

Response to Request for Proposals



WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN SERVICES BUREAU FOR MEDICAL SERVICES

Solicitation# RFP MED11015

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TECHNICAL PROPOSAL

Prepared for

Mr. Bryan Rosen
WV Department of Health and Human Resources
Office of Purchasing
One Davis Square, Suite 100
Charleston, WV 25301
(304) 558-0953
Bryan.D.Rosen@wv.gov

Prepared by

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RESTRICTION ON DISCLOSURE AND USE OF DATA

This offer includes data that shall not be disclosed outside the state and shall not be duplicated, used, or disclosed – in whole or in part – for any purpose other than to evaluate this offer. If, however, a contract is awarded to this offeror as a result of – or in connection with – the submission of this data, the state shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting subcontract. This restriction does not limit the state's right to use information contained in this data if obtained from another source without restriction.

TRANSMITTAL LETTER

May 17, 2011

Mr. Bryan Rosen
WV Department of Health and Human Resources
Office of Purchasing
One Davis Square, Suite 100
Charleston, WV 25301

Dear Mr. Rosen:

It is our privilege to submit this response to the State of West Virginia's Request for Proposals to provide a data warehousing/decision support system solution for your Medicaid program. Government Works is a woman-owned minority small business with offices in Southborough, MA and suburban Washington, DC.

Please note that Government Works accepts the terms of the RFP and certifies that we arrived at the proposed price without any conflict of interest.

Founded in 2002, Government Works is an established provider of healthcare management solutions, IT services, and acquisition support to federal, state, and local governments, as well as to leading healthcare organizations around the country. Government Works is a woman-owned, minority business headquartered in Southborough, Massachusetts. We have an outstanding reputation in software development—such as interface development, database development, report generation, and datacenter operations—and we provide customized solutions for the business processes of every customer using our products.

To deliver maximum value to our federal and municipal healthcare management clients, Government Works partners with its sister company, ikaSystems—one of the fastest growing providers of comprehensive IT services in the healthcare industry. Like Government Works, ikaSystems is based in Massachusetts, and as sister companies, they frequently share resources and expertise to deliver outstanding and creative healthcare IT solutions.

The Government Works/ikaSystems Data Warehouse combines state-of-the-art Web-based technologies to quickly normalize and integrate any type of data, analyze this data, and deliver timely analyses information in flexible, high-impact formats. The data warehouse stores the data in an integrated, time-variant and stable relational environment, ready for statistical analysis and decision support. We store data using indexing technologies, so that data can be retrieved quickly. Before any analysis is performed, all data is cleaned and translated; because of the system's efficiency, data can be refreshed as often as BMS requires, maximizing the impact of all analyses through near real-time information. In addition, we use parallel processing (Oracle 11g Enterprise edition) to enhance performance.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Government Works is teaming with our sister company, ikaSystems, Inc., to provide you with the most complete solution possible. Government Works' and ikaSystems' capabilities combine to provide you with a decision support system solution that expands the use of traditional analytical tools to make them available across a broad spectrum of staff and stakeholders while at the same time expanding the variants in data past the point of traditional expectations and into new areas of analytics. Our utilization analytics and profiling functions, in tandem with the data mining capabilities of our warehousing product offer a centralized, consolidated database that integrates data retrieved from the entire organization. It consolidates data from multiple and diverse sources, formats that data, and then provides the tools for that data to be extracted, analyzed, and discussed in such a way that it is useful at all levels of the organization. The data warehousing function is sorted, arranged, and optimized to provide answers to questions coming from diverse functional areas within the healthcare organization. A time component is included in the Government Works warehousing design so that historical data can be compared to current data and future trends can be extrapolated. Data is added and revisited based upon the client's needs. It is in fact not mere words, but a very real collaboration,

Government Works' current product base is ideally designed to extract information from data and to use such information as a basis for clinical decision-making. GWI-Utilization Analytics (UA) and GWI-Profile are both tools with long and successful histories within our two companies. They combine historical operation data with clinical models (that reflect real-life clinical activities) and the massage and aggregation of that data to achieve a true picture of an individual circumstance based on realistic clinical factors. Utilizing the many functionalities of Government Works' Data Warehouse and Data Center, these tools can become powerful at the simplest and most complex levels, and can even be used to forecast responses to certain situations and challenges. Government Works' DSS product is flexible and interactive and provides *ad hoc* query tools to retrieve data and to display data in different formats.

Government Works also is proposing the use of HMS Technologies as our subcontractor for the performance of this contract. Incorporated in 2003, HMS Technologies is a Certified Service Disabled, Veteran-Owned Small Business (SDVOSB) Technology Company Incorporated in 2003, with HubZone certification in process, headquartered in Martinsburg, West Virginia with satellite offices in Tyrone, Pennsylvania; Rockville, Maryland, and Vancouver, Washington.

We believe that our response will demonstrate that our approach is rational, practical and more cost-effective than any approach that has been attempted in the past. We welcome the opportunity to discuss with you both its implications and its impact, and to describe in greater detail how Government Works can provide the services and solutions that will support the state of West Virginia as you strive to meet the complex goals of Medicaid reform and the implementation of a Medicaid Enterprise system.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

We look forward to speaking with you in the future.

Krishna Ika
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TABLE OF CONTENTS

EXECUTIVE SUMMARY	6
VENDOR’S ORGANIZATION	9
LOCATION	10
PROJECT APPROACH AND SOLUTION	11
VENDOR QUALIFICATIONS AND EXPERIENCE.....	14
PROJECT STAFFING.....	19
SOLUTION ALIGNMENT WITH BMS’ BUSINESS NEEDS	25
TECHNOLOGY SOLUTION	53
SUBCONTRACTING	144
SPECIAL TERMS AND CONDITIONS	145
SIGNED FORMS.....	146
COST SUMMARY (ATTACHMENT I).....	155
RFP REQUIREMENTS CHECKLIST (ATTACHMENT II).....	156
ATTACHMENTS	164

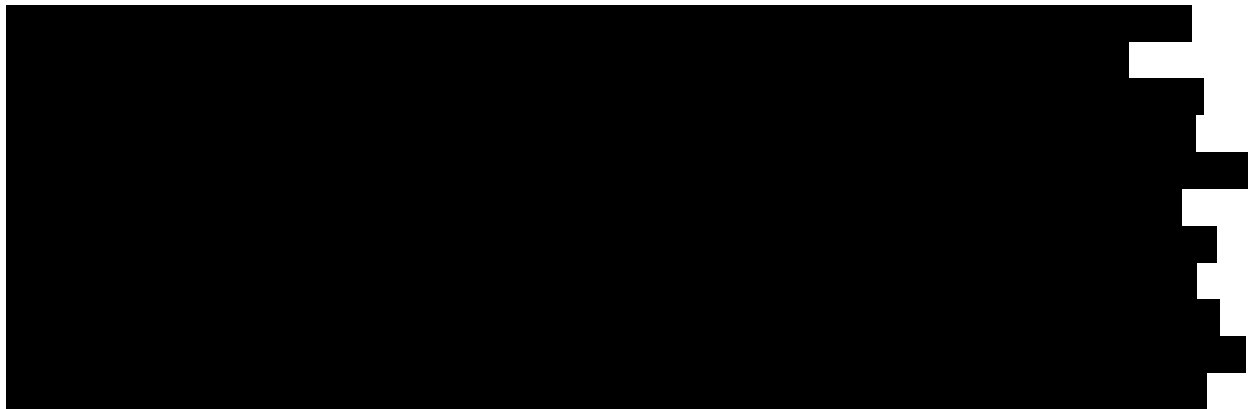
EXECUTIVE SUMMARY

Government Works, Inc. is pleased to present this proposal for a Medicaid Decision Support Services/Data Warehouse to the state of West Virginia's Bureau of Medical Services. Our data warehouse houses one of two copies of the MARx database, which under a contract with CMS is used by Medicare Advantage plans across the country to determine eligibility and enrollment.

Our top-secret-cleared data warehouse combines state-of-the-art Web-based technologies to quickly normalize and integrate any type of data, allowing complete analysis of opportunities to improve the quality of care delivery or reduce costs and ultimately the delivery of timely information in flexible, high-impact formats. As a result, BMS will be able to more effectively identify critical information and allow its Medicaid providers and provider entities to design tailored programming and make decisions based on all the data they need.

As part of West Virginia's Medicaid Information Technology Architecture (MITA) initiative, a number of goals were set by the state and by BMS in 2009. Those goals are reflected in strategic initiatives to transform the business operations of the state's Medicaid program in such a way that it will become flexible enough to meet ever-expanding need and robust enough to build on technologies already in existence, in development, or in their own state of transition. The development of an active data warehouse was seen from the outset as critical to the achievement of these goals. This initiative will clarify expectations and increase accountability within BMS, between BMS, and between BMS and other agencies and in contractor relationships.

Critical to CMS' vision of Enterprise-wide systems that allow state programs to interact was the establishment not only of the data warehousing functionality but of the decision support system. The concept was a straightforward one: the DSS would interact with the state's stakeholders and MMIS to establish prior authorization guidelines, profile providers, institutionalize utilization analytics, and in the short run as well as the long run, improve care for beneficiaries. In addition, BMS requires a system that is capable of wide-ranging financial, programmatic, and project management analytics, all of which Government Works is able to offer.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Government Works also offers BMS the services of staff and a subcontractor that are seasoned in working with Medicaid and with the technologies involved in implementing and managing a DSS. As a leader in healthcare IT, we have worked with numerous Medicare and Medicaid MCOs, as well as federal, state, and local entities.

One final caveat: We would like to note, as you review our technical and cost proposals, that we have been providing DSS solutions for several years. In fact, we recently competed for and won a contract to provide DSS functionalities to the New York Health Insurance Program, with which we are in contract negotiations. Therefore, our solution already includes most of the functionalities required by this RFP, which can be implemented as “out of the box,” and 8,000 hours a year for customization may well not be necessary; hence, the total cost proffered in the cost proposal would be lesser.

We look forward to having the opportunity to work with the state of West Virginia to implement its Medicaid DSS/DW vision.

VENDOR'S ORGANIZATION

PRIME CONTRACTOR

Company Name	Government Works, Inc. (GWI)
Address	257 Turnpike Road, Southborough MA 01772 774-760-1600 www.governmentworks.com
Licenses (if applicable)	

TEAMING PARTNER

Company Name	ikaSystems, Inc.
Address	134 Turnpike Road, Southborough, MA 01772 508-229-0600 www.ikasystems.com
Licenses (if applicable)	

SUBCONTRACTOR

Company Name	HMS Technologies
Address	1 Discovery Road, Martinsburg, WV 25403-1844 (304) 596-5583 www.hmstech.com
Licenses (if applicable)	

The Financial Reports for Government Works are included in **ATTACHMENT A**.

LOCATION

In addition to any onsite work that is performed, Government Works will perform the tasks of this contract at its Southborough, Massachusetts location or at its Rockville, Maryland location. IkaSystems will perform any tasks of the contract it is assigned at its Southborough, Massachusetts location. Our subcontractor, HMS Technologies, Inc., will perform any tasks associated with the contract at their offices in Martinsburg, West Virginia.

PROJECT APPROACH AND SOLUTION

At the time that Medicaid was established, no one could have imagined the complexities or nuances involved in managing a healthcare system for the medically indigent and their dependents that would encompass the number of lives and the levels of services encompassed by the program today. Neither could the industry have envisioned the need for database systems so complex that they could guide clinicians through appropriate clinical decision making processes. But then, no one realized how complex and overworked the health care industry would become or how great the need for such support and the cost savings and improvement in quality of care it promised would be.

West Virginia is responsible for the healthcare of 183,000 children and just under 60,000 parents were enrolled in West Virginia's Medicaid program; about two-thirds of these parents are women. Only parents in families with income below 37 percent of the poverty line (\$6,142 per year) are covered through the Medicaid program. Since March 2009, when the Affordable Care Act was passed, West Virginia's healthcare system has undergone numerous changes. From July 2009 to June 2010, Medicaid's average monthly enrollment increased 4.8 percent compared to the same period last year. Average monthly enrollment is increasing approximately 8,000 members. This trend continues today.

But in the meantime, the healthcare information technology industry has progressed to the point that it is no longer out of the realm of reality to imagine that a database and technological decision-making system could overlay the clinical practices that affect members every day. Since the 1970s, experts have been developing active knowledge systems through which points of individual data can be used to generate personalized clinical advice.

The Bureau for Medical Services is facing the same constraints as Medicaid programs in other states and is responding by establishing a strategy that will make the most of resources, technology, and manpower. This strategy reflects national strategy in that it focuses on clarifying and simplifying the processes associated with processing Medicaid claims while at the same time providing the highest-quality care to enrollees. New initiatives that the state must address include maximizing the efficiency of care for Medicaid enrollees who suffer from chronic conditions and generate episodes of care and promoting wellness and developing activities to do so.

The technology that has been used in the past to support the Medicaid program is not only no longer efficient, it has lost its relevance in a world in which clinical decisionmaking is refined to the point that providers parse or divide responsibilities for care among themselves according to computer-prompted guidelines and the need for reporting and comprehensive, accurate analytics has become so great that Medicaid programs cannot function effectively without them. The decision support system required by a client as large as the state of West Virginia must be able to integrate a significant amount of patient data with the enormous knowledge base that constitutes numerous clinical guidelines in order to create an inference engine that develops high-quality, cost-effective, and most importantly, reliable and medically sound treatment plans tailored to the individual needs of the patient and clinical expertise of the provider. It sounds like a superhuman task. And in a very real sense, it is. Perhaps no other technology takes our human capabilities and transforms them for the improvement of people's lives more than this technology does.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

At Government Works, we are well aware that the Centers for Medicare & Medicaid Services (CMS) is encouraging states to implement a “big picture” approach to Medicaid, and to set up its systems to function on an “enterprise” level that prioritizes high-quality health care and prevention as well as financial goals. Such a system cannot exist without a state-of-the-art data warehouse.

We are pleased to offer you a Medicaid data warehousing/decision support system solution that is informed, creative, innovative, and out of the mainstream. Working with ikaSystems, Government Works will develop and implement a software solution that will address the challenges that state Medicaid programs face when attempting to create a medical home for its Medicaid members and provide them with up-front high-quality care at all points along the care continuum. The DSS/DW solution we have developed will accept data in a range of formats and from a variety of additional sources.

We believe that Medicaid is no different from other sophisticated health plans at risk for the cost of care of a large heterogeneous population. As with other large plans, to function effectively Medicaid requires the right set of tools and organizational structure to better manage the delivery of care that produces the right result, which is high-quality and appropriate care. Although this may be a complex litany of requirements, it is necessary to maintain the integrity of the database and its components.

Although Medicaid/SCHIP programs can usually (but not always) link their own administrative files to each other (e.g., hospital and enrollment files), linking Medicaid files to other data within state government is more challenging. However, once linkage at the individual level has occurred, analyses can be used to monitor the quality of care delivered. Government Works has prepared comprehensive analyses such as those required by West Virginia to other clients and can deliver them to the state.

Management tools are only as good as the administrative data supporting them. Thus, states must often work on improving the quality of data that are submitted. This is especially true for encounter data from managed care organizations. Unlike fee-for-service claims data that are the basis for payment, encounter data are frequently not used and suffer from such problems as missing data and erroneous coding. While persistent data editing and standardization are key to improving data, states have used a variety of techniques to improve data quality. We will partner with West Virginia to ensure the quality of the data it obtains.

Several states are using encounter data to calculate clinical measures for public reporting or to adjust payments and have discovered that health plans are more incentivized to improve the accuracy of their data when it is used. The two mechanisms that are most responsible for more accurate encounter data are that plans in which performance falls below the mean will evaluate their data and make corrections and that plans also will scrutinize and critique the adjustment methodologies, resulting in improved methods for payment by states. This is considered a national imperative to which West Virginia is obligated.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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VENDOR QUALIFICATIONS AND EXPERIENCE

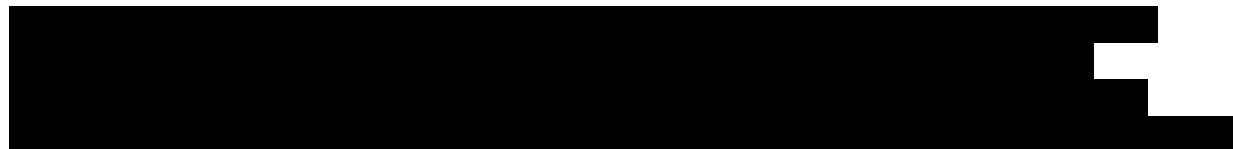
Founded in 2002, Government Works is an established provider of healthcare management solutions, IT services, and acquisition support to federal, state, and local governments, as well as to leading healthcare organizations around the country. Government Works is a woman-owned, minority business headquartered in Southborough, Massachusetts. We have an outstanding reputation in all aspects of software development, including interface development, database development, report generation, deployment, testing, and training, documentation, and data center operations. We provide customized solutions for the business processes of every customer using our IT products and can assure BMS that it will receive the same level of service as we deploy a decision support software solution that will provide the resources for clinical care decision-making according to highly specific algorithms.

Government Works is a leading provider of high-quality information technology solutions to federal and state government agencies as well as commercial customers. Offering a broad range of project management, development, and consulting expertise, Government Works enables its clients to fully utilize and effectively manage technology to address their missions and key initiatives. Our expert analysts work to develop and design solutions to challenges that will affect the entire healthcare industry, especially how high-quality resource management is implemented and deployed. We are unique in that our expertise lie not only at the back end of data analysis—pulling conclusions together—but at the front end as well—working with providers to ensure data collection tools are effective.

A Strategic Partnership: Government Works and ikaSystems

To deliver maximum value to our federal and municipal healthcare management clients, Government Works partners with our subcontractor on this proposal, ikaSystems, one of the fastest growing providers of healthcare IT services in the commercial healthcare industry. Like Government Works, ikaSystems is based in Massachusetts, and we frequently share resources and expertise to deliver outstanding and creative healthcare IT solutions. Government Works and ikaSystems jointly developed the GWI-Health suite of products and market the same products under different brands to different markets. This collaboration leverages the strengths of both companies and gives our clients access to a robust product suite, experienced implementation team, and unmatched subject matter expertise.

Working with ikaSystems, Government Works has achieved 100 percent successful implementations for all of its healthcare clients. These implementations, which have encompassed project and go-live planning, data conversion/transmission, testing, training, and deployment, all have been completed on schedule, within budget, and according to client requirements. Furthermore, *all* of those clients continue to use our products.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Our clients include:

Centers for Medicare & Medicaid Services (CMS). CMS administers Medicare, Medicaid, and the Children’s Health Insurance Program (CHIP), as well as related quality assurance, research, and outreach programs. CMS’s high-level mission is to ensure that its policies and actions

promote efficiency and quality within the total health care delivery system.

Under the current contract, Government Works receives 61.5 million records from CMS bi-weekly, and processes and loads 61 million records for eligibility, 75 million records for beneficiaries, 25 million records for low-income subsidiaries, 55 million records for Part D, 32 million records for retiree drug subsidiaries and 52 million records for uncovered months—totaling 239 million records.

