**Attachment F – Technical Proposal,  
RFP 21-67029, High School Equivalency Record Management**

**Instructions: Respondents shall provide a written response in the yellow text box below each of the questions/prompts listed and indicate any attachments that have been included. Note that the yellow text box will expand as text is entered.**

|  |  |
| --- | --- |
| **A. IMPLEMENTATION** | |
| **1** | What is your implementation approach? |
| At the core of the DS implementation approach are four components which are common to all jurisdictions.  The core includes collecting all of the academic records, designing the official documents, collecting policy rules, and communicating the transition to key stakeholders.  Explaining how each of these four components are accomplished are necessary details which appear elsewhere. However, the overall implementation approach is critical to appreciating the details.  Implementation of DS is shaped to the jurisdictions distinctive requirements.  [Getting Real](https://basecamp.com/gettingreal) philosophy delivers better results by focusing on the actual tasks to be completed instead of having meetings to discuss ideas about checklists and tasks. In essence the DS implementation approach forces DS to deal with reality.  Behind the scenes, DS implementation is cautious and relies upon incremental steps and cumulative results.  Caution compels DS to disable the assumptions of conformity, that each implementation is identical and constrains DS to approach implementation as a one of a kind event.  Incremental steps permit adequate time to reveal the underlying complexity of the academic records. Each jurisdiction has multiple sources of testing history; spread across multiple media; with data housed in modern and archived systems. The individual tests are subject to scoring policy and rules which differ by date range impacting the overall status of incomplete, non-pass, pass, and credential. Tester's history may span many years, be simultaneously preserved in diverse locations and each source is slightly different but qualifies to create one tester's academic record. The cumulative result produces a single academic history for each tester that represents the entirety of their HSE history and makes possible the identification of credential and transcripts not distributed prior to the transition to DS, but are qualified for distribution by DS.  **Attachment and Section(s):**  “DS HSE Services” (Implementation Approach, page 6) |
| **2** | Provide a standard timeline for the implementation process. |
| DS adopts a formula to forecast the implementation timeline. The following events are on the critical path. Most jurisdictions have two (2) or more databases.  For each database, DS anticipates one (1) month.  Jurisdictions have three (3) or more documents for DS to design and to receive approval.  DS estimates one (1) week for document design and approval. Collecting, coding and verifying the testing and credentialing policy consumes multiple meetings over the span of a two (2) week period.  Next a service suspension period is determined. The service pause, interrupts the distribution of documents and defers changes to the data.  This allows DS to finalize loading of the data. The suspension requires the data loading, document design, and the collecting of policy to be completed. This is a prerequisite for determining the go live date. The service pause period and release consume one (1) week.  The Formula. Implementation Timeline = (# of databases \* 4 weeks) + 1 week for document design + 2 weeks for policy rules collection + 1 week pause in service for transition and release.  Critical Path.  Database migration is most often the longest leg of the implementation and is prerequisite to all other implementation events.  When applying the implementation formula to determine the go live date, the start date is established when all of the databases are transferred to DS.  Concurrent Events.  Occurring concurrently with the events on the critical path, DS provides orientation for key users, for example: correctional officials, educational providers, jurisdictional employees, and test center administrators.  DS contributes website tools for use on the jurisdictions HSE website; verbiage for communicating the transition; and recommendations for phone and email response to direct questions to DS.  Timeline Example:  A jurisdiction has three databases and provides all three to DS on the first day of January.  Using the formula, the jurisdiction may anticipate the go live date on a Tuesday or Wednesday mid March.  **Attachment and Section(s):**  “DS HSE Services” (Implementation Timeline, page 7) |
| **3** | How would you approach migrating electronic records from the current system to your service? How would your migrate paper records to your service? |
| DS coordinates transfer system to receive all historical data files (electronic and/or paper).  DS requests the jurisdictional administrator to provide a list of the locations including physical address of the records, contact number and email address of the records curator. The jurisdictional administrator will distribute introductory communications to the records curators requesting cooperation with DS. For physical records, DS will contact, arrange pickup, provide and sign document custody, and prepare documents for transportation. For electronic records, DS will coordinate with the school contact person and transfer records using SFTP. The process presumes records are in decentralized locations as well as records accumulated in one location. Further, the DS system presumes and allows for the collection of records discovered throughout the duration of the contract.  DS is the final repository for high school equivalency assessment records and is solely liable for the security of the records unless the jurisdiction retains possession of the documents. Jurisdiction’s high school equivalency paper records are stored in a secure warehouse with physical security measures that meet and are regularly audited by a third party for SOC 2 Type 2 compliance.  DS digitization process and associated optical character recognition is a proprietary process. DS digitization scans paper using Fujitsu scanners. Paper is magnetically cleansed of metal, and batched by single, double, or multi page documents. Scanned images are uploaded to Microsoft's cloud computing service. Uploaded images are OCR processed by the DS proprietary software.  Coming in the early summer of 2021 DS converts microfiche and film using FlexScan 400.  Digitized records are stored in the DS digital catalogue and searchable by PII, school/ facility, and date.  **Attachment and Section(s):**  “DS HSE Services” (Physical Record Transfer, page 20) |
