



# Request for Proposals: Global Health Technical Support for Global Public Health Data Innovation

Letter of Intent Due: June 12, 2023

*Application Due Date: **June 26, 2023***

*Applications due to APHL Global Health,*

*[globalhealth.informatics@aphl.org](mailto:globalhealth.informatics@aphl.org)*

[www.aphl.org](http://www.aphl.org)

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## Section One: General Information

### Introduction

#### ***About APHL***

The Association of Public Health Laboratories (APHL) is a membership organization in the United States representing the laboratories that protect the health and safety of the public. In collaboration with members, APHL advances laboratory systems and practices, and promotes policies that support healthy communities. APHL serves as a liaison between laboratories and federal and international agencies, ensuring that this network of laboratories has current and consistent scientific information in order to be ready for outbreaks and other public health emergencies. Membership consists of local, territorial, county, and state public health laboratories; environmental, agricultural, and veterinary laboratories; and corporations and individuals with an interest in public health and laboratory science. APHL is a non-profit, 501(c)(3) organization with a history of over fifty years' experience.

#### ***About the APHL Global Health Program***

APHL's Global Health Program works with countries all around the world to build strong and resilient national laboratory systems. APHL supports and coordinates the US national public health laboratory system that serves the fifty US states. With over 50 years of experience managing public health laboratory programs, we apply our expertise to serve national laboratory systems across the globe. APHL supports the [President's Emergency Plan for AIDS Relief](#) (PEPFAR) and [Global Health Security Agenda](#) (GHSA) initiatives in collaboration with a variety of funding partners.

APHL provides technical assistance, training, leadership and management fellowship programs and tools for laboratory professionals at all levels of a national system. National systems gain knowledge, skills and abilities in policy development, strategic and implementation planning, project management as well as training in methods for laboratory leaders and bench staff.

#### ***RFP Purpose***

The APHL Global Health program has released this Request for Proposals (RFP) to solicit bids from qualified applicants to support the advancement of informatics initiatives across public health stakeholders.

1. Informatics Expertise and Technical Assistance Support for Core APHL Global Health Informatics Initiatives

APHL is seeking to identify informatics subject matter experts (SMEs) to work individually and/or within a team setting with APHL staff and other contractors, partners and key stakeholders, to support current and future-funded APHL Informatics program work. APHL may make separate awards to one or more SMEs in each of the specific areas discussed in the Core Informatics TA Scope of work section of this RFP. APHL will identify appropriate projects and roles dependent on applicant responses and may award one or more active roles or initiatives to successful applicants as project and program initiatives are finalized and resource needs identified. In addition, awardees identified through this RFP process will constitute the APHL technical assistance resource pool through the end of the current APHL/CDC cooperative agreement period which ends on **September 29, 2024**, this approach is similar to the federal contracting model known as [indefinite delivery, indefinite quantity \(IDIQ\)](#).

Applicants will respond to the following expertise areas:

1. Project Management and Coordination
2. Business Analysis
3. Vocabulary, Terminology and Coding
4. Architecture
5. Data and Systems Integration
6. Systems design and development
7. Data visualization and analytics

## RFP PROCESS OVERVIEW

### Eligibility

This is an open and competitive process.

### Response Submission Deadlines

APHL will follow the anticipated RFP schedule unless otherwise modified on APHL's procurement site <https://www.aphl.org/rfp/Pages/default.aspx>. If there is a change to the RFP schedule following the letter of intent deadline, APHL will contact the main point of contact identified in their letter of intent directly.

Applicants must meet the following three important submission deadlines related to this RFP: the letter

of intent email, final response submission and, if applicable, revised or updated submission. Applicants who submit proposals in advance of the deadline may withdraw, modify, and resubmit proposals at any time prior to the indicated deadline.

### Anticipated RFP Schedule

The following dates are set forth for informational and planning purposes. APHL will communicate any modification to this anticipated schedule on APHL’s procurement website

(<https://www.aphl.org/rfp/Pages/default.aspx>) and via email to all applicants that submitted a letter of intent.

All due dates have a **5:30pm EDT** deadline unless otherwise indicated.

*Table 1: Anticipated RFP schedule*

May 25	RFP Issued
June 5	Informational Teleconference (Optional)
June 7	Email with questions due
<b>June 12</b>	Letter of Intent <b>Due Date</b> (Required)
<b>June 26</b>	RFP Responses <b>Due Date</b>
July 14	Proposal Review and Evaluation Complete (follow-up interviews if needed)
July 28	Final review completed, and awardee(s) selected and notified
TBD	Contract awarded – dependent on final contract review and ratification by all parties.

