



UNIVERSITY  
OF KENTUCKY

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# Purchasing Division

Request for Proposal

UK-2262-23

Proposal Due Date – 07/06/2022

Enterprise Data Warehouse (EDW)

Modernization Implementation



# UNIVERSITY OF KENTUCKY

## Purchasing Division

### REQUEST FOR PROPOSAL (RFP)

**ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.**

<b>PROPOSAL NO.:</b>	<b>UK-2262-23</b>	<b>RETURN ORIGINAL COPY OF PROPOSAL TO:</b>
<b>Issue Date:</b>	<b>06/08/2022</b>	<b>UNIVERSITY OF KENTUCKY</b>
<b>Title:</b>	<b>Enterprise Data Warehouse (EDW) Modernization Implementation</b>	<b>PURCHASING DIVISION</b>
<b>Purchasing Officer:</b>	<b>Joyce French</b>	<b>411 S LIMESTONE</b>
<b>Phone:</b>	<b>859-257-9104</b>	<b>ROOM 322 PETERSON SERVICE BLDG.</b>
		<b>LEXINGTON, KY 40506-0005</b>

**IMPORTANT: PROPOSALS MUST BE RECEIVED BY: 07/06/2022 3 P.M. LEXINGTON, KY TIME.**

NOTICE OF REQUIREMENTS

- The University's General Terms and Conditions and Instructions to Bidders, viewable at [www.uky.edu/Purchasing/terms.htm](http://www.uky.edu/Purchasing/terms.htm), apply to this RFP. When the RFP includes construction services, the University's General Conditions for Construction and Instructions to Bidders, viewable at [www.uky.edu/Purchasing/ccphome.htm](http://www.uky.edu/Purchasing/ccphome.htm), apply to the RFP.
- Contracts resulting from this RFP must be governed by and in accordance with the laws of the Commonwealth of Kentucky.
- Any agreement or collusion among offerors or prospective offerors, which restrains, tends to restrain, or is reasonably calculated to restrain competition by agreement to bid at a fixed price or to refrain from offering, or otherwise, is prohibited.
- Any person who violates any provisions of KRS 45A.325 shall be guilty of a felony and shall be punished by a fine of not less than five thousand dollars nor more than ten thousand dollars, or be imprisoned not less than one year nor more than five years, or both such fine and imprisonment. Any firm, corporation, or association who violates any of the provisions of KRS 45A.325 shall, upon conviction, be fined not less than ten thousand dollars or more than twenty thousand dollars.

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 523.040:

- That I am the offeror (if the offeror is an individual), a partner, (if the offeror is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the offeror is a corporation);
- That the attached proposal has been arrived at by the offeror independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other Contractor of materials, supplies, equipment or services described in the RFP, designed to limit independent bidding or competition;
- That the contents of the proposal have not been communicated by the offeror or its employees or agents to any person not an employee or agent of the offeror or its surety on any bond furnished with the proposal and will not be communicated to any such person prior to the official closing of the RFP;
- That the offeror is legally entitled to enter into contracts with the University of Kentucky and is not in violation of any prohibited conflict of interest, including, but not limited to, those prohibited by the provisions of KRS 45A.330 to .340, and 164.390;
- That the offeror, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sale and use tax imposed by Chapter 139 to the extent required by Kentucky law and will remain registered for the duration of any contract award;
- That I have fully informed myself regarding the accuracy of the statement made above.

SWORN STATEMENT OF COMPLIANCE WITH CAMPAIGN FINANCE LAWS

In accordance with KRS 45A.110 (2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to a bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

CONTRACTOR REPORT OF PRIOR VIOLATIONS OF KRS CHAPTERS 136, 139, 141, 337, 338, 341 & 342

The contractor by signing and submitting a proposal agrees as required by 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that have occurred in the previous five (5) years prior to the award of a contract and agrees to remain in continuous compliance with the provisions of the statutes during the duration of any contract that may be established. Final determinations of violations of these statutes must be provided to the University by the successful contractor prior to the award of a contract.

CERTIFICATION OF NON-SEGREGATED FACILITIES

The contractor, by submitting a proposal, certifies that he/she is in compliance with the Code of Federal Regulations, No. 41 CFR 60-1.8(b) that prohibits the maintaining of segregated facilities.

**SIGNATURE REQUIRED:** This proposal cannot be considered valid unless signed and dated by an authorized agent of the offeror. Type or print the signatory's name, title, address, phone number and fax number in the spaces provided. Offers signed by an agent are to be accompanied by evidence of his/her authority unless such evidence has been previously furnished to the issuing office.

<b>DELIVERY TIME:</b>	<b>NAME OF COMPANY:</b>	<b>DUNS #</b>
<b>PROPOSAL FIRM THROUGH:</b>	<b>ADDRESS:</b>	<b>Phone/Fax:</b>
<b>PAYMENT TERMS:</b>	<b>CITY, STATE &amp; ZIP CODE:</b>	<b>E-MAIL:</b>
<b>SHIPPING TERMS: F. O. B. DESTINATION PREPAID AND ALLOWED</b>	<b>TYPED OR PRINTED NAME:</b>	<b>WEB ADDRESS:</b>
<b>FEDERAL EMPLOYER ID NO.:</b>	<b>SIGNATURE:</b>	<b>DATE:</b>

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EDW Modernization RFP Requirements  
HIPAA/BAA Agreement, Appendix A

## 1.0 DEFINITIONS

The term "addenda" means written or graphic instructions issued by the University of Kentucky prior to the receipt of proposals that modify or interpret the RFP documents by additions, deletions, clarifications and/or corrections.

The term "competitive negotiations" means the method authorized in the Kentucky Revised Statutes, Chapter 45A.085.

The terms "offer" or "proposal" mean the offeror's/offers' response to this RFP.

The term "offeror" means the entity or contractor group submitting the proposal.

The term "contractor" means the entity receiving a contract award.

The term "purchasing agency" means the University of Kentucky, Purchasing Division, Room 322 Peterson Service Building, Lexington, KY 40506-0005.

The term "purchasing official" means the University of Kentucky's appointed contracting representative.

The term "responsible offeror" means a person, company or corporation that has the capability in all respects to perform fully the contract requirements and the integrity and reliability that will assure good faith performance. In determining whether an offeror is responsible, the University may evaluate various factors including (but not limited to): financial resources; experience; organization; technical qualifications; available resources; record of performance; integrity; judgment; ability to perform successfully under the terms and conditions of the contract; adversarial relationship between the offeror and the University that is so serious and compelling that it may negatively impact the work performed under this RFP; or any other cause determined to be so serious and compelling as to affect the responsibility of the offeror.

The term "solicitation" means RFP.

The term "University" means University of Kentucky.

## 2.0 GENERAL OVERVIEW

### 2.1 Intent and Scope

UK HealthCare (UKHC) has completed an evaluation of our Enterprise Data Warehouse and developed the resulting modernization roadmap and architecture. UK HealthCare (UKHC) now seeks an implementation partner to execute the modernization roadmap of our Enterprise Data Warehouse (EDW) Services and Enterprise Data Management Platforms. Our modernization roadmap requires an integrated architecture consisting of the Microsoft Azure ecosystem, UKHC existing on-premise platforms and required tools.

The scope of this engagement goes beyond delivering the required systems, it includes an effective transition of the solution, and building the expertise within UKHC to independently extend, operate and modify the implemented modernize enterprise data platform. We expect UKHC staff to obtain the required expertise through Offeror's proven methods, and the optimal integration of UKHC staff during the implementation phase for their experiential skills development.

UKHC EDW modernization is a transformational initiative aimed at accomplishing outcomes such as:

- added capabilities to efficiently transfer, store, integrate, process and prepare data to present actionable intelligence regardless of the variations in data formats, transfer mechanism or speed;
- accelerated efficiency with delivering advanced analytics (such as Machine Learning and NLP);
- sophisticated self-servicing capability (beyond dashboarding) to securely meet user needs;
- optimize capabilities to support UKHC's research mission in a more strategic way;
- provide sophisticated architecture for performance services/analytics;
- successful transition of the modernization solution to UKHC; and
- creating the expertise within UKHC to support and independently build on the modernization path.

UKHC EDW modernization shall result in the implementation of a modernized Enterprise Data Platform solution that comprises of a Logical Data Warehouse (LDW) and all the included services, data structures, storage, processing, integration, programing, and configurations that are abstracted to present a unified user view. This includes harmonization of legacy and current data from disparate data sources to create a seamlessly integrated view of records. The solution shall be delivered in accordance with UKHC stakeholder needs, the UKHC EDW modernization evaluation outcomes, Azure well-architected principles, and industry best practices. UKHC envisions a modernized Enterprise Data Platform solution having an architecture that may include but not be limited to the Azure Services (note that i-ix listed below are considerations for the foundational Azure components that are to be included in the modernization architecture):

- i. Azure Kubernetes Services
- ii. Azure Synapse Analytics
- iii. Azure Data Lake Storage
- iv. Azure Active Directory
- v. Azure SQL Elastic Pool
- vi. Azure Integration Services
- vii. Azure Health Data Services

- viii. Azure Key Vault
- ix. Azure Analysis Services
- x. Azure Cognitive Services
- xi. Azure Arc
- xii. Azure Monitor
- xiii. Azure Machine Learning
- xiv. Other appropriate Azure Services required for cost-effective well-architected solution

Additionally, the modern platform architecture shall include Integrated Notebooks (such as Jupiter), Machine Learning Frameworks (such as PyTorch), code management and development pipelines. The modernized platform shall integrate with current on-premise technologies including but not limited to those required for security operations.

The scope will consist of several phases. Responses shall include the cost breakdown by phases:

### **PHASE 1: Foundations**

Implementation of foundational Azure components (i-ix above) along with the cross-premise integrations, the operations monitoring capabilities as well as security and access configurations (such as Active Directory and HIPAA/HITRUST services). Phase one also involves setting-up the Azure ingestion and data migration processes and for key data sources such as Epic.

Define the staffing requirements to support the modern enterprise data platform long-term.

In this phase, Offeror is responsible for the implementation and training of UKHC staff to have a comprehensive understanding and hands-on knowledge of the modern platform. A critical success measure for our Implementation Partner is for UKHC staff to undertake increasingly more of the hands-on implementation work as the engagement progresses, and that UKHC staff are capable of performing at similar efficiency and effectiveness as implementation partner experienced team members.

### **PHASE 2: EDW Transformation**

Transition selected operational data processes (such as data reconciliation to support billing activities) and required reporting to the modernized platform. The use cases are selected based on their value in delivering high impact to the bottom line and/or patient care.

