UNIVERSITY of MARYLAND MEDICAL SYSTEM

Expanding your Network:
How the University of Maryland Medical System Deployed a Successful Epic Connect Program (and how you can, too)

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University of Maryland Medical System

Edward E. Duryee; Director of Strategic Services; Avaap USA

Presenters

Edward E. Duryee
Director of Strategic Services
Avaap

- 30+ years of experience in Healthcare IT and advises clients in strategy, governance and implementation
- Avaap is the largest provider of IT services and solutions for organizations that use Infor ERP and Epic EHR enterprise software applications
- Leads the Connect and Affiliate product offerings at all points in a client's lifecycle
- Subject matter expert on various individual components of a Connect strategy for inpatient hospital, ambulatory and combined programs
- Previously served as Chief Information Officer for several different healthcare systems over a 16 year period
- Led an Epic clinical and rev cycle initiative from system selection to capital budgeting to design, build and go-live
- Received his MBA from Temple University and is CPHIMS certified

Kelly Foulke
IT Director for Revenue Cycle and Connect
University of Maryland Medical System

- 25+ years of experience in Healthcare IT management with a focus on project management and Affiliate satisfaction
- Focused on Epic implementations at the University of Maryland Medical System (UMMS), successfully implementing revenue cycle products for 715 departments with 87 specialties and 5 hospitals
- Previously worked as a project manager for Lockheed Martin, IBM and Kaiser Permanente
- UMMS is a university-based health care system delivering care to the people of Maryland with more than 150 locations including eleven community hospitals and two specialty hospitals from the Eastern Shore to central and southern Maryland

Agenda

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University of Maryland Medical System

Health System Statistics – FY2016	
109,610	Admissions
39,279	Inpatient Surgeries
386,929	Emergency Room Visits
1,466,080	Outpatient Visits [1]
52,938	Outpatient Surgeries
1,546	Average Daily Census

Inpatient Bed Capacity-FY2017	
Licensed Acute Care Beds	
1,558	Medical/Surgical
104	Obstetrics
167	Psychiatry
87	Pediatric
1,916	**Total**
Licensed Post-Acute Care Beds	
102	Rehabilitation
102	Special Hospital Pediatric
116	Chronic
16	Rehab/Chronic(duly licensed)
336	**Total**
Licensed Newborn Beds	
102	Newborn Nursery
72	Premature Nursery (NICU)
174	**Total**

Source: UMMS Reimbursement and Revenue Advisory Services and Statistics received from each UMMS hospital

System Overview

University of Maryland Medical System is a private, not-for-profit corporation founded in 1984 to provide health services to the citizens of Maryland. Located throughout the Baltimore metropolitan area, Eastern Shore and South Maryland. These hospitals include:

- UMMC, an 750-bed academic medical center
- UM Baltimore Washington Medical Center, a 293-bed acute care community hospital
- UM Charles Regional Medical Center, a 89-bed acute care hospital
- UMMC Midtown Campus, a 167-bed* acute care community hospital
- Mt. Washington Pediatric Hospital, a 102-bed pediatric rehab and specialty care hospital
- UM Rehabilitation and Orthopaedic Institute, a 138-bed rehabilitation hospital
- UM St. Joseph Medical Center, a 232-bed Catholic acute care hospital
- UM Shore Regional Health
  - UM Shore Medical Center at Chestertown, a 26-bed acute care hospital
  - UM Shore Medical Center at Dorchester, a 46-bed acute hospital
  - UM Shore Medical Center at Easton, a 132-bed* acute hospital
  - Shore Emergency Center at Queenstown
- UM Upper Chesapeake Health
  - UM Upper Chesapeake Medical Center, a 186-bed facility
  - UM Harford Memorial Hospital, a 91-bed facility

In addition to the 12 System – affiliated hospitals, Union Hospital of Cecil County entered into a management agreement with UMMS in January 2014.

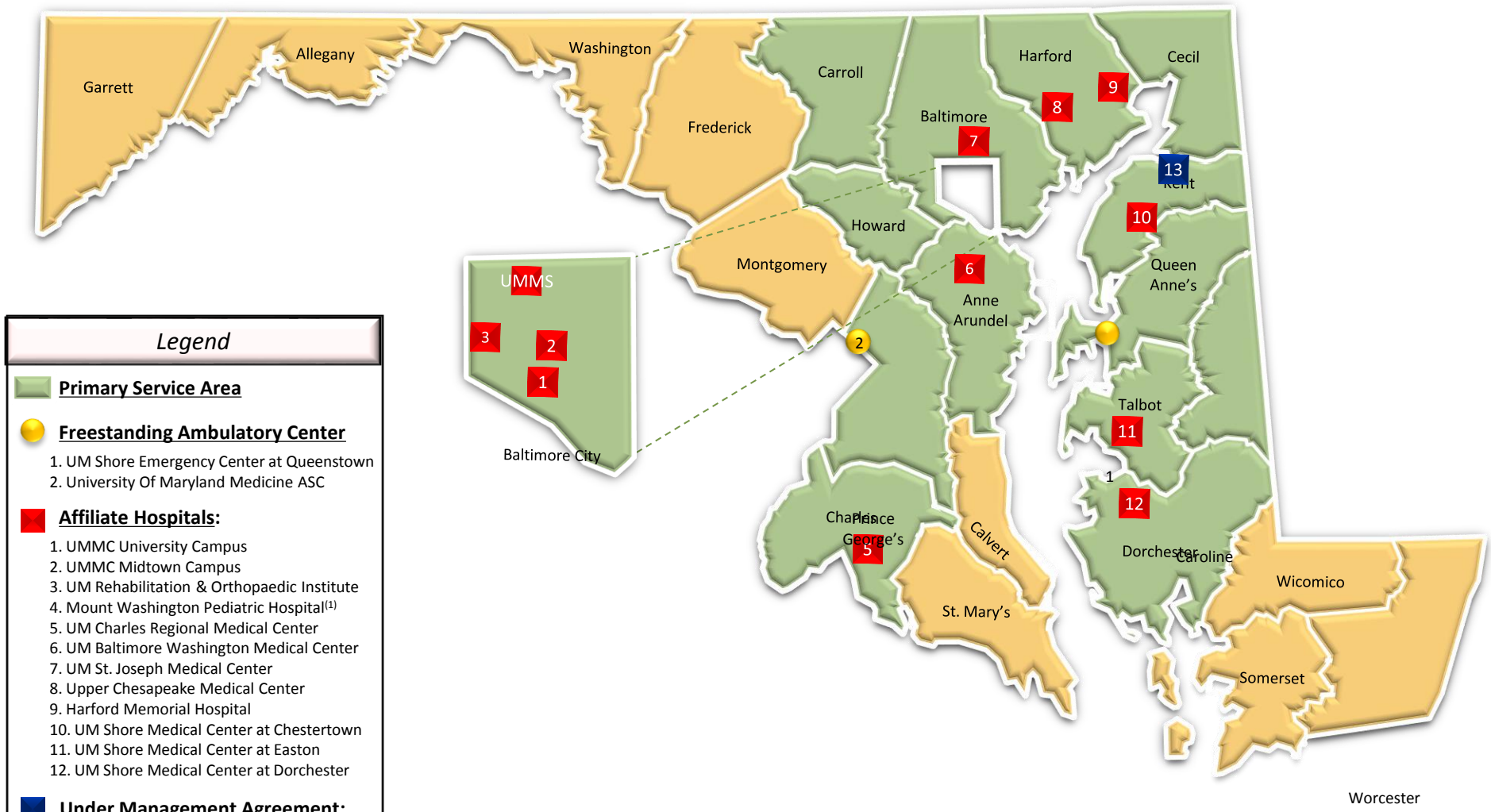
The Health System offers a wide range of health services, including primary, secondary, tertiary and quaternary care, as well as rehabilitation, chronic care and sub-acute care.

❖ Includes acute and rehab beds

❖ Dimensions not included

University of Maryland Medical System

Statewide Service Area Coverage by the System Hospitals



Legend

Primary Service Area

Freestanding Ambulatory Center

1. UM Shore Emergency Center at Queenstown
2. University Of Maryland Medicine ASC

Affiliate Hospitals:

1. UMMC University Campus
2. UMMC Midtown Campus
3. UM Rehabilitation & Orthopaedic Institute
4. Mount Washington Pediatric Hospital(1)
5. UM Charles Regional Medical Center
6. UM Baltimore Washington Medical Center
7. UM St. Joseph Medical Center
8. Upper Chesapeake Medical Center
9. Harford Memorial Hospital
10. UM Shore Medical Center at Chestertown
11. UM Shore Medical Center at Easton
12. UM Shore Medical Center at Dorchester

Under Management Agreement:

13. Union Hospital of Cecil County

What's in a name?

Agni

Fire represents the passion of the Avaap culture. Collectively, we seek to provide the best service and software solutions in the industries we serve.

(Sanskrit: अग्नि, pronounced ăgˈnē)

Passion

Vayu

Wind illustrates our ability to rapidly, calmly, and efficiently react to an ever-transforming marketplace.

(Sanskrit: वायु, pronounced [ʋaːju])

Speed/Calm

Akash

Sky correlates to Avaap's organizational goals. Each year, we strive to achieve more than the year before and improve how we can better serve our Affiliates.