### Communications

#### **RFP Point of Contact**

APHL will manage all RFP communication with applicants through APHL’s central email inbox:

[globalhealth.informatics@aphl.org](mailto:globalhealth.informatics@aphl.org). Please include the title of the RFP in the subject line of all email correspondence.

#### **RFP Materials**

APHL will post all RFP-related documents, current schedule information and answers to all submitted questions and clarifications on APHL’s procurement site,

#### *RFP Questions and Clarifications*

This RFP is designed to provide the necessary information applicants need to prepare competitive proposals for the work described; it is not intended to be comprehensive. Each applicant is responsible

for determining all the factors and information necessary to submit a comprehensive bid proposal to APHL. APHL invites applicants to submit questions and requests for clarification regarding the RFP. Applicants must submit all questions and requests for clarification via email to [globahealth.informatics@aphl.org](mailto:globahealth.informatics@aphl.org) by close of business **June 7**.

### ***RFP Informational Teleconference (Optional)***

APHL will hold an optional teleconference on **June 5**

During this call, APHL will review the RFP scope of work and allow potential applicants to ask clarifying questions ahead of the letter of intent due date June 12.

APHL requests that potential applicants send questions **as they are identified, you do not need to wait for the teleconference**. Applicants may contact [APHL](#) to receive a formal calendar invitation if they wish.

[Informational Teleconference Call-in Information: June 5 \(link will be posted on APHL's site\)](#)

### ***RFP Letter of Intent***

To allow for appropriate review process planning, APHL requires that prospective applicants submit a brief email statement indicating an intent to submit an RFP response, the scope area(s) they responding to, along with the identity and contact details of their primary contact(s).

### ***RFP Final Submissions***

Applicants must submit responses to [globalhealth.informatics@aphl.org](mailto:globalhealth.informatics@aphl.org), with a copy to Hewan Moges: [hewan.moges@aphl.org](mailto:hewan.moges@aphl.org). The applicant is responsible for ensuring that the proposal is received at APHL by this deadline.

Applicants must address the required proposal elements for the response to qualify as “complete”.

APHL may terminate or modify the RFP process at any time during the response period. APHL will acknowledge the receipt of the applicant’s RFP response via email within 48 hours of submission. If you do not receive an acknowledgment, please email [globalhealth.informatics@aphl.org](mailto:globalhealth.informatics@aphl.org) to confirm receipt.

APHL must receive complete applicant responses no later than 5.30 pm EDT on **June 26, 2023**.

### ***RFP Page Limit and Formatting Specifications:***

An applicant’s proposal must be limited to the following per scope area:

Informatics Expertise and Support for Core APHL Global Health Informatics Initiatives

- a. 10 pages of narrative and visuals
- b. font size of 11 points or larger

- c. page margins of at least 0.5 inches

If an application exceeds the identified page limits for the scope areas above, only the information provided within the allotted page limit for that scope area will be sent to the evaluation team who will review scores based solely on the portion of the proposal submitted for review. Title page, table of contents and appendices do not count towards page limits.

## Award

APHL expects to provide funding for this work on a cost-reimbursable basis supported by the Global Health Security Partnerships: Expanding and Improving Public Health Laboratory Strategies and Systems Cooperative Agreement, number NU2HGH000080-02. APHL will make these payments in accordance with the payment terms specified in the written contract between APHL and the selected organization(s) and/or individual(s) or as otherwise mandated by applicable federal law or regulation or the terms of APHL's funding notice from the Centers for Disease Control and Prevention (CDC).

## Term of Award

The original period of performance for this award will run from the date of contract execution through the end of the current APHL/CDC cooperative agreement year, which ends on September 29, 2023.

The potential for annual funding support through 2024 may be considered by APHL based on the availability of funds and performance of the awardee(s).

## Evaluation of Responses

### ***Initial Review***

APHL's Informatics Program staff will conduct an initial review of all proposals for completeness. Any application that is incomplete on the RFP response due date, June 26, 2023, will not be considered and will not receive a formal evaluation.