This phase establishes the adoption of the data management development patterns, reusable templates and standardizes the software development life-cycle management that governs the UKHC Enterprise Data Management team's development practices.

In this phase, Offeror is responsible for the implementation and to maximize UKHC staff engagement for accelerated learning as well as increasing their practical experiences and proficiencies with the modern platform.

### **PHASE 3: Data Science, Research Analytics and ML Ops Tools**

Implementation of the Azure components and workflow to establish and enterprise-grade workspace for development and application of advance analytics and machine learning for research, decision support and application integration.



Typical project lifecycles include defining a task, exploring and preparing data, training and validating models, deploying models, and monitoring and managing model lifecycle, all in an auditable, repeatable manner. Data scientists manage this development lifecycle and prepare models for production with integrated DevOps Pipelines.

In this phase, Offeror is responsible for the implementation and to maximize UKHC staff engagement for accelerated learning as well as increasing their practical experiences and proficiencies with for implementing the modern platform. The build will leverage a set of identified high-value use-cases to that demonstrates the new capabilities.

**PHASE 4: Self-Service and Enterprise Data Trust**

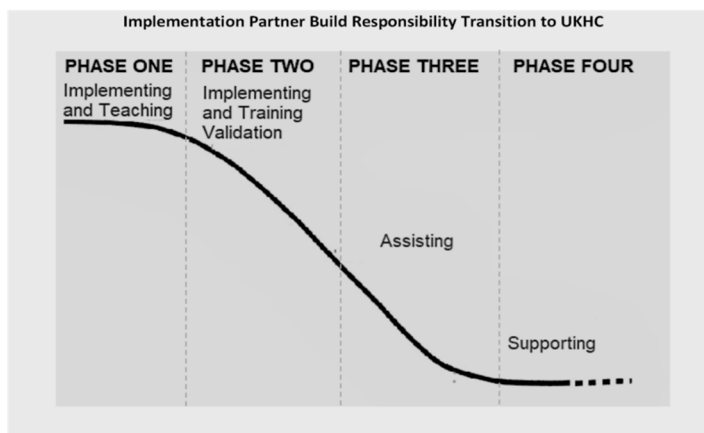
Implementation of a self-service model with direct impact to research and quality improvement. This implementation is complementary to the other phases. We expect this solution to include a secure de-identified data-lake that is well governed for data cataloging and defined research role-based access controls. The solution shall include the standards and tools for tailored self-service across users of various skillset and background. The solution shall leverage the capabilities developed in the prior phases.

In this phase, Offeror is responsible for maximizing the partnership and training of UKHC staff to perform the majority of any portion of implementation work that requires patterns or skills from the preceding phases.

**Transition of Responsibility and Expertise**

The modern data platform shall be delivered in phases having incremental deployment sprint cycles. In the first phase, foundational implementation is completed and a series of high-value use cases selected to implement with successive phases.

The implementation partner shall extensively perform the initial foundational phase while providing the experiential training to UKHC staff to effectively co-build the modern enterprise data platform. As the phases and cycles progressed, hands-on implementation responsibilities shall gradually shift to the UKHC team (with the expectation that each phase will provide effective knowledge transfer to independently manage and build-on the Azure cross-premise architecture).



**Figure 1.** Transition of Implementation Responsibilities from Implementation Partner to UKHC  
The engagement involves a first phase of implementing foundational Azure components. Extension beyond the foundations will be implemented iteratively based on proven use-case needs in the agile methodology. Each iterative implementation shall emphasize increasing the transition of expertise and practical know-how to UKHC staff.

A successful implementation shall include;

- a practical and cost-efficient operational enterprise data platform that optimally leverages Azure;
- the effective transition of the solution and progressive build phases to UKHC; and
- UKHC having the expertise to build, manage and enhance the delivered modernization solution

## **2.2 Background Information**

The backbone of our current system (EDW) is at the end of life and needs to be brought up to industry standards. The current EDW system is fully on-premises and consists primarily of the IBM InfoSphere Information Server suite, Netezza, SQL Server and Tableau. The current EDW infrastructure offers no practical capabilities in the efficient handling of unstructured or semi-structured data. Also note that UKHC has fully implemented Epic as our EHR. The Epic implementation includes activating the Epic Cogito Module (that consists of: Radar, Reporting Workbench, SlicerDicer, their Analytics Catalog, and the Epic data warehouses: Clarity, Caboodle, Chronicles). The aim of this engagement is to complement and augment the data and analytical capabilities available with Epic.

This modernization effort is to ensure that we can deliver data quickly, reliably, and in the most appropriate method to meet UKHC strategic objectives. We need to deliver data to (1) assess performance at all levels of the organization (Performance Analytics); (2) provide a holistic view of the organization by ingesting disparate data; (3) anticipate our future performance; (4) anticipating/course correcting with predictive models/NLP at the point of care; and/or (5) provide a sophisticated self-servicing model (that spans reporting/dashboarding, data models, and individual schemas with appropriate SLAs) to support research and quality improvement. To that end, we require a scalable, sustainable, and cost-effective cloud-based platform that can deliver data assets quicker to market than the current on-premise EDW.

## **2.3 University Information**

Since his arrival, President Eli Capilouto has set forth an ambitious agenda to extend and enhance our role as Kentucky's land-grant and flagship research university. By focusing on infrastructure growth and improvement; creating opportunities for innovative teaching, learning, and academic excellence; fostering a robust research and creative scholarship enterprise; providing life-saving subspecialty care; empowering communities through service and outreach; and encouraging a transparent and shared dialogue about institutional priorities; the University of Kentucky will ensure a new century of promise for the people we impact.

Founded in 1865 as a land-grant institution adjacent to downtown Lexington, UK is nestled in the scenic heart of the beautiful Bluegrass Region of Kentucky. From its early beginnings, with only 190 students and 10 professors, UK's campus now covers more than 918 acres and is home to more than 30,000 students and approximately 14,500 employees, including more than 2,300 full-time faculty. UK is one of a small number of universities in the United States that has programs in

agriculture, engineering, a full complement of health colleges including medicine and pharmacy, law and fine arts on a single campus, leading to groundbreaking discoveries and unique interdisciplinary collaboration. The state's flagship university consists of 17 academic and professional colleges where students can choose from more than 200 majors and degree programs at the undergraduate and graduate levels. The colleges are Agriculture, Food and Environment; Arts and Sciences; Business and Economics; Communication and Information; Dentistry; Design; Education; Engineering; Fine Arts; Graduate School; Health Sciences; Law; Medicine; Nursing; Pharmacy; Public Health; and Social Work. These colleges are supported by a modern research library system.

Research at the University of Kentucky is a dynamic enterprise encompassing both traditional scholarship and emerging technologies, and UK's research faculty, staff and students are establishing UK as one of the nation's most prolific public research universities. UK's research enterprise attracted \$285 million in research grants and contracts from out-of-state sources, which generated a \$580 million impact on the Kentucky economy. Included in this portfolio is \$153 million in federal awards from the National Institutes of Health, non-NIH grants from the Department Health and Human Services, the National Science Foundation, Department of Energy, Department of Agriculture and NASA, among others. The National Science Foundation ranks UK's research enterprise 44th among public institutions.

With more than 50 research centers and institutes, UK researchers are discovering new knowledge, providing a rich training ground for current students and the next generation of researchers, and advancing the economic growth of the Commonwealth of Kentucky. Several centers excel in the services offered to the public. The Gluck Equine Research Center is one of only three facilities of its kind in the world, conducting research in equine diseases.

The Center for Applied Energy Research is pursuing groundbreaking discovery across the energy disciplines. CAER staff are pioneering new ways to sustainably utilize Kentucky natural resources through carbon-capture algae technology, biomass/coal to liquid products and the opening of UK's first LEED-certified research lab to support the development of Kentucky's growing alternative energy industry. Among the brightest examples of UK's investment in transformative research is the Markey Cancer Center. As a center of excellence and distinction at UK, Markey's robust research and clinical enterprise is the cornerstone of our commitment to Kentucky – fundamental to our success in uplifting lives through our endeavors and improving the general health and welfare of our state – burdened by the nation's highest rate of cancer deaths per 100,000 people. In 2013, Markey earned the prestigious National Cancer Institute-designation (NCI) – one of 68 nationally and the only one in Kentucky.

The University of Kentucky was awarded a \$20 million Clinical Translational Sciences Award (CTSA) from the National Institutes of Health (NIH). As one of only 60 institutions with this research distinction, UK was awarded the CTSA for its potential in moving research and discovery in the lab into practical field and community applications. The CTSA and NCI are part of a trifecta of federal research grants that includes an Alzheimer's Disease Center. UK is one of only 22 universities in the country to hold all three premier grants from NIH.

Established in 1957, the medical center at UK is one of the nation's finest academic medical centers and includes the University's clinical enterprise, UK HealthCare. The 569-bed UK Albert B. Chandler Hospital and Kentucky Children's Hospital, along with 256 beds at UK Good Samaritan Hospital, are supported by a growing faculty and staff providing the most advanced subspecialty care for the most critically injured and ill patients throughout the Commonwealth and beyond. Over

the last several years, the number of patients served by the medical enterprise has increased from roughly 19,000 discharges to more than 36,000 discharges in 2014.

UK Chandler Hospital includes the only Level 1 Trauma Center for both adult and pediatric patients in Central and Eastern Kentucky. In addition, UK HealthCare recently opened one of the country's largest robotic hybrid operating rooms and the first of its kind in the region. While our new patient care pavilion is the leading healthcare facility for advanced medical procedures in the region, our talented physicians consult with and travel to our network of affiliate hospitals so Kentucky citizens can receive the best health care available close to their home and never need to leave the Bluegrass for complex subspecialty care.

UK's agenda remains committed to accelerating the University's movement toward academic excellence in all areas and gain worldwide recognition for its outstanding academic programs, its commitment to students, its investment in pioneering research and discovery, its success in building a diverse community and its engagement with the larger society. It is all part of the University's fulfillment of our promise to Kentucky to position our state as a leader in American prosperity.

### **SUSTAINABILITY**

Sustainability is an institution-wide priority for the University of Kentucky. We strive to ensure that all activities are ecologically sound, socially just, and economically viable, and that they will continue to be so for future generations. This commitment also prioritizes the integration of these principles in curricula, research, athletics, health care, creative works, and outreach. This principled approach to operational practices and intellectual pursuits is intended to prepare students and empower the campus community to support sustainable development in the Commonwealth and beyond. The UK Sustainability Strategic Plan guides these efforts (<https://www.uky.edu/sustainability/sustainability-strategic-plan>). #

## **2.4 Supplier Diversity and Procurement**

The University of Kentucky is committed to serve as an advocate for diverse businesses in their efforts to conduct business. Diverse Business Enterprises (DBE) consist of minority, women, disabled, veteran and disabled veteran owned business firms that are at least fifty-one percent owned and operated by an individual(s) of the aforementioned categories. Also included in this category are disabled business enterprises and non-profit work centers for the blind and severely disabled.

