



State of West Virginia

Child Welfare Information System



RFI # CRFI 0511 BSS2300000001

Due Date: 11th April 2023

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WV Purchasing Division

REQUEST FOR INFORMATION - CHILD WELFARE INFORMATION SYSTEM

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Cover Letter

Ms. Crystal G Husted

Department of Administration Purchasing Division
2019 Washington ST E, CHARLESTON
WV 25305 US

Dear Ms. Crystal

RE: Request for Information **RFI# CRFI 0511 BSS2300000001** for web-based Communication System

On behalf of Elixir Lab USA Inc (d/b/a Cardinality.ai), we appreciate the opportunity to present our proposal to provide an innovative, cutting-edge, web-based Collaborative Communication System to the **West Virginia Department of Health and Human Resources** (WV DHHR).

We understand the crucial role that a web-based Communication System plays in providing effective child welfare services and are confident that our system can enhance the quality of services provided to children in foster care in West Virginia.

Our proposal includes a comprehensive solution that incorporates features such as Role-Based Access Control, Mobile Accessibility, Reporting & Analytics, integration with the existing Comprehensive Child Welfare Information System (CCWIS), and logging and storing all communication information. These features provide greater flexibility, control, and security, ensuring that only authorized users have access to sensitive information.

Our team comprises of experts in the field of child welfare services, and we are confident in our ability to deliver a user-driven, accurate, and faster system, ensuring that the needs of the child remain at the forefront of our system's design.

We look forward to demonstrating how our system can help you improve the services provided to children in foster care. At Cardinality, we consider this project to be equally important to us and to you. I commit that we will provide dedicated support throughout this project to ensure its successful completion, within the specified time and budget.

Please contact me at Sales@cardinality.ai or +1 312.342.3776 with questions or if additional information is needed.

Respectfully,



Anna Harper

Chief Administrative Officer
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1. Executive Summary

We, Team Cardinality, are pleased to submit our response to the referenced solicitation and acknowledge the receipt of **RFI# CRFI 0511 BSS2300000001**. Cardinality has extensive experience in Child Welfare systems and a deep understanding of the unique challenges and requirements involved. We have successfully implemented systems for similar programs and are confident about delivering a web-based Communication System to facilitate communication between designated stakeholders who provide services to foster children.

Cardinality understands that the objective of this RFI is to improve communication between various parties involved in providing services to foster children. This includes streamlining communication between foster parents and the Bureau for Social Services staff, as well as its contracted designees. It also involves keeping everyone informed about foster child movement, visitation, travel, scheduling court hearings, guardian ad litem meetings, and multidisciplinary team meetings. Moreover, any communication channels that could improve the care of foster children will be actively encouraged among the designated parties with legal responsibilities for the foster child.

Cardinality has extensive domain expertise and a deep commitment to Child Welfare. We are transforming Child Welfare in a whole new way, by introducing innovative ideas. Our aim is to enable the West Virginia Department of Health and Human Resources (WV DHHR) to provide exceptional care to children through a family-centric approach that is packaged in a state-of-the-art solution.

Our vision is to offer an unparalleled end-user experience, resulting in improved accuracy and timing, ultimately benefiting children. Cardinality is the perfect fit to realize this vision for the new web-based Communication System, enabling foster parents and social workers to deliver the highest quality services to children..

Cardinality offers a **secure communication platform** that enables foster parents, social workers, and healthcare providers to effectively collaborate and communicate to deliver foster children care. This system seamlessly integrates with the agency's current Child Welfare systems and offers multiple communication channels, such as **email, chat, video conferencing, and instant messaging**. The system prioritizes privacy and security and includes features such as user authentication, data encryption, and access controls. This ensures that the sensitive information is protected and only accessible to authorized users.

Overall, Cardinality's web-based communication system provides a streamlined and efficient way for stakeholders to communicate and collaborate on the care and well-being of foster children, ultimately improving outcomes for this vulnerable population.

2. Company Overview

Cardinality, a digital modernization leader with a proven track-record of delivering successful solutions in Indiana, Maryland, Wyoming, Georgia, and Oregon, is uniquely positioned to provide WV DHHR an outcome-accelerating solution. As an outcomes company that works with government agencies, Cardinality has already helped over 5000 caseworkers in 8 government agencies, 5 states, and 10+ nonprofits and healthcare providers with our pre-built software solutions that meet government standards.

