Keys to a Successful CMMS Implementation

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Discovering the Possibilities

What is "**YOUR**" plan for implementation?

- Assign managers or technicians as project managers
- Import your current CMMS Data into the new CMMS
- Map your current workflows into the new system
- Project managers monitor the progress of the CMMS vendor
- Vendor trains managers and technicians
- Start using the new CMMS

- Is this a successful plan to achieve your desired results?
- Are all stakeholders represented with this plan?

Where should you start your CMMS implementation?

- New homes
  - Don't start with building supplies dropped off on the job site
- New televisions
  - Don't start with LCD panels, plastic, and wiring dropped onto a workbench

- They all start with a blueprint or plan

- There's a list of design parameter or objectives that must be accomplished

- Implementing a CMMS requires a requirements plan as well

Create Your CMMS Project Team

- Executive Leaders
- Biomed Manager(s)
- Project Manager – May be from IT
- Subject Matter Experts – Technician(s)
- IT Department –Network Security, Web Applications, Hardware
- Department managers –CMMS Users
- Consultant Group

Implementation Team Roles

- Senior Leaders approve funding
- Biomed Leaders promote the new system benefits to users
- Project Manager keeps the implementation on track
- SMEs define how the system is used
- IT Staff work with the vendor in authenticating and/or building
- Consultants provide prior experience to assist with your implementation

Team Buy-In

- All team members should understand the benefits of the new CMMS
- Team should identify opportunities for their role
- Understand the data flow
- Understand the data standardization

Identify the Expectations of the New CMMS

- Capture maintenance costs
- Regulatory compliance
- Automate workflows for seamless operation
- Increase department efficiency
- Better accountability
- Cybersecurity
- Mobile workforce
- KPIs and analytics

New Workflows or Process Design

- Examine existing workflows
- Compare to your department policies and procedures
- Can the process be improved?
- Does the new CMMS require new process flow?
- Develop new business processes

Process Design Details

- Write down the inputs, outputs, and steps needed to achieve the business goal
- Create the process diagram with the most granular steps you can get down to
- Draw the links between the different steps and how the process flows from one to the next
- After the initial process mapping is complete, carry out several meetings to identify any gaps in the design

Service Request Process
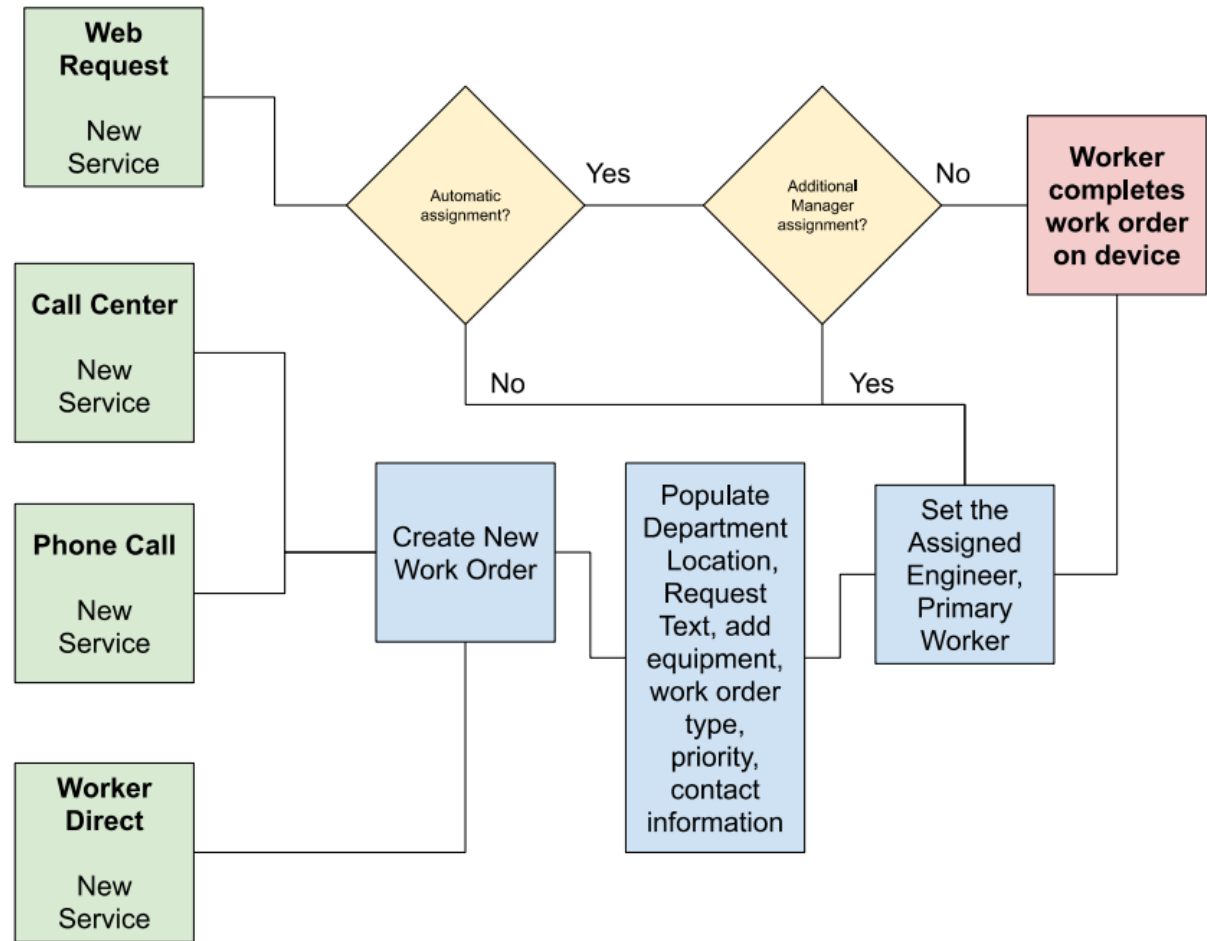
Work Request Process