The University is committed to increasing the amount of goods and services acquired from businesses owned and controlled by diverse persons to 10% of all procurement expenditures. The University expects its suppliers to support and assist in this effort.

Among the University's goals for DBE participation in procurement are:

- To ensure the absence of barriers that reduce the participation of diverse suppliers
- Educate vendors on "how to" do business with the University
- Support diverse vendors seeking to do business with the University in the areas of goods, services, construction, and other areas of procurement
- Encourage participation of qualified diverse vendors by directing them to agencies that can benefit from their product or service
- Provide resources for diverse vendors
- Sponsor events to assist diverse vendors in becoming active, responsible, and responsive participants in the University's purchasing opportunities

For additional information regarding how diverse suppliers may participate in this Request for Proposal, submit any questions to the Purchasing Officer as indicated in Section 3.2 by the Deadline for Written Questions date.

### 3.0 PROPOSAL REQUIREMENTS

#### 3.1 Key Event Dates

Release of RFP	06/08/2022
Deadline for Written Questions	3 p.m. Eastern Time on 06/15/2022
RFP Proposals Due	3 p.m. Eastern Time on 07/06/2022
Offeror Presentations*	07/20/2022
Contract Award*	08/01/2022

\*Note: These are **projected dates**, and the RFP review may fall outside of the dates specified.

#### 3.2 Offeror Communication

To ensure that RFP documentation and subsequent information (modifications, clarifications, addenda, Written Questions and Answers, etc.) are directed to the appropriate persons within the offeror's firm, each offeror who intends to participate in this RFP is to provide the following information to the purchasing officer. Prompt, thorough compliance is in the best interest of the offeror. Failure to comply may result in incomplete or delayed communication of addenda or other vital information. Contact information is the responsibility of the offeror. Without the prompt information, any communication shortfall shall reside with the offeror.

- Name of primary contact
- Mailing address of primary contact
- Telephone number of primary contact
- Fax number of primary contact
- E-mail address of primary contact
- Additional contact persons with same information provided as primary contact

This information shall be transmitted via fax or e-mail to:

Mrs. Joyce French  
 Purchasing Division  
 University of Kentucky  
 322 Peterson Service Building  
 Lexington, KY 40506-0005  
 Phone: (859) 257-9104  
 Fax: (859) 257-1951  
 E-mail: [Joyce.French@uky.edu](mailto:Joyce.French@uky.edu)

All communication with the University regarding this RFP shall only be directed to the purchasing officer listed above.

#### 3.3 Offeror Presentations

All offerors whose proposals are judged acceptable for award may be required to make a presentation to the evaluation committee.

### 3.4 **Preparation of Offers**

The offeror is expected to follow all specifications, terms, conditions and instructions in this RFP.

The offeror will furnish all information required by this solicitation.

Proposals should be prepared simply and economically, providing a description of the offeror's capabilities to satisfy the requirements of the solicitation. Emphasis should be on completeness and clarity of content. All documentation submitted with the proposal should be bound in the single volume except as otherwise specified.

An electronic version of the RFP, in .PDF format only, is available through the University of Kentucky Purchasing Division website at: <https://purchasing.uky.edu/bid-and-proposal-opportunities>.

### 3.5 **Proposed Deviations from the RFP**

The stated requirements appearing elsewhere in this RFP shall become a part of the terms and conditions of any resulting contract. Any deviations therefrom must be specifically defined in accordance with the transmittal letter, Section 4.3 (d). If accepted by the University, the deviations shall become part of the contract, but such deviations must not be in conflict with the basic nature of this RFP.

Note: Offerors shall not submit their standard terms and conditions as exceptions to the University's General Terms and Conditions. Each exception to the University's General Terms and Conditions shall be individually addressed.

### 3.6 **Proposal Submission and Deadline**

Offeror must provide the following materials prior to 3 p.m. (Lexington, KY time) on the date specified in Section 3.1 and addressed to the purchasing officer listed in Section 3.2:

- **Technical Proposal:** Two (2) copies on electronic storage devices (USB) (1 copy per storage device) each clearly marked with the proposal number and name, firm name and what is included (Technical Proposal) and two (2) printed original copies
- **Financial Proposal:** Two (2) copies on electronic storage devices (USB) (1 copy per storage device) each clearly marked with the proposal number and name, firm name and what is included (Financial Proposal) and two (2) printed original copies

**Note: Proposals received after the closing date and time will not be considered. In addition, proposals received via fax or e-mail are not acceptable.**

**The University of Kentucky accepts deliveries of RFPs Monday through Friday from 8 a.m. to 5 p.m. Lexington, KY time. However, RFPs must be received by 3 p.m. Lexington, KY time on the date specified on the RFP in order to be considered.**

Proposals shall be enclosed in sealed envelopes to the above referenced address and shall show on the face of the envelope: the closing time and date specified, the solicitation number and the name and address of the offeror. The technical proposal shall be submitted in a sealed envelope and the financial proposal shall be submitted in a sealed envelope under separate cover. Both

sealed envelopes shall have identical information on the cover, with the addition that one will state "Technical Information," and the other, "Financial Proposal."

Note: In accordance with the Kentucky Revised Statute 45A.085, there will be no public opening.

### **3.7 Modification or Withdrawal of Offer**

An offer and/or modification of offer received at the office designated in the solicitation after the exact hour and date specified for receipt will not be considered.

An offer may be modified or withdrawn by written notice before the exact hour and date specified for receipt of offers. An offer also may be withdrawn in person by an offeror or an authorized representative, provided the identity of the person is made known and the person signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

### **3.8 Acceptance or Rejection and Award of Proposal**

The University reserves the right to accept or reject any or all proposals (or parts of proposals), to waive any informalities or technicalities, to clarify any ambiguities in proposals and (unless otherwise specified) to accept any item in the proposal. In case of error in extension or prices or other errors in calculation, the unit price shall govern. Further, the University reserves the right to make a single award, split awards, multiple awards or no award, whichever is in the best interest of the University.

### **3.9 Rejection**

Grounds for the rejection of proposals include (but shall not be limited to):

- Failure of a proposal to conform to the essential requirements of the RFP.
- Imposition of conditions that would significantly modify the terms and conditions of the solicitation or limit the offeror's liability to the University on the contract awarded on the basis of such solicitation.
- Failure of the offeror to sign the University RFP. This includes the Authentication of Proposal and Statement of Non-Collusion and Non-Conflict of Interest statements.
- Receipt of proposal after the closing date and time specified in the RFP.

### **3.10 Addenda**

Any addenda or instructions issued by the purchasing agency prior to the time for receiving proposals shall become a part of this RFP. Such addenda shall be acknowledged in the proposal. No instructions or changes shall be binding unless documented by a proper and duly issued addendum.

### **3.11 Disclosure of Offeror's Response**

The RFP specifies the format, required information and general content of proposals submitted in response to this RFP. The purchasing agency will not disclose any portions of the proposals prior to



contract award to anyone outside the Purchasing Division, the University's administrative staff, representatives of the state or federal government (if required) and the members of the committee evaluating the proposals. After a contract is awarded in whole or in part, the University shall have the right to duplicate, use or disclose all proposal data submitted by offerors in response to this RFP as a matter of public record.

Any submitted proposal shall remain valid six (6) months after the proposal due date.

The University shall have the right to use all system ideas, or adaptations of those ideas, contained in any proposal received in response to this RFP. Selection or rejection of the proposal will not affect this right.

### **3.12 Restrictions on Communications with University Staff**

From the issue date of this RFP until a contractor is selected and a contract award is made, offerors are not allowed to communicate about the subject of the RFP with any University administrator, faculty, staff or members of the board of trustees except: the purchasing office representative, any University purchasing official representing the University administration, others authorized in writing by the purchasing office and University representatives during offeror presentations. If violation of this provision occurs, the University reserves the right to reject the offeror's proposal.

### **3.13 Cost of Preparing Proposal**

Costs for developing the proposals and any subsequent activities prior to contract award are solely the responsibility of the offerors. The University will provide no reimbursement for such costs.

### **3.14 Disposition of Proposals**

All proposals become the property of the University. The successful proposal will be incorporated into the resulting contract by reference.

### **3.15 Alternate Proposals**

Offerors may submit alternate proposals. If more than one proposal is submitted, all must be complete (separate) and comply with the instructions set forth within this document. Each proposal will be evaluated on its own merits.

### **3.16 Questions**

All questions should be submitted by either fax or e-mail to the purchasing officer listed in Section 3.2 no later than the date listed in Section 3.1.

### **3.17 Section Titles in the RFP**

Section titles used herein are for the purpose of facilitating ease of reference only and shall not be construed to infer the construction of contractual language.

### **3.18 No Contingent Fees**

No person or selling agency shall be employed or retained or given anything of monetary value to solicit or secure this contract, except bona fide employees of the offeror or bona fide established

commercial or selling agencies maintained by the offeror for the purpose of securing business. For breach or violation of this provision, the University shall have the right to reject the proposal, annul the contract without liability, or, at its discretion, deduct from the contract price or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee or other benefit.

### **3.19 Proposal Addenda and Rules for Withdrawal**

Prior to the date specified for receipt of offers, a submitted proposal may be withdrawn by submitting a written request for its withdrawal to the University purchasing office, signed by the offeror. Unless requested by the University, the University will not accept revisions or alterations to proposals after the proposal due date.

### **3.20 Requirement To Perform Vendor Onboarding and Registration**

As a condition of award, and for any renewals performed during the life of the contract, successful Contractor agrees to register their company with PaymentWorks, Inc., the University's vendor onboarding application. Registration information will be provided by the Purchasing Division as part of the award process. During the vendor registration process, successful Contractor agrees to provide any applicable information pertaining to diversity demographics for their company. Further, should any company or diversity information change during the life of the contract, successful Contractor agrees to update this information in PaymentWorks as applicable.

## **4.0 PROPOSAL FORMAT AND CONTENT**

### **4.1 Proposal Information and Criteria**

The following list specifies the items to be addressed in the proposal. Offerors should read it carefully and address it completely and in the order listed to facilitate the University's review of the proposal.

Proposals shall be organized into the sections identified below. The content of each section is detailed in the following pages. It is strongly suggested that offerors use the same numbers for the following content that are used in the RFP.