Government Works is one of only two contractors in the country to be selected by CMS to host a copy of the Medicare Beneficiary Data (MBD/MARx) extract file for providing Medicare beneficiary entitlement and eligibility

Hosted in our secure data center, the MBD/MARx extract file is available to our clients via our CMS Gateway product, which allows them to perform real-time Medicare eligibility and enrollment functions for their members.

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DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

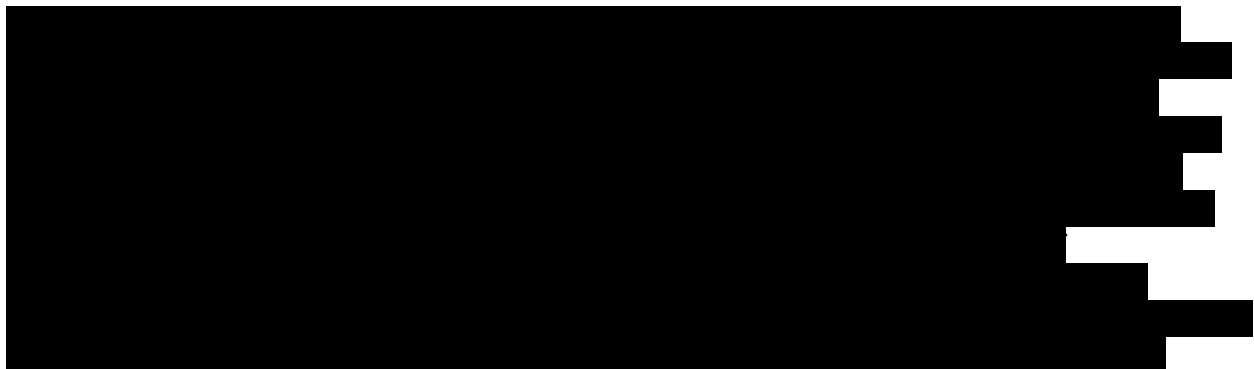
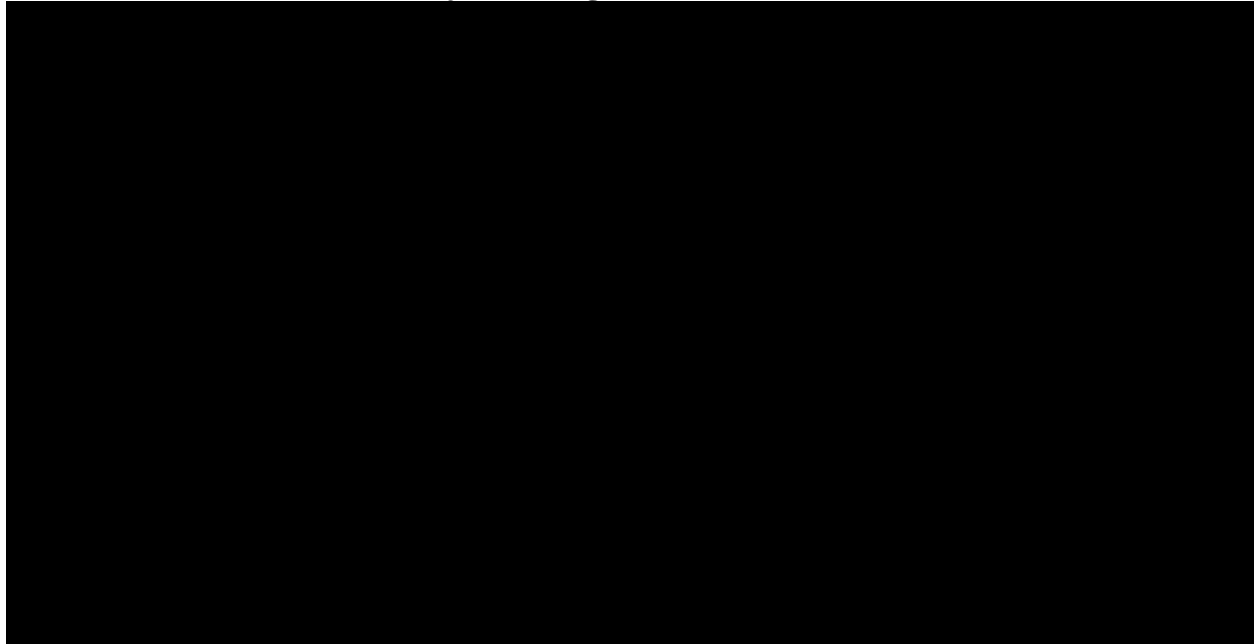
Our award-winning subcontractor, HMS Technologies, Inc. was founded by Harry M. Siegel and incorporated in 2003. HMS Technologies is a Certified Service Disabled-Veteran Owned Business with headquarters in Martinsburg, West Virginia and satellite offices in Tyrone, PA, Rockville, MD, and Vancouver, WA. The company boasts significant experience in, among other areas, Enterprise database amalgamation, database management and data mining, configuration management, COTS/GOTS Software Interfaces/Integration, database design and development, data exchange, infrastructure support, systems design and development and implementation, systems documentation, and technology evaluation. We propose to use this expertise in various areas during both phases of the project.

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PROJECT STAFFING

Project Management Team Chart



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West Virginia Department of Health and Human Services - Bureau for Medical Services
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DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Résumés for each of the proposed staff members can be found in **Attachment B**.

Our proposed team will be made up of individuals conversant in both Medicaid and in the implementation and operation of a decision support system and associated software. At all times during the course of the contract at least one staff member will be in direct contact with BMS, and a trainer will regularly work onsite for six months until the BMS users comfortable using the DSS system.

Other staff members will work onsite on an as-needed basis, to be determined with BMS during the initial kickoff discussions. Although that individual will interact with all the parties named above, it will be Mr. Ika who has the primary contact with BMS and other stakeholders.

SOLUTION ALIGNMENT WITH BMS' BUSINESS NEEDS

[REDACTED]

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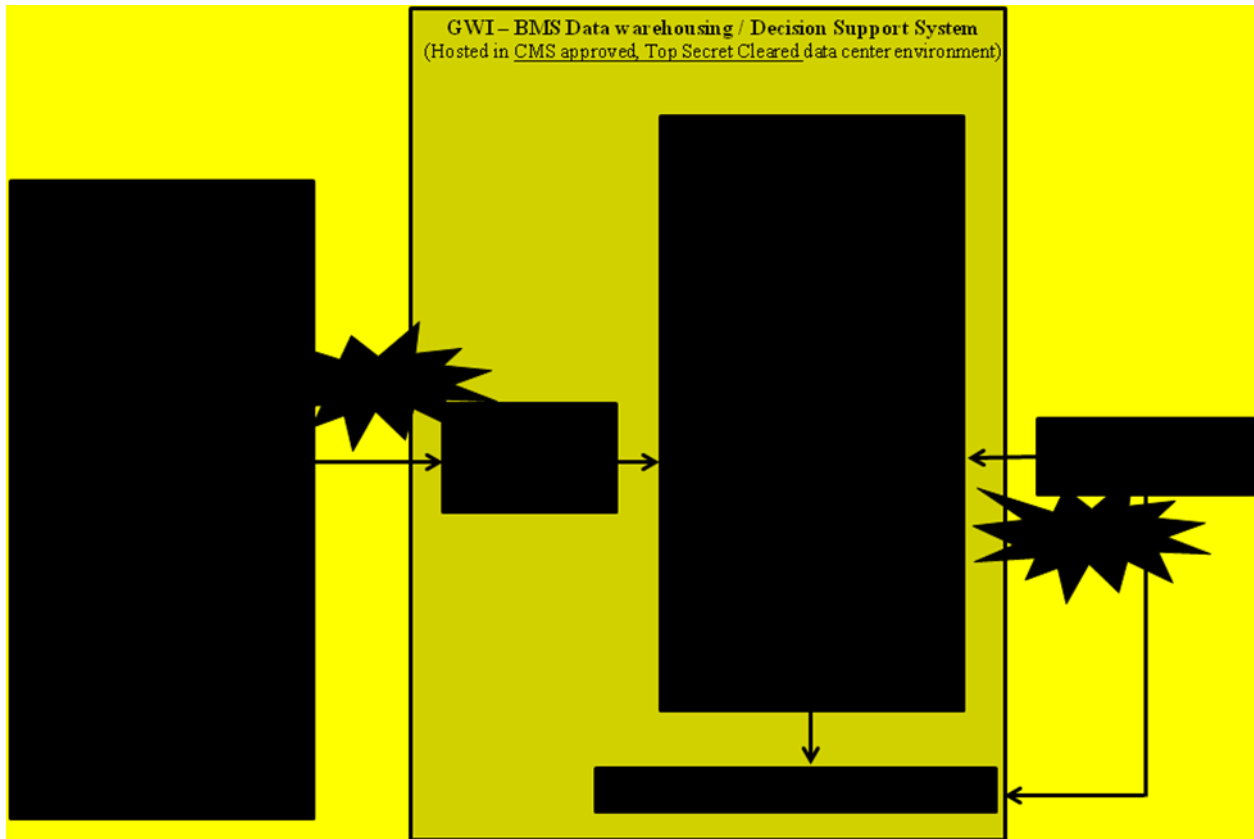
The Government Works Data Warehouse supports both column-level encryption of personal health data and all standard transaction formats. All client information, including health information, is minimum 256-bit SSL encrypted and protected. Our Data Warehouse solution uses and supports both HL7 and the standard EDI X12 protocols. All system components are HIPAA compliant, and all Protected Health Information (PHI) is protected according to HIPAA regulations as well as state- and client-mandated rules. In addition, because sensitive information may be sent through tunnels over a Virtual Private Network (VPN) through firewalls,

Government Works also supports 3DES, which is a mode of the DES encryption algorithm that encrypts data three times (three 64-bit keys are used, instead of one, for an overall key length of 192 bits).

Database Encryption	<ul style="list-style-type: none">• 256-bit SSL encryption• HTTPS• FTP over SSL/SSH• VPN with 3DES encryption	<ul style="list-style-type: none">• Column-level encryption for SSN, credit card, and PHI• Drive encryption with bit locker & TPM chips
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Government Works uses column-level encryption for every client in our book of business, including the Centers for Medicare & Medicaid.

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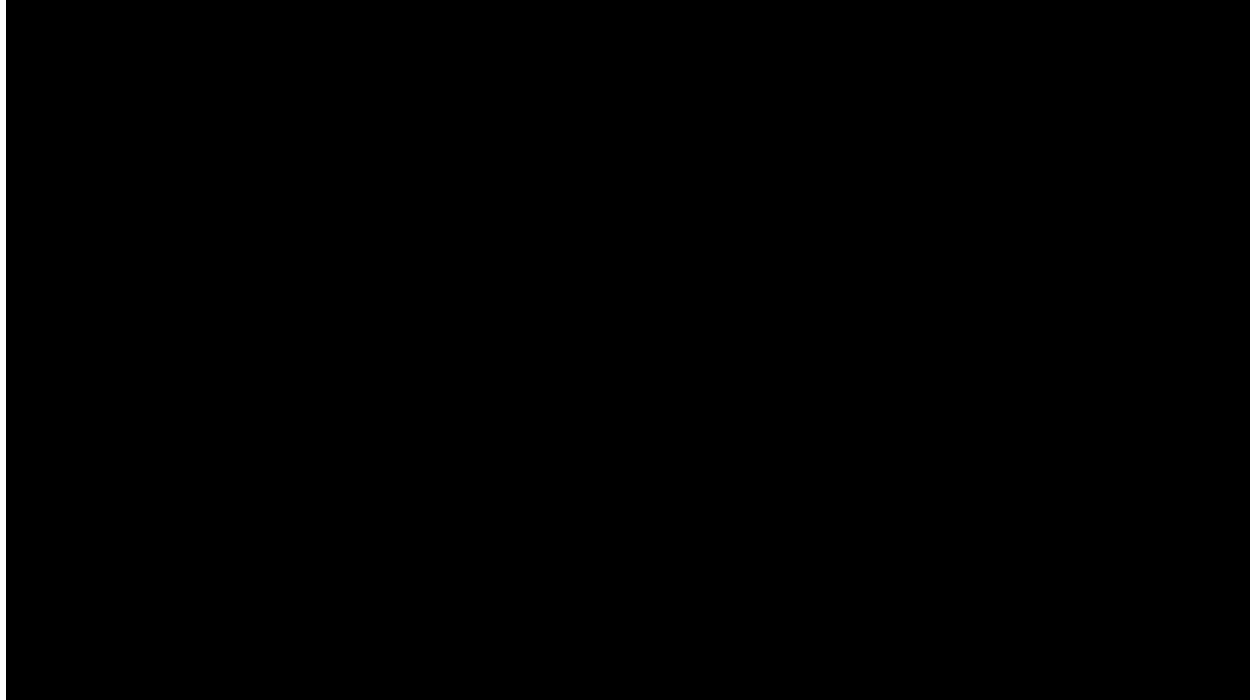
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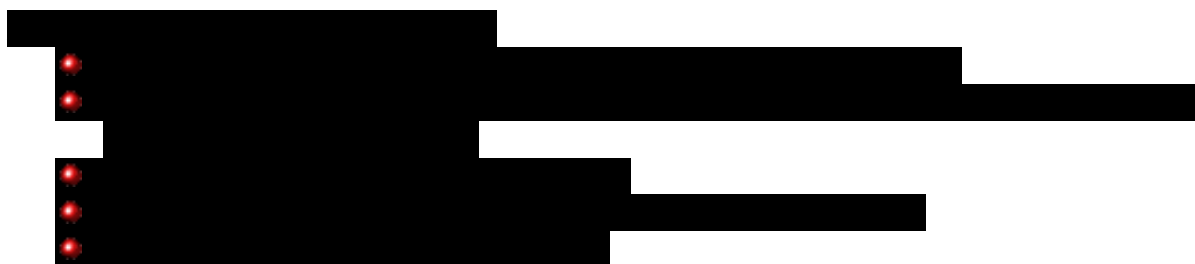
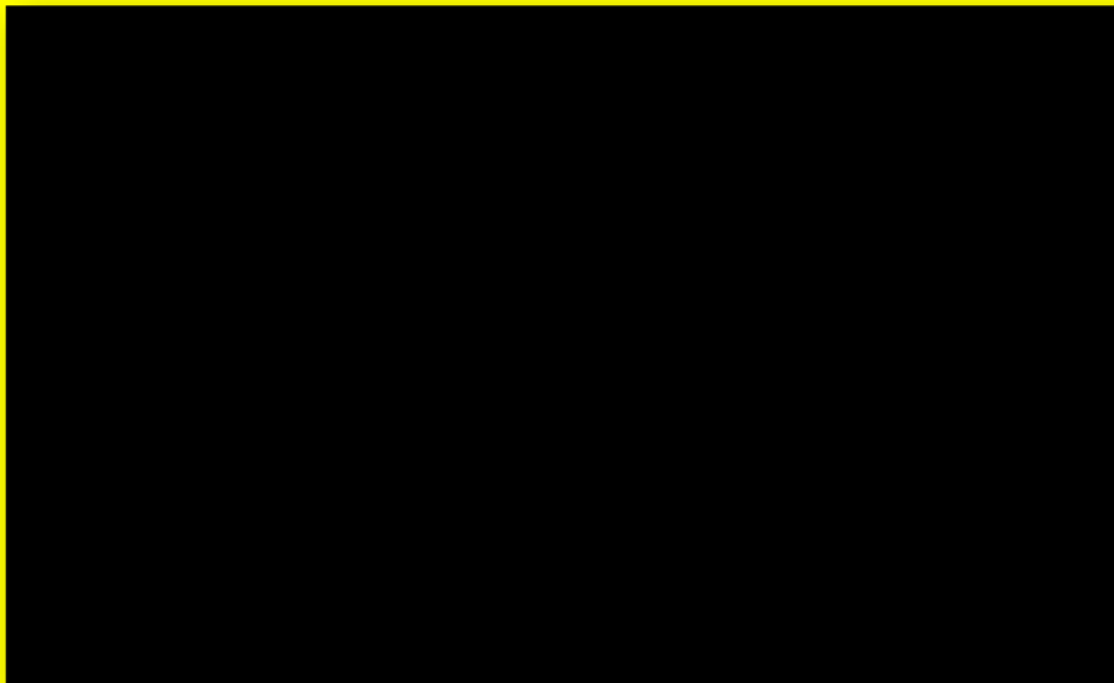
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

GWI-UA

- standard reports covering virtually all reporting requirements
- ad hoc reporting via third party tools
- availability of proprietary and industry standard grouping methods
- case identification and stratification
- adjusted primary care, specialty and hospital comparisons
- web based to facilitate information sharing
- Medicare reports required for January 2010



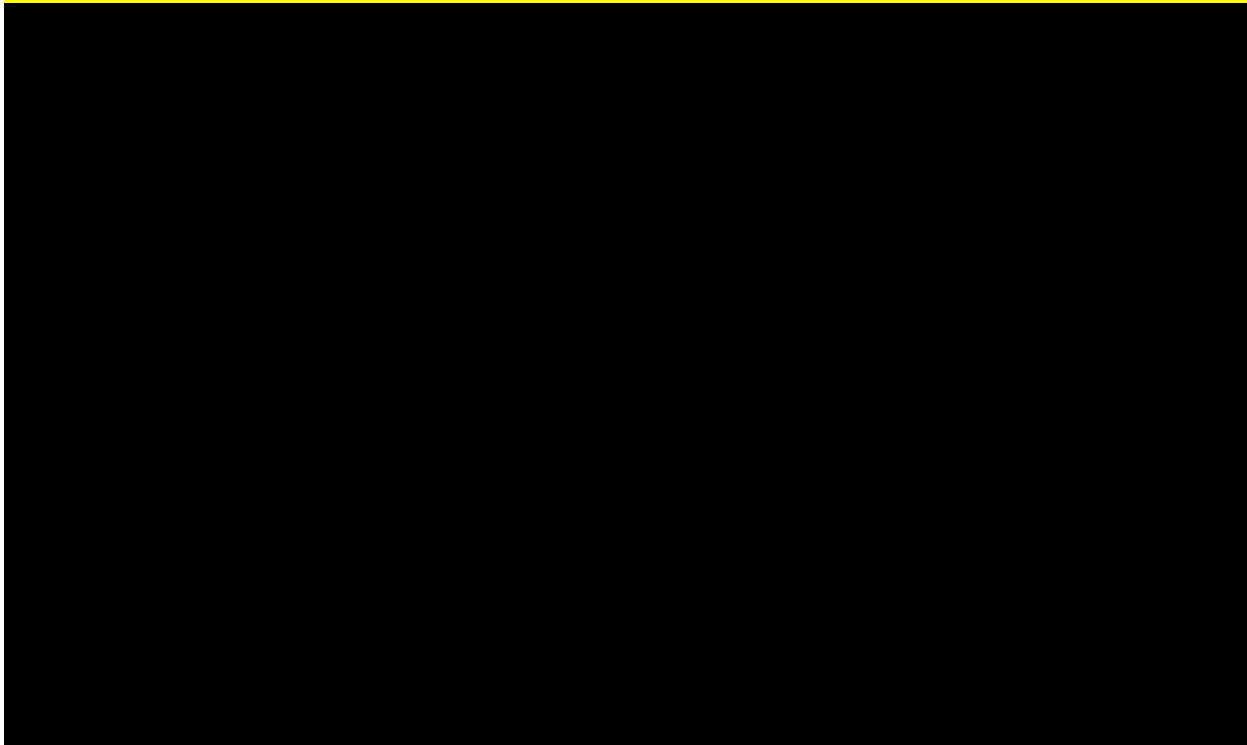
How Do Plan Metrics change over time: Opportunity to compare plans and plan designs