| **4** | How much system integration does your program support? (For example, secure integration of examinee information, tracking transcript/diploma requests, etc.) |
| DS system integrations are robust and agile. They are influenced by our partner jurisdictions changing needs. The current list of systems designed by DS to satisfy the services required and requested by jurisdictions includes but not limited to: Diploma and transcript design, diploma and transcript complimentary and duplicate distribution, Third-party verifications, physical research request, customer assistance, publisher data imports, data exports to client jurisdictions, data storage and cleaning, physical record transportation, data reporting, portal for viewing/editing state business rules, combing of academic records, functioning as the database of record, document issue notification, self-service website, bulk mailing of official documentation, tester notification system, document security, document authentication and fraud prevention, complete auditable transaction history for users and records, weekly issue tracking and reporting, academic record editing, alternative pathway program support, administrator dashboard, and contract closeout services.  All of these services are made transparent to authorized users of the DS website according to the users permission level of access. To accomplish the integrations, DS creates transaction tables to support an exhaustive audit trail. Transactions show who gained access to an academic record including the person’s IP geo location, email address, and date time stamp. Order details contain the document type, person placing the order, the intended recipient, and the distribution method. Financial transactions are logged by Authorize.NET and retained in their system with access provided by DS.  Internally, DS maintains a transaction log of changes to the academic record showing what has changed, when it was changed and who made the change. This allows the ability to roll back a change to restore the record to a prior date.  Equally important, this robust set of auditing tools are displayed in the test taker’s account. Each account holder has simple, up-to-date and accurate knowledge of who accessed their record, when their record was accessed, how and where documents were sent, and the most current details of their test results.  **Attachment and Section(s):**  “DS HSE Services” (Transaction History, page 48); (HSE Administration Dashboard, page 62); (Weekly Issue Reporting, page 52); (Access to State Scoring Policy, page 44); (Comments in Tester Account, page 42); (Use of Approved Documents, page 34) |
| **B. SYSTEM FUNCTIONALITY & CAPABILITIES** | |
| **1** | Does your service offer functionality to integrate telephone responses, email, and chat into a system? |
| DS utilizes a unified communication tool for online chat via our secure website. This is accessible from desktop or mobile devices. DS also offers a toll free phone number to speak with a customer service representative.  Additionally, DS provides jurisdictional administrators access to see important metrics pertaining to customer service including but not limited to chat volume, talk volume, call wait time, and email volume. Jurisdictional administrators have access to view and listen to all customer contacts with DS through the secure DS website.  DS provides routine customer assistance at no cost to the customer. Additionally, through our unified communications system DS will provide transparent access to customer service metrics.  Phone conversations, chat history, email content, and DS notes are detailed in the Touch Points layer of the test taker’s account.  All communications with or about the person and their academic record as well as edits, updates, orders, and history are merged into the Touch Points. Touch Points unify communications with transaction history creating transparency.  This is managed through our administrative portal accessible to the jurisdiction administrator.  A request for a record that requires research will result in a deliverable document.  The document is accessed for a fee. There may be instances where the deliverable document is a notice of no record available.  DS provides HSE program administration real time analytics!  **Attachment and Section(s):**  “DS HSE Services” (Customer Assistance, page 16); (Comments in Tester Account, pages 42-43) |
| **2** | Does your system support integration with current high school equivalency vendors? |
| DS receives daily data transfers from all publishers.  The process for access is initiated by the publisher’s request for jurisdictional authorization to share data with DS.  Publishers provide DS with credentials. DS accesses the jurisdictional folder provided by the publisher. The folder contains the daily file of testing results.  DS downloads the results file to the DS import server.  The publisher does not charge DS a fee to access or extract the results file.  DS does not charge for the importing of jurisdictional test results.  Importing test results is a core service provided by DS.  DS import process receives daily data transfers from GEDTS, ETS, and DRC for the GED, HiSET, and TASC test respectively.  All publishers utilize XML format for exporting test results.  The exports follow a schedule which varies by publisher. One publisher exports at 3 am daily and does not provide additional exports. Another exports as frequently as once every three hours. Regardless of the schedule frequency, DS fetches the files for processing into the DS database.  **Attachment and Section(s):**  “DS HSE Services” (Publisher Data Imports, page 17); (Publisher Relations, page 40) |
