AGENDA

INFORMATION TECHNOLOGY
COMMITTEE

Meeting Date: <u>November 8, 2018</u>
Time: <u>10:00 AM</u>
 Location: <u>125 Worth Street, Room 532</u>

BOARD OF DIRECTORS

CALL TO ORDER   **MS. YOUSSOUF**

ADOPTION OF MINUTES
   September 13, 2018

CHIEF INFORMATION OFFICER REPORT   **MR. LYNCH**

INFORMATION ITEM ONE – BUDGET OVERVIEW   **MR. LYNCH**

OLD BUSINESS

NEW BUSINESS

ADJOURNMENT

Meeting Date: September 13, 2018

INFORMATION TECHNOLOGY COMMITTEE

ATTENDEES

COMMITTEE MEMBERS
Emily Youssouf, Chair
Josephine Bolus, RN
Scott French (representing Steven Banks in a voting capacity)
Mitchell Katz, MD, President and Chief Executive Officer

NYC HEALTH + HOSPITALS CENTRAL OFFICE STAFF:
Paul Albertson, Vice President, Supply Chain and Materials Management
Machelle Allen, MD, Senior Vice President, Chief Medical Officer
Aaron Anderson, Senior Director, Correctional Health Services
Jennifer Bender, Director, Marketing and Communications
Jeremy Berman, Deputy Counsel, General Counsel
Kenra Ford, Senior Assistant Vice President, Office of Medical & Professional Affairs
Colicia Hercules, Chief of Staff, Office of the Chairperson
Jeffrey Herrera, Senior Director, Correctional Health Services
Jessica Laboy, Assistant Vice President, Correctional Health Services
Barbara Lederman, Assistant Vice President, Information Technology
Nemanja Liskovic, Associate Director, Correctional Health Services
Ross MacDonald, Chief Medical Officer, Correctional Health Services
Maureen McClusky, Senior Vice President, Post-Acute Care Operations
Kim Mendez, Senior Vice President, Chief Nursing Executive
Krista Olson, Assistant Vice President, Finance
Shaylee Papadakis, Senior Management Consultant, Finance
Lisette Saravia, Senior Executive Secretary, Office of the Chairperson
Barry Schechter, Assistant Director, Information Technology
Brenda Schultz, Senior Assistant Vice President, Financial Planning
Devon Wilson, Senior Director, Audit

OTHERS PRESENT:
Tim Cosgrave, Cerner
Justine DeGeorge, Office of State Comptroller
Moira Dolan, Senior Assistant Director, DC 37
Scott French, Chief of Staff, Department of Social Services
Sarina Shrier, Office of Management & Budget

INFORMATION TECHNOLOGY COMMITTEE
Thursday, September 13, 2018

Emily Youssouf called the meeting to order at 10:05 AM. The minutes of the July 19, 2018 meeting were adopted.

CHIEF INFORMATION OFFICER REPORT

Kevin Lynch thanked the Committee and then spoke to the CIO Report.

He began with an Update on Post Acute Care and Correctional Health. He said neither Post Acute Care or Correctional Health Services can utilize Epic as an Electronic Medical Record solution until mid/late 2020 because of the work effort to deploy across our current remaining Acute Care and Gotham/Ambulatory landscape.

Regarding Post Acute Care, Mr. Lynch said we evaluated our options which included staying on paper for the next two years and implement Epic in mid/late calendar 2020, or implement a niche product in a timely fashion in order to leverage better reimbursement and provide better patient care. We can then evaluate Epic in 2020. The increased revenue which we will receive by going to this package through CY 2020 will be greater than the cost of acquiring the package.

Mr. Lynch said for Correctional Health Services our current eClinicalWorks product does not adequately meet our clinical needs and is being replaced in early 2019 with a new product that has no correctional health retrofits. This leaves us in the need of an immediate solution. We can implement a niche product in a timely fashion to continue patient care and evaluate Epic in 2020. The capital funding for this project is covered in the City's capital plan.

Mr. Lynch said both Post Acute Care and Correctional Health Services niche systems will need integration options which will be evaluated with some of the industry standard tools available.

Governance

Mr. Lynch then spoke to Governance. He said the Health Information Technology Prioritization Steering Committee continues the work effort of prioritizing the highest strategic IT projects (10) listed on the CIO Report. Those that are underlined will be addressed in this CIO Report below.

Epic Electronic Medical Record (EMR) Initiative

Mr. Lynch said the GO team continues the work effort to extend our enterprise electronic medical record system across all NYC Health + Hospitals Acute Care, Gotham, and Ambulatory patient care locations. It is scheduled to be completed by the end of calendar year 2019.

He said the next go-live is scheduled for October 20, 2018 (in 35 days). This includes Clinical and Revenue Cycle Epic applications at Woodhull/Cumberland and the retrofit of Revenue Cycle at Queens, Elmhurst, and Coney Island.

Ms. Youssouf asked what retrofitting means.

Mr. Lynch said when we went live with the first Epic rollouts at Queens, Elmhurst, and Coney Island, we only implemented the clinical, not revenue cycle applications. They are using Unity and Soarian. We decided to retrofit it with Epic revenue cycle. We are replacing the old ones with Epic.

Yesterday, we do gate checks every 30 days, starting with 120 days before rollout. Testing is accurate and training is set. So we brought together leadership from each facility and ambulatory to feel comfortable with quality of product. It was very successful.

Mr. Lynch said we trained over 300 SuperUsers. They help our internal go-lives.

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Ms. Youssouf asked if they are employees.

Mr. Lynch said yes, they are employees, not consultants. He said our end-user training starts on Monday. That will be around 3700 staff that we will train right up to go-live. We are confident and looking forward to our next update at the Board meeting.

Enterprise Radiology Integration Update:

Mr. Lynch spoke about Enterprise Radiology Integration. That is our PACS (picture archiving and communication system). He said it is now live at Coney Island, Woodhull, Kings County, and most recently at Metropolitan. He said it is on track for go lives at the remaining sites including Lincoln, Harlem, Bellevue, North Central Bronx, Jacobi, Queens, and Elmhurst which scheduled for fall through winter of 2018/19.

Enterprise Resource Planning (Project _Evolve_) Update:

Mr. Lynch said this project has completed Phase 1, Waves 1-5 which included PeopleSoft's Finance (Accounts Payable, Asset Management, Budget, General Ledger) and Supply Chain (eProcurement, Inventory) modules across all NYC Health + Hospitals locations.

He said Cost Accounting has moved from its planned September go live to a date yet to be determined. The plan is being reworked and a new date is being worked out.

Ms. Youssouf asked what the issue was/

Mr. Lynch said we have several different versions of QuadraMed, Unity and Soarian. The differences have some minor discrepancies that need to be resolved to make it successful. This platform will be for cost accounting.

Dr. Katz said most of our expense is personnel. You can't do cost accounting if you don't know where people work. Our current system does not allow for this. ERP will clean up PeopleSoft and we will know we are accurately counting people.

Ms. Youssouf asked if we will be eventually getting rid of disparate systems?

Mr. Lynch said we will be replacing Unity and Soarian once we leave QuadraMed.

Ms. Youssouf asked if this is in conjunction with PeopleSoft.

Mr. Lynch said we are using PeopleSoft as cost accounting module.

Ms. Bolus asked what we will be left with?

Mr. Lynch said we are keeping PeopleSoft and Epic. We are looking at EMRs for post-acute care and correctional health. I will show a lot of systems we have. We want to collapse onto enterprise systems instead of silos.

Mr. Lynch said we are currently in the initial build for Clairvia Clinical Scheduling (for nurses) and expected to go live for Wave 1 in Spring 2019. Design and build efforts have begun for our Wave 1 facilities, which includes Coney Island, Kings, County, SeaView, McKinney and East New York. He said the rollout of Waves 1B – 1F will continue through the Fall 2019. This integrates with PeopleSoft and EMR.

Mr. Lynch spoke to a slide with the SharePoint site for EITS News. He showed how it has an IT Landscape which as very detailed list of the top ten and all other EITS projects and their accompanying parts. He pointed out the Project Portfolio, which is a summarized view of the projects. We are focusing on the most important projects.

Mr. Lynch then spoke to the slide titled Acute Facilities + Post Acute Care + Correctional Health Services + Gotham Health Facilities. It shows all 70+ sites where NYC Health + Hospitals provides care. He moved to the next slide, called Current Electronic Medical Record + Revenue Cycle Landscape. Then he showed EMR

Future State, which is how the enterprise will look after the Epic Clinical and Revenue Cycle is fully implemented. He said once we fully implement Epic, clinicians will have all information about a patient no matter where in the system that person is.