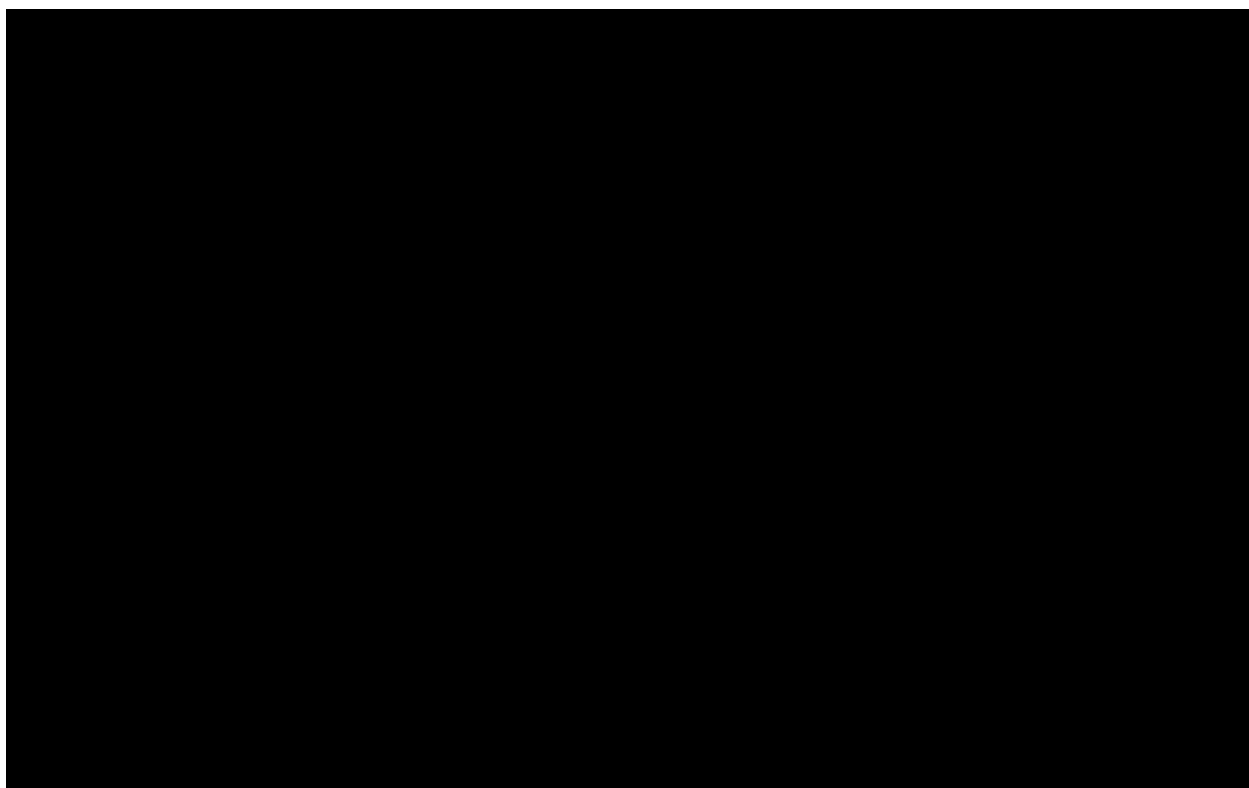
**PCP Risk Group Relative Performance Adjusted by Age/Sex and Case Mix
Summary (Liab.) Cat. \$50K**



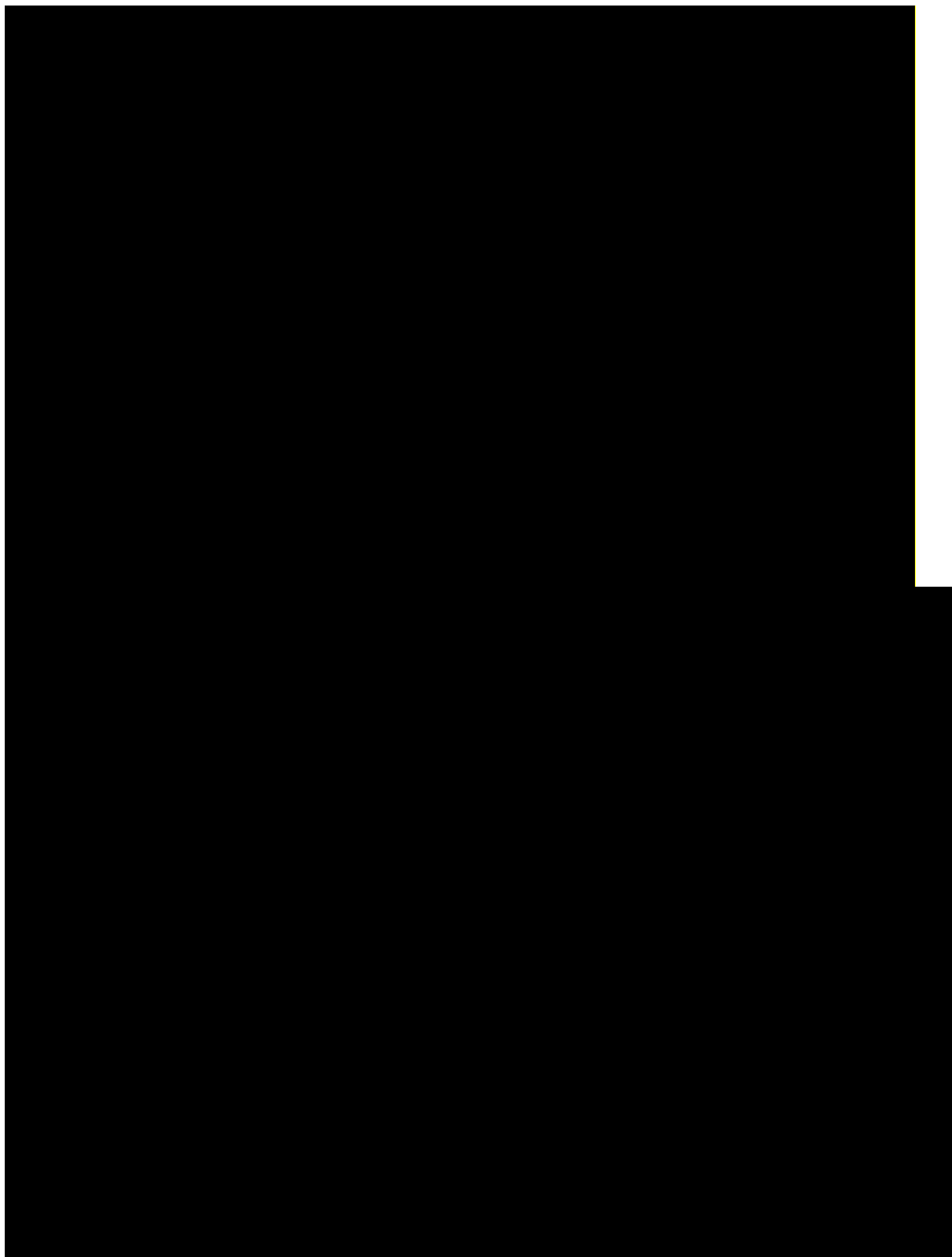
- The majority of providers are “efficient”; moving the members to these groups would save even more \$\$\$
- Tool can be used to “drill down” on referral patterns, hospital costs, develop COE’s, etc.



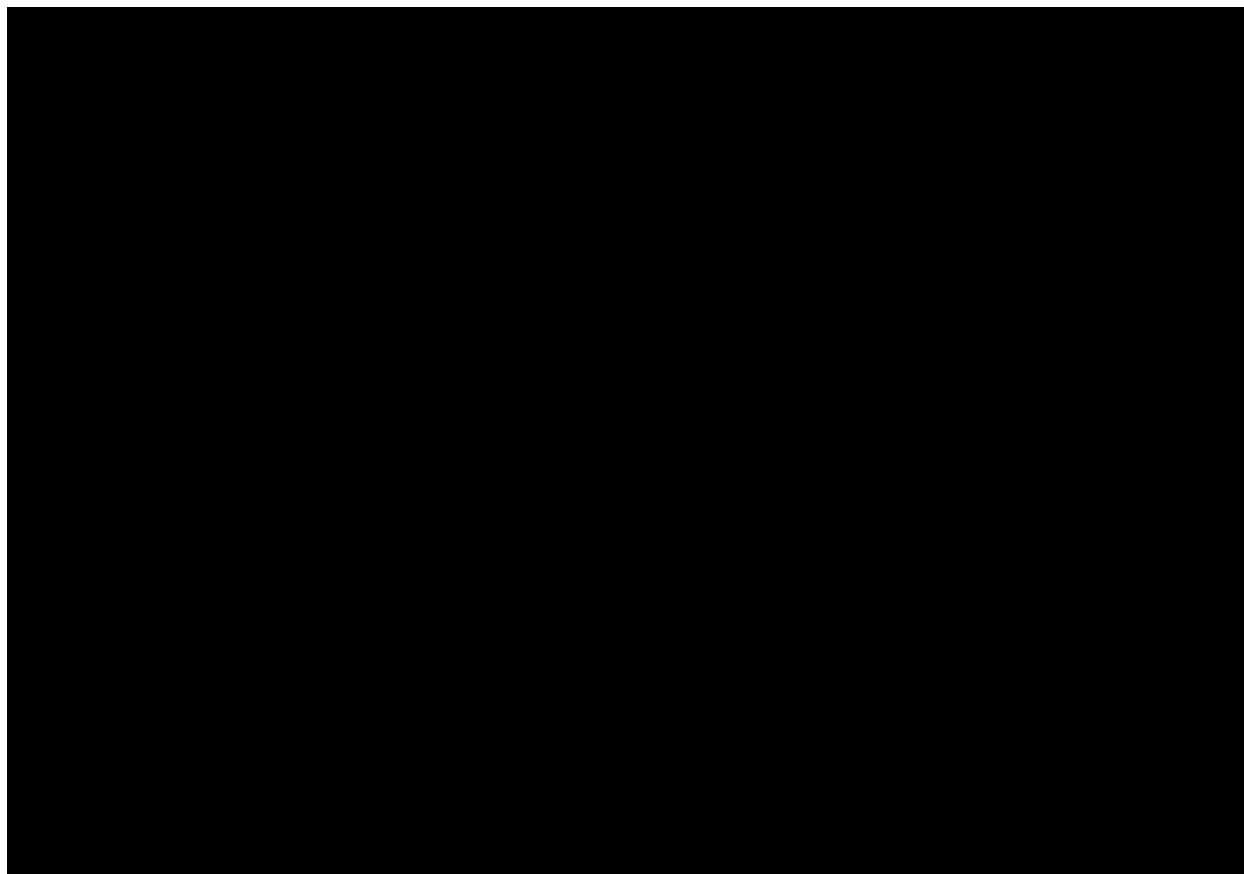
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West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



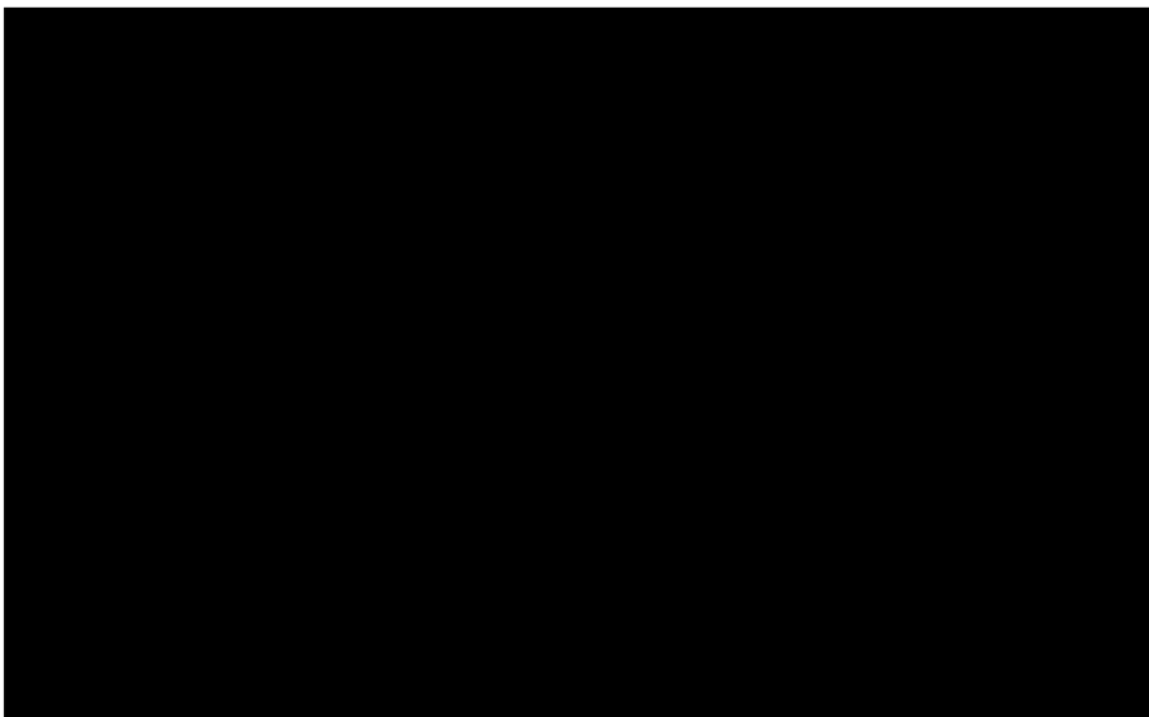
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



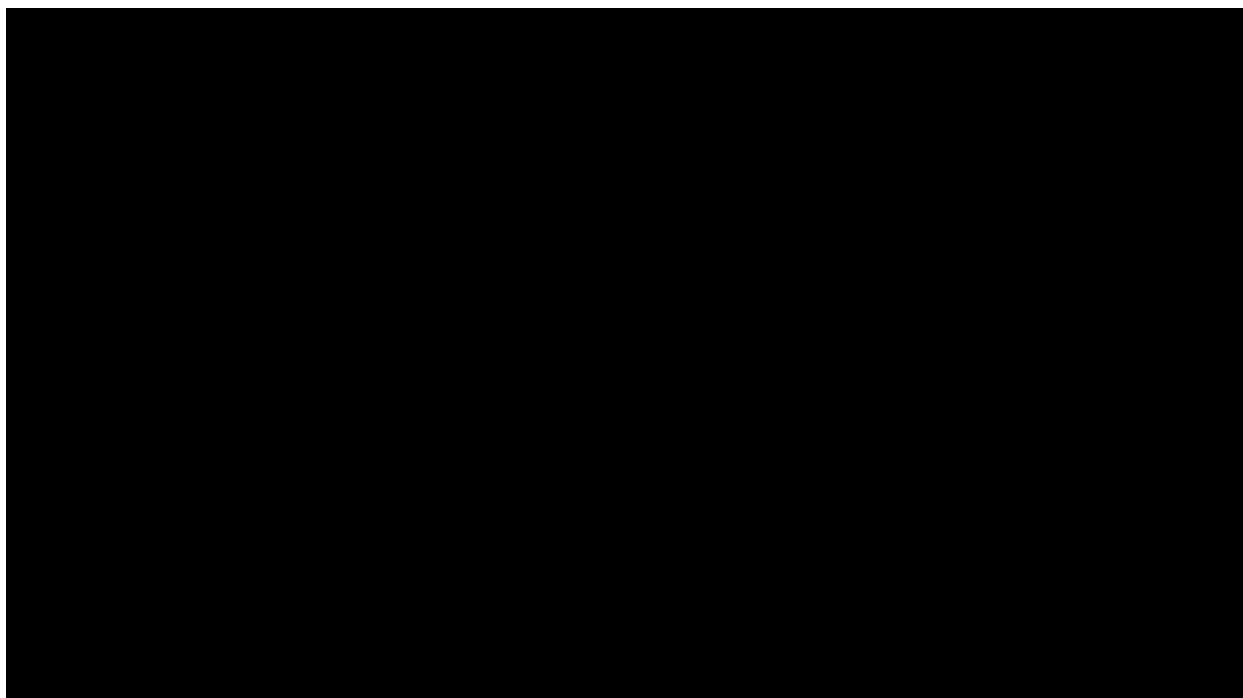
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



How do the risk profiles for plans compare, and has risk profile changed over time?



GW-IA



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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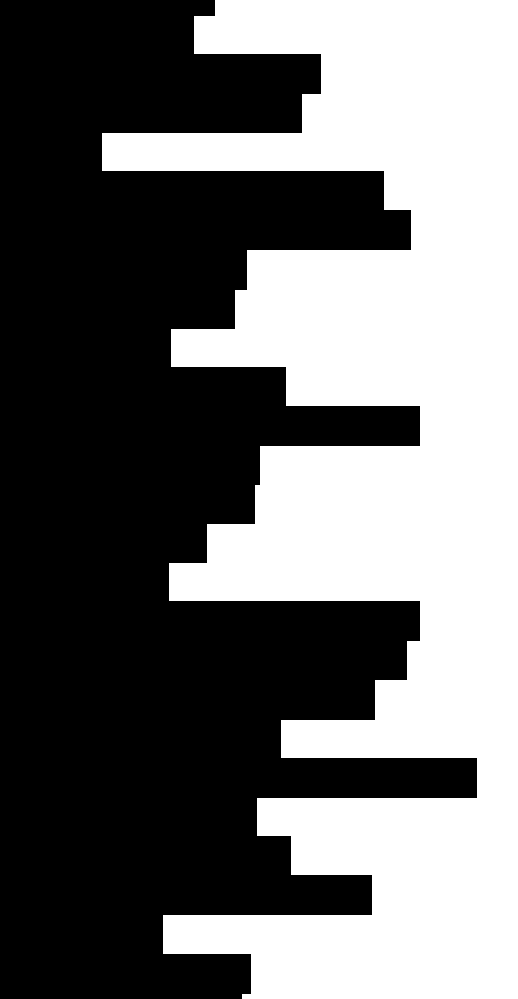
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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

[REDACTED]

A sample of our reports can be found in **ATTACHMENT B.**

[REDACTED]

[REDACTED]

[REDACTED]

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Standard utilization analytics reports will include reports on current cost and how to contain costs. We also will consult with our Medical Directors to analyze reports and recommend strategies on cost containment. Utilization costs are available as a summation of costs in 40 different service categories to enable focus on individual cost-heads as well as aggregate utilizations. All data is retained as long as it is need by BMS and then destroyed according to company guidelines.

