APHL DETOR Implementation Handbook

The New Direction in Electronic Test Orders and Results for Public Health and Healthcare

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Welcome to the APHL Detor - Electronic Test Orders and Results implementation. As a user of APHL's Detor solution, you will be able to securely exchange test orders and results between healthcare organizations and public health laboratories.

Implementation of Detor requires a coordinated effort between multiple organizations. APHL will leverage its proven Technical Assistance Methodology to manage this effort. This methodology provides a highly supportive, structured approach to facilitate efficient and effective management, communication, and coordination of your implementation.

This handbook will serve as a guide for what to expect during your implementation and will help to ensure appropriate preparation and successful outcomes. The intended audience for this guide is the public health laboratory and their identified healthcare organizations.

Our team is committed to providing exceptional services and support throughout this process.

We look forward to working with you and your team.

Sincerely,

APHL Detor Program Team

🔎 Solution Description

Background

Rapid and timely data exchange of laboratory test information is essential for patient care. State and local public health laboratories provide critical testing for healthcare organizations, such as hospitals, urgent care clinics, community centers, and physician offices. Facilitating electronic test orders and results with public health laboratories will result in the exchange of faster, more up-to-date, and complete laboratory test information for the benefit of all interested parties. Enabling Detor is critical for enhancing patient care and supporting public health reporting.

CDC's Data Modernization Initiative (DMI) team has prioritized laboratory data exchange as part of their multi-year data strategy to streamline data sharing between clinical and public health entities while reducing the burden on both parties. CDC's Division of Laboratory Systems is leading this Electronic Test Orders and Results initiative and has provided APHL the funding and guidance needed to launch a comprehensive public health laboratory focused solution.

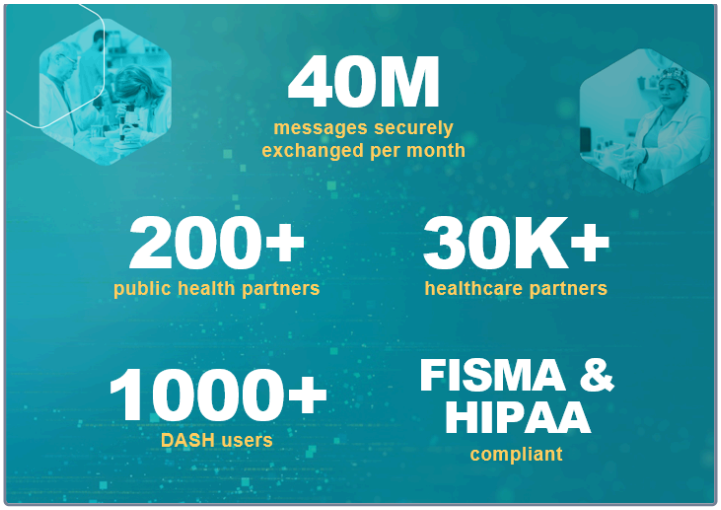
APHL has served public health as a trusted nonprofit partner for over 60 years. As a member-driven organization, we are committed to our mission to promote the role of public health laboratories in shaping national and global health objectives, and to support policies, programs, and technologies that assure continuous improvement in the quality of laboratory practice and health outcomes. **APHL's Detor solution was developed to support its members and advance the public health laboratory testing process.**

Solution

At a high level, there are three possible Electronic Test Orders and Results implementation paths available – web portal, system integrated (direct), and system integrated (indirect). The APHL Detor solution follows the **system integrated (indirect) approach**, which supports the modernization and innovation of IT capabilities and services.

Web Portal	System Integrated (Direct)	System Integrated (Indirect)
Separate system accessed by clinical providers for manual entry of orders and retrieval of test results. This system can be integrated with public health laboratory's LIMS.	Integrated solution that enables clinical partner's EHR system to communicate directly with public health laboratory LIMS. Direct integration is 1:1 and requires message translation by one or both systems.	Integrated solution enabling clinical EHR system to communicate with public health laboratory LIMS via an "intermediary" that allows each system to maintain its native format and manages the translation for them.

