**Exhibit 1 - Scope of Work**

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1. Glossary of Terms

|  |  |
| --- | --- |
| **TERM** | **DEFINITION** |
| Acceptance or Accepted | Written documentation of the County’s determination that the Contractor's Work has been completed in accordance with the Contract. Acceptance as used herein does not constitute final Acceptance defined in the Contract terms and conditions. |
| Acceptance Criteria | Conditions that a User Story must satisfy in order to be accepted by the County. |
| API | Application Programming Interface |
| Azure DevOps | Microsoft Azure DevOps (ADO) is the SaaS tool used by the County to plan and track software development efforts. |
| Business Days | Monday through Friday, 7:00 a.m. to 5:00 p.m. Pacific Time, except for holidays observed by King County. (Calendar days are identified explicitly as such and are always presented in lower-case.) |
| Contractor | The selected contractor, as well as all of its representatives and subcontractors. |
| Critical Event | Any type of event that has a significant impact on the schedule of the Project, or impacts Production. |
| Day | A calendar day. |
| Defect Severity 1 | A defect that completely hampers or blocks a feature. An example would be that after going through a wizard, the UI just hangs. |
| Defect Severity 2 | Any Major feature implemented that is not meeting its requirements/use case(s), behaves differently than expected, and the impact causes partial disablement of a feature or wrong input/output, classified as Severity 2. |
| Defect Severity 3 | Any defect that does not have a direct impact on the functionality of the Solution. Any cosmetic defects including spelling mistakes or alignment issues or font casing can be classified under Severity 3. With the exception that all such Defects occurring within the public-facing portions of the Web Portals shall be deemed Severity 1 or Severity 2. |
| Critical Defect | Critical Defect applies to both Defect Severity 1 and Defect Severity 2. |
| Definition of Ready (DOR) | The criteria defined by a Scrum Team that allows a User Story to be moved from the product backlog into a Sprint. It should be immediately actionable because the Project Team must be able to determine what needs to be done and the amount of work required to complete the User Story. |
| Deliverables | Deliverables have a due date and are tangible, measurable, and specific. A deliverable satisfies a milestone or due date that is created and produced in the Contractor Project Work Plan. |
| Definition of Done (DOD) | A checklist of criteria indicating when a User Story or Feature is ready for release, e.g. “code complete and commented; test data created; unit and integration testing passed; release notes and design documents updated;” etc. |
| Cutover Rehearsal | A practice Go-Live to run through the Deployment and Cutover Plan with everyone on the team that will be actively involved in the Go-Live participating in the event. |
| Effective Date | Start date of the Project. |
| EH | Environmental Health - the branch of public health concerned with all aspects of the natural and built environment affecting human health. |
| EHS | PHSKC Environmental Health Services Division – The sponsor and customer for the project to build and deploy the Solution. |
| Epic | A very large User Story that cannot be delivered as defined within a single Sprint or is large enough that it can be split into smaller Features and User Stories. |
| Feature | A capability or enabler that is identified as a desired part of the Solution or provides a measurable increment of business value. A Feature is expressed as a collection of User Stories. |
| Fee-based Program | An EHS program that collects revenue from permit fees, inspection fees, civil penalties, and liens; and which operates solely or primarily with those funds, i.e. without General Fund allocations. |
| Final Acceptance | Final Acceptance occurs when all Deliverables and Milestones have been Accepted. |
| FIPS | Federal Information Processing Standards - Publicly announced standards developed by the United States federal government for use in computer systems by non-military government agencies and government contractors. |
| GIS | Geographic Information System. The GIS currently in use at King County is ArcGIS from ESRI. |
| Go-Live Date | The date when the Solution shall be fully implemented, as specified in the Scope of Work, for staff to begin using the Solution in its entirety, in Production. Also known as “Release to Production.” |
| Integration Environment | A stable testing environment provided for EHS partners to test interfaces and integrations. |
| Interface | Software that is either configured, customized, or developed by the Contractor or King County for transmitting Data between the Solution and other systems. |
| JSON | JavaScript Object Notation - A data interchange format |
| KCIT | King County Department of Information Technology |
| Legacy System(s) | All of the existing EHS work management environment, including the on-premise EC application, the ECR remote/mobile application, and the SQL Server database. |
| Milestone | A Milestone is a point in the development cycle of the Solution where a component is fully ready for deployment to Production. At the time of Milestone, all the Features assigned to the component have completed:   1. Full testing has been planned and executed), 2. All critical defects are closed, 3. Connectors and interfaces (if appropriate) are ready, 4. Training and documentation for end users has been delivered, 5. Technical support and help for end users is ready to be delivered, and 6. All code, configurations, and scripts are properly documented and checked-in. |
| Oracle EBS | Oracle E-Business Suite is the business application that maintains all financial transactions within King County. |
| PGP | Plumbing and Gas Piping – An EHS program within the CEH Section |
| PHSKC | Public Health – Seattle & King County is the County’s public health department, sharing jurisdictional authority with the City of Seattle. |
| Product Backlog | A prioritized and estimated list of all outstanding Solution requirements, defects, and other work items. |
| Product Owner | Person designated by EHS to represent EHS on the project. The Product Owner responsibilities will be performed by one or more designated individuals, as appropriate, to the work process following the principles of Scrum. The Product Owner(s) will be empowered to set direction during Sprint activities. In case of more than one Product Owner, one (1) will be designated as the primary decision maker or the boundaries of their authority will be established. |
| Production | The Solution or a component in active use by the County. |
| Provide | Furnish without additional charge (i.e. in scope). |
| Real-Time | Refers to an operation that happens in a short amount of time. |
| Release to Production (RTP) | The process by which components enter into Production. Also referred to as “Go-Live.” |
| RTP Event | After signed acceptance forms, the point in time when a Component is deployed to Production. |
| REST | **RE**presentational **S**tate **T**ransfer – A Web services architectural style that relies on a stateless, client-server, cacheable communications protocol. |
| SaaS | Software as a Service – A cloud-hosted, web-based platform solution for delivering Enterprise Resource Planning (ERP) and additional software functionality, along with ancillary services such as technical support, End User support, and system administration. |
| Scrum | An Agile method which utilizes a development process through Sprints with a cross-functional self-managed team, called a Scrum Team. A Scrum Team has the roles of a Product Owner, Scrum Master and Team Member. |
| Scrum Team | A cross-functional team that includes both County and Contractor resources with specific work objectives, working within the spirit of Scrum. |
| SOAP | Simple Object Access Protocol - A protocol for exchanging structured information in a decentralized, distributed Web services environment. |
| Solution | The Software, configuration, templates, reports, database, data, interfaces, website, and related functionality defined by this Statement of Work. |
| Sprint | A two- to three-week work cycle during which work is completed and made ready for County review and feedback. |
| System Administrator | A County user who is responsible for the upkeep, basic configuration, and reliable operation of the Solution in conjunction with the Contractor for the duration of the Project. |
| Training Environment | A place where a full copy of the Production Solution is available for Users to train on and learn about the Solution. |
| Training Scripts | Scripts that have suggestions on how to use the Solution. |
| UAT | User Acceptance Testing – A phase of the Solution testing process. During UAT, actual King County Solution Users test the Solution to make sure it correctly and completely handles required tasks in real-world scenarios, according to specifications. |
| User | Also “End User.” The person who actually uses or is intended to use a product or application. End Users typically do not possess the technical understanding or skill of the product designers. |
| User Story | A tool used to capture a description of a functional increment of value from a specific User’s perspective. A User Story (i) describes the type of user, (ii) determines what they want and why and (iii) has related Acceptance Criteria. Each User Story is expected to yield, once implemented, a contribution to the value of the overall Solution, irrespective of the order of implementation. |
| Web-based | Software used over the internet with a web browser. Other than the web browser, a web-based application does not require any client software to be downloaded, installed or upgraded locally. |

1. Introduction
   1. Overview
      1. Purpose

The Environmental Health Services Division of Public Health – Seattle & King County (“EHS”) seeks proposals for the procurement, implementation, and ongoing support of an enterprise work management solution that handles Environmental Health data, including Permitting, Inspection, Customer Data and Enforcement Management (the “Solution”), from a qualified and experienced professional consulting firm (the “Contractor”). The Solution shall be a highly configurable work management system incorporating inspection, permitting, and enforcement functionality that meets the needs of King County, Washington (the “County”).

* + 1. Problem

EHS has used a system called EnvisionConnect (the “Legacy System”) since 1998 to manage all its work; to serve as a system of record; and to operate as the back-end data source for a public-facing third-party online portal service. Typical ERP operating life cycles range from five (5) to ten (10) years; at twenty (20) years, the Legacy System is reaching the end of its useful life as business, customer, and technological requirements evolve. In 2014, the company acquiring the Legacy System decided to develop a different Environmental Health management software offering, ultimately ceasing new feature development, with sunset on the Legacy System product roadmap in coming years. Licensing, support, and operational costs for the on-premise solution continue to increase despite the product’s age and frozen feature set.

* + 1. Goal

The County’s goal is to replace this existing system with a more modern, supportable, adaptable, and highly usable work management/ERP Solution that supports EHS’s program operations and enables King County residents and businesses to submit all their environmental health applications online. The Solution shall be fully deployed, functional, and usable by customers no later than December 31, 2021.

* 1. Background
     1. King County Overview

The County is a multi-purpose government that provides regional services to all residents who live in Seattle and surrounding cities and unincorporated areas. It is composed of three (3) major branches: Executive, Judicial, and Legislative. The King County Executive is the elected executive officer of County government. The Metropolitan King County Council, the legislative branch of County government, adopts laws, sets policies, and holds final approval over the budget.

The County delivers services to a 2,200-square-mile area, ranking 11th in geographical size among Washington State’s thirty-nine (39) counties. The County ranks first in population in the State of Washington and is the financial, economic, and industrial center of the Pacific Northwest region. King County contains thirty-nine (39) incorporated cities, which collectively account for approximately eighty (80) percent of its population. The population in the 2010 census was 1,931,249 with 710,916 households and 420,151 families residing the in the County. The U.S. Census 2019 population estimate for King County was 2,252,782, which would rank as the 13th most populous county in the nation.

* + 1. Public Health – Seattle & King County, EHS Division Overview

Public Health is a King County Executive Branch department that works to protect and improve the health and well-being of the population in King County. It is one (1) of the largest metropolitan health departments in the United States with one thousand four hundred (1,400) employees. Environmental Health Services is one (1) of the six (6) divisions that compose Public Health.

King County Environmental Health Services Division (EHS) strives to prevent diseases and ensure safe and healthy environmental conditions throughout the County by promoting sanitation, safe food and water handling, and proper disposal of wastes and toxic substances.

EHS’s mission is to identify and sustain environmental conditions that promote health equity, healthy people, and communities in Seattle and King County. The division’s vision is to see healthy, safe, and vibrant communities that are free of health disparities based on race, gender, or economic status. Approximately one hundred thirty (130) EHS staff currently use the existing system.

The EHS division is made up of four (4) sections:

* Food and Facilities (F&F)
* Community Environmental Health (CEH)
* Community Toxics, Science & Policy (CTSP)
* Operations & Finance (OPS)

Additionally, EHS includes a Public Health Veterinarian.

* + - 1. Food and Facilities Section (F&F)

F&F is composed of two (2) programs: Food Protection and Water Recreation.

* + - * 1. a. The Food Protection program promotes and protects healthy communities by reducing illness and injury and covers the following:

Regulates food service establishments such as restaurants, mobile food vehicles, caterers, grocery stores, and school cafeterias.

Regulates beverage related business such as wine, beer and distilled tasting rooms.

Regulates farmer’s markets, temporary food booths, and feeding programs as needed.

Certify food workers/handlers and temporary food booth operators as needed.

Assures that new schools, public and private schools’ kindergarten through high school grade twelve (12), and private universities are built to the minimum standards.