(Sanskrit: आकाश, pronounced ākāśa)

Goal-Oriented

Ap

Water has the unique ability to take form as a gas, liquid or solid, representing innovation, shown through continual development of industry-leading solutions.

(Sanskrit: अप्, pronounced áp-)

Innovation

Prithvi

We focus on earth-friendly initiatives and participate with outside organizations that work towards the same goal.

(Sanskrit: अग्नि, pronounced pṛthvī)

Eco-Conscious

Industry Focus

Healthcare ERP

Healthcare EHR

Manufacturing

Retail

Public Sector

Solutions - Services - Products

IT Services

- Implementations
- Upgrades
- Business Process Analysis
- RICE Development
- ACE

EHR Expertise

- Epic Installations
- Patient Portals
- Revenue Cycle Optimization
- CDI
- Affiliate Programming
- Clinical Optimization

Infor Solutions

- Infor M3
- CloudSuite Financials
- HCM/Global Human Resources
- EAM
- PLM
- Lawson
- ION
- Business Intelligence
- Retail

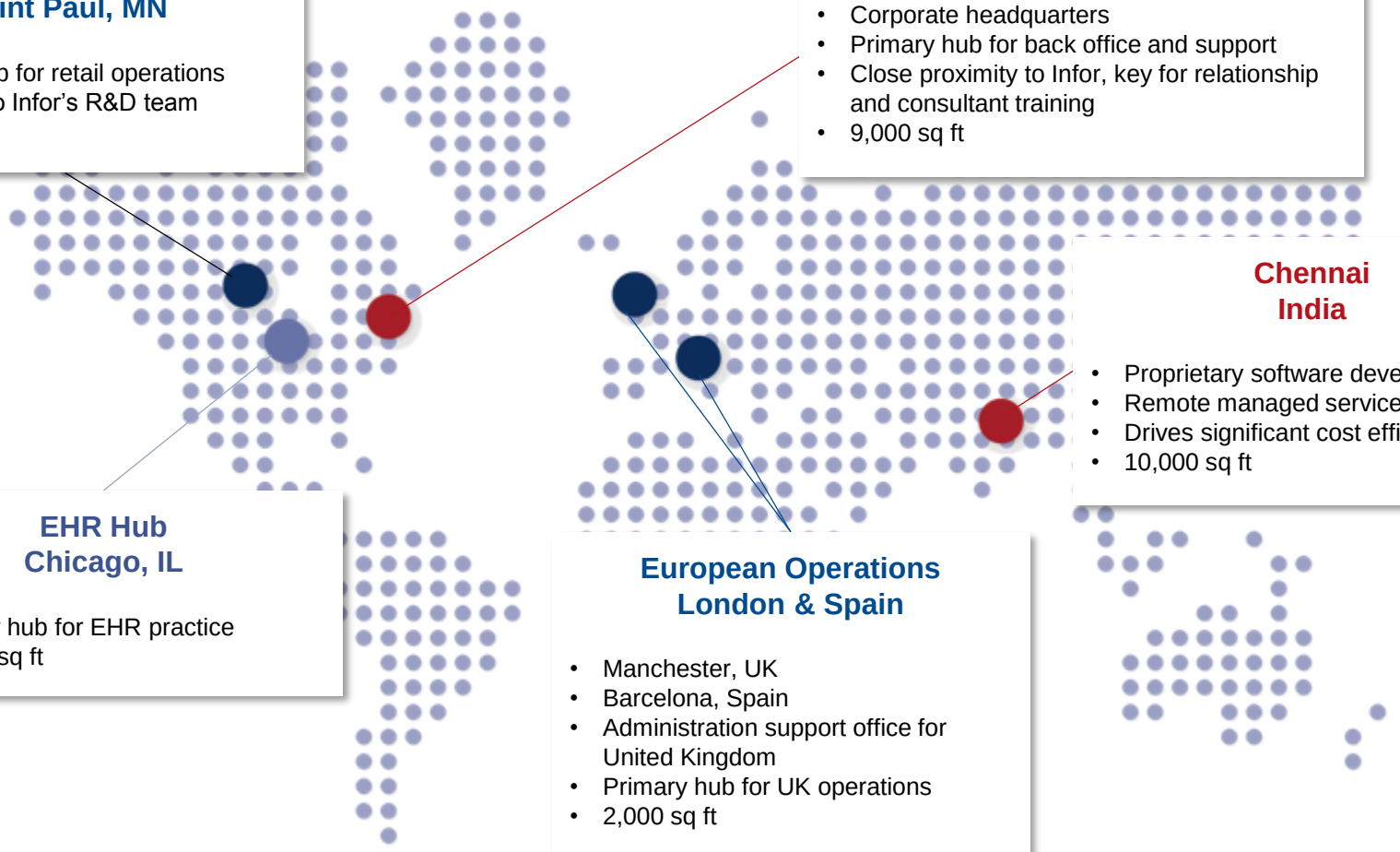
Support Execution

- Business Application Support
- System Admin
- System Monitoring
- Patch and RM
- Managed Services

Products

AttachIT • Avaap Credit Card Processing for M3 • Avaap M3 API Data Engine • Avaap Tax Solution M3 • Avaap Test Automation • IPA Analyzer • MOM Template Framework • ProviderSync • Requisition Dashboard • Security Dashboard • v10 Scripted Installs

Worldwide Operations



Midwest
Saint Paul, MN

- Primary hub for retail operations
- Proximity to Infor's R&D team
- 3,000 sq ft

Headquarters
Edison, NJ

- Corporate headquarters
- Primary hub for back office and support
- Close proximity to Infor, key for relationship and consultant training
- 9,000 sq ft

Chennai
India

- Proprietary software development
- Remote managed services
- Drives significant cost efficiencies
- 10,000 sq ft

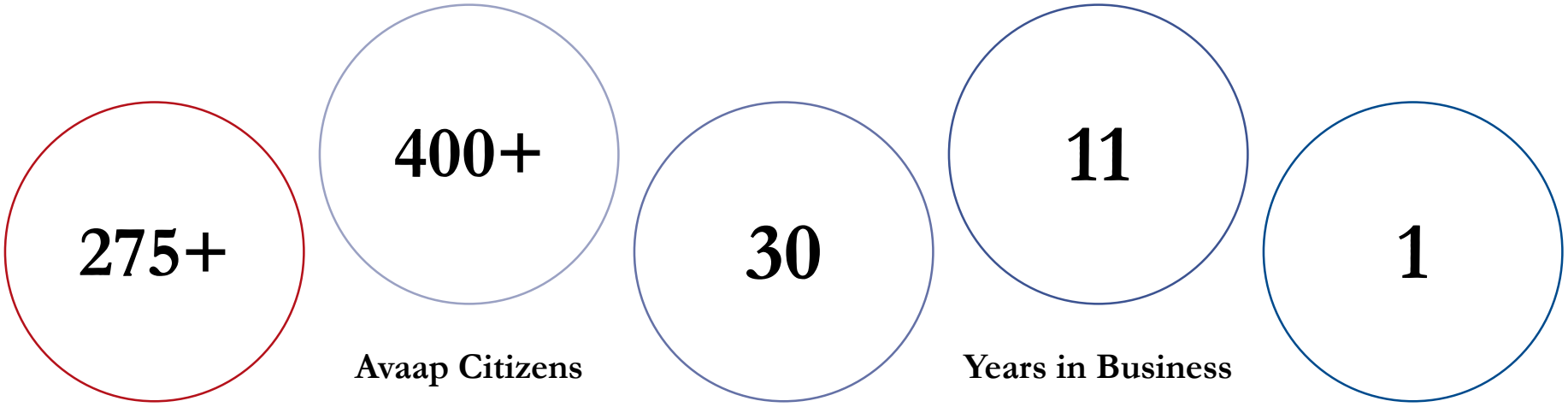
EHR Hub
Chicago, IL

- Primary hub for EHR practice
- 15,000 sq ft

European Operations
London & Spain

- Manchester, UK
- Barcelona, Spain
- Administration support office for United Kingdom
- Primary hub for UK operations
- 2,000 sq ft

By The Numbers



By The Numbers

14
Epic and Infor Specific Product Innovations

275+
Affiliates

350+
Technical and Functional Consultants

16+
Years of Industry Experience

11+
Years in Business

54+
Cloud Migrations

What is a Connect Program?