### ***Evaluation Team***

Following the initial review, APHL will convene one evaluation team. The team will evaluate awardee responses to *the Informatics Expertise and Technical Assistance Support for Core APHL Global Health Informatics Initiatives*. The evaluation team will assess proposals on their relative qualities based on the General Evaluation Criteria outlined below along with other factors and sub-factors noted in each RFP scope area.

### ***Conflict of Interest***

APHL will ask potential reviewers to complete and sign APHL's Conflict of Interest Disclosure Statement in order to disclose any real or perceived conflict of interest prior to the start of the evaluation process.



Reviewers will have to affirm that they have no conflict of interest that would preclude an unbiased and objective review of the proposals received. APHL will not select reviewers with a perceived or potential conflict of interest. This Conflict-of-Interest Disclosure Statement is provided in the RFP for Applicant review only. Applicants should not complete the Conflict-of-Interest Disclosure Statement unless instructed by APHL.

### ***General Evaluation Criteria***

Winning applications to this RFP will be selected only after the evaluation teams' assessment of each completed proposal. Evaluators will weigh an applicant's ability to meet the goals and objectives outlined in each RFP scope area, basing their assessment on the general evaluation criteria listed below:

- Management Approach
- Technical Approach & Capabilities
- Organizational Experience & Past Performance
- Transition/Startup Plan

### **Management Approach [ 35%]**

Describe their organizational structure and how they propose to manage this task, including a discussion of timelines and issues.

- Provide a rationale for their management approach.
- Describe the methodology for managing the task, performance measures they will use to monitor performance, any management tools they will use, how they will ensure quality products are delivered, how they will mitigate risk, and how they will communicate.
  - Adequately describe the resources they propose to complete the work described in the RFP Scope Area(s) selected and a rationale for their proposed approach.
  - Identify any resources (facilities, hardware, software, communications, etc.) that would be required above and beyond that already addressed as part of this RFP.
- Clearly indicate how any tasks and subtasks will be monitored - and how corrective action will be taken if appropriate – and specify an approach for maintaining control of all contract change management issues.
  - Provide (i) a description of how conflicts are managed; (ii) a plan to ensure client satisfaction; and (iii) a measurement of fiscal responsibility and accountability.
- Identify anticipated management barriers and risks and provide a description of their approach to risk management during the task order from a management perspective and the planned actions to mitigate or eliminate risks.

- Identify all assumptions or conditions, if any, relating to their Management Plan and Other Qualification Information.
- **Cost Proposal:** Since this is a human resource/expertise focused RFP, we would expect the cost proposal to be based on a time and materials basis. We do not have a preferred format; however, we feel that it would make the most sense for any known (named individual) or blended rate (labor category) pricing for the initial contract period (through **September 29, 2023**) be included as part of the staffing/role matrix discussed in the general evaluation criteria under the Technical Approach (last sub-bullet). You are free to identify your own proposed labor categories/approach. In addition, we request that applicants identify any general yearly rate increases post the initial budget period and any direct costs you would expect APHL to reimburse for that are not already built into your projected rates.

*Please note: The cost proposal/resource matrix may be included in an appendix and will not count against the 10-page response limit per scope area.*

**Technical Approach [ 55%]**

- Responsiveness to RFP Specifications
- Approach to respond to program goals and deliverables including implementations and how the responder will report its performance and quality
- Approach to documentation development and knowledge management

An applicant should specifically address aspects such as technical understanding, methodology, and approach and provide adequate qualified technical human resources to address the technical and administrative requirements and services outlined in the RFP scope area they are responding to. An applicant's proposal should:

- Provide a detailed and comprehensive statement of the problem, scope, and purpose of the project to demonstrate complete understanding of the intent and requirements of the work in the applicant's selected RFP scope area(s).
- Describe the proposed programmatic or technical approach (i) to comply with or satisfy requirements specified in the respective scope of work sections the applicant is applying for. An applicant must submit a proposal that is consistent with the stated goals and objectives.
- Discuss the ability to identify and recruit qualified personnel. An applicant must provide a description of (i) the approach and plan to rapidly obtain and/or replace qualified staffing resources to support existing and new task order work and to meet changing workload requirements and (ii) key skill sets for proposed personnel. Applicants may include resumes, as attachments to the response. *Please note: resumes may be included in an appendix and will not count against the 10-page response limit per scope area.*
  - APHL strongly encourages applicants to submit a staffing matrix showing type and number of staffing resources readily available, including breakdowns by skill sets, security clearances, and any related technical IT certifications.