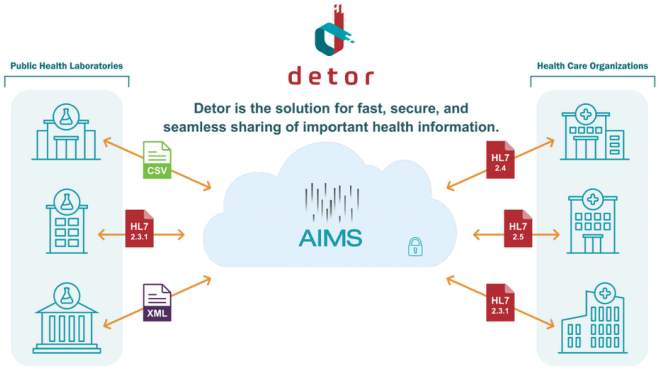
Detor was developed on the existing cloud-based infrastructure known as the APHL Informatics Messaging Services (AIMS) platform. This cloud-based platform, funded and supported through a cooperative agreement with the CDC, has served public health partners as a public health data exchange mechanism since 2008. AIMS securely receives, filters, routes, and delivers millions of individual messages per month to and from public health laboratories, agencies, CDC programs, and thousands of healthcare organizations.



Details on the AIMS environment and Security Posture are available here: AIMS Trust Center - AIMS Resource Center - Confluence (atlassian.net)

The high-level process flow of test ordering and resulting via Detor is:

1. Test order is **transmitted** from provider's EHR to Detor.
2. Detor performs **transformation**, **translation**, and **terminology** services on message.
3. Detor **routes** test order to PHL.
4. Test result is **transmitted** from PHL's LIMS to Detor.
5. Detor performs **transformation**, **translation**, and **terminology** services on message.
6. Detor **routes** test result to provider.



The primary goals of Detor are:

- Minimize the burden on both the public health laboratory and healthcare organization to manage numerous connections and message translations, reducing the technical staff requirements.
- Integrate the test orders and results within the organizations' existing systems (EHRs and LIMS), reducing the need for additional systems and manual entry.
- Establish a long-term solution that can manage high-volume testing and scale for public health emergency use.

Project Approach Overview

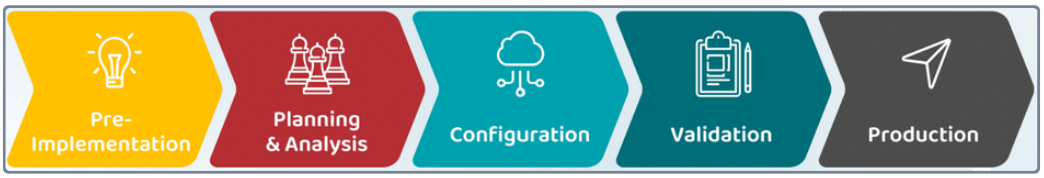
In collaboration with CDC, APHL has technical assistance subject matter experts whose mission is to assist public health partners in implementing data exchange solutions. The Detor team will provide expertise in project management, laboratory workflow, terminology support, technical architecture and systems integration.

This team will provide both on-site and remote hands-on support. They will adhere to a methodology that incorporates best-practices, efficiency and effective management, communication and coordination.

The key benefits of our approach are:

- ✅ Reduces burden on over-allocated or unavailable resources.
- ✅ Promotes on-time and on-scope implementations.
- ✅ Minimizes uncertainty and risk.
- ✅ Prepares your team for long-term sustainability.

Approach By Phase



Pre-Implementation

The pre-implementation phase will be focused on strategizing and preparing for the Detor project, particularly in the areas of legal execution, staff allocation, and completion of a public health laboratory and healthcare organization profile.

The primary components of this phase include:

- ☐ Completion of a profile with the Public Health Laboratory
- ☐ Completion of a profile with the Healthcare Organization(s)
- ☐ Identification and allocation of required project roles at all organizations (Creation of Contact List)
- ☐ Identification of tests in scope (test catalogue)
- ☐ Completion of legal agreements
- ☐ Project schedule creation

Planning & Analysis

The planning and analysis phase will be focused on gathering data on the operational and technical processes of both the public health laboratory and the healthcare organization(s). This data will be analyzed to prepare for Detor configuration and support the organization in the design of the new operational and technical processes that will exist with Detor.

The primary components of this phase include:

- ☐ Project Kick-Off
- ☐ Commitment to Project Schedule
- ☐ Commitment to Project Charter

- [ ] Initial Use of Project Control Measures (Communication, Issue/Risk/Change Managment, and Status Reporting)
- [ ] Analysis, design and approval of test order and results workflows for selected test types
- [ ] Analysis of data for selected test types (gap analysis)
- [ ] Analysis of current technical environment
- [ ] Integration/Connectivity planning
- [ ] Provide healthcare organization test order message (via email)
- [ ] Provide public health laboratory test result message (via email)
- [ ] Collection of pre-Detor evaluation metrics

Configuration

The configuration phase will establish the required transport and routing, message transformation and translation, terminology services, and monitoring for the unique public health laboratory and healthcare organization(s).