Adding Assets to Inventory
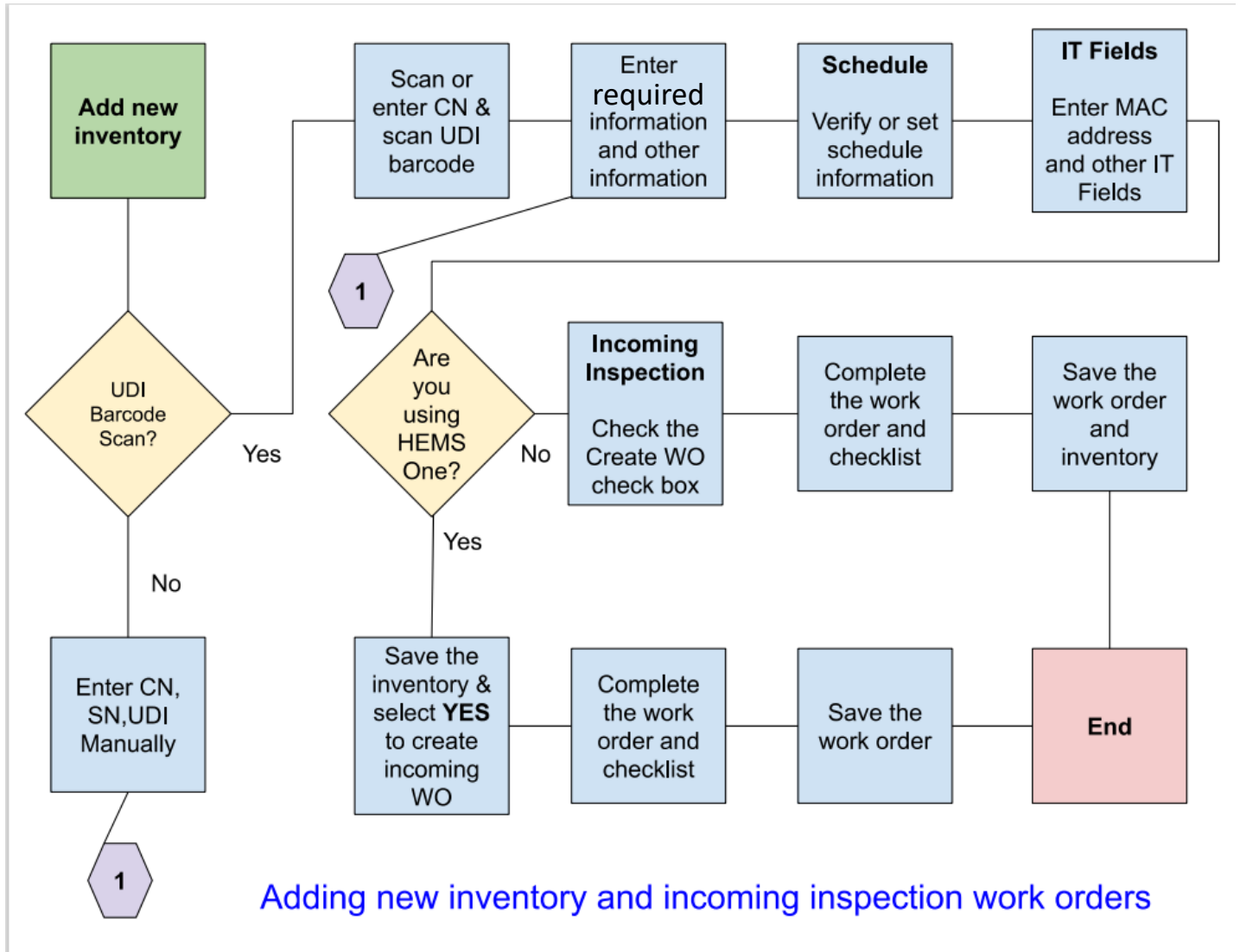
Adding new inventory and incoming inspection work orders