* + - * 1. The Water Recreation program ensures the safety of semi-public and private water recreation facilities and covers the following:

Municipal pools and spas

Waterparks

Private club and athletic club pools and spas

Apartment/boarding home/condominium pools and spas

Hotel/motel pools and spas

Homeowners association pools and spas

Camp/RV/mobile home park pools and spas

Sorority/fraternity pools and spas

Splash pads

Float tanks

Beaches

* + - 1. Community Environmental Health Section (CEH)

CEH is composed of three (3) programs: Plumbing and Gas Piping Inspection (PGP); On-site Sewage System (OSS) Permitting ; and On-site Sewage System Operation and Maintenance (OSS O&M) and covers the following:

* + - * 1. PGP program reviews and approves plans and inspects installations of plumbing, gas piping, backflow and medical gas systems in Seattle, unincorporated King County, and two (2) other small jurisdictions.
        2. OSS Permitting Program reviews site designs (plans) for on-site wastewater treatment systems, most are complex designs, such as a membrane bioreactor treatment system. And the program permits OSS installations including new and replacement systems, and repairs. This program operates County-wide.
        3. The OSS O&M Program prevents illness outbreaks from sewage contamination, and covers the following:

Reviews Time of Sale inspections of OSS

Investigates surfacing sewage complaints and provides assistance to owners of failed OSS to ensure repair of systems

Certificates OSS installers, maintainers, and pumpers and provides annual truck inspections and certification renewals

Inventories and tracks OSS data for all OSS in the County (~85,000 systems)

Conducts water quality investigations to address fecal pollution of streams, beaches, and shellfish harvest areas.

Provides educational information to OSS owners

Tests, certifies annually, and ensures quality of work for OSS professionals including OSS septage pumping companies, individual pumpers, maintainers, and installers.

* + - 1. Community Toxics, Science & Policy Section (CTSP)

CTSP is composed of five (5) programs: Toxicologist; Solid Waste, Rodents and Zoonotics; Lead &Toxics (L&T); Hazardous and Waste Management Program (Haz Waste); and Healthy Community Planning and Partnerships (HCPP).

* + - * 1. Solid Waste, Rodents and Zoonotics program:

Regulates solid waste facilities and vehicles

Review and approve new biomedical waste technologies in addition to new waste process technologies

Regulate pet businesses

Investigates illegal dumping and rodent complaints and enforcement activities

Tracks inquiries and investigations related to zoonotic diseases

Performs sewer baiting activities in the City of Seattle limits which is integrated with Esri’s ArcGisOnline platform and real time data collection using the collector application.

* + - * 1. HCPP works to achieve public health through education and progressive enforcement strategies working in a collaborative way to ensure health and safety in public environments
        2. Lead & Toxics program Identifies and reduces exposure to toxic chemicals in King County and equitably increase life and years lived
        3. Hazardous Waste is a regional partnership established to protect public health and the environment, program services focus on prevention, policy and collection to reduce exposure risks to hazardous materials found at home and at work.
        4. The Toxicologist provides research and technical support to the division and the public.
      1. Operations Section:

The Operations Section includes the following three (3) programs: Financial Services, Code Enforcement, and Administrative Support. The Operations Section doesn’t contain any fee-based programs but provides operational support to all fee-based programs.

* + - * 1. The Financial Services program provides financial and budget management services.
        2. The Code Enforcement program provides compliance, legal, legislation, and policy support.
        3. The Administrative Support program provides human resources support; employee, community, and education engagement; permit processing; continuous improvement; and business and strategic planning.
    1. EHS Core Processes

The system should provide all the functionality required to manage the EHS core processes illustrated in Exhibit 3: Current and Future State Diagram and described in the following section.

Permitting applicants must be able to submit their applications online, in person, or via mail. Most applications involve completing a form, attaching documents, making a payment, and printing documents (application package and permit).

EHS staff must be able to use the Solution to document and record activities performed and time spent on tasks such as processing permits, plan reviews, service requests, etc.

* + - 1. Permitting – Food Service Establishments (FSE), Water Recreational Facilities (WRF), Solid Waste Facilities (SW), and Pet Businesses (Pets).

FSE, WRF, SW, and Pets permits are commonly referred to as annual permits in EHS as they must be renewed every year to continue operating.

The permitting process for the annual permits starts with a plan review application. Applicants, usually architects, submit their plan and all other required documents to be reviewed and approved by EHS plan reviewers who ensure that facilities are constructed to the minimum health code standards. Plan review can be applied for new construction (new), changes to existing permits (remodel), or changes to approved plan reviews (revision).

Plan review applicants must be able to submit their applications via the online Solution, complete the application form, attach required documents, make a payment, and print the application for their record.

For some plan review applications, plan reviewers need to verify that all required documents are submitted before applicants can make a payment.

Once a new construction plan review is approved, the permit applicant (which could be a different entity from the plan review applicant) will submit the permit application. Permit applicants shall be able to submit their permit application, complete the form, and pay the permit fee online. Owner and facility information shall be linked to the permit and stored in the Solution.

Plan reviewers shall use the Solution to record all activities they perform, and the time they spend on applications. Applicants pay a base fee when applying initially, which covers a certain number of plan review hours. If the actual plan review time exceeds the time covered by the base fee, applicants will pay the difference. Applicants shall be able to make the supplemental plan review payment online.

A plan reviewer shall use the Solution to perform a field pre-opening inspection before approving the permit application to make sure that the facility is constructed or remodeled according to the approved plan. Once the permit application is approved, the Solution shall generate a PDF of the permit in the Solution and send it to the permit owner or point of contact. Permit technicians will make sure that a designated employee is added to the permit in the Solution.

The designated employee/inspector shall use the Solution to perform and document routine inspections and provide educational visits to ensure that permits operate according to the health code. Inspectors must be able to capture their field and office activities and time using the Solution. Also, inspectors shall be able to use their program inspection checklist or list of violations while working remotely in the field to capture compliance status of permits. Once inspectors finish performing an inspection, they shall be able to capture the signature of the permit’s point of contact, and the Solution shall generate a PDF of the inspection report and email the report to the permit’s point of contact.

If violations are cited during inspections, inspectors may need to return subsequently to the inspected facility and verify that the violations have been corrected. Permits can be suspended depending on the type and frequency of violations. The annual programs have their own rules defining when a return inspection is needed and when to suspend a permit.

For restaurant inspection, the Solution shall enable remote inspectors in the field to calculate a placard grade, add the grade to the inspection report, and make the inspection result accessible to the public via the King County restaurants placard website. See Attachment D: Solution Requirements for the details of the placard grade calculation.

Return inspection and permit suspension affect restaurants’ placard grade; whenever a restaurant permit gets a return inspection or a suspension, the Solution shall recalculate the restaurant’s grade and update the restaurant’s placard in the Solution and the County’s restaurants placard website.

If an inspection is performed for a grocery store, mobile food vehicle, school kitchen, or catering operation, the inspection result shall be accessible to the public via the King County food establishments inspection result website.

In addition, inspection data for all food establishments including restaurants shall be made available to the public via the County’s open data source.

Table 1 shows new plan review and permit applications and activities performed on annual permits in 2019.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table 1 | FSE | WRF | SW | Pets |
| Plan Review Applications | 947 | 105 | 22 | 36 |
| Plan Review Activities | 5,161 | 876 | 481 | 287 |
| New Permits | 686 | 26 | 2 | 34 |
| Routine Inspections and Educational Visits | 20,411 | 2,471 | 155 | 488 |
| Violations Cited | 17,689 | 5,165 | 30 | 422 |
| Placarded FSE's | 8,693 | Na | Na | Na |

* + - 1. Permit Renewal – Food Service Establishments (FSE), Water Recreational Facilities (WRF), Solid Waste Facilities (SW) and Pet Businesses (Pets).

Annual permits need to be renewed every year to stay in operation. The renewal process starts with generating a renewal notice from the Solution. The Solution shall create renewal notices for all permits at once for a given program.

Permit holders shall be able to pay renewal fees and penalties online. For renewal payments mailed to the EHS offices, permit technicians shall be able to process them in batches using a bar code scanner.

If the renewal fee is not collected within a given period after the renewal notice date, the Solution shall add penalties and generate late fee notices. If permits are not still renewed after the last late fee notice, the Solution shall expire the permits and generate an expiration notice. Each program has its own rule as to when to add penalties on permits and when to expire them.

Permit technicians shall be able to print the renewal, late, and expiration notices from the Solution and mail them to the permit holders. Also, the Solution shall email the notices to the permit holders if they have an email address in the Solution’s database.

The permit and payment records shall reflect the renewal status, i.e. when renewal notices are sent, the permits shall show in the Solution that they are waiting to be renewed; and when payments are collected, the permits shall show that they are renewed and active for the coming year, for example.

Table 2 shows annual permits renewed, counts of penalties paid and permits expired in 2019.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table 2 | FSE | WRF | SW | Pets |
| Renewed | 12,447 | 1,816 | 72 | 508 |
| Penalties | 1,344 | 148 | - | 82 |
| Expired | 56 | 19 | - | 3 |

* + - 1. Change of Ownership and Permit Classification - Food Service Establishments (FSE), Water Recreational Facilities (WRF), Solid Waste Facilities (SW) and Pet Businesses (Pets).

Annual permits can be transferred to a new owner or have a different classification, which requires applicants to complete a form and make a payment. Applicants shall be able to submit change of ownership and permit classification applications online.

If remodeling is involved in or required for a change of ownership or permit classification application, a plan review application will be required.

If plan review is not required, the permit designated employee will perform field inspection using the Solution remotely before approving the change of ownership or permit classification to ensure that the permits continue to comply with the health codes.

Change of ownership affects the restaurant placard grade; therefore, the Solution shall recalculate the grade and update the restaurant's placard on the King County restaurants placard website whenever a change of ownership is approved for a restaurant.

Once the change of ownership is approved, all related records of the permit shall be transferred to the new owner while keeping the history.

Table 3 shows number of change of ownership and permit classification applications approved in 2019.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table 3 | FSE | WRF | SW | Pets |
| Change of Ownership | 724 | 4 | - | - |
| Change of permit classification | 18 | - | - | - |

* + - 1. Permitting - Temporary Food Events and Farmers Markets

Applicants shall be able to submit temporary event and farmers market permit applications online: complete application form, attach documents if applicable, make a payment, and print application package and permit.

The type of temporary food and farmers market permits that applicants need depends on the complexity of the food they plan to serve, the number of events they plan to operate in the year, and the number of operators serving at the same event.

If applicants plan to operate in more than one event, they can get multiple or unlimited permits and pay when applying for the first permit and get subsequent permits for free. Even though an additional payment is not required, applicants could pay a penalty if they fail to take out the subsequent permits a certain number of days before the event. The penalty amount depends on how late the applicants take out the permits.

For some applications, a certified operator is required; the Solution shall verify that applicants are certified before allowing them to submit applications.

Inspectors shall be able to use the Solution to capture field inspection and other activities they perform and the time they spend on temporary food events and farmers market permits.

For blanket permit type where multiple vendors operate in an event and one (1) coordinator takes out the permit, the initial payment covers only a certain number of hours. The Solution shall determine if additional time was spent on the permit beyond the base hours.

Table 4 Temporary food event and Farmers Market

|  |  |
| --- | --- |
| Table 4 | Temporary food event and Farmers Market |
| Permits | 2,902 |
| Activities performed | 3,721 |

* + - 1. Permitting - Plumbing and gas piping (PGP)

The PGP program issues plumbing, backflow, gas piping, and medical gas permits. Depending on the type of application, applicants will be required to submit their plan for a review and get approval before they obtain the permit.

Applicants, usually certified contractors, must be able to submit their applications online by completing an application form, attaching required documents, and making a payment. The Solution shall ask applicants a set of questions to determine if they need to submit their plans for review.

If a plan review is required, a plan reviewer must first verify that all necessary documents are submitted before the applicant can pay the plan review fee. If an application is incomplete, the applicant shall be notified and given the opportunity to add additional documents to the initial application, or to replace documents initially submitted.