Note that initial configuration work will begin prior to the completion of Planning & Analysis.

The primary components of this phase include:

- [ ] Mapping/Translation of healthcare data elements to the Detor data elements
- [ ] Mapping/Translation of the public health laboratory data elements to the Detor data elements
- [ ] Establishing connectivity
- [ ] Creation of the intermediary test order and results messages
- [ ] Configuration of monitoring tools

Validation

The validation phase will include the coordinated testing of the Detor operational and technical processes. This phase will be supported by APHL but will require focus and coordination between APHL, the public health laboratory, and the healthcare organization.

The primary components of this phase include:

- [ ] Validation of connectivity and data flow
- [ ] Validation of successful test ordering for all scenarios associated with select test types
- [ ] Validation of successful test resulting for all scenarios associated with select test types
- [ ] Validation of expected error handling
- [ ] Validation of monitoring tools
- [ ] Validation of operational processes
- [ ] Updates to Detor configuration as needed
- [ ] Training of staff in ongoing Detor support and maintenance responsibilities
- [ ] Approval for public health laboratory to proceed to production
- [ ] Approval for healthcare organization(s) to proceed to production

Production

The production phase will include the “go-live” of Detor and 1-2 weeks of on-site post-production implementation team support.

The primary components of this phase include:

- [ ] Detor Productive Use
- [ ] Validation of productive operational and technical processes
- [ ] Transition to AIMS Support team

- [ ] Collection of post-implementation evaluation metrics (this may occur several months following productive use)

Technical Considerations

> ⚠ Note that page is still in development. The preliminary sharing of this information is intended to benefit the ETOR initial implementers in preparation for their implementations, with the understanding that some information may change as our development evolves.

The following tables outline the technical considerations for public health laboratories (PHLs) and healthcare organizations (HCOs) implementing ETOR exchange via the APHL Intermediary.

Public Health Laboratories (PHLs) - Technical Considerations

Technical Component	Considerations	Notes
Transport Method Options	• S3 *(this is the preferred option in most situations)* • SFTP	While the AIMS ETOR Intermediary can support other transport methods, S3 and SFTP are preferred given functionality, resiliency, and versatility.
Network/Firewall Requirements	• For those using S3 as a transport method, the firewall needs to allow for HTTPS in/out • For those using SFTP as a transport method, the firewall/network needs to allow for SFTP in/out	Network/firewall components are directly linked to PHL transport methods.
Message Payload Options	• HL7 v2.x *(this is the preferred option in most situations)* • FHIR • XML • CSV	Any of the outlined file formats are compatible with the ETOR intermediary solution as long as the LIMS 1) is capable of importing sufficient order information and 2) contains fields for the data elements necessary to create a result.
Data Field Recommendations	The recommended data fields for the in-scope test(s) will be defined during Gap Analysis discussions with both the PHL and HCO.	This allows for the creation of orders and results in the LIMS.
LIMS Capability Requirements	• Able to import sufficient information to create an order within the system. • Able to link order and results using a unique ID/token. • Able to export sufficient information to create a result within the system. • Has a protocol for handling (e.g., consuming, reviewing) of error messages or an automated or manual alternative process external to LIMS.	Additional LIMS configurations may be necessary. If so, APHL will collaborate with the PHL to assist in communicating needs to the LIMS vendor.
Integration Engine	No integration engine required for message transformations.	APHL does not recommend the use of an integration engine for transformation of data for ETOR exchange.

		Note: No integration engine should be needed if the LIMS can import/export data. If the LIMS cannot import/export data, APHL will work with the LIMS vendor to communicate updates needed.

Healthcare Organizations (HCOs) - Technical Considerations

Technical Component	Considerations	Notes
Transport Method Options	1. RESTful API *(this is the preferred option in most situations)* 2. FHIR 3. MLLP/VPN	While the AIMS ETOR Intermediary can support other transport methods, RESTful, FHIR and MLLP / VPN are preferred given functionality, resiliency, and versatility.