**Organizational Experience and Past Performance [5%]**

*Please note: Past performance content may be included in an appendix and will not count against the 10-page response limit per scope area.*

An applicant should provide a description of up to three projects completed within the past three years that clearly demonstrate the applicant's experience in performing projects of similar scope, size, and complexity to the RFP scope area(s).

Provide the following information for each project reference:

- The contract number, customer or agency name, the contract title and date, and the name of the project;
- A brief narrative description of the work performed for each of those contracts, including a discussion of any problems encountered, corrective actions taken and significant accomplishments achieved; and
- The dollar value, contract type, period of performance, place of performance, and the number and types of personnel used in the performance of the contract.

**Transition/Startup [5%]**

Applicants should provide a plan for the transition or ramp-up of scope area activities and should also consider outlining a plan that describes how project phase-out might occur.

***Possible Secondary Evaluation Criteria***

In the event that two or more proposals receive substantially similar scores from the evaluation team's review, APHL may introduce the following as secondary criteria that can be considered by the evaluation team in order to differentiate proposals with similar scores.

- **Price Evaluation**

APHL may conduct a price analysis of an applicant's proposal to determine the reasonableness of proposal. Only proposals that the evaluation team rated as technically acceptable will be subject to this type of analysis.

- **Price Realism**

APHL may conduct a price realism analysis of an applicant's proposal for such purposes as determining an applicant's understanding of the solicitation's requirements or assessing risk associated with an applicant's proposal.

## Post-Evaluation Procedures

APHL staff will notify one or more of the selected applicants within ten (10) business days of the completion of the evaluation and will post the name(s) of the awardees to APHL's procurement website, <http://www.aphl.org/rfp> on the same day. Unsuccessful applicants will receive notification of these results by email within 30 days of the date the name of the winning applicants are posted.

All applicants will be entitled to utilize APHL's RFP Appeals Process to formulate a protest regarding alleged irregularities or improprieties during the procurement process. Specific details of this policy are located on the procurement website.

## Conditions of Award Acceptance

All selected awardees must be able to contract directly with APHL or have an existing relationship with a third-party organization that can contract directly with APHL on behalf of the applicant.

## Disclaimer and Other General Matters

This RFP is neither an agreement nor an offer to enter into an agreement with any respondent. Once the application evaluation is complete, APHL may choose to enter into a definitive contract with one or more of the selected applicants or may decline to do so.

APHL must ensure that the selected respondents are neither suspended nor barred from receiving federal funds and that the respondents meets any other funding eligibility requirements imposed by the Cooperative Agreement. APHL's determination of whether the respondents are eligible to receive Cooperative Agreement funding will be definitive and may not be appealed. If APHL determines that the selected respondents are ineligible to receive Cooperative Agreement funding, APHL will nullify the contracts or will cease negotiation of contract terms.

Each respondent will bear the costs associated with or relating to the preparation and submission of its application. These costs and expenses will remain with the respondent, and APHL will not be liable for these or any other costs or other expenses incurred by a respondent.

## Section Two: RFP Scope Statement and Requirements

### RFP Informatics Expertise and Support for Core APHL Informatics Initiatives

#### ***Background***

In 2022, APHL's Global Health program launched the Global Public Health Data Innovation Project (GPHDI) funded as an innovative project under the APHL/CDC cooperative agreement. The GPHDI initiative expanded the program's mission.

APHL has continued to manage and evolve these initiatives and to date has provided both direct assistance and project centric informatics expertise to public health laboratories globally. The goal of providing informatics expertise through APHL's TA model is to streamline and modernize electronic data exchange and data use between global public health organizations and their partners by providing the support and expertise necessary to meet local and national informatics objectives.

#### ***Purpose and Approach***

The purpose of this RFP focus area is to identify organizations that can support APHL/CDC cooperative agreement projects and initiatives through **September 29, 2024**. Awardee(s) will work closely with APHL program staff to identify and assign the appropriate informatics subject matter experts (SMEs) who may work individually and/or within a project team to deliver a broad range of informatics programmatic and technical services, including direct one on one assistance to public health partners as well as the delivery of services as part of funded project initiatives.

#### **Overview of APHL Technical Assistance Models**

APHL has developed several different technical assistance models to support the diverse needs of our stakeholders and funders.