Plan reviewers shall be able to use the Solution to record the activities they perform, and the time they spend on plan review applications. The Solution shall use the activity and time data entered by plan reviewers to determine if applicants must be charged for an extra plan review time. If there is any extra plan review charge, applicants shall be able to pay that online.

Once a plan review is approved, and all plan review payments are made, applicants shall be able to pay and receive their permits online or in person.

Plumbing and gas permits can be extended if they expire before the installation work ends, and fixtures or outlets can be added to issued permits. Applicants shall be able to submit extensions or add fixtures/outlets to issued permits online.

There are different levels of inspection a PGP permit shall go through before the plumbing or gas system is fully installed and covered. Applicants shall be able to request those inspections online or over the phone. The inspection requests shall appear on the inspectors' to-do list for the day; as an inspection request is fulfilled, it shall drop off from the to-do list. Historical data pertaining to inspection requests shall be stored in the Solution so that PGP program staff can retrieve data on inspections fulfilled.

Table 5 shows PGP permits issued in 2019.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table 5 | Plumbing | Backflow | Gas piping | Medical Gas |
| Permits | 5,996 | 1,235 | 4,525 | 38 |
| Inspections | 20,427 | 1,340 | 7,214 | 103 |

* + - 1. Permitting - On-site Sewage System (OSS) Permitting

The OSS permitting process starts with a site design application which can only be submitted by an OSS designer. Inspectors perform office and field reviews to ensure that septic designs meet the health code requirements, and that the proposed sites are appropriate for an OSS. Designers shall be able to use the Solution to submit new applications—as well as revised site designs, if they want to make changes to the approved site plan—online, using the Solution.

Subdivision pre-application report, Final subdivision, Boundary line adjustment, Building remodel, Repair proposal, Winter water review, Private well source site, and Accessory dwelling unit with kitchen permits all have similar application and review processes as the OSS site design application.

Once the site design is final, an OSS installer shall get a permit to install the OSS. Inspectors shall perform office review and go out in the field to inspect the septic system, mainly conduct a pressure test. The installer then submits an as-built drawing, which requires a Public Health approval. OSS installers shall be able to submit permit applications and as-built drawings online using the Solution.

Approved OSS documents shall be accessible to the public via the King County OSS as-built record website.

Table 6 shows OSS site design and permits issued in 2019.

|  |  |
| --- | --- |
| Table 6 | OSS |
| Site design | 827 |
| Permits | 592 |
| Subdivisions | 17 |
| Boundary line adjustment | 10 |
| Building remodel | 426 |
| Winter water | 47 |
| Private well source site application and Accessory dwelling unit with kitchen | 16 |
| Rainwater Catchment Hardship Determination | 4 |
| Repair proposal | 112 |
| Group B water system review | 1 |
| Water testing | 412 |

* + - 1. Permitting – OSS Operation and Maintenance (O&M)

When property owners acquire an OSS, they request educational materials from EHS to learn how to keep their system clean and safe.

King County has over eighty-five thousand (85,000) OSS. The O&M program staff will use the Solution to track the OSS and ensure that they are regularly inspected and maintained by OSS certified professionals. The Solution shall link all records related to a OSS with its record.

OSS professionals submit inspection reports and other documents via web-based management tools, OnlineRME and SkipThePaper. These shall migrate to the Solution so that they can be reviewed by EHS inspectors.

EHS inspectors must generate a reminder from the Solution to remind property owners to have their OSS inspected on regular basis. In high-risk areas, an EHS inspector will conduct an O&M sanitary survey to identify OSS failure and ensure that failed OSS are maintained.

When a OSS is demolished, the property owner needs to inform EHS by submitting a tank abandonment report.

Table 7 shows O&M data for 2019.

|  |  |
| --- | --- |
| Table 7 | O&M |
| Educational materials | 1,595 |
| O&M inspection reports | 1,750 |
| Sanitary Survey | 169 |
| Tank abandonment report | 137 |
| Property Transfer | 2,483 |
| Request to waive Title 13 | 33 |

* + - 1. Complaint and Enforcement Cases

Each program in EHS accepts and investigates complaints; for example, FSE for foodborne illnesses, O&M for septic tank operation failures, and SWRZD for facility complaints, illegal dumping and rats. If a complaint is received for a permit or facility, or an OSS that has a record in the EHS’s Solution, the complaint shall be linked to the record.

Inspectors investigate and confirm the issue and violation of health code, if there are any. They send notice of violation to the property owner to correct the violation. Inspectors follow up on the complaint until the issue is resolved.

If property owners/operators fail to correct the issue, they will get an Notice and Order; if property owner does not resolve the problem, they will be required to pay civil penalties and a lien will be added to the property.

The Solution shall allow EHS staff to process complaints and enforcements, generate standard letters (notice of violation and notice and order), and use investigation and enforcement related activities and time data to determine how much property owners need to pay to settle enforcement cases.

Table 8 shows complaints received by each program in 2019.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Table 8 | FSE | WRF | SW | Pets | OSS/O&M | Non-program specific |
| Complaints | 1,394 | 55 | 305 | 390 | 239 | 263 |

* + - 1. Certification Tracking

The Solution shall track and store professional certification information. Some applications in EHS require applicants to be certified by the state. EHS certifies Meat Cutters, Certified Booth Operators (CBO), OSS Installers, OSS Maintainers, and OSS Pumpers. The Solution shall track and store certification data about professionals certified by both EHS as well as the State of Washington, and submit applications to EHS.

Table 9 shows all active certifications that EHS has issued so far:

|  |  |
| --- | --- |
| Table 9 | Certification |
| Meat cutters | 205 |
| Certified Booth Operators (CBO) | 612 |
| OSS Installers | 368 |
| OSS Maintainers | 107 |
| OSS Pumpers | 981 |

* + 1. Current and Future State

This section describes the diagrams depicted in Exhibit 3: Current State and Future State Diagrams.

* + - 1. Current State

EHS’s current work management system uses the EnvisionConnect desktop application (EC), EnvisionConnect Remote application (ECR), and a third-party web portal to manage its permitting and inspection data. The EHS data resides in a County-hosted on-premise Microsoft SQL Server database.

Inspectors currently need to synchronize their ECR mobile application with EC manually, twice a day, to make sure that they use updated data in the field. Synchronization is crucial for the accuracy of restaurants placard grade calculation.

The EC database and the portal are connected to the King County GIS web service to look up property information by parcel number.

EHS currently uses CallXpress Interactive Voice Recognition (IVR) system to allow plumbing, backflow, gas piping, and medical gas permit holders to request, cancel and confirm inspection requests. The IVR system is connected directly to the EC database.

The web portal is integrated with EC via an API. The portal has online services for some of the main applications that EHS processes. It also provides public access to the status of most applications submitted to EHS.

The portal connects to the County's payment engine API to redirect customers to enter payment information and process payments in the County's payment processor system.

The OnlineRME and SkipThePaper services send OSS O&M inspection reports and OSS certifications applications (new and renewal) data, respectively, to EC via the portal. They integrate with the portal via API.

Approved OSS site design documents are being transferred from the portal to a polling folder with an index file. The documents are then routed to the County’s Electronic Content Management System (ECMS) and accessed from the King County OSS documents page via the portal. This process works for OSS as-built documents; the only difference is that the as-built documents shall be scanned and uploaded manually to the polling folder.

Restaurant inspection results are transmitted from EC to the King County restaurants placard grade website. Inspection results for all food establishments (restaurants and non-restaurants) are sent to the King County food establishments inspection result website and the County’s open data hosting platform, Socrata.

* + - 1. Future State

The Solution shall include an internet-based enterprise work management application for managing the EHS workflows and data; it shall support synchronous and asynchronous data exchange with remote and mobile Users in the field; and it shall include a public-facing portal for accessing online services, permit status updates, and inspection results.

The Solution shall utilize a cloud-based platform, hosted either on vendor-managed infrastructure or in the County’s Azure Government cloud.

In addition to the services, data feeds, and interfaces shown to be integrated with the current state Legacy System, the Solution shall also integrate with the following systems:

* + - * 1. The County’s Active Directory infrastructure to permit EHS Users to log in to the Solution and other systems using a single username and password
        2. The County’s Department of Local Services Permitting Division (DLS) and City of Seattle Department of Construction and Inspections (SDCI) to exchange selected permitting data, metadata, and artifacts
        3. The County’s Oracle EBS Financials General Ledger module to post revenue data from the various EHS programs
        4. CallXpress (call center/IVR). There shall be no need to integrate this system if the Solution provides telephone scheduling functionality.
        5. Point-and-Pay or King County eCommerce to process payments. If the Contractor has a storefront that allows cart management and data exchange, the Solution shall be integrated directly with Point and Pay. Otherwise, the Solution shall be integrated indirectly with Point and Pay via the King County eCommerce storefront.
  1. Objectives

Upon implementation, the Solution shall meet the following objectives:

* + 1. Replace an obsolescent on-premise system with a modern user-friendly cloud-hosted Solution based on more contemporary and easily supported technologies
    2. Improve EHS’s ability to implement process improvements with a highly configurable Solution that can scale and adapt depending on business needs
    3. Automate data upload from mobile/remote devices:
       1. Automated synchronization of inspection reports and other data when internet connectivity exists
       2. Queuing of inspection reports and other data while offline, with automatic synchronization once internet connectivity is reestablished
    4. Make legacy system data specified by the County available for search and query in the Solution
    5. Improve and enhance data sharing with EHS partners
    6. Successfully implement the Solution with minimal stress and disruption to Users and business operations
    7. Provide a Solution that does not require a high level of IT support to maintain
    8. Effect successful knowledge transfer, through training and documentation, to EHS staff
    9. Provide a long-term maintenance and support for the Solution
    10. Provide ready access to near and/or real-time data and reports
    11. Automate data input processes
    12. Reduce paper-based processes, documentation, and tracking, and streamline business workflows
    13. Improve accuracy using automated functions thereby reducing the number of corrections needed and potential resulting liability
    14. Improve query and reporting capabilities, and provide accurate data and dashboards
        1. Provide audit functionality for all transactions and User activity
  1. Scope

The Contractor shall install and configure (and, if necessary, customize and or develop) the Solution to meet the requirements of the County, including but not limited to a cloud-hosted application for storing and managing EHS data; client software to support synchronous and asynchronous connectivity for remote and mobile End Users; and a web portal for the public to use to access online services. County staff shall be included in the development and configuration process to facilitate knowledge transfer and iterative refinement.

The County strongly prefers a subscription-based Contractor-managed cloud-hosted SaaS for the application and portal, but will consider options hosted in the County’s Azure Government Cloud subscription. Both the web portal and client software shall synchronize data with the cloud-hosted application automatically. The client software shall also enable asynchronous data exchange with the cloud-hosted application, to support scenarios in which remote Users such as inspectors submit reports offline, with synchronization occurring automatically as soon as connectivity is re-established.

The Contractor shall convert and migrate required data from the Legacy System to the Solution, configure or create interfaces for the Solution, and facilitate data exchange sufficient to meet the business, functional, and technical requirements as stated herein, and as further stated in all Attachments and Exhibits.

Prior to Go-Live, the Contractor shall provide training and change management assistance to County End Users. Following Go-Live, the Contractor shall provide technical and End User support services for the Solution.

This Scope section introduces the EHS Solution requirements at a high level. The requirements and User Stories documented in Attachments D and C may need to be updated based on alterations to business processes; this may occur due to the Contractor’s suggested process improvements or the County’s suggestions. The changes shall still meet the final business needs of the End User and comply with County regulations.

