

Eliminating Paper in Our Lab Through Automation

2019 Lab Quality Confab
Jean Hammelev, BS, CT(ASCP) MBA/HCM
Vice President, Operational Excellence

October 16, 2019



Sonora Quest
Laboratories™



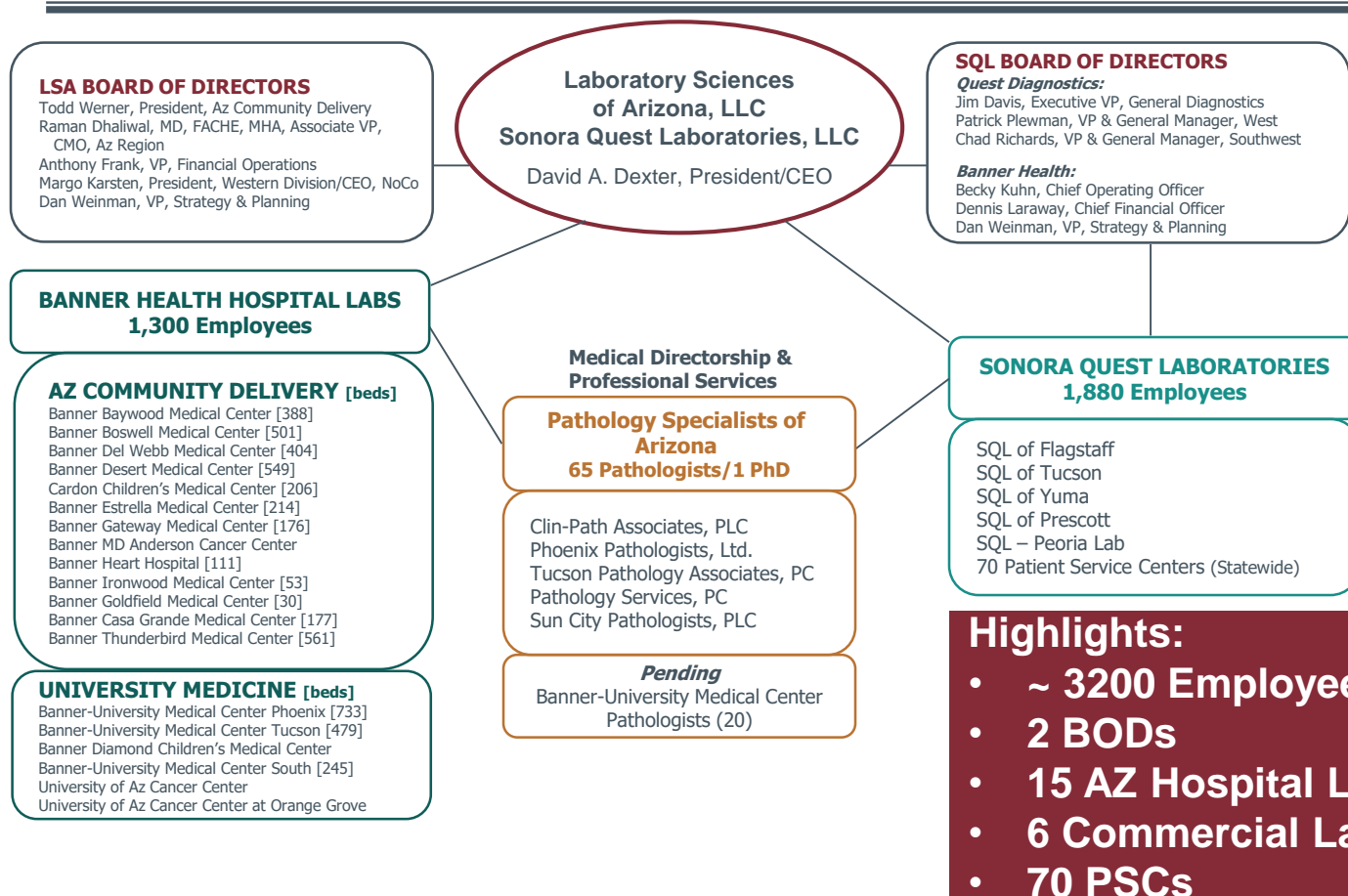
Laboratory Sciences
of Arizona

Session Agenda

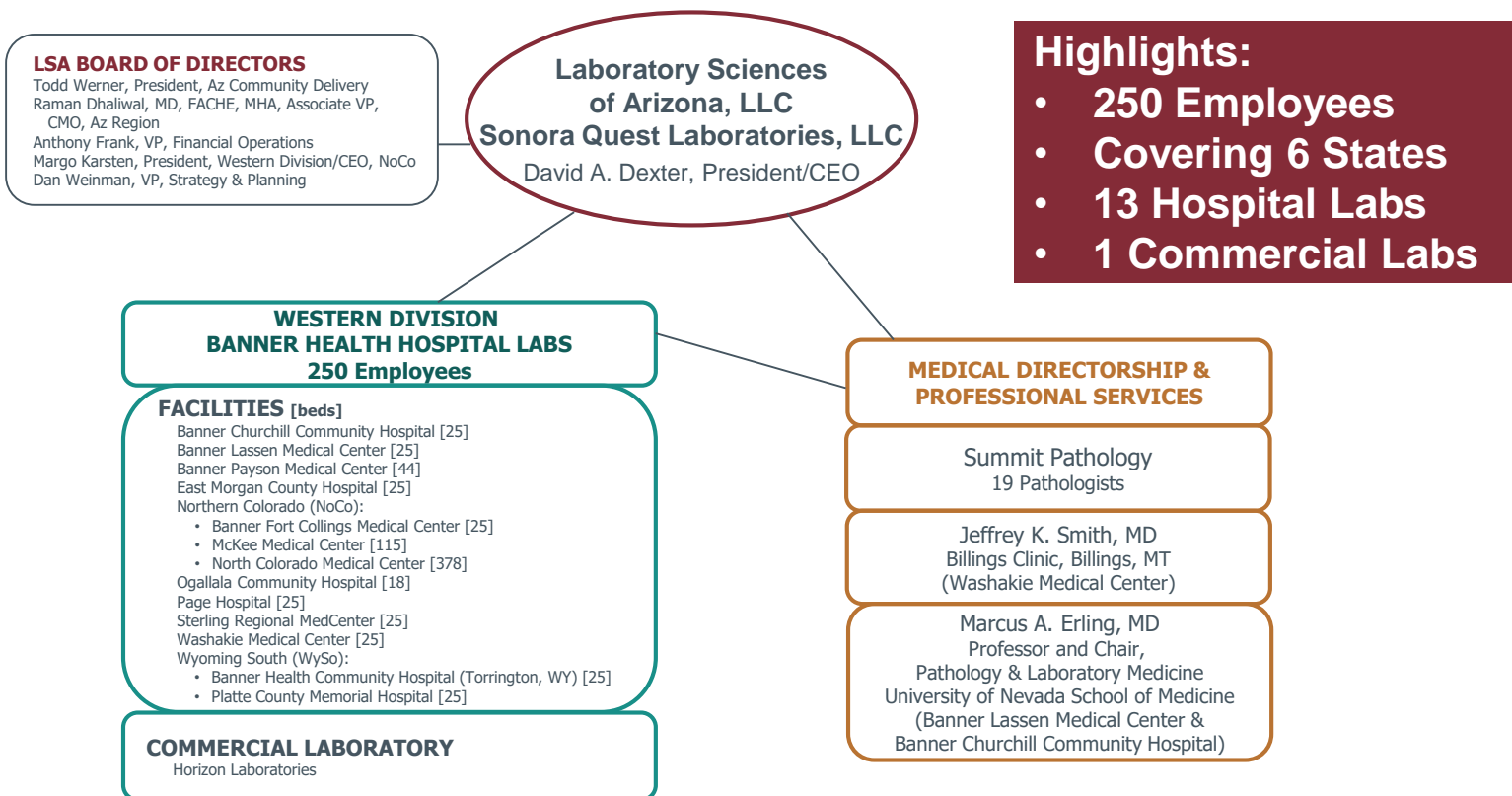
Our *Successful* Journey to Automate (almost) Everything