- Signed Authentication of Proposal and Statement of Non-Collusion and Non-Conflict of Interest Form
- Transmittal Letter
- Executive Summary and Proposal Overview
- Criteria 1 - Offeror Qualifications
- Criteria 2 - Services Defined
- Criteria 3 - Financial Proposal
- Criteria 4 - Evidence of Successful Performance and Implementation Schedule
- Criteria 5 - Other Additional Information

### **4.2 Signed Authentication of Proposal and Statements of Non-Collusion and Non-Conflict of Interest Form**

The Offeror will sign and return the proposal cover sheet and print or type their name, firm, address, telephone number and date. The person signing the offer must initial erasures or other changes. An offer signed by an agent is to be accompanied by evidence of their authority unless such evidence has been previously furnished to the purchasing agency. The signer shall further certify that the proposal is made without collusion with any other person, persons, company or parties submitting a proposal; that it is in all respects fair and in good faith without collusion or fraud; and that the signer is authorized to bind the principal offeror.

### **4.3 Transmittal Letter**

The Transmittal Letter accompanying the RFP shall be in the form of a standard business letter and shall be signed by an individual authorized to legally bind the offeror. It shall include:

- A statement referencing all addenda and written questions, the answers and any clarifications to this RFP issued by the University and received by the offeror (If no addenda have been received, a statement to that effect should be included.).
- A statement that the offeror's proposal shall remain valid for six (6) months after the closing date of the receipt of the proposals.
- A statement that the offeror will accept financial responsibility for all travel expenses incurred for oral presentations (if required) and candidate interviews.
- A statement that summarizes any deviations or exceptions to the RFP requirements and includes a detailed justification for the deviation or exception.

- A statement that identifies the confidential information as described in Section 6.23.

#### 4.4 **Executive Summary and Proposal Overview**

The Executive Summary and Proposal Overview shall condense and highlight the contents of the technical proposal in such a way as to provide the evaluation committee with a broad understanding of the entire proposal.

As part of the Executive Summary and Proposal Overview, Offeror shall submit with their response a summarized profile describing the demographic nature of their company or organization:

1. When was your organization established and/or incorporated?
2. Indicate whether your organization is classified as local, regional, national, or international.
3. Describe the size of your company in terms of number of employees, gross sales, etc.
4. Is your company certified as small business, minority-owned, women-owned, veteran-owned, disabled-owned, or similar classification?
5. Include other demographic information that you feel may be applicable to the Request for Proposal submission.
6. Offeror shall describe in detail their company's commitment to diversity, equity, and inclusion. Information shall be provided as to the number of diverse individuals that the vendor employees as well as a description of vendors efforts to do business with Diverse Business Enterprises as they conduct their own business. In additional, please indicate the diversity nature of your company as well as ownership race/ethnicity.

Check One Only	<b>Diverse Business Description (If Diverse Business, determine the classification that is the best description)</b>	<b>Internal Code</b>
	Minority Owned (only)	10
	Veteran Owned and Small Business	100
	Minority and Woman and Small Business	110
	Minority and Woman and Veteran-Owned Business	120
	Minority and Veteran and Small Business	130
	Woman and Veteran and Small Business	140
	Minority and Woman and Veteran-Owned Small Business	150
	Woman Owned (only)	20
	Small Business (only)	30
	Veteran Owned (only)	40
	Minority and Woman Owned	50
	Minority and Small Business	60
	Minority and Veteran-Owned	70
	Woman Owned and Small Business	80
	Woman and Veteran-Owned	90
	Diversity not indicated	999

Race/Ethnicity	Check One
Asian	
Black/African American	
Hispanic or Latino	
Native American	
Native Hawaiian/Pacific Islander	
White	
Other	

**4.5 Criteria 1 - Offeror Qualifications**

The purpose of the Offeror Qualifications section is to determine the ability of the offeror to respond to this RFP. Offerors must describe and offer evidence of their ability to meet each of the qualifications listed below.

Our supply chains and business partnerships are an important aspect of this work. In your proposal, please (A) provide your company’s mission and vision relative to sustainability, and (B) how your company, through services, products, and partnerships, will help the University of Kentucky advance specific elements of the Sustainability Strategic Plan.

UK HealthCare is seeking Offerors as an Implementation Partner to optimize and execute the modernization road-map of our current on-premise Enterprise Data Platform. The ideal Offeror shall have experience in HealthCare and implementation experience with Epic and Azure.

Offerors shall demonstrate their experience and expertise to enhance and execute the road-map that builds the processes and artifacts of an Azure-based Enterprise Data Platform. The modernized Azure-based Enterprise Data Platform shall complement and extends the capabilities of our traditional on-premise enterprise data systems. Therefore, the Implementation Partner must demonstrate evidence of success on building cross-premise Azure Architected Enterprise Data services capabilities including those referenced in the enclosed “EDW Modernization RFP Requirements”.

In addition to completing responses in the “EDW Modernization RFP Requirements”, Offerors shall offer evidence of their ability to meet each of the qualifications listed below;

- A. Responsible Offerors shall have rendered services of similar scope and volume to other clients. Identify the number of client facilities currently using the proposed system. Offeror shall supply names, addresses and telephone numbers of at least five (5) business references for whom similar work has been accomplished within the past three years and briefly describe the type of service provided. The references should include Academic Medical Centers of similar size, complexity and scope to UK HealthCare (<https://ukhealthcare.uky.edu/about>). By submission of a Proposal, Offeror grants permission to the University to contact references.
- B. Indicate if your company has had a contract terminated for default during the past five (5) years. All such incidents must be described in detail, including the other party’s name, address, and telephone number and present your company position on the matter.

- C. Provide a brief narrative describing the history of your firm. Identify the number of years in the industry, the number of employees in your firm, the Ownership and if the company has ever filed for bankruptcy, been in loan default, or if there are pending liens, claims or lawsuits against the firm. If so, please describe.
- D. Provide an organizational chart of your firm indicating lines of authority for personnel involved in performance of this potential contract and relationship of this staff to other programs or functions of the firm. This chart must also show lines of authority to the next senior level of management.
- E. Provide a company prospectus and/or the last two company annual reports.
- F. Explain the consequences for the University should the Offeror's company be sold or go out of business.
- G. Provide resumes for key personnel who will be assigned to this project.
- H. Identify any subcontractors/business partners which would be used by your firm and describe their role and relationship to your firm. Describe exactly which portions of the requested work would be completed by which subcontractor. Also indicate if the resources include any off-shore personnel with their location and expected involvement. Note that UKHC data cannot be transferred, stored or accessed at offshore locations outside the United States.
- I. Describe the firm's quality assurance methodology, approach to total quality management, customer service, and a performance improvement program.
- J. Describe why your company should be selected over other competitors.

#### **4.6 Criteria 2 – Services Defined**

The Offerors shall describe and offer evidence of their ability to meet each of the qualifications listed below.

UK HealthCare seeks to build a modern enterprise data platform based in Microsoft Azure-based technologies. This modern data platform must easily evolve with UKHC needs and prudently replace legacy tools. Therefore, Offeror must demonstrate capabilities and expertise with concepts and technology that make up the current UKHC EDW as well as the technology and principles required to transition to UKHC's targeted modern enterprise data platform.

UKHC's current Enterprise Data Warehouse (EDW) is on-premises. It supports the integration of several data sources in a variety of traditional structured formats. UKHC source systems changes continuously and at this time primarily includes (but not limited to): Epic Cogito (Caboodle and Clarity based on a full Epic EMR Implementation), Vizient, Press Ganey, Phillips eICU, ScriptPro, 3M, Syngo, registries and Health Information Exchanges. The current Data Warehouse maintains a Type 2 slowly changing dimension load strategy. Most of the current data stores across UKHC are on Netezza and SQL server.

The Implementation Partner shall perform the project management activities along with executing the design, implementation and training required to deliver UKHC modern enterprise data platform. The services required to deliver UKHC modern enterprise data platform, includes but is not limited to;

**A. Project management, Planning and Alignment:**

This requires UKHC EDW Modernization Evaluation Roadmap and Architecture as inputs to planning. The task includes engaging stakeholders to identify and sequence high-impact use-cases. The Offeror shall develop alignment with planning and perform resource analysis which includes taking an inventory of skills and skills gap required to operationalize the EDW modernization build. It also includes leveraging agile methods to execute the project providing communication plan, tracking, status reporting, and managing budget, risks and releases among other activities as necessary to successfully deliver the modernized Enterprise Data Platform according to Azure well-architected principles and UKHC needs.

Define the staffing requirements to support the modern enterprise data platform long-term.

**B. Analysis and Design:**

This task includes identifying required services and configuration, as well as, discover and onboard the required datasets, schema and workflow to create the MVP data model. Detail designs for the foundational integrations and Azure MVP configuration are created. Designs are optimized for; scalability, supportability, reusability, governance, accelerated development, cost, Azure well-architected principles and best practices. Valuable use-cases are refined, validated and prioritized based on continued discoveries.

**C. Azure Configuration:**

The Azure environment is configured according to designs, with the integration of required services such as for Active Directory, Virtual Network, Security Groups, FHIR and others as necessary that establish the foundational Azure environment. Software development life-cycle processes and code management technologies are stood-up.

**D. Implementation:**

This includes agile cycles of discovery, analysis, detailed-design and deployment of prioritized use-cases. The implementation at a minimum involves performing; refinement and tailoring of use-cases, infrastructure design, Azure configuration, schema design, data pipeline development, code builds, integration and conforming data structures, data processing migration, data migration, data mart build and visualizing data for reporting, analytics, MLOps, transaction/applications, research and or devices. Services that advance analytics and create sophisticated self-servicing are integrated and deployed. The build shall be performant, well architected and concretely meets UKHC strategic needs.

**E. Train While Building Delivery Model:**

This involves active facilitation of peer-to-peer learning to ensure UKHC to have a comprehensive understanding of UKHC modern enterprise data platform and the Azure ecosystem. Offeror shall deploy the most effective hands-on training methods such as; activity-based demonstrations, peer-to-peer interactive development, experiential learning and apprenticeship. Training must be tailored to UKHC background and results in UKHC staff quickly having a deep understanding of the deployment and are able independently maintain and extend the environment. The delivery shall accompany effective knowledge transfer documentation, manuals, well-documented code, and effective knowledge catalog. Offer shall deploy a training plan that integrates with the build. This training plan shall optimize the involvement of UKHC technology staff such that they are able to understand and effectively take-over operating, maintaining and extending the deployed modernized Enterprise Data Platform after the first phase.