Mr. Lynch went on to speak to the slide NYC H+H Epic and QuadraMed Instances. He said there had been concern about where Ambulatory locations were.

Then Mr. Lynch spoke to NYC H+H Epic and QuadraMed Instances, Post October 20, 2018, when Epic is implemented at a group of sites. He said Bellevue and Harlem will go live in the Spring.

Ms. Youssouf said these slides are very helpful to her and to the Committee. She said as laymen, this makes it much easier for us to understand.

Mr. Lynch showed the slide NYC H+H 2020 EMR Landscape. This is what the enterprise will look like after full Epic implementation. He showed the next slide, which showed that Epic will later have future state integration with Post Acute Care EMR and Correctional Health Care EMR.

The next slide Mr. Lynch showed was NYC H+H Clinical IT Systems, Current and Future State. Each arrow represents an interface. There are 65 interfaces now but we will be retiring some soon. Then he spoke to NYC H+H Clinical IT Systems Interfaces. He said there are over 200 different applications tracking to Epic and QuadraMed. There are almost 1000 in all of IT that we maintain currently. We show it on our site. We look to them when we need an application. We will show the ones we are keeping in the future.

Ms. Youssouf said these are very helpful slides.

Mr. Lynch showed Epic EMR Implementation Timeline. After that, he addressed GO Program Executive Budget Summary.

The last slide Mr. Lynch showed was Enterprise Radiology Integration Initiative Time Line.

Dr. Katz asked if the Board has seen this.

Ms. Youssouf said I think they want to know how many systems we have. I am glad that information is in here.

Dr. Katz said it is not unusual for a big organization to have this many systems but it shows a lot potential. He said Kevin got an email from a doctor asking if Epic will allow him to see patient information from various hospitals. People are trained to think that EMRs are only hospital-centric and not systemwide.

Ms. Youssouf said this will make us more efficient and allow our medical staff to deliver better care. This will lead to more revenue and better outcomes.

Dr. Allen thanked the Chair for helping and guiding through the process.

Ms. Youssouf thanked the medical staff for all their work.

ACTION ITEM 1:

RESOLUTION FOR CERNER LABORATORY INFORMATION SYSTEMS AMENDMENT TO THE PARTICIPATION AGREEMENT WITH NORTHWELL

Mr. Lynch read the resolution:

Authorizing the New York City Health and Hospitals Corporation (the "NYC Health + Hospitals") to execute an amendment to the Participation Agreement (the "Participation Agreement") with Northwell Health, Inc. ("Northwell") to support an amendment to the agreement (the "Cerner Agreement") between Northwell and Cerner Corporation ("Cerner") by which Cerner will provide implementation and support services to

complete the installation and roll-out of the Cerner laboratory information system (the "LIS") across all of the NYC Health + Hospitals system with the resulting amendment to the Cerner Agreement increasing the total budgeted cost by $12,955,085 bringing the cost of such implementation and roll-out to a not to exceed total, inclusive of all expenses, of $34,379,677 over the period required for such implementation and roll-out currently estimated to be approximately June, 2020.

Mr. Lynch, Ms. Ford, and Dr. Garofalo addressed the presentation called Cerner Laboratory Information Systems, Application to Approve an Amendment to the Participation Agreement with Northwell September 20, 2018.

Dr. Garofalo spoke to Background. He said in 2015, NYC Health + Hospitals entered into an agreement for a joint venture with Northwell; per the agreement, NYC Health + Hospitals would send outpatient lab tests to the existing Northwell lab, pending construction of a new joint lab venture. He said the Joint Venture lab services will utilize Cerner LIS (laboratory information services).

Dr. Garofalo said the Benefit is of a LIS is a standardized, enterprise-wide model, encompassing all enterprise lab services with seamless integration to the joint venture laboratory.

Ms. Ford spoke to Reasons for Amendment. She said Cerner LIS has been implemented at Elmhurst, Queens and Coney Island Hospitals; further build is necessary to align with the Epic Financials. She said based on prior experiences/"lessons learned" with the Cerner LIS implementation at Elmhurst, Queens and Coney Island Hospitals, additional services are needed for training and support services for the remaining facilities.

Ms. Ford said some of the build/implementation work already performed by Cerner for remaining sites requires updating/modification, to alignment with revised Epic timeline.

Ms. Youssouf asked about the next slide: Cost Breakdown. I remember this venture kicking off a few years ago. Is this retrofit to hook it up with Epic?

Ms. Ford said the joint venture remains the same. The retrofit is for sites already live with Epic.

Mr. Lynch said we originally decided to build it with Soarian and Unity. For Revenue Cycle, we had to claw it back to Epic.

Ms. Ford said Cerner had also done work at Jacobi and North Central Bronx, in addition to three facilities that already have Epic. This is a one-time upgrade. We have to retouch the three sites with Epic but going forward, we should not have to do any more retrofits.

Ms. Youssouf asked if that is because Cerner has not yet been implemented anywhere else.

Ms. Ford said that was correct. The retrofit will take place on October 20. It should really be Epic and Cerner when we talk about that date.

Ms. Youssouf asked if clinicians are happy with Cerner.

Ms. Ford said we are generally speaking doing well and making progress. We are working on issues to make the process smoother and using lessons learned with each implementation.

Mr. Berman said we are at the investment stage which has taken longer due to changes in Epic financials. We will be able to send many more in the future. We are still building and working on this. The greater benefits will come later.

Ms. Ford said we were working very short staffed and we are realigning staff for this project.

Ms. Bolus asked if we will need to continue to retrofit at future facilities.

Ms. Ford said it will be part of the standard project, so no need to retrofit.

Mr. Lynch said we retrofitted the standard build for future rollouts. Clinical is pretty standard. But the lab product will be consistent in future go-lives.

Ms. Ford said our lab timeline is equal to Epic.

Ms. Bolus asked how specimens are collected.

Ms. Ford said Cerner is the delivery service. It is daily.

Ms. Bolus asked what happens in a snowstorm. Do we use our own labs?

Ms. Ford said it would not affect delivery as we make preparations. She said the tests going out are not time critical.

Dr. Katz said hospitals no longer do all tests. It is no longer a viable model. You can have backups within the hospital in case of emergency. But all other non-emergency labs should be sent out for pricing purposes. You want automation because it prevents occupational injuries. I support this 100%. On the other side, there will be more point of care testing where clinician does my tests right then and there. At my appointment at Gouverneur, they ask if I want tests done right there. If I am treating a patient, I could have my nurse do test and we can adjust medication without phone calls or extra visits. There are more tests that are being done this way.

Ms. Ford said we are working with doctors to create a plan to meet needs of patients.

Dr. Katz said we want to make right decisions for patients.

Mr. Berman said the benefits in this venture will be see which tests are over-administered and other variations. It will help in reducing costs since we will have less equipment. The price of new equipment is coming down due to our arrangement with Northwell.

Ms. Ford said regarding emergency planning, we can rely on ourselves by sending to other enterprise sites and moving staff around.

Dr. Katz said when I see patients at Gouverneur, the labels have normal or abnormal listings on each test. I have to open each one to see the information. This will change with Epic. I will see results and not just abnormal flag.

The resolution was adopted.

ACTION ITEM 2:

RESOLUTION FOR QUADRAMED/HARRIS CONTRACT RENEWAL (THE "4TH AMENDMENT")

Mr. Lynch read the resolution:

Authorizing the New York City Health and Hospitals Corporation (the "NYC Health + Hospitals") to execute an amendment to extend its contract with Harris Computer Corporation ("Harris"), successor in interest of QuadraMed, to continue operation, maintenance and support of NYC Health + Hospitals' legacy electronic medical record system, QuadraMed, for a term of three-years with four (4) one-year renewals in an amount not to exceed $61,316,936.00.

Mr. Lynch and Dr. Garofalo addressed the presentation called QuadraMed Contract Renewal, The "4th Amendment." He said Harris now owns the QuadraMed system. We will need to maintain the six QuadraMed system until we go to Epic.

Ms. Youssouf asked about the slide called Contract History which listed the Date Executed, Agreement, and Vendor of our agreements to use QuadraMed. She asked if this is a real IT increase.

Dr. Garofalo said the original contract had a wind-down clause and there was no other EMR on the table. We got better pricing than we did in 2011.

Ms. Bolus said this system has been sold a lot.

Mr. Lynch said there is stability in this agreement. The four years allow us to move forward with implementing Epic and the one year options give us a safety net of future service, whether we need it or not. We prefer not to use them but they are committing to us. They agreed to support us if needed.

