deployed across the System for a total of \$48,906,495, for the period of October 1, 2019 through June 30, 2022; and

Authorizing the System to borrow \$48,906,495.65 from Key Government Finance, Inc. (“Lender”) over a period matching the Dimension Data agreement term with interest at approximately 4.2% with the final rate to be fixed prior to funding based on changes in market rates and to execute a loan agreement, note, security agreement and such other customary documents as are necessary to complete the financing transaction.

WHEREAS, the System currently has a contract with Dimension Data for Cisco SmartNet maintenance which expires on September 30, 2019; and

WHEREAS, SmartNet maintenance supports the Cisco equipment, including networking (routers and switches), firewalls (e-mail protection), Voice Over IP, facility wireless networks, the Contact Center and video collaboration installed across the enterprise; and

WHEREAS, all System applications, including Epic, rely on such networking components to operate, provide interoperability and communication to prevent unavailability and slow-downs; and

WHEREAS, the contract includes mandated Service Level Agreements, including immediate service response times, 24x7 dedicated support and escalations, and replacement of critical equipment within 4 hours to ensure continuity of services and avoid disruptions or gaps in service; and

WHEREAS, a solicitation was issued to all Cisco re-sellers listed on the New York State Office of General Services contract and Dimension Data offered the lowest total cost; and

WHEREAS, the System proposes to finance the contract by a loan from Lender of \$48,906,495.65, which will be co-terminus with the Dimension Data agreement and which will be serviced out of its operating revenues; and

WHEREAS, the Senior Vice President/Chief Information Officer will be responsible for the supervision, management and reporting of the proposed contract.

NOW THEREFOR, IT IS RESOLVED that New York City Health and Hospitals Corporation be and hereby is authorized to execute a contract with Dimension Data to provide Cisco SmartNet maintenance to support the inventory of Cisco hardware and software licenses deployed across the System for a total of \$48,906,495, for the period of October 1, 2019 through June 30, 2022 and it further

RESOLVED, that New York City Health and Hospitals Corporation be and hereby is authorized to borrow \$48,906,495.65 from Key Government Finance, Inc. over a period matching the Dimension Data agreement term with interest at approximately 4.2% with the rate to be fixed prior to funding based on changes in market rates and to execute a loan agreement, note, security agreement and such other customary documents as are necessary to complete the financing transaction.

EXECUTIVE SUMMARY

BACKGROUND:	<p>The accompanying Resolution requests approval to enter into a contract with Dimension Data in the amount of \$48,906,495 for the period October 1, 2019 through June 30, 2022, to provide Cisco SmartNet maintenance to support the Cisco hardware and software, including networking (routers and switches), firewalls (e-mail protection), Voice Over IP, facility wireless networks, the Contact Center and video collaboration installed across the enterprise.</p>
NEED:	<p>Without a SmartNet agreement in place, NYC H+H would not have access to immediate repair/replacement of critical network equipment, software patches to fix issues, and upgrades and enhancements needed to allow for newer devices to connect to the network. In the event of a hardware failure, a replacement part would have to be procured which can take 60-90 days to manufacture once the order is received, potentially keeping a critical area down while waiting for this replacement.</p> <p>In case of a network failure, interoperability and communication from system to system within the enterprise, and/or system to end-user/clinician may slow or become unavailable. All clinical and business applications, including Epic, would not operate unless these networking components are functioning and in place.</p> <p>The proposed agreement includes mandated Service Level Agreements, including immediate service response times, 24x7 dedicated support and escalations, and replacement of critical equipment within 4 hours to ensure continuity of services and avoid disruptions or gaps in service.</p>
PROPOSAL:	<p>The previous agreement with Dimension Data had a total contract value of \$39.4M over three years. The increase in cost between the previous agreement and the proposed contract is due to multiple factors: the proposed agreement includes new functionality, a three year upgrade for our wireless network and the ability to migrate call center express licenses to call center enterprise. Over the last 12 months the System made an \$80M capital investment in Cisco network equipment as part of the Network Refresh project, funded by City capital, which replaced equipment that was no longer supported; and a \$10M capital investment for the Call Center funded through the New York State CRFP capital grant, for call center licenses and hardware.</p>
FINANCING:	<p>System proposes to finance the contract with a loan from Lender of \$48,906,495.65 with interest at approximately 4.2% with the rate to be fixed prior to funding based on changes in market rates which loan will be co-terminus with which the Dimension Data agreement and which will be serviced out of its operating revenues; and</p>
PROCUREMENT:	<p>A solicitation was issued to all Cisco re-sellers listed on the New York State Office of General Services contract, Dimension Data was selected as it was the vendor that offered the lowest total cost for the services.</p>
MWBE STATUS:	<p>NYC Health + Hospitals will be seeking an MWBE waiver for Dimension Data as part of the SmartNet contract. Dimension Data is a reseller of the Cisco maintenance support product and does not perform/supply the actual support logistics. Cisco does not offer this support service directly to the consumer and only offers it through qualified resellers. We spoke with both Cisco and with Dimension Data and they understand the priority that NYC Health + Hospitals places on MWBE utilization. Both Cisco and Dimension Data are exploring options to leverage in future contracts that would allow them to leverage these qualified companies in their support model.</p>

