			Prescribed IES Technology Framework Components					
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Mobile App (Xamarin)**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Mobile Application	IES_HH_MCS_001	The system must have functionality to enable people with applying for and managing benefits using mobile devices. All features of the application available on desktops must be available through mobile devices.	X	[redacted]	No		[redacted]	x
Navigation	IES_HH_MCS_002	The system must have functionality that gives users clear sense of what users are able to see and do with the application.	X	[redacted]	No		[redacted]	x
Validation	IES_HH_MCS_003	The system must have functionality to ensure that the user provides necessary and properly formatted information needed to successfully complete an operation using mobile application.	X	[redacted]	Yes	[redacted]	[redacted]	x
Sorting/Filtering	IES_HH_MCS_004	The system must have functionality to improve application user experiences as they allow the users to sort through the content to quickly get what they are looking for using mobile devices	X	[redacted]	Yes	[redacted]	[redacted]	x
Calculations	IES_HH_MCS_005	The system must have functionality to perform calculations using functions and formulas on mobile application.	X	[redacted]	Yes	[redacted]	[redacted]	x
Voice to Text	IES_HH_MCS_006	The system must have speech recognition program that converts spoken to written language on mobile devices.	X	[redacted]	Yes	[redacted]	[redacted]	x
Worker Device	IES_HH_MCS_007	The System will allow for the request of or entry of data from "remote" (e.g., tablets), so long as security standards are met In compliance to the New York State Information Technology Standard: Bring Your Own Device (BYOD) NYS-S14-012	X	[redacted]	No		[redacted]	x

IES TECHNICAL REQUIREMENTS

Legend:

1. NYS technical Function: The technical functions as documented in the Target Technical Architecture to which the FRM requirements map to.
2. IES Req: The IES requirement number
   - IES_HH_BRS: Browser Services
   - IES_HH_RCS: Rich Client Services
   - IES_HH_MCS: Mobile Client Services
   - IES_HH_ECC: Enterprise Collaboration and Communication
   - IES_HH_WAS: Web Application Server Services
   - IES_HH_BID: BI and Data analytics Services
   - IES_HH_ECM: Enterprise Content Management (ECM)
   - IES_HH_BPM: Business Process Management Services
   - IES_HH_BRM: Business Rules Management Services
   - IES_HH_MRS: Messaging and Routing Services
   - IES_HH_DWR: Data Warehousing Services
   - IES_HH_CAS: Common Application Services
   - IES_HH_MDM: Master Data Management Services
   - IES_HH_SMS: Service Management Services
   - IES_HH_SPS: Security and Privacy Services
   - IES_HH_DTS: Data Services
   - IES_HH_IMS: Infrastructure Management Services
   - IES_HH_MNS: Monitoring services
   - IES_HH_SCS: Systems communication Services
3. Linked FRM requirements number: The column documents the requirements number of the FRM requirements that map to the rolled-up IES requirements
4. FRM Example: This column documents the related FRM requirement description for the linked FRM requirements.
5. IES Requirement: The IES requirement description.
6. Type: Depicts that these are technical requirements
7. Source: This column indicates the source of the requirement.

			Prescribed IES Technology Framework Components												
NYS Technical Function	IES REQ #	IES Requirement Description	Adobe E-Signature	IBM BAW	IBM ODM	Informatica MDM	Elastic Search	Verizon VCC	IES Portal(Liferay/Adobe Forms/Angular/OpenShift)	IBM Filenet	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Web Portal	IES_HH_BRS_001	The system must have one portal both for the public and the worker.							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_002	The system must be available through different browsers and different versions of the browsers, including (but not limited to): Google Chrome, Mozilla Firefox, Microsoft Edge, Microsoft Internet Explorer 11, and Apple Safari.							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_003	The system portal must comply with New York State Web Browser Support Standard NYS-S15-004 which requires the front end portal to be guided by the emerging W3C specifications providing cross platform/device compatibility.							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_004	The system must possess a fully responsive design.							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_005	The system must have a consistent, configurable look and feel.							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_006	The system must support the ability to capture and store a user language preference.							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_007	The system must support the ability for the user to set communication preferences (e.g., SMS, email, web portal).							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_008	The system must support the ability to start and complete applications in separate sessions or channels.							X		[redacted]	No		[redacted]	x
Web Accessibility including Section 508 compliance	IES_HH_BRS_009	The system must comply with New York State Enterprise IT Policy NYS-P08-005, Accessibility of Web-Based Information and Applications which requires that state agency web-based information and applications are accessible to persons with disabilities.							X		[redacted]	No		[redacted]	x