Dr. Katz asked if company will be around.

Mr. Lynch said they are a larger company that will be around. They set aside staff to continue to support this system.

Dr. Garofalo says they own a lot of big systems.

Dr. Katz said it was probably a good thing they were bought. That makes it more secure. Big companies want systems like this to maintain cash flow for the future. They do not have much to do. Guaranteed source of income.

The resolution was adopted.

ACTION ITEM 3:

RESOLUTION FOR CERNER LABORATORY INFORMATION SYSTEMS AMENDMENT TO THE PARTICIPATION AGREEMENT WITH NORTHWELL

Dr. Katz said since we were all here for the previous presentation by Correctional Health, we do not need to do it again.

Ms. Youssouf said she wanted the record to show she was present for the previous meeting and heard the presentation and that Ms. Bolus is a member of that committee. Everyone here was present.

Mr. Lynch read the resolution:

Authorizing New York City Health and Hospitals Corporation (the "System") to execute an agreement with Fusion, a division of Fusion Capital Management, to procure a Correctional Health specific electronic medical record for the System's Correctional Health Services division with primary care, pharmacy, specialty services, mental health and drug treatment in 11 NYC jails, with an initial term of three years with two one-year options to renew solely exercisable by the System and with total amount over the combined five-year term not to exceed $12,999,354 to pay Fusion.

Ms. Youssouf said when you mentioned Post Acute Care and Correctional Health would be separate from the rest, that was because Epic does not have a module for those. I do not think we need to hear it all again.

Ms. Bolus said I know the company that previously had Rikers Island. I want to say the current Correctional Health Services team is a big improvement.

Ms. Youssouf said they have a tough job.

The resolution was adopted.

There being no further business, the meeting was adjourned at 11:10 AM.

CHIEF INFORMATION OFFICER REPORT

Briefing for the Information Technology Committee of the NYC Health + Hospitals
November 8, 2018

Thank you and good morning. I would like to provide the committee with the following brief updates:

(H$_2$O) Epic Electronic Medical Record (EMR) Initiative:

- We have a new name for enterprise medical record: H$_2$O. It stands for Health and Hospital Online. H$_2$O has been successfully turned on at Woodhull/Cumberland and 10 associated Gotham Clinics for clinical and revenue cycle modules. We also retrofitted the Revenue Cycle module for Queens, Elmhurst, Coney Island and 17 associated clinics which have already been using the clinical modules to provide patient care.
- Patient care is being performed using H$_2$O in a meaningful way. The project is progressing positively with the natural discovery and remediation of a standard go-live issues. Our enthused and energetic staff are using H$_2$O effectively to provide patient care. We continue onsite support for the next several weeks and will have dedicated staff allocated for additional weeks, as needed.
- Our next go live will be at Bellevue, Harlem and all of their associated Gotham clinic locations on March 30, 2019.

NYC H+H

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

Dyckman Clinica

Morrisania

North Central Bronx

Gunhill

PS 197 John Russwurm

JHS117

JHS 22

Tremont

PS 161 Pedro Albizu Campos

CS 200 James Mccune Smith

Lincoln

Daniel Webster

Vernon C. Bain Ctr.

Jacobi

PS 194 Countee Cullen

CS 30/31 Hernandez & L. Huges

CE73

Melrose Houses

Belvis

IS 10 Fredrick Douglas

Harlem

CS 46 Tappan

Carter

La Clinica del Barrio

Norman Thomas HS

Metropolitan

Rikers Island

St. Nicholas

IS 286/172

Henry Street

Corona District Health

Sydenham

Manhattan Courts

Junction

Woodside

Judson

Manhattan Detention Ctr.

Bellevue

Roberto Clemente

Coler

Long Island City HS

IS 145

Springfield Garden High School

850 Grand St HS

Jonathan Williams

Greenpoint

Elmhurst

Women's Health Ctr

PS 86

Gouverneur

Cumberland

Woodhull

Williamsburg

Friendship Geriatric Clinic

Queens

Ft. Greene

Sumner

Bushwick

McKinney

Bedford/Throop Clinic

IS 49

Ridgewood

Mariner's Harbor

Crown Heights

Brownsville

East New York

Parsons

IS 166

Brooklyn Criminal Court

Coney Island

Homecrest

Sutter

South Queens

Kings County

Bushwick Educational Campus

Brooklyn Detention Ctr.

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Sea View

Vanderbilt

IS 302

Ida G. Israel

Springfield Gardens

NYC H+H
Current Electronic Medical Record + Revenue Cycle Landscape

QuadraMed #1
+2 Gotham Clinics
North Central Bronx
Jacobi

Soarian
Revenue Cycle

+7 Gotham Clinics
QuadraMed #2
Lincoln

Unity
RevCycle #2

Metropolitan

QuadraMed #3
Harlem
+12 Gotham Clinics
Unity
RevCycle #3

QuadraMed #4
Bellevue
+6 Gotham Clinics
Unity
RevCycle #4

Unity
RevCycle #6
Kings County
+7 Gotham Clinics
QuadraMed #6

H_2O
Clinical + Revenue Cycle
+27 Gotham Clinics

Woodhull
Elmhurst
Queens
Coney Island
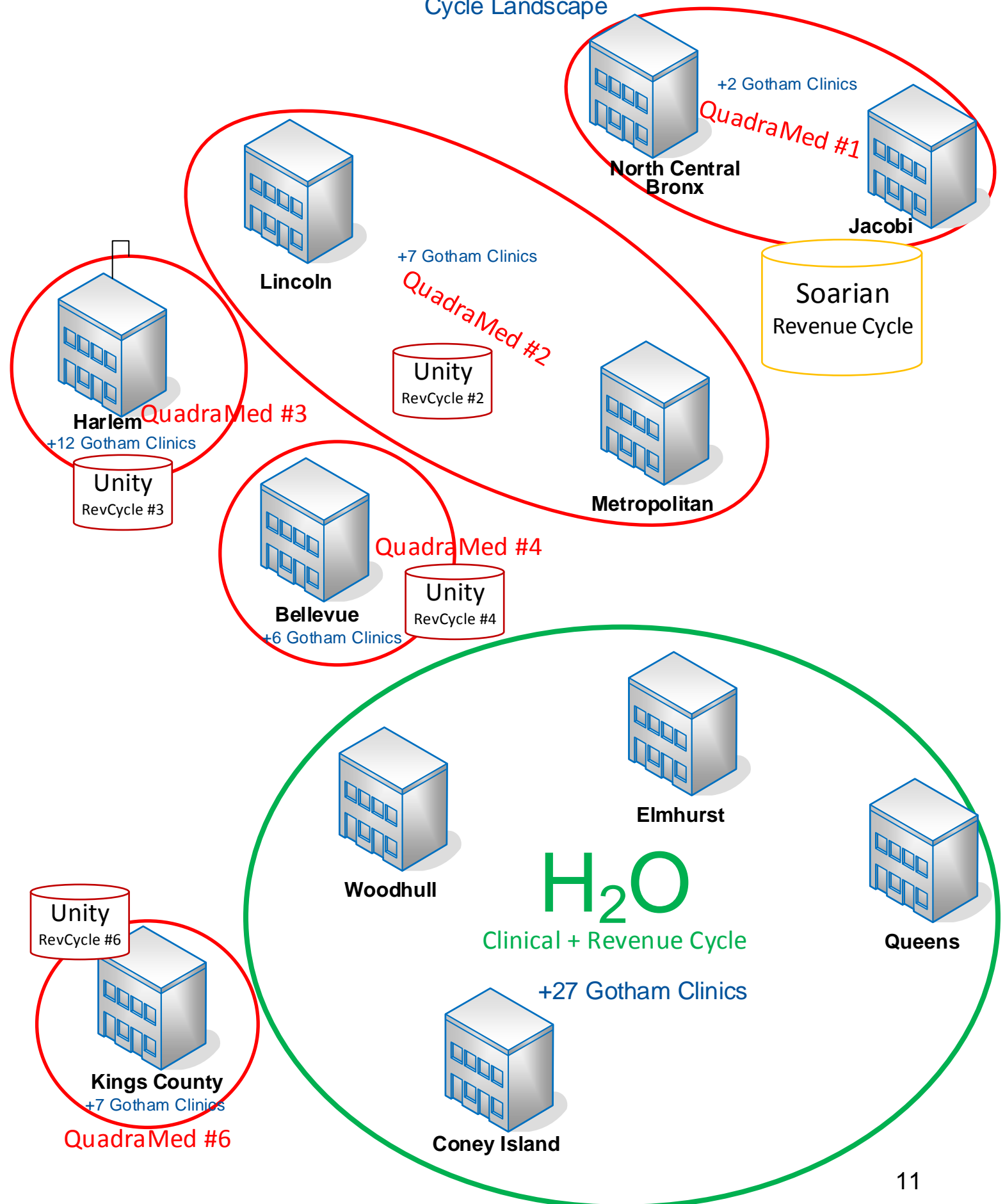
NYC H+H
EMR future state
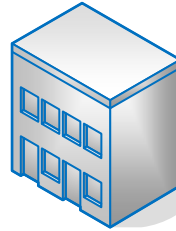
North Central Bronx
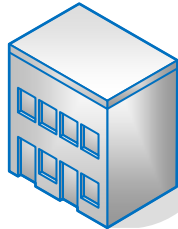
Jacobi