**F. Operationalize and Transfer:**

This includes operationalizing assets in production with the standard policies and processed for managing the software development life-cycle. Tools are delivered to monitor, alert and remediate issues with an emphasis on auto-recovery and self-healing to keep the system running with high-fidelity. Monitoring tools shall also include mechanisms to track, control and forecast the cost of to run and own the environment and its assets. Offeror shall perform the training and knowledge transfer that enables UKHC staff to independently support and enhance said assets.

The products developed during this engagement may evolve based on findings during the Analysis and Design, and includes;

**EDW Modernization Foundations** (Rationalize and transform legacy EDW processes and data to the Azure ecosystem with the Azure foundational infrastructure that enables research, analytics and operational datastores);

- *The current EDW scope includes nearly 250+ DataStage ETL Jobs of which 85% are consider simply ingestion jobs from APIs, relational and flat-files delimited sources*
- *primarily includes Epic Cogito i.e. Clarity and Caboodle*
- *Netezza relational database sized at nearly 20TB with its data-marts and data-stores*
- *supports data extractions, querying and analytics that surfaces as Tableau dashboards*
- *requires capabilities for batch and real-time ingestion and orchestration of data sourced from IoMT, Epic, Imaging, Financial Systems, SDOH, registries and various third-party sources*
- *includes capabilities to ingest, orchestrate, enrich, model and visualize data*
- *build data pipelines, analytics and visualization of monitoring, telemetry and streaming data*
- *requires transforming data of various types and formats into standardized common data sets that; populates developed data models, can be queried, prepared for analytics, and transported to downstream applications, reporting and devices*
- *supports anonymizing (deidentifying) of data for research, analytics and machine learning use-cases*
- *is constraint by performance and cost to operate the converted EDW*
- *supports the delivery of data through a variety of protocols such as API and FHIR for real-time, transactional applications, ML Ops, analytics and research*
- *requires establishing the standard processes and technologies to manage software development life-cycle within the Azure-ecosystem including; distributed version control, source-code management, release management and deployment, continuous integration/continuous delivery*

**Research Analytical Data Platform**

- *anonymized (deidentifying) data-lake and associated data-stores*
- *includes governance and technology that implements role-based access control, meta-data management, authoritative and collaborative attribution of definition and context to data*
- *requires capabilities for data ingestion, orchestration, operation, integration, analytics and ML that is delivered and sourced in both batch and real-time frequency*
- *integrates data of various formats and types into a common data structure that can be queried, analyzed and used for developing models and derived insights*
- *requires sophisticated self-service capabilities beyond dashboarding*
- *contains a workspace for exploration, experimentation, collaboration and promote to be operationalized in production*
- *supports MLOps and Analytical use-cases such as Risk-Modeling, Genomics and Image Analytics*



- *includes robust capabilities that controls the dissemination of data through visualization tools, APIs, FHIR and other protocols such that research results can be operationalized and consumed by applications, devices and reports*

### **Enterprise Analytics and ML Ops Platform**

- *built on and includes all the ingestion, processing, integration and operability capabilities of the modernized EDW*
- *contains workspace for data preparation, exploration, experimentation, development and deploying analytics*
- *build and deploy custom models that are complementary and not duplicative of those available in Epic*
- *includes analytical modeling, visualization, and integration that supports customized use-cases such as;*
  - ***Enterprise-Level Balanced Scorecard.*** *Operational leadership decision support with key operational data presented at the summary level, for any department or combination of departments, with the capability to drill down on cohorts to see detailed data from Epic, internal and third-party data sources.*
  - ***Capacity & Throughput Management.*** *Combine patient data with data from devices, beds, diagnoses, medications and historical outcomes to manage and minimize ED boarding, understand the impact of discharges and new admissions, track meds-to-beds, monitor critical KPIs related to risk of re-admission / risk of mortality.*
  - ***IoMT Analytics.*** *Consumes streaming data from monitoring devices for which models can be applied to surface actionable insights that drives improvement in patient care and outcomes.*
  - ***Population Health.*** *Combine population statistics & study results with known patient experiences & outcome data to understand social determinants of health and the resulting required care, particularly for population-based care relating to regional and global events such as COVID-19.*
  - ***Optimize Clinical Care with Machine Learning.*** *Utilize the data warehouse to de-identify basic patient hospital data such as symptoms, diagnoses, treatment plans, medications and outcomes at a large scale, which can in turn feed machine learning models and inform provider decisions, identify workflow variations and maximize quality of care.*
  - ***Clinical Patient Surveillance Tools.*** *Utilize powerful combinations of EHR, medical device and third-party data sources to identify populations at risk of negative clinical events such as Sepsis, infected lines and falls. Build and train models to identify clinical areas requiring extra monitoring and risk management.*
  - ***ML Assisted Clinical Documentation.*** *Operationalized automated document review and analysis to expedite the discovery document inefficiencies for corrective action.*
  - ***Clinical Decision Support and Accelerators.*** *Automate recurring and data-driven tasks to enable clinicians additional time for higher value-added tasks. Epic data, third-party day and telemetry data is ingested, modelled and used to develop and train analytical algorithms to perform repeatable, analysis and diagnosis, and then deliver these results to Clinicians to aid in the provision of care. Applied text analytics to automate document reviews such that we discover and surface critical clinical indicators that are relevant to care at a faster rate than manual review.*

### **HealthCare Data Products Engine**

- *includes the data integration capabilities to deliver targeted purpose-built data driven applications that improves healthcare quality and access*
- *built on and includes all the ingestion, enrichment, processing, integration and operability capabilities of the modernized EDW*

- *requires capability to develop and disseminate data insights using protocols such as API and FHIR and others required to power application integrations including mobile, web and devices*
- *Epic data and third-party data can be leverage to develop risk-models that are integrated with bots to reach and deliver health information to those who are at risk of health care access*
- *requires the capability to analyze screening results and launch personalized communication path that is aimed at amplifying, healthcare access, outreach and education*
- *requires the capability to analyze real-time data such as IoMT and applied MLOps for Clinical recommendations during patient stay*

#### **Enterprise Health Data Trust (Exchange)**

- *data-lake and associated data-stores created and accessed by a collective group that may include internal and external partner entities*
- *implemented governance for access rights and controls, and cataloging data contributed to the trust*
- *includes anonymized (deidentifying) for approved community use*
- *create data models and data structure that unifies community data for consistent and ease to perform query and analytics that supports research and decision making*
- *requires sophisticated self-service capabilities beyond dashboarding with associated access limits enforced based on user profile*

(Note the modern enterprise data platform is in reference to the viable on-premise integration and UKHC approved optimization of the enclosed “Baseline Reference Architecture” attached to the “EDW Modernization RFP Requirements” document).

Offerors are to complete the “EDW Modernization RFP Requirements” document and submit it with your proposal.

List the offerors ability to provide all services outlined in section 7.0.

#### **4.7 Criteria 3 – Financial Proposal**

The Financial Summary Form shall contain the complete financial offer made to the University using the format contained in Section 8.0. All financial information must be submitted in a sealed envelope under separate cover.

#### **4.8 Criteria 4 – Evidence of Successful Performance and Implementation Schedule**

In addition to completing section 4.8 of the enclosed “EDW Modernization RFP Requirements”, include supporting documentation to the following in your response;

- A. Provide your implementation approach, framework and schedule including projected labor hours provided by the Offeror and needed from University staff for the implementation of the proposed system. Include system installation; software configuration; hardware configuration, if applicable; other system set-up and training. Indicate by title, responsibilities, and person-hours per week, the staff that the Offeror proposes to use on this project and support – both onsite and remote – in that effort. Specify activities that are performed by the Offeror and University staff. Include in your response the expected team composition and size.
- B. Describe your plan to ensure a successful transition of the modernization solution to UKHC staff, transferring the expertise to optimal build and extend the modernization solution.

- C. How long does it typically take to install and configure the solution?
- D. What factors keep implementation on time (e.g., source system configuration, staff expertise, etc.)? What factors increase the risk of a delayed implementation?
- E. Describe the post-implementation activities that will be provided by the Offeror. Specifically address post-live debugging, conformance to documentation, proper functioning of the system, support, etc.
- F. What is the typical training plan to use the solution? Are there different levels offered by type of user: e.g., administrator, content editor, etc.? What ongoing training is available or provided to end users?
- G. Do you have a guaranteed response time? If so, please provide that information.

#### **4.9 Criteria 5 – Other Additional Information**

Please provide any additional information that the offeror feels should be considered when evaluating their proposal.

The offeror may present any creative approaches that might be appropriate. The offeror may also provide supporting documentation that would be pertinent to this RFP.

Offeror shall describe in detail their company's commitment to diversity, equity and inclusion. Information shall be provided as to the number of diverse individuals that the vendor employees as well as a description of vendors efforts to do business with Diverse Business Enterprises as they conduct their own business.

Offeror may provide additional evidence of success by completing and or extending section 4.9 of the "EDW Modernization RFP Requirements".

## 5.0 EVALUATION CRITERIA PROCESS

A committee of University officials appointed by the Chief Procurement Officer will evaluate proposals and make a recommendation to the Chief Procurement Officer. The evaluation will be based upon the information provided in the proposal, additional information requested by the University for clarification, information obtained from references and independent sources and oral presentations (if requested).

The evaluation of responsive proposals shall then be completed by an evaluation team, which will determine the ranking of proposals. Proposals will be evaluated strictly in accordance with the requirements set forth in this solicitation, including any addenda that are issued. The University will award the contract to the responsible offeror whose proposal is determined to be the most advantageous to the University, taking into consideration the evaluation factors set forth in this RFP.

The evaluation of proposals will include consideration of responses to the list of criteria in Section 4.0. Offerors must specifically address all criteria in their response. Any deviations or exceptions to the specifications or requirements must be described and justified in a transmittal letter. Failure to list such exceptions or deviations in the transmittal letter may be considered sufficient reason to reject the proposal.

The relative importance of the criteria is defined below:

### **Primary Criteria**

- Offeror Qualifications
- Services Defined
- Financial Proposal
- Evidence of Successful Performance and Implementation

### **Secondary Criteria**

- Other Additional Services

The University will evaluate proposals as submitted and may not notify offerors of deficiencies in their responses.

Proposals must contain responses to each of the criteria, listed in Section 4 even if the offeror's response cannot satisfy those criteria. A proposal may be rejected if it is conditional or incomplete in the judgment of the University.

## **6.0 SPECIAL CONDITIONS**

### **6.1 Contract Term**

The contract resulting from this RFP shall be effective when signed with an initial period of two years and is renewable for up to three additional one-year renewal periods. The total contract period will not exceed more than five years. Annual renewal shall be contingent upon the University's satisfaction with the services performed.

### **6.2 Effective Date**

The effective date of the contract shall be the date upon which the parties execute it and all appropriate approvals, including that of the Commonwealth of Kentucky Government Contracts Review Committee, have been received.