			Prescribed IES Technology Framework Components												
NYS Technical Function	IES REQ #	IES Requirement Description	Adobe E-Signature	IBM BAW	IBM ODM	Informatica MDM	Elastic Search	Verizon VCC	IES Portal(Liferay/Adobe Forms/Angular/OpenShift)	IBM Filenet	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Online Help	IES_HH_BRS_010	The system should provide online help capability through the integrated client portal							X		[redacted]	No		[redacted]	x
Pagination	IES_HH_BRS_011	The system must have capability to display limited number of results on search engine results pages to improve responsiveness.							X		[redacted]	No		[redacted]	x
Sorting/Filtering	IES_HH_BRS_012	The system must have capability to sort through content and filter content.							X		[redacted]	No		[redacted]	x
Front End Validations	IES_HH_BRS_013	The system must verify and validate data entered into the system using business rules, policy, etc			X				X		[redacted]	No		[redacted]	x
File Upload and Download	IES_HH_BRS_014	The system must have capability to upload and download files directly using web browser.							X	X	[redacted]	No		[redacted]	x
Usability	IES_HH_BRS_015	The system will speak the users' language, with words, phrases and concepts familiar to the user, rather than System-oriented terms e.g., drop down menus							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_016	The System will follow standardized conventions and limit the use of words, situations, or actions that have multiple meanings							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_017	The system will make all necessary data and possible actions visible to the user (e.g., there will be no need remember transaction codes).							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_018	The system cursor will automatically advance to the next logical input field when the maximum allowed numbers of characters have been entered for the keyed field or when the user presses the "Enter" or "Tab" key							X		[redacted]	No		[redacted]	x
	IES_HH_BRS_019	The system will notify the user when a source system is unavailable / inoperable and notify user that any available information about the subject being viewed is as of certain time and date							X		[redacted]	No			x
Archive	IES_HH_BRS_020	The system must have ability to archive and track electronic information		X						X	[redacted]	Yes	[redacted]	[redacted]	x
History	IES_HH_BRS_021	The system must have ability to store, maintain and retrieve historical electronic information.					X		X		[redacted]	Yes	[redacted]	[redacted]	x
Integrated Application	IES_HH_BRS_022	The new system should have capability to integrate application forms for all programs.		X					X		[redacted]	No		[redacted]	x
Intelligent Question Set	IES_HH_BRS_023	The system must be designed to utilize intelligent question sets that collects required data according to the program(s) /service (s) that the recipient applied for and the circumstances of the case.						X			[redacted]	No		[redacted]	x

			Prescribed IES Technology Framework Components												
NYS Technical Function	IES REQ #	IES Requirement Description	Adobe E-Signature	IBM BAW	IBM ODM	Informatica MDM	Elastic Search	Verizon VCC	IES Portal(Liferay/Adobe Forms/Angular/OpenShift)	IBM Filenet	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Search	IES_HH_BRS_024	The new system must provide the ability to quickly search for a case, or an individual within a case. Users also need the ability to customize their searches.		X			X		X	X	[redacted]	No		[redacted]	x
Federated Search	IES_HH_BRS_025	The system must support federated search that allows the simultaneous search of multiple searchable resources.					X		X	X	[redacted]	Yes	[redacted]		x
Duplicate	IES_HH_BRS_026	The system must not allow duplicate case records in the system. The system must inform worker(s) of the existence of possible name(s), address(es), sex, birth date(s) matches that would prevent/avoid/avert creation of duplicates				X					[redacted]	No		[redacted]	x
Language	IES_HH_BRS_027	The web portal must be accessible in six languages that are identified in the Executive Order 26 and Local Law 73						X	X		[redacted]	Yes	[redacted]	[redacted]	x
Electronic Case Files	IES_HH_BRS_028	The new system should provide workers/staff with electronic case files and the ability to customize files' organization; for all program areas.		X						X	[redacted]	No		[redacted]	x
Track Case Status	IES_HH_BRS_029	The new system should be able to monitor the progress and status of all cases and applications, documents associated to the case and/or applications, correspondences, etc.		X							[redacted]	No		[redacted]	x
Automated Notification	IES_HH_BRS_030	The system must have automated alerts and notification capability.		X							[redacted]	No		[redacted]	x
Capture Electronic Signature	IES_HH_BRS_031	The system must have electronic signatures capability in accordance with the Electronic Signatures and Records Act (ESRA) Guidelines	X								[redacted]	Yes	[redacted]		x