* + 1. The County is interested in a close partnership with the Contractor that leverages Contractor’s expertise with other successful implementations of similar solutions, in order to deliver a modern and highly configurable system that shall transform current business processes and enable better services for the public. Contractor shall provide recommendations and advice as a part of this engagement, including, but not limited to, design and implementation techniques and strategies to be used by Contractor.
    2. The Contractor shall provide implementation services to create the Solution per the County’s requirements, and successfully complete the Work outlined in the Scope. This includes, but is not limited to, configuration, custom software development, reports, document templates, forms, data conversion and migration, interface development, testing, documentation, training, Go-Live, and post Go-Live support. The Project Kick-Off shall occur no later than one (1) week after full contract execution.
    3. The Contractor shall install three (3) instances of the Solution for the County: a Test/Integration Environment, a Training Environment, and a Production Environment.
    4. The Services in this Scope shall be deemed complete when the Contractor receives Final Acceptance by the County. Final Acceptance as defined in Section 4.2.C shall occur no later than eighteen (18) months after Effective Date unless the Contract is otherwise amended.
    5. As of May 2020, the EHS Plumbing and Gas Piping program (PGP) is exploring the feasibility of hosting its permitting, inspection, and enforcement work management functionality in a separate partner-hosted environment. While PGP solution requirements remain part of the Scope of this Project, the County reserves the right to not include as part of the actual project.

1. Functional Requirements

This section provides a high-level description of the functional requirements for the Solution. The Solution shall meet all requirements listed in Attachment D: Solution Requirements. The functional requirements are organized by the main purposes of the Solution.

* 1. Permit Applications and Inquiries
     1. The Solution shall process all identified permit applications and inquiries that EHS receives from the King County residents and businesses. Sample EHS application forms can be found in Exhibit 6: Sample Application Forms.

The Solution shall enable EHS staff to perform the following activities:

* + - 1. Enter, store, and update all identified applications, complaints, and enforcement cases.
      2. Manage payment or financial transactions data in the Solution.
      3. Generate PDFs of permits, invoices, letters, and notices that EHS staff can print and give to applicants or property owners.
  1. Permit Renewals and Enforcement
     1. The Solution shall support renewal processing and enforcement of annual and seasonal permits.
        1. Permit Renewals
           1. The Solution shall generate renewal notices and forms, and transmit them by email to permit holders.
           2. EHS staff shall be able to print renewal notices from the Solution in order to mail them to permit holders.
           3. EHS staff shall be able to process payments in batch using a bar code or other scanning tool.
           4. Permits in the Solution shall display their renewal status.
        2. Permit Expirations and Penalties
           1. The Solution shall add penalties to unpaid permits and expire permits based on EHS’s rules.
           2. The Solution shall generate expiration and penalty notices, and transmit them by email to permit holders.
           3. EHS staff shall be able to print the expiration and penalty notices from the Solution and mail them to permit holders.
  2. Online Portal
     1. The Solution shall have an online public-facing portal to support the following activities:
        1. Applicants shall be able to:
           1. Submit all identified applications and inquiries online. Ability to make changes to submitted applications.
           2. Use the online portal to pay for their applications, renewal or additional service charges
           3. Print a copy of the applications they submitted for their records
           4. View status of application
           5. Print issued permits online
        2. The online portal shall provide access to web Users:
           1. Users are able to register and access the online portal.
           2. For Users who submit applications that require a valid certification, the Solution shall check their certification status before allowing them to submit the application and notify them a few days before their certification expires.
           3. Online portal has a mobile interface.
        3. The online portal shall provide a dashboard for Users to see details and current status of all the applications they have submitted as well as any open invoices.
        4. Non-licensed Users and the general public shall have the ability to view permit application status, inspection results, and other relevant data.
  3. Inspection Scheduling (PGP) via Online and IVR
     1. Applicants shall be able to perform the following activities:
        1. Request and cancel inspections via the online portal and an Interactive Voice Response system
        2. Receive a confirmation when their inspection is scheduled, via text, phone call, and/or email
        3. View an online list of scheduled inspections
        4. The system shall store historical inspection requests and fulfillment information.
  4. Remote Activity and Time Recording
     1. The Solution shall permit EHS staff in the field to manage inspections and other activities, and to record time and activity data.
        1. EHS staff shall be able to access the Solution remotely to perform field work, create and upload data (such as inspection reports), and record time spent on activities. Inspectors shall be able to complete the following tasks using the Solution remotely:
           1. Document compliance status using a checklist or violation list
           2. Record measured observations
           3. Use their program’s list of standard comments to document their notes
           4. Record applicant’s signature electronically
           5. Generate field inspection reports regardless of internet connectivity
           6. Send field inspection reports to the permit point of contact
        2. Remote client data shall automatically synchronize with the Solution
           1. If an inspector’s device is connected to the internet when the inspector submits a field report, the data shall be sent to the Solution immediately
           2. If an inspector’s device is not connected to the internet when the inspector submits the field report, the remote system shall save the inspection data and send it to the Solution immediately upon establishing internet connectivity
           3. Before an inspector performs a field inspection, the remote and internal components shall synchronize and the inspector shall be able to see the last synchronization date and time
  5. Restaurant Inspection Food Safety Placarding
     1. The Solution shall support the King County restaurant placarding process.
        1. The Solution shall enable remote/mobile inspectors in the field to determine the restaurant placard grade, following a routine inspection, whether or not their device is connected to the rest of the Solution.
           1. Each year, the King County restaurant placard team calculates new grade break sets by ZIP code which shall be updated in the Solution before the first restaurant inspection for the year.
           2. The Solution shall calculate the placard grade of a restaurant at the end of a routine inspection, based on EHS rules. The system shall generate the inspection report in the field, regardless of internet connection, with the calculated placard grade.
        2. The Solution shall make restaurant placard grades available via the County’s restaurants placard website
        3. The Solution shall transmit weekly and yearly inspection data to the team that calculates grade breaks.
        4. The Solution shall support the placard Quality Assurance (QA) and Quality Control (QC) process
           1. The Solution shall reject duplicate inspections as it affects the placard grade
           2. If there is any difference between the placard grade calculated in the field and placard grade posted on the King County website, the Solution shall display the discrepancies for EHS supervisors on a dashboard.
  6. Exchange Required Data Elements with DLS and SDCI
     1. The Solution shall exchange required data elements with the King County Department of Local Services – Permitting Division (DLS) and the City of Seattle Department of Construction and Inspections (SDCI).
  7. Search Queries, Reporting, and Dashboards
     1. Users shall be able to search records by simply entering a search value or using simple queries, and be able to create report using simple tools.
        1. Users shall be able to perform searches in the system by entering a search value
        2. The Solution shall allow Users to export, filter, group, sort search results and add or remove and freeze columns when viewing search results
        3. Users shall be able to search records using simple queries
        4. The Solution shall provide a simple and intuitive tool that Users can use to create customized reports
        5. The Solution shall provide all reports/dashboards listed under “Report/dashboard” feature in Attachment D: Solution Requirements.

1. Technical Requirements

This section describes some of the technical requirements for the Solution at a high level. Proposers shall refer to Attachment C: Technical Requirements and Questions to understand the technical requirements and context of this Project. Tab 1 of the Excel workbook lists technical requirements, and Tab 2 lists more open-ended technical questions. Detailed instructions for completing Tabs 1 and 2 are provided on “Tab 0 - Instructions.”

* 1. Technical Requirement Summary

Solution Components and Infrastructure: The Solution shall include an internet-based application for managing the EHS workflows and data, support for synchronous and asynchronous data exchange with remote and mobile Users in the field, and a public-facing portal for accessing online services. The Solution shall utilize a cloud-based platform, hosted either on vendor-managed infrastructure or in the County’s Azure Government cloud.