Lincoln

Harlem
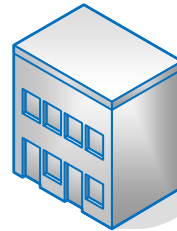
Metropolitan
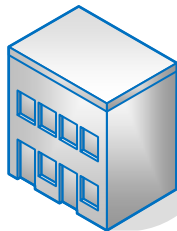
Bellevue

H$_2$O Clinical & Revenue Cycle

+61 Gotham Clinics
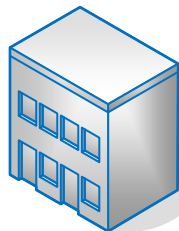
Woodhull
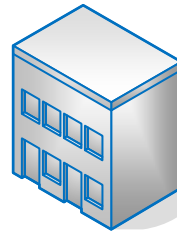
Elmhurst
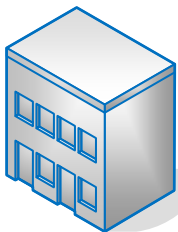
Kings County

Queens

Coney Island

Updated 08/30/18

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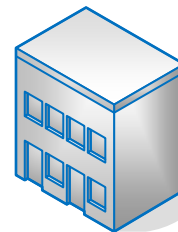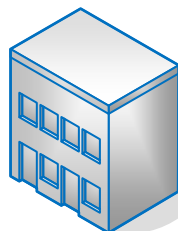
NYC H+H H₂O and QuadraMed Instances
Post October 20, 2018

Legend:
- Jacobi / NCB Instance
- Met / Lincoln Instance
- Harlem Instance
- Bellevue Instance
- Woodhull Instance
- Kings County Instance
- H₂O Clin. & Rev. Cyc

Updated 10/25/18

Map labels:

Dyckman Clinica, PS 197 John Russwurm, JHS117, JHS 22, Morrisania, North Central Bronx, Gunhill, PS 161 Pedro Albizu Campos, CS 200 James Mccune Smith, Lincoln, Daniel Webster, Tremont, Jacobi, PS 194 Countee Cullen, CS 30/31 Hernandez & L. Huges, CE73, Melrose Houses, Belvis, IS 10 Fredrick Douglas, Harlem, CS 46 Tappar, Carter, La Clinica del Barrio, Sea View, St. Nicholas, IS 286/17, Norman Thomas HS, Henry Street, Metropolitan, Corona District Health, Sydenham, Judson, Bellevue, Junction, Woodside, Long Island City HS, IS 145, Springfield Garden High School, Roberto Clemente, Coler, Gouverneur, 850 Grand St HS, Jonathan Williams, Greenpoint, Elmhurst, PS 86, Cumberland, Woodhull, Williamsburg, Women's Health Ctr, Ft. Greene, Sumner, Bushwick, Friendship Geriatric Clinic, Queens, McKinney, Bedford/Throop Clinic, Ridgewood, Mariner's Harbor, Crown Heights, Brownsville, IS 49, East New York, Parsons, IS 166, Bushwick Educational Campus, South Queens, Kings County, Homecrest, Sutter, Vanderbilt, IS 302, Ida G. Israel, Coney Island, Springfield Gardens

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NYC H+H H_2O Ecosystem

Current & Future State

Central node: **H_2O** (cylinder/database)

Surrounding nodes (clockwise):

- Data Repository — BI Intelligence
- Intellicred Phys Credential — IntelliSoft
- JCW - HIM Transcription — CIH, HLM
- PowerScribe 360 RAD Nuance — Transcription
- Provation GI — CIH,QHC,ELM, JMC, NCB, WH,KCH,BHC,HLM,MET
- PACS/VNA — CIH, WH, KCH, MET
- PACS AGFA — QHC, ELM 05/2019
- FDNY Intermedix — BHC, GU, HLM, SYD
- DOH Syndromic Surveillance
- DOH Immunization
- DOH Havebed
- DOH NICS
- NYS Quitline
- Novanet
- Abbott
- Pweb — 10/2019
- AllScripts — Case Mgmt 10/2019
- CareWebQI — MCG
- InterQual — Change Health Care
- Intellivue BE — Phillips
- Phillips Cardiac — Bedside Monitors
- BIS (Bispectral Index) Patient Monitors — Multiple Vendors
- Anesthesia Machines — Multiple Vendors
- I/P Vents — Multiple Vendors
- vRad After hours — QHC, ELM, MET, JMC, NCB, LHC
- NexxRad Overnight coverage — CIH
- Cadwell SierraWave EMG — CIH
- NantHealth BioMed
- OBGYN-AS — Ultrasound KCH,LHC,JMC,NCB
- Xltek Neurology — EEG ELM, QHC, KCH, CIH, JMC, NCB,MET
- QPath POC Ultrasound — ELM
- IntelliSpace Perinatal Phillips — QCH, ELM, CIH, WH, KCH, LHC, MET
- TIGR Telehealth
- NEC — ELM
- 3M H.I.M
- Pyxis Supply Cabinets
- Surescripts
- Pyxis Rx Med Cabinets
- PenRad Mammo 10/2018
- Xcelera -non invasive — Phillips KCH, WH, CIH,BHC, QHC, LHC, HLM, MET
- TraceMaster — Phillips KCH, ELM, BHC 10/2019
- Pyramis ECG Mortara/Welch Allen — QHC, JMC, NCB 2019/2020
- GE-MUSE Cardiology — HLM, LHC, MET, CIH, WH
- GE Cardio Centricity Workgroup — BHC, CIH
- GE DMS — Invasive system ELM, JMC, KCH 12/2018
- HealthFirst DSRIP
- Dentrix Henry Schein
- Soarian Cerner — JMC, NCB, CIH, ELM, QHC, LTC
- Unity Cerner — MET, WCH, LCH, HLM,BHC, KCH
- Change HealthCare — RevCycle
- Experian — Credit Card
- Tunstall Pt Reminders — CIH
- Tech for Bus. Corp Pt Reminders — QHC, ELM
- IOD Prism H.I.M
- NYCIG-HIE
- Sentinal H.I.M.
- FSCM PeopleSoft
- Collaborative Care Mgmt — Behavioral Health
- Phycare — 03/2019
- QML – Telcor POC
- Cerner LAB
- HCLL Blood Bank
- Jellyfish — ELM,QHC
- Hyland OnBase Enterprise Content Mgmt
- OPUS/ OP Pharmacy
- CBORD Dietary
- SailPoint Identity Mgmt
- MOSAIQ Elekta — QHC, ELM, KHC
- Enterprise Resource Planning

Legend

- Enterprise Standard (green outline)
- Multiple Instances (orange outline)
- Finance (blue)
- Single Instance (black outline)
- Will be decommissioned (dotted outline)
- Devices (black square)
- Not in scope for 10/20/18 Go-Live. Analysis in process for future Go-Live (dark red outline)

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Updated 11/15/18

NYC H+H Legacy Clinical IT Systems

Pharmacy

- Cart Fill (All sites)
- Connect Rx (KCH/LHC/MHC)
- eRx (All sites)
- Robot (BHC/KCH/LHC/MHC/JMC/NCB)
- QS1 Retail O/P Rx (BHC)
- Pyxis Med Cabinet (BHC/HLM/KCH/LHC/MHC/JMC/NCB)

Opus O/P Rx

Surescripts

Miscellaneous

- Clairsol Transcription (KCH)
- ED Discharge ADT1-2-3 (WHH)
- Portal DHIT (All Acute and DTCs)
- Decision1 (All sites)
- Faculty Practice (All sites)
- Press Ganey (All Acute and DTCs)
- DOH CIR & Surveillance (All Acute and DTCs)
- Generic ADT (All sites)
- Rhapsody (KCH)
- DOH Lead (KCH)
- Media Manager (MHC)
- RHIO (All sites)
- Discharge ADT (WHH)
- Mail Machine (JMC/NCB)
- WP OR (BHC/LHC/MHC)
- ED Dashboard (All sites)
- Portal CCDA (All Acute and DTCs)