Government Works DSS/DW Solution also will generate the following reports:

- information on contracted MCOs, including geographic locations, capitation rates, and organization type
- encounter data for the purpose of monitoring appropriateness of care
- encounter data for use in the determination of re-insurance to calculate true out-of-pocket costs
- encounter data for use in profiling MCOs and comparing utilization statistics
- encounter data for use in completing MSIS reports
- encounter data for use in determining capitation rates
- encounter data to detect under-utilization of services by enrollees of the MCO
- comparison of FFS claims statistics and encounter data, re: cost of care, timeliness of care, quality of care, outcomes
- encounter data to identify persons with special health care needs, as specified by the State
- managed care program reports by category of service, category of eligibility, and by provider type
- reports of capitation payment by various categories (e.g., by eligibility group, rate cell, etc.)
- fee-for-service (FFS) claims reporting for services furnished outside of a capitation agreement (i.e., for services "carved-out" of the managed care program)
- basic administrative information
- Beneficiaries who are eligible for a State's Medicaid program by qualifying under a Section 1115 waiver eligibility expansion group
- data needed to produce reports consistent with data collection plan to assess quality and appropriateness of care furnished to participants of the waiver program
- utilization reports for monitoring cost neutrality of waiver services to a target population.
- data needed to produce reports consistent with data collection plan to assess quality and appropriateness of care furnished to participants of the waiver program.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

The DDS/DW solution that Government Works is proposing will be able to use MMIS data to support population health analyses that are required of the state and of its partners and will be able to receive the following population data:

- census data
- vital statistics
- immigration data
- public health data
- other data as defined by BMS during the DDI phase.

In addition, the solution offers users the ability to analyze population health data that will aid in the development of health improvement communication materials, such as new program areas, services, updated benefits/reference information, and other health promotions, as required by BMS. The solution also will be able to track and maintain data detail for population health initiatives, including

- originator/source of inquiry
- data source/s used
- strategy (or strategies) developed in response to data analysis
- changes to benefits
- changes to reference data
- record of communications materials
- time period/case schedule of review
- FFS claims covered under MCO benefit enrollees
- other data as required by BMS during the DDI phase of the project.

TECHNOLOGY SOLUTION

[REDACTED]

[REDACTED]

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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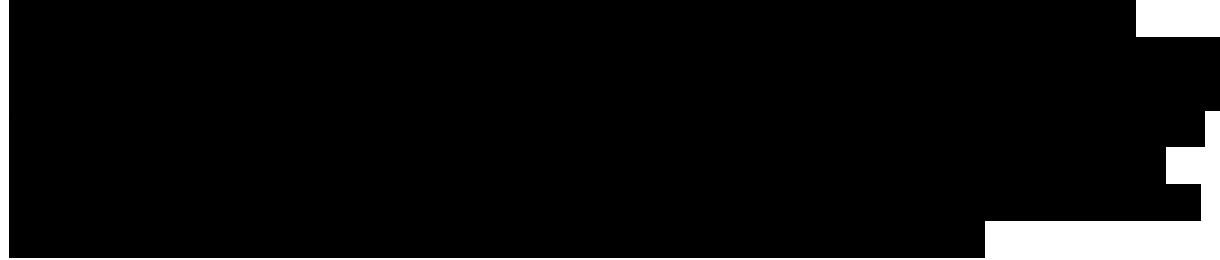
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Government Works offers complete business-level archiving and the capability to retrieve historical data. We will identify the functional framework of the data assets and determine the aging of the data assets from a business and functional perspective. Once the aging is understood, Government Works will create a business-level slicing of the data assets and create periodic endpoints with associated data integrity between master and child. The key process is to isolate dependencies for the operational data, thus ensuring that none becomes part of archiving.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Government Works has many years of experience in identifying these aging processes for any sophisticated data asset, including a large data warehouse.



Reviewing the mapping utilized by the DSS tool is the principal focus of data validation. Because of the sheer volume of data to be loaded into the fact tables, mapping is validated to verify that the data that is expected to be loaded into specific data elements is indeed being sourced from tables that contain the information in the operational system.

Government Works' DSS solution will create a report that can be viewed as is or imported into an analytical interface with Microsoft Access. The name of each table, both logical and physical, as well as each data element, also logical and physical, is identified. Each data element will be assigned a formal description and will be mapped back to the source table(s) used to populate it during the process. Any transformation that occurs will be documented. If no transformation occurs, the sample SQL to capture the data element from the source table will be documented as well.

The next step in data validation involves the use of counts. Simple database queries can be run either on an entire table or for a subset (i.e., number of records for any given month). If these counts are equal, we assume that records were not left out due to an error during the simple load process. This is further verified by the lack of errors in the exception reporting.

Many dimensional tables have an exact duplicate in the operational database schema. Doing a simple table compare can further validate these tables. If a table compare indicates no difference, these tables are considered fully validated. For additional verification, actual rows from both the operational and data warehouse tables can be printed and listed side by side for comparison. Randomly selecting rows of data from the test environment and comparing them to data stored within the data warehouse should give a high level of confidence in the process. A more detailed version of this test is conducted in the acceptance testing procedure.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

When provider data errors are noted, files are returned to providers for correction through a secured FTP. The data will be encrypted and the provider will correct the fields and return it through the secured connection. We will then use the translator to run the data again. We will follow up to ensure that the problem is resolved.

[REDACTED]

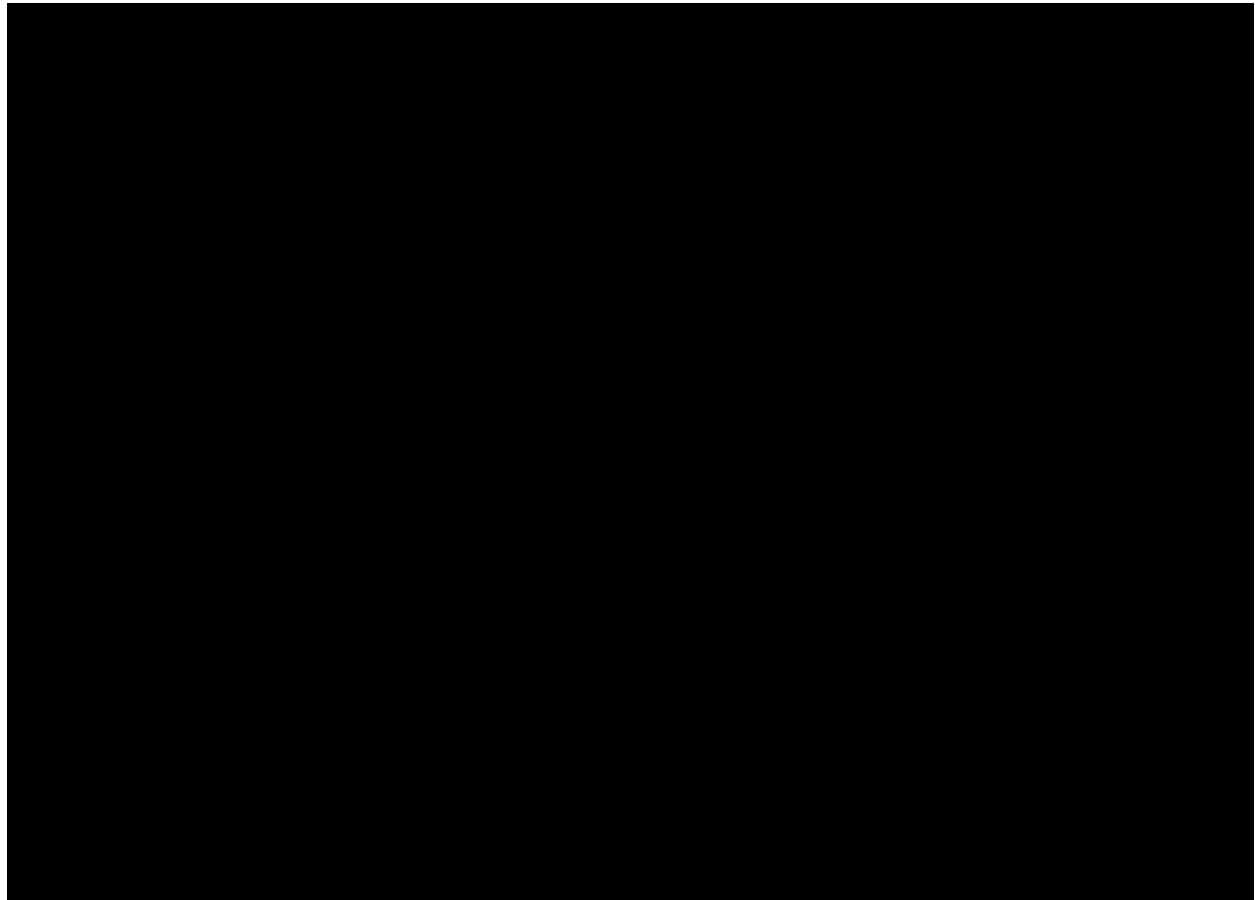
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Data Center Staffing

Typically, data centers are highly automated, allowing a small number of workers to operate a large facility. This has become even more true with the advent of cloud computing, in which users abandon their own infrastructure for an Internet connection to the contracted data center. Yet, although automation is becoming more the norm, the complexity of integration is increasing dramatically. Thus, Government Works staffs its data center with experts who are trained to comprehend technical information rapidly, to notice anomalies in how data is processed, to question outliers, to maintain detailed records in a world in which everything must be documented, to break issues down into operational questions, to formulate models that can be tested, to adapt to variable operating environment, to switch back and forth among tools, and to manage auxiliary staff.

Following Phase I, which we expect to be an “all-hands-on-deck” situation, we will work with BMS to determine which of the data center staff members are needed not only for operations but for future enhancements. Managing operations requires different skillsets, such as dealing with more protracted planning timescales and shorter problem-solving timescales; handling multiple issues at the same time as the system becomes up and running; adopting a more global view of the system; and serving the specific needs of the client. Critical to the success of any data center’s staff is appropriate training. A significant portion of our data center staff is Cisco certified.



Data Center Security

Government Works will provide both physical and technical security for the solution through the use of numerous mechanisms designed to protect the data warehouse and its contents. The individual who will be responsible for managing the portion of the data warehouse where the BMS data is maintained will be a seasoned professional, experienced in management of both data warehouses and DSS teams.

Through a contract with the Centers for Medicare and Medicaid, Government Works hosts a copy of the Medicare Beneficiary Database (MBD) from MARx. CMS Gateway is an innovative software solution that automates the complexity of CMS data exchanges, delivering greater accuracy and speed. Government Works hosts streamlined access to this information allows CMS Gateway to perform instant eligibility queries, speeding the path to critical answers and eliminating the need for batch processing. In addition, information is fully integrated with and auto-populates enrollment screens, dramatically increasing efficiency. The facility that houses the database is a top-secret facility, and all staff carry the appropriate clearances.

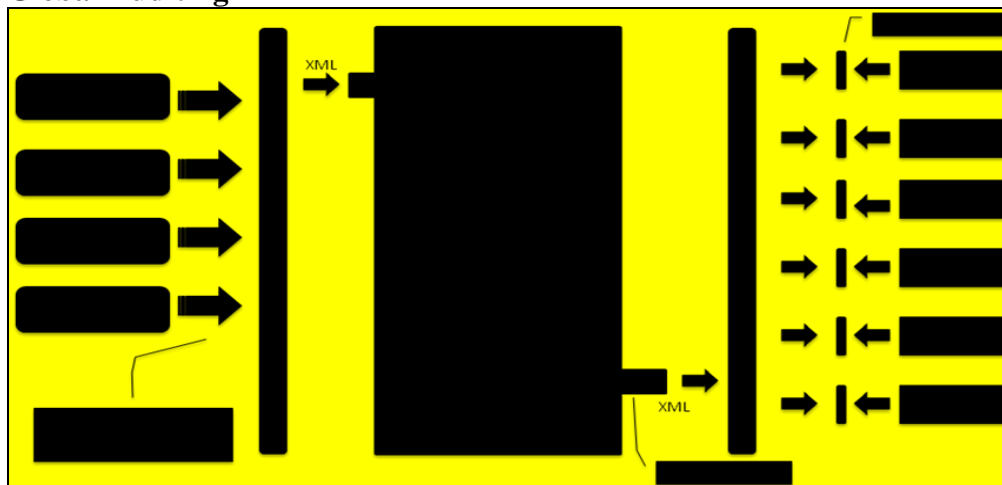
BMS' database will be backed up regularly at the Data Warehouse. Backup services are scalable from gigabytes to terabytes. The following services are included in Government Works SaaS' backup planning:

- **Offsite backup storage at a secure facility.** Government Works will work with BMS to select a rotation and retention schedule that meets its requirements.
- **Data encryption.** Data is kept safe via back-up data tape encryption, using a minimum 128-bit encryption. Advanced Encryption Standard, a U.S. federal standard symmetric block cipher, is used for this function.
- **Non-Disruptive regular back-ups.** The database is backed up daily, with no disruption to ongoing activities.
- **Offsite tape rotation.** On a regular basis, all of the full back-ups are taken offsite, not only information backed up from specific files or servers. Data are retained for at least 28 days.

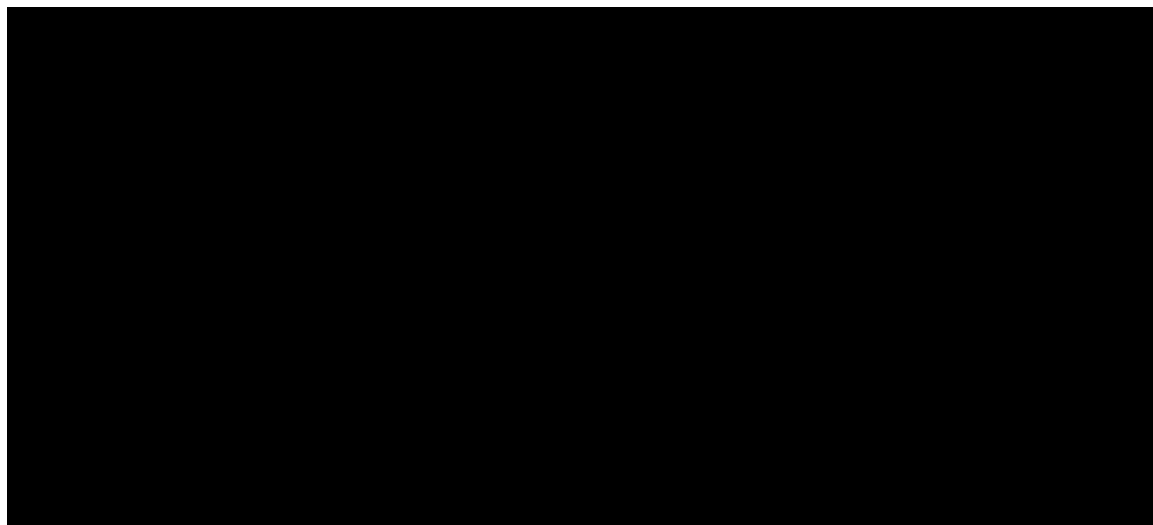
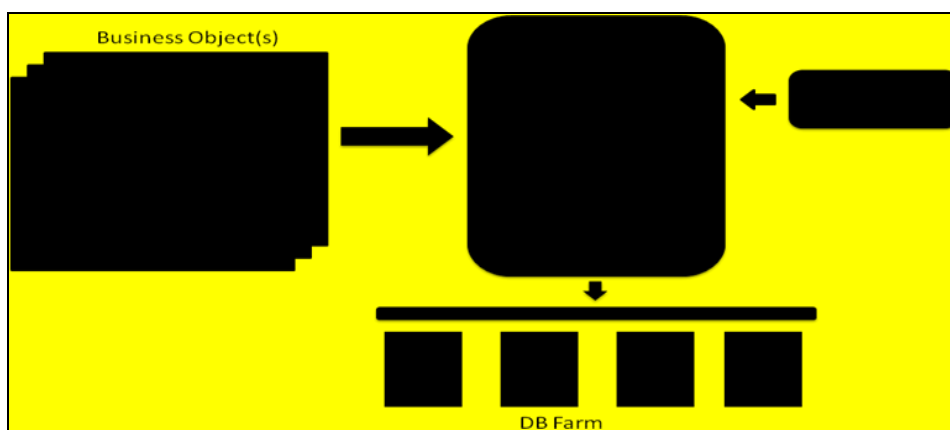
A comprehensive approach to physical and logical security protects hosted and networked infrastructures from data compromise. BMS will have access to security reporting at any time, enabling the rapid and efficient evaluation of security threats. Other security approaches include:

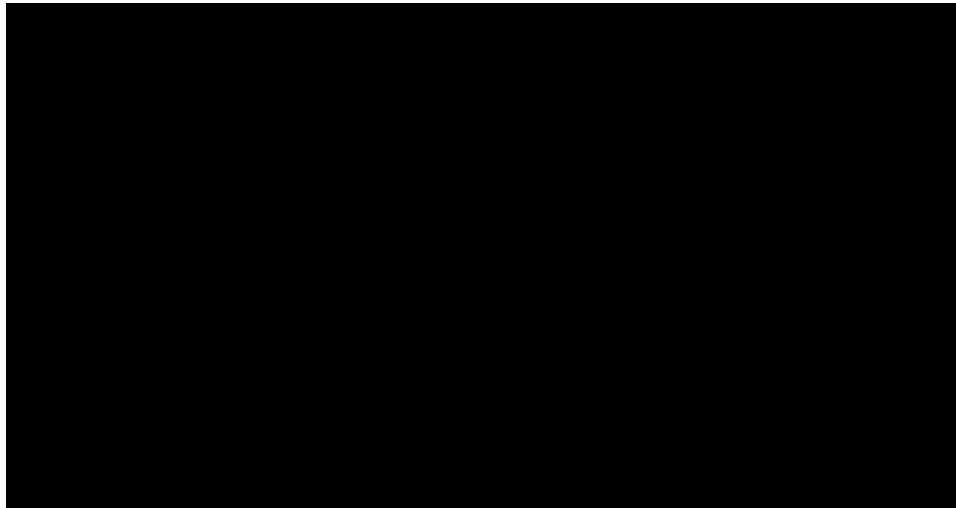
- **Training for employees.** Government Works has a defined data security plan and all of our employees are trained in the basic principles of data security, including applicable privacy regulations.
- **Top-of-the-line security at the Data Center itself.** Only Government Works or appropriate ikaSystems or HMS personnel with the appropriate permissions will have access to BMS' data infrastructure. Biometric readers, card-scanners and person-traps all are used to ensure that *only* these personnel have access to the facility.
- **Web application firewall.** Our firewall service ensures that applications will run unimpeded by any potential cyber attack. The service also inspects outbound traffic to avoid leaks of sensitive patient data, such as social security numbers. This is critical to helping healthcare payers and providers meet their Health Insurance Portability and Accountability Act and other privacy responsibilities.
- **Intrusion detection.** The system is able to immediately spot breaches in the subscriber's network and respond to them at once.
- **Integrity monitoring.** When specified subscriber files on the host computers are accessed or changed, alerts are sent out at once to the subscriber to ensure that no breaches have occurred. This information is available via the Web dashboard that subscriber staff can access from their desks.
- **Malware, anti-virus, and anti-spam software.** We protect from worms and viruses through the use of state-of the-art software. Security patches are added and system updates are conducted on a frequent basis and whenever business intelligence alerts us to a specific threat. If there will be any effects on the subscriber's infrastructure, advance notification is provided.