### **6.3 Competitive Negotiation**

It is the intent of the RFP to enter into competitive negotiation as authorized by KRS 45A.085.

The University will review all proposals properly submitted. However, the University reserves the right to request necessary modifications, reject all proposals, reject any proposal that does not meet mandatory requirement(s) or cancel this RFP, according to the best interests of the University.

Offeror(s) selected to participate in negotiations may be given an opportunity to submit a Best and Final Offer to the purchasing agency. All information received prior to the cut-off time will be considered part of the offeror's Best and Final Offer.

The University also reserves the right to waive minor technicalities or irregularities in proposals providing such action is in the best interest of the University. Such waiver shall in no way modify the RFP requirements or excuse the offeror from full compliance with the RFP specifications and other contract requirements if the offeror is awarded the contract.

### **6.4 Appearance Before Committee**

Any, all or no offerors may be requested to appear before the evaluation committee to explain their proposal and/or to respond to questions from the committee concerning the proposal. Offerors are prohibited from electronically recording these meetings. The committee reserves the right to request additional information.

### **6.5 Additions, Deletions or Contract Changes**

The University reserves the right to add, delete, or change related items or services to the contract established from this RFP. No modification or change of any provision in the resulting contract shall be made unless such modification is mutually agreed to in writing by the contractor and the Chief Procurement Officer and incorporated as a written modification to the contract. Memoranda of understanding and correspondence shall not be interpreted as a modification to the contract.

### **6.6 Contractor Cooperation in Related Efforts**

The University reserves the right to undertake or award other contracts for additional or related work to other entities. The contractor shall fully cooperate with such other contractors and

University employees and carefully fit its work to such additional work. The contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by University employees. This clause shall be included in the contracts of all contractors with whom this contractor will be required to cooperate. The University shall equitably enforce this clause to all contractors to prevent the imposition of unreasonable burdens on any contractor.

#### **6.7 Entire Agreement**

The RFP shall be incorporated into any resulting contract. The resulting contract, including the RFP and those portions of the offeror's response accepted by the University, shall be the entire agreement between the parties.

#### **6.8 Governing Law**

The contractor shall conform to and observe all laws, ordinances, rules and regulations of the United States of America, Commonwealth of Kentucky and all other local governments, public authorities, boards or offices relating to the property or the improvements upon same (or the use thereof) and will not permit the same to be used for any illegal or immoral purposes, business or occupation. The resulting contract shall be governed by Kentucky law and any claim relating to this contract shall only be brought in the Franklin Circuit Court in accordance with KRS 45A.245.

#### **6.9 Kentucky's Personal Information Security and Breach Investigation Procedures and Practices Act**

To the extent Company receives Personal Information as defined by and in accordance with Kentucky's Personal Information Security and Breach Investigation Procedures and Practices Act, KRS 61.931, 61.932 and 61.933 (the "Act"), Company shall secure and protect the Personal Information by, without limitation: (i) complying with all requirements applicable to non-affiliated third parties set forth in the Act; (ii) utilizing security and breach investigation procedures that are appropriate to the nature of the Personal Information disclosed, at least as stringent as University's and reasonably designed to protect the Personal Information from unauthorized access, use, modification, disclosure, manipulation, or destruction; (iii) notifying University of a security breach relating to Personal Information in the possession of Company or its agents or subcontractors within seventy-two (72) hours of discovery of an actual or suspected breach unless the exception set forth in KRS 61.932(2)(b)2 applies and Company abides by the requirements set forth in that exception; (iv) cooperating with University in complying with the response, mitigation, correction, investigation, and notification requirements of the Act, (v) paying all costs of notification, investigation and mitigation in the event of a security breach of Personal Information suffered by Company; and (vi) at University's discretion and direction, handling all administrative functions associated with notification, investigation and mitigation.

#### **6.10 Termination for Convenience**

The University of Kentucky, Purchasing Division, reserves the right to terminate the resulting contract without cause with a thirty (30) day written notice. Upon receipt by the contractor of a "notice of termination," the contractor shall discontinue all services with respect to the applicable contract. The cost of any agreed upon services provided by the contractor will be calculated at the agreed upon rate prior to a "notice of termination" and a fixed fee contract will be pro-rated (as appropriate).

## **6.11 Termination for Non-Performance**

### Default

The University may terminate the resulting contract for non-performance, as determined by the University, for such causes as:

- Failing to provide satisfactory quality of service, including, failure to maintain adequate personnel, whether arising from labor disputes, or otherwise any substantial change in ownership or proprietorship of the Contractor, which in the opinion of the University is not in its best interest, or failure to comply with the terms of this contract;
- Failing to keep or perform, within the time period set forth herein, or violation of, any of the covenants, conditions, provisions or agreements herein contained;
- Adjudicating as a voluntarily bankrupt, making a transfer in fraud of its creditors, filing a petition under any section from time to time, or under any similar law or statute of the United States or any state thereof, or if an order for relief shall be entered against the Contractor in any proceeding filed by or against contractor thereunder. In the event of any such involuntary bankruptcy proceeding being instituted against the Contractor, the fact of such an involuntary petition being filed shall not be considered an event of default until sixty (60) days after filing of said petition in order that Contractor might during that sixty (60) day period have the opportunity to seek dismissal of the involuntary petition or otherwise cure said potential default; or
- Making a general assignment for the benefit of its creditors, or taking the benefit of any insolvency act, or if a permanent receiver or trustee in bankruptcy shall be appointed for the Contractor.

### Demand for Assurances

In the event the University has reason to believe Contractor will be unable to perform under the Contract, it may make a demand for reasonable assurances that Contractor will be able to timely perform all obligations under the Contract. If Contractor is unable to provide such adequate assurances, then such failure shall be an event of default and grounds for termination of the Contract.

### Notification

The University will provide ten (10) calendar days written notice of default. Unless arrangements are made to correct the non-performance issues to the University's satisfaction within ten (10) calendar days, the University may terminate the contract by giving forty-five (45) days notice, by registered or certified mail, of its intent to cancel this contract.

## **6.12 Funding Out**

The University may terminate this contract if funds are not appropriated or are not otherwise available for the purpose of making payments without incurring any obligation for payment after the date of termination, regardless of the terms of the contract. The University shall provide the contractor thirty (30) calendar days' written notice of termination under this provision.

**6.13 Prime Contractor Responsibility**

Any contracts that may result from the RFP shall specify that the contractor(s) is/are solely responsible for fulfillment of the contract with the University.

**6.14 Assignment and Subcontracting**

The Contractor(s) may not assign or delegate its rights and obligations under any contract in whole or in part without the prior written consent of the University. Any attempted assignment or subcontracting shall be void.

**6.15 Permits, Licenses, Taxes**

The contractor shall procure all necessary permits and licenses and abide by all applicable laws, regulations and ordinances of all federal, state and local governments in which work under this contract is performed.

The contractor must furnish certification of authority to conduct business in the Commonwealth of Kentucky as a condition of contract award. Such registration is obtained from the Secretary of State, who will also provide the certification thereof. However, the contractor need not be registered as a prerequisite for responding to the RFP.

The contractor shall pay any sales, use, personal property and other tax arising out of this contract and the transaction contemplated hereby. Any other taxes levied upon this contract, the transaction or the equipment or services delivered pursuant hereto shall be the responsibility of the contractor.

The contractor will be required to accept liability for payment of all payroll taxes or deductions required by local and federal law including (but not limited to) old age pension, social security or annuities.

**6.16 Attorneys' Fees**

In the event that either party deems it necessary to take legal action to enforce any provision of the contract and in the event that the University prevails, the contractor agrees to pay all expenses of such action including attorneys' fees and costs at all stages of litigation.

**6.17 Royalties, Patents, Copyrights and Trademarks**

The Contractor shall pay all applicable royalties and license fees. If a particular process, products or device is specified in the contract documents and it is known to be subject to patent rights or copyrights, the existence of such rights shall be disclosed in the contract documents and the Contractor is responsible for payment of all associated royalties. To the fullest extent permitted by law the Contractor shall indemnify, hold the University harmless, and defend all suits, claims, losses, damages or liability resulting from any infringement of patent, copyright, and trademark rights resulting from the incorporation in the Work or device specified in the Contract Documents.

Unless provided otherwise in the contract, the Contractor shall not use the University's name nor any of its trademarks or copyrights, although it may state that it has a Contract with the University.



**6.18 Indemnification**

The contractor shall indemnify, hold and save harmless the University, its affiliates and subsidiaries and their officers, agents and employees from losses, claims, suits, actions, expenses, damages, costs (including court costs and attorneys' fees of the University's attorneys), all liability of any nature or kind arising out of or relating to the Contractor's response to this RFP or its performance or failure to perform under the contract awarded from this RFP. This clause shall survive termination for as long as necessary to protect the University.

**6.19 Insurance**

The successful Contractor shall procure and maintain, at its expense, the following minimum insurance coverages insuring all services, work activities and contractual obligations undertaken in this contract. These insurance policies must be with insurers acceptable to the University.

**COVERAGES**

Workers' Compensation  
 Employer's Liability  
 Commercial General Liability including operations/completed operations, products and contractual liability (including defense and investigation costs), and this contract  
 Business Automobile Liability covering owned, leased, or non-owned autos  
 Cyber Liability

**LIMITS**

Statutory Requirements (Kentucky)  
 \$500,000/\$500,000/\$500,000  
 \$5,000,000 each occurrence  
 (BI & PD combined) \$2,000,000 Products and Completed Operations Aggregate  
 \$1,000,000 each occurrence  
 (BI & PD combined)  
 \$10,000,000 for each claim and aggregate.  
 Such policy shall include coverage for cyber liabilities including network security and privacy liability and related fines and penalties imposed.

The successful contractor agrees to furnish Certificates of Insurance for the above described coverages and limits to the University of Kentucky, Purchasing Division. The University, its trustees and employees must be added as additional insured on the Commercial General Liability policy with regard to the scope of this solicitation. Any deductibles or self-insured retention in the above-described policies must be paid and are the sole responsibility of the contractor. Coverage is to be primary and non-contributory with other coverage (if any) purchased by the University. All of these required policies must include a Waiver of Subrogation (except Workers' Compensation) in favor of the University, its trustees and employees.

**6.20 Method of Award**

It is the intent of the University to award a contract to the qualified offeror whose offer, conforming to the conditions and requirements of the RFP, is determined to be the most advantageous to the University, cost and other factors considered.

Notwithstanding the above, this RFP does not commit the University to award a contract from this solicitation. The University reserves the right to reject any or all offers and to waive formalities and minor irregularities in the proposal received.