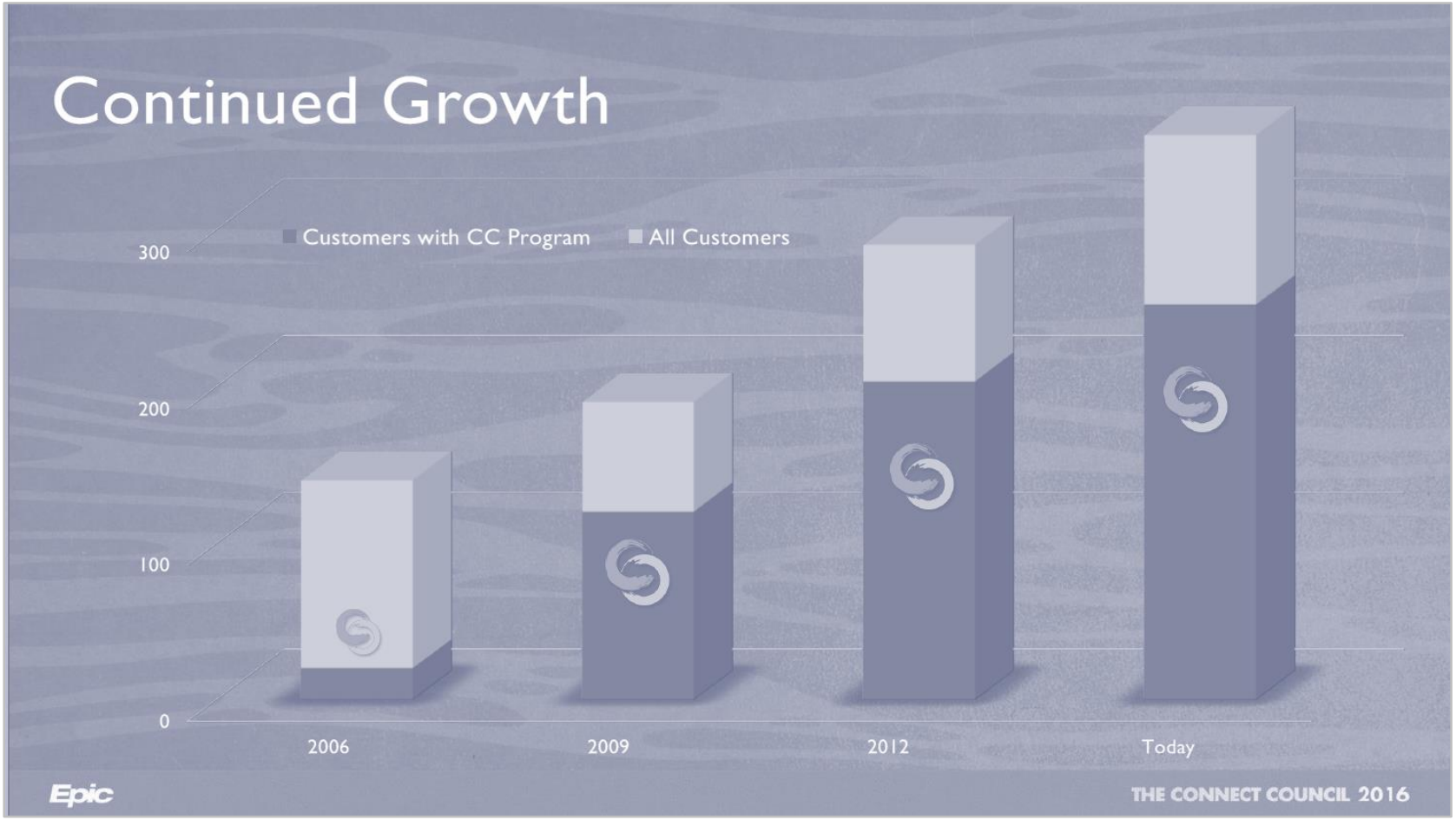
Basic Definition
• Re-selling the Epic and related third party licenses to independent provider organizations (Affiliates) that could not afford to buy directly from Epic • Historically the Affiliates (customers) have been Physician Practices; this has expanded to hospitals, surgery centers and other provider organizations • One Patient, One Record, One Consolidated Database (continuum of care) • Connect is a strategy to enhance Population Health with the longitudinal patient record • The independent providers who purchase Connect gain the benefit of the full Epic system • ACO and other alternate payment models are requiring consolidated care as well as financial management • The Host uses their data center and infrastructure that is already in place • The Host is able to use existing trained staff to provide implementation and support • CMS regulations state that donors (Hosts) may subsidize up to 85% of the total value of the EMR, subject to the certain restrictions.

Organizational Drivers

Epic has compiled the top reasons (including response percent) why organizations develop Connect programs.

Source: Epic Connect Council 2016

Community Connect Growth



What trends will fuel the continued growth of Connect?

Significant Trends
• Benefits of integrated record: One Patient, One Record (continuum of care) • Replacement EHR market continues to thrive; therefore many hospitals and Physician Practices will need a replacement EHR and/or Practice Management system • ACO and other alternate payment models • Epic continues to be #1 in KLAS ratings, as well as most other industry comparisons • Many stand-alone EMR vendors have had a drop in sales in recent years • Some large, established Health Systems have found that acquisition does not work in all situations so an alternative model is being sought • Epic will continue to push this model as their current product does not scale to below 200 beds or 200,000 ambulatory visits   • The industry will watch All-Terrain, Utility, and Sonnet; Epic's soon-to-be-released product for smaller facilities

Lessons Learned

The decision to develop a Connect Strategy needs to be developed at the highest levels of the organization using decision-making tools utilized for all other senior level initiatives.

Key Lessons
• Ensure that long term and short term strategies, and competing initiatives for time, resources and finances are considered • Communicate if a Affiliate strategy is an "end" point or is just one step in a series of agreements including acquisition • Give the Affiliate site what they need, not necessarily everything they want • Recommend that the Affiliate use their existing decision-making processes to fully vet their agreement to undertake this change • Plan enough time for contractual and legal reviews. Prepare for ways to move this process along.

Lessons Learned (Con't)

Key Lessons (Con't)
• Develop the structure for governance and implementation overviews before communicating the final decision
• Engage all key stakeholders in the decision process, including the community. Emphasize the "One Patient, One Record" concept that will benefit the served patient population.
• Review all market demographics (payor mix, patient volume, competition) as it is now and also as it is projected to be in 5 years
• Ensure that the Connect initiative includes communication with existing owned Ambulatory Provider groups
• Determine if other IT systems should be included outside of the normal Connect offering

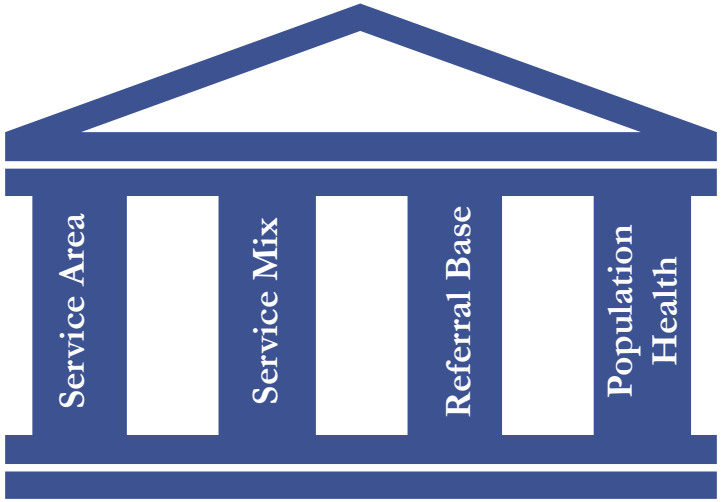
Alignment with Affiliated Organization

Understanding organizational and leadership priorities is vital when considering an affiliation.

Key Considerations:

1	How are the UMMS and the Affiliate's Mission, Vision and Values aligned?
2	How would existing Leadership & Board synergy promote the success of an Epic affiliation?
3	Are there existing partnerships between the Affiliate and UMMS that have engendered trust and collaboration?
4	How does the UMMs Connect model allow Affiliates to maintain independence, while being supported by the shared Epic Model?

What are the market synergies between the Affiliate and UMMS?



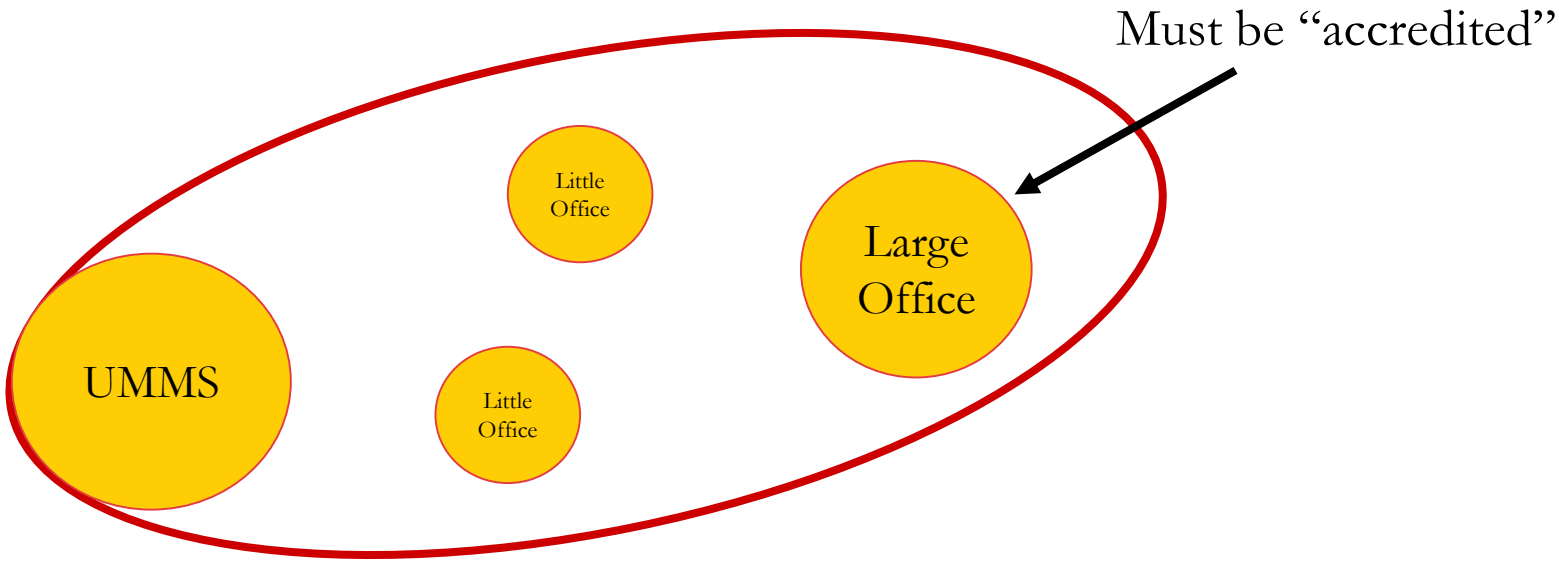
How would an affiliation advance the care delivery goals of each organization?