Work Order Coding

- Define your work order types
  - A short mutually exclusive list like AAMI CMMS Collaborative
- Define your work order priorities
- Define sub codes / failure codes
  - A short mutually exclusive list like AAMI CMMS Collaborative
- Ensure work order process matches your documented policy and procedures
- Defining Locations
  - Facilities and EVS customers have detailed mapping

Locations

- Identify all campuses or remote services
- Identify all buildings
- Identify the floors in each building
- Identify the rooms on each floor
- Will you be interfacing with RTLS?
- Will you be interfacing with Space Management?
  - Space Management may be determinant for locations
- Will the locations help with billing and regulatory reporting?

Assets

- Define the equipment types
- Define the criticality and risk
- Define the system
- Define the models
  - Name and Number
- Define risk for the model
- Do you use ECRI UMDNS?
- Do you have existing attachments to convert?

Data Standardization – Critical Step

- Equipment Types
  - ECRI UMDNS
  - FDA
  - Noun, adjective, ...
- Work Order Types - AAMI
- Maintenance codes for accounting - AAMI
- Priority work orders and categories
  - Response Time
  - Close Time
- Risk Categories

Data Validation

Choose	Choose the person or team in charge for this process in advance
Allocate	Allocate time to perform the data review • It may take 1 to 4 weeks depending on the database size
Add	Add missing critical data if available
Gather	Technicians may need to gather data for missing items or duplicates
Start	Start with essential data first • Further information can be added later
Ask	Ask how your CMMS vendor can assist

Missing Data

- Do all assets have a purchase price?
  - Estimated value
- Do all assets have a purchase date?
  - Use first work order date
- Do you have all contract information?
  - Supply chain or contract management

- Are you going to use the CMMS for Capital Planning?

Excel Pivot Table for Estimating Asset Prices

Row Labels	Sum of Pur Cost	Count of Control #	Average of Pur Cost	Max of Life Exp	Average of Age
Ablation, Endometrial System	$ 12,490.00	4	$ 3,122.50	7	5.9
AC Fibrillator	$ 1,950.00	1	$ 1,950.00	7	6.1
Active Display	$ 109,181.84	7	$ 15,597.41	7	2.0
Air Detector-Bubble Detector	$ 8,277.99	3	$ 2,759.33	5	4.3
Air Mattress Inflator	$ 25,683.00	51	$ 503.59	7	6.4
Air Pump	$ 12,477.08	11	$ 1,134.28	10	9.1
Air Purifier	$ 565,497.72	425	$ 1,330.58	7	3.3
Airway Clearance System	$ 38,490.00	9	$ 4,276.67	7	5.7
Alarm, Remote Unit	$ 75,557.90	278	$ 271.79	7	26.1
Alarms, Bed Occupancy	$ 240.00	4	$ 60.00	10	15.3
Amalgamators	$ 7,038.00	12	$ 586.50	10	6.7
Amplifier Module	$ 811,104.86	18	$ 45,061.38	10	7.8
Amplifier, EEG	$ 1,312,877.13	51	$ 25,742.69	10	3.3

Inaccurate data entry lowers data quality

- Creating erroneous reports and unreliable, useless data.