Network/Firewall Requirements	• For those using RESTful API as a transport method:
	  ◦ Able to enable AIMS RESTful API service for order receival.
	  ◦ Able to enable HCO RESTful API service for result delivery.
	  ◦ Able to authenticate RESTful API connection.
	• For those using MLLP/VPN, the network/firewall must be able to establish VPN from AWS to VPN/server to VPN/firewall.
		Network/firewall components are directly linked to HCO transport methods.

Message Payload Options	• HL7 v2.x *(this is the preferred option in most situations)* • FHIR • XML • CSV	Any of the outlined file formats are compatible with the ETOR intermediary solution as long as the EHR 1) contains fields for the data elements necessary to create an order and 2) is capable of importing sufficient result information.
Data Field Recommendations	The recommended data fields for the in-scope test(s) will be defined during Gap Analysis discussions with both the PHL and HCO.	This allows for the creation of orders and consumption of results in the EHR.
EHR Capability Requirements	• Able to export sufficient information to create an order suitable for PHL consumption, with necessary data elements. • Able to link order and results using a unique ID/token. • Able to import results. • Able to identify (i.e., include in the order) the appropriate PHL to receive the test order. • Has the ability to enforce the population of certain data elements in the EHR prior to creation of the order - *preferred* • Has established processes for test data collection and data entry into the EHR with which staff comply, ensuring data of high quality.	

Roles and Responsibilities

To ensure a successful implementation, you will need to provide the required roles with the appropriate skill set and availability.

Below are details for role requirements on a standard Detor Implementation.

Public Health Laboratory Roles and Responsibilities

The following roles and associated allocation will be necessary for a Detor implementation. Depending on laboratory organization and staffing, some roles may be served by multiple individuals, or a single individual may serve in multiple roles. FTE requirements may vary based on the scope of your implementation and will be discussed. The success of the implementation and sustained Detor solution is reliant on utilizing a team approach.

Role	FTE Implementation	FTE Sustaining	Responsibility	Recommended Skillset
Project Sponsor	0.1	< 0.1	**Implementation and Sustainability** • Identifies individuals to fill all required project roles. • Commits to participating in implementation project as outlined in Project Charter. • Advocate for Detor with stakeholders. • Provides leadership representation in discussions with healthcare organization. • Approves milestones for progress (e.g., CLIA approval in Validation, approval to move into Production). • Removes obstacles for the project team and negotiates escalated issues and risks related to the project and/or solution.	*Often a Lab Director* • Has access to and influence with stakeholders. • Understands the value and benefits of Detor. • Authority to make commitments and decisions related to the Detor effort. • Understands competing priorities and impacts to the Detor implementation project. • Ability to allocate resources to the project. • Excellent communication and interpersonal skills.
Project Manager	0.5	N/A	**Implementation** • Works closely with APHL Project Manager to understand and commit to project scope, timeline, management approach. • Directs the work assigned to the public health laboratory, monitoring and ensuring timely and quality completion, with assistance from APHL Project Manager.	*Often a Bench Supervisor or Section Supervisor* • Knowledge of project management principles and practices. • Previous project management experience. • System implementation experience. • Knowledge of laboratory workflow for receiving a

			• Works closely with healthcare organization team to align goals and tasks. • Supports the APHL Project Manager in issue and risk management, escalating as necessary to the Project Sponsor. • Creates and maintains the project communication plan for PHL internal and external communication. • Coordinates APHL on-site visits. • Coordinates all project approvals, including CLIA approval. • Provides regular status updates to the Project Sponsor.	test order and providing a test result. • Ability to grasp technical information. • Ability to work cooperatively with other organizational entities and engage 3rd parties as necessary. • Excellent communication and organizational skills.
Lab Subject Matter Expert (SME)	0.5	0.1	**Implementation** • Provides insight into lab processes and workflow. • Implements non-technical workflow changes. • Creates lab process documentation that reflects updated workflows. • Collaborates with HCO during validation. • Works with APHL Terminologist and PHL Informatics/Technical Analyst to create test messages. • Acts as the LIMS end user. • In coordination with the Integration resource, creates formal document for CLIA approval that analyzes the integration, documents additional processes, and outlines any issues with mapping/vocabulary. **Sustaining** • Trains PHL staff on new Detor workflow(s) and process(es). • Updates standard operating procedures (SOPs) and accesses PHL staff competency in executing SOPs. • Collaborates with support staff to manage the follow up needs of the new process. • Supports additional Detor test onboarding. • Assist with Detor quality assurance and troubleshooting.	*Often a Laboratorian* • Knowledge of lab processes and workflows (specifically for the tests being implemented during the implementation). • Access to and experience with LIMS applications. • Experience writing workflow procedures (SOPs) for business use. • Experience implementing SOPs. • Excellent communication and organizational skills. • Team player.

