Project Scope

APHL Requirements Implemented
(Requirements for Public Health Laboratory Information Management Systems)

• BP #1. Laboratory Test Processing (Clinical and Environmental)
• BP #3. Proactive Specimen/Sample Collection
• BP #4. Specimen and Sample Tracking
• BP #7. General Laboratory Reporting
• BP #8. Statistical Analysis and Surveillance
• BP #14. Quality Control (QC) and Quality Assurance (QA) Management
LIMS Users

- Lab Sections
  - Virology
  - Microbiology / Bioterrorism
  - Environmental and Molecular Microbiology
  - Environmental Chemistry
  - STAT (remote) labs
  - Chemical Terrorism

- Public Health Clinics
  - 10 of 10 clinics are live

- Community based Organizations (CBO)
  (high school wellness centers, prisons, health clinics, etc.)
  - To be implemented summer of 2006

- Hospital labs
  - To be implemented fall of 2006
External Interfaces

- Drinking Water – SDWIS ready
- Instruments: Balances, pH meters, ICP/MS and GC/MS
- Billing – extracted data report sent to Public Health billing office includes CPT codes and diagnosis (ICD-9)
- Master Client Index (MCI): Patient information
- CDC extract report for sexually transmitted diseases
- DERSS for epidemiology surveillance
- XPEMS: HIV
Implementation Process

- Initially reviewed requirements for all lab sections
- Focus turned to individual labs, which were implemented sequentially
  - The only exceptions were Environmental Chemistry and EMM which overlapped
- Configuration was workflow driven
  - Scenarios were identified for each lab
  - Configuration completed from order entry to final reporting
Schedule

- **Start**: Oct, 2004 **End**: Jun, 2006
  - **Project Duration**: 20 months

- **LabWare personnel**
  - 2 LW consultants full time for the duration of the project
  - 1 LW consultant 50% availability for the duration of the project
  - 1 LW consultant full time for 10 months (Environmental Chemistry)

- **DPHL personnel**
  - 1 LIMS Administrator full time for the duration of the project
  - 2 Key users 20% availability starting in Micro for the duration of the project (14 months)
Schedule

Virology Oct, 2004 May, 2005
Microbiology / BT May, 2005 Nov, 2005
4 STAT remote labs Nov, 2005 Dec, 2005
EMM Dec, 2005 Apr, 2006
Environmental Chemistry Jul, 2005 Apr, 2006
Chemical Terrorism Apr, 2006 Jun, 2006

APHL Annual Meeting 2006
New Public Health Lab Functionality Introduced

- Order Manager: Clinical patient test request
- Reference Ranges: Limits, reflex test definition
- Sample Rules: Specimen source definition
- Patient Manager: patient demographics
- Folder Manager: Sample workflow
- Child Test: Micro testing
- Lab Manager: Release testing rules
- Group Security: Clinic access rules
- Sample Display Fields: Display Accession ID instead of sample ID
Benefits Realized

- Harmonize & centralize reports
- Data is more accessible
- Turnaround time has been reduced by 1 day
- Clinics have on-line access to results
- Sample accessioning administrative effort has been reduced
- All labs reduced transcription
  One example is during flu season. Prior to LabWare LIMS results were transcribed 7 times. With LabWare LIMS results are transcribed twice (notebook, and LabWare LIMS)
- Product flexibility allows DPHL to configure changes
Challenges

- State IT policies sometimes hindered progress of the project
- Vendor needs to understand government operations
- Vendor knowledge of Public Health lab operations
- Refinements and process improvements always needed
  - Most changes can be done by DPHL LIMS Administrator
Post Production Resources

- 1 LabWare Consultant required 4 weeks per year
- 1 Delaware LIMS Administrator allocated 70% to project (configuration, upgrades)
- 1 Delaware Key User per lab allocated 15% to project (Configuration, questions, training new staff)
- Maintenance contract for LabWare upgrades