			Prescribed IES Technology Framework Components								
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Verizon VCC**	**IES Portal(Liferay/ Adobe/Angular/OpenShift)**	**Mobile App (Xamarin)**	**IBM Data Cap**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Omni-Channel Accesibility	IES_HH_RCS_001	The system must allow applicants/ clients access to application and/or case data through various channels such Web Portal, Kiosk, IVR, etc.	X	X	X		[redacted]	No		[redacted]	x
Scanning	IES_HH_RCS_002	The system must have functionality that allows users to scan documents into the system real-time				X	[redacted]	Yes	[redacted]	[redacted]	x
Chat	IES_HH_RCS_003	The system must provide online chat functionality to interact with worker regarding benefit delivery and case related information.	X				[redacted]	Yes	[redacted]		x
IVR/Telephony	IES_HH_RCS_004	The system must provide functionality to interact with worker through phone regarding benefit delivery and case related information.	X				[redacted]	Yes	[redacted]	[redacted]	x
Mobile Client services	IES_HH_RCS_005	The system must have functionality to enable people with applying for and manage benefits using mobile devices.			X		[redacted]	Yes	[redacted]	[redacted]	x

			Prescribed IES Technology Framework Components								
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Verizon VCC**	**IES Portal(Liferay/ Adobe/Angular/OpenShift)**	**Mobile App (Xamarin)**	**IBM Data Cap**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Contact-us	IES_HH_RCS_006	The system must provide a help desk (support) functionality that allows users to contact help desk staff through the web portal.	X				[redacted]	No		[redacted]	x

			Prescribed IES Technology Framework Components								
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Mulesoft**	**Verizon VCC**	**Quadient**	**IES Portal (Liferay/Adobe Forms/Angular/Opens**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Business Integration	IES_HH_ECC_001	The system must have functionality that facilitates transfer and synchronization of transaction data from one entity to another, and from one system to another, according to the business requirements.	X			X	[redacted]	No		[redacted]	x
Collaboration Tools	IES_HH_ECC_002	The system must have functionality that provides collaborative tools to help facilitate SSD's working together over geographic distances to aid communication, collaboration.		X		X	[redacted]	No		[redacted]	x
Communications Management	IES_HH_ECC_003	The system must have functionality that manages and tracks communications to both internal and external parties.			X	X	[redacted]	Yes		[redacted]	x

			Prescribed IES Technology Framework Components						
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**IES Portal(Liferay/Adobe Forms/Angular/OpenShift)**	**IBM BAW**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Session Management	IES_HH_WAS_001	The system must have functionality to keep track of a user's activity across sessions of interaction within the application.	X		[redacted]	No		[redacted]	x
Transaction Management	IES_HH_WAS_002	The system must have functionality to support and facilitate atomicity, consistency, isolation, and durability (ACID) of transactions with in the database, Middle ware, etc.	X	X	[redacted]	No		[redacted]	x

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Synapse**	**Cognos**	**Tableau**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Ad-Hoc Queries	IES_HH_BID_001	The system must have functionality to supports ad-hoc queries that are created to obtain information as the need arises.	X	X		[redacted]	No		[redacted]	X
	IES_HH_BID_002	The system must be able to collect all programmatic data to meet state and federal requirements, such as TANF and child care reporting requirements	X	X		[redacted]	No		[redacted]	X
	IES_HH_BID_003	The system must have ability for external individuals to access reports, such as involvements, benefit payments, and overpayment balance status	X	X		[redacted]	No		[redacted]	X
	IES_HH_BID_004	The system must retain reports for a prescribed period.	X	X		[redacted]	No		[redacted]	X
Canned Reports	IES_HH_BID_005	The system must have functionality for pre-defined reports in which clients define the requirement specification.		X		[redacted]	No		[redacted]	X
Complex Reporting	IES_HH_BID_006	The system must have functionality to enable many complex reporting functions.		X		[redacted]	No		[redacted]	X
Dashboards	IES_HH_BID_007	The system must have functionality that presents a range of different indicators on one page		X	X	[redacted]	No		[redacted]	X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Synapse**	**Cognos**	**Tableau**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Simple Reporting	IES_HH_BID_008	The system must have functionality that enables simple reporting functions.	X	X		[redacted]	No		[redacted]	X
Data Mining	IES_HH_BID_009	The system must have functionality that allows extracting data and transforming it into meaningful data for future use.	X			[redacted]	No			X
Statistical Analysis	IES_HH_BID_010	The system must have functionality that allows for analyzing the existing data for statistical purposes.	X		X	[redacted]	No			X
Visualization	IES_HH_BID_011	The system must have functionality that enables creation of visual and graphical images (charts, diagrams, graphs, etc.).			X	[redacted]	Yes	[redacted]		X