| **3** | What is your average volume of requests per year across your book of business? What is the average volume of requests for your largest accounts, per year? |
| Average volume of requests per year: 253,000 Average volume of requests for largest accounts per year: 28,250 |
| **4** | What is your company’s average turnaround time for requests? |
| Requests for electronic records are fulfilled within 5 minutes of the request being made. Requests for printed and mailed documents are sent via USPS the same day they are requested. Turnaround for mailed documents averages 7 days from the date of the request to the date of delivery to the recipients address.  **Attachment and Section(s):**  “DS HSE Services” (Document Distribution, pages 11-12) |
| **5** | What are your company’s hours of operation? |
| DS business hours of operation are Monday-Friday 9:00am-6:00pm CT.  Academic records are available for access to account holders 24-7 hours a day, 365 days a year. Access requires registration and account verification.  **Attachment and Section(s):**  “DS HSE Services” (Self-Service Website, page 31) |
| **6** | How does your company handle publishing transcripts and diplomas? |
| DS generates high school equivalency diplomas and transcripts that meet all jurisdiction requirements and quality standards. Customization begins by gathering jurisdictional documents. Multiple copies of current documents and of prior versions of the current documents, along with documents specific to prior series are assembled for analysis.  Unique graphical characteristics are identified and classified and then replicated through digitization.  Resulting digitized images are submitted for jurisdictional approval. The collection of documents are sorted by type and purpose. The text from multiple documents of the same type and purpose are distilled into a single document.  The document of coalesced text is submitted for jurisdictional approval. Font type and size, formatting, color, and borders are replicated. The resulting catalog is submitted for jurisdictional approval.  The iteration continues for each of the current documents. Finally publisher specific features, links, and verbiage are assembled into a single document and sent for jurisdictional approval.  Sample documents are created using the approved graphics, text, type, and format. Draft versions of actual transcript/s and the diploma/s are submitted for approval.  The process iterates until the final approval represents the jurisdiction requirements for diplomas, transcripts, publisher specific versions of the transcripts, special consideration documents (e.g. grandfathered), and alternative pathway documents.  **Attachment and Section(s):**  “DS HSE Services” (Diploma and Transcript Requirements, page 8) |
| **7** | How does your company support any requests outside of normal business hours? |
| Requests made outside business hours will be automatically sent in minutes if electronic, and will be sent out the next business day if paper/mailed documents are requested.  **Attachment and Section(s):**  “DS HSE Services” (Self-Service Website, page 31) |
| **8** | How does your system support targeted communications and alerts? Such as a specific group of customers based on a data point. |
| DS email notifications are customized to support a specific process. The verbiage, logo, and distribution timing are authored and determined by the state.  Notification of available documents announce the accessibility of the initial and complimentary (free) documents. Instructions for registering with a hyperlink to the DS registration page.  The use of email notifications is expanding to include policy alerts, privacy rights, impending changes, and updates to records.  DS offers the following cautionary note.  The limitation of email notifications is primarily constrained by the accuracy of addresses.  Registration does not lend itself to automation when the data source integrity and accuracy relies upon the embedded emails gathered by the testing publisher’s registration process. Reliance failures include: multiple publisher accounts for a tester, one publisher with multiple accounts for one tester, email addresses entered during registration then subsequently abandoned, single point matching cannot be challenged because the transaction history cannot be made specific to the person who is accessing the academic record.  **Attachment and Section(s):**  “DS HSE Services” (Tester Notifications, page 33) |
| **9** | What search features does your system offer? |
| Most of the search pages on the DS website are designed to match using increasingly relaxed criteria. Running a single search on the website may run multiple queries on the server until it finds data.  The first step is that the search tries to do an exact match on all of the fields supplied. If any result is found, the search is paused at that point and the data is shown on the website. If no data is found, or Continue Search button is clicked, the search progresses to the next stage.  Step 2 tries to match combinations of the supplied fields individually. If either part of the combination is missing, it will skip that attempt and move on to the next. The combinations are designed to go from strong to weak matching. The order is as follows:   1. Last Name & Id Number 2. ID Number & any Jurisdiction 3. First Name & Birth Date 4. First & Last Name 5. Last Name & Birth Date   The search will also look for predictable typos in dates. For example, if a test taker’s birth date is 03/24/1985 it will also look for the following:   * 02/24/1985 * 04/24/1985 * 03/14/1985 * 03/24/1975 * 03/24/1995 * 01/01/1985   The algorithm tries a +1, -1, +10, or -10 on each part of the date if it is applicable.  The final step uses partial matching on all of the supplied fields. All of the partial matching checks the beginning of the data. As an example, if you searched for “Joh” you could find John, but not if you searched for “ohn”. This step can be useful with searching names that have shortened versions. For example, searching for “Chris” would find “Christopher”.  When all search algorithms are exhausted, the website offers the ability to place an Archive Request. |