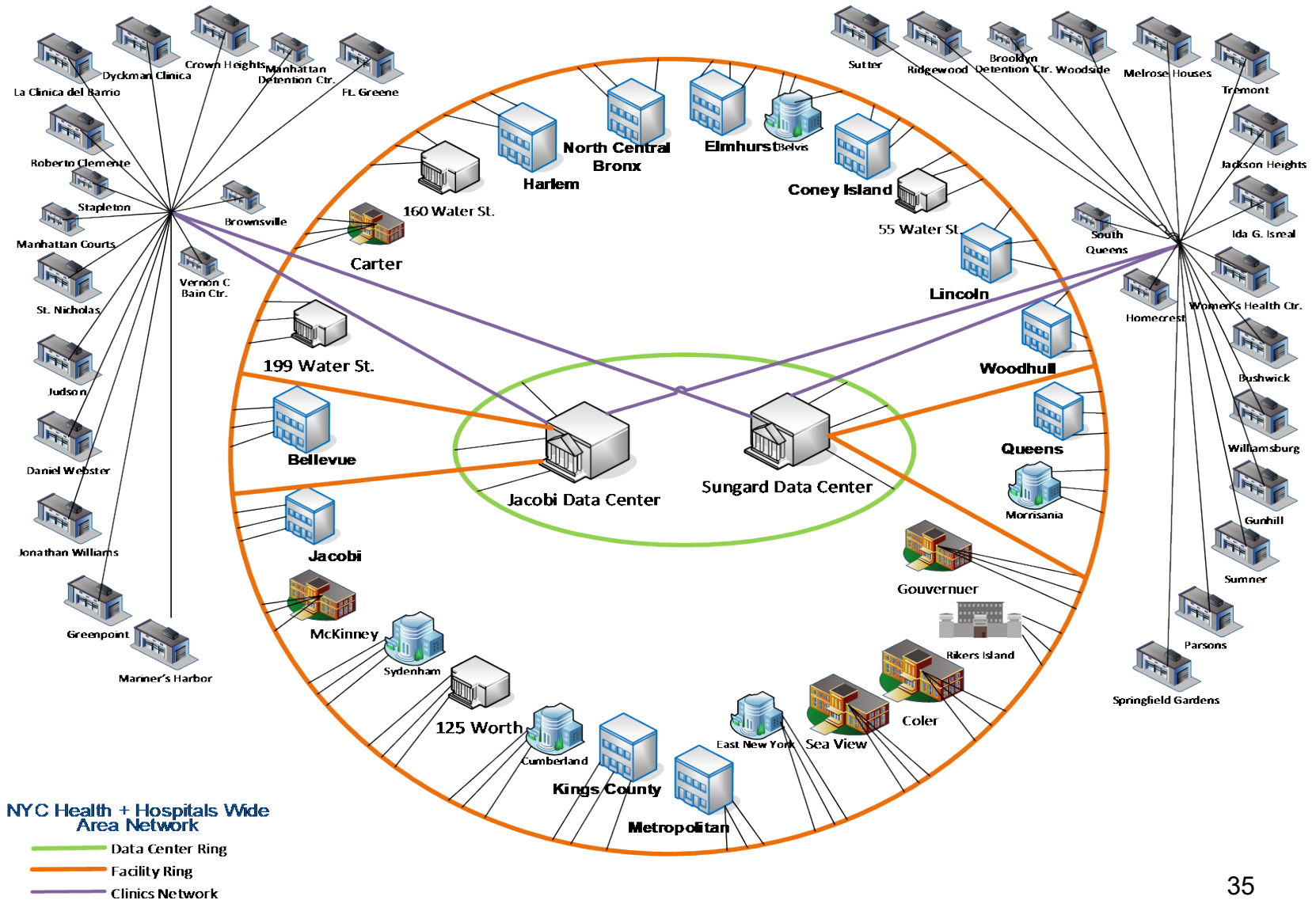
Cisco SmartNet Maintenance Agreement

Joint IT and Finance Committee Meeting September 12, 2019

Kevin Lynch
Senior Vice President
Chief Information Officer

Jeffrey Lutz
Assistant Vice President Infrastructure

Wide Area Network Overview





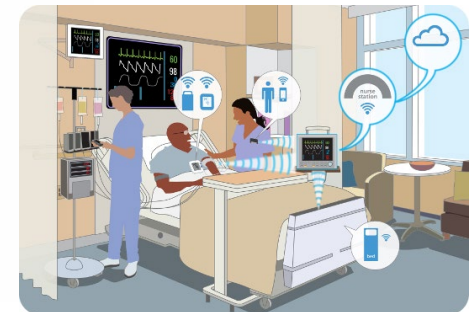
Voice / Telephony

Collaboration



Security
& Monitoring

Networking / Connectivity



Background / Current State

- Who Is Cisco?
 - Worldwide technology leader that has been making the Internet work since 1984
 - \$51.7 billion company with over 74,000 employees across the world
 - Three pillars of the Cisco experience: Connect Everything, Innovate Everywhere, Benefit Everyone
- H+H selection of Cisco as the standard network platform for the enterprise
 - In 2009, NYC Health + Hospitals began to establish Cisco as the standard for networking
 - Wanted a company that could provide needed connectivity and grow and evolve as healthcare changes
 - In fall of 2015, this commitment was reaffirmed as \$160 million multi year network refresh / standardization project was initiated to be supported through capital funding.
 - Committed to Cisco not only as a vendor for networking and connectivity, but for voice as well.
 - In Winter of 2018, Cisco selected as the vendor for Contact Center project as part of the Delivery System Reform Incentive Payment (DSRIP) program
- Cisco SmartNet maintenance supports all Cisco hardware and software:
 - Mandated Service Level Agreements including immediate service escalation, 24 x 7 dedicated support contact for escalations and management, and equipment replacement (ex. critical = 24x7x365 4 hour response)
 - Future Proofing – protects capital investment provides hardware and software, bug fixes and updates ensures H+H has most current version
- Consequences Without SmartNet:
 - Costly break/fix on as needed basis
 - Delays in service response times results in unavailability/disruptions in service
 - Degrades investment, operating version w/o updates – not compatible with replacement parts, not compatible with new end user devices, potential security threats will remain unaddressed
- SmartNet maintenance cannot be purchased directly from Cisco, it has to be procured through “resellers” even though the support is provided directly from Cisco.

Overview of Contract

- NYC Health + Hospitals typically enters into a three year agreement for this maintenance that is paid on an annual basis. The contract total of the current three-year Dimension Data SmartNet agreement is \$39M and expires on September 30, 2019.