Global Auditing



Application Auditing





We have **never** had an unauthorized disclosure of DSS data and do not expect to in the future. Government Works assumes responsibility for any such failure—unless it is the result of a so-called Act of God—and will compensate BMS for any damages that may result.

Government Works has developed a Data SafeGuard policy, which it follows after project completion and would follow after termination, if that were to occur. The procedures that follow are components of our Data SafeGuard policy:

- Upon conclusion of the Agreement, Government Works will return all sensitive data to BMS, or, if its return is not feasible, destroy any and all sensitive data.
- Within 30 days following the expiration of the contract, Government Works will either: Return or destroy, as applicable, all sensitive data provided to Government Works by BMS or its affiliated institutions, including all sensitive data provided to Government Works' employees, subcontractors, agents, or other affiliated persons or entities; or In the event that returning or destroying the sensitive data is not feasible, provide notification of the conditions that make return or destruction not feasible, in which case, Government Works will continue to protect all sensitive data that it retains and agree to limit further uses and disclosures of such data to those purposes that make the return or destruction not feasible as Government Works maintains such data.
- Government Works agrees, upon conclusion of the contract, within 30 days, to return to the Institution or if return is not feasible, destroy and not retain any copies (and furnish BMS with an appropriate Certificate of Destruction) of any and all Confidential Information that was in its possession.
- Upon conclusion of the contract, Government Works will return the data to BMS unless BMS requests that such data be destroyed. This provision also will apply to all covered data that is in the possession of subcontractors or agents of Government Works. Government Works will complete such return or destruction no later than 30 days following the conclusion of the contract. Within this 30-day period, Government Works will certify in writing that such return or destruction has been completed.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- At the completion of this agreement, Government Works will physically or electronically (or both) destroy beyond all ability to recover it, all BMS data provided to them. This includes any and all copies of the data such as backup copies created at any Government Works site.
- Government Works also will erase, destroy, and render unreadable all BMS data and certify in writing that these actions have been completed within 30 days of the conclusion of the Agreement or within 7 days of the request of an agent of BMS, whichever shall come first.

Our system is flexible and there is no limitation on when reports can be run. If any prescheduled reports are required Government Works and BMS will work together to get them done. Government Works agrees to offer the Project Services in such a manner that BMS has no responsibility for the operation, maintenance and related upgrades of the DSS, (e.g., the decision support system software, technical infrastructure and associated processes and procedures).

Should an interruption be scheduled for maintenance or other legitimate purposes, we will send a request to BMS to determine the most convenient time and inform BMS how long we expect it to be before service is restored. The timeframe will depend upon the reason for the interruption. Our goal is to interrupt service as infrequently as possible, if at all, while still maintaining the high quality of our work.

System Outages

The Government Works team has business and system continuity plans in place to automate the recovery process when a system outage occurs.

First, recovery procedures are in place for batch processing. This includes recovery procedures from hardware, software and environmental failures affecting batch applications. Furthermore, we coordinate problems—such as capacity and performance management, with batch recovery procedures.

All changes to the components are reviewed for proper backout procedures in order to ensure timely recovery in the event of an unsuccessful change installation. All changes are reviewed for any possible affect on existing recovery procedures and to determine if any new or additional procedures are required as a result of the change. Information pertaining to the backout of recovery procedures are documented and reviewed.

Government Works also has recovery procedures in place for online outages and will coordinate with BMS in the event that network outages occur. All user support personnel assigned to maintain the online systems have a thorough understanding of online systems recovery methods and know the location of all recovery documentation. Our staff will manage the methods and guidelines used to document the impact of problems on service level commitments. Government Works supports the service level process by minimizing, to the greatest possible extent, the time required to restore service after a component failure.

Government Works will be responsible to BMS for:

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- maintaining, in the operations area, up-to-date recovery documents
- executing recovery procedures for all system/applications
- regularly testing system/application recovery procedures
- recording pertinent information, which includes documenting procedure problems
- logging and tracking component and application outages
- logging and tracking recovery time
- ensuring that all recovery procedures have an eight character naming convention, and informing the systems analyst if there are procedures that have not been named
- performing immediate management initiated root cause analysis, if needed
- maintaining and updating the recovery matrix.

Furthermore, the Government Works team also will be responsible for implementing and maintaining procedures and standards to ensure recovery capabilities at all times. Other technical support duties and responsibilities include:

- providing operational recovery procedures
- providing numbered recovery procedures
- providing software contact support list
- testing system and component recovery procedures prior to production installation
- ensuring recovery methods are included in the operational procedures
- ensuring existing recovery procedures are regression tested following system changes
- providing problem escalation support.

In addition, we regularly support the following functions:

- ensuring recovery methods are included in the development of new applications and changes to existing applications
- participating in application recovery process when needed to recover from outage
- testing system recovery procedures prior to production installation
- ensuring recovery methods are included in the operational procedures documentation
- ensuring existing recovery procedures are regression tested following system changes
- providing problem escalation support.

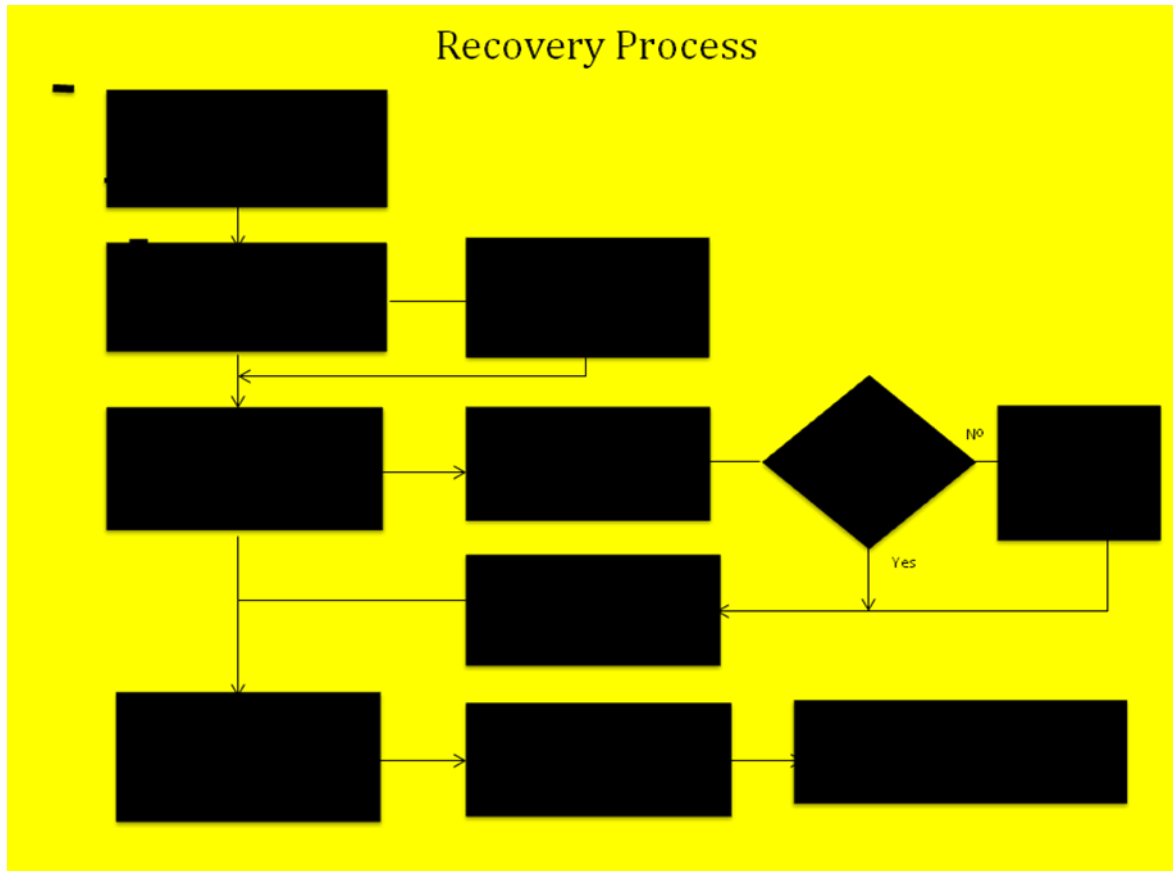
Documented recovery procedures used to restore service to a failing component will require periodic testing. Testing must include:

- power off and power on simulation testing
- system backup and recovery capability (full system and incremental backups)
- normal recovery capability.

The recovery process requires that all recovery procedures used to restore service be documented using a standard naming convention, so that specific procedures can be easily recognized. This

information can be used to track and assess the “mean time to restore” for procedures during a given outage. Ongoing testing and evaluation can reduce the number of procedures and down time required for annual testing.

The basic activities that occur during recovery from an outage are diagrammed below:



The information presented above forms the core of our Physical Security Plan, which we will be happy to tailor to the specific needs of BMS.

Proposed DSS/DW System

A data warehouse is considered a "business infrastructure." In reality, it does not do anything on its own, but is home to sanitized, consistent and integrated information for a host of applications and end-user tools. The infrastructure and architecture of the data warehouse are therefore critical to the tasks in which the company is engaged. The size of a data warehouse is determined not only by the amount of data it stores but by its dimensions, attributes, and measures.

The volume and frequency of each increment of data determines the processing speed and memory of the hardware platform. The increment of data should be typically on the daily basis. Many a times, a company may pull in huge amount of data from the source system into various

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

environments but load much smaller size summary data in Data Warehouse. Our infrastructure supports the following environments:

- development
- test/ QA
- UAT
- staging
- production.

Essentially, the number of users is equal to the number of concurrent logins that occur on a data warehouse platform. Our enterprise reporting server accesses the data warehouse whenever a user asks the data warehouse to generate one or more reports. Our utilization analytics system creates its own local cube from a data warehouse. The actual users may be accessing that cube without logging into the data warehouse. Sometimes the users could be referring to the cache of the data warehouse distributed database and not referring to the main data warehouse.

No fixed formula exists by which it is possible to calculate and link the number of users for the purpose of estimating the infrastructure required. We use the history of the organization and the projection of its future user needs to make some assumptions about how much data the warehouse can support. Processing occurs over multiple servers that each have their own memory and disk space. Servers can be added to “share the load” via message or another mode of enterprise application integration. The servers have load-balancing and fail-over capability.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Government Works has an extensive auditing and logging function. Invalid logons, last logon, date and time, and IP address are logged and stored in Government Works' system and/or LDAP directory services. Logs are available for any authorized and privileged administrator to access online until they are archived as defined by the client. Audit logs can be retrieved from the archive if required.

Role-based Security. Government Works uses role-based security to set user security levels and restrict access. The system administrator with appropriate access rights will define users, user roles and role access. During authentication, the user role is matched to the assigned functionality. Using role-based user levels, BMS can restrict user access to individual records by only assigning specific users access to those fields. For example, each type of user can be set up as a user role, and the appropriate access rights can be defined for each role. Then, when a specific user is created, the user will be assigned the applicable user role.

Password Security. At each user level, the system supports strong passwords and can be customized according to BMS' needs:

- Password length can be configured.
- Password expiration time frames can be configured.
- Passwords and user names are encrypted.
- Users must immediately change their password after they initially log onto the system using a default password. The self-service features of the application allow users to change their password themselves. If BMS likes, the application also can be configured so that users must answer a secret question to change their passwords. Password reset instructions and links are sent to a user's email. Links expire if they not used within a certain period. This can be configured based on BMS' requirements as well.
- The software can be customized to support two-factor authentication.

At the same time, access to the portal will not be complicated for the non-technical user. A desktop "dashboard" will make it possible for them to access the web portal easily and find the data or reports or other information for which they are searching.

Business Intelligence

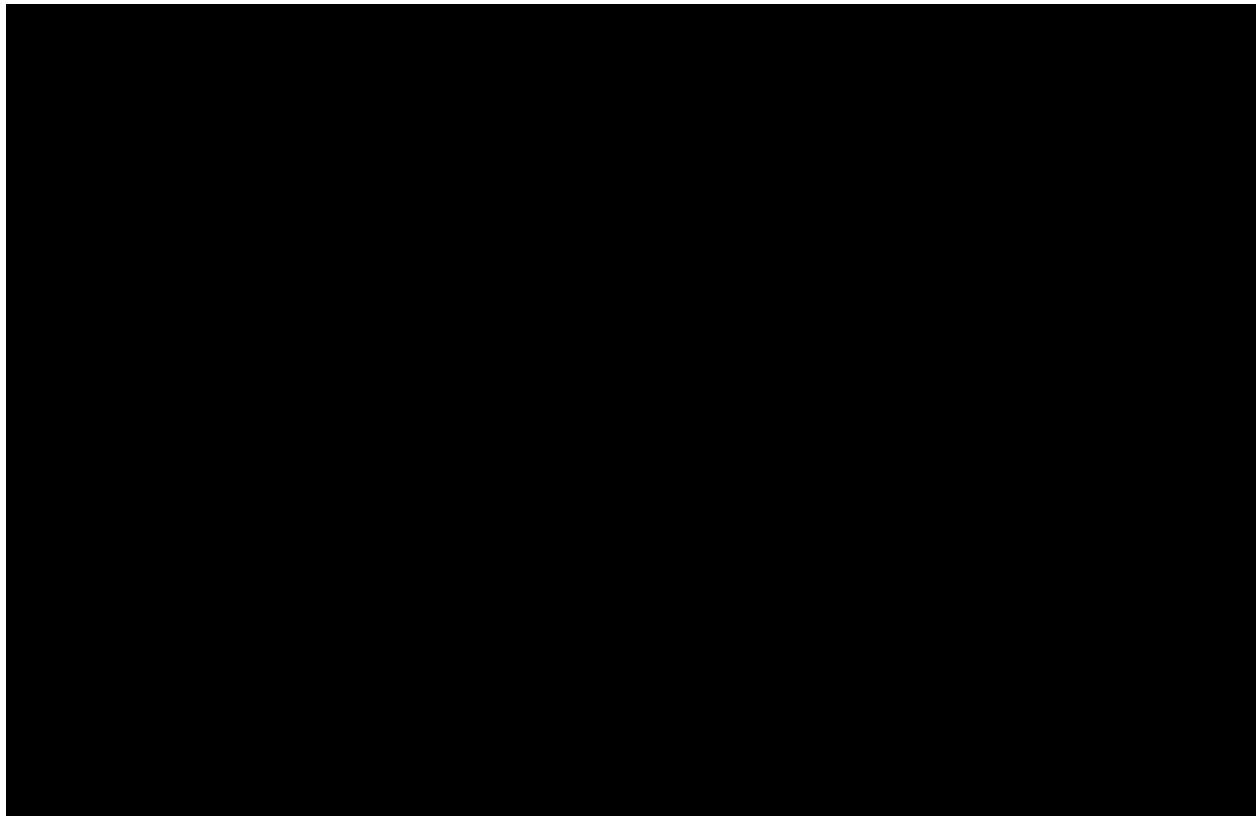
Business intelligence is a comprehensive, integrated, cohesive tools and processes framework that allows a business to transform data into valuable, accessible information. Business intelligence software is set of tools that allow users to access enterprise data via reports, Online Analytical Processing (OLAP) cubes, graphs/charts, ad-hoc queries and dashboards. It is the mechanism through which the user obtains information once he or she has accessed the Web portal. To be worthwhile, it must be easy for the user to access and manipulate. In addition, Government Works is constantly upgrading performance and availability so that data access remains easy as well as state of the art. We will make the SQL used to create all of our reports available to BMS.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Reports, cubes, charts, and graphs that are generated from data through business intelligence software are multidimensional and interactive. These are the tools that allow users to model and analyze outcomes and opportunities—in essence, to develop a “single version of the truth” based on facts and tested data. Business intelligence software, when used in a decision support system, answers the questions:

- What happened?
- What is happening?
- Why did it happen?
- What will happen? If?
- What do we want to happen?

Users will be easily able to answer these questions through by accessing data components through point-and-click functionality, and add measures to or delete measures from any report available and allow the user to develop measures without needing knowledge of SQL or other complex query language and without having to do manual table joins even if the data is stored in multiple tables. The DSS offers a menu of summary level reports, charts, maps and graphs that are available in a view-ready and print-ready format.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Data Model

Government Works utilizes an entity-relationship model. The data model is formally documented and includes an overview of the whole model and is also sorted based on each module. The data model is available during the implementation and data load phases. The explanation of tables, fields and granularity is also provided. The data model is customized to the application rather than using industry standards to determine the definition of data attributes.

Each specific module design is based on metadata sets that a form software system which can consume data dynamically, maintain data and functional coherence and integrity. The functional specifications and design aspects of the software require that fewer interface points be required to implement any given set of functionality. SOA services in the entire framework of the solution offering are loosely coupled, allowing for rapid integration of segregated but logically clubbed functional modules.

Government Works offers a DW/DSS data model component that is to be maintained in an open systems modeling tool that will support:

- syntax of proposed relational database management system
- import and export of metadata

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- logical and physical data models
- version control of logical and physical models
- forward engineering capabilities
- reverse engineering capabilities
- volumetric calculation capabilities
- comparison capabilities for different logical and physical data model versions
- report generation capabilities
- ability to enforce object naming standards.

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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We perform the following five levels of WEDI SNIP validation testing for HIPAA compliance validation:

- Level 1, Integrity Testing: Testing for valid segments, segment order, element attributes, testing for numeric values in numeric data elements, validation of X12 syntax and compliance with X12 rules.
 - Level 2, Requirement Testing: Testing for HIPAA *Implementation Guide*-specific requirements, such as repeat counts, used and unused codes, elements and segments, required or intra-segment situational data elements (non-medical code sets as laid out in the *Implementation Guide*) and values noted via an X12 code list or table.
 - Level 3, Balancing Testing: Testing the transaction for balanced field totals, record or segment counts, financial balancing of claims or remittance advice, and balancing of summary fields.
 - Level 4, Situational Testing: Testing of specific inter-segment situations described in the HIPAA *Implementation Guide* such that: if A occurs, then B must be populated. This is considered to include the validation of situational fields given values or situations present elsewhere in the file. As an example, if the transaction is an inpatient claim, a date of admission must be present.
 - Level 5, Code Set Testing: Testing for valid *Implementation Guide*-specific code-set values. Examples are CPT, CDT3, NDC, ICD, etc.
- [REDACTED]
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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Post-award, Government Works will work jointly with BMS to develop the Project Charter and amend the Initial Project Plan to integrate it with the overarching BMS Project Management Plan.

A project plan is a commitment by a project manager to deliver a project within a specified time frame. It is intended as a contractual document that the business owner and IT sponsor can use to measure project progress. It describes the project evaluation process, goals, objectives, activities and deliverables, a work plan and a resource schedule, and the project management process. In addition, a solid project management plans provides project managers with a means of specifying all project implementation requirements.

Government Works, Inc. is well-versed in the discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives. Every project is a defined and foreseen endeavor for Government Works, with specific start and completion dates for every task, undertaken to create beneficial change or added value for BMS. The finite characteristics of our projects stand adjacent to our processes, or operations, which are permanent functional cycles used to produce an efficient, effective, and exceptional product.