| **10** | How does your company search examinee records? |
| The DS system is designed to approach data as discrete points, or selected across hundreds of tables. The selection and presentation facilitates methodical and useful analysis.  Questions of fraud, misrepresentation, inadequate test results, and missing details comprise one type of research.  Questions of counts within a date range filtered by location points, and/or biographics comprise a second type of research.  Questions of status within a date range filtered by similar points comprises a third type of research.  DS research produces aggregated or disaggregated results. Advanced questions are referred to a DS statistician whose PhD in educational research determines the applicability of the data to answer research questions.  General questions are the purview of the IT Director in collaboration with Fraud prevention, and the database architect and manager.  **Attachment and Section(s):**  “DS HSE Services” (Research Requests, page 15) |
| **11** | How does your system manage access/security permissions to view/edit/add/delete content? |
| DS maintains the confidentiality and security of data to which DS is contractually bound or ethically obligated. DS is proud to be SOC 2 Type 2 and SOC 3 compliant, have taken the [Student Privacy Pledge](https://studentprivacypledge.org/privacy-pledge/) (link to external website), and built internal policy to exceed requirements to which DS is obligated under FERPA. DS Security Policy Manual is not included here in order to keep the DS response concise, however, it can be made available to HSE  administration upon request.  DS website restricts the highest level of authorization for exclusive access by the jurisdiction administrator and their designee.  The jurisdiction tier allows state administrators to manage all aspects of the account. Management includes access in real-time to their jurisdictions (live) database.  Permission encompasses updating, inserting, reviewing, and verifying the academic record PII and test history.  The breadth of reporting service extends reporting to multiple types of both aggregated and disaggregated data.  Parameters of date, location, demographic, and publisher enable precise management of results. Formats are downloaded as either PDF or CSV.  **Attachment and Section(s):**  “DS HSE Services” (Confidentiality and Information Security, page 59) |
| **12** | Where is your database hosted? |
| The DS database is hosted with Microsoft Azure. |
| **13** | How are examinee records maintained and/or updated? What resources are needed? |
| DS receives daily data transfers from all publishers.  The process for access is initiated by the publisher’s request for jurisdictional authorization to share data with DS.  Publishers provide DS with credentials. DS accesses the jurisdictional folder provided by the publisher. The folder contains the daily file of testing results.  DS downloads the results file to the DS import server.  DS applies more than 40 proprietary sequential de-duplication processes which combine academic records across all series of tests, as well as aggregating academic records from all publishers.  In essence the academic record is an amalgamation of test results organized and isolated as testing policy dictates.  DS programmatically identifies potential matches, then applies an algorithm to combine the record logically and sequentially. The processes sort by the age of the source information, remove duplicate information that is older unless the older information is more complete, preserve unique information, and accept new information. This results in a complete history of the academic record. DS presents status as static when the record is locked by policy but continuously accepts additional information updating both the static and the dynamic records.  Additionally, DS applies confidence threshold limits to isolate records which require reviewer intervention.  DS systems, present the best practice and recommended actions to the reviewer for their match / no match decision.  In those cases where jurisdictional leaders and test taker evidence indicates PII or academic anomalies, inaccuracies, or missing data, DS securely receives the evidence, applies jurisdictional policy when the error is on the academic record, or reviews official documents for authenticity when the error involves PII. Upon competition of the review, DS either corrects the error with prior authorization, or requests jurisdictional approval to correct the error.  DS customer support and continuous improvement relies upon direct contact with testers.  Academic record holders (e.g. testers) have the option to contact DS by chat, email, or phone. Testers whose preference is phone may, in subsequent cases, continue to use the phone. However, there is no obligation to use the phone, the tester is invited and welcome to chat or email. The same options are available for testers who prefer email or chat, they are welcome to select whatever is their most convenient method to contact DS.  To support multiple channels, DS merges all communications into one record.  