- LSA/SQL & OPEX Overview
- How We Began Our Journey
- Barriers You May Encounter
- Benefits of Paperless Processes
- Methods/Tools Used at LSA/SQL for Reducing Paper & Project Highlights
- Key Learnings
- Q&A

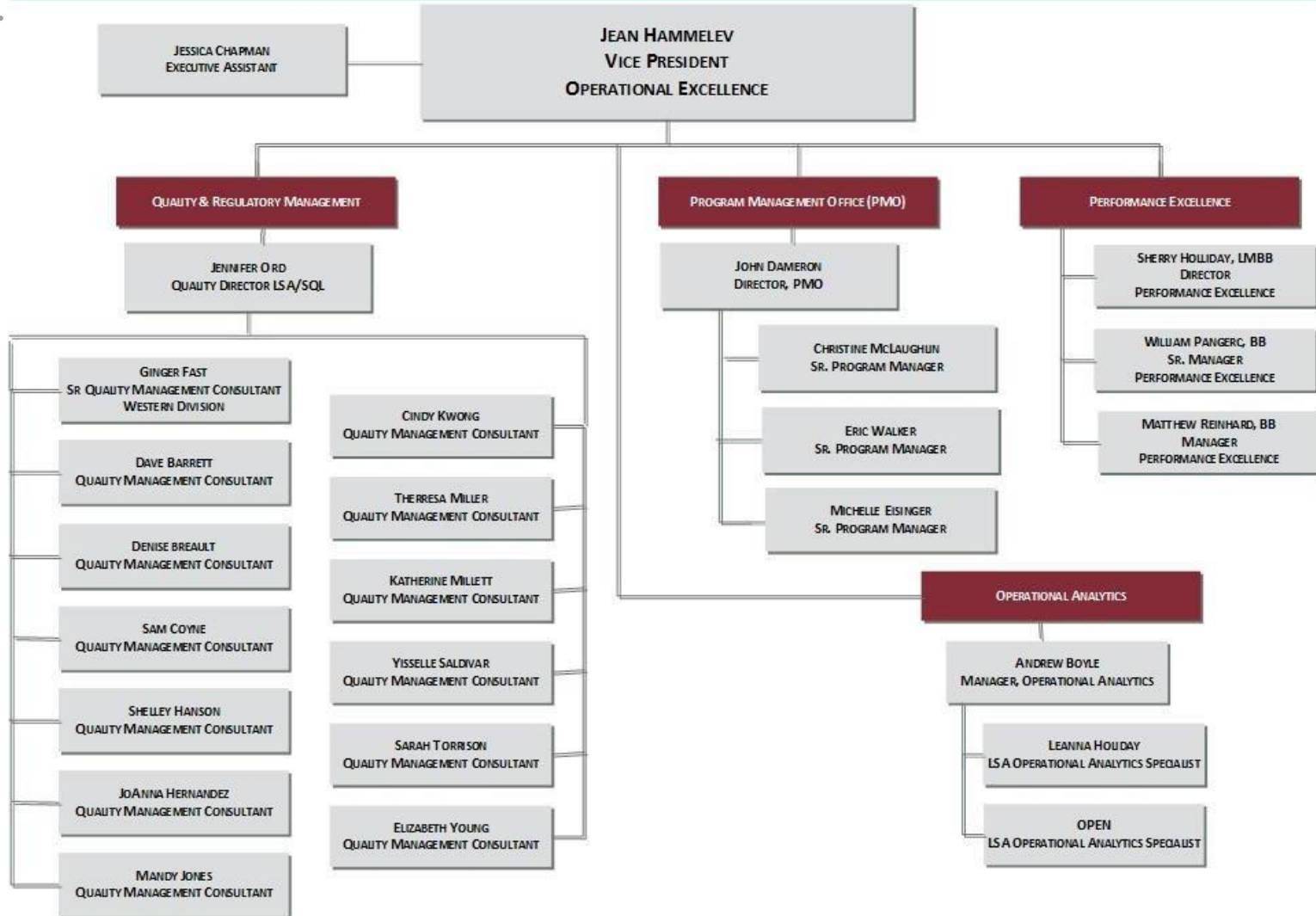
Arizona Integrated Laboratory Network



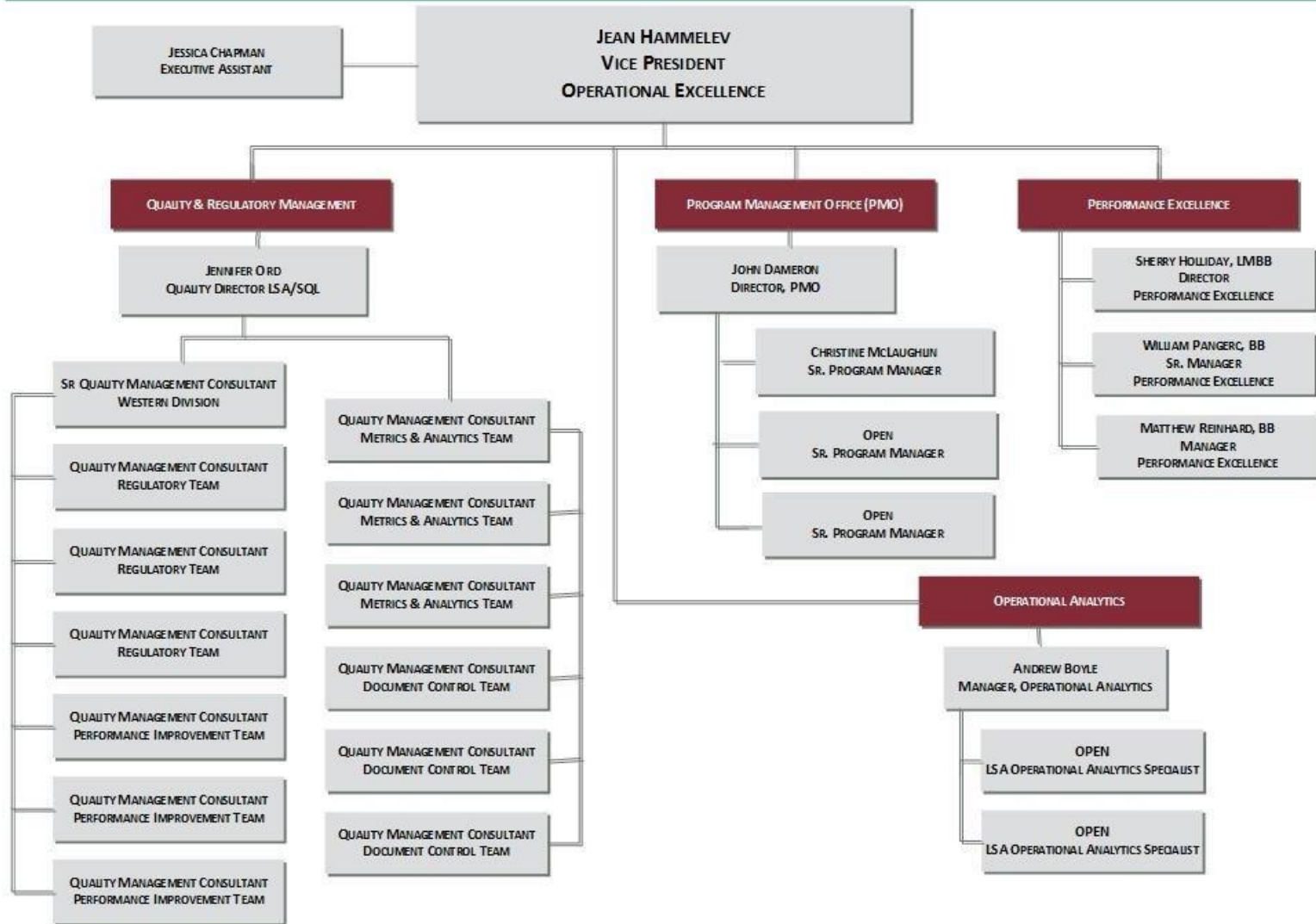
Western Division Integrated Laboratory Network



LSA/SQL Operational Excellence (OPEX) Organizational Chart 2019



LSA/SQL Operational Excellence (OPEX) Organizational Chart 2019



How We Got Started

2018 RoadMap (Business Plan) Initiative



Barriers To Going Paperless

Perceived or Real?