Agencies choose Cardinality because of the speed of implementation, with more than 75% of the solution ready out of the box, and a 50% shorter implementation timeline than other custom solution providers. Being “built for government” yields advantages over alternative approaches that rely on custom development or repackaging “general purpose” platforms for a government operating environment. Our solution has been proven to provide measurable results in multiple states, ensuring a low-risk and high-return on investment for agencies like the WV DHHR.

Cardinality.ai understands that the new communication channel for the WV DHHR's existing Child Welfare system is crucial, as it impacts the lives of thousands of vulnerable children. We are confident in the Agency's ability to achieve a lean and efficient system in the fastest and most-effective way possible by leveraging our solutions. Obtaining a lean and efficient system is not just a technical ambition, but it is also an operating and administrative vision that will provide a better life for WV's foster children. We are confident that Cardinality will accomplish this goal quickly and efficiently.



Figure 01: Cardinality's clientele

Cardinality, recognized as a GovTech 100 company in 2020-2023 and the AWS State & Local Government Partner of the Year 2022, offers a suite of solutions designed for workforce, health, and human services use cases. Our solutions leverage a utility-grade platform called Personalized Integrated Citizen Services (PICS) to achieve integration and interoperability. PICS is a game-changing asset for government agencies committed to rapid modernization with contemporary technologies. Our approach allows for rapid implementation, lower cost of operations, and up to 50% faster modernization compared to custom or unproven solutions.

3. Solution Overview

Cardinality's web-based collaborative Communication System is designed to facilitate communication between individuals providing services to foster children, by integrating with West Virginia's existing CCWIS.

Some of the key features embedded into our solution are as follows:

- **Secure messaging:** Our Communication System provides a secure messaging platform that enables users to communicate with each other privately and securely.
- **File sharing:** It allows users to share files, documents, and other relevant information related to a foster child's care.
- **Video conferencing:** Remote meetings and consultations between users are supported through video conferencing capabilities.
- **Collaboration tools:** Shared calendars, task lists, and project management tools are integrated within our Communication System to facilitate collaboration between users. It promotes easy information sharing with external participants, such as foster parents, private providers, and other service providers through integrated workflows and collaboration tools.
- **Access control:** The Role-Based Access Control (RBAC) feature ensures that only authorized users can access sensitive information related to a foster child.
- **Reporting and analytics:** Cardinality's Communication System includes a reporting and analytics module to enable users to track communication history, identify patterns, and generate insights to improve the quality of care provided to foster children.
- **Mobile accessibility:** The system is accessible via mobile devices, such as smartphones and tablets, to let users communicate and collaborate on the go. It provides a streamlined version of mobile application focusing on worker's day-to-day tasks, as well as offline capabilities and automatic synchronization when the app comes online.
- **Integration capabilities:** Using APIs, the system can be integrated with the existing CCWIS, to facilitate seamless information exchange.
- **Purpose-built for human services:** Built to meet the unique needs of HHS, Cardinality's system covers the full range of functional capabilities required for delivering Child Welfare services and meets the CCWIS solution design requirements.

Our solution is built to address the following:

- Offer high performance, flexibility, adaptability, and scalability, to meet the changing business requirements, and to accommodate future project workflows.
- Support standardization of business processes and workflow requirements.
- Use COTS for the core architecture, including data acquisition, data management, workflow management, application management, and data access.
- Comply with State standards for key architectural principles, to deploy and maintain in the production environment.

- Minimize client (end-user) system requirements through the use of browser-based solutions.
- Separates presentation and business logic leading to a more flexible, scalable, and reusable system.
- Meets requirements for reliability, scalability, and maintainability, as defined in the Systems Requirements document.
- Supports the performance requirements for concurrent users, transaction volumes, and response time.
- Uses a standards-based architecture and limits the use of proprietary technologies.
- Maintains end-to-end data integrity.
- Uses declarative and attribute-oriented programming methods over traditional ones.
- Creates modular and loosely coupled components and layers.

4. Cardinality's Response to Questions

4.1 General Information Being Sought

4.1.1 *A description of a web-based communications system which shall facilitate communications between individuals providing services to foster children, including, but not limited to, requests from foster parents and responses to requests from staff of the Bureau for Social Services and its contractual designees; updates regarding foster child movement, visitation, and travel; schedules for court hearings, guardian ad litem meetings, and multidisciplinary team meetings; and other communications that may improve care for the foster child amongst designated parties with legal responsibilities to care for the foster child.*

In today's digital age, businesses and organizations, regardless of scale and geographical barriers, require a reliable means of communication that can facilitate seamless collaboration. To address this need, Cardinality provides a highly effective and secure web-based communication platform with a user-friendly interface and an extensive range of functionalities.