- **TERM :** The prior SmartNet contract expired on June 30, 2019. Due to the short time frame between vendor selection, the June CRC Meeting and the July Board of Directors meeting, the CRC's direction was to secure a 3-month extension to the existing contract to avoid an interruption of services and return to the Board in September to consider a 33 month contract with Dimension Data at a cost of \$48,906,495.65.
 - Entered into a 3-month extension through September 30, 2019 for \$3.4M
- The increase over the prior agreement is due to two main factors:
 - **Net New Additional Maintenance and Functionality:** covers capital purchases funded through both City capital Network Refresh and CRFP Digital Health and Contract Center, including:
 - Maintenance of security software licenses to monitor traffic between networking and endpoints
 - New subscription services for security tokens (Duo) to be used for e-prescription, VPN access and administrative access required to meet regulatory and compliance requirements
 - Wireless End User License subscription to provide additional security and functionality to meet the increased needs and complexity of the devices accessing our wireless network including bio-med devices, mobile devices (ex. iPhones and iPads) and will also provide NYC H+H the ability to better separate patient and visitor devices
 - Upgrade current contact center licenses to the more advanced Contract Center Enterprise licenses
 - **New Networking Equipment** – covers capital purchases of Cisco equipment funded through City capital and CRFP Digital Health and Contact Center, including:
 - Deployment of new equipment, including e-mail security appliance, Data Center firewalls, Contact Center hardware and software, and the deployment of wireless networks in Bellevue, Metropolitan, McKinney, Sea View and various Gotham clinics
 - New equipment deployed that replaced outdated and unsupported equipment, thus no previous cost on SmartNet for these items
 - Replacement of different vendors equipment at Jacobi and North Central Bronx to meet the enterprise network standards

Overview of Procurement

- The solicitation was issued May 28, 2019 to 58 Cisco Direct Value Added Resellers currently listed on the OGS contract. The bid responses were as follows:
 - Dimension Data: \$52,335,355.68*
 - Presidio: \$53,005,959.69
 - Dyntek: “no bid”
 - Zones: “no bid”