All sites = All Acute Care facilities, DTCs and LTCs

(Charge/Billing center)

- SMS Reverse (All sites)
- Soarian Visit Close (JMC/NCB)
- Soarian Charge (JMC/NCB)
- Unity Charge Billing (All sites)

Registration

- Unity Reg (BHC/Gouv/HLM/LHC/MHC/KCH/WHH)
- Soarian Registration (JMC/NCB/Cole/Carter/DSSM/Gouv SNF)
- Invision LTC (Cole/Carter/Gouv SNF/DSSM)
- Soarian Scheduling (All Acute and DTCs)
- ADT Out to Ensemble (JMC/NCB)

QuadraMed
Bellevue
Harlem
Kings County
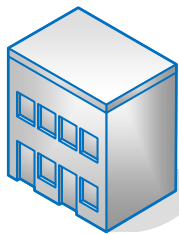North Central Bronx
Jacobi
Lincoln
Metropolitan

Laboratory

- Advia (KCH/JMC/NCB)
- Hook Server (All sites)
- Abbott Sybase (HLM/LHC/MHC)
- ISTAT (HLM/LHC/MHC/JMC/NCB)
- Batch Server (BHC/HLM/LHC/MHC/JMC/NCB)
- Maciel (JMC/NCB)
- BioSite Triage (BHC/Cole)
- MediWare Blood Bank (All Acute)
- CHEM (BHC/KCH/JMC/NCB)
- Northwell (All sites)
- CliniComp (BHC)
- Peer to Peer/Reference Lab (All sites)
- Clinitek (BHC/HLM/KCH/JMC/NCB/WHH)
- Rapid Lab JMC/NCB
- CoPath (BHC/LHC/MHC)
- Roche (HLM/MHC/KCH/JMC/NCB/WHH/All DTCs)
- ECLRS (All Acute and DTCs)
- Sybase (HLM/KCH/LHC/MHC)
- EVOLIS Subscriber (KCH)
- Telcor (All sites)
- Facscaliber (BHC/KCH/JMC/NCB)
- WAM (BHC/MHC/KCH/JMC/NCB)
- Gen Probe (JMC/NCB)

Radiology/GI/Cardiology

- AS Ultrasound (LHC/KCH/JMC/NCB)
- GE Viewpoint OBS/US (MHC)
- Provation MD (BHC)
- Talk Tech (BHC/HLM/JMC/NCB/KCH/WHH/All DTCs)
- Digisonics (KCH)
- McKesson/AGFA PACS (All sites)
- Pyramis (JMC/NCB)
- Viasys Pulmonary (KCH/LHC/WHH)
- Olympus GI Endoworks (BHC/HLM/KCH/JMC/NCB/WHH/All DTCs & LTCs)
- MOSAIC (KCH)
- R 4 Ultrasound (WHH)
- VRAD/Nuance Powerscribe (All sites)
- GE-ADT (JMC/NCB)
- MUSE EKG (HLM/LHC/MHC)
- Rapid Link (Carter)
- VRC (Virtual Radiology) (All LTCs)
- GE Centricity (BHC/JMC/NCB)
- PenRad Mammo (All sites)
- Rapid Point (Carter)
- Xcelera Cardiology (BHC/HLM/LHC/MHC/KCH/WHH/All DTCs & LTCs)

Ancillary

- CCW (BHC)
- Stentel Transcription (JMC/NCB)
- Cbord Dietary (BHC/KCH/WHH)
- Tracemaster (BHC/Cole/Carter/Gouv Gouv SNF/KCH/ENY/WHH/Cumberland)
- Navicare OB (HLM)
- Tracevue OB (MHC/KCH/WHH)
- Picis Surgery (BHC)

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Last Updated: 11/2018

H₂O Clinical & Revenue Cycle Implementation Timeline

Briefing for the Information Technology Committee of the NYC Health + Hospitals
November 8, 2018

Enterprise Radiology Integration Initiative:

- Live at Coney Island, Woodhull, Kings County, and Metropolitan.

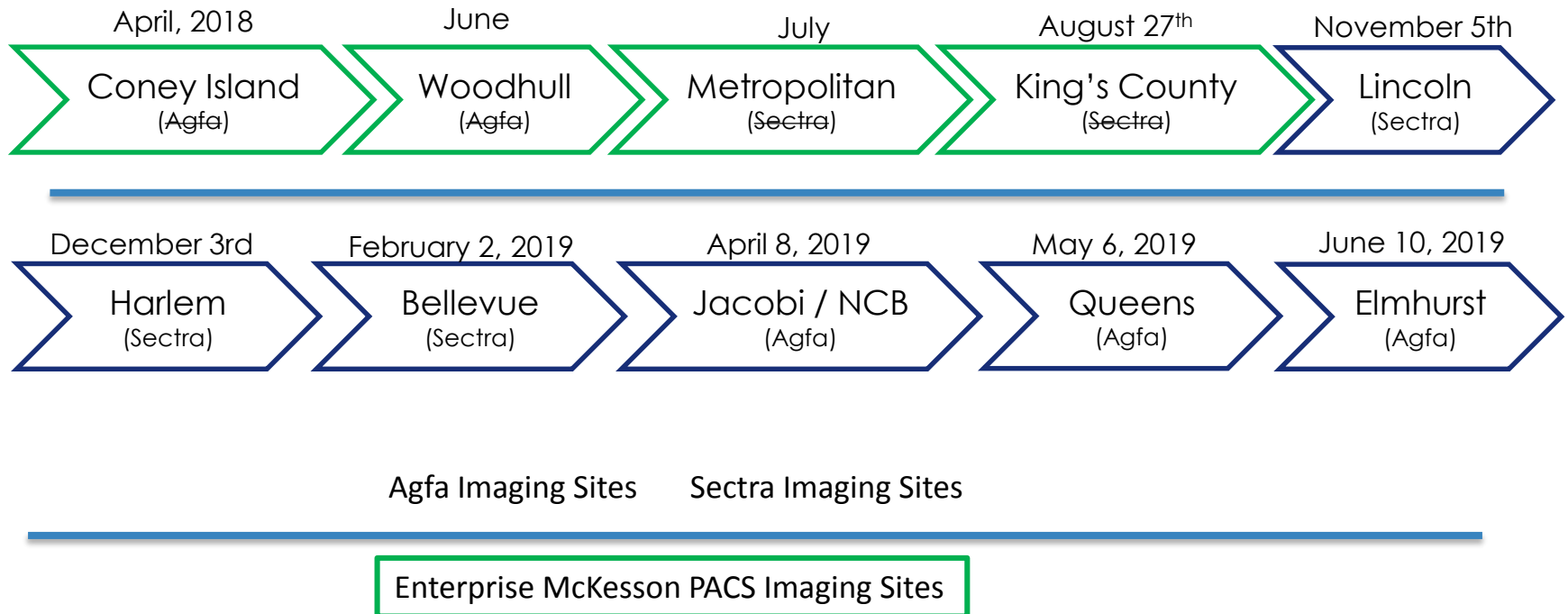- We adjusted the go-lives dates at the remaining sites to align with other prioritized projects. The remaining sites include: Lincoln, Harlem, Bellevue, North Central Bronx, Jacobi, Queens and Elmhurst.

Enterprise Radiology Integration Initiative Time Line

April, 2018	June	July	August 27th	November 5th
Coney Island (Agfa)	Woodhull (Agfa)	Metropolitan (Sectra)	King's County (Sectra)	Lincoln (Sectra)

December 3rd	February 2, 2019	April 8, 2019	May 6, 2019	June 10, 2019
Harlem (Sectra)	Bellevue (Sectra)	Jacobi / NCB (Agfa)	Queens (Agfa)	Elmhurst (Agfa)

Agfa Imaging Sites   Sectra Imaging Sites

Enterprise McKesson PACS Imaging Sites

CHIEF INFORMATION OFFICER REPORT

Briefing for the Information Technology Committee of the NYC Health + Hospitals
November 8, 2018

Enterprise Resource Planning (Project *Evolve*) Update:

- Cost Accounting is still planning their go-live to be aligned with other priority projects.