The essential features of our communication solution include:

- Appointments Management
- Voice and video chat capabilities
- Email capabilities
- Document/file sharing
- Task management
- Alerts/Notifications
- Integration with existing systems

Additionally, we also have mobile applications, customizable meeting profiles, and integration with other business systems, within an intuitive framework for easy navigation.

When choosing a web-based Communication System, usability and integration with existing systems are crucial factors to consider. Cardinality's Collaborative Communication System prioritizes both, with an intuitive UI Framework and seamless integration capabilities. Our system, for facilitating communication between service provider of foster children and child welfare staff includes the following features:

- A. Secure user accounts:** Each user will have a secure account that requires login credentials, verified using a user authentication system. This will ensure that only authorized users can access the system.
- B. Mobile Accessibility:** Cardinality's web-based communication solution includes native mobile applications for iOS and Android platforms. These mobile applications offer the full range of functionalities available in the web application, allowing WV DHHR employees to stay productive and efficient while on-the-go. The Cardinality mobility platform includes the following features:
 - a. Native App:** This streamlined version of the CCWIS application is designed to increase productivity and operational effectiveness for field workers. It includes offline capabilities and automatic synchronization when the application is online.
 - b. Responsive Web:** Built with a "mobile-first" approach, the application is accessible via a stable internet connection on iOS and other Android devices, offering a simpler and pared-down experience compared to the desktop version of the CCWIS application.

As mentioned above, the native application provides a full range of functionality for caseworkers to perform their day-to-day tasks both in online and offline modes.

In offline mode, the native app provides the following functionality:

- **Access case information:** Caseworkers can view and edit case information that has been set for offline mode.
- **Use camera:** The native application leverages the device capabilities to take photos or videos and link it to case files.
- **Upload files:** Photos or videos taken while in the field can be uploaded and associated with case information by adding metadata to those files.
- **Assessments:** All assessment templates required to be completed during visits with clients are available in offline mode for caseworkers to capture assessment data.
- **eSignature:** The native application captures eSignatures from clients and associates them with electronically captured records, even when offline.
- **Case plan:** The native application can record or manage case plan activity statuses and other information in offline mode.
- **Travel plan:** To optimize and manage caseworker travel schedules while reducing time and travel mileage, the native application has the ability to support and implement “traveling salesman problem” resolution techniques - leveraged Google maps and direction APIs to help achieve travel planning and optimization.

C. Role-based access control: Our solution’s built-in Role-Based Access Control (RBAC) facilitates easy creation of roles and access permissions required by a user or service needs. The RBAC administrators can enable authorization at field/page/module levels, making it easy for administrators to manage users, roles, and access permissions. The solution allows for configuring application components to roles that users require. Additionally, it includes out-of-the-box roles and codes for easy access control implementation. Users would have access to different levels of information, based on their role and responsibilities within the Child Welfare system. For example, foster parents may have access to information about their foster child’s schedule, while case workers and other staff may have access to more detailed information about the child’s case.

D. Alerts and Notifications: The Alerts and Notifications feature can notify users in multiple ways (in-application notifications, alerts within web applications, secure messages, emails, SMS, and so on). The workflow engine can be configured to send notifications in real time, based on service/user/activity for custom events or case-related activities, e. g. foster child movement, visitation, and travel. Integration with WV’s existing CCWIS allows it to provide data related to child placement, visits, services and travel.

E. Appointment Management: Our solution integrates with calendar applications, such as Outlook Calendar, iCal, and Google calendar, to schedule and track events or to initiate notifications. Using this feature, users can add court hearings to their calendar, parent/child visit and sibling visit meetings, multidisciplinary team meetings, and other ad-hoc meetings.