The primary project management goal is to achieve all of the incremental project and task goals while at the same time adhering to classic project constraints—scope, quality, time, and budget. Our secondary goal is to optimize the allocation and integration of inputs necessary to meet pre-defined objectives. Government Works defines every project as a continuum that employs a wide

range of resources (money, manpower, materials, and energy) to achieve the project's goals and objectives. The overarching goal of this project is to implement a clinical decision support system that will integrate a comprehensive patient knowledge base, a wealth of patient data, and an inference engine that will generate case-specific recommendations consistent with evidence-based practices and clinical criteria. Elements that must be factored into the tool include accessibility, training and other support, and the ability of the tool to group services based on episodes of care.

The management team has been selected because of the various individuals' specialized experience and how that experience will contribute to the flow of the tasks. All are adept at handling multiple tasks with overlapping responsibilities and the Project Director—a company vice president—ensures that timelines and task assignments are monitored stringently. It is his responsibility to develop the timelines and identify major milestones for each sub-task and any necessary sub-sub-tasks. Experts agree that good technical project management and leadership ensures that tasks are completed on time, deliverables and project management documentation comply with standards and best practices, and project implementation occurs within the planned time frame and budget. The Project Director communicates directly with the Medical Director and the Medical and Business Intelligence Expert on all matters related to the implementation of the DSS. He relies upon the Team Leader—who is dedicated full time to the project—to assign tasks, to assess workloads, and to manage deliverables. *Every deliverable and the success of every task is reviewed and assessed at the Project Director level.* See the management chart located on page 20.

Each meeting or task development process will be fully documented for BMS, beginning with the kick-off meeting. All meetings will result in a meeting summary document that identifies milestones achieved, tasks completed, tasks yet to be completed, resources needed, and action items. These documents will serve as a way of maintaining the line of communication between Government Works and BMS and between the upper levels of the Government Works management team and the individual employees doing the specialized work required of their assignments. We also propose to conduct focus group meetings with end-users to ascertain the effectiveness of the model, and reports will be provided to BMS based on these meetings as well.

The Project Director will maintain this information and manage the overall project using *MS Office Project* management software and hard files and will report to BMS' Project Director and meet with critical project staff—depending on the task or tasks underway—at least weekly. At the kickoff meeting, the parties will decide how often the Project Director should touch base with the state's project lead. A Database Analyst will be assigned to work onsite with BMS staff in order to facilitate the implementation and learning curve of those who will be using the product.

Government Works will deliver an Initial Project Plan within ten calendar days of contract startup.

The Project Scope Management Plan

A project management scope management plan specifies how the requirements of the contract will be reviewed and approved, what requirements management tools will be used and how the

requirement traceability matrix will be maintained. Scope Management is the collection of processes that are designed to ensure that the project includes all the work required to complete it while excluding all the work that is *not* necessary to complete it. The Scope Management Plan details how the project scope will be defined, developed, and verified. It defines clearly who is responsible for managing the project's scope and functions as a guide.

Project scope management follows a five step process:

- **Collect Requirements:** This is the process by which the requirements needed to meet all project objectives are defined and documented. The foundation of this process is the project charter and stakeholder register. From these, the team can identify requirements, collectively discuss details associated with meeting each requirement, conduct interviews and follow-on discussion to clarify the requirements, and document the requirements in sufficient detail to measure them once the project begins the execution phase. This documentation also serves as an input to the next step in the process, which is to define scope.
- **Define Scope:** This step requires the development of a detailed project/product description to include deliverables, assumptions, and constraints and establishes the framework within which project work must be performed.
- **Create a Work Breakdown Structure (WBS):** This process breaks project deliverables down into progressively smaller and more manageable components that, at the lowest level, are referred to as work packages. This hierarchical structure allows for more simplicity in scheduling, costing, monitoring, and controlling the project.
- **Verify Scope:** This is the process by which the project team receives a formalized acceptance of all deliverables with the customer.
- **Control Scope:** This is the process of monitoring and controlling the project scope as well as managing any changes in the scope baseline. Changes may be necessary to the project scope but it is imperative they are controlled and integrated in order to prevent “scope creep,” or the inclusion of unnecessary and unneeded elements.

This plan documents

- the scope management approach
- the roles and responsibilities as they pertain to project scope
- the scope definition (in terms as precise as possible)
- verification and control measures
- scope change control
- the project's work breakdown structure.

Any project communication that pertains to the project's scope should adhere to the Scope Management Plan. Again, it is imperative that the approach to managing the project's scope be clearly defined and documented in detail.

For this project, scope management will be the sole responsibility of the Project Manager. The scope for this project is defined by the Scope Statement, the WBS, and a WBS Dictionary. The Project Manager, BMS, and designated stakeholders will establish and approve documentation for measuring project scope that will include deliverable quality checklists and work performance measurements. Proposed scope changes may be initiated by the Project Manager, BMS, stakeholders, or any member of the project team. All change requests will be submitted to the Project Manager, who will then evaluate the requested scope change. Upon acceptance of the scope change request the Project Manager will submit the scope change request to BMS for acceptance. Upon approval of scope changes by BMS, the Project Manager will update all project documents and communicate the scope change to all stakeholders. Based on feedback and input from the Project Manager and stakeholders, BMS is responsible for the acceptance of the final project deliverables and project scope.

The scope management document will go onto define the roles and responsibilities of each member of the team, as they relate to scope management. It will state who is responsible for scope management and who is responsible for accepting the deliverables of the project as defined by the projects' scope.

The Project Integration Management Plan

Project integration management plays a critical role in the success of any project. The project integration plan ensures that all of the elements necessary to complete a successful project come together. The project manager must be responsible for project integration. Project integration is composed of four main processes:

- Developing the project charter, a document that authorizes the project officially. Project managers use project charter to organize all of the resources that they have to complete a project. A project charter helps define which products or services will be created, its requirements, budget allocation, start and project end date. The project charter also defines stakeholders, their needs, interests and their expectations.
- Directing and managing project execution involves performing the work described in the project management plan and spelled out in the scope. An effective plan supports the production of an effective service. If significant risks are involved, the project manager should understand the project's risk management and project's procurement management. Organizational support also plays an important role during project execution. Project execution outputs include work performance information, change requests, and updates
- Monitoring and controlling project work, performing integrated change control includes the collection of performance data. To check the overall project's health team should continuously check the project performance. If changes occur during the execution, project management plans must be revised. Change requests are an important output of monitoring and controlling the project and should include defect repairs and corrections.
- Closing the project or a phase is the last process of the project integration management. The main outputs are the final products or services, as well as project documentation and summaries, which serve as project assets.

The Schedule Management Plan

It is often the purview of the project manager to make a determination that the previously agreed-upon schedule may need to be modified and or tweaked in one way or another in order to accommodate one of more schedule events and/or unexpected obstacles. When the project manager, it is critical that he or she adhere to a schedule management plan developed at the beginning of the process. The schedule management plan is the document that determines the criteria for developing and maintaining the actual project schedule, and represents a subsidiary of the project management plan as a whole. This schedule management plan may be a highly formalized document, or it could be very informal depending on what the client desires.

The Project Resource Plan

Project resource planning should ensure that during the project execution phase resources across projects are available. It also should support what-if scenarios and perform other type of simulations (work in progress).

it is possible to distinguish resource planning process variants according to the amount of information that users are willing or accustomed to enter into the system:

- **Information from Operational Processes** is information obtained as part of operational project tracking, such as timesheet and translation workflow management. This information may in some cases be enough to provide managers with reports regarding resource utilization and the deviation between planned assignments and the actual resources consumed.
- **Coarse-Grain Resource Assignment to Active and Potential Projects** involves maintaining assignment "percentages" of resources to "active" (currently ongoing) and "potential" (future, from sales pipeline of project requests) projects, which allows planning the need for resources in the future on a coarse grain level.
- **Weekly Resource Assignment** involves a short-term plan that captures the assignment of resources per project/sub-project/task and week.

The Project Communications Management Plan

A project management communications plan spells out how communications will be managed and who is responsible for communications. A communications plan specifies how communications will be maintained among and between project team members. The written plan ensures that all stakeholders are aware of the communication channels and helps avoid confusion and misunderstanding. A typical communications plan includes ongoing communications, such as

- status reporting
- project schedule updates
- financial updates
- risk and issue reporting.

A communications plan also addresses one-time or infrequent communications, including

- project kick-off meetings

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- phase kick-off meetings
- lessons learned reports
- meeting minutes, and more.

Many agencies and companies also include the following in their communications plans:

- policy, standards and best practices, to ensure everyone is aware of expectations
- new team member on-boarding, to ensure everyone “ramps up” quickly and is aware of project objectives
- defect management reporting
- change management communications
- QA test reporting
- release management communications.

For each type of communication, the following information should be included:

Who	What	How	When	Owner
Name and role of person who will receive the communication	Purpose for communicating (i.e., project status update, financial status update, review issues)	Method of communicating (i.e., PowerPoint presentation)	Daily, weekly, monthly, quarterly	Person who will “own” the communications

The Risk Management Plan

The Risk Management Plan identifies the risks that can be defined at each stage of the life cycle of the project, evaluates them, and outlines ways to mitigate them. The plan is periodically updated and expanded upon as the project increases in complexity and risks become more defined. The risk management plan will include

- an identification of other systems with which the subject system interfaces
- contractor support for development and maintenance
- system architecture, operating system and application languages
- development methodology and tools used for the project.

The risk management plan also includes a definitive statement of the scope of the risk management planning contained in this document, including the limits and constraints of the plan. It also should include policy decisions that influence how risk management is conducted. The approach to risk management will include identification, analysis, planning, tracking, control, and communications. It will discuss the project’s risk mitigation strategies in general

and detail specific strategies that have significant impact across the project (e.g., parallel development, prototyping).

The risk management plan will include a risk identification list. The risk identification list tracks risks and is used from the beginning of the project as a major source of input for the risk assessment activity. The following are examples of categories that may be a source of risk for a system development:

- the complexity, difficulty, feasibility, novelty, verifiability, and volatility of the system requirements
- the correctness, integrity, maintainability, performance, reliability, security, testability, and usability of the deliverables
- the developmental model, formality, manageability, measurability, quality, and traceability of the processes used to satisfy the customer requirements
- the communication, cooperation, domain knowledge, experience, technical knowledge, and training of the personnel associated with technical and support work on the project
- the budget, external constraints, politics, resources, and schedule of the external system environment
- the capacity, documentation, familiarity, robustness, tool support, and usability of the methods, tools, and supporting equipment that will be used in the system development

The project management plan and the risk identification list are inputs to the risk assessment plan. Risks are categorized as internal or external. Internal risks are those that can be controlled. External risks are events over which the contractor has no direct control. Examples of internal risks are project assumptions that may be invalid and organizational risks. Examples of external risks are government regulations and supplier performance. The identified risks are evaluated in terms of probability and impact. For each risk item, probability that it will occur and the resulting impact if it does occur are evaluated. An evaluation tool is used to score each risk. The risk items with high rankings are reviewed to determine if the risks can be accepted, transferred, or mitigated. Actions that will be taken to transfer or mitigate risks are identified and described in detail. These actions must be incorporated into the budget, schedule, and other project plan components.

The Quality Management Plan

For each implementation, the Government Works Quality Assurance (QA) team creates a comprehensive test strategy and plan that is incorporated into the master project plan. The primary activities in the testing process are:

- regularly scheduled meetings for test participants to review and discuss test scope, test metrics, test approaches, test schedules, test cases, bug tracking and other aspects of the test program
- preparation of validation plans and test cases
- execution of test cases
- analysis of test data
- bug tracking and resolution

- closing issues
- release to production.

Resources such as staff and budgetary considerations can be influential in determining the scope of the test plan and may require adjustments to the plan, or the introduction of additional resources or tools.

Testers must understand the context for the project and the mission of the testing plan to help others to make informed decisions on testing results. Once a bug is found, testers must also accurately communicate its impact and describe any workaround solutions that could lessen its impact. The tester makes bug descriptions and steps for recreating the bugs easy to understand and follow. The tester participates with the entire team in setting the quality standards for the product.

Government Works performs four levels of incremental internal testing before user acceptance testing is initiated. In addition, regression testing is performed for releases and software updates:

- **Unit testing** is a white box test that is logic oriented. This test level is the lowest level of testing and evaluates the function of an individual unit. A unit may be a module, called module, procedure, sub-routine or sub-system. The development team performs this level of testing in the development environment. This test must complete successfully with a sign-off by the team member to promote the code to the functional test level.
- **Integration testing** is used to evaluate whether systems or components correctly pass data and control to one another. It examines the operation of all components of the application collectively, according to the system requirements. Included in this test is module-to-module execution, inputs and work flows, outputs and data validation. The QA team, which is separate from the development team, performs integration testing in a controlled test environment uninfluenced by continued development on the code. The integration test process is designed to uncover data integrity issues, programming logic errors and business process inadequacies.
- **Functional testing** is also performed by the QA team. The end result of the functional test phase are programs that interact as expected in a processing sequence and can be run concurrently with integration if time constraints dictate. Validation testing also occurs at this stage and involves intensive testing of the new front-end fields and screens; Windows GUI standards; valid, invalid and limit data input; screen and field look and appearance; and overall consistency with the rest of the application. Specific functional testing is also performed to test individual processes and data flows.
- **System testing** is then conducted on a complete, integrated system to evaluate the system's compliance and its ability to give proper exceptions and error messages, within specified requirements.
- **Regression testing** entails selective retesting of a system or component to verify that modifications have not caused unintended effects and that the system or component still complies with its specified requirements.

Prior to user acceptance testing (UAT) being conducted, a test summary document will be prepared. A test summary states the test objective, conditions, and specific results. Additional

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

pertinent data is included, along with any control information. Any anomalies are described in detail. This data may include confirmation that all earlier testing has been as part of the test plan and the outcome of those tests, documentation that the test environment has been loaded with test data, confirmation that all defects discovered in previous testing and ranked as critical have been resolved, the methodology for documenting and ranking defects and deficiencies discovered during in relationship to implementation readiness, and a proposed process for updating and finalizing the test summary prior to implementation. A similar report is prepared following UAT testing.

Finally, user acceptance testing is conducted to satisfy business team and end users that the solution meets functional and business requirements.

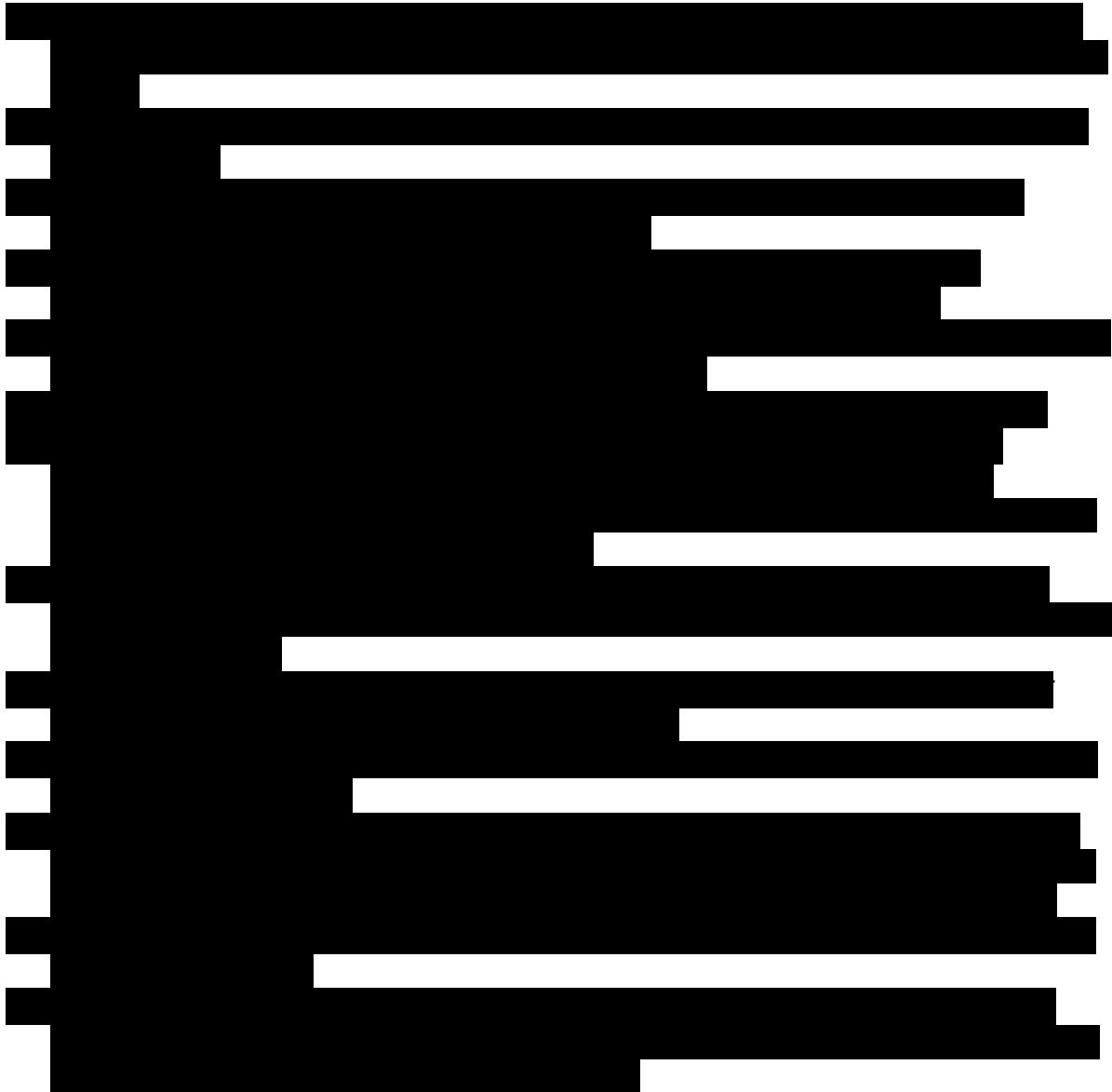
The typical input materials that must be made available to conduct tests are as follows:

- scenarios
- list of controls onscreen
- screen captures
- test case instruction forms
- test case record forms
- test scripts
- data generators.

Output documentation based on test results includes:

- test execution reports
- defect tracking documents
- issue tracking documents.





Implementation Readiness Activities

Overall, the goal of implementation readiness is to understand the business needs and business processes of the client and then define the methods required to apply software configuration appropriately and effectively. A balanced implementation readiness approach should include executive strategy, measurable requirements, process automation, software technology utilization, and an enterprise-wide focus that encompasses all locations.

Implementation readiness activities are designed to prepare staff and management for the implementation of the new DSS and may include the following:

- identifying the current skills and culture within the organization that may affect the success of the implementation of a new and unfamiliar system

- providing staff and management with information regarding the implementation and opportunities to ask questions and prepare for whatever impact the change process may have on their work and work environments
- identifying characteristics of existing work flow processes that will be affected by the implementation
- identifying changes to work flow processes that may be needed in anticipation of eventual staff training
- providing all staff and management with an overview of the implementation process
- providing information to stakeholders so that they will understand that a new systems change is about to occur and why.

As part of our Implementation Readiness activities, we will provide DW/DSS user documentation to BMS prior to requesting approval to commence operations; as-delivered system documentation prior to requesting approval to commence operations; and an Implementation Readiness Report at the time that it requests from BMS approval to commence operations.