- Phase 2 – PeopleSoft Payroll/Time & Labor/Absence Management/Electronic Time Capture:

  o **Payroll Go-Live** is on track for January 2019. We have continued detailed testing efforts including multiple parallel payroll cycles. We are tracking expected milestones / gate-checks to ensure we are ready of a successful go-live.

  o **Time and Labor/Absence Management** modules are on track for May 2019.

  o **Electronic Time Capture** is on track to begin rolling out in June 2019.

- **Clairvia Clinical Scheduling** in progress and expected to go live for Wave 1 in Spring 2019. Design and build efforts have progressed positively for our Wave 1 facilities, including Coney Island, Kings, County, Sea View, McKinney and East New York.

  o The rollout of Waves 1B – 1F will continue through the Fall 2019.

- **Enterprise Information Technology System's budget overview presentation**.

This completes my report today. Thank you.

Information Technology Budget Overview

IT Committee
November 8, 2018
Kevin Lynch, SVP/CIO

H$_2$O Project Budget (Clinical & Revenue Cycle)

Operating: $515M (FY13-FY21)
Capital: $537M (FY13-FY21)

Enterprise Information Technology Services Budget (Other than H$_2$O):

Operating (FY18): $240M
Capital* (FY19-FY21): $156M

Capital Restructuring Finance Program (CRFP)

NYS Grant (2017-2021) IT Portion of the Total Grant Award: $212M

*City Capital funds remaining based on Sept. FY19 Capital Plan

H$_2$O Project Executive Budget Summary
($ in Millions)

Summary through FY19 (as of 9.30.18)	Accruals (FY13-FY19 Q1)	Remaining Balance	Total
Clinical Capital	$262.96	$123.92	$386.89
Revenue Cycle Capital	$29.86	$120.55	$150.41
Total Capital	**$292.82**	**$244.47**	**$537.29**
Clinical Operating	$246.67	$130.51	$377.18
Revenue Cycle Operating	$17.44	$121.27	$138.71
Total Operating	**$264.11**	**$251.78**	**$515.89**
Total Clinical	$509.63	$254.43	$764.06
Total Revenue Cycle	$47.30	$241.82	$289.12
Total	**$556.93**	**$496.25**	**$1,053.18**

NYC HEALTH+ HOSPITALS

H$_2$O Operating Accruals vs Balance as of 9.30.18 ($ in Millions)

FY13-FY21 Clinical and Revenue Cycle Operating Budget Summary

Category	Accruals	Balance
Total Operating ($515.89)	$264.11	$251.78
Application Support (FTE) ($125.18)	$87.78	$37.40
Implementation Support ($206.27)	$91.41	$114.86
Interfaces ($12.76)	$1.83	$10.93
Hardware ($30.78)	$24.66	$6.12
Third Party & Other Software ($72.98)	$26.60	$46.37
Epic Contract ($67.93)	$31.84	$36.09

(Horizontal axis: $0.00, $100.00, $200.00, $300.00, $400.00, $500.00, $600.00)
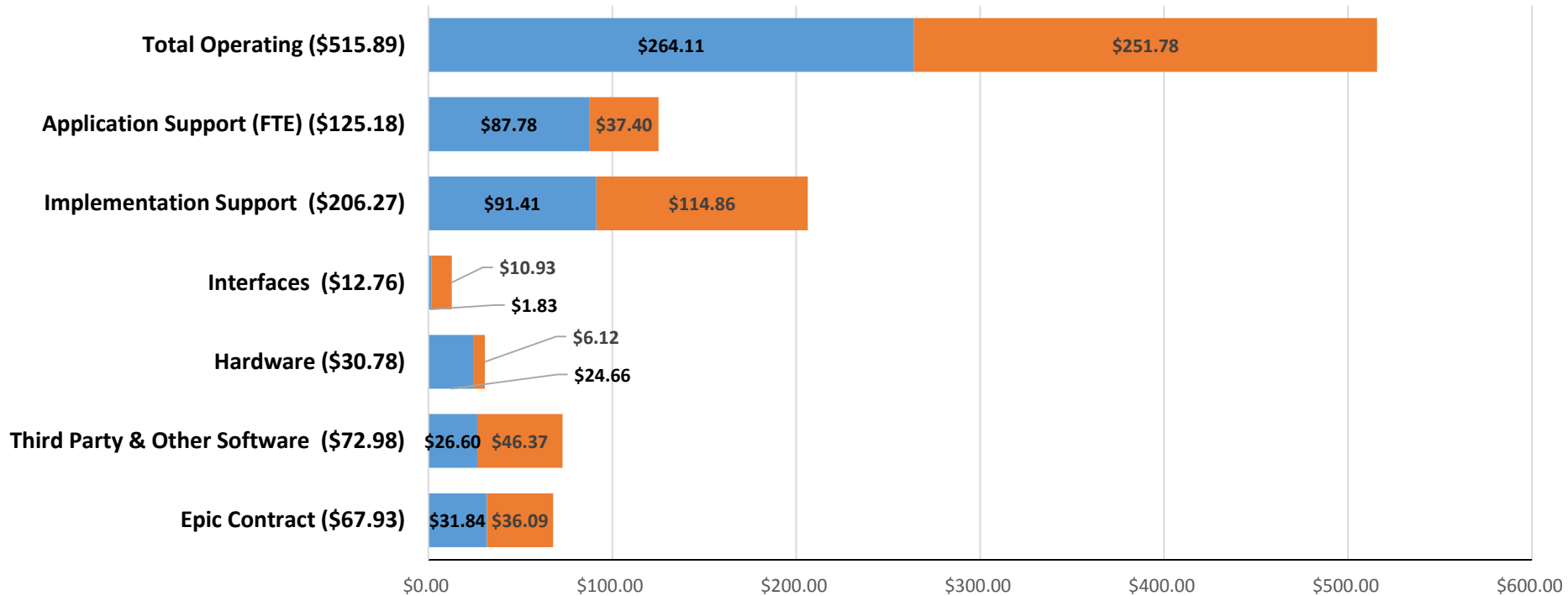
Application Support – H+H Employees assigned to H$_2$0 program; as of 10/15/18 there are 182 H+H employees
Implementation Support – Consultants performing support and at-the-elbow support services. As of 10/15/18 there are 63 consultants in the operating budget; the number of consultants ramps up/down based on the project needs
Interfaces – build and maintenance of the integration points between H$_2$0 and H+H business and clinical software applications
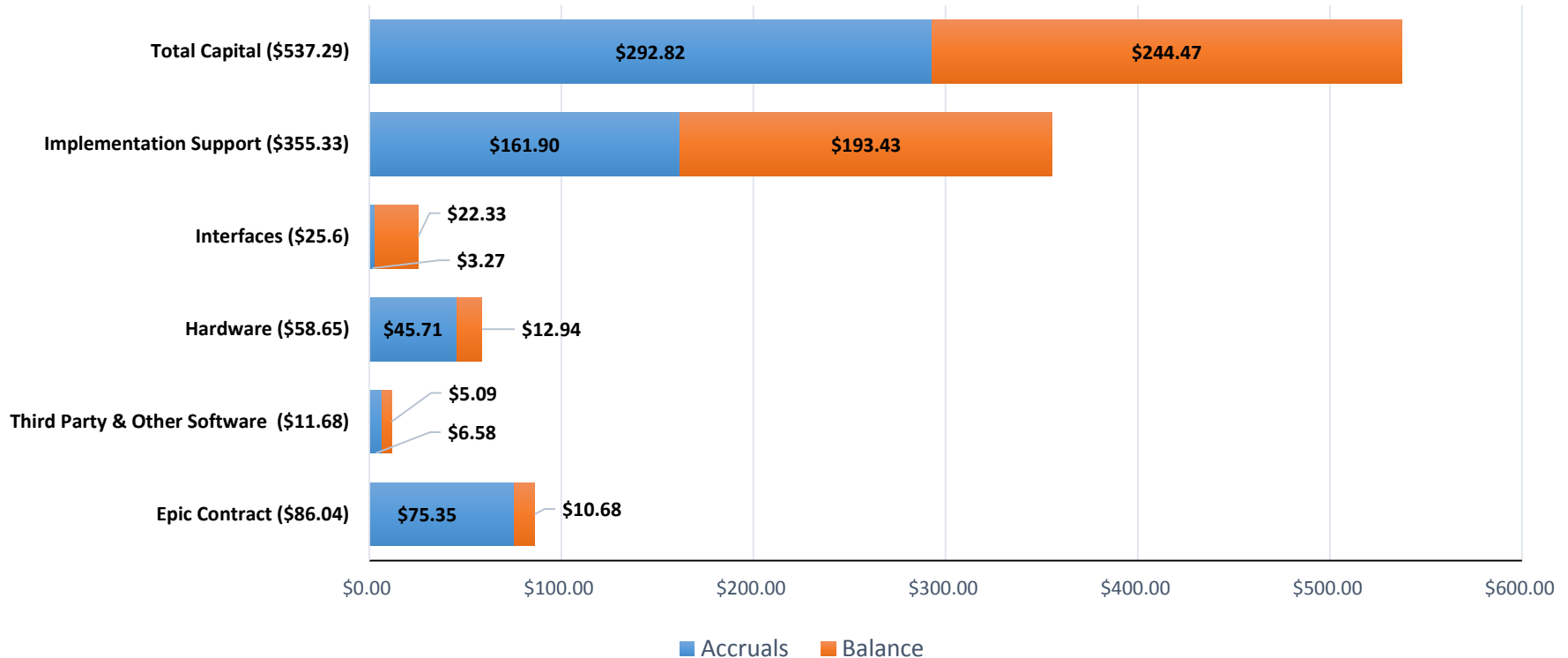**Hardware** – purchase and maintenance of end-user equipment; servers and storage equipment in Jacobi and Sungard Data Centers
Third Party and Other Software – maintenance for non-Epic software
Epic Contract – maintenance of Epic software licenses