Informatics/Technical Analyst	0.5	0.2-0.5 *dependent on # of Detor partners, test types, and volume*	**Implementation** • Collaborates with HCO to send/receive necessary artifacts and/or tests. • Works with APHL Terminologist and PHL Lab SME to create test messages. • Pulls reports/other artifacts or coordinates between PHL IT to do so. • Reviews Service Level Agreements (SLAs) and coordinates updates as needed. • Advocates for Detor with stakeholders. • Sets up connection to AIMS intermediary. **Sustaining** • Monitors Detor feed and ensures data quality. • Coordinates required updates and/or changes with test(s). • Provides Help Desk support to PHL and HCO Detor users (this may need to be covered by an additional resource). • Troubleshoots issues and escalates as necessary with HCO and APHL counterparts. • Documents Detor troubleshooting processes and maintains technical SOPs. • Reviews mapping updates in Waypoint and coordinating with APHL as needed. • Advocates for Detor with stakeholders.	*Often a LIMS Administrator or IT Technical Architect* • Knowledge of laboratory standards preferred. • Familiarity with HCO test data. • Access to and experience with LIMS applications. • Understanding of how to monitor data feeds (e.g., quality of data, quantity of data). • Ability to maintain knowledge of NBS test updates and/or changes. • Knowledge of integration engine a plus. • Excellent communication and organizational skills. • Team player.
LIMS Vendor Representative - *3rd party*	Dependent on LIMS capability	Dependent on LIMS capability	**Implementation and Sustaining** • Addresses changes needed in LIMS if/as needed.	• Authority and ability to execute requested changes in LIMS applications.

In addition to the project roles defined above, the following personnel may be minimally involved and/or impacted by the Detor implementation: legal representation, sample receiving staff/test courier, quality assurance specialist, procurement staff, and/or additional sustaining support.

Please provide contact information for the required Public Health Laboratory Roles Here: Profile Page

Healthcare Organization Roles and Responsibilities

The following roles and associated allocation will be necessary for a Detor implementation. Depending on healthcare organization and staffing, some roles may be served by multiple individuals, or a single individual may serve in multiple roles. FTE requirements may vary based on the scope of your implementation and will be discussed.

Role	FTE Implementation	FTE Sustaining	Responsibility	Recommended Skillset
Project Sponsor	0.10	0.10	**Implementation and Sustainability** • Commits to participating in implementation project as outlined in implementation project charter. • Approves milestones for progress (e.g., approval in Validation, approval to move from Limited Production to Full Production). • Advocate for Detor with healthcare organization stakeholders, including medical staff, nursing, laboratory, and IT leadership. • Identifies resources and allocates their time appropriately to the project and long-term maintenance needs. • Work closely with public health laboratory and APHL team during the implementation. • Acts as conduit for raising project issues with public health laboratory leadership. • Provides leadership representation for discussions between public health laboratory and healthcare organization. • Removes obstacles for the project team and negotiates escalated issues and risks related to the project and/or solution.	*Often an Administrator* • Organizational knowledge of the healthcare organization. • Has access to and influence with leadership. • Ability to access and allocate resources to the project. • Understands the value and benefits of Detor. • Understands the clinical workflow involved in ordering a test and receiving a result. • Understand competing priorities and impacts to the Detor implementation project. • Authority to make commitments and decisions related the Detor effort.
Project Manager	0.50	N/A	**Implementation** • Responsible for the day-to-day management of the project. • Works closely with public health laboratory team to align goals and tasks. • Works closely with APHL Project Manager to establish timeline and priorities. • Directs the work assigned to the healthcare organization, monitoring	*Often an IT Project Manager* • Knowledge of project management principles and practices. • Previous project management experience. • System implementation experience. • Knowledge of public health laboratories and healthcare organizations.