* + 1. Usability: The Solution shall operate and provide equivalent context and/or experience from desktop, laptop, and mobile devices and shall be fully functional and compatible with the County’s supported browsers:
       1. Desktop (Windows)
          1. Microsoft Internet Explorer v11 and higher
          2. Microsoft Edge Chromium v80 and higher
          3. Google Chrome
          4. Mozilla Firefox
       2. Mobile
          1. Google Chrome (Android)
          2. Apple Safari (iOS)
    2. Integration: The Solution shall integrate with the systems listed below, as illustrated in the future state diagram in Exhibit 3: EHS Current and Future State. The Solution shall integrate using standard / pre-existing APIs whenever possible and practical and use a secure communication protocol to exchange data.
       1. The Solution shall be integrated with the King County GIS system to allow property address and owner’s information lookup using a parcel number.
       2. If the Solution doesn’t provide a phone inspection scheduling functionality, the Solution shall be integrated with Callxpress
       3. The Solution shall be integrated directly or indirectly with Point and Pay to process payments. If the Contractor offers storefront that manages carts and allows invoice detail lookup and additional data exchange, the Solution shall be directly integrated with Point and Pay; otherwise the Solution shall be indirectly connected to Point and Pay via the King County eCommerce storefront.
       4. The Solution shall be integrated with the King County restaurants placard grade website to provide access to restaurants’ placard grade for the public
       5. The Solution shall be integrated with the King County Food Establishments Inspection Result website to provide public access to food establishments’ inspection result
       6. The Solution shall be integrated with the King County Open Data website to provide access to the food establishments inspection data for the public
       7. The Solution shall be integrated with OnlineRME to transfer inspection reports conducted by OSS professionals from OnlineRME to the Solution
       8. The Solution shall be integrated with SkipThePaper to transfer certification application and renewal data from SkipThePaper to the Solution
       9. The Solution shall be integrated with Oracle EBS financial to post revenue from the Solution to the County general ledger in EBS
       10. The Solution shall be integrated with Oracle PeopleSoft to transfer activities time data from the Solution to PeopleSoft to avoid double data entry
       11. The Solution shall be integrated with King County Department of Local Services (DLS) to exchange application status and approved documents between EHS and DLS
       12. The Solution shall be integrated with Seattle Department of Construction and Inspections (SDCI) to exchange application status and approved documents between EHS and SDCI
       13. Integration with King County IMap to allow the public view septic system information for properties with septic
       14. The Solution shall be integrated with Electronic Content Management System (ECMS) to transfer final records to the OSS As-Builts public-facing search page.
       15. Integration with Microsoft Exchange/Outlook Calendar to remind field inspectors through the Solution on inspections scheduled in Outlook Calendar
    3. Backup and Disaster Recovery: The Solution shall include backup and restore capabilities and tools, with data backups retained securely for at least 90 calendar days.
    4. Security: The Solution data and application shall be separated from other customers, shall comply with County password policy, and shall support the following IT security best practices:
       1. Role-Based Security: Access control based on the role a user plays in the organization.
       2. Least Privilege: Only authorize access to the minimum amount of resources and permissions required for a function.
       3. Separation of Duties: Functions shall be divided between staff members to reduce the threat that one person can commit fraud undetected.
    5. Auditability: The Solution shall maintain an audit log of events and activities including but not limited to Users and data exchange activities.
    6. Reporting and Dashboards:
       1. The Solution shall support the execution of complex reports without significantly impacting system performance.
       2. The Contractor shall provide industry-standard tools for creating and visualizing reports and dashboards, such as Tableau, Power BI, and ArcGIS Online.
       3. The Contractor shall develop dashboards and/or reports as defined during the discovery phase and shall ensure that custom dashboard and reports are not impacted during or by system upgrades.
       4. End Users should be able to add and configure reports and dashboards that are relevant to their work.
    7. Support:
       1. System Configuration: The Contractor shall configure and customize the system to meet all identified County requirements and provide tooling to be used by County System Administrators to configure the system for future needs.
       2. Software Environment: In addition to a Production runtime environment, the Contractor shall deliver to the County:
          1. A pre-production environment in which new patches, fixes, version updates, and interfaces can be tested, to ensure stability and functionality of all integrations
          2. A User training environment in which hands-on User training and knowledge sharing shall take place.
    8. Resiliency: During major upgrades, patch releases, and bug fixes, the Contractor shall ensure that all customized functionality remains unimpacted, especially interfaces and integrations. The Contractor shall provide the County a reasonable amount of non-Production testing time to test the system before any system upgrade. The Contactor and the County will discuss and agree on how much time prior to Go-Live
    9. Data Conversion and Migration: The Contractor shall evaluate, map, convert and migrate EHS’s identified Legacy System data into the Solution. A survey of tables from the existing current with the highest record counts can be found in Exhibit 4: Data to be Converted. Note that Exhibit 4 doesn’t necessarily reflect the final list of tables and records to be converted and migrated to the Solution.
  1. Technical Work Products
     1. Architecture Design and Technical Specifications Document
        1. The Contractor shall participate in architecture review sessions to present the conceptual design, proposed architecture, and final architecture to the County’s Architecture Review Team (ART).
        2. The Contractor shall develop an Architecture Design and Technical Specifications Document, identifying the planned architecture of the Solution in terms of software, platform, network, and database components. The Document includes:
           1. A diagram of the Solution’s high-level architecture including all identified interfaces and integrations
           2. Recommended remote/mobile client configuration
           3. Backup, recovery, and restoration strategy
           4. Application health monitoring and alerting
           5. Security and access management for County staff, partners, and the public
           6. Access to vendor’s description and schedule for maintenance (including outages and software patching schedule)
     2. Fit/Gap Analysis Report
        1. The Contractor shall conduct a Fit/Gap Analysis. The Contractor shall provide the County with a solid understanding of what the system can and cannot do “out of the box,” identifying what does not meet business requirements and requires configuration, modification, or workarounds.
        2. The Contractor shall suggest specific and actionable approaches for resolving apparent gaps and assist the County in finalizing resolutions. All Work required to implement specific resolutions using optimized workflows, configurations of code tables, business rules, system options, or product development shall be implemented at no additional cost to the County.
        3. The Contractor shall document the results of this analysis in the Fit/Gap Analysis Report. The Fit/Gap Analysis Report shall be submitted to the County within fifteen (15) Days after Contract Effective Date.
     3. Configuration Management and Implementation Plan
        1. The Contractor shall develop a Configuration Management and Implementation Plan that includes, at a minimum, the following:
           1. Methods used to manage the configuration process
           2. The progression of configuration values from initial prototyping through testing to Production
           3. Continuous Deployment/Continuous Integration (CI/CD) pipeline tools and processes to bring to bear, if any
           4. Sources of information
           5. Source code management
           6. Applying all upgrades and patches released by the Software provider
           7. Managing changes to configuration throughout the project lifecycle
           8. Release management
           9. Ensuring project deliverables, documents, and other documentation subject to change throughout the engineering lifecycle are updated to reflect configuration changes
           10. Ensuring that Work is not performed on out-of-scope features, functions, or tasks until the County grants authorization in writing
           11. Software change control procedures with procedures and/or automated tools shall be employed to ensure the integrity of programs and configuration settings developed to support the Solution
           12. Identification of proposed Solution processes and recommendations
           13. Solution Configuration to support the business requirements
           14. Feasibility assessment to determine the cutover approach: direct cutover, parallel operation, pilot operation, or phased operation with increments
        2. The Solution configuration includes but is not limited to:
           1. Screens and labels
           2. Lookup tables with standard values as defined by the County
           3. Business rules, workflows, events, notifications
           4. Reports development
           5. Dashboard development
        3. The Contractor shall document the Solution configuration.
        4. The Contractor shall complete the Configuration Management and Implementation Plan no later than 40 Days after the Effective Date or as otherwise agreed to.
     4. Interfaces and Data Exchange Plan
        1. As part of project scope, The Contractor shall provide an Interfaces & Data Exchange Plan that, at a minimum,
           1. Lists all required interfaces, integrations, and data exchanges
           2. Describes the Contractor’s interface and integration development process, health monitoring, configuration management, roles and responsibilities, prerequisites, and test methodology. This Plan shall be completed no later than twenty (20) Days after the Effective Date, and Accepted by the County prior to any Interfaces & Data Exchange configuration work commencing.
        2. As part of this Plan, The Contractor shall provide a detailed Interface Design Document for each integration illustrated in Exhibit 3: EHS Current and Future State. The Interface Design Documents shall be developed iteratively and shall include design information including, but not limited to:
           1. Process overview
           2. Summary of Solution configuration
           3. Metadata definition, including the data fields and record layouts required by the interface and source-to-target mapping
           4. Communication methods, protocols, and API definitions
           5. Business continuity and interface availability, including how failures shall be handled
           6. Other assumptions
     5. Data Conversion and Migration Plan
        1. The Contractor shall work with the County to evaluate, map, convert, and migrate EHS’s legacy data provided by the county into the Solution.
        2. The Contractor shall provide a Data Conversion and Migration Plan that describes the Contractor’s planned data conversion and migration methodology and tools. It should include the following at a minimum:
           1. source-to-target data mapping, conversion, and data transformation processes, as well as corresponding data maps
           2. types of data excluded from the migration process
           3. roles and responsibilities, and resources required
           4. data conversion/migration quality assurance process, review cycles, testing timelines, cutover and deployment process (including any planned coexistence), issue reporting process, exception handling, and rollback plan
        3. “Data Conversion” includes proper casing of strings, datetime format corrections, decomposition of smart coded fields and other required data cleansing transformations.
        4. The Contractor shall review with the County any data elements that do not fit into the Contractor’s database schema for the County’s determination on how to handle this data.
        5. This Plan shall be completed no later than twenty (20) Days after the Effective Date, and Accepted by the County prior to any Data Conversion and Migration work commencing.
     6. Test Plan
        1. The Contractor shall be responsible for developing an overall Test Plan, including the following types of testing:
           1. Unit
           2. Functional
           3. Regression
           4. Data Verification, including legacy data conversion and migration
           5. Performance/Load
           6. Functional
           7. Penetration and Vulnerability
           8. Database Backup & Restore
        2. The Test Plan shall include a structured and repeatable testing protocol that, at a minimum:
           1. Describes testing strategy, objectives, schedule, roles and responsibilities, and deliverables (including definition of pass/fail for each test and resulting actions)
           2. Explains the method of documenting the tests and the results for each test
           3. Supports the implementation schedule
           4. Employs automated testing tools, if feasible, to minimize the staff required to test the implementation of the Solution
           5. Enables testing processes that compare and reconcile the outcomes between the legacy systems and the Solution, where appropriate
           6. Supports an iterative development and testing approach
        3. The Test Plan shall be tailored to the County’s configuration of the Solution, considering workflows, data, templates, reporting, and interfaces.
        4. The Contractor shall be responsible for execution of the Test Plan with the County’s input and acceptance.
        5. The Contractor shall conduct backup and restore testing, if mutually determined to be feasible by the Contractor and King County.
        6. The Contractor shall perform testing prior to submitting a deliverable to the County for testing, and shall submit their test scripts and test results with each deliverable.
        7. The Contractor shall perform Unit Testing on converted and migrated data and resolve issues prior to County testing.
        8. The development team shall conduct Build Verification Testing (BVT) in parallel with more formal testing. BVT is a set of tests run on a new build at the end of each two (2) week iteration to verify that the build is testable before it is released to the County’s QA team for further testing. These test cases are core functionality test cases that ensure the Solution is stable and can be tested thoroughly.
        9. Performance and Load Testing shall be conducted. Load testing identifies the peak load conditions at which the Solution fails. Performance testing verifies that certain User actions do not exceed the performance requirements in Attachment C: Technical Requirements and Questions. The Contractor shall resolve any issues that are found from performance and load testing.
        10. The County expects to conduct Penetration Testing and Vulnerability Scanning. Penetration Testing will require participation by the Contractor to resolve issues identified during the testing.
        11. The County will lead and perform User Acceptance Testing (UAT) after the Contractor completes its final system testing and confirms that the applicable deliverable meets all applicable specifications. UAT shall start after all components of the Solution have been completed in accordance with the County requirements.
        12. The Contractor shall perform Implementation of the testing environments, data, and tools required. The test environments shall have the latest version of the software installed and maintain the latest version of the software for the duration of the project.
        13. The Contractor shall develop repeatable testing protocols and scripts. The number of test scripts shall be mutually agreed upon by the County and the Contractor. The County will determine the test data to be used with the test scripts. Specific test scripts and test script templates shall be developed to mirror the County’s future business processes utilizing the Solution.
        14. The Contractor shall troubleshoot and resolve in a timely manner all identified deficiencies discovered in this testing.
        15. The County will conduct at least one (1) round of UAT, for fifteen (15) continuous Business Days, and will report any defects to the Contractor for immediate correction. The Contractor shall fix these defects within ten (10) continuous Business Days after the initial 15-Day period. If any defects remain at the end of this period, the Contractor shall Provide a written plan to achieve Acceptance or to make corrections or replacements within a mutually agreed upon time period.

1. Deliverables
   1. Deliverable Schedule

In addition to the Solution itself, the Contractor shall complete the following deliverables. The Estimated Deliverable Schedule below is a high-level schedule and may not include all of the deliverables and dates that shall be required to complete the Project successfully.

* + 1. Estimated Deliverable Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Deliverable | Begin Date | End Date | Dependency/Notes |
| #1 | Architecture Design and Technical Specifications | Contract Negotiations | (Iterative) | See 3.2.A – Technical Deliverable Documents |
| #2 | Kick-off and Project Planning Meeting and Updated Contractor Project Work Plan | Contract Negotiations | 10 Days after Effective Date | See 7.3.A, 7.5.A, and 7.5.B – Project Management |
| #3 | Fit/Gap Analysis Report | N/A | 15 Days after Effective Date | See 3.2.B – Technical Deliverable Documents |
| #4 | Interfaces and Data Exchange Plan | N/A | 20 Days after Effective Date | See 3.2.D – Technical Deliverable Documents |
| #5 | Data Conversion & Migration Plan | N/A | 20 Days after Effective Date | See 3.2.E – Technical Deliverable Documents |
| #6 | Test Plan (make sure this includes scripts, Pass/Fail results) | N/A | 30 Days after Effective Date | See 3.2.F – Technical Deliverable Documents |
| #7 | Initial training for Subject Matter Experts, Developers, and Administrators | N/A | 40 Days after Effective Date | See 5.2.B – Training Plan Details |
| #8 | Configuration Management & Implementation Plan | N/A | 40 Days after Effective Date | See 3.2.C – Technical Deliverable Documents |
| #9 | Training Plan | N/A | 4 months prior to Training (#17) | See 5.2.A – Training Plan Details |
| #10 | Go-Live Plan | N/A | 4 months prior to Go-Live | See Section 6.2 – Go-Live Plan |
| #11 | Solution Configuration Complete | N/A | 4 months prior to Go-Live |  |
| #12 | Reports and Dashboards Configured | N/A | 4 months prior to Go-Live |  |
| #13 | Interfaces & Data Exchanges Configured | N/A | 6 months prior to Go-Live |  |
| #14 | Data Conversion & Migration Completed | N/A | 6 months prior to Go-Live |  |
| #15A | Solution Testing Completed | 6 months prior to Go-Live | (Iterative) |  |
| #15 | User Acceptance Testing Completed | 6 months prior to Go-Live | 3 months prior to Go-Live | Shall begin after #11 – 14 are complete |
| #16 | Execute Go-Live Readiness Assessment Checklist | 6 months prior to Go-Live | 6 weeks prior to Go-Live | See 6.2.A.2 |
| #17 | End-User Training | 3 months prior to Go-Live | Go-Live | Shall begin after #15 is complete |
| #18 | Deployment and Cutover Rehearsal | 2 months prior to Go-Live | 2 weeks prior to Go-Live | See 6.1.B – Deployment and Cutover Rehearsal  Shall begin after #15 is complete |
| #19 | Post-Rehearsal Readiness Assessment Completed | 6 weeks prior to Go-Live | 5 weeks prior to Go-Live | See 6.1.C – Post-Rehearsal Readiness Assessment |

* 1. Approval and Acceptance

The County will review contributions to the deliverables during regularly scheduled review meetings or via email. Each deliverable is considered complete upon meeting the Acceptance Criteria mutually set forth between the County and Contractor. Among other criteria, Acceptance shall be conditioned upon the resolution of all identified Severity 1 and Severity 2 Defects associated with a specific deliverable.