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H$_2$O Capital Accruals vs Balance as of 9.30.18 ($ in Millions)

FY13-FY21 Clinical and Revenue Cycle Capital Budget Summary

Category	Accruals	Balance
Total Capital ($537.29)	$292.82	$244.47
Implementation Support ($355.33)	$161.90	$193.43
Interfaces ($25.6)	$3.27	$22.33
Hardware ($58.65)	$45.71	$12.94
Third Party & Other Software ($11.68)	$5.09	$6.58
Epic Contract ($86.04)	$75.35	$10.68

■ Accruals ■ Balance

Implementation Support – Consultants performing design, build, testing and deployment. As of 10/15/18 there are 163 consultants in the Capital budget; the number of consultants ramps up/down based on the project needs

Interfaces – build of the integration points between H$_2$0 and H+H business and clinical software applications

Hardware – purchase and installation of end-user equipment; servers and storage equipment in Jacobi and Sungard Data Centers
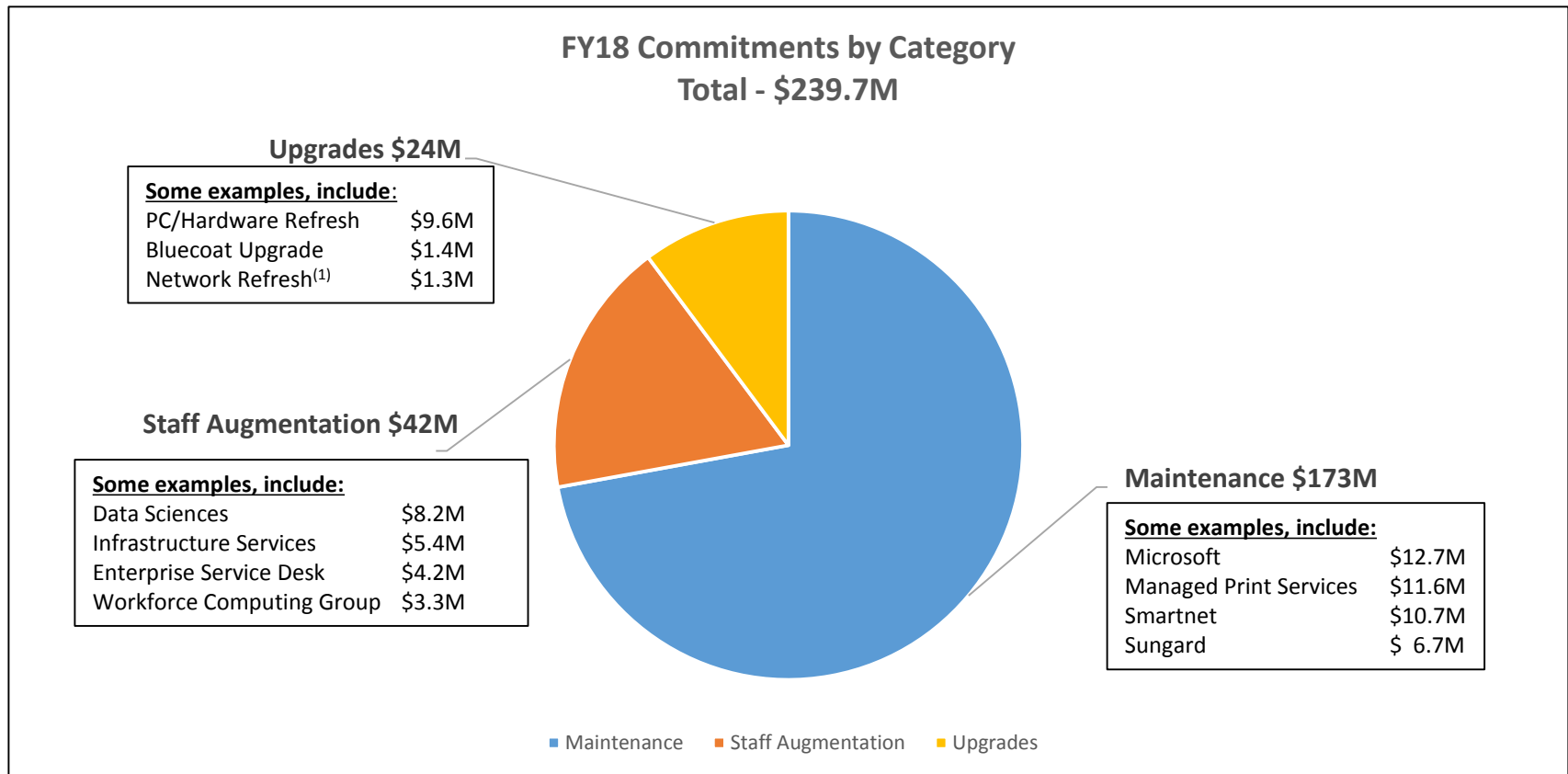
Third Party and Other Software – purchase of non-Epic software

Epic Contract –purchase of Epic software licenses

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FY18 Historical Spend (Non H$_2$O - Operating)

- The FY18 Commitments for Non H$_2$O was $239.7M. This does not include reserves, Personal Services or H$_2$O-related OTPS funding.

($ in millions)

FY18 Commitments by Category
Total - $239.7M

Upgrades $24M

Some examples, include:	
PC/Hardware Refresh	$9.6M
Bluecoat Upgrade	$1.4M
Network Refresh[1]	$1.3M

Staff Augmentation $42M

Some examples, include:	
Data Sciences	$8.2M
Infrastructure Services	$5.4M
Enterprise Service Desk	$4.2M
Workforce Computing Group	$3.3M