			and ensuring timely and quality completion. • Provides issue and risk management, escalating as necessary to the Project Sponsor. • Provides status updates to the Project Sponsor.	• Ability to grasp technical information. • Ability to work cooperatively with other organizational entities and engage 3rd parties as necessary. • Excellent communication and organizational skills.
Testing Analyst	0.50	0.1	**Implementation** • Acts as point person for the TA Team, PHL, and any visit(s). • Provides insight into HCO processes. • Creates test order data to generate messages in sending system. • Collaborates with PHL to send/receive necessary artifacts and/or tests. • Acts as the EHR end user. • Review and validates test result data for completeness and quality. • Approve mappings in Waypoint. **Sustaining** • Trains HCO staff on new Detor workflow(s) and process(es). • Updates standard operating procedures (SOPs) and accesses HCO staff competency in executing SOPs. • Collaborates with support staff to manage the follow up needs of the new process. • Supports additional Detor test onboarding. • Assist with Detor quality assurance and troubleshooting.	*Often a Nurse Manager or Nurse* • Understands the clinical workflow involved in ordering a test and receiving a result. • Knowledge of public health data standards (HL7, IHE, LOINC, SNOMED CT, UCUM, ICD). • Knowledge of Waypoint mapping tool. • Access to and experience with healthcare organization EHR system (end user). • Excellent communication and organizational skills. • Team player.
Hospital IT Specialist	0.50	0.2-0.5 *dependent on test types and volume*	**Implementation** • Engages in discussions to strategize switch from Limited/Parallel Production and Full Production. • Turns on system for switch to Production. • Collaborates with APHL Technical Architect. • Sets up connection to AIMS intermediary. **Sustaining** • Monitors Detor feed.	*Often an IT Specialist* • Understanding of how to monitor data feeds (e.g., quality of data, quantity of data). • Knowledge of integration engine a plus.

			• Coordinates required updates and/or changes with test(s). • Troubleshoot issues and escalate as necessary with HCO and APHL counterparts. • Reviewing mapping updates in Waypoint and coordinating with APHL as needed. • Documenting Detor troubleshooting processes and maintaining technical SOPs.	
EHR Analyst/Engineer	Dependent on EHR capability	Dependent on EHR capability	• Addresses changes needed in EHR if/as needed.	*Often an EHR analyst (maybe from EHR Vendor)* • Authority and ability to execute requested changes in EHR applications.

Please provide contact information for the required Healthcare Organization Roles Here: Profile Page

APHL Roles and Responsibilities

The assigned APHL Technical Assistance (TA) Team will be supported by a centralized team that includes architects, terminologists and engineers. The centralized team will be responsible for the intermediary configuration, while the public health laboratory focused team will be responsible for addressing public health laboratory (PHL) and healthcare organization (HCO) unique requirements, and supporting the design, documentation and updates of local systems and processes. The below includes a description of the roles that will be a part of the public health laboratory focused team.

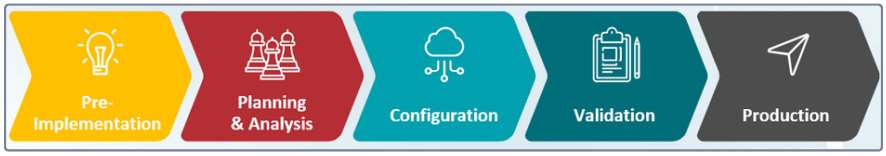
Role	FTE Implementation	Responsibilities
Project Sponsor	0.10	• Commits to participating in implementation project as outlined in implementation project charter. • Provides oversight to all APHL Detor technical assistance teams. • Responsible for the staffing and scheduling of Detor implementations. • Serves as escalation and support for team.
Project Manager	0.50	• Acts as APHL primary contact for PHL and HCO involved in the implementation project. • Manages implementation project(s) and TA engagement(s) including scheduling and project planning, stakeholder management, risk identification and mitigation, issue tracking and solutioning, communication, and associated documentation per APHL standards. • Coordinates with APHL TA team, PHL, and HCO to ensure tasks are completed and progress made. • Provides review, quality control, and assurance on TA processes and deliverables. • Provides project management updates following APHL and PMO policies. • Collates feedback from APHL TA Team, PHL, and HCO on implementation process opportunities for improvement.