			Prescribed IES Technology Framework Components									
NYS Technical Function	IES REQ #	IES Requirement Description	IBM Data Cap	IBM BAW	IBM Filenet	IES Portal(Liferay/Adobe	IES Mobile App (Xamarin)	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Document Imaging	IES_HH_ECM_001	The system must provide the ability to image all documents in real-time	X		X			[redacted]	No		[redacted]	X
	IES_HH_ECM_002	The system must have capability to retain documents and images for seven years online			X			[redacted]	Yes	[redacted]	[redacted]	X
Document Management	IES_HH_ECM_003	The system must have functionality to support storing and tracking electronic documents or images of paper documents. It associates the electronic files with the entity to which they relate (e.g., person, case, provider, agency, etc.).			X			[redacted]	Yes	[redacted]	[redacted]	X
Document Workflow	IES_HH_ECM_004	The system must have document workflow capability that tracks documents from the point of imaging making document images available as soon as possible and avail document images though out the application flow.	X		X			[redacted]	Yes	[redacted]	[redacted]	X

			Prescribed IES Technology Framework Components									
NYS Technical Function	IES REQ #	IES Requirement Description	IBM Data Cap	IBM BAW	IBM Filenet	IES Portal(Liferay/Adobe	IES Mobile App (Xamarin)	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
	IES_HH_ECM_005	The system must provide for the capture of copies of mailed in applications to reduce delays in program participation.	X		X			[redacted]	Yes	[redacted]	[redacted]	X
Annotation Comments	IES_HH_ECM_006	The system must provide ability to annotate scanned images.			X			[redacted]	Yes	[redacted]		X
Immutability of Digital Files	IES_HH_ECM_007	The system must have functionality that guarantees the immutability of digital files			X			[redacted]	No		[redacted]	X
Image Capture	IES_HH_ECM_008	The system must have functionality that enables users to upload pictures from digital cameras or scanners which are either connected directly to the computer or the network.			X	X	X	[redacted]	Yes	[redacted]		X

			Prescribed IES Technology Framework Components									
NYS Technical Function	IES REQ #	IES Requirement Description	IBM Data Cap	IBM BAW	IBM Filenet	IES Portal(Liferay/Adobe	IES Mobile App (Xamarin)	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Link Management	IES_HH_ECM_009	The system must provide the ability to seamlessly integrate different components of the application with imaged documents for retrieval.			X			[redacted]	Yes	[redacted]	[redacted]	X
ECM Search	IES_HH_ECM_010	The system must have functionality for finding information and its associated contexts within an ECM system.			X			[redacted]	No		[redacted]	X
Taxonomy	IES_HH_ECM_011	The system must provide ability to Standardize state wide Indexing / Imaging of Documents so that all cases are indexed in the same manner.			X			[redacted]	No		[redacted]	X
Version control	IES_HH_ECM_012	The system must have ability to take the information used in the re-determination and recalculation process, but not overlay the existing historical record for the prior period(s).			X			[redacted]	Yes	[redacted]	[redacted]	X
	IES_HH_ECM_013	The system must have ability to create an additional record or records, representing any adjustment or adjustments to any clients' existing eligibility and benefit record maintained on the database.		X	X			[redacted]	Yes	[redacted]	[redacted]	X

			Prescribed IES Technology Framework Components								
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**IBM BAW**	**IBM ODM**	**Mulesoft**	**OpenShift**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Process Interfaces	IES_HH_BPM_001	The system must have functionality to link multiple processes.	X		X		[redacted]	No		[redacted]	X
Process Routing and Rules	IES_HH_BPM_002	The system must have functionality to model and control the workflow of activities as an end-to-end process in order to ultimately automate tasks as much as possible.	X	X	X		[redacted]	No		[redacted]	X
Process State Management	IES_HH_BPM_003	The system must have functionality to encompass the tracking of individual processes, so that information on their state can be easily seen, and statistics on the performance of one or more processes can be provided.	X				[redacted]	Yes	[redacted]	[redacted]	X