Top Questions for Host Organization

Questions to initiate conversations around Connect program expansion.

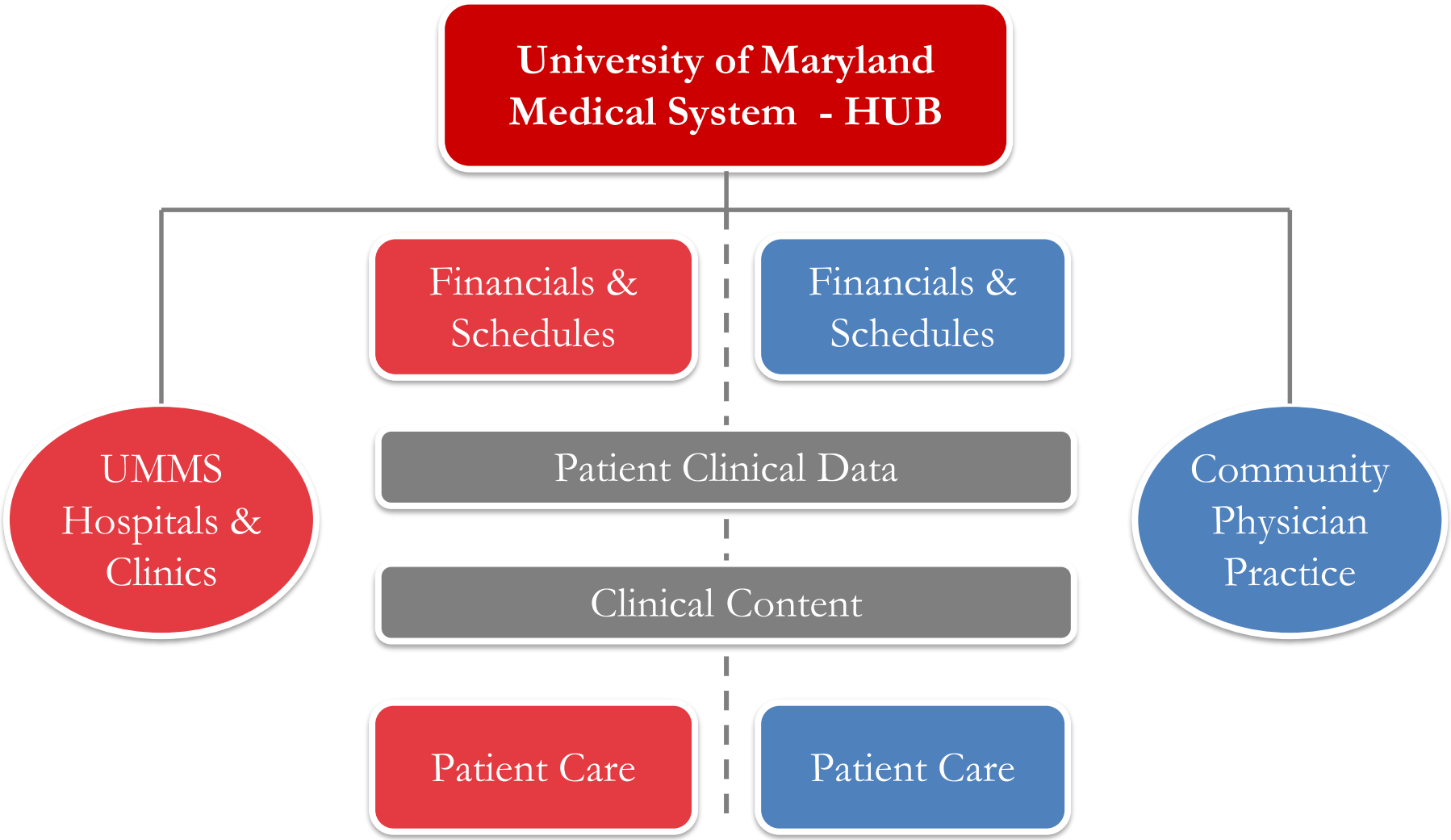
1. **Data:** Who owns the data? How is patient information protected?
2. **Partnership:** How have the Affiliates been identified as potential partners?
3. **Product Offering:** What standards need to be defined and established?
4. **Cost:** How are costs allocated? How do Stark laws fit in? Who will collect and enter all of the component costs? What are the associated costs of setting up and maintaining a program?
5. **Governance:** How are the strategies and business needs of each entity addressed and supported?
6. **Metrics:** How are quality, usability, adoption and engagement measured?
7. **ROI:** How will return on investment be determined? Will qualitative results be included in addition to quantitative?
8. **End User Support:** How are users supported and staff / provider changes handled?
9. **Implementation:** How involved are staff/providers from Affiliate practices in the implementation and support?
10. **Infrastructure:** How are hardware, network and infrastructure needs assessed, addressed and supported?
11. **3rd Party Contracts:** What third party vendors will be supported?
12. **Marketing:** What type of marketing will be done? Will patient messaging be included?
13. **Timeline:** How will the implementation schedule be defined and how will participants be scheduled?

UMMS as a Hub Organization



- UMMS extends Epic applications to Affiliates
- 75% of Epic Affiliates are the "little office"
- Accreditation for "big Affiliates" >200,000 visits
  - Strengthen downtime capabilities
  - Technical target platform

Separation of Information



UMMS Connect
Ambulatory Connect Program Scope

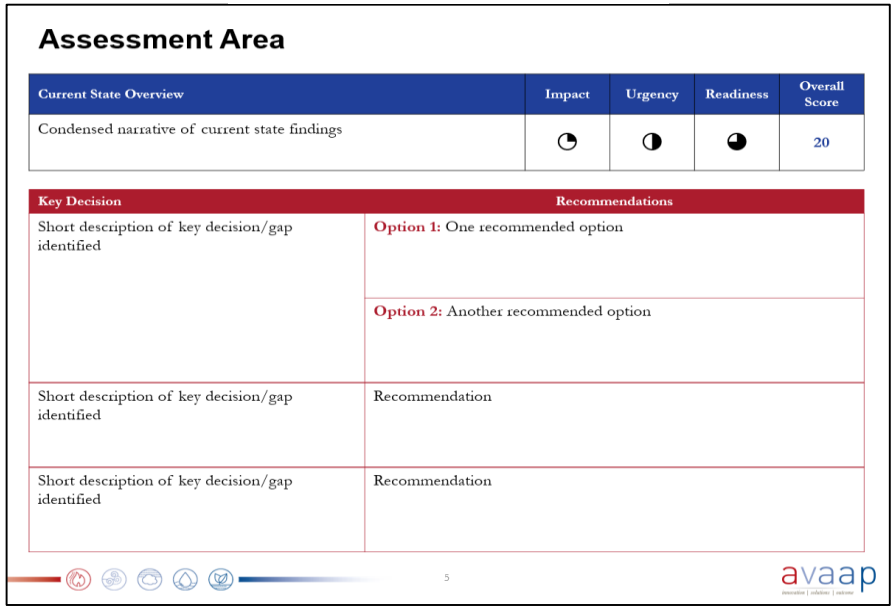
- Scope of the Ambulatory Community Connect program includes a targeted list of Epic and third-party applications. Some elements are mandatory while others are options. A few highlights are below:

Vendor	Application	Function	Mandatory?
Epic	Cadence	Scheduling	Yes
	Prelude	Registration	Yes
	EpicCare Ambulatory	Clinical Care	Yes
	Resolute PB	Professional Billing	Yes
	MyChart	• Scheduling • E-check-in	No - Optional
RelayHealth	RelayClearance	Real-time Eligibility	No - Optional
Lexmark	Perceptive Content (formerly ImageNow)	Document Management	Yes
Surescripts	Electronic Prescribing	E-prescribing	Yes
LabCorp/ Quest	Results interface	Results interface	Yes
Availity	Advanced Clearinghouse	Claims clearinghouse	Yes

Current State Assessment Overview

UMMS and Avaap reviewed 34 areas to assess progress towards creating the UMMS Ambulatory Community Connect program. Each topic was rated in the areas of Impact, Urgency, and Readiness, in order to help drive any needed action.