- How do you access news?
- Convenience – many feel paper documents are easier to read, we have always done it this way....
- Compliance and Regulations – ease of SOP's at hand vs electronic copies
- Perceived Affordability – the infrastructure required to print documents has a cost
- Resistance to Change – this one is hard....
- IT System Challenges to Digitize Paper Processes

Benefits of Paperless Processes

Communicate and Understand the Why

- Easier Access to Information
 - Estimated that employees spend one-third of their time looking for paper documents (www.helpsystems.com)
- Ability to Automate Manual Data Processes & Capture Data Automatically instead of Re-Keying Information
- Depth & Breadth of Coverage
- Speed Up Approval Processes
- Reduce Cost – Paper/Storage
- We Won't Have to Move It!!!!



Image source: Backpacksandmountaintops.com

Easier Access To Information

Electronic Document Management

MasterControl: LSA/SQL Laboratory Solution

- Centralized Single Source of Truth
- Decrease in Regulatory Deficiencies Due to Outdated SOP Issues & Easy Access to Policies & SOPs
- Document Routing Capability
- Reduction in Outdated Paper Manuals
- Creates an Audit Trail for Sign Off of Policies and SOPs

DocuSign: Contract routing for signature(s)/Speeds Up Approval Processes

Certify: Electronic Expense Submission/Approval Tool

Ability to Automate Manual Data Processes

Multiple Data Feeds & Operational Decision Making

- **hc1:** SQL Utilizes a cloud based data repository with ability to customize data requirements from multiple sources through automation – Operational Analytics pushes custom reports to respective recipients throughout the organization for operational decision making
 - Cytogenetics Look Back Process – eliminated 1.5 FTE daily workload
 - Overtime (OT) Reporting – ability to address OT on a more real time basis
 - Improved Resource Allocation For In Office Phlebotomy Resources
 - Anchor Testing Growth – automated process to communicate new high complexity test utilization
 - Growth Initiative Monitoring
 - Daily Metrics
 - Volume by Payor Type/Client Mix
 - Service Quality Dashboard for SQL Customers (Physician Client, WD)
 - Test Cancellations Deeper Dive by Client/Lab Department, etc.



Ability to Automate Manual Data Processes

Robotic Process Automation (RPA)

- IT Completed Proof of Concept: Automated a manual IT process for adding updated physician information (National Provider Identifier – NPI) to our database – backlog/low priority in IT but had significant downstream impact for insurance reimbursement
- **“iTOP” (IT Operations Bot):** Pulls data from multiple systems automatically to provide new employees access to multiple systems by job position (i.e. Active Directory – user I.D, LIS, Email, Billing, AP, etc.
- **“Billy”:** Our first of many Bots in Billing Operations will automate the insurance resubmission process and improve reimbursement collection for outstanding claims with no reply from insurance companies
- **Next Steps:**
 - Governance/Intake/Prioritization Process/ROI – OPEX Oversight
 - Train Internal Bot Developers in key areas suitable for automation
 - HR Bots: “Prebordinator” & “Ivonna Hire You”

Reduce Cost of Paper and Storage

Multiple Projects Completed

Billing Patient Correspondence Workflow: Receive faxes from patients for missing information required to bill correctly. Involved printing and working paper copies in batch style and scanning into FIS batch style with a note in XIXIN for location reference. Current process incorporates E-fax, Email Capture (FIS), a virtual file cabinet, and an FIS workflow. Documents are no longer printed, are available in near real-time, stored at the patient level, and no longer require scanning.

Pre-Order/Held Order Process: PSCs receive faxed orders for future lab work. Patient may present at a different location that received the faxed order. Created a centralized fax line for these orders hooked directly to E-fax. Use email capture to move to FIS workflow to place orders on hold in a virtual filing cabinet. After the order is completed, the requisition will be exported from the held orders virtual filing cabinet and imported to a requisition virtual filing cabinet.