* + 1. Deliverable Acceptance Process
       1. Upon completion of a deliverable, the Contractor shall notify the County and the Acceptance process will commence. Acceptance shall be based upon closure of all Critical Defects, as well as the assumption that all plans and documentation shall be continue to be updated to account for changes until Go-Live.
       2. Upon receiving notice by the Contractor of completion of the deliverable, the County within ten (10) Business Days will either accept or reject the deliverable based upon meeting the Acceptance Criteria mutually set forth between the County and Contractor below.
       3. If the County rejects the deliverable, it will provide the Contractor with documentation of the specific grounds for the rejection, outlining items not in compliance with the deliverable guidelines. The Contractor shall have ten (10) Business Days to correct the items documented in the County’s notice of rejection, or to present a plan to correct them.
       4. Following delivery of the Contractor’s notice that the Work has been corrected, Testing and User Acceptance Testing will recommence. After completion of UAT, the County within ten (10) Business Days will either accept or reject the deliverable as described above.
       5. The Project schedule shall be adjusted accordingly in case a dispute regarding the method or accuracy of the correction causes a delay. If the Work fails to comply with the deliverable guidelines after the Contractor’s second attempt to correct the work, and no clear plan can be agreed upon between the County Project Manager and the Contractor’s Project Manager, the County will determine the appropriate corrective action(s).
    2. Deliverable Acceptance Criteria

|  |  |  |
| --- | --- | --- |
| No. | Project Deliverable | Acceptance Criteria |
| #1 | Architecture Design and Technical Specifications | 1. Delivered in electronic form 2. Satisfies all criteria listed in Section 3.2.A. 3. Design approved by KCIT Architecture Review Team, with all conditions satisfied 4. All subsequent changes prior to Go-Live are documented |
| #2 | Kick-off and Project Planning Meeting + Updated Contractor Project Work Plan | 1. Initial Contractor Project Work Plan delivered with Proposal as specified in Section 7.3.A; update provided within 10 Days of Effective Date as specified in Sections 7.5.A and 7.5.B; and includes at a minimum: 2. List of all scheduled Sprints/iterations with start and finish dates, if applicable 3. Milestones, tasks, durations, and estimated level of effort for each Sprint 4. Contractor resource assignments for each Sprint 5. County resource dependencies for each Sprint and deliverable 6. Other dependencies 7. Revised Architecture Document received 8. Kick-off and Project Planning Meeting held as specified in Section 7.5.B 9. All deliverable definitions have been reviewed and completed |
| #3 | Fit/Gap Analysis Report | 1. Delivered in electronic form 2. Satisfies all criteria listed in Section 3.2.B |
| #4 | Interfaces and Data Exchange Plan | * + - 1. Delivered in electronic form       2. Satisfies all criteria listed in Section 3.2.D |
| #5 | Data Conversion & Migration Plan | * + - 1. Delivered in electronic form       2. Satisfies all criteria listed in Section 3.2.E       3. All source data objects requiring conversion and migration identified and documented       4. Data mapping completed for identified data structures, including field mapping, value mapping, treatment of all exceptions, and record-/field-/document-level security if applicable       5. Up-to-date Data Dictionary for Solution       6. Conversion & migration schedule aligned with the process documented in Section 6.3 |
| #6 | Test Plan | * + - 1. Delivered in electronic form       2. Satisfies all criteria listed in Section 3.2.F |
| #7 | Initial training for Subject Matter Experts, Developers, and Administrators | 1. Satisfies all criteria listed in Section 5.2.B 2. Training delivered as specified in Training Plan |
| #8 | Configuration Management & Implementation Plan | * + - 1. Delivered in electronic form       2. Satisfies all criteria listed in Section 3.2.C |
| #9 | Training Plan | * + - 1. Delivered in electronic form       2. Satisfies all criteria listed in Section 5.2 |
| #10 | Go-Live Plan | * + - 1. Delivered in electronic form       2. Satisfies all criteria listed in Section 6.1 |
| #11 | Solution Configuration Complete | 1. Security configured for each role 2. System options, screens, navigations, fields, and labels have been configured 3. All required workflows, events, notifications, and business rules have been implemented 4. The code for workflows, events notifications, interfaces and integrations, mobile applications, and custom business rules has been reviewed and accepted by the County’s staff 5. All required configuration documented in the related Use Cases has been completed and conforms to the Acceptance Criteria attached to the Use Cases 6. All reported Critical (Severity 1 and Severity 2) defects for the Solution have been resolved |
| #12 | Reports and Dashboards Configured | 1. All Pre- and Post-Go-Live tests passed, documented by Contractor, and reviewed and Accepted by the County. |
| #13 | Interfaces & Data Exchanges Configured | 1. All the interfaces and integrations have been configured in the Production environment 2. Solution Architecture has been updated and accepted 3. Health monitoring has been configured for each interface 4. Each interface’s source code, configuration, test scripts, documentation and other artifacts are in the County’s source code management repository 5. Each interface can be configured by Solution Administrators |
| #14 | Data Conversion & Migration Completed | 1. All Pre- and Post-Go-Live tests passed, documented by Contractor, and reviewed and Accepted by the County. |
| #15A | Solution Testing Completed | 1. The Solution meets the technical requirements listed in Attachment C – Technical Requirements and Questions. 2. All tests were conducted, including quality assurance testing, on the application and Solution configuration (forms, templates, reports, security, business rules). 3. Data conversion testing with all data sources has been completed and all identified issues have been resolved.  Testing of converted data has been completed in all components of the Solution, including reports, forms, mobile clients, and interfaces. 4. All identified interfaces and data exchanges have been established and tested against specifications in the Interfaces and Data Exchange Plan. 5. Performance and load testing have been completed in the Production environment. 6. Security/penetration testing has been completed and no vulnerabilities have been found. 7. All source code for workflows, events, notifications, interfaces, and custom business rules has been commented and checked into the County’s source code management system and labeled with the release version. 8. Fundamental test scripts for automated system testing have been submitted and accepted by the County. 9. Contractor has configured and tested the integration of all the different interfaces. 10. Contractor has configured and tested the integration to the County’s Azure Active Directory, and the County has verified that the system enables County staff to login with their County AD accounts. 11. The County has completed thorough browser access to the application, document generation, printing, etc., and the Contractor has verified that the clients are operating correctly. 12. The mobile/remote Solution has been fully tested on the mobile devices used by the County. 13. The web portal has been fully tested, including for scalability. 14. All reported Critical Defects have been resolved. 15. The County has reviewed and accepted all Test Results. |
| #15b | User Acceptance Testing Completed | 1. Acceptance Criteria satisfied for all applicable User Stories. 2. Test Results reviewed and Accepted by the County. |
| #16 | Go-Live Readiness Assessment Checklist | 1. Delivered in electronic form 2. Satisfies all criteria listed in Section 6.1.B.2 3. Reviewed and Accepted by the County and the County’s external Project Quality Assurance consultant, if applicable |
| #17 | Training | 1. All training sessions have been delivered and completed by Contractor and Accepted by the County. 2. All training materials and documentation, including a runtime environment mirroring Production, have been provided. 3. System administrators have base knowledge in the use of the system, and have been trained on all aspects of system configuration. 4. Contractor’s trainers have been trained to conduct future training with new hires. 5. Technical support staff have received training/knowledge transfer on all aspects of the system. |
| #18 | Deployment and Cutover Rehearsal + Readiness Assessment Completed | 1. Deployment and Cutover Plan executed 2. Assessment completed 3. Documented issues and risks assessed 4. Contractor recommendations submitted to the County in electronic form 5. Recommendations accepted and incorporated into Go-Live Plan, or rejected, by the County |
| #19 | Go-Live | 1. The County has verified that all the requirements for the Solution have been implemented 2. All identified Severity 1 and Severity 2 Defects have been resolved 3. Post-Go-Live support is confirmed to be in place 4. The Solution is in Production use by the County 5. Required integrations and interfaces are in Production use by the County 6. All runtime environments have been updated to mirror the Production environment 7. The Architecture Design and Technical Specifications document has been updated to include the final configuration of the Solution 8. All the latest source code, workflow scripts, configurations, test scripts, and all other project artifacts have been checked into the County’s source control repository 9. All tests, including UAT, have been executed and completed successfully 10. There are no known open Defects 11. The training content has been completed and approved. 12. Training has been delivered to the appropriate audiences. |

* + 1. Final Acceptance Process

The County will begin the Final Acceptance Process as follows:

* + - 1. The Final Acceptance Process will commence upon the Go-Live Date.
      2. The Final Acceptance Process will include ninety (90) consecutive calendar days of operation of the Solution without a Critical Defect (as defined in the Glossary of Terms) in the County’s fully implemented Production environment. During this time, the County will require additional Testing and User Acceptance Testing of the full Solution.
      3. If the County Accepts the Solution, the County will send a notice of Final Acceptance to the Contractor.
      4. If the County determines that the Work is not Acceptable the County will notify the Contractor, describing the deficiencies.
      5. The Contractor shall Provide a detailed written plan either to achieve Final Acceptance or to make corrections or replacements within a mutually agreed upon time period.
      6. If during the ninety (90) calendar day period a Critical Defect is found within the last thirty (30) calendar days of the ninety (90) calendar day period, an additional thirty (30) calendar days shall be added to the ninety (90) calendar day period once the Critical Defect is closed. Two (2) or more thirty (30) calendar day operational Acceptance test periods can occur if mutually agreed to by the parties.
      7. If the County Accepts the Work following a second or subsequent Acceptance test, the County will send a notice of Final Acceptance to the Contractor.
      8. If the Contractor does not correct or replace the unacceptable Work, the County may declare a material breach of Contract.
    1. Dispute Escalation Process

If the provisions in Sections 4.2A and 4.2.C are insufficient to resolve disputes, the following escalation process will be used to resolve (1) disputes such as the County and Contractor are unable to agree as to whether or not a Change Request is necessary; and (2) Contract performance issues such as when a milestone date is missed or quality issues arise.

The standard escalation process for project dispute and issue resolution is as follows:

* + - 1. The County’s Project Manager (or designee) will notify the Contractor Project Manager in writing of the dispute within five (5) Business Days upon learning of the issue.
      2. The County’s Project Manager (or designee), County’s Business Lead (or designee), and Contractor Project Manager will make a good-faith effort to settle the dispute or issue within two (2) Business Days.
      3. In the event the dispute is not resolved as set forth above within two (2) Business Days, the dispute will be forwarded, in writing, to EHS’s Deputy Director (or designee), KCIT’s Director of Business Advisory Services (or designee), and Contractor Executive Account Manager. These representatives shall make a good faith attempt to settle the dispute or issue within five (5) Business Days.
      4. Should the dispute not be resolved by EHS’s Deputy Director, KCIT’s Director of Business Advisory Services, and Contractor Executive Account Manager within five (5) Business Days, it will be escalated in writing to EHS’s Division Director, the County’s Chief Information Officer and Contractor Executive Director. Such executives will attempt to settle the dispute or issue within five (5) Business Days.
      5. In the event the dispute or issue is not resolved as set forth above, the County and Contractor will follow Section 8, Claims and Appeals; Dispute Resolution, of the Contract terms and conditions.