Assessment Slide Format



Each slide contains a brief overview of current state, the score for the particular area, and the key decisions, options, and recommendations UMMS should consider to finalize its program for the topic

Assessment Scoring

Criterion	Definition	Scoring
Impact	The impact of the topic across the people, processes, and technology affected by the decisions	A rating from 0 (low impact) to 10 (high impact). See below for scoring ideograms.
Urgency	How urgent it is to act to ready the program for a particular area	A rating from 0 (not urgent) to 10 (very urgent)
Readiness	The measure of the gaps that exist between current state and a complete Connect program	A rating from 0 (large gaps) to 10 (small gaps)
Overall Score	The scores combined out of a total possible score of 30. The lower the score, the more work on the topic area ***should be prioritized***.	A numerical score from 0 to 30

Icon	○	□	◑	□	●
Score	0	2.5	5	7.5	10

Current Scores

Scores across the different areas demonstrate a varying level of readiness. Scores are provided only for the 31 areas that have completed assessment meetings; a lower score indicates a higher level of concern.

Grouping	Area	Score*
Organizational Strategy	Governance	12.5
	Implementation Roadmap	10
	Scope of Services Model	7.5
	Pricing Model	5
	Service Agreement Contract	2.5
	Account Management Model	12.5
	Approach to Enterprise Resource Planning (ERP)	17.5
Implementation Plan	Implementation Staffing Model	7.5
	Affiliate Assessment Model	10
	Design and Build (D&B) Approach	10
	Business Informatics and Revenue Cycle Plan	7.5
	HIM and ROI Approach	17.5
	Reporting	12.5
	Change Management Integration Model	22.5
	Program Office Staffing Model	17.5
	EHR Policy and Procedures Approach	17.5
	ABNs	20
	Testing Plan	17.5
	Training Model	12.5
	Dress Rehearsal Model	17.5
Support Model	Go-Live Support Model / Transition from Go-Live to Support Plan	20
	Help Desk Support Model	17.5
	Service Level Targets	17.5
Technical Plan	External Affiliate Infrastructure Model	10
	EMPI	20
	Approach to Interfaces	17.5
	Device Integration Plan	25
	Data Conversion Plan	25
	Affiliate Business Continuity Plan	15
Regulatory/ Compliance	Finance and Invoicing Model	10
	Meaningful Use and Regulatory Compliance Position	17.5

*Sample Data Only

Implementation Plan Scores

The areas in this grouping need to be finalized in order to understand how UMMS will assess, implement, and activate the Affiliate Epic ambulatory solution.

Grouping	Area	Score*
Implementation Plan	Implementation Staffing Model	7.5
	Affiliate Assessment Model	10
	Design and Build (D&B) Approach	10
	Business Informatics and Revenue Cycle Plan	7.5
	HIM and ROI Approach	17.5
	Reporting	12.5
	Change Management Integration Model	22.5
	Program Office Staffing Model	17.5
	EHR Policy and Procedures Approach	17.5
	ABNs	20
	Testing Plan	17.5
	Training Model	12.5
	Dress Rehearsal Model	17.5

*Sample Data Only

Key Findings

- Finalizing the implementation staffing model is the top priority for this aspect of the program
- Existing assessment tools will need to be modified so that all relevant functional areas are included
- Billing will require careful attention as these workflows and operational expectations will be the greatest area of variance between the UMMS standard model and the Affiliate sites
- Many current tools and methodologies can be leveraged, including the plan for testing, training, and dress rehearsal

Implementation Staffing Model

Current State Overview	Impact	Urgency	Readiness	Overall Score
A PM facilitates and manages ambulatory implementations at UMMS across the software, hardware, and infrastructure teams. The Ambulatory team is divided between implementation (8 analysts) and support resources. These are usually utilized to capacity with a lead and 1-3 other analysts for every practice. Cadence, Prelude, HIM, and PB teams have combined implementation and support functions. The staffing ratio for HIM, Cadence, and Prelude is approximately 1 analyst to 20 departments.	●	□	◑	7.5

Key Decision	Recommendations
Will UMMS fold Community Connect implementation work within the structure of the current implementation team or create a new structure? ***Note*** *– this does not have to impact internal reporting structure, instead focusing on project team construction.*	**Option 1:** Dedicated Implementation Team – Shared Ancillary (Recommended) ***Note*** *– this approach is consistent with Epic recommendations* Dedicate the following resources: Project Manager, Application Implementation Staff (Amb/Cad/Pre/PB/PB Claims), and Account Manager(s). Share resources with existing enterprise teams for remaining project roles but designate primary Connect liaison for each area (with dedicated planned resource hours): HIM, Production Support, Technical team, Interface team, informatics/training.
	Option 2: Shared Resources (Alternative) In this model, UMMS would fold Connect implementation work effort into the existing structure of implementation work. While eliminating the need to create a separate team, and ensuring no implementation knowledge is lost by enterprise teams, a completely shared team results in lost efficiency and flexibility and increased difficulty in accurately capturing implementation cost. Additionally, analysts successful in a Connect environment often have additional soft skills that may or may not exist in current teams.
Will UMMS utilize existing staffing ratios for successful implementations?	**Recommendations:** Increase current staffing ratios by 20-30% in the beginning of the Connect program, as the new processes and inclusion of practice-owned PB result in additional work and lost efficiency.

Affiliate Assessment Model

Current State Overview	Impact	Urgency	Readiness	Overall Score
UMMS employs an Ambulatory Discovery Questionnaire to assess new clinic business operations and determine any deviations from the standard model that require discussion. A technical walk-through is performed to validate hardware specifications and workflows. Only a few standard KPIs exist today: daily visits and closed encounters.	☐	☐	◑	10

Key Decision	Recommendations
What is the timeline of technical and clinical discovery as it relates to project kick-off or other milestones?	**Recommendations:** Start the discovery process prior to project kick off to prevent unexpected changes in project timeline and scope. Ideally this happens even before slotting the Affiliate into a go-live track. This discovery process should identify scope related to: 1. Network Connectivity 2. ISP Redundancy 3. Hardware Readiness – new hardware purchase and install is the largest variance in connect implementation timelines post kick-off 4. Existing Interfaces and Integrations 5. Unique job roles that may not exist currently at UMMS 6. Vendor contracts in place vs. needed
What discovery process will be used for billing functions within Practice Management?	**Recommendations:** Work with the CBO to develop an in-depth implementation discovery questionnaire to use in conjunction with those in place for the scheduling and clinical areas. These need to be carefully reviewed to ensure minimal use of duplicative questions and to ensure scheduling and registration questionnaires are ready for use with Connect. Although PB can be more standardized than other applications the impact of the variance is usually greater. This questionnaire should include: 1. Users, Job Functions, Workflows 2. Current Vendors 3. Physician Identifiers – NPI, Medicare ID, etc. 4. Any accounting agreements that may drive Service Area build 5. Obtain sample claims, statements, superbills, monthly reports, etc. 6. Policies – statements, bad debt, etc. 7. KPIs
How should Epic's Catalyst tool be utilized?	**Recommendations:** Very few Connect programs utilize this tool, and UMMS should continue to use existing processes.

HIM and ROI Approach

Current State Overview	Impact	Urgency	Readiness	Overall Score
UMMS Hospitals/Clinics are responsible for their own ROI although some affiliated clinics allow the hospital to release their records. Billing within the ROI module is only in place in UMMS hospitals. Ambulatory sites use Quick Disclosure; Quick Release is not present. Some of the larger clinics centrally batch which requires install of the full Lexmark client locally. All clinics use scanning through Epic's Media Manager for clinical scanning and the Documents Table for Cadence/Prelude scanning.	◑	◑	□	17.5

Key Decision	Recommendations
How will UMMS handle cases when a Community Connect clinic requests full ROI or ROI Billing?	**Recommendations:** If a Connect Affiliate has a dedicated Medical Records department they would likely benefit from use of the full ROI module and potentially even ROI billing. UMMS should include this option only for clinics with dedicated HIM staff. The scope of that offering should be consistent with what is currently in place at UMMS today; scope should not be expanded beyond current ROI build.
How will UMMS handle Batch Scanning for Connect Affiliates?	**Recommendations:** Similar to the decision regarding full ROI, if an Affiliate has dedicated and/or centralized Medical Records staff and currently performs batch scanning, UMMS should include this in scope. Experienced staff traditionally have few problems switching to a new system for batch scanning and should be responsible for their own QA. UMMS should maintain the right to audit. In smaller clinic settings, and de-centralized offices, Media Manager will be sufficient.
What will be the scope of transcription in the Community Connect strategy? Partial? Full?	**Recommendations:** Transcription and Voice Recognition functionality can often be a physician satisfier. The lack of a solution could prevent some practices from partnering with UMMS. UMMS should choose one solution as a standard across the Connect model, ensuring that the costs involved can either be directly billed to the Affiliate, or identified easily on the UMMS invoice for pass-through billing.