- Independent Implementation: TA SMEs develop stand-alone tools and resources for stakeholder use with the goal of implementation.
- Guided Implementation: Project management support to develop a plan for implementation and to manage stakeholder progress.

- Targeted Assistance: Scope-limited assistance available by stakeholder request; focused on a defined technical challenge or needed area of expertise.
- Cohort Implementation: Full SME support to a group of TA recipients for end-to-end implementation
- Hands-on Implementation: Full SME support to a single TA recipient for end-to-end implementation

**Important information:**

- APHL expects to select multiple awardees as part of this RFP process. APHL will make initial awards to vendors across one or more of the subject matter expertise areas discussed in the Scope of Work section, task orders beyond the initial award will be managed either through a closed RFP process or through a call for specific human resources; restricted to awardees of this RFP.
- Applicants should submit a response that encompasses all areas; however, they may choose to highlight the areas where they have the most interest or expertise. Applicants should clearly indicate these interest areas in their final RFP response.
- *Please note:* This RFP pertains to newly funded and future technical assistance engagements, not for projects or assignments actively managed by current contracted resources. All budgets submitted must be related to this project scope only.

**Scope of Work**

Each awardee will provide consultation and expertise for APHL and CDC informatics initiatives across multiple public health use cases, including but not limited to novel or standalone initiatives. Technical Assistance team members are embedded directly with and operate as a collaborative unit under the direction of APHL Global Health Informatics staff. Under this model, APHL TA teams will work with an expanded network of stakeholders (CDC program officers, CDC technical assistance teams, APHL in-country offices) to provide valued services to laboratories, information technology, and epidemiology TA recipients across the public health ecosystem.

Applicants are advised that the specified services may shift slightly in response to changes in APHL's programmatic needs. In addition, APHL is likely to revisit and potentially modify the specified services under any of the six project areas in future project years in order to reflect the amount of funding available in a given project year and to meet then-current APHL programmatic needs.

General requirements and detailed explanations of the skill sets required for each area are outlined below.

## 1. Project Management and Coordination

Overview: Initiate and shepherd projects through to completion, managing people, processes, and tools to ensure project success. Develop and maintain project plans and schedules to meet project goals and objectives, manage and mitigate risks and issues, and ensure appropriate documentation and reporting. This may include coordination and management of human resources, budgets, collaborative tools, and other activities needed to provide consultation and assistance on informatics activities for public health surveillance and laboratory data management. Specific Tasks may include:

- Manage project and technical assistance engagements including: scheduling and project planning, stakeholder management, risk identification and mitigation, issue tracking and solutioning, communication, reporting, knowledge management and associated documentation per APHL standards. Ensure team provides support to scope for data exchange solution implementation, and ensure milestones are met through go-live or per project requirements.
- Identify and develop needed processes, communications, tracking systems or other logistical solutions to help ensure projects meet deadlines and complete deliverables.
- Provide project management activities following APHL and PMO policies, which may include but are not limited to Global Health informatics needs, project process agreements, project plans, work breakdown structures, project schedules, requirements, SOWs, and public health information security considerations.
- Utilize project development methods that are appropriate for the scope of each project and approved by informatics program management, business owners, and business stewards.
- Lead the TA team using APHL's TA method and develop documentation to support TA approach and delivery, tracking, collaborative tools and templates to ensure project goals are met. Ensure ongoing communication and collaboration within the Technical Assistance Team to accomplish project requirements using the APHL TA method.
- Ability to record and deliver information, to explain procedures, and to contribute to the broad range goals of delivering overarching technical assistance initiatives while capitalizing on historical efficiencies and reusability when possible.

## 2. Business Analysis

Work directly with APHL staff and appropriate persons (e.g. partners, system owners, users, etc.) as authorized to perform discovery, capture requirements, develop innovative specifications, build implementation guides and other resources for technical solutions for data exchange. This will include the ability to understand, document and translate requirements, including standard measures and



indicators, needed for systems designers, developers, and technical architects designing applications and prototypes. Specific Tasks may include:

- Capture, document and communicate high level and in-depth business requirements analysis of data exchange initiatives and technical solutions. This may include discovery, workflow analysis, or landscape analysis to understand current and future state, needs and capabilities, and key contributing factors to support decision making on technical solutions.
- Enable communication and collaboration between project stakeholders, and ensure knowledge transfer between the technical assistance team and assistance recipients and collaborating partners. Understand, document, and translate end user and subject matter expert needs to technical requirements for system designers, developers and technical architects.
- Conduct project discovery on informatics modernization efforts. This may include performing targeted discovery and project planning support for new or emerging projects or to guide general discovery on informatics needs and brainstorming efforts.
- Ensure successful collaboration with Informatics staff and consultants to coordinate technical assistance across all informatics initiative and provide consistent delivery of maintainable and scalable data exchange solutions.
- Prepare project reports, presentations, and meet other project reporting requirements as directed by Informatics leadership. Communicate issues and updates to program management, business stewards, and other involved stakeholders.
- Provide review, quality control, and assurance on technical assistance processes and deliverables.

### **3. Workforce Competencies**

Develop the online competency database for APHL's global workforce competencies and dashboard for the results. The public health workforce competency guideline will serve all laboratory professionals across different levels of skillset and expertise and different countries. A competency-based approach allows for organizations to identify gaps in employee knowledge, skills, or abilities, and develop a "treatment" such as a professional organizational development plan to address those gaps. The goal of the workforce competencies is to strengthen the public health workforce globally by providing a framework for developing education and training programs, identifying worker roles and job responsibilities, and assessing individual performance and organizational capacity.

### **4. Informatics Profile Tool Set Repository**



Develop electronic version of the library of assessment questions/tools that have been utilized to document systems that have been deployed, develop solutions for assessing current lab informatics capacity. Design, development, implementation of HIS country profile/Lab informatics capacity tool to deploy to multiple countries.

### **5. Vocabulary, Terminology and Coding**

Develop, configure, implement, and maintain national health information technology standards and codes to support the interests of TA recipients to achieve electronic data exchange and interoperable surveillance needs. Analyze workflows, perform gap analyses and crosswalks across local and standard mappings, and develop and manage project-related value sets, mapping tools and encoding guidelines. Specific Tasks may include:

- Provide Technical expertise and guidance in health information exchange, Electronic Medical Record/Electronic Health Record Integration Architecture, and national and international data standards including HL7 2.x/3.x ORU/OUL, ORM/OML and/or ADT, XML, CCD, SNOMED, LOINC, ICD-9, ICD-10, CDA, and FHIR.

- Understand the role of Standards Development Organizations (e.g., HL7, Regenstrief), and participate in the development of healthcare standards.
- Develop standards resources and tools such as implementation guides, mapping tables, business rules and encoding guidelines, for public health data especially related to laboratory and surveillance reporting. This includes reporting streams such as electronic test orders and results (ETOR), electronic laboratory reporting (ELR), electronic case notification for nationally notifiable diseases, and laboratory surveillance reporting. Provide expertise to support partners understanding and implementing standards-based data exchange.
- Ensure successful collaboration on standards use, interpretation, and assistance with Informatics staff and consultants working across technical assistance.
- Provide terminology and standards support for public health entities across multiple initiatives.

Some example tasks include:

- Assist PHL or PHA staff with mapping local to standard codes, such as Logical Identifiers Names and Codes (LOINC) and Systemized Nomenclature of Medicine Clinical Terms (SNOMED-CT), and apply solutions to messaging issues from a terminology perspective.
- Coordinate with data exchange partners to ensure data exchange solutions follow national standards (e.g., HL7 2.x/3.x, SNOMED, LOINC) and meet project requirements.
- Coordinate with data exchange partners to ensure vocabulary solutions follow national standards appropriate for the respective domain and data exchange paradigm, and meet project requirements (e.g., standardized electronic laboratory reporting flat file development)
- Provide vocabulary support to meet the requested services, provide knowledge transfer, and promote more efficient and effective electronic data exchange, transfer, and use.
- Support TA recipients' efforts to implement more structured data analysis models by assisting in assessment of existing models and/or the development of new models.
- Represent public health communities' requirements at Standards Development organizations to improve underlying international standards.