- F. Messaging and chat features:** The system offers messaging and chat features that allows quick and easy communication between foster parents, caseworkers, and other staff.
- G. Document management:** Cardinality's Collaborative Communication System comes integrated with a document management system or can integrate with the state's document management system through its pre-built connectors. This functionality allows users to upload and share documents related to the foster child's case record, such as medical records, school records or court documents in multiple formats (e.g. pdf, word, excel) These documents are securely stored and accessible only to authorized users.
- H. Ticketing functionality:** Foster parents can submit requests for services or support to caseworkers and staff, who can respond to requests, within the system.
- I. Security:** The system has robust security measures, such as user authentication, data encryption, and audit trails, to ensure privacy and security of sensitive information about foster children. Our communication platform's real-time updates allow WV DHHR stakeholders and foster care providers to communicate and collaborate effortlessly, ensuring foster children receive optimal care and support by addressing requests and responses efficiently.

4.2 Specific Questions.

- 4.2.1 *How would the web-based communication system ensure that access to utilize the child welfare information technology system is available to only those parties with legal responsibilities to care for and support the foster child? Access must be automated with the existing comprehensive child welfare information system (CCWIS) in order to avoid information being entered into two separate systems.*

Cardinality's Collaborative Communication system maintains confidentiality and security of the child welfare information technology system, by implementing multiple security measures that restrict access to only authorized parties with legal responsibilities to provide care and support to the foster child.

Some of these measures include:

- A. User authentication:** Our system requires users to verify their identity with a unique username and password. We also use multi-factor authentication (MFA) for added security.
- B. Role-based access control:** Role-based access control (RBAC) is used to control access to specific information within the system, based on a user's role and responsibilities.
- C. Audit trails:** The audit trails feature tracks users' activity within the system and helps to monitor access to sensitive information and identify any unauthorized access attempts. Our auditing component preserves information in JSON format, before the change. These audit logging activities can be performed on the same or different database instances depending on the configuration for all additions, deletions, changes, or updates by users.
- D. Data encryption:** We believe in securing, governing, and protecting data at rest, in transit, and during controlled access by authorized users. To achieve this, our solution encrypts database data files before writing, preventing direct access at the operating system level. Our system also utilizes TLS encryption to secure data in transit, and a 256-bit AES encryption algorithm to

encrypt sensitive data, including Confidential Personal Data and Sensitive Information, that is migrated into our solution.

- E. Regular system maintenance and updates:** We have a proactive approach to system maintenance. We conduct regular system health checks and apply the necessary security patches, updates, and upgrades. This ensures that the system is updated and running optimally. Regular system maintenance and updates helps to identify and address any vulnerabilities.
- F. Interoperability with Agency's systems:** The platform supporting the Collaborative Communication System allows for seamless integration with state's existing CCWIS system and other external systems through WSO2 API gateway that facilitates data exchange in real time or in batches. WSO2 offers tools for managing and tracking the progress of specific data exchanges or integrations, and the ability to generate reports or alerts based on the status or performance of specific integrations.

To ensure that only authorized parties with legal responsibilities to care for and support the foster child have access to the Child Welfare system, additional verification methods may be necessary, such as verifying the user's legal status or relationship to the foster child through official documents.

Moreover, the web-based Communication System will be connected to the current CCWIS using APIs, to prevent redundant data entry and to ensure that all pertinent information is saved in a centralized location. The automated integration will ensure that any modifications or updates made in either system are synchronized in real-time so that the information is accurate and current.

4.2.2 *How would the web-based communication system archive communications for the purpose of running reports on responsiveness by parties utilizing the system?*

Cardinality's Collaborative Communication System uses State-of-the-art Analytics and Reporting Suite to store and archive communications, which enables the system to generate reports on responsiveness. All communications are tracked to provide reports and insights to improve the communication process. Our solution provides a standard report and analytics development interface with both tabular and graphical data representations. Reports are configured to the Cardinality.ai Platform Database to provide real-time metrics and dashboards.



Figure 02: Reporting features

Our proposed solution performs the following tasks to measure communication effectiveness between the parties:

- A. Store all communication data in a centralized database:** Our solution logs and stores all communication activities between parties, including the time, date, and type of communication (for example, , email, chat, video call), as well as any attachments or files exchanged. The data stored in the database can be used for easy retrieval and analysis.
- B. Tracking:** The system monitors all communication-related metadata, such as the sender, receiver, communication type, date, time, and subject line. Timestamps are used to track response time from the moment a communication is sent. This data can be analyzed to evaluate individual responsiveness and identify communication patterns.
- C. Reporting:** Our system produces reports utilizing stored communication data, offering valuable information about the level of responsiveness demonstrated by each participant. These reports can be tailored to display various kinds of data, such as response times categorized by day or communication type, and can be exported in multiple formats to facilitate additional analysis.