Training Model

Current State Overview	Impact	Urgency	Readiness	Overall Score
Epic training ownership is spread across multiple teams. Third-party systems are not trained by UMMS staff. The ambulatory team conducts ambulatory training. The Compass Group conducts Cadence and Prelude training, which includes front-end scanning. The CBO handles training for billing office staff.	☐	◑	◑	12.5

Key Decision	Recommendations
How will UMMS leverage Epic Elements training tools?	**Recommendations:** Connect programs vary in their usage of Epic Elements e-learning trainings. UMMS should not rely solely on Epic Elements for training, and must validate that the Epic offering remains consistent with any changes UMMS has made to their environments. This could be utilized as optional class pre-work.
Should UMMS use existing Ambulatory or HIM Curriculum for Community Connect training?	**Recommendations:** As UMMS moves from a workflow-based to a functionality-based training method, the curriculum in the HIM and Ambulatory space may remain relatively similar to current state. It is important in training, however, to highlight ways in which the Connect Affiliate may differ from the enterprise as typical negative feedback from Connect trainings concerns the trainers not knowing or highlighting specific practice workflows. HIM and Scanning workflows will differ between Affiliates, so UMMS should establish curriculum for each (batch, non-batch, full ROI, Quick Disclosure), and train whichever is appropriate.
Who will conduct the Cadence and Prelude training for Community Connect sites?	**Recommendations:** Cadence/Prelude Community Connect functionality will be extremely similar if not exactly the same as at existing ambulatory clinics. We strongly recommended leveraging the training curriculum in this area, but UMMS will need to determine who will perform front-desk training.
How will professional billing be handled?	**Recommendations:** UMMS will likely need to develop a PB training curriculum for Community Connect separate from the enterprise as there will be significant variance in workqueue build, combined responsibilities, etc. UMMS should engage a PB trainer early in discovery to modify existing curriculum and class structure. Extend training and provide supplemental sessions for latter parts of the revenue cycle – statement runs, working denials, etc. – to the greatest extent possible after go-live.
How will Affiliate Credentialed Trainers remain connected with the internal UMMS CT environment?	**Recommendations:** Provide access to regular CT continuing education meetings, include them in EHR update emails, and allow them access to relevant non-prod environments, if existent.

Clinical Assessment Findings (Sample)

Topic	Comments	Proposed Next Steps
Clinical Support Scope of Practice	• UMMS scope of MA's differs from the Practice's scope of MA's; Security can be supported • Front desk support staff assists in inputting patient reported or faxed in health maintenance information	• Need to discuss differences in scope of practice and solidify access for the Practice's MA's in future • Need to determine clinical access for non-clinical staff
Specialty Build (Cardiology)	• Through discovery, we have learned the cardiologist relies on a system outside of the existing EMR for clinical documentation	• Need to determine the level of support necessary for customized build and workflow development
Patient E-Sig Workflow Change	• Currently, patient e-signatures are captured directly into the EMR for back office procedures and ABNs. UMMS does not have functionality to support this today.	• Scanning is the alternative solution that will be offered
In-house Laboratory Workflow (with or without Integration)	• Workflows are complex for lab from scheduling through billing. Although integration can help with this, an investment in build and preparation will be required.	• Determine overall scope and needs of In-house Laboratory and impact to workflow • Discuss lab charging workflows to determine best build approach
EKG Device Integration	• 2 Practice sites currently use stand-alone EKG machines that integrate directly into the existing EMR	• Need to discuss potential licensing needs for this integration into UMMS Epic platform
Medication Management	• The office currently manages all vaccines and injections in clinic through an inventory management protocol within the existing EMR. UMMS will not be able to support this workflow at this time	• UMMS is able to offer alternative workflows to manually manage vaccines and injections • The office may want to review and consider medication dispense machines (Omncell, Pyxis)

Affiliate Practice Follow Up Items (Sample)

Follow Up Item	Owner	Received?
List of 3rd Party vendors/business partners	Manager	No
Request sample of 100 patients to determine volume of matched patients (name, DOB, gender, SSN, address)	Manager	No
Count of active unique patients seen twice in the last 2 years (with breakdown by year)	Manager	No
Self-pay lockbox payment file format	Manager	No
Current Security Matrix	Manager	No
List of all EC labs available in the system	Lab Coordinator	No
List of all reports (clinical, billing, and finance)	Billing Manager	No
List of all vaccines and injections performed/in stock in clinic	Lab Coordinator	No
Review the Office company drive for unique forms & print	Billing Manager	No
Clinic Floorplans (fire exit floorplans) for print mapping purposes	Billing Manager	No

Risk Identification and Mitigation (Sample)

Potential Risk	Mitigation
UMMS is assuming the role of an application service provider	• The UMMS – Affiliate Service License Agreement has been developed to delineate the community offering, costs, and scope
Affiliates may identify their interest, but have resource contention when completing the implementation and training requirements	• The Agreement details the Affiliate's responsibilities. The detail of their commitment will be thoroughly reviewed prior to adding the practice to the implementation wave schedule • When sending project status communication during the project include an evaluation of the Affiliate's performance compared to commitments
UMMS encounters insufficient staffing levels/ key staffing gaps	• UMMS may choose to use consultants, as needed to supplement the UMMS Community Connect implementation, training and support teams
"Scope creep"	• The Playbook document defines scope and project details • Project governance has been defined in this Playbook • Deliverables will be discussed frequently
Affiliate does not want to train per the UMMS training plan	• Affiliate is provided training and scope information • Required training to obtain role-based security activation in the production environment
Affiliate expects immediate training and access to production for new hires	• Affiliate is provided information about the Onboarding process.
Practice Connectivity Issues	• Affiliate is responsible to obtain a business grade DSL for adequate bandwidth and comply with the technical specifications presented
Siloed Connect Governance Structure	• Bring Affiliates and Connect program into the same structures and processes that UMMS uses today for managing the EHR
Contracting (Affiliate and Third-Party)	• Provide Affiliate with detailed information of the Third-Party contracts and what is to be included. This will be agreed upon prior to contract signing.

Introduction to Cost Model Tool

1. Dashboard Overview
2. Epic Subscriptions & 3rd Party Software
3. Interfaces & Integrations
4. Data Conversions
5. Hardware & Operating Software
6. Implementation Resources
7. Training Resources
8. Maintenance & Support Resources
9. Marketing & Legal
10. Go-Live Support Resources
11. ERP Solution
12. Epic Resources
13. Miscellaneous

Dashboard Overview

Provides snapshot for executive review.

Dashboard Overview

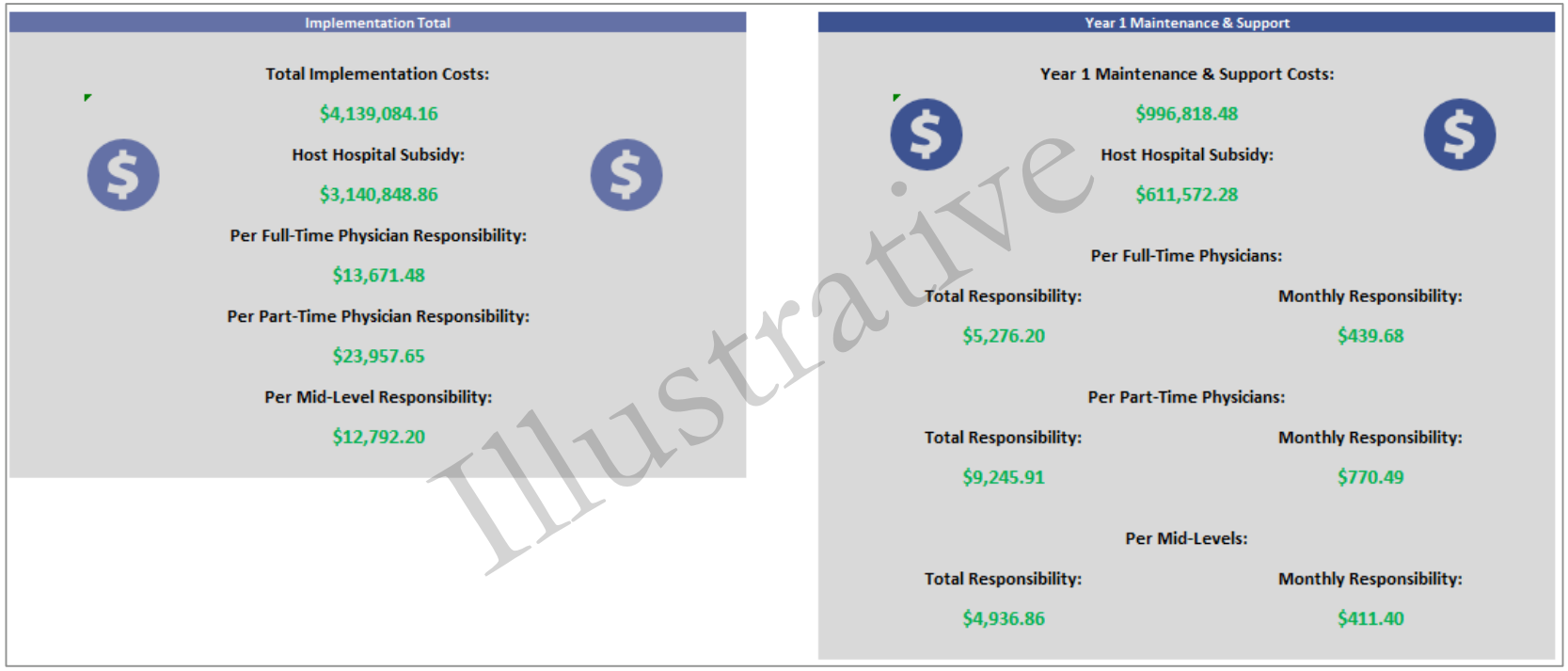
Costs Overview

	Implementation	Year 1	Year 2	Year 3	Year 4
One-Time Subsidized	$ -	$ -	$ -	$ -	$ -
One-Time Unsubsidized	$ -	$ -	$ -	$ -	$ -
Recurring Subsidized	$ -	$ -	$ -	$ -	$ -
Recurring Unsubsidized	$ -	$ -	$ -	$ -	$ -
Host Hospital Responsibility	$ -	$ -	$ -	$ -	$ -
Connect Practice Responsibility	$ -	$ -	$ -	$ -	$ -