Reduce Cost of Paper and Storage

Multiple Projects Completed

IOP/PSC Documentation: Retention period for respective documentation increased to two years creating an on-site/off-site storage issue. Supervisor now reviews documentation, batches by site code/site name/month/year and forwards to Central Scanning. Scanning occurs and documents are placed in an IOP virtual filing cabinet with respective retention period set. Paper copies are shredded and discarded.

Database Management (DBM) Paperless Workflow: DBM created paper batches of documentation for majority of processes. Documents come from multiple sources (email, word docs, PDFs, etc.) and were batched and sent to Central Scanning. Current process consists of saving electronic documents to a folder as they move along the process. When the process is completed, the entire folder is imported in to FIS via a whole folder function and indexed into a DBM virtual file cabinet.

Reduce Cost of Paper and Storage

Multiple Projects Completed

Hematology QC Data Retention: Hematology would print QC, review, sign, and store in binder in the department. Today, they no longer print the QC and review and sign electronically (utilizing doPDF which allows you to freely convert documents to PDF files). Files are imported into a folder in the Hematology virtual filing cabinet for retention. System wide commercial QC data is now accessible from any PC.

Genetics Pre-Authorization Workflow: Converted to a paperless workflow. All documentation remains electronic until documentation is received, placed in an electronic folder and marked complete. Completed folders are imported into the Genetics/Genomics virtual filing cabinet and stored per regulatory requirements. The process created a single index for each case vs. upward of 20+ index steps in FIS.

Reduce Cost of Paper and Storage

Multiple Projects Completed

Client Services Laboratory Order Correction Form (LOCF): Previously LOCF forms were filled out, printed, and then manually faxed to clients for missing or a request for corrected information. Current process is to complete the form electronically and utilize Fax2Mail for sending. Currently developing an electronic process for capturing returned LOCF forms. Documentation is imported and stored in respective virtual filing cabinet.

Cytology & Anatomic Pathology Incoming/Outgoing LOCF Process: Same process as above utilizing Fax2Mail for both incoming and outgoing information requests. Documentation imported and stored in respective virtual filing cabinet.

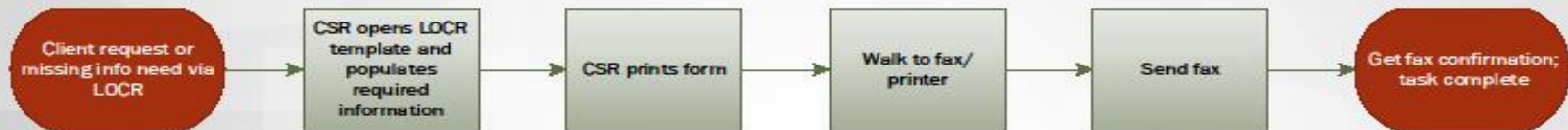
Microbiology Validation Data: Paperwork stored in binders and retained per regulatory requirements. Scanned historical information and placed in Micro virtual filing cabinet with respective retention requirement. New validations completely electronic, and documentation is imported and stored in virtual filing cabinet.

Workflow Improvement

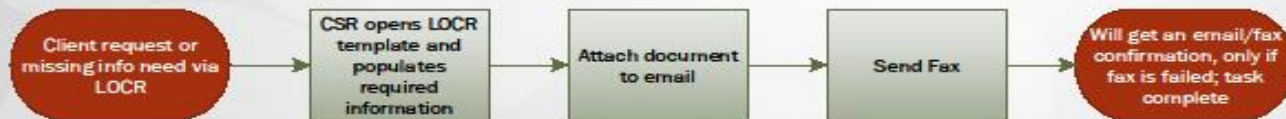
Client Services Outgoing LOCR Fax Process