## 6.21 Reciprocal Preference

In accordance with KRS 45A.494, a resident offeror of the Commonwealth of Kentucky shall be given a preference against a nonresident offeror. In evaluating proposals, the University will apply a reciprocal preference against an offeror submitting a proposal from a state that grants residency preference equal to the preference given by the state of the nonresident offeror. Residency and non-residency shall be defined in accordance with KRS 45A.494(2) and 45A.494(3), respectively. Any offeror claiming Kentucky residency status shall submit with its proposal a notarized affidavit affirming that it meets the criteria as set forth in the above reference statute.

## 6.22 Reports and Auditing

Contractor shall provide a quarterly report to the University of all product(s) and/or service(s) based on an Excel template provided by the Purchasing Division. The template will require basic line item order information to include, but not limited to: purchase transaction date, purchase order number, product/catalog number, description, UOM, price each, extended price, invoice number, etc. The Excel reporting template is available upon request from the Purchasing Division and is subject to change. The Excel template provided by the Purchasing Division is the only reporting format that may be used; Contractor-submitted reports based on internal reporting or templates will not be accepted. The reporting date structure shall follow the below outline and begin with the quarter in which the contract is executed. The date of the purchase order (or other transaction type that may be used with the Contractor (e.g., procurement card)) shall determine the quarter in which the transaction is to be reported.

In addition to the aforementioned quarterly reporting of goods and services, contractors are also required to report summary dollar amounts of goods and services sold to the University via the resulting contract and originating from diversity Tier 2 or subcontractors affiliated with company. Quarterly reports for Tier 2 diverse suppliers/subcontractors must accompany the standard quarterly report requirement. Due to the broad array of diversity reporting utilized, the University does not require specific classifications of diverse purchases; the successful contractor may report Tier 2 purchase amounts as produced by their information systems and with sub-classifications as they are available. If the successful contractor does not have any Tier 2 reporting for diverse suppliers to accompany their quarterly report submissions, they must indicate this when submitting their standard quarterly reports.

FY Quarter 1 report for purchases dated July 1 through September 30	Quarterly report due October 20
FY Quarter 2 report for purchases dated October 1 through December 31	Quarterly report due January 20
FY Quarter 3 report for purchases dated January 1 through March 31	Quarterly report due April 20
FY Quarter 4 report for purchases dated April 1 through June 30	Quarterly report due July 20

Report headers shall also be completed with the Contractor's name, contract number, and reporting period.

Reports can be submitted via email to [UKPurchasing@uky.edu](mailto:UKPurchasing@uky.edu) based by the deadline(s) listed herein.

The University, or its duly authorized representatives, shall also have access to any books, documents, papers, records or other evidence which are directly pertinent to this contract for the purpose of financial audit or program review.

In the event that successful Contractor(s) does not meet the reporting requirements based on the terms and conditions herein, the contract is subject to cancellation or termination.

### **6.23 Confidentiality**

The University recognizes an offeror's possible interest in preserving selected information and data included in the proposal; however, the University must treat such information and data as required by the Kentucky Open Records Act, KRS 61.870, et seq.

Information areas which normally might be considered proprietary, and therefore confidential, shall be limited to individual personnel data, customer references, formulae and company financial audits which, if disclosed, would permit an unfair advantage to competitors. If a proposal contains information in these areas and the offeror declares them to be proprietary in nature and not available for public disclosure, the offeror shall declare in the Transmittal Letter the inclusion of proprietary information and shall noticeably label as confidential or proprietary each sheet containing such information. Proposals containing information declared by the offeror to be proprietary or confidential, either wholly or in part, outside the areas listed above may be deemed non-responsive and may be rejected.

The University's General Counsel shall review each offeror's information claimed to be confidential and, in consultation with the offeror (if needed), make a final determination as to whether or not the confidential or proprietary nature of the information or data complies with the Kentucky Open Records Act.

### **6.24 Conflict of Interest**

This Request for Proposal and resulting Contract are subject to provisions of the Kentucky Revised Statutes regarding conflict of interest and the University of Kentucky's Ethical Principles and Code of Conduct ([www.uky.edu/Legal/ethicscode.htm](http://www.uky.edu/Legal/ethicscode.htm)). When submitting and signing a proposal, an offeror is certifying that no actual, apparent or potential conflict of interest exists between the interests of the University and the interests of the offeror. A conflict of interest (whether contractual, financial, organizational or otherwise) exists when any individual, contractor or subcontractor has a direct or indirect interest because of a financial or pecuniary interest, gift or other activities or relationships with other persons (including business, familial or household relationships) and is thus unable to render or is impeded from rendering impartial assistance or advice, has impaired objectivity in performing the proposed work or has an unfair competitive advantage.

Questions concerning this section or interpretation of this section should be directed to the University purchasing officer identified in this RFP.

### **6.25 Personal Service Contract Policies**

Pursuant to the Kentucky Model Procurement Code (Code), the Government Contract Review Committee (GCRC) of the Kentucky General Assembly may establish policies that govern personal service contracts. Under the Code, a personal service contract is an agreement whereby an individual, firm, partnership or corporation is to perform certain services requiring professional skill or professional judgment for a specified period of time at an agreed upon price.

**A. Professional Service Rate Schedules:**

The GCRC has established rate schedules for certain professional services and may impact any contract established under the Code. These rate schedules are located on the GCRC website at the following link: <https://apps.legislature.ky.gov/moreinfo/contracts/homepage.html>. Access/click the dropdown menu within the web page for the rates information.

**B. Invoicing of Personal Service Contracts:**

The Kentucky Model Procurement Code was recently amended to establish conditions for invoicing for fees for personal service contracts. It states, "No payment shall be made on any personal service contract unless the individual, firm, partnership, or corporation awarded the personal service contract submits its invoice on a form established by the committee." The Government Contract Review Committee has adopted a personal service contract invoice form that must be submitted as a condition of payment. A copy of the form is located on the GCRC website at: <https://apps.legislature.ky.gov/moreinfo/contracts/PSC%20INVOICE%20FORM.pdf>.

**6.26 Copyright Ownership and Title to Designs and Copy**

The contractor and University intend this RFP to result in a contract for services, and both consider the products and results of the services to be rendered by the contractor hereunder to be a work made for hire. The contractor acknowledges and agrees that the work and all rights therein, including (without limitation) copyright, belongs to and shall be the sole and exclusive property of the University. For any work that is not considered a work made for hire under applicable law, title and copyright ownership shall be assigned to the University.

Title to all dies, type, cuts, artwork, negatives, positives, color separations, progressive proofs, plates, copy and any other requirement not stated herein required for completion of the finished product for use in connection with any University job shall be the property of and owned by the University. Such items shall be returned to the appropriate department upon completion and/or delivery of work unless otherwise authorized by the University. In the event that time of return is not specified, the contractor shall return all such items to the appropriate University department within one week of delivery.

**6.27 University Brand Standards**

The contractor must adhere to all University of Kentucky Brand Standards. University Brand Standards are maintained by the University Public Relations Office (UKPR) and can be viewed at <http://www.uky.edu/prmarketing/brand-standards>. Non-adherence to the standards can have a penalty up to and including contract cancellation. Only the UKPR Director or designee can approve exceptions to the University standards.

Graphics standards for the UK HealthCare areas are governed by UK HealthCare Clinical Enterprise Graphic Standards, found at: <https://ukhealthcare.uky.edu/staff/brand-strategy>.

Contractor warrants that its products or services provided hereunder will be in compliance with all applicable Federal disabilities laws and regulations, including without limitation the accessibility requirements of Section 255 of the Federal Telecommunications Act of 1996 (47 U.S.C. § 255) and Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d), and its implementing regulations set forth at Title 36, Code of Federal Regulations, Part 1194. For purposes of clarity, updated regulations under Section 508 standards now incorporate WCAG 2.0, and for purposes of

this agreement WCAG 2.0 Level AA compliance is expressly included. Contractor agrees to promptly respond to, resolve and remediate any complaint regarding accessibility of products or services in a timely manner and provide an updated version to University at no cost. If deficiencies are identified, University reserves the right to request from Contractor, a timeline by which accessibility standards will be incorporated into the products or services provided by Contractor and shall provide such a timeline within a commercially reasonable duration of time. Failure to comply with these requirements shall constitute a material breach of this Agreement and shall be grounds for termination of this Agreement.

Where any customized web services are provided, Contractor represents that it has reviewed the University's Web Policy and all products or services will comply with its published standards.

Contractor will provide University with a current Voluntary Product Accessibility Template (VPAT) for any deliverable(s). If none is available, Vendor will provide sufficient information to reasonably assure the University that the products or services are fully compliant with current requirements.

#### **6.28 Printing Statutes**

The purchase of printing services for all state agencies is governed by Chapter 57 of the Kentucky Revised Statutes. Specifically, all printing must be awarded to the lowest responsive bidder and approved by the Governor of Kentucky. In compliance with these statutes, all printing must be provided by a contract established by the Purchasing Division.

#### **6.29 Requirement for Contract Administration Fee**

As a condition of award, successful Contractor(s) shall provide a contract administration fee to the University for all goods and/or services provided under the resultant contract. The fee shall be on a quarterly basis and shall be equivalent to 2% of the aggregate net value of goods/services sold to the University, exclusive of freight charges.

The fee shall be reported and paid within 30 calendar days of the end of conventional calendar quarters ending March 31, June 30, September 30, and December 31 of each year. The fee applies to orders which have been successfully delivered/installed and invoiced in the previous quarter. Fees shall be paid in the form of a check made payable to the University of Kentucky and shall be delivered to the Purchasing Division, Room 322 Peterson Service Building, 411 S. Limestone, Lexington, Kentucky 40506-0005. Each fee payment must be accompanied by a statement indicating the referenced University price contract to which it applies and indicate the aggregate value of goods/services provided and invoiced during the quarter, the fee percentage applied, and the net amount of the quarterly payment. If any errors are found in the report or calculations as determined by University, the successful Contractor shall correct immediately upon notification.

The successful Contractor(s) may extend the pricing, terms, and/or conditions of this contract to other universities, state agencies, and public and private institutions, with prior approval of the University of Kentucky. The successful Contractor(s) will pay the University of Kentucky a contract administration fee of two (2) % of goods/services provided and invoiced during the quarter. The fee shall be reported and paid within 30 calendar days of the end of conventional calendar quarters ending March 31, June 30, September 30, and December 31 of each year. The fees shall be in the form of a check made payable to the University of Kentucky and shall be delivered to the Purchasing Division, Room 322 Peterson Service Building, 411 S. Limestone, Lexington, Kentucky 40506-0005.