	Implementation	Year 1	Year 2	Year 3	Year 4
Epic Subscriptions & 3rd Party Softwar	$ -	$ -	$ -	$ -	$ -
Interfaces & Integrations	$ -	$ -	$ -	$ -	$ -
Data Conversions	$ -	$ -	$ -	$ -	$ -
Hardware & Operating Software	$ -	$ -	$ -	$ -	$ -
Implementation Resources	$ -	$ -	$ -	$ -	$ -
Training Resources	$ -	$ -	$ -	$ -	$ -
Maintenance & Support Resources	$ -	$ -	$ -	$ -	$ -
Marketing & Legal	$ -	$ -	$ -	$ -	$ -
Go-Live Support Resources	$ -	$ -	$ -	$ -	$ -
Epic Resources	$ -	$ -	$ -	$ -	$ -
ERP Solution	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -	$ -

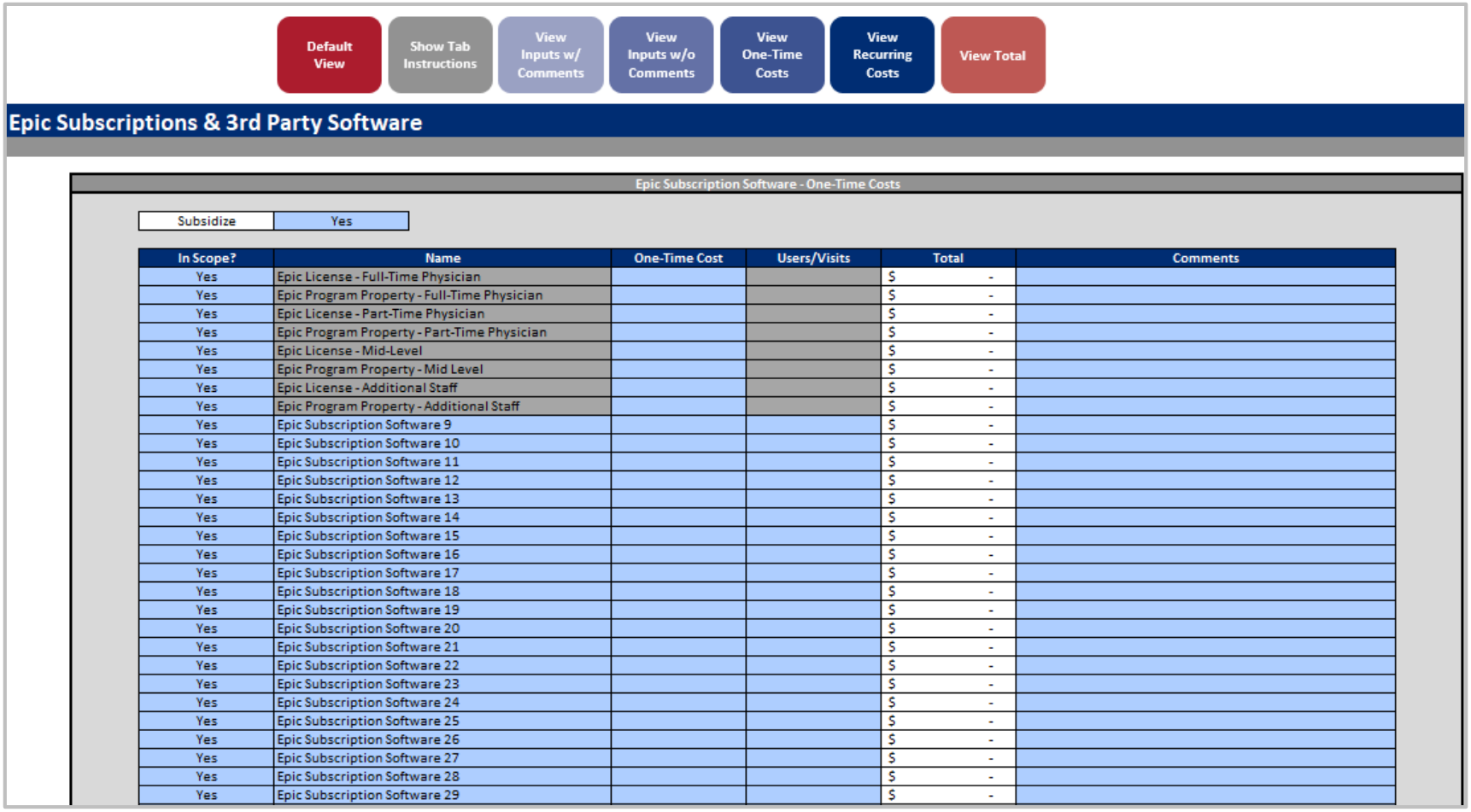
Dashboard Dollar View

Displays Subsidy and Total Costs.



Epic Subscriptions & 3rd Party Software

Allows decision-maker to identify key Epic application and 3rd party software implementation costs, determine whether to keep in scope, and whether to subsidize any part of the cost.



Default View | Show Tab Instructions | View Inputs w/ Comments | View Inputs w/o Comments | View One-Time Costs | View Recurring Costs | View Total

Epic Subscriptions & 3rd Party Software

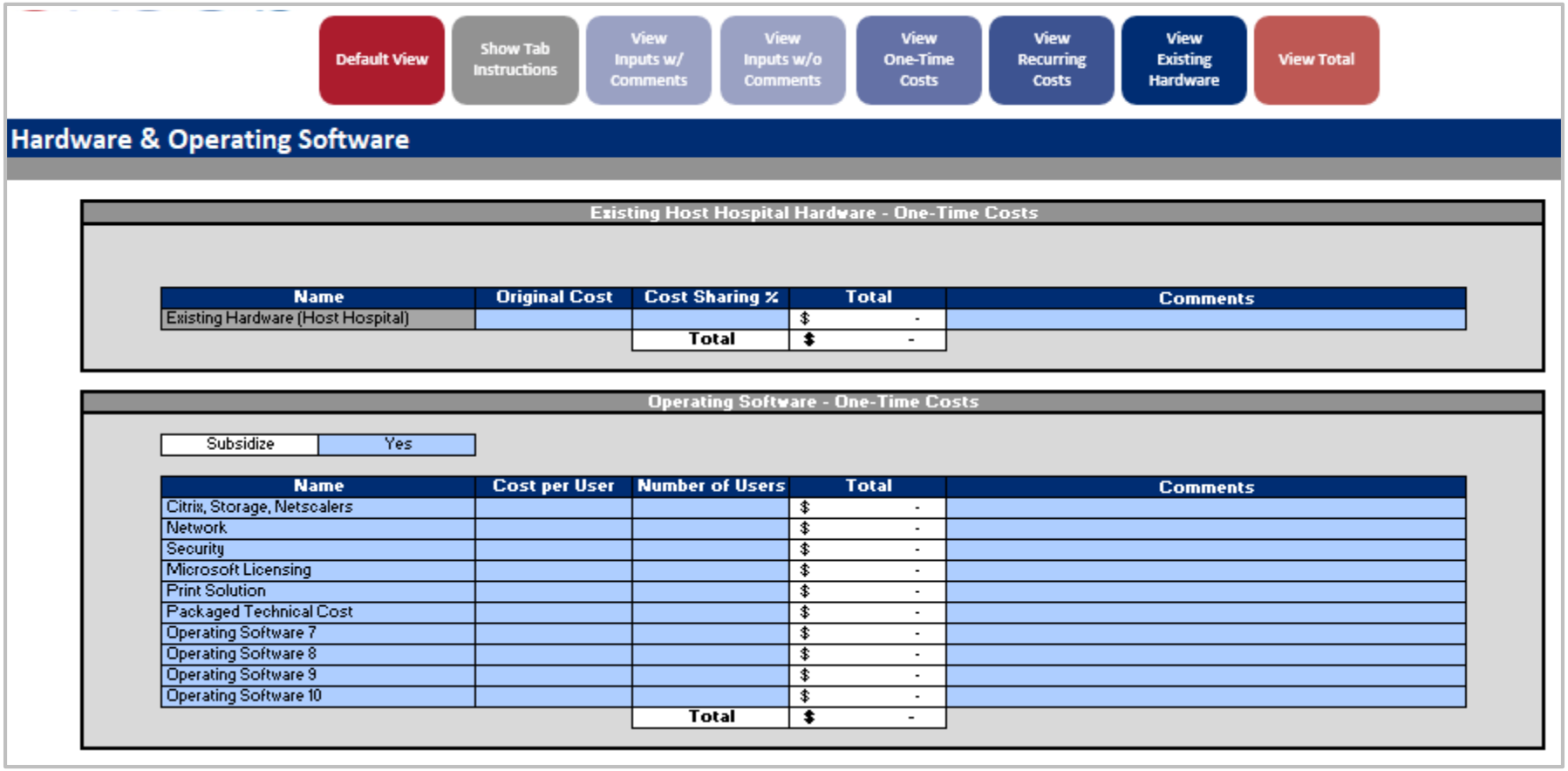
Epic Subscription Software - One-Time Costs