		• Coordinates project meetings (and agendas) between teams and various stakeholders, documents meeting minutes/decisions/action items/next steps, and performs follow-up. • Leads knowledge management activities to organize, track and communicate project activities in Smartsheet or Confluence. • Utilizes APHL processes, communications, tracking systems or other logistical solutions to help ensure project success.
Lab Workflow SME	0.50	• Observes, documents, and assesses current PHL and HCO workflows and processes around ordering and result reporting. • Leads and analyzes gap analyses for 1) current workflow(s) vs future workflow(s) and 2) required and desired elements. • Documents future-state PHL workflows, encompassing Detor processes. • Documents future-state HCO workflows, encompassing Detor processes. • Documents functions that differ from current processes and how to handle if/then situations. • Documents requirements for test(s) in scope for Detor implementation. • Primarily supports the Planning & Analysis and Production portion of the Implementation. • Provides insight to Terminologist should questions arise during Configuration and/or later steps of the approach.
Terminologist	0.50	• Collecting information from the PHL and HCO. • Identifies data element gaps. • Map local codes to middle ground (intermediary) for both PHL and HCO. • Assists with mapping local-to-standardized values across different vocabulary domains. • Provides test case scenarios. • Performs validation on HL7 messages and provides feedback. • Assists in implementation of public health integration use cases using national messaging standards (HL7), implementation guides, and encoding guidelines. • Helps develop and maintain message implementation guides, business rules, and message specifications as needed for APHL member and partner organization support (e.g., result reporting to CDC, Detor for PHLs and their business partners, etc.). • Seeks insight from the Lab Workflow SME should questions arise regarding workflow documentation. • Provides training on Waypoint (mapping tool).
Technical Architect	0.25	• Analyzes client IT environments and messaging capabilities. • Helps to identify technical solutions to meet messaging requirements. • Provides TA consulting to healthcare organization and public health laboratory to advise on implementation of IT messaging solutions (e.g., reviewing for structural errors, writing queries to pick up messages outside of the S3 receiving bucket). • Coordinates with centralized technical team for specific technical tasks. • Provides training on DASH (message monitoring tool).
Data Integration Engineer	0.50	• Establishes connection between PHL and middle ground. • Establishes connection between HCO and middle ground. • Determines extraction process from the LIMS (what can it import, export).

		• Works closely with terminologists. • Collects information on data workflow, primarily with LIMS and integration engine. • Works with LIMS vendor as necessary.

Project Calendar

A unique schedule will be developed and agreed to for your implementation. A high-level calendar of the key phases and activities included in each is detailed below. The schedule for your implementation will include additional detail and could vary based on several factors including the number of healthcare organizations, test scope and resource availability.



Phase & Key Tasks	Week																
	Pre-Implementation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Post-Implementation
Pre-Implementation																		
Commit to Project																		
Complete Profile																		
Identify Tests in Scope																		
Identify and Allocate Team																		
Complete Legal Agreements																		
Project Management																		
Planning & Analysis				OS														
Create Project Schedule																		
Project Kick Off																		
Current Workflow Assessment																		
Future Workflow Design																		
Data Gap Analyses and Update Recommendations																		
Connectivity and Technical Planning																		
CLIA Documentation and Validation Planning																		
Training Planning																		
Provision of Sample Messages																		
Configuration																		
Data Element Evaluations																		
Structural and Vocabulary Mapping																		
AIMS Message Creation																		
Connectivity Establishment																		
Configuration of Monitoring Tools																		
Validation											OS							
Test Order Validation																		
Test Result Validation																		
CLIA Documentation																		
Training																		
Configuration Adjustment																		
Go/No-Go Decision																		
Production																OS		
Go-Live																		
On-site Production Support																		
Transition to Remote Support																		
Remote Support																		

OS = APHL Team Member(s) On-Site at PHL

Project Control

APHL's project methodology includes various tools and methods for managing the Detor implementation. Key project management elements that will help control the effort are described below.

Communication Management

Effective communication is critical to ensure your project's success. Together with your Project Manager, the APHL Project Manager will coordinate the assembly and maintenance of a full team contact list. Team members should communicate all relevant information to their counterparts and ensure the Project Managers are copied/included on all information.

The following will serve as our primary tools for communication during the implementation:

- In-Person interactions during on-site visits
- Emails & phone calls
- Weekly status meetings
- Monthly sponsor meetings

Scheduled calls will be supported by detailed agendas that will be provided and maintained by the APHL Project Manager.

Schedule Management

A high-level schedule template is available here. A unique project schedule for your implementation that reflects the scope and availability will be finalized and approved during prior to beginning your implementation. The schedule will be created by the APHL Project Manager and will be reviewed and approved by both the public health laboratory's and healthcare organization(s)' Project Managers and Project Sponsors. Once approved, the calendar will be distributed to the entire project team and will be adhered to ensure deliverables are met. Any variance from the schedule will be tracked and managed to ensure a full understanding of impact.