			Prescribed IES Technology Framework Components								
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**IBM BAW**	**IBM ODM**	**Mulesoft**	**OpenShift**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
User Role Management	IES_HH_BPM_004	The system must have functionality for the assessment the dynamic behavior of processes over time, i.e. the development of process and resource performance in reaction to changes or fluctuations of certain environment or system parameters.	X		X	X	[redacted]	Yes	[redacted]	[redacted]	X
Workflow Engine	IES_HH_BPM_005	The system must have functionality to enable users to access tasks in the universal work list (UWL) and to execute tasks within a BPM process.	X				[redacted]	No		[redacted]	X
Workflow Engine	IES_HH_BPM_006	The system must have the capability for systematic reconciliation of data provided by different sources (for example, CNNX and WMS replacement) and preventing mismatches upfront where possible to avoid billing and payment rejections.	X		X		[redacted]	Yes	[redacted]	[redacted]	X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology IBM ODM	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Rules Engine	IES_HH_BRM_001	The system must have functionality to both serve as a documented repository of business logic as well as being an executable part of the overall architecture in the application of those rules within the architecture.	X	[redacted]	No		[redacted]	X
Effective Dating	IES_HH_BRM_002	The system must have functionality to provide an effective date specification that identifies that the ruleset is always active, or that the ruleset is restricted based on a time and date range, or a starting or ending time and date.	X	[redacted]	No		[redacted]	X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology IBM ODM	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Rules Authoring and Configuration	IES_HH_BRM_003	The system must have functionality to create the rule sets that can be deployed to a runtime environments.	X	[redacted]	No		[redacted]	X
Rules Deployment	IES_HH_BRM_004	The system must have functionality for deployment of a rule set to a controlled environment.	X	[redacted]	Yes		[redacted]	X
Rules Processing	IES_HH_BRM_005	The system must have functionality for execution of one or more business rules in a runtime production environment.	X	[redacted]	Yes		[redacted]	X
Rules Storage	IES_HH_BRM_006	The system must have functionality that stores the business rules defined by the business users in a database.	X	[redacted]	No		[redacted]	X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology IBM ODM	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Rules Storage	IES_HH_BRM_007	The system must maintain a file of historic eligibility rules when changes are made. The index of modified rules is needed when a worker has to take action for a period prior to the implementation of the new rule change. This can occur due to a fair hearing decision, a case action that overlaps two periods of different business rules or a retroactive budgeting change necessitated by court action, etc.	X	[redacted]	No		[redacted]	X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**IBM MQ**	**Mulesoft / OpenShift**	**Kafka**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Guaranteed Delivery	IES_HH_MRS_001	The system must have functionality that uses a built-in data store (local storage disk space in a participant computer) to persist messages in each participant computer on which the messaging system is installed.	X		X	[redacted]	No		[redacted]	X
Message Correlation	IES_HH_MRS_002	The system must have functionality to enable messages to be assigned a specific property, usually known as a correlation identifier, which is set to the same value in all related messages.	X	X		[redacted]	[redacted]		[redacted]	X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**IBM MQ**	**Mulesoft / OpenShift**	**Kafka**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Message Enrichment	IES_HH_MRS_003	The system must have functionality to provide supplemental data from external sources that is added to the message payload to address the issue of more data being required by the target system than the source system can provide.		X		[redacted]	No		[redacted]	X
Message Exchange Patterns	IES_HH_MRS_004	The system must have functionality as a network-oriented architectural pattern that describes how two different parts of a message passing system connect and communicate with each other.	X	X	X	[redacted]	No			X
Message Parsing and Formatting	IES_HH_MRS_005	The system must have functionality that translates between binary data and human-readable textual representations of these values.		X		[redacted]	No		[redacted]	X
Message Sequencing	IES_HH_MRS_006	The system must have functionality that ensures that messages are delivered to the receiving application in a particular order.	X		X	[redacted]	No		[redacted]	X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**IBM MQ**	**Mulesoft / OpenShift**	**Kafka**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Message Transformation	IES_HH_MRS_007	The system must have functionality and patterns that define proven guidelines for transforming messages for additional processing or to match the expected document format of the service to which the message will be sent.		X		[redacted]	No		[redacted]	X
Message Validation	IES_HH_MRS_008	The system must have functionality that verifies type, length, format, or range of inputs.	X	X	X	[redacted]	No		[redacted]	X
Message Routing	IES_HH_MRS_009	The system must have functionality that defines proven guidelines for routing a message to its target endpoint(s).		X		[redacted]	No		[redacted]	X