February 26, 2019

Current State



Future State



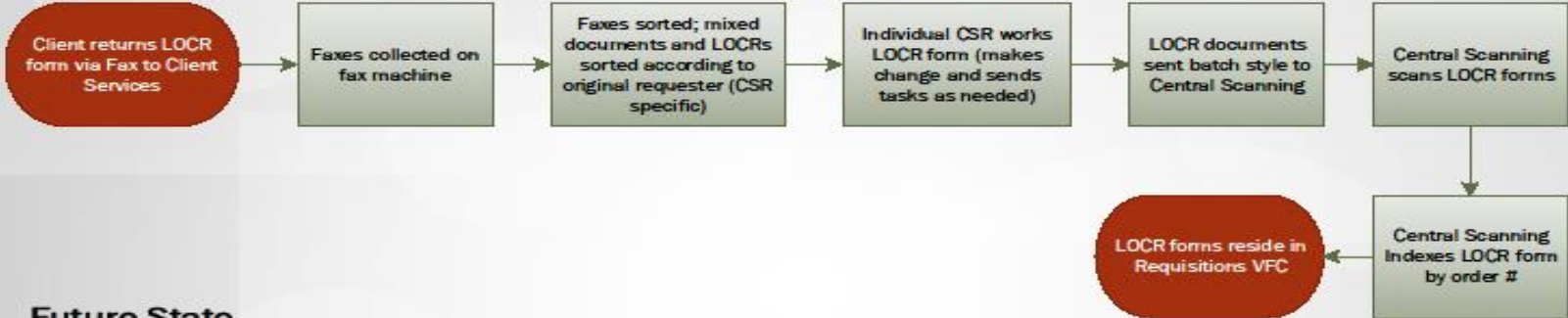
Page 1

Workflow Improvement

Client Services Incoming LOCR Process

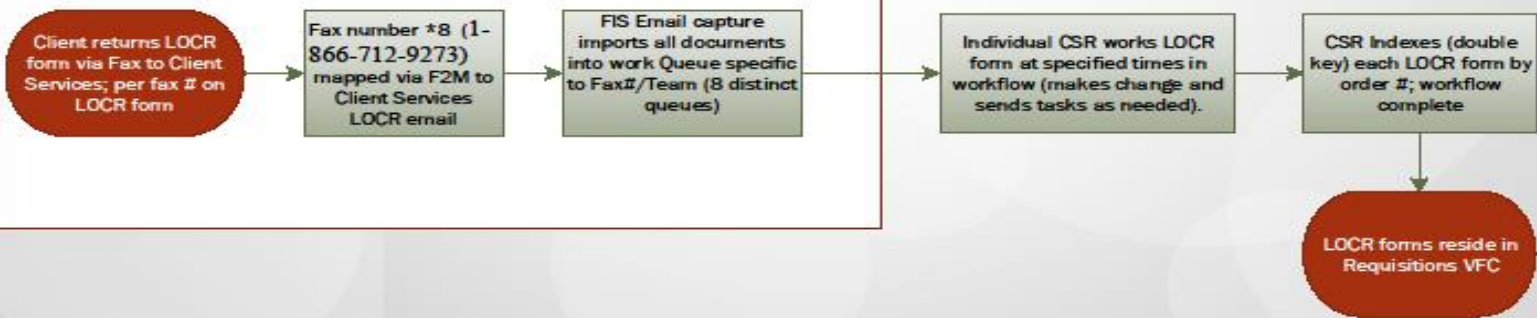
May 1, 2019

Current State



Future State

Automated Process



Reduce Cost of Paper and Storage

Multiple Projects In Progress

General Lab Maintenance Documentation: Scanning documents for all sights into a virtual filing cabinet. Future state will be capture original documents electronically, through Email Capture and store in virtual filing cabinet per regulatory requirements.

Cytology Competency & Training Documentation: Documents currently being scanned for retention purposes. Future state will include importing electronic training documentation into a virtual filing cabinet with respective retention per regulatory requirements.

Billing Client Document Request Process: Billing Order Entry requests documents for missing information, information received by fax, worked by Billing, and sent for scanning. Future State will utilize receiving information via Efax, utilize Email Capture to retrieve the data, index data into a virtual filing cabinet, then worked in billing, eliminating all paper.

Key Learnings

Lessons Learned

- Top Down Organizational Initiative Gets Everyone Thinking About Ways to Reduce Paper
- Although Solutions are Not “One Size Fits All”, We Can Replicate Processes in Many Operational Areas
 - i.e. Laboratory Order Correction Form Process
- Start With Stable & Repeatable Processes
- Garbage In, Garbage Out – Lean Processes Before Automating
- Keep Automating!!!! (Especially those things that no one likes doing, anyways!!!)

Q&A

Thank you!

Q & A