Unified support history allows testers to elegantly move between communication choices and pick up where they left off without having to restate, summarize, or start over explaining their question or concern. The idea is for a single communication history that tracks each customer support event into the one history.  In those cases where a test taker is challenging an academic record, DS adheres to the FERPA regulations.  FERPA requires data managers to allow academic record holders the ability to request changes to incorrect records.  DS uses secure messaging and direct upload to accept evidence/s of PII or academic anomalies, inaccuracies, or missing data. DS securely receives the evidence, applies jurisdictional policy when the error is on the academic record, or reviews official documents for authenticity when the error involves PII. Upon completion of the review, DS either corrects the error due to prior authorization, or requests jurisdictional approval to correct the error.  **Attachment and Section(s):**  “DS HSE Services” (Publisher Data Imports, page 17); (Record Deduplication and Issue Correction, page 42); (Academic Record Editing, page 53) |
| **14** | How does your system accommodate new tests? |
| DS import process receives daily data transfers from GEDTS, ETS, and DRC for the GED, HiSET, and TASC test respectively.  All publishers utilize XML format for exporting test results.  The exports follow a schedule which varies by publisher. One publisher exports at 3 am daily and does not provide additional exports. Another exports as frequently as once every three hours. Regardless of the schedule frequency, DS fetches the files for processing into the DS database.  **Attachment and Section(s):**  “DS HSE Services” (Publisher Data Imports, page 17) |
| **15** | Does your system support a dashboard style display of examinee information? Please provide a screenshot example of that display. |
| Yes. The dashboard is available to each HSE administrator and is unique to the jurisdiction.  **Attachment and Section(s):**  “DS HSE Services” (HSE Administration Dashboard, page 62) |
| **16** | How does your system manage different interfaces based on the type of user coming to the website? |
| Interface design and user access is associated with the user’s role. Each role is assigned access aligning to the responsibilities and authority of the role.  **Attachment and Section(s):**  “DS HSE Services” (User Roles and Permissions Table (CONFIDENTIAL), page 23) |
| **17** | Outline your staffing model, and how you provide managed services to customers. |
| DS has a staff of approximately 30 collaborators organized in the following functional areas:   * Leadership. Executives, Directors, and company administrative support staff, such as legal, compliance, internal audit, training, contracting, accounting, finance, and human resources. * Contact Center. * IT. Help desk, IT infrastructure, IT networking, IT system administration, software systems development and application support, information security, and IT operations personnel manage electronic interfaces and business implementation support and telecom.   + The help desk group provides technical assistance to users.   + The infrastructure, networking, and systems administration staff typically has no direct use of the data management of academic records. Rather, it supports DS’ IT infrastructure, which is used by the software. A systems administrator will deploy the releases of the data management of academic records and other software into the production environment.   + The software development staff develops and maintains the custom software for DS. This includes the data management of academic records, supporting utilities, and the external websites that interact with the data management of academic records. The staff includes software architect and developers, database architect and administrator, and software quality assurance.   + The Microsoft Azure information security staff supports the data management of academic records indirectly by monitoring internal and external security threats and maintaining current antivirus software.   + The Microsoft Azure information security staff maintains the inventory of IT assets.   + IT operations in collaboration with Microsoft Azure manage the user interfaces for the data management of academic records. This includes processing user entity–supplied membership and eligibility files, producing encounter claims files, and other user-oriented data (capitation files, error reports, remittance advice, and so on).   **Attachment and Section(s):**  “Service Organization Controls SOC 3 Report - DS” (People, page 13) |
| **18** | What kind of quality assurance testing do you provide? |
| DS maintains documented change control policies and procedures to guide personnel in documenting and implementing application and infrastructure changes. Change control procedures include change request and initiation processes, documentation requirements, development practices, quality assurance testing requirements, and required approval procedures.  A ticketing system is utilized to document the change control procedures for changes in the application and implementation of new changes. Quality assurance testing results are documented and maintained with the associated change request. Development and testing are performed in an environment that is logically separated from the production environment. Management approves changes prior to migration to the production environment and documents those approvals within the ticketing system.  Version control software is utilized to maintain source code versions and migrate source code through the development process to the production environment. The version control software maintains a history of code changes to support rollback capabilities and tracks changes to developers.  **Attachment and Section(s):**  “Service Organization Controls SOC 3 Report - DS” (Change Control, page 16) |