			Prescribed IES Technology Framework Components									
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Informatica ETL**	**Synapse**	**c**	**IES Portal / Verizon VCC**	**Esri/GIS**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Data Extract	IES_HH_DWR_001	The system must have functionality where data is analyzed and crawled through to retrieve relevant information from data sources (like a database) in a specific pattern.	X	X				[redacted]	Yes	[redacted]		X
Extract, Transform and Load (ETL)	IES_HH_DWR_002	The system must have functionality that provides extract, transform and load capabilities that allow data to be migrated from one system to another system.	X	X				[redacted]	Yes	[redacted]		X
GIS	IES_HH_DWR_003	The system must have functionality that allows the capture, store, manage and analyze geographic data.					X	[redacted]	Yes	[redacted]		X
Knowledge & FAQ	IES_HH_DWR_004	The system must have functionality that supports the organization and management of content on various electronic media and associated metadata to support content classification and retrieval (e.g. videos and presentations for marketing and training purposes).				X		[redacted]	Yes	[redacted]		X
Data Extract	IES_HHS_DWR_005	The system must be able to preserve an immutable copy for litigation hold purposes. If the document is a template, copies of the template, with the dates the template was in use, should be stored as an immutable copy, along with the business requirements of what data elements would populate same.	X		X			[redacted]	Yes	[redacted]		X

			Prescribed IES Technology Framework Components							ch				
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**GitLab**	**Redis**	**Blueprint/ HP ALM/Jira**	**ITS Managed File Transfer**	**ElasticSearch / SplunkS**	**IES Portal(Liferay/Adobe/A ngular/OpenShift)**	**Azure Synapse/IBM MQ/Kafka**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Caching	IES_HH_CAS_001	The system must have functionality that transparently stores data so that future requests for that data can be served more quickly.		X						[redacted]	Yes	[redacted]		X
Configuration	IES_HH_CAS_002	The system must have functionality for tracking and controlling changes in the software. Configuration Management practices include revision control and the establishment of baselines.	X		X			cal		[redacted]	Yes	[redacted]		X
Event Management	IES_HH_CAS_003	The system must have functionality that provides real-time analysis of alerts (e.g. security alerts) generated by the application layer					X		X	[redacted]	No		[redacted]	X
Exception Handling	IES_HH_CAS_004	The system must have functionality for responding to the occurrence, during computation, of exceptions – anomalous or exceptional events requiring special processing – often changing the normal flow of program execution.						X		[redacted]	No		[redacted]	X