Startup Activities

Government Works always begins its projects with kickoff meetings that are designed to introduce the key players to each other, outline specific goals and objectives, make concrete decisions and develop action items. One of the things that we advocate doing during the course of a kickoff meeting is developing a comprehensive vision statement. Then, we can refer back to the vision statement when defining measurable performance goals and success metrics at specific points in time.

We prepare an agenda for this meeting and it is documented in a report that is distributed to all participants and any other relevant parties within 5 business days. The Government Works Project Manager usually leads the meeting, which may run for two days. At the end of the meeting, a schedule of activities, deliverable, and to-do items has been developed and after the report—which will include these items—is completed, it is submitted to BMS for review and approval.

Also in the kick-off meeting, a go-live date will be determined and a final schedule developed that works back from that go-live date. Because BMS will collaborate on the development of this schedule, we will expect little need for a long approval period. This schedule will be distributed to all staff within three days of the kickoff meeting.

Requirements Definition and Analysis Activities

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Government Works and ikaSystems believe that data analytics and business intelligence are the cornerstone of modern care management. The foundation of our systems is a single data warehouse; all data is stored in one location which ensures “one source of the truth.”

We have already discussed in detail how Government Works elicits, validates, and documents DSS/DW requirements to ensure how BMS goals are met and how claims are finalized; as well as how provider, reference, encounter, and lab results data is incorporated into the data warehouse for use in the DSS.

Government Works can integrate all of the client’s data into a single data warehouse that combines state-of-the-art Web-based technologies to quickly normalize and integrate any type of data requested. Relevant data can rapidly and efficiently enter the data warehouse either as structured data, XML-formatted files, or through direct integration with claims processing or other systems. ikaSystems’ proprietary, intelligent data translator, ikaTranslator, transforms all data into the same standard format, automatically performing field identification and mapping, data integrity and format checks, and data verification.

Ours is a comprehensive data warehouse that maintains both raw and “adjusted” data. This Oracle database can hold long-term historical data sets, which are stored in a time-variant, stable environment. The Data Warehouse is based on the Oracle 10g/11g platform and is highly scalable to accommodate future growth. Because of its scalability and flexibility, the Data Warehouse can run any management or administrative, or other analytical reports that can be used to lab result data with claims and payment detail, or with any other data, for that matter.

Our modules include many standard reports that are available online, but the system can also integrate with any third-party vendor of analytic and reporting tools, such as QlikView or Crystal Reports, to enable ad hoc or custom reporting. To facilitate the transfer of data to these third-party tools, we provide the following items to allow the health plan to access and extract any information from the data warehouse:

- data dictionary
- entity relationships for the data warehouse
- unlimited access to data.

Also because of its flexibility, the DSS/DW is easily adaptable to the needs and requirements of other systems and can be easily partitioned so that various partners can obtain validated and secure information. Finally, Government Works DSS/DW solution is fully capable of adding national trending data and even of linking this data to data already existent in the data warehouse. The data is designed to assist with budgeting and forecasting; and is expandable to accept additional clinical values.

CMS Certification

To receive 75 percent/25 percent Federal Financial Participation (FFP) funding for the operation of a MMIS, state programs are now expected to successfully compete a CMS Certification

Review. The Certification review ensures that the MMIS satisfies the terms of your Advance Planning Document (APD) for the Design, Development, and Implementation (DDI) of the MMIS, and determines that it meets all applicable Federal Requirements and was operating in compliance with the current policies and regulations in place when the system became fully operational. Additionally, the Certification review will also ascertain whether the requirements, functions, and objectives of the Part 3 and Part 11 of the State Medicaid Manual (SMM) are achieved, and that each of the subsystem functional requirements have been met.

The existing Certification review process as outlined has been relatively constant for the past 30 years, but today, certification reviews are typically conducted six months *after* implementation of a new or enhanced MMIS. The actual on-site review portion of the Certification process is accomplished in a week, and with few exceptions, The review today consists of a checklist of functions and features that are described at the MMIS subsystem level. All of this is about to change radically in the near future, and States need to prepare themselves for the coming changes to the MMIS.

CMS has developed a Toolkit, with which Government Works is quite familiar, that is designed to support states through the certification process. All elements of our DSS/DW solution are designed to meet the requirements of the regulations, and we will be happy to work with BMS to ensure that its MMIS is certified.

Change Management

Government Works assigns a high priority to change management while implementing the project. A change management process defines the steps used to identify and make changes to a project, including its scope. The elements included in a change management process are the purpose of the change management plan, change control procedures, roles and responsibilities for managing change, a change request form, and a change request log. While managing the change during project implementation, Government Works ensures that the project is implemented on time and within the approved budget and scope. We evaluate and prioritize all changes to the project and develop a process for implementing changes required by the system. Government Works maintains an efficient communication system to communicate all the requests for change and all the steps in managing change. We track all the modifications to software, acquisition of software tools, changes in scope, modules, data conversion, migration, interfaces, milestone dates, interim milestones, additional project spending, hardware, and training. To do so, we use a requirements traceability matrix that we will submit to BMS for approval.

Government Works will implement a formal change request process for this project. The change is initiated by completing the change request information section on the Change Request Form and submitting it to the Project Director. The Project Director reviews the change request with the team and identifies the required information and next steps to be completed. The Project Director then creates a new entry into the Change Request Log and on the requirements traceability index. He coordinates and communicates with the team to gather required information and to take the necessary steps to institute the change. The Project Director will prepare and communicate the information included in the Change Request Impact Analysis

section to BMS and the Government Works team. BMS and the Government Works team will review the pending change requests periodically. The review team approves/denies change requests, provides final recommendations on the Change Request Form, and advises the Project Director. If the Change Request Form is appropriate, then another review and disposition takes place and modifications in the implementation plans are made. Documentation is modified and an appropriate entry is made into the Change Management Request Log. The Scope Change Management Plan document also is modified appropriately. Test plans are modified, and the system is tested.

Government Works will deliver the following items upon completion of the Requirements Definition and Analysis Activities:

- A DW/DSS Requirements Definition Document (RDD)
- A DW/DSS Conceptual Data Model
- A DW/DSS Requirements Traceability Matrix.

Detailed System Design Activities

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Government Works will provide a data delivery component of its DSS that

- provides a uniform web-based interface to extract large volumes of data maintained in the DW/DSS based on selection criteria submitted
- provides an integrated, intuitive, and user friendly web-based portal interface to request and schedule dataset creation and to monitor the status of requests
- maintains the following requester information:
 - date and time of request
 - date and time of initiation of execution
 - date and time of completion of execution
 - duration of execution
 - volume of data extracted
 - acknowledgement of data extraction
 - receipt of data
 - data elements requested
 - selection criteria for extraction
- enables the user to extract the data in a number of formats
- publishes data to a final location destination or to an intermediate location destination where the requestor can then retrieve the data
- provides secure access to this data delivery functionality and to the data elements received
- schedules the data extraction based on time or on the occurrence of events
- provides the following administrative functions:
 - deletion/cleanup of extracted datasets
 - monitoring and control of jobs that contain data extraction requests
 - creation of automatic alerts sent to operators when errors occur during the process
 - notifications sent to requestor concerning the details of the extract, such as duration of execution, size of extract
- Generates administrative reports that detail and summarize the data delivery requests and executions.

Database Tables

The product is relational table driven and all information is stored in a relational database management system (RDBMS). The table structure matches the logical structure of the entities. In addition, the product is transaction/rules driven. users can configure or define their own rules based on the facts available. All activities are transactional in nature, executed using atomicity, consistency, isolation, durability (ACID) properties.

Programs

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Government Works will collaborate with BMS to develop programming that is appropriate for the DSS/DW solution we are offering.

ETL Process

The ETL process is described above.

[REDACTED]

[REDACTED]

[REDACTED]

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[illegible]

System Construction and Testing Activities

- regularly scheduled meetings for test participants to review and discuss test scope, test metrics, test approaches, test schedules, test cases, bug tracking and other aspects of the test program
- preparation of validation plans and test cases
- execution of test cases
- analysis of test data
- bug tracking and resolution
- closing issues
- release to production.

Testers must understand the context for the project and the mission of the testing plan to help others to make informed decisions on testing results. Once a bug is found, testers must also

accurately communicate its impact and describe any workaround solutions that could lessen its impact. The tester makes bug descriptions and steps for recreating the bugs easy to understand and follow. The tester participates with the entire team in setting the quality standards for the product.

Government Works performs four levels of incremental internal testing before user acceptance testing is initiated. In addition, regression testing is performed for releases and software updates:

- **Unit testing** is a white box test that is logic oriented. This test level is the lowest level of testing and evaluates the function of an individual unit. A unit may be a module, called module, procedure, sub-routine or sub-system. The development team performs this level of testing in the development environment. This test must complete successfully with a sign-off by the team member to promote the code to the functional test level.
- **System integration testing** is used to evaluate whether systems or components correctly pass data and control to one another. It examines the operation of all components of the application collectively, according to the system requirements. Included in this test is module-to-module execution, inputs and work flows, outputs and data validation. The QA team, which is separate from the development team, performs integration testing in a controlled test environment uninfluenced by continued development on the code. The integration test process is designed to uncover data integrity issues, programming logic errors and business process inadequacies.
- **Functional testing** is also performed by the QA team. The end result of the functional test phase are programs that interact as expected in a processing sequence and can be run concurrently with integration if time constraints dictate.
- **Validation testing** also occurs at this stage and involves intensive testing of the new front-end fields and screens; Windows GUI standards; valid, invalid and limit data input; screen and field look and appearance; and overall consistency with the rest of the application. Specific functional testing is also performed to test individual processes and data flows.
- **Operations readiness testing** is then conducted on a complete, integrated system to evaluate the system's compliance and its ability to give proper exceptions and error messages, within specified requirements.
- **Regression testing** entails selective retesting of a system or component to verify that modifications have not caused unintended effects and that the system or component still complies with its specified requirements.

Finally, **user acceptance testing** (UAT) is conducted to satisfy business team and end users that the solution meets functional and business requirements.

User Acceptance Testing

Acceptance testing generally involves running a suite of tests on the completed system. Each individual test, known as a case, exercises a particular operating condition of the user's environment or feature of the system and will result in a pass or fail outcome. No degree of success or failure is assigned. The test environment usually is designed to be identical, or as close to identical as possible, to the anticipated user's environment, including any extremes that

may exist. The UAT environment also is capable of handling scheduled as well as on-demand requests to refresh data in a timely fashion and with a referentially intact subset of data. These test cases must each be accompanied by test case input data or a formal description of the operational activities (or both) to be performed—intended to thoroughly exercise the specific case—and a formal description of the expected results. Acceptance testing is the process of determining modification or additions to the end product required to obtain confirmation by the state of the product’s usability.

- The acceptance test environment is given to the client.
- Clients perform functionality testing.
- Clients submit modification or additions.
- Changes are reviewed and put through development phases again (implementation, QA, staging and production servers).
- The above steps are repeated if required.
- The code is frozen.
- The system goes live.

Post Go-Live Activities

Post go-live activities include submission of the following documents:

- user training documents
- distributed user documents
- finalized user documents
- change management procedures.

UAT will be conducted to test the system infrastructure for performance, failover, redundancy, and throughput. In addition, the following will be tested:

- the data consolidation/ collection process
- the establishment of GWI-BMS data warehouse
- the tools GWI-CM, GWI-UA, GWI-Profile and their plug-in processes, and their functions
- input and output test results
- query, report and analytical processes
- chart generation
- business intelligence.

Process

Each test area will be approved by BMS staff in coordination with the project team liaison staff. A detailed test design template will be produced by our team leads and submitted to BMS staff for sign off. This design template will address key aspects of the DSS system, including

- application workflow

- application structure
- functional area
- operational areas.

Criticality

Each test plan will incorporate the criticality factors that will capture critical business functionality vulnerabilities and risks. The criticality map will be prepared for BMS staff to conduct more specialized test cases for these areas, including a stress test.

Test Environment

Test environments will be established for the BMS DSS system to be fully tested. These environments will be built upon key aspects that describe the actual production in terms of configuration settings, version, tools, environment, etc. A multiple test bed will be created to conduct version level testing for BMS staff. The Government Works team will identify the plan for establishing a test bed for thorough testing of the DSS solution as a standalone as well as running it as an integrated solution with the enterprise.

Test Environment Establishment

- identify hardware
- identify the configuration settings
- identify the key members for the test plan, execution, evaluation, along with BMS staff.

High-Level Test Case Scenario

The following is a high-level list of tests that will be conducted during the UAT conducted for the BMS DSS:

- system infrastructure testing for failover, performance, security, disaster recovery
- a complete system, application disaster recovery plan
- test data collection process from BMS insurance providers from the external system
- validation process for data error, file error, duplicate record, broken files, etc.
- data storage functions from staging to production
- business level validation of records
- data warehouse integrity testing
- reporting feature testing with valid input and test cases
- business intelligence scenario testing
- charts for business intelligence testing
- program testing for various plans and the metrics for each case.

Detailed Test Case Scenario

The following use case will explain in detail what may happen with each of the potential scenarios that may occur during the above test plan.

Use Case

Result:

- Identify the system elements within each test plan and prepare a scenario for each element testing.

Pre-Conditions:

- Set the conditions for each test case.
- Each test condition is a business rule.
- Every element of the application and system will be tested against the BMS business rule.
- Government Works will offer a solution that will validate its delivery against each business rule identified and approved by BMS.

Description:

- A Government Works team member will design and develop a test plan with sample data and scenarios using the accepted business rule.
- After sign-off from BMS staff, the test plan will be entered into the repository.
- Each test plan will have associated data, business rules, and conditions, as well as sample test results.
- Anyone identified as the test engineer by BMS can take up the testing of a particular module.
- These test results as observed by the test engineer from BMS staff will be reported in the database for peer reviews.
- Comments and observations of inconsistency with test results also will get highest priority for fixes or resolutions.
- The application component will be marked as incomplete and will move to a status of ‘in process.’”

Every test case and plan will have a security plan. All test plans will incorporate performance as one of the key criteria and timing will be marked as a baseline for the development of the service-level agreement. All of the application layers will be tested against a well-established test plan, validation, and business rules. Exception cases also will be documented for reference.

The following test tasks will be undertaken:

- gather test data
- perform tests
- document test results
- acceptance criteria
- conduct ATP meetings
- ATP sign-off.

All members of the team will have testing responsibilities, but someone will be assigned the role of test specialist, and that individual will coordinate with the client, provide assistance, and guide the testing process. He or she will have a clear understanding of the business rules relevant to each element of the test. Our implementation plan designates 7 working days to complete acceptance testing. All of the testing activities will be documented in a testing report.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

ATP Issue log

ATP ISSUE LOG						
Name of Function Here					As of:	
ISSUE NO.	DATE	ATP MEMBER	ACCOUNT NUMBER/SSN	ISSUE	OPEN/CLOSE HOLD	RESOLUTION & DATE

The typical input materials that must be made available to conduct tests are as follows:

- scenarios
- list of controls onscreen
- screen captures
- test case instruction forms
- test case record forms
- test scripts
- data generators.

Output documentation based on test results includes:

- test execution reports
- defect tracking documents
- issue tracking documents.

Government Works will establish a test system and environments that will be ready for use in testing prior to commencement of system construction. Government Works performs four levels of incremental internal testing before user acceptance testing is initiated. In addition, regression testing also is undertaken.

TEST PREPARATION

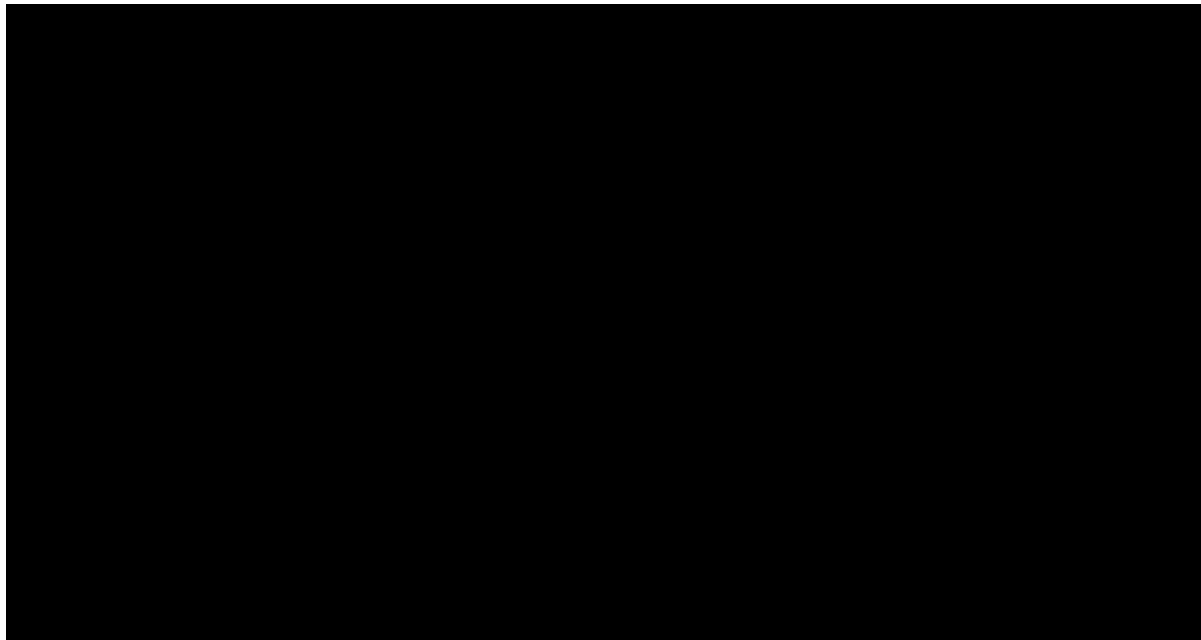
Prior to the start of testing, key preparation activities will be conducted in order to prepare properly. Key activities in testing process include:

- regularly scheduled meetings for test participants to review and discuss test scope, test metrics, test approaches, test schedules, test cases, bug tracking and other aspects of the test program
- preparation of validation plans and test cases
- execution of test cases
- analysis of test data

- bug tracking and resolution
- closing issues
- release to production.

Testers must understand the context for the project and the mission of the testing plan to help others to make informed decisions on testing results. Once a bug is found, testers must accurately communicate its impact and describe any workaround solutions that could lessen that impact. The tester describes any bugs that are found and identifies ways to recreate the bugs using steps that are easy to understand. The tester participates with the entire team in setting the quality standards for the product.

Test Process Flow:



Completion Criteria for Testing

A critical aspect of monitoring the progress and acceptance of the end result of three months of testing will be a clear understanding on completion criteria. One key component of this process is the successful identification and resolution of issues/defects.

Issues/defects are categorized as follows:

CRITICAL

- causes system to crash or does not support critical functional requirements tied to key performance parameters

- no acceptable work-around
- unable to demonstrate completed business scenario.

HIGH

- causes significant system degradation or a difficult work-around to support critical functional requirements tied to key performance parameters
- business scenario completed with difficulty.

MEDIUM

- causes moderate system degradation or a work-around to support critical functional requirements tied to key performance parameters.
- business scenario completed with moderate to minor impact on business process.