Subsidize	Yes

In Scope?	Name	One-Time Cost	Users/Visits	Total	Comments
Yes	Epic License - Full-Time Physician			$ -	
Yes	Epic Program Property - Full-Time Physician			$ -	
Yes	Epic License - Part-Time Physician			$ -	
Yes	Epic Program Property - Part-Time Physician			$ -	
Yes	Epic License - Mid-Level			$ -	
Yes	Epic Program Property - Mid Level			$ -	
Yes	Epic License - Additional Staff			$ -	
Yes	Epic Program Property - Additional Staff			$ -	
Yes	Epic Subscription Software 9			$ -	
Yes	Epic Subscription Software 10			$ -	
Yes	Epic Subscription Software 11			$ -	
Yes	Epic Subscription Software 12			$ -	
Yes	Epic Subscription Software 13			$ -	
Yes	Epic Subscription Software 14			$ -	
Yes	Epic Subscription Software 15			$ -	
Yes	Epic Subscription Software 16			$ -	
Yes	Epic Subscription Software 17			$ -	
Yes	Epic Subscription Software 18			$ -	
Yes	Epic Subscription Software 19			$ -	
Yes	Epic Subscription Software 20			$ -	
Yes	Epic Subscription Software 21			$ -	
Yes	Epic Subscription Software 22			$ -	
Yes	Epic Subscription Software 23			$ -	
Yes	Epic Subscription Software 24			$ -	
Yes	Epic Subscription Software 25			$ -	
Yes	Epic Subscription Software 26			$ -	
Yes	Epic Subscription Software 27			$ -	
Yes	Epic Subscription Software 28			$ -	
Yes	Epic Subscription Software 29			$ -	

Hardware & Operating Software

Provides a view from which to determine the cost of various required hardware and software for the Affiliate—end-user software is not included.



Transition from Scoping to Contracting

Program Development

Formal Documentation

- Review and finalize all necessary Connect documentation

Program Scope

- Finalize scope for Epic & Third Party Applications, Interface, Data Conversions, and Ancillary Hardware

Key Decisions

- Complete outlined key decisions by meeting with appropriate stakeholders

Pricing & Service Contract

- Finalize standard cost modal for software, infrastructure, people, delivery, maintenance and support
- Develop and finalize subsidy strategy
    - Finalize standard contract
    - Develop and finalize finance and invoicing approach

Initial Discovery

Activities Prior to Assessments

- Update current ambulatory assessment tool to incorporate necessary connect activities

Office One

- Identify Office One Connect counterpart
- Schedule assessment with Office One counterpart
- Conduct assessment at Office One
- Create documentation needed to transition from assessment to design and build

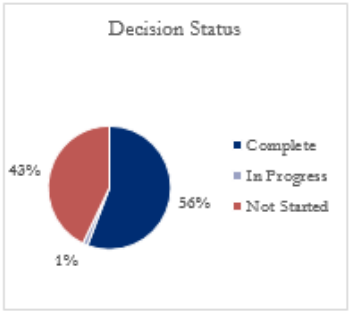
Office Two

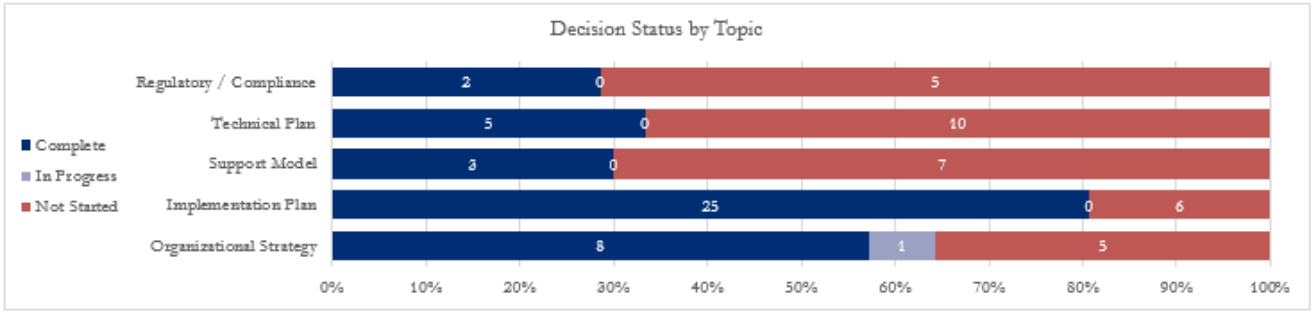
- Identify Office Two Connect counterpart
- Schedule assessment with Office Two counterpart
- Conduct assessment at Office Two
- Create documentation needed to transition from assessment to design and build

UMMS Connect Key Decisions Summary

Provides visual analytics of the progression of key decisions, broken down by Decision Status and Topic.

UMMS Community Connect Key Decisions Insight





Decision Status by Topic & Area

Topic - Area	Decision Complete #	Decision Complete %	In Progress #	In Progress %	Not Started #	Total #	Total %
Organizational Strategy	8	57.14%	1	7.14%	5	14	100.00%
Regulatory / Compliance	2	28.57%	0	0.00%	5	7	100.00%
Support Model	3	30.00%	0	0.00%	7	10	100.00%
Technical Plan	5	33.33%	0	0.00%	10	15	100.00%
Implementation Plan	25	80.65%	0	0.00%	6	31	100.00%
Grand Total	43	55.84%	1	1.30%	33	77	100.00%

UMMS Connect Implementation Roadmap

	Phase 1: Pre-Contracting Discovery and Scoping	Phase 2: Build, Testing, and Training	Phase 3: Go-Live	Phase 4: Post Go-Live
	4 weeks	TBD	TBD	TBD
Activities	• Epic workflow demonstrations for Affiliate executive leadership and end-users • Conduct initial discovery and gap analysis of UMMS vs. Affiliate • Finalize scope offering and implementation strategy based on discovery findings (including KPIs and SLTs) • Identify UMMS and Affiliate project staffing • Identify Affiliate Super Users • Complete contracting • Project kick-off with Affiliate	• Finalize build plan based on initial discovery findings • Complete system build • Finalize testing materials for Affiliate • Complete training materials as appropriate for Affiliate • Conduct testing (application, integrated, charge, etc.) and obtain sign-off • Conduct end-user training and train-the-trainer for ongoing courses • Conduct workflow and technical dress rehearsals • Hold pre-live readiness assessments • Plan staffing for clinical and billing Go-Live support	• Plan and set up command center and additional help desk support • System activation • Monitor pre-defined key performance indicators (KPIs) • Deploy go-live support structure including at-the-elbow support in clinics and assistance with billing functions • Triage and resolve go-live support issues • Establish list of top post-live issues for resolution	• Schedule and conduct post-live visits at Affiliate sites • Begin to utilize governance and change control processes for build and optimization requests • Review optimization strategies and implement as appropriate • Monitor pre-defined service level targets (SLTs) and produce reports for Affiliate call volumes • Deploy Account Manager to ensure Affiliate happiness and success with newly live system
Outputs	• Affiliate discovery and gap analysis • Affiliate scope and product list • Affiliate contract with UMMS • UMMS and affiliate staffing • Project kick-off	• Affiliate build plan and completed system build • Successful Affiliate testing and training • Workflow and technical dress rehearsals • Readiness assessments and risk mitigation plans	• Activate system • Triage and resolve go-live issues • Formal transition from go-live to long-term support structure • Top post-live issues list	• Post-live visit schedule • List of top Affiliate site support and enhancement issues • Understanding of relationship between Affiliate tickets and UMMS SLTs • Integration of Affiliate site with UMMS governance structures

Transition to Becoming a Vendor

The host needs to provide internal, organizational education to deal with the differences between a typical implementation and an Affiliate implementation.

Host Strategy

Why?	• There are differences between supporting an owned hospital or Practice verses a Connect Affiliate; differences are both obvious and subtle • New skills are needed to take on the role of a vendor to the Connect Affiliate • The Host organization likely plans to grow the Connect business
How?	• Provide awareness training to all IT and other staff who will be involved with the initiative • Ensure that organizational readiness and communications is "baked in" to all discussions with the Affiliate

Other Related Goals

Objectives	• Review the inter-relationship of all sections of the Playbook • Understand how clinical informatics and EHR policies will play an important role • Use example clinical case studies to highlight changes with potential Connect Affiliates • Know where the Host can leverage existing knowledge with Help Desk, Support and Technical infrastructure

Thank you!

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