			Prescribed IES Technology Framework Components							ch				
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**GitLab**	**Redis**	**Blueprint/ HP ALM/Jira**	**ITS Managed File Transfer**	**ElasticSearch / SplunkS**	**IES Portal(Liferay/Adobe/Angular/OpenShift)**	**Azure Synapse/IBM MQ/Kafka**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
File Transfer	IES_HH_CAS_005	The system must have functionality that supports the consumption of file transfer				X				[redacted]	Yes	[redacted]		X
Application Lifecycle Management	IES_HH_CAS_006	The system must have functionality that manges the product lifecycle (governance, development, and maintenance)			X					[redacted] available integrations that are already in place for the IES	Yes	[redacted]		X
Localization and Internationalization	IES_HH_CAS_007	The system must have functionality that provides the means of adapting computer software to different languages, regional differences and technical requirements of a target market.						X		[redacted]	Yes	[redacted]	New York State -> COVID Vaccine Scheduling	X
Logging and Auditing	IES_HH_CAS_008	The system must have functionality that integrates with enterprise SIEM products to produce audit logs that record user and system activities, exceptions, and information security events that are kept for an agreed-upon time period, to assist in future investigations and access control monitoring.					X		X	[redacted]	[redacted]			X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology Framework Components Informatitac MDM	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Golden Record	IES_HH_MDM_001	The system must have functionality to ensure authoritative data for a given entity from a master source from strategy, governance and implementation perspective.	X	[redacted]	Yes	[redacted]		X
Records Linkage	IES_HH_MDM_002	The system must have functionality for finding records in a data set that refer to the same entity across different data sources.	X	[redacted]	No			X
Reference Data	IES_HH_MDM_003	The system must have functionality to provide data that defines the set of permissible values to be used by other data fields.	X	[redacted]	Yes	[redacted]		X
Metadata Management	IES_HH_MDM_004	The system must have functionality for metadata management to enable management of different metadata sets across components.	X	Unisys leverages the MDM framework provided as part of shared services for metadata [redacted]	Yes	[redacted]		X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology Framework Components Informatitac MDM	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Master Person Registry	IES_HH_MDM_005	The system must have functionality that matches and identifies clients as well as providers across multiple systems and ties them together via a composite index.	X	[redacted]	Yes	[redacted]		X
Records Management	IES_HH_MDM_006	The system must have functionality that provides capabilities to help manage key data or reference data across systems from both data management and for the records management perspective	X	[redacted]	Yes	[redacted]		X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**NY.gov/OKTA**	**IES Portal(Liferay/Adobe/Angular/OpenShift)**	**IES Common Services**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Access/Privilege Management	IES_HH_SPS_001	The system must have functionality that provides capabilities to manage user access and privileges across application and infrastructure.	X	X	X	[redacted]	No		[redacted]	X
Authentication	IES_HH_SPS_002	The system must have functionality to provide capabilities to manage different methods for assuring the identity of a user. The service tracks identifying information including login and different verification factors.	X			[redacted]	No		[redacted]	X
Authorization	IES_HH_SPS_003	The system must have functionality that manages the membership of different individuals in groups and provides a mechanism for requesting applications to determine whether a user should have access to a resource.	X	X	X	[redacted]	No		[redacted]	X
Digital Signatures	IES_HH_SPS_004	The system must have functionality that provides the capability to encrypt information for purposes of secure transmission or non-repudiation.		X		[redacted]	Yes		[redacted]	X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**NY.gov/OKTA**	**IES Portal(Liferay/Adobe/Angular/OpenShift)**	**IES Common Services**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Identification	IES_HH_SPS_005	The system must have functionality to manage data that uniquely describes a person or a thing and contains information about the subject's relationships		X	X	[redacted]	No		[redacted]	X
Nonrepudiation	IES_HH_SPS_006	The system must have functionality to ensure that a transferred message has been sent and received by the parties claiming to have sent and received the message. Nonrepudiation is a way to guarantee that the sender of a message cannot later deny having sent the message and that the recipient cannot deny having received the message.		X		[redacted]	Yes	[redacted]	[redacted]	X
Single Sign On (SSO)	IES_HH_SPS_007	The system must have functionality to manage access control of multiple related, but independent software systems. With this service a user logs in once and gains access to all systems without being prompted to log in again at each of them.	X			[redacted]	No		[redacted]	X
Audit	IES_HH_SPS_008	The system must have functionality that audits transactions and activities in the system for data protection compliance.			X	[redacted]	No			X
Logging	IES_HH_SPS_009	The system must have functionality that offer information logging services.			X	[redacted]	Yes	[redacted]		X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology Framework Components Mulesoft / Openshift Service Mesh	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Web Services SLA Management	IES_HH_SMS_001	The system must have functionality to enable the SLA management for web services.	X	[redacted]	No		[redacted]	X
Discovery	IES_HH_SMS_002	The system must have functionality for a client application querying the central registry to learn of the location of services.	X	[redacted]	No		[redacted]	X
Message Specification	IES_HH_SMS_003	The system must have functionality to define contracts between consumers and producers of the message service.	X	[redacted]	No		[redacted]	X
Service Registry	IES_HH_SMS_004	The system must have functionality to enable the process of a service registering its location in a central registry.	X	[redacted]	No		[redacted]	X

			Prescribed IES Technology Framework Components					
NYS Technical Function	IES REQ #	IES Requirement Description	Mulesoft / Openshift Service Mesh	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Service Repository	IES_HH_SMS_005	The system must have functionality to enable lifecycle management to track lifecycle, versions and availability of services.	X	[redacted]	No		[redacted]	X

		sys	Prescribed IES Technology					
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Oracle/SQL Server/ MongoDB / Informatica**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Data Archiving	IES_HH_DTS_001	The system must have functionality for moving data that is no longer actively used to a separate data storage device for long-term retention.	X	[redacted]	Yes	L	[redacted]	X
Data Access	IES_HH_DTS_002	The system must have functionality related to storing, retrieving, or acting on data housed in a database.	X	[redacted]	No		[redacted]	X
Data Synchronization	IES_HH_DTS_003	The system must have functionality for establishing consistency among data from a source to a target data storage and vice versa and the continuous harmonization of the data over time.	X	[redacted]	No		[redacted]	X