- Removing the use of historical asset data to guide repair/replacement choices.

- Reduced CMMS functionality that produces a lower ROI than anticipated.

Timing

- Preceding steps can be performed prior to project implementation
  - Some accounts spent one year on their data cleansing alone prior to CMMS
  - Business processes can be redesigned prior
- Consultants can guide these activities and assist with CMMS selection
- These steps can be performed within or before the project implementation

Implementation

Phased Approach

Phased Approach to Implementation Model

	Implementation Phase	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Year 2	Year 3
Phase 1	Assessment Phase														
Phase 2	Harmonization														
Phase 3	Loading, Testing, Training														
Phase 4	Go Live														
Phase 5	System Interface														
Phase 6	Sustaining														

Assessment Phase

- Create Implementation Teams – Vendor & Hospital Biomed
- Create Two Project Managers (Vendor and Hospital)
- Identify the number of personnel for training and create schedule & identify if train the trainers will be used
- Assess, define, and schedule data conversion, standardized procedures, reports, interfaces, etc.
- The two team leaders (Vendor & Hospital) conduct check-point reviews to confirm all sites agree to new terms and a detailed schedule is approved by all.

Harmonization Phase

- Data Migration Process

- Evaluate PM Procedures and Scheduling
  - Vendor will compare procedures between hospitals for consistency

- Standardize Data Formatting, Conversion, Procedures, Processes, Flow Charts, Reports, Nomenclature

  - Divide workload between teams and business units

  - Develop the training program and curricula to fit the number of trainees, their skill levels, and time constraints

Loading, Training, Testing Phase

- Products to Install and Configure

- Build Servers – Database & Application/Web (IIS)

- Data Verification
  - Biomed Leaders Verify Data Conversion

- Hardware Configuration – Hospital IT and Vendor

- Setup Sign-on & Security Protocols

- Configure Backup & Recovery Procedures

- Complete System Interfaces for Go Live (Day 1)

- Training Biomed by Role
  - Admins, Superusers, Technicians, Etc.

Leverage Training Sessions

- High quality training increases the likelihood of a successful implementation
- The training team should get the workers excited to use the new CMMS
- Exploit the new system's potential and ability to enhance the maintenance operations
- Record sessions for future trainings or staff onboarding
- View training videos and 'how-to' documents

Training and SMEs (Subject Matter Experts)

- Training is critical to the success of your implementation
- Technicians need to be confident in the use of the new system

- Train the Trainer
  - Creates SMEs
  - Internal trainers are more proficient with the CMMS than the everyday user
  - SMEs should possess good communication skills and organization
  - Assist with day-to-day questions and new employee onboarding
  - Strong supporters of the new CMMS

Go Live Phase

- Vendor Performs a Differential Data Conversion

- Vendor Reconverts and Reconfigures Products on Servers

- Implement by Business Unit
  - Determined in Assessment Phase

- Hospital IT Publishes all Weblinks for Products

- Connect the Interfaces to CMMS

- Project Close

Go Live Details

- May use a 'soft' Go Live
  - Work orders and assets
  - Parts Inventory
  - Contracts
- Start with one hospital or region
  - Pilot testing of the new system
  - Address issues before full switchover
  - Support and trainers can focus on one group at a time
- Rollout your system interfaces

System Interface Phase

- CMMS Vendor & System Vendor Complete Interface(s)

  - PartsSource

  - ServiceNow

  - Power BI

- Completed by Go Live
  - Medigate
  - ECRI
  - OneSource

Sustaining Phase

- CMMS vendor provides ongoing support per the Service Level Agreement purchased and will last for the defined period and beyond if the hospital Biomed continues with the CMMS.
- In a sense, the Go Live continues
  - *Add new products*
  - *Use additional features*
  - *Re-implement the system*
  - *New interfaces*

Change Management

"Scope Creep"

Change Management

- Project change can be a challenge
- Change, if required, is discussed during the project meeting (weekly/bi-weekly)
- Vendor provides a 'Change Management' form to CMMS vendor
- Vendor and Hospital leaders mutually approve the change
- Vendor determines if the change will require additional fees
  - Program customization or additional applications
- Vendor performs the change for Hospital per requirements
- Minimize "*scope creep*"

Change Management Details

- Identify the change and submit a change request form provided by the vendor
  - Description, reasons, benefits, impacts, supporting documentation, approvals
- Review the change request
  - Number of changes, feasibility, complexity, scale of changes
- Approval of the change request
  - Risk for implementing, risk for not implementing, project impact (time, resources, finance)
- Formal review of the project leadership
  - Reject, approve fully or conditionally, escalate the change
- Closing the change request
  - Communicate to the team, update deliverables, etc.