LOW

- causes minor system degradation or minor work-around to support critical functional requirements tied to key performance parameters
- business scenario completed with minor to no impact to business process.

The completion criteria for pre-system testing have been established as follows:

- ✓ each business test case exercised
- ✓ each required conversion, interface and enhancement completed
- ✓ no CRITICAL unresolved issues/defects, may allow HIGH if necessary, but have an action plan.
- ✓ action plans exist for remaining HIGH, MEDIUM and LOW issues/defects
- ✓ security and privileges (profiles) established and tested

The completion criteria for system testing have been established as follows:

- ✓ each business test case exercised and
- ✓ each required conversion, interface and enhancement completed
- ✓ no CRITICAL, HIGH and MEDIUM unresolved issues/defects remain
- ✓ action plans exist for remaining LOW issues/defects
- ✓ security and privileges (profiles) established and tested

The completion criteria for beta testing have been established as follows:

- ✓ each business test case exercised and
- ✓ each required conversion, interface and enhancement completed
- ✓ no CRITICAL, HIGH, MEDIUM and LOW unresolved issues/defects remain
- ✓ security and privileges (profiles) established and tested

Changes

Changes to any of the testing documents will be made at the end of each testing cycle.

The only exception will be in the event of a change request event or change that is needed immediately.

Communications

Communication between the entire Government Works Test Team and BMS is critical during testing. All resources will be required to assist in the successful execution of all testing cycles. It is everyone's responsibility to review the issues database for progress on issues related to testing.

Test Conference Call

A weekly conference call with the Government Works QA Team will be held upon approval by BMS.

Support to be provided to BMS during UAT

Prior to UAT, a test summary document will be prepared. A test summary states the test objective, conditions, and specific results. Additional pertinent data is included, along with any control information. Any anomalies are described in detail. This data may include confirmation that all earlier testing has been included as part of the test plan and the outcome of those tests, documentation that the test environment has been loaded with test data, confirmation that all defects discovered in previous testing and ranked as critical have been resolved, the methodology for documenting and ranking defects and deficiencies discovered during in relationship to implementation readiness, and a proposed process for updating and finalizing the test summary prior to implementation. A similar report is prepared *following* UAT testing.

Finally, UAT is conducted to satisfy business team and end users that the solution meets functional and business requirements.

The typical input materials that must be made available to conduct tests are as follows:

- scenarios
- list of controls onscreen
- screen captures
- test case instruction forms
- test case record forms
- test scripts
- data generators.

Output documentation based on test results includes:

- test execution reports
- defect tracking documents
- issue tracking documents.

Government Works will provide an initial test summary prior to commencement of UAT and a final test summary prior to the commencement of implementation readiness activities.

To implement an efficient and operable testing system, Government Works will take the following steps.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- We will provide a DW/DSS test system that can be refreshed as requested by BMS. This BMS approval is needed to prevent instances where a refresh may inadvertently wipe out any current testing efforts and results.
- We will provide a test system that mirrors the production system with all current releases, patches and fixes installed for the DW/DSS.
- We will install the same database management tools and utilities for the test system that are installed on the production servers for the DW/DSS.
- We will develop and implement, upon acceptance by BMS, a configuration management system to control the migration of tested hardware and software (system and application) to the production environment.
- We will include access to the UAT test system as an option on the DW/DSS Web portal.
- We will provide access to the DW/DSS test system to allow for BMS review, testing and acceptance.
- We will provide a test system that will support the following activities:
 - production problem research and resolution
 - test area to validate software vendor patches and fixes before promoting in production
 - test area to validate edits and updates to metadata information, user tools, and the Web portal
 - system and user acceptance testing
 - user area to test new queries and reports prior to execution in production
 - data conversion as needed to seed the DW/DSS
 - DW/DSS ETL process.
- We will provide a DW/DSS test system that addresses the functionality provided by the following functions:
 - data acquisition
 - data delivery
 - data access
 - metadata
 - business continuity.
- The test system will
 - use the same hardware, operating system (OS), and RDBMS that is being used in production
 - have the same make and model of servers (database, application and ETL) to mirror those that are being used in the production data warehouse environment
 - provide the same database capacity and structure for the test system as is available for the production data warehouse database.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Training will be conducted in three different “rounds.” For Level I user Training, 15 staff members are expected to participate. They will be separated so that eight are in one group and seven are in another. Each group training session will last for approximately 4 hours. Level II user Training will consist of one group of ten staff members, with a one-time session also lasting 4 hours. For Level III user Training, 20 staff members will be separated into two groups. Again, the session is expected to last 4 hours.

users will receive a manual tailored to their user level that will contain all essential information for the user to make full use of the DSS solution. This manual includes a description of the system’s functions and capabilities, contingencies and alternate modes of operation, and step-by-step procedures for system access and use. Graphics illustrate the concepts that are being covered. In addition to receiving hard copies, users will have access to an online copy that will enable them to click on topics individually. The manual will discuss primary business functions from the perspective of the user’s primary responsibilities and tasks as they are supported by the system. Text will focus on systematic steps to support the business functions. The user manual also will contain a comprehensive glossary.

The users’ manuals also will include level-tailored step-by-step access and system operating instructions, including procedures for system logon and system initialization to a known point, such as a system main menu screen, and methods of accessing help if an error message or other interruption should occur.

Implementation Readiness Activities

Government Works will ensure that the implementation readiness activities required in the RFP have occurred and conduct evaluations to ensure that key staff is ready to proceed with go-live. We will conduct training of essential start-up staff and provide them with user documentation. Government Works will prepare an Implementation Readiness Report that indicates its findings—the preparation of staff, the success of training, and the responsiveness to the user documentation, among others—prior to requesting permission of BMS to begin operations. Government Works utilizes a number of approaches to determining if staff and stakeholders are ready for the implementation of a new program, including surveys and focus groups. We consider responsiveness to the comments and suggestions of our partners to be critical to our performance and one of the reasons why all the programs we have implemented remain our clients.

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Please see our earlier discussions of project management, staffing, training, and operations for more information.

The Government Works plan includes a fixed number of consulting hours as part of its data warehouse solution. These consulting hours are associated with members of the assigned account team, and relate directly to ongoing maintenance and support of the data warehouse. These services include, but are not limited to, supporting and validating the quarterly data feeds from the health plans, maintaining the database, performing application updates, processing any error reports, and performing account and contract management activities. In addition, the following services are covered by consulting hours:

- determine clinical groupings and modify them as necessary to meet BMS' needs
- facilitate physician and health plan focus groups to explain the Government Works data warehousing methodology and algorithms, and to address concerns related to the cost of care and its impact
- identify cost drivers and other high cost areas to demonstrate areas of potential over-utilization; suggest methods to control over-utilization costs.
- perform trend analysis and address ways to manage and improve negative trends.

During Phase II, we will assist BMS in the management of the CMS certification process, as discussed elsewhere in this proposal. As requested in the RFP, these activities will include creating and reviewing documents, attending meetings, assisting in the development of presentations, answering questions, facilitating system review and access and other activities needed to support the certification process.

Turnover

Although we have never had to transition one of our contracts to another vendor, we would imagine that doing so would require following many of the same guidelines used during an implementation. Working closely with our client and the new vendor, our data warehousing specialists, database architects, and healthcare IT and medical management professionals would work to ensure a smooth transition with minimal disruption to business activities, and an emphasis on immediate productivity.

Government Works will maintain a professional, responsive and responsible working relationship with BMS and any relevant vendors to ensure a smooth transition of operations to BMS or to a new vendor. If, as the incumbent, we are notified that the contract is not to be continued, Government Works will submit an exit transition plan within 60 days prior to the

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

expiration of the term of contract. During the transition period, we will continue to operate and provide contract services in accordance with contract standards and performance guarantees.

Government Works' exit transition plan will include a description and a schedule of the required activities to be provided. We also will create a transition team that includes key personnel, and representatives from both BMS and if applicable, the new contractor. The team will meet weekly or as needed.

We will provide BMS and/or the contractor with a list of all records, plans and other documents developed by Government Works during the contract period. We also will provide documents necessary to continue operations and maintenance of relevant BMS functions. These documents include, but are not limited to:

- operations and maintenance plans
- operations and maintenance manuals
- standard operating procedures
- list of software utilized in the operation and maintenance of the project.

Government Works also will provide a list of all reports and related correspondence prepared by us and submitted to BMS. All BMS-related data will be returned to BMS, upon approval.

During the 60 days following the beginning of the transition, Government Works will ensure that it runs smoothly by:

- continuing to provide support service to BMS
- complete the project deliverables and transferring software and documentation responsibility
- cleaning up of the IT environment via test, development, training
- transferring knowledge to the support team (design and function, maintenance tasks and needed changes)
- providing tools and techniques for support team maintenance
- transitioning ownership of training materials especially, business user and user administration
- providing formal closure of the project, releasing all resources, closing the project budget, and preparing a final report.



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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Methodology

Government Works uses a variety of tools to support business service management (BSM). All of these tools are integrated through an Internet application to provide the client with a “one-stop shopping” experience to view and participate in the activities used to manage and coordinate all services. The BSM tool set consists of a trouble ticket management system, a release/QA management system, and Microsoft SharePoint as the integration tool and Internet front-end tool. The ticket management and release/QA tool display reporting and status via the integrated Internet front-end, client-specific Web site. Each client has a customizable Web site that displays status and reporting of the ticketing and release/QA tools, client-specific project plans, activity calendars, training tools, communication pages and training and support documentation, as well as other information related to Government Works’ solutions.

The SharePoint tool allows for a variety of reporting services. Integration with the trouble ticketing tool allows for the display of all tickets in the system for the client or any derivative report configuration, such as open items, recently closed, pending closed, waiting for test, waiting for client response, etc. Site integration also allows for reporting from the release/QA tool. The site displays release schedules, release plans, QA status, code sets in testing, code sets approved for release, etc. All of the reporting can be pre-configured for display on the client’s Web site or can be set up to be derived by the client on an ad hoc basis.

Government Works' BSM tools are designed with the client to report information critical to maintaining service levels and measure performance against ROI goals. Frequent updates to the reports and the transparency into the process afforded the client via the tools ensure that minor deviations from plan are identified early so that necessary mitigation steps are implemented and monitored. Transparency and direct client involvement in the support process is the best manner in which to ensure success.

Implementation

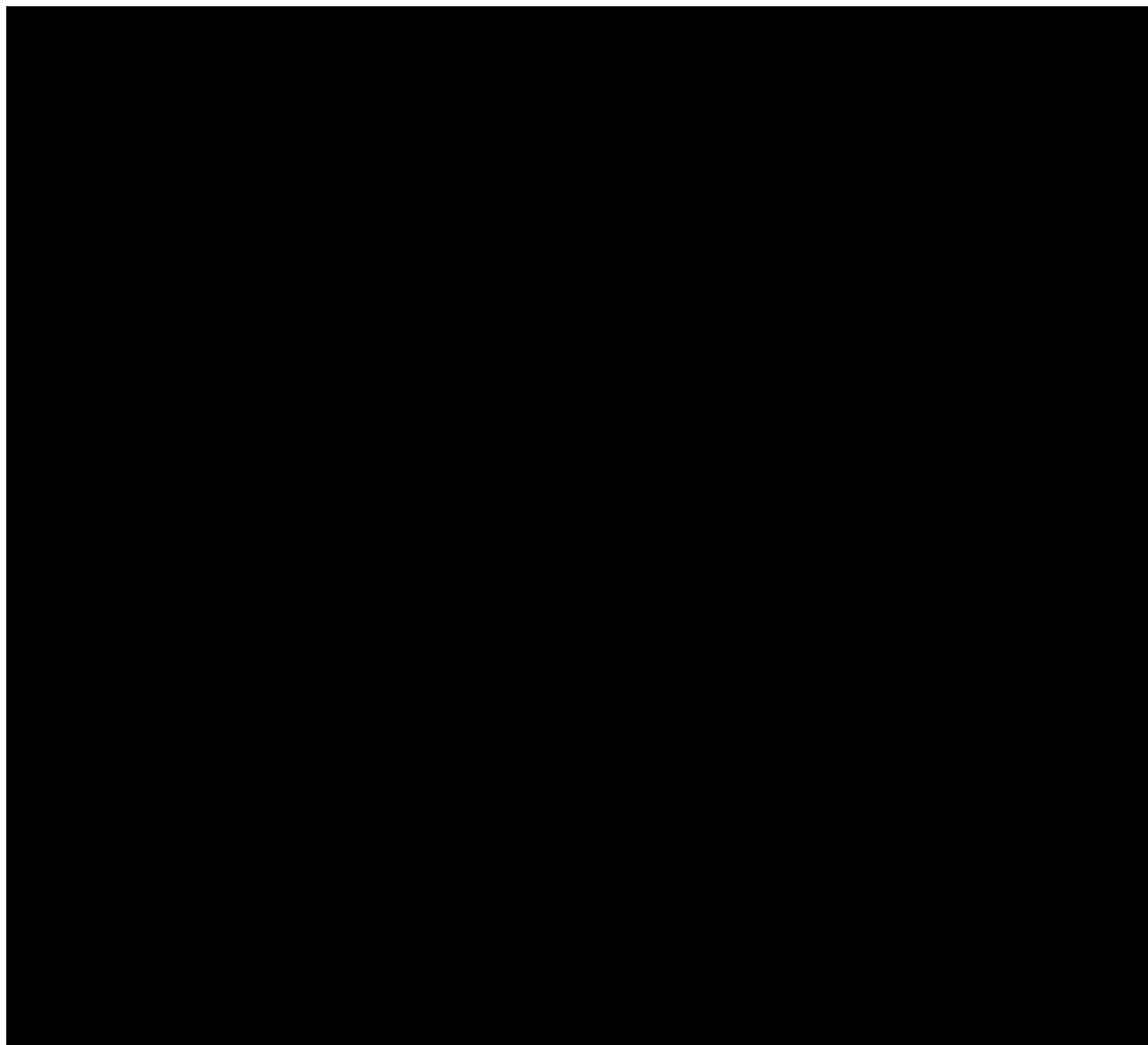
According to Government Works' standard implementation plan, implementation begins with the identification of Government Works and client implementation teams. Each team has a project manager. All communication from Government Works' staff flows through the Government Works project manager, who in turn communicates with the client project manager. Similarly, communication from client staff flows through the cPM, who in turn communicates with the iPM. This ensures a comprehensive communication flow and expedites processes.

As part of the initial implementation process, the Government Works implementation team meets with each area of the client organization that will be involved with the implementation. Our team reviews the Enterprise modules in detail, then reviews the current systems and processes that the client has in place. Part of this evaluation involves identifying the most beneficial way to configure modules, as well as any potential gaps or issues and the best way to address them. At this time, regular site visits and conference calls are scheduled. At a minimum, Government Works recommends a weekly status update call between PMs.

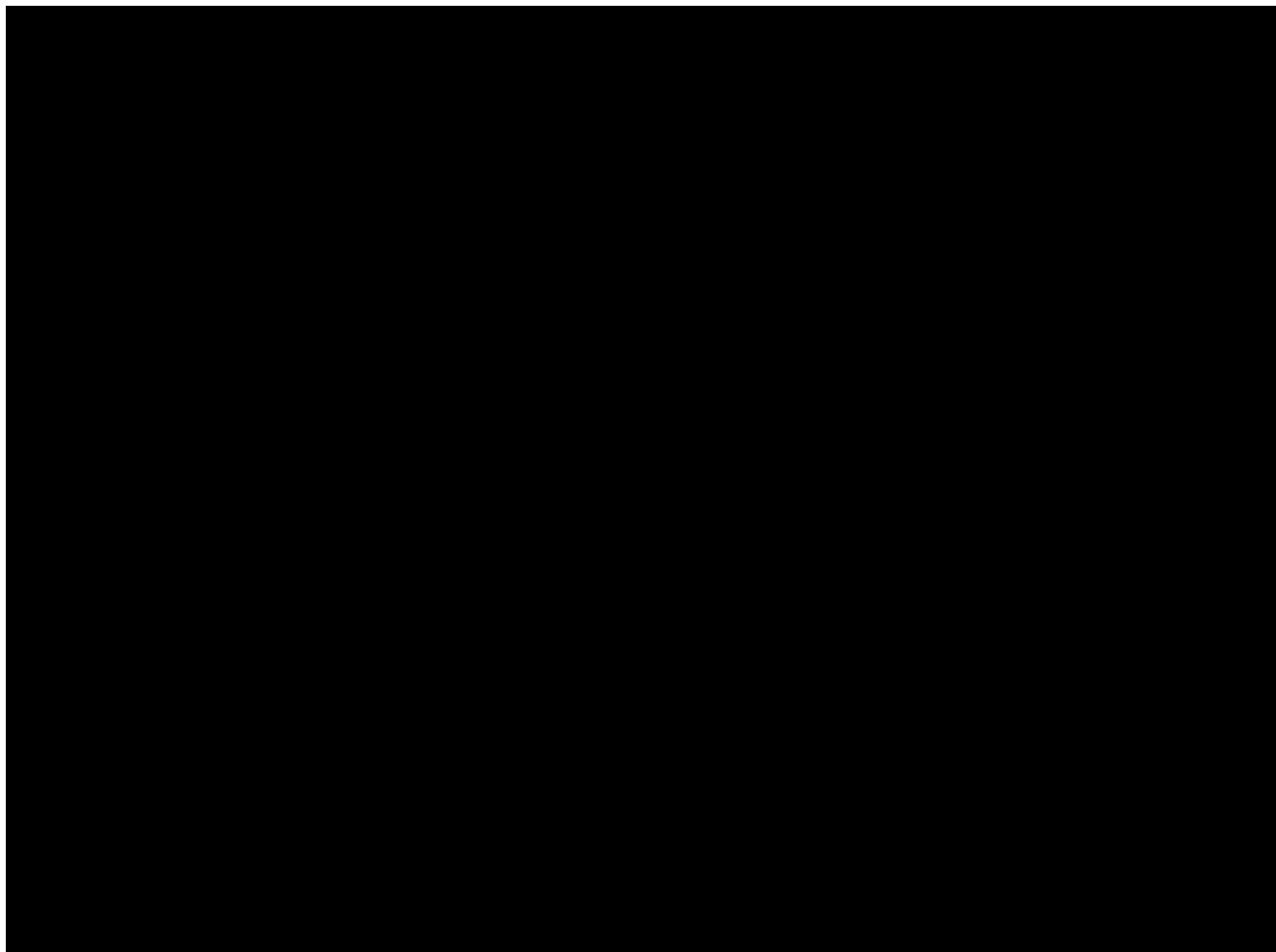
Project scheduling is discussed after the initial evaluation has been completed. Jointly, the PMs identify the persons responsible and establish appropriate timeframes for various tasks to be completed based on client resources, go-live date, set-up requirements, data conversion needs and the amount of testing desired. For instance, if client resources allow, certain tasks can be worked on concurrently, reducing the implementation period.

Typically, Government Works maintains a high-level implementation plan, and the client develops an internal implementation plan. The two plans have the same milestones, but the client plan would contain additional details that are necessary based on its business rules and roles. If the client prefers, we can combine the two plans. At the weekly conference calls or onsite meetings, we discuss progress made on the assigned tasks and any obstacles or resource constraints if a task is falling behind.