		sys	Prescribed IES Technology					
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Oracle/SQL Server/ MongoDB / Informatica**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Data Indexing	IES_HH_DTS_004	The system must have functionality that improves the speed of data retrieval operations on a database table through data indexing.	X	[redacted]	Yes	[redacted]	[redacted]	X
Database Locking	IES_HH_DTS_005	The system must have functionality to prevent data from being corrupted or invalidated when multiple users try to read while others write to the database.	X	[redacted]	No		[redacted]	X
Metadata Management	IES_HH_DTS_006	The system must have functionality that manages the end-to-end process and governance framework for creating, controlling, enhancing, attributing, defining and managing a metadata schema, model or other structured aggregation system.	X	[redacted]	Yes	L	[redacted]	X
Change Data Capture	IES_HH_DTS_008	The system must have functionality for data integration that is based on the identification, capture and delivery of the changes made to enterprise data sources.	X	[redacted]	No		[redacted]	X

		sys	Prescribed IES Technology					
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**Oracle/SQL Server/ MongoDB / Informatica**	**Bidder Narrative**	**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Rejected Data Management	IES_HH_DTS_009	The system must have functionality to manage the reject data records during data migration. This typically involves writing rejected records to a separate area and handled in a separated process.	X	[redacted]	No		[redacted]	X

NYS Technical Function	IES REQ #	IES Requirement Description	Prescribed IES Technology Framework Components ITS Managed Data Center (Azure/OnPrem)	Bidder Narrative	Custom (Yes/No)	L/M/H	Example of Where Previously Implemented	EECM Workstream
Performance Monitoring	IES_HH_MNS_002	The system must have functionality that monitors and manages performance and availability of software applications.	X	[redacted]	No			X
Web Analytics	IES_HH_MNS_004	The system must have functionality for the measurement, collection, analysis and reporting of web data for purposes of understanding and optimizing web usage.	X	[redacted]	Yes	[redacted]		X
Business Transaction Monitoring	IES_HH_MNS_005	The system must have functionality for tracking the flow of transactions across IT infrastructure, in addition to detection, alerting, and correction of unexpected changes in business or technical conditions.	X	[redacted]	Yes	[redacted]		X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**DevOps Tools (IBM uDeploy/Jenkins/Container Registry/Artifactory)**	**Mulesoft**	**IES Portal(Liferay/Adobe/Angular/OpenShift)**		**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Automated Deployment	IES_HH_SCS_001	The system must have functionality that masks the complexity of deployment through management processes and cross-platform packaging.	X			[redacted]	Yes	[redacted]	[redacted]	X
Direct Data Access	IES_HH_SCS_002	The system must have functionality providing a method of reading data from a computer file without reading through the file from the beginning as on a disk or drum.	N/A	N/A	N/A	[redacted]	No			X
Local Software and Resource Integration	IES_HH_SCS_003	The system must have functionality providing integration with software and system resources in local computing environment.	N/A	N/A	N/A	[redacted]	Yes	[redacted]		X
Messaging Connectivity	IES_HH_SCS_004	The system must have functionality that deals with establishing a connection between two different applications that need to communicate with one another to transfer information.		X	X	[redacted]	Yes	[redacted]	[redacted]	X
Middleware Connectors	IES_HH_SCS_005	The system must have functionality that knows how to interact with an underlying business application.		X	X	[redacted]	Yes	[redacted]	[redacted]	X

			Prescribed IES Technology Framework Components							
NYS Technical Function	**IES REQ #**	**IES Requirement Description**	**DevOps Tools (IBM uDeploy/Jenkins/Container Registry/Artifactory)**	**Mulesoft**	**IES Portal(Liferay/Adobe/Angular/OpenShift)**		**Custom (Yes/No)**	**L/M/H**	**Example of Where Previously Implemented**	**EECM Workstream**
Object Component Access	IES_HH_SCS_006	The system must have functionality that provides a formalized means of composing disparate components into a fully working application ready for use. e.g Make a local Java method a remote procedure without having to deal with remote APIs.			X	[redacted]	Yes	[redacted]		X
Offline	IES_HH_SCS_007	The system must have functionality to enable applications to function without networks. When the application creates data or saves state, it stores that data locally while it is offline and synchronize it with the remote server once the network is back online.	N/A	N/A	Mobile Apps only	[redacted]	Yes	[redacted]		X
Packaged Integration	IES_HH_SCS_008	The system must have functionality that identifies complex but regular processes where there are numerous interactions through several touch points between disparate applications and provides a common integration solution out of box.		x	X	[redacted]	Yes	[redacted]	[redacted]	X
Partner Integration Management	IES_HH_SCS_009	The system must have functionality that enables execution of the service level agreement with integration partner. This includes monitoring of activity, security, connectivity of the integration solution.		X	X	[redacted]	Yes	[redacted]	[redacted]	X