1. Training and Documentation
   1. Training Overview
      1. The Contractor shall provide training services for all Solution functionality prior to Go-Live. These services include planning and coordination, development of training materials and tools, and delivery of training to EHS End Users and system administrators.
      2. EHS estimates that approximately one hundred and thirty (130) business users will require training. Some of those may hold special roles such as organizational Systems Administrator or “train the trainer” instructor.
      3. The County will also require public-facing instructional content for online applicants and other portal Users.
   2. Training Plan
      1. The Contractor shall develop a Training Plan, which shall include at a minimum the following:
         1. Training Approach – the intended methodology for providing training (instructor-led training,classroom or remote, self-paced online training, train-the-trainer sessions)
         2. Training Audience – Which County staff groups will receive training, and when that training will occur
         3. The type of documentation for each staff group or training subject that shall be provided (hard-copy and soft-copy manuals, workbooks, facilitator/user guides, desk aids, etc.).
         4. The methodology for staff assessment during and after training, as well as any required follow-up training prior to Go-Live
         5. Learning Objectives and Curriculum
         6. Number and length of classes
      2. The Contractor shall provide initial technical training on all Solution components to the County’s System Administrators. This shall include training on the technical and functional features and controls of all the components that make up the Solution.
      3. The Contractor shall provide trainers to deliver onsite and online training on all Solution components. The Contractor shall begin conducting End User training after UAT is Accepted and at least three (3) months prior to Go-Live.
      4. The Contractor shall make available to the County all data files and (if necessary) software used for this effort. The County shall be granted the right to use, modify, reproduce, and distribute all training materials, without limitation, as it is deemed appropriate during and after project implementation. Documentation may include the following, for example:
         1. Instructor-led training materials to support classroom training
         2. Scenario-based facilitator and participant training guides
         3. An agenda/syllabus for each course
         4. Computer-based training and all associated electronic files
         5. Course evaluations and feedback templates
         6. Job-specific desk aids
         7. Online help
         8. Step-by-step process instructions
         9. General system administration
         10. Technical configuration
         11. Infrastructure administration
         12. Troubleshooting procedures
         13. Data Dictionary
         14. Web Services and/or API documentation
      5. The Contractor shall provide user guides and training scripts for the initial deployment, as well as updates for new software version releases. As changes occur to the Solution, the Contractor shall provide training scripts that support the changes. Release notes shall be provided to the County within thirty (30) calendar days after new functionality is announced; and the Contractor shall provide a call-in opportunity for the System Administrator to ask questions about new releases during the Project.
      6. The Contractor shall implement a process to refresh the training environment in a way that supports the Training Plan.
      7. The Contractor shall provide additional System Administrator training after Go-Live and User training are completed, to include at minimum Solution maintenance tables, reports, user access management, document template creation, and maintenance
      8. The Contractor shall customize training materials to accommodate varied EHS user roles as follows:
         1. Inspectors and plan reviewers
         2. Permit technicians
         3. Leads (“seniors”) and supervisors
         4. Program managers
         5. Public Health Administrative Services Supervisors (PHASSes)
   3. Training Topics
      1. End User Training Topics

End User training shall include, but is not limited to:

* + - 1. How to access the Solution
      2. Basic operational skills: navigation, menus, editing, and help features
      3. Business workflows, including but not limited to:
         1. Plan review
         2. New permits
         3. Permitting-related applications
         4. Permit renewal
         5. Field inspection
         6. Activity and time data recording
         7. Complaints
         8. Enforcement
      4. Searching & querying for records
      5. Generating reports and dashboards
      6. Sending and receiving messages, both within and outside of the Solution (e.g. triggering an email notification or inspection report to be sent to customers)
    1. System Administrator Training Topics

The Contractor shall conduct System Administrator training including but not limited to:

* + - 1. Administrative and configuration tasks including the following:
         1. Security and Access settings
         2. Managing security profiles
         3. Data management
         4. Creating and configuring new attributes
         5. Managing field labels and displayed/hidden fields
         6. Business event rules
         7. Global integration settings (emails, calendars, schedules)
         8. Managing workflows
         9. Notifications and alerts
         10. Form creation and configuration
         11. Data merge fields and formatting
      2. Problem determination and troubleshooting
      3. Database structure
      4. Creating and configuring custom queries, reports, and dashboards

1. Go-Live (Release to Production)
   1. Go-Live Plan
      1. The Contractor, with guidance from the County, shall develop a Go-Live Plan which shall be submitted to the County Project Manager at least four (4) months prior to Go-Live.
      2. The Go-Live Plan shall include at minimum:
         1. Deployment and Cutover Plan – an instructional (step by step) document used to deploy the Solution into the Production environment and complete the transition from the legacy work management system to the new Solution. The plan shall identify, at minimum, the resources assigned to each task, roles and responsibilities, and estimated activity durations.
         2. Prior to Go-Live, the Contractor shall conduct at least one rehearsal by executing the Deployment and Cutover Plan and simulating daily activity, in order to test & validate each process step and verify that business process flows, interfaces, integrations, and batch processes run correctly.
         3. Go-Live Readiness Assessment Checklist – the criteria used to conduct a comprehensive audit to validate that the Solution is ready for Go-Live. All Work affecting the deployment shall be identified in this checklist and the assessment will be used by the County to confirm the Work is complete.
         4. Rollback Plan – a detailed procedure document that explains when and how to undo a failed cutover and restore functionality to the legacy work management system. It specifies the criteria for when to use the rollback procedure, the approval path for deciding to roll back. The Rollback Plan shall be tested prior to Go-Live as part of rehearsal activities.
         5. Go-Live Support Plan – the roles and responsibilities of the Contractor’s and County’s resources that will provide support during the Go-Live period and thirty (30) calendar days after the Solution has been stabilized (identified Go-Live issues have been resolved). It establishes the process that will be used to resolve issues in a timely manner, including the escalation process, the levels of support, team contact information, and conference bridge information.
         6. Solution Maintenance and Support Plan – the plan for supporting and maintaining the Solution post-Go-Live.
   2. Go-Live Readiness Activities
      1. Deployment and Cutover Rehearsal

Prior to Go-Live, the Contractor shall conduct at least one (1) rehearsal, with support from County staff as needed, by executing the Deployment and Cutover Plan and simulating daily activity, in order to test & validate each process step and verify that business process flows, interfaces, integrations, and batch processes run correctly. The Contractor shall provide support staff onsite for the rehearsal exercise.

* + 1. Post-Rehearsal Readiness Assessment

The Contractor and County shall conduct a readiness assessment after the rehearsal exercise. The Contractor and the County shall discuss identified open items and their potential impact on Go-Live without resolution. The Contractor, with County input, shall prepare a Readiness Assessment that will assess all risks affecting Go-Live, and provide recommendations to mitigate such risks.

Upon acceptance of the Contractor’s and County’s readiness assessments, the County will proceed with final Go-Live planning. During the Go-Live weekend, the Contractor shall execute the Deployment and Cutover Plan with the assistance of the County.

* + 1. Pre-Go-Live Updates and Patches

The Contractor shall apply all upgrades, fixes, and security patches to each of the County’s runtime environments prior to Go-Live. User Acceptance testing, rehearsal activities, and training shall occur using the most up-to-date version of the Solution.

* 1. Final Data Conversion and Migration Planning
     1. The final test data conversion for each data source shall be performed two (2) weeks before Go-Live to confirm that no new data mapping is needed and there are no unresolved issues.
     2. Based on the time needed to run the data conversion and migration and the availability of County staff, the County and Contractor will agree on the day and date on which the County will provide a final back-up of the Production data from the Legacy System before the Go-Live Date. At the agreed-to date and time, the County will provide the data extracts to the Contractor, and the Contractor shall perform the final data conversion.
     3. The Contractor shall load the converted data into the Production database by the mutually agreed-to number of days before the Go-Live Date. County staff will access the Solution to perform data checking, confirm a successful conversion, and notify the Contractor when the data check is complete.
  2. During and After Go-Live
     1. Go-Live and Moment-After Support
        1. The Contractor shall provide the support staff required for a successful Go-Live. The number of support staff onsite at locations designated by EHS for the Go-Live period will be mutually agreed upon by the County and Contractor.
        2. The County expects the resources to remain accessible if needed by the County for at least thirty (30) continuous calendar days after the Solution has been stabilized (identified Go-Live Defects and issues have been resolved). The Contractor shall track the status of all Go-Live Defects and issues until resolved and Accepted by the County. All Go-Live issues will be tracked in Azure DevOps. The number of days for Go-Live Support may be reduced based on the Go-Live status and mutual agreement between the County and Contractor.
        3. The Contractor’s technical support staff shall be available by phone and email during EHS operational staff hours, Monday through Friday, during Go-Live and for thirty (30) continuous calendar days after stabilization.
     2. Ongoing Support
        1. System support requirements shall include, at a minimum, phone, email, and online incident ticketing capabilities for availability, security, and other technical and/or system-wide issues.
        2. User support requirements shall include, at a minimum, self-help options either in-product or online, as well as telephonic and email support options during EHS business hours (8:00 AM – 5:00 PM Pacific Time).
        3. The County and the Contractor shall discuss and agree later in the Evaluation and Selection process on system and End User support terms and details, including the following:
           1. Service Level Agreements (SLAs)
           2. Problem determination and routing
           3. Escalation paths
           4. Contact methods and hours of availability

1. Project Management and Planning
   1. Project Management Methodology
      1. Overview

The Project shall utilize a combination of Waterfall and Agile methodologies. The Project follows the Waterfall methodology because it includes a specific time-boxed duration, a specific assigned budget, and has a defined set of requirements. The Project is also an Agile project because it follows an Agile Project Delivery process.

* + - 1. During the Detailed Design, Development, and Implementation phases, the County leverages Agile development tools and methods to provide steady incremental value, regular End User feedback, iterative refinement, transparency, and adaptability.
      2. Traditional project management methods and work products govern project scope, schedule, budget, risks, and resource management.
      3. The County’s own IT Delivery Framework provides additional technical and business governance through a series of quality gates at the end of each Waterfall project phase.
    1. Agile Project Delivery

The Contractor shall leverage an Agile Project Delivery process, including at minimum:

* + - 1. Participate in brief daily meetings per project delivery team to discuss what each team member—both Contractor and County—accomplished on the previous day, what they plan to accomplish that day, and any impediments to completing work assignments.
      2. The County will assign a Product Owner for the project delivery team, who will be responsible for backlog grooming, prioritization, defect triage, and system acceptance.
      3. Delivery of portions of the Solution for each project team in iterations of two (2) week increments, with demonstrations to the County project team at the end of each period.
      4. Quarterly demonstrations of the Solution to the Project Steering Committee and Partner Advisory Committee. Deliver the product in increments, which will allow for testing and User training.
      5. All the Solution Artifacts, including but not limited to all the different Project Plans, Features/Requirements, Use Cases, and Defects shall be tracked in the County’s instance of Azure DevOps.
  1. Contractor Roles and Responsibilities
     1. Contractor shall assign to the Project a Contractor Project Manager with authority sufficient to assure timely responses from all Contractor personnel, partners, and subcontractors; and whose resume and qualifications will be reviewed and approved by the County prior to his or her appointment as Contractor Project Manager. The approval process may include, at the County’s discretion, an interview with the proposed original and any replacement Contractor Project Manager. The County will not unreasonably delay or unreasonably deny approval of the Contractor Project Manager. The Contractor Project Manager shall be responsible for acting as a liaison with the County Project Manager.
        1. Contractor represents and warrants that the Contractor Project Manager shall be fully qualified to perform the tasks required of that position under this Contract. The Contractor Project Manager shall function as Contractor’s authorized representative for all management and administrative matters not inconsistent with the provisions contained herein. The Contractor Project Manager shall be able to make binding decisions and approve Change Orders for the Contractor.
        2. The Contractor Project Manager shall not be changed by the Contractor from the person proposed in the Proposal. The Contractor shall provide thirty (30) calendar days advance notice prior to the removal or replacement of the Contractor Project Manager. The Contractor shall submit a resume and obtain approval of the replacement Contractor Project Manager from the County, prior to his or her beginning work on the Project. Contractor shall temporarily fill the Contractor Project Manager within seven (7) calendar days of it being vacated and shall fill the position with a permanent fulltime replacement within thirty (30) calendar days of the Contractor Project Manager’s removal or departure.
        3. Any written commitment by the Contractor Project Manager and persons designated by him or her in writing for this purpose, within the scope of the Contract, shall be binding upon Contractor.
        4. The Contractor Project Manager shall be responsible for the oversight of all Contract-related activities performed by Contractor including, but not limited to:
           1. Acting as a liaison between Contractor and County
           2. Ensuring Contractor’s compliance with the terms of the Contract, including securing and coordinating necessary resources to ensure such compliance
           3. Receiving and responding to all inquiries and requests made by the County related to this Contract, in accordance with the time frames and formats specified by the County
           4. Ensuring that Contractor Staff shall be available to participate in County activities related to this Contract
           5. Identifying, highlighting, and effecting mitigations for risk.
     2. Contractor shall assign Key Staff for the project. Prior to the Effective Date, Contractor shall have provided to the County an organization chart of Contractor’s Staff, including names of Key Staff for the project and positions during the Project. Contractor shall also provide to the County job descriptions for Key Staff positions.
        1. Except in the case of a legally required leave of absence, sickness, death, termination of employment or unpaid leave of absence, Key Staff shall not be changed during the project from the people who were described in the Proposal and after Go-Live of the System without the prior approval from the County until completion for their assigned tasks, as described in the Contractor Project Work Plan. The Contractor shall provide fifteen (15) Business Days’ advance notice prior to the removal or replacement of any Key Staff. Contractor shall provide the County with a resume of any member of its Key Staff or Subcontractor’s Key Staff assigned to or proposed to be assigned to any aspect of the performance of this Contract prior to commencing any Services. Contractor shall temporarily fill the Key Staff position within five (5) Business Days of it being vacated and shall fill the position with a permanent fulltime replacement within ten (10) Business Days of the Key staff member’s removal or departure.
        2. All staff proposed by Contractor as replacements for other staff shall have comparable or greater skills for performing the activities as performed by the staff being replaced.
        3. Contractor assumes sole and full responsibility for its acts and the acts of its personnel. Contractor shall ensure that any transition to new Key Staff shall not affect the schedule or provision of Services.
     3. Contractor shall assign to the project a Contractor Executive Account Manager of a management level with sufficient authority to address Contractor’s ability to meet project schedule, handle potential changes in project scope or costs, and address Contractor resource needs or challenges. The Contractor Executive Account Manager shall be responsible for acting as a liaison with the County Project Business Owner and the County Chief Information Officer.
        1. The Contractor Executive Account Manager shall be fully qualified to perform the tasks required of that position. The Contractor Executive Account Manager shall have management authority over the Contractor Project Manager and other Contractor Key Staff. The Contractor Executive Account Manager shall be able to make binding decisions for the Contractor.
        2. The Contractor Executive Account Manager shall not be changed from the person proposed. The Contractor shall provide fifteen (15) Business Days’ advance notice prior to the removal or replacement of the Contractor Executive Account Manager. Contractor shall temporarily fill the Contractor Executive Account Manager position within five (5) calendar days of it being vacated and shall fill the position with a permanent fulltime replacement within ten (10) calendar days of the Contractor Executive Account Manager’s removal or departure.
        3. Any written commitment by the Contractor Executive Account Manager and persons designated by him or her in writing for this purpose, shall be binding upon Contractor.
     4. The County shall reserve the right to reject or remove any of the Contractor’s employees or Subcontractors (i) whose qualifications, do not meet the standards established by the County as necessary for the performance of the Services; or (ii) whom the County identifies as being unacceptable.
  2. Project Management Plans
     1. The Contractor shall deliver a Contractor Project Work Plan, using Microsoft Project, including but not limited to tasks, Deliverables, schedule, task dependencies, identification of resource requirements, and Critical Events.
        1. The Contractor shall submit a draft Contractor Project Work Plan, which details the proposed initial project schedule, in the Proposal to the County. An updated Work Plan shall be due ten (10) Business Days after the Effective Date. In the event of failure of the parties to agree upon the Work Plan and/or of the County to give its Acceptance thereof within thirty (30) calendar days of the Effective Date, the County may immediately terminate this Contract.
        2. The Contractor Project Work Plan shall be organized in a way that supports Agile Project Delivery as shown in Exhibit 7 – Sample Project Schedule (note: the heavily abridged sample plan demonstrates the target style; it does not reflect the required level of detail, accuracy, and completeness.)
        3. The Contractor Project Work Plan shall be complete and include at a minimum for each task/subtask, the following:
           1. Durations (no longer than ten (10) Business Days) and estimated level of effort (in hours)
           2. Estimated number and length of development iterations (Sprints)
           3. Baseline Start/Finish dates
           4. Actual Start/Finish dates
           5. Resource assignments
           6. Dependencies
        4. The schedule shall not change as a result of time required by Contractor to correct Defects, unless otherwise agreed beforehand in writing by the County. The schedule may be extended, however, in the County’s discretion, on a day-to-day basis to the extent that the County’s review of a Deliverable and review of corrections of Defects in accordance with the Acceptance process and Acceptance Test Plan is longer than described in the schedule.
        5. The County will control and maintain the Integrated Project Work Plan, the project’s master project plan. The Integrated Project Work Plan shall comprise the Contractor Project Work Plan. The Integrated Project Work Plan shall provide detailed information, in a Microsoft Project document, including but not limited to tasks, Deliverables, schedule, task dependencies, identification of resource requirements, and Critical Events. The Integrated Work Plan shall be inclusive of the mutual expectations and work to be performed by the County and Contractor in order to complete the Project successfully.
     2. The Contractor shall provide a Project Management Plan that includes the following:
        1. Proposed list of project phases/iterations, start/end dates, contingencies, milestones, resources, and deliverables to be reviewed and mutually agreed to by County and Contractor.
        2. Proposed estimate of hours and project team titles of County and Contractor personnel, to be reviewed and mutually agreed to by County and Contractor.
        3. Proposed division of labor between Contractor and King County resources, to be reviewed and mutually agreed to by County and Contractor.
        4. Communication Plan with Contact Information of Contractor staff assigned to the project
        5. Risk Management Plan, including the methodology for risk identification, tracking, and mitigation/contingency planning
        6. Issue Management Plan with methodology of issue identification, tracking, and resolution
        7. Change Management Plan used to manage the change process, and ensures control in budget, schedule, scope, communication, resources, customer readiness, impact assessment, stakeholder identification, performance measures and rewards, training, and executive support.
  3. Project Reporting
     1. Status Reports: The Contractor shall provide weekly written Status Reports to the County via email. The status reports shall include at a minimum:
        1. Key activities performed during the report period
        2. Key activities planned for the report period that did not occur and why they did not occur
        3. Key activities planned for the next report period (including any dependencies on County staff)
        4. Progress on Critical Events, if any
        5. Status of scope, schedule (including percentage of completion for tasks that are in progress), and budget
        6. Major issues affecting the project and activities underway to resolve issues
        7. Major risks affecting the project and activities underway to mitigate risks
        8. Decisions made during the report period
        9. Pending decisions and status of activities underway to get resolution.
     2. Status Meetings: The Contractor Project Manager shall conduct weekly status meetings with the County Project Manager to review and report status, resolve issues, and manage risks.
        1. The status meetings will be working meetings where the Contractor Project Manager and the County Project Manager work together to update the project schedule. The County Project Manager will determine the frequency and location of the status meetings, which shall be no less than weekly, but as often as daily, depending on the project phase or upon the County’s request.
        2. County Product Owner and/or Scrum Master may also attend and participate at the discretion of the County Project Manager.
     3. Monthly Project Steering Committee Meetings: Contractor shall participate and provide updates to the monthly Steering Committee meetings, either in person or remotely.
     4. External Project Quality Assurance Support: If the County engages third-party Project Quality Assurance (PQA) services for additional project oversight and risk management, the Contractor Project Manager shall cooperate with the County Project Manager to fulfill reasonable PQA requests for project oversight or process improvement support, such as attending meetings or complying with quality recommendations.
     5. Phase Gate Review Meetings: The Contractor shall participate in County phase gate processes and meetings as requested by the County Project Manager. More information about the phase gates is available in Exhibit 8 – KCIT Delivery Framework Phase Gates. The project is expected to be at or just past Gate 3 when the contract is awarded.
  4. Project Management Activities

The Contractor Project Manager shall track all progress against the approved Contractor Project Work Plan and shall report status to the County Project Manager according to the approved Contractor Project Work Plan.

* + 1. Proposed Contractor Project Work Plan Updates

Contractor shall provide proposed updates to the Contractor Project Work Plan regularly (no less than weekly) to the County Project Manager.

* + - 1. These updates shall occur throughout the Project to accurately reflect the status of activities, tasks, events, services, and projected schedule for such activities, tasks, events and services.
      2. Any such update changes shall be agreed upon by the County prior to incorporation into the Contractor Project Work Plan. However, unless otherwise specifically agreed to in writing, the County’s Acceptance of a change to the Contractor Project Work Plan will not relieve Contractor of liability for liquidated damages and other damages arising from such failures to perform its obligations as required herein.
      3. The Contractor Project Manager and County Project Manager will agree upon a process for recording, tracking, and managing project issues, risks, assigned actions, and pending decisions. Contractor Project Manager shall implement, manage, and execute issues and risk management procedures. Risk mitigation plans or acceptance of any risk shall be reviewed and approved by the County.
         1. Issue and Risk tracking typically utilize the County’s SharePoint site.
         2. Requirements and Defects are typically tracked in the County’s instance of Microsoft Azure DevOps.
      4. Approved Solution changes and modifications shall be added to the Contractor Project Work Plan after all such changes have been assessed for schedule and cost impacts by the project delivery team, and those impacts Accepted by the County.
      5. The Contractor shall submit an updated Contractor Project Work Plan within ten (10) Business Days after the Effective Date to establish the schedule baseline that will be used to track performance.
    1. Kick-off and Project Planning Meeting
       1. The Contractor shall conduct a multi-day, onsite Kick-off and Project Planning Meeting at the County’s location within ten (10) Business Days from Effective Date unless mutually agreed upon by the Contractor and the County. This shall include planning meetings to begin or update the development of the following deliverables: Architecture Design and Technical Specifications Document, Contractor Project Work Plan, Fit/Gap Analysis Report, Interfaces & Data Exchange Plan, Data Conversion & Migration Plan, Test Plan, Go-Live Plan, and the Training Plan.
    2. Project Timeline

1. OPTIONAL Future Services
   1. DLS Permitting and SDCI workflows

Incorporate DLS Permitting and SDCI workflows into the Solution, for the purpose of providing fully integrated application status tracking and/or processing workflow among EHS, DLS, and SDCI

* + 1. Workflow shall be built on the integrated online system for application processes in the three (3) agencies. When an application is approved by EHS, the system shall allow applicants to submit the next application to DLS or SDCI and the vice versa.
    2. Future EHS portal shall Integrate with the partners’ online system and provide one (1) system to accept applications from the three (3) agencies. The integration shall allow applicants to submit applications to the agencies in one (1) system, and the applications shall be distributed to the agencies' internal systems.
  1. Implement Open API support for custom integrations
     1. API integration supporting LiGO AVL (automatic vehicle location) for vehicle location data
     2. API integration for the County’s Oracle PeopleSoft ESS module to record staff time and avoid duplicative data entry
  2. Enable EHS to conduct virtual inspections with video capabilities
  3. Enable Deployment and Inspection Scheduling workflow support
     1. A deployment optimization workflow that assigns inspections and routes inspectors based on business requirements to ensure efficient deployment. The alternative is the ability to integrate with a 3rd party deployment software.
     2. The ability for the software to schedule inspections based on business rules or the ability to integrate with an external scheduling software platform. Ability of the software to create inspection queues based on business rules and assign those inspections to inspectors.Ability to create new modules in the platform for different functional programs and add additional business unit’s workflows. For example, adding on a hazardous waste work management system.
  4. Incorporate functionality to support Sewer Baiting activities for the Solid Waste, Rodents, and Zoonotics program