The successful Contractor must notify the Contracting Officer when the resultant contract is utilized by other universities, state agencies, and public and private institutions in Kentucky.

In the event that successful Contractor(s) does not provide the quarterly payment based on the terms and conditions herein, the contract is subject to cancellation or termination.

### **6.30 Payment Terms**

The University adheres to a strategic approach regarding payables management based on risk minimization, processing costs, and industry best practices. As such, suppliers and individuals doing business with the University will be paid based on the following protocol:

1. The University utilizes Payment Plus (e-payables) as its primary default form of payment. By enrolling in Payment Plus, suppliers can receive payments immediately (all invoices will be paid immediately upon confirmation of goods receipt and invoice). The process is electronic and the supplier receives real-time payment notices. Additional information regarding Payment Plus (and enrollment form) can be found at: <https://www.uky.edu/ufs/payment-plus-supplier-enrollment-form>.
2. Payments by check. Payment terms for check payments are Net-30.
3. Individuals receiving payments from the University that require ACH direct payments will only be processed under special circumstances as approved by the Controller's office. Payment terms for ACH are Net-40.

### **6.31 HIPAA/BAA Agreement**

Offeror will be required to comply with Health Insurance Portability and Accountability Act of 1996 (HIPAA). University of Kentucky master HIPAA/BAA agreement, Appendix A, and will become an integral part of any agreement.

## 7.0 SCOPE OF SERVICES

### 7.1 Detailed Services Defined

Offeror is required to perform all the services required to modernize UKHC EDW with reference to the “Baseline Reference Architecture” (BRA) illustrated in the enclosed “EDW Modernization RFP Requirements”. Offeror shall optimize and extend the BRA and develop from it, the comprehensive Low-Level Architecture (LLA) and detailed Low-Level Designs (LLD) required to implement the EDW modernization solution in accordance with; the UKHC EDW modernization evaluation completed in 2021, UKHC requirements, Azure well-architected principles and best practices.

Offeror shall implement the EDW modernization using the detail designs created in this engagement by executing tasks such as;

- performing technology cross-prem integration
- performing the Azure service selection, configurations and deployment
- develop and deploy the processes and mechanisms to transport, store, process, analyze and surface data for visual consumption and or application enablement
- establish the EDW modernization software development life-cycle standard and processes
- validate data, systems integration, and processes to operationalize the EDW modernization
- deliver and operationalize the modernized EDW
- evaluate and migrate on-premise data management processes from legacy systems to the modernized EDW environment
- deliver tools for monitoring, controlling and forecasting the cost and operational management of the modernized EDW
- build the tools, transfer the knowledge and provide training that enables UKHC staff to independently maintain, rationalize, enhance and evolve the operations of the modernized EDW on an ongoing basis
- deliver knowledge management documentation, reusable components, and architectural guidelines and development best practices that governs the optimally evolves and sustain the modernized EDW

The capabilities and requirements outlined in section 4.8 of the enclosed “EDW Modernization RFP Requirements” indicates key services that the Offeror is expected to perform in this engagement and is expected to include the below activities at a minimum;

#### A. Project Management

- Develop and execute a detailed project plan leveraging agile methodologies.
- Develop a rollout strategy and execution.
- Build a communication plan that includes a value proposition, benefits realize, and contribution towards UKHC mission (as an Academic Medical Centers in service to the Kentucky Commonwealth).
- Elicit, evaluate and score user needs to maintain implement a detailed backlog of high-value use-cases that are sufficiently defined such that they are ready for rapid deployment (ex. 30-90 days).
- Review, analysis and assessment of the UK HealthCare Enterprise Data Warehouse (and Data Management Platform) Architecture modernization and roadmap.

- Develop detail requirements and low-level designs for implementing a well-architected UKHC LDW that meets the UKHC needs.
- Advance operational hand-off capabilities with the provision of expedited training, knowledge transfer and documented guides; that enables UKHC team to independently support the operations of the Azure Architected Logical Data Warehouse (LDW).

## **B. Implementation of UKHC Azure Architected Logical Data Warehouse (LDW)**

- Data Source
  - Determine and implement the process of identifying, profiling and cataloging data and metadata such that it is accessible, fit for use and qualified and its context appropriately democratized with consideration to access privileges, data security and regulatory compliance such as HIPPA.
  - Assess current and future data sources and data consumers to analyze minimum data requirements to meet user needs
- Ingestion
  - Design, develop and implement the protocols, patterns and processes for consuming data in a variety of formats - (ex. logs, files, document, media, voice, IoMT, streaming) -, volume, frequency, latency, sources and access (ex. FIHR, HL7, APIs).
- Storage
  - Implement, deploy and control storage access with consideration to optimizing functionality and minimizing cost.
- Data Preparation, Data Integration and Data Wrangling
  - Develop the automated processes and patterns that orchestrate, cleanse, transforms and applies the required programmatic and analytical operation upon a blend of connected data sources to arrive at descriptive, predictive and prescriptive insights.
  - Development of Data pipelines and deploy curated data management Azure services such as Azure Data Factory.
- Build the Azure environment for Analytical Services and Machine Learning Operations (ML Ops)
  - Implement the integrated development environment that enables experimentation and integrated change management and development process to operationalize Analytical and Machine Learning programs. This includes the deployment of Azure ML and Analytical Services with the capability to integrate UKHC LDW with service consumers, applications.
- Visualization
  - Developing the models and pipeline that surfaces data to UKHC business intelligence tools, DevOps, electronic communication tools and other applications.
- Network and Security
  - Configuring and implementing detail designs with the appropriate network and security policies and in accordance with UK ITS and UKHC IT approvals. Ensure data is protected at rest and in-transit among all channels including cloud and on premise.



- Integration with identify management and access controls and UKHC approved security best practices that includes but not limited to; encryption, role-based access, multifactor authentication, enabling single sign-on, password management, active monitoring and alerts for suspicious activities.
- Integrate the required network configurations as approved by UKHC that enables secure resource access, cross-premise connectivity, device connectivity, virtual networks, gateway and firewall policies
- Integration of Azure Services with UKHC Active Directory
- Azure Configuration
  - Configure and integrate the required Azure services and other UKHC assets to cohesively deliver the capabilities and functionalities required of the UKHC modern enterprise data platform.
  - Configure Azure services in accordance with cloud best practices and well-architected principles that implements healthcare analytical capabilities such as; Precision Medicine, Genomics Pipeline, Predicting hospital metrics (ex. readmissions, patient-flow, throughput, length of stay), population health, imaging analytics
- Implement a modernize UKHC Health Data Trust
  - Design, configure and implement a Health Data Exchange trust that securely shares and integrates data across a consortium of partner entities in support of advance research and self-service.

**C. Implement in accordance with established Best Practices and Azure Well-Architected Framework**

- Implement the activities, structures, processes and tools to effectively monitor and govern the support and extension of the UKHC LDW.
- Leverage design principles that delivers a solution that is scalable, resilient and manageable by designing for; self-healing, redundancy, scale, operations, manages services, optimal storage, evolution, minimal dependencies, a justified business requirement.
- Implement the modernization in accordance with established best practices and the Azure Well-Architected Framework;
  - Reliability (The ability of a system to recover from failures and continue to function).
  - Security (Protecting applications and data from threats. Access to data assets controlled such that it is restricted to whom it is intended and only used as intended).
  - Cost Optimization (Managing costs to maximize the value delivered).
  - Operational Excellence (Operations processes that keep a system running in production. Providing the training and knowledge transfer efficiently enhance, and modify the system as required without risk of unforeseen system outage).
  - Performance Efficiency (The ability of a system to adapt to changes in load).

- Leverage the best design and implementation patterns that encompasses factors such as consistency and coherence in component design and deployment, maintainability to simplify administration and development, and reusability to allow components and subsystems to be used in other applications and in other scenarios. Ensure that the design and implementation patterns are optimized high quality outcomes and minimizes the total cost of ownership of cloud hosted LDW.
- Establish and adhere to an UKHC approved development life-cycle which includes; version control, testing, validation and change management.
- Build the catalog, and required process, activities and governance that ensures the catalog is maintained, accessible and accurate.
- Assess and optimize workloads for performance, cost and service selection

**D. Operational Budgets and Cost of Ownership tracking**

- Build, deploy and expose tools for forecast and monitor the operational cost of the modern UKHC enterprise data platform and cost of ownership. This includes implementing the ability to monitor, set usage threshold alerts and other mechanisms to control operational cost.

**E. Data and Process Migration**

- Analyze and discover the cohort of current data assets and migrate or replace with Azure services (ex. IBM DataStage ETL jobs converted to Azure Data Factory pipelines, Netezza DB to Azure SQL or Azure Data Lake Storage).
- Implement the conversion and validation of current data assets and processes with Azure Services.

**F. Operational Management and Monitoring**

- Build, deploy controls to manipulate and visualize operational events and processes that enables proactive and aided responsive resolution of operational and application issues. This includes enabling alerts regarding operational errors and events that provide status on system health, processes, application issues as well as identifying anomalies including suspicious or undesirable events.

**G. Perform the Detail Design, Development and Validation of UKHC Azure-based LDW**

- Identify and perform the scope of work required modernize UKHC Enterprise Data Platform in accordance with UKHC LDW Architecture modernization roadmap and UKHC evolving needs. The system shall be performant, well-architected and advances UKHC analytical, self-service and research capabilities.
- Implement detailed design, configuration, development, cross-prem integration and validation of use-cases that meets and exceed UKHC stakeholders, Provider and Patient needs such as; Enterprise Balanced Scorecard, Throughput and Capacity Management, Population Health, Surgical Analysis, and ML Ops to optimize, hospital operations, finance, clinical care and patient outcomes.

## 7.2 **Optional Services**

- Deploy a data product management framework to optimize the value and services delivered from UKHC LDW

## **8.0 FINANCIAL OFFER SUMMARY**

Offerors are to provide a fixed price for the services offered.

### **8.1 Mandatory Services (Section 7.1)**

Please complete and attach Section 7.1 to provide support for your firm fixed price bid.

### **8.2 Optional Services (Section 7.2)**

Offerors must provide a bid on the optional services detailed in Section 7.2. The University shall, at its sole discretion, make the determination as to whether the optional service will be undertaken.

Please submit your bid on optional services by completing Section 7.2.

### **8.3 Alternate Pricing**

In addition to the above financial offer, the offeror may submit alternative financial proposals, however the information requested above must be supplied and will be used for proposal evaluation purposes.

#### **Additional Financial Commitment**

In addition to the financial offers, please propose a financial commitment to assist the University. Options may include a signing bonus, scholarships, internships, commitment to hire University Graduates or a (%) percentage rebate.