*(includes \$3.4M for a 3-month extension)
- Who is Dimension Data
 - Dimension Data is an \$8 billion company with over 28,000 employees across 47 countries
 - A subsidiary of Nippon Telegraph and Telephone Corporation (NTT Ltd.) with over \$11 billion in sales , 40,000 employees across 70+ countries
 - A leading partner for many leading technology, hardware and cybersecurity vendors
 - Cisco partner for 28+ years, currently a Tier 1 provider
 - Certification is maintained through the following criteria
 - Certification of engineers and sales staff
 - Customer satisfaction scores
 - Revenue of Cisco services and product
 - Partnership with NYC H+H for over 10 years
 - Previous contract was with and financed through Dimension Data
 - Provides additional services including resources to perform inventory and certification of Cisco hardware
 - Previously provided support for annual Information Technology Security assessments
 - Provided resources for Security, Networking and other Infrastructure related areas
 - MWBE Status
 - NYC Health + Hospitals will be seeking an MWBE waiver for Dimension Data as part of the SmartNet contract. Dimension Data is a reseller of the Cisco maintenance support product and does not perform/supply the actual support logistics. Cisco does not offer this support service directly to the consumer and only offers it through qualified resellers. We spoke with both Cisco and with Dimension Data and they understand the priority that NYC Health + Hospitals places on MWBE utilization. Both Cisco and Dimension Data are exploring options to leverage in future contracts that would allow them to leverage these qualified companies in their support model.

Annual v. Pre-Payment Options

Cost Savings Benefits of 33-Month Pre-Payment

- Gartner Research confirmed that the majority of companies with large installed inventories of Cisco equipment typically enter into extended SmartNet maintenance agreements like this one in order to benefit from both the steep discounts and to lock in the three-year price
 - Gartner is a leading and well respected research and advisory company of \$4 billion in revenue and 15,000 employees world wide
 - NYC Health + Hospitals has been working with Gartner for 10+ years to consult with Information Technology research, initiatives and contracts / procurements
- H+H received a discount of 50% below list price – an annual contract receives a lower discount
- No annual increases – an annual contract would be subject to price increases
- Total Cost of the 33 month contract plus the financing fee is less than the cost of purchasing the maintenance on an annual basis
- Financing through Key Government Finance Inc. (Key Bank) allows H+H to spread out the payments rather than a lump sum

Year	One Year Pricing	Three Year Pricing
Year 1	\$29,186,853	\$17,445,118
Year 2	\$23,142,643	\$17,445,118
Year 3	\$23,142,643	\$17,445,118
Total	\$75,472,139	\$52,335,356
Financing	\$0	\$ 3,000,000 *
Total Cost	\$75,472,139	\$55,335,356 **

- Compared the proposed contract with the current DoITT City-wide enterprise SmartNet contract which allows City agencies to purchase maintenance on an annual basis. The enterprise contract is a 5-year agreement financed through Cisco Capital, the finance fees are rolled into the total contract price. As a result the City received a discount of 30%.

Approval Request

- NYC Health + Hospitals seeks to enter into contract with Dimension Data to provide SmartNet Services enterprise wide
 - Maintenance for all networking equipment, Voice over IP equipment and related Software
 - Includes:
 - Mandated Service Level Agreements including immediate service escalation, 24 x 7 dedicated support contact for escalations and management, and equipment replacement (critical = 24x7x365 4 hour response)
 - Ability to convert licenses for Cisco Call Center Express to Call Center Enterprise
 - Inventory including asset tagging service included
 - Ability to cover any legacy equipment or un-inventoried equipment same as inventoried equipment
- We are seeking approval to enter into contract with Dimension Data for Cisco SmartNet Maintenance and the related financing with Key Government Finance, Inc.:
 - 33 Month Contract and Financing (expires: June 30, 2022)
 - Immediate implementation upon contract approval and financing to close on September 30, 2019
 - Provides maintenance on all Cisco equipment used to support the network, security, Voice Over IP, collaboration, and Contact Center equipment deployed throughout the enterprise
 - Agreed Service Level Agreements and Support escalations and contacts, and License conversions
 - Contract value: \$48,906,495.65
 - Total cost of financing (including estimated interest expense): \$51,906,495.65

Questions?

Costs Breakdown

SmartNet Agreement Breakdown	2016 Agreement	2019 Agreement	2019 Agreement (3 month)	2019 Agreement (33 month)
Hardware / Software Maintenance (3yr total)	\$37,000,000	\$41,810,307	\$3,426,790	\$38,383,517
Contact Center Flex Licensing		\$1,248,799		\$1,248,799
StealthWatch Maintenance		\$721,875		\$721,875
Service Full Coverage & Software Lifecycle Management		\$1,030,181		\$1,030,181
Wireless Distributed Network Architecture		\$6,174,194		\$6,174,194
Duo-Security Licensing and Maintenance		\$1,350,000		\$1,350,000
Total (without Interest)	\$37,000,000	\$52,335,356	\$3,426,790	\$48,908,566
Interest	\$2,466,169	\$3,000,000	\$0	\$3,000,000
Total	\$39,466,169	\$55,335,356	\$3,426,790	\$51,908,566
Average Annual Payment	\$13,155,390	\$18,445,119		\$17,302,855