Utilizing analytics tools, our system detects communication behavior trends and patterns, while employing machine learning models to forecast the duration a party will take to respond to a communication. It delivers real-time reports on response times, enabling parties to promptly recognize and tackle any communication obstructions. Additionally, the system creates personalized reports for each party, exhibiting their individual response times and overall level of responsiveness. To present communication data in a more comprehensible manner, the system incorporates user-friendly dashboards with visualizations such as charts and graphs.

We are confident that WVDHHR would benefit from the reporting capabilities of Cardinality's Communication System to improve the responsiveness of various stakeholders.

4.2.3 *How would the web-based communication system complement the existing CCWIS for the purposes of controlling access to those parties with legal responsibilities to care for and support the foster child and to archive the communications for purposes of discovery or other reasons?*



Figure 03: Access Control features

Cardinality's Collaborative Communication System will easily complement the existing CCWIS via the inbuilt Role-Based Access Control (RBAC) providing secure and centralized access for communication among parties involved in caring for and supporting foster children, including caseworkers, foster parents, biological parents, and other relevant individuals.

Our system is designed to regulate access through RBAC. This implies that every user is assigned a particular role and corresponding permissions within the system, thereby enabling efficient access control. The system guarantees that sensitive information is accessible only to parties with legal obligations to care for and support the foster child. Furthermore, it permits distinct levels of access depending on a user's role.

The system offers precise roles to manage users and their responsibilities. This means that the administrator can assign permissions to the user at various levels, such as field, page, menu, or feature levels. Each role can be customized to enable or restrict access to particular features and functionalities present within the system. For instance, the system can deny certain roles the usage of the chat or email features or restrict access to schedule appointments.

Our solution can smoothly migrate the current userbase residing on the State's current system, and access controls can be established on it. The system delivers supplementary access and security features, granting greater flexibility and control to an admin user.

Furthermore, Cardinality's Collaborative Communication System maintains a record of every communication that occurs between the involved parties, which can be effortlessly accessed at any time. This can be useful for discovery or other reasons, as well as for legal or administrative purposes.

4.2.4 *In what jurisdictions is this software currently being utilized?*

Our system is currently utilized by the State of Maryland as part of the Child, Juvenile, and Adult Management System (MD-CJAMS).

MD-CJAMS is a modular system based on open-source technologies and provides comprehensive case management capabilities; integrated Title IV-E eligibility determination, financial management, and

provider management capabilities. Our Collaborative Communication System features are part of the MD-CJAMS system.

In the Child Welfare domain, our solution supports all major processes and programs including Intake, Investigation, Child Protective Services, In-Home Services, Out-of-Home Services, Foster Care, Permanency services (Reunification, Adoption, and Guardianship), and Independent Living Services.

4.3 Documents Being Sought.

4.3.1 *Training materials, preferably viewable online.*

Cardinality will follow the **ADDIE** (Analyze, Design, Develop, Implement, and Evaluate) instructional design and delivery methodology. This approach will ensure that all training materials and delivery activities are of high quality and consistency, thereby enhancing your staff's proficiency in using the solution. The methodology will be tailored to meet specific requirements, striking a balance between structure and flexibility.

The training materials offered will include:

- **Online User Guide.** Cardinality's KBS (Knowledge Base System) will provide post-training support through online user guides, videos, FAQs, and artifacts.
- **Recorded Webinar Sessions.** These sessions will provide explanations, instructions, and demonstrations on how to perform the associated duties and responsibilities. These webinars will be provided using the Department's preferred video conferencing and collaboration tools.
- **Instructor Manuals.** These manuals will guide the Train-the-Trainer SMEs as well as Cardinality trainers in delivering the necessary training. These manuals will include examples, demonstration scripts, and instructions for hands-on learning and delivering a post-training learning assessment.
- **PowerPoint Presentations.** These presentations will support demonstrations of various functions by the instructor, providing important information or summaries that may be relevant to the effective use of the application within a workflow or module.

5. Authorized Signatory

By signing below, I certify that I have reviewed this Request for Information in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this information for review and consideration.

Elixir Lab USA Inc. (d/b/a) Cardinality.ai

(Company)



Anna Harper, Chief Administrative Officer

(Representative Name, Title)

513-907-1068

(Contact Phone/Fax Number)

11th April 2023

(Date)