### **Architecture**

Develop and support data exchange solutions to meet specific and broad project requirements using international standards for public health, where available and appropriate. This includes the ability to 'think

outside the box' and introduce innovative and specific program analysis to align with other activities supported by APHL, and further interoperability. Specific Tasks may include:

- Provide expertise in technical architecture assessment and design, health information exchange, Electronic Medical Record/Electronic Health Record Integration Architecture, including: HL7 2.x/3.x, XML, CCD, SNOMED, LOINC, ICD-9, ICD-10, CDA, and FHIR.
  - Rhapsody and Mirth Certifications preferred
  - Experience with data architecture design (Transactional, Business Intelligence).
  - Experience with the needs assessment methodology, Joint Application Development (JAD)
- Provide technical architecture design solutions to public health entities and data exchange partners with varying degrees of information technology abilities. Tasks may include:
  - Conduct technical infrastructure needs assessments and IT use case analyses to identify potential barriers to implementing electronic messaging efforts and make recommendations for building a scalable, maintainable messaging solution per project requirements.
  - Assist TA recipients and data exchange partners with designing, developing, testing and validating data exchange solutions that may include data extraction from Laboratory Information Management Systems/Laboratory Information Systems, Surveillance Information Systems, other databases or data warehouses; designing, building, and documenting databases, queries, scripts, or other components; developing integration engine routes to transform and translate information per data exchange specification; and transportation to data exchange partner(s).
  - Assist TA recipients and data exchange partners with receiving, validating, and parsing electronic data.
  - Architect scalable systems per project requirements that support future expansion needs, and develop re-usable technology components to promote efficiencies.
- Provide technical architecture troubleshooting and maintenance support for public health entities and data exchange partners to meet the requested services per project requirements, provide knowledge transfer, and promote more efficient and effective electronic PHL data exchange, transfer, and use.
- Provide subject matter expertise in the area of technical architecture, routing options, and system integration to support data exchange efforts. Provide project coordination necessary to implement computer software products and resolve technical problems.

- Ensure successful collaboration and knowledge transfer on technical architecture assistance approach, reusable components, and route development with Informatics staff and consultants working across technical assistance.
- Perform knowledge transfer and share reusable technical components with technical assistance recipients and collaborating partners.

### **Data and Systems Integration**

Utilize integration engine software, transport protocols, XML encoding documentation, and other IT workflow components (e.g., mapper files, JavaScript filters, database filters and transport/I.O. configuration, web services, etc.) to support PHAs, PHLs, and other data exchange partners. Develop solutions for enterprise data integration for health information exchange, and continuity of operations. Specific Tasks may include:

- Provide Technical expertise in enterprise data integration, health information exchange, Electronic Medical Record/Electronic Health Record Integration Architecture, including: HL7 2.x/3.x, XML, CCD, SNOMED, LOINC, ICD-9, ICD-10, CDA, and FHIR.
  - Lyniate Rhapsody and Mirth Certifications preferred
  - Experience with data architecture design (Transactional, Business Intelligence).
- Provide integration solutions to public health entities and data exchange partners with varying degrees of information technology abilities. Tasks may include:
  - Assist TA recipients and data exchange partners with developing, testing and validating data exchange solutions using various data integration programs and other IT workflow components (e.g. mapper files, JavaScript filters, database filters and transport/I.O. configuration, web services, etc.) to transform and translate information per data exchange specification and transport to data exchange partner(s).
  - Assist TA recipients and data exchange partners with receiving, validating, and parsing electronic data.
  - Develop integration solutions per project requirements that support future expansion needs and develop re-usable technology components to promote efficiencies.
  - Develop and maintain documentation for data exchange solutions.
- Provide technical architecture troubleshooting and maintenance support for public health entities and data exchange partners to meet the requested services per project requirements,

provide knowledge transfer, and promote more efficient and effective electronic PHL data exchange, transfer, and use.

- Provide subject matter expertise in the area of technical architecture, routing options, and system integration to support data exchange efforts. Provide project coordination necessary to implement computer software products and resolve technical problems.
- Ensure successful collaboration and knowledge transfer on technical architecture assistance approach, reusable components, and route development with Informatics staff and consultants working across technical assistance.

### **Back-end Development, Administration and Modeling**

Design methods to store, analyze, utilize, organize, and visualize data with a focus on public health data standards.

- Formulation and documentation of existing processes and events that occur during application software design and development.
- Use techniques and tools to capture and translate complex system designs into easily understood representations of the data flows and processes, creating a blueprint for health data exchange and interoperability.
- Provide subject matter expertise in the area of data creation, storage, organization, and presentation of data.
- Perform complex technical, analytical, and professional services involving public health data modeling and exchange standards.
- Ability to plan and coordinate security measures alongside AIMS and APHL Informatics team members, as well as enhance or build data storage designs for the most sustainable, efficient products.