Issue Management

The identification and management of issues will be tracked throughout the implementation to ensure thorough awareness and timely resolution. For our purposes, an issue will be defined as any existing situation that may impede progress on the Detor project. Issues will be categorized based on their status, priority, type and disposition. Thorough documentation of all project issues will enable:

- A visible decision-making and tracking progress for all team members and sponsors
- Maintenance of focus on high priority items
- A mechanism for reaching consensus
- Documented solutions that may serve as a reference tool to assist in future issue resolution

Risk Management

Every project carries a certain amount of risk. For our purposes, a risk will be defined as any potential (not yet occurred) situation that may impede progress on the Detor project. Our risk management plan will enable us to identify those risks and employ strategies to manage them. Effective identification and development of mitigation plans early in the project, will help ensure our success. Frequent reviews and updates of the risks throughout the project will be critical to ensure the risks do not turn into issues.

A risk log will be created and maintained by the APHL Project Manager and reviewed with your Project Manager and sponsors.

Change Management

It is critical that changes to the project are carefully managed. Changes can have a significant effect on the schedule and quality of the final solution. Our change management process will help ensure that approved changes are beneficial and that they are appropriately communicated and reviewed prior to approval. Example of requests that may require approval include:

- A key milestone date change (either forward or backward)
- A key team member change
- Any APHL, Public Health Laboratory or Healthcare organization change to a contractual commitment
- Any change to either solution functionality or operational usage

Any requested change will be documented via both a change request form (completed by the submitter) and the change control log (completed by the APHL project manager). Once the APHL project manager has fully reviewed the request and understands the impact of the change, it will be reviewed with all stake holders to ensure it is necessary and beneficial to the overall project goals. A decision will be made by the stakeholders to either:

- Accept – move forward with the change and adjust the scope, schedule and cost as appropriate.
- Deny – provide an explanation for why the change cannot be made and what, if any, adjustments will be put in place instead.
- Defer – delay or re-assign the change request decision based on a need for more time or research to be completed prior to a decision being made.

Status Reporting

Status dashboards will be used to provide the project managers and project stakeholders a summary of the current project status and call attention to any significant milestones as well as concerns in the areas of scope, schedule, risks, issues, or changes. Status reports will be prepared by the APHL project manager and delivered weekly.

⭐ Post Production & Support

Monitoring Detor

In addition to the monitoring performed by APHL, your team will have a tool, DASH, available to monitor the routing of your organization's test orders and results. Prior to productive use of Detor your team will test the use of DASH and be trained on the monitoring process.

The DASH user guide can be referenced here: AIMS System Monitoring Dashboards User Guide (google.com)

Maintaining Detor

Clinical Architecture's Waypoint portal is the tool that will be used to manage the vocabulary service. This will need to be maintained and updated. During the implementation of Detor, your team will receive training on this tool.

The Waypoint user guide can be referenced here: Waypoint v22.3 User Guide (clinicalarchitecture.com)

If you require assistance in updating the vocabulary mapping, a request ticket can be submitted to AIMS support.

Requesting Support

Once you begin productive use of Detor, you will be transitioned to AIMS support. This will ensure prompt and qualified support.

The support team is available 24x7x365 to respond to catastrophic and critical ETOR related incidents. For all other incidents and requests, the support team is available 8:00 AM to 8:00 PM EST, Monday through Friday excluding holidays.

It is important to remember that the management of support tickets is a shared responsibility between the APHL support team and the individual/organization submitting the ticket. Efficient resolution may be impacted by availability of your team and relevant third parties.

The below reflects the AIMS Production Support Severity Descriptions:

Severity	Description of Conditions
Catastrophic	The Service is down or almost entirely nonfunctional. Delivery of messages /documents to the final destination is greatly affected. Users are not able to use the Services and work practices are severely impacted. The condition may be due to the components of the APHL Platform being down, unreachable, or unusable.
Critical	The Service has considerably degraded performance. While the Service displays major faults or crashes, the users' work can progress.
Medium	The Issue (1) affects the user and the problem has limited visibility or (2) is intermittent in nature and the user can still achieve full functionality on the platform.
Low	The Service is unaffected. The condition involves minor errors or bugs in the Service that do not impact on the business or the program function.

How to access Support

AIMS will provide portal access to the support desk for the purpose of reporting all issues and submitting requests. To access the support portal, use the following link: AIMS Service Desk - Jira Service Management (atlassian.net)

When submitting a ticket, be prepared to provide information related to:

1. The relevant service: ETOR
2. For incidents, the "impact" and "urgency" of the incident

3. Details of the incident or request