Hospital Implementation Team

- Hospital IT expected to attend the weekly/bi-weekly project meeting to provide updates to configuration
  - IT project discussed first to release them from the meeting sooner

- Hospital Business Leaders expected to attend the weekly/bi-weekly project meeting
  - Vendor presents their project updates and requests additional information when required
  - Hospital presents their project updates and asks Vendor questions
  - Next steps are discussed & assigned

- Vendor or Hospital may contact the project manager for additional required information

Expectations

- Hospital IT (15 to 30 Minutes per meeting until complete)
  - Authentication (MS Azure AD, SAML 2.0, etc.)
  - Network security
  - Web Team to publish application weblinks
  - Interface teams
  - Hardware Team to install Android/iOS applications on mobile devices
  - Service accounts for vendor support staff
- Hospital Business Leaders (30 to 60 minutes per meeting)
  - Biomed representation for data review, workflows, reports, scheduling PM (Data Review > 4 hours)
  - Hospital Project Manager (30 to 60 minutes per meeting, and business hour availability)
    - Biomed Lead
    - Kickoff meeting may identify additional members

Hospital Team

- **Required Hospital Resources**
  - Project Manager
  - IT Team – Network Security/Authentication, Desktop Support, Web Applications, Database
  - Biomed Team Leaders for Regions
    - Biomed Lead at each hospital reporting to the Region Leader
  - PM Scheduling Specialists
  - Train-the-Trainers Personnel for Biomed

Vendor Implementation Team

- Implementation Team Roles
  - Project Manager
  - Technical Manager
  - Database & Report Architect
  - Network Engineer
  - Account Manager
  - Trainers

Training Approach

- **Recommend- Role Based Training**
  - Admins, Superusers, **Director/Manager, Supervisor,** Technician, DBA, etc.
  - Train-the Trainer approach creates Subject Matter Experts within your department
  - Refresher training may be virtual

Project Documentation

Tracking Progress and Assigning Tasks

Project Plan –Excel / MS Project / Other

Document Task Completion with milestones calculated by phase

Milestones in RED

Project Documents

- Project Meeting Minutes – Hospital / Vendor / Both
  - Word
  - Outlook
  - MS Notes
- Deliver minutes in a timely fashion to project on track
- Create a shared folder or drive for files and documents
- Update the project plan with versioning and deliver in a timely fashion
- Record important workflow or configuration meetings to shared drive

Other Information

- Schedule a product demo for the department
  - Include all stakeholders
- Schedule 'role-based' demos as you narrow down vendors
  - 2-hours for technicians including Q&A
  - 2-hours for managers including Q&A
  - 2-hours for database analysts including Q&A
  - 1-2 hours with IT for security, authentication
- Ask to 'test drive' the software in a sandbox environment
  - Ask if a small sample of your data can be converted to the sandbox

Rewards

- Standardized Data & Procedures

- Consistent and actionable data

- Better capital planning decisions

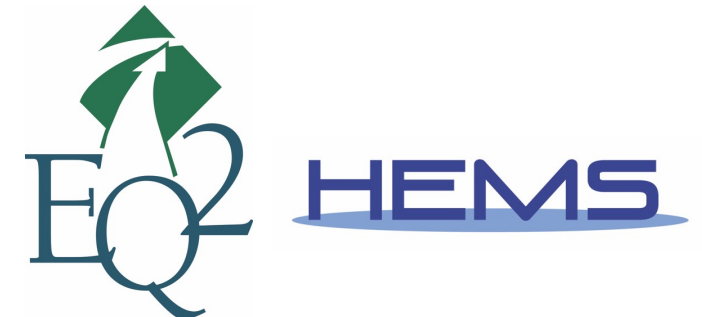- Easier ways to meet compliance.

Question & Answer

Share Your Experience

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