Maintenance $173M

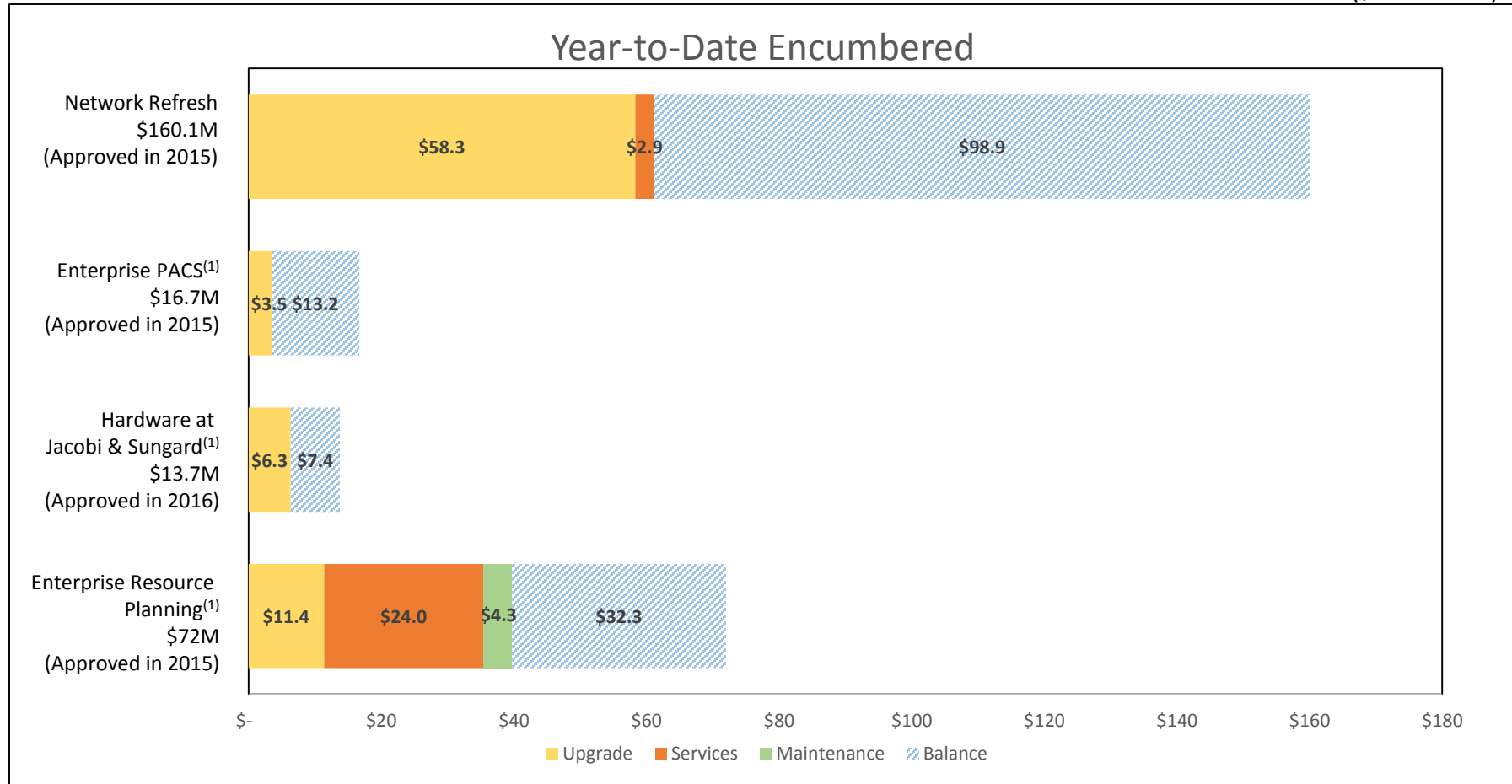| Some examples, include:	
Microsoft	$12.7M
Managed Print Services	$11.6M
Smartnet	$10.7M
Sungard	$ 6.7M

■ Maintenance ■ Staff Augmentation ■ Upgrades

(1) Equipment that was not Capital eligible.

Approved Capital Projects with Expense

($ in millions)

Year-to-Date Encumbered

Project	Upgrade	Services	Maintenance	Balance
Network Refresh $160.1M (Approved in 2015)	$58.3	$2.9		$98.9
Enterprise PACS[1] $16.7M (Approved in 2015)	$3.5			$13.2
Hardware at Jacobi & Sungard[1] $13.7M (Approved in 2016)	$6.3			$7.4
Enterprise Resource Planning[1] $72M (Approved in 2015)	$11.4	$24.0	$4.3	$32.3

Legend: Upgrade, Services, Maintenance, Balance

The Year-to-Date Encumbered is by Non H_2O only through 9/13/18
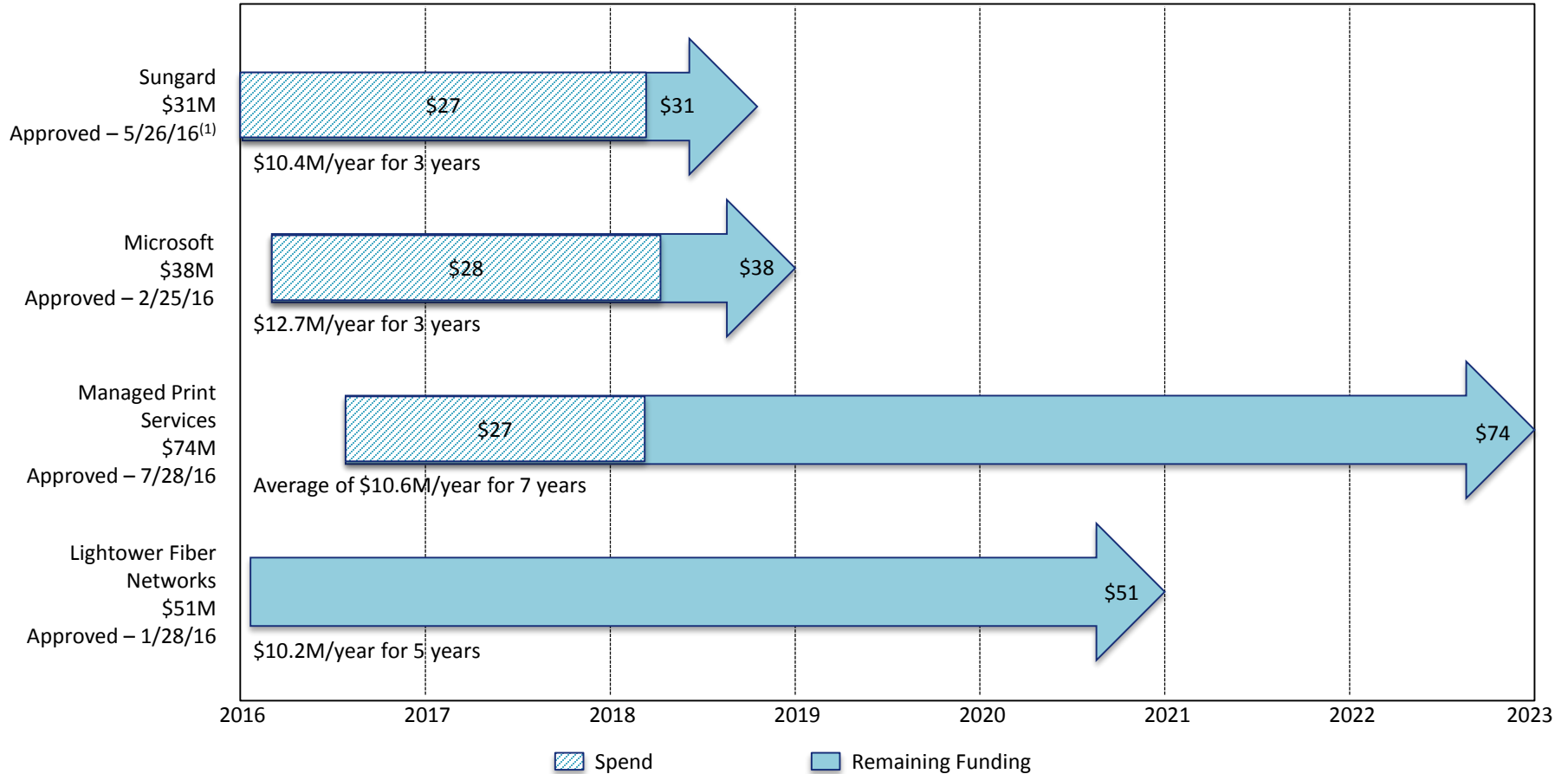The Year-to-Date Encumbered for the Radiology project only includes items for McKesson
(1) Funding is comprised of Capital and Operating budgets.

Board Approved Contracts for Ongoing Operating Expenses

Board Approved Contracts vs Year-to-Date Encumbered

($ in millions)

Sungard
$31M
Approved – 5/26/16[1]

$27 $31

$10.4M/year for 3 years

Microsoft
$38M
Approved – 2/25/16

$28 $38

$12.7M/year for 3 years

Managed Print Services
$74M
Approved – 7/28/16

$27 $74

Average of $10.6M/year for 7 years

Lightower Fiber Networks
$51M
Approved – 1/28/16

$51

$10.2M/year for 5 years

2016   2017   2018   2019   2020   2021   2022   2023

Spend   Remaining Funding

Rounded to the nearest million.
Year-to-Date Encumbered is by Non H_2O only through 9/13/18
(1) Includes a funding increase of $8M for previous contract.

NYS Grant
(CRFP/DSRIP Grant – IT Projects Only)
(As of August 31, 2018)
($ in Millions)

Grant/Cash Disbursement Summary

Project	Total Grant Amount	IT Portion		
		Grant Amount	Cash Disbursement Amount	Net Balance
Behavioral Health	$44.6	$7.9	$0.0	$7.9
Contact Center	$19.4	$11.8	$0.1	$11.7
Digital Health	$109.1	$109.1	$10.0	$99.1
Emergency Department	$19.6	$2.1	$0.0	$2.1
Population Health	$81.3	$81.3	$4.8	$76.5
Total	$274.0	$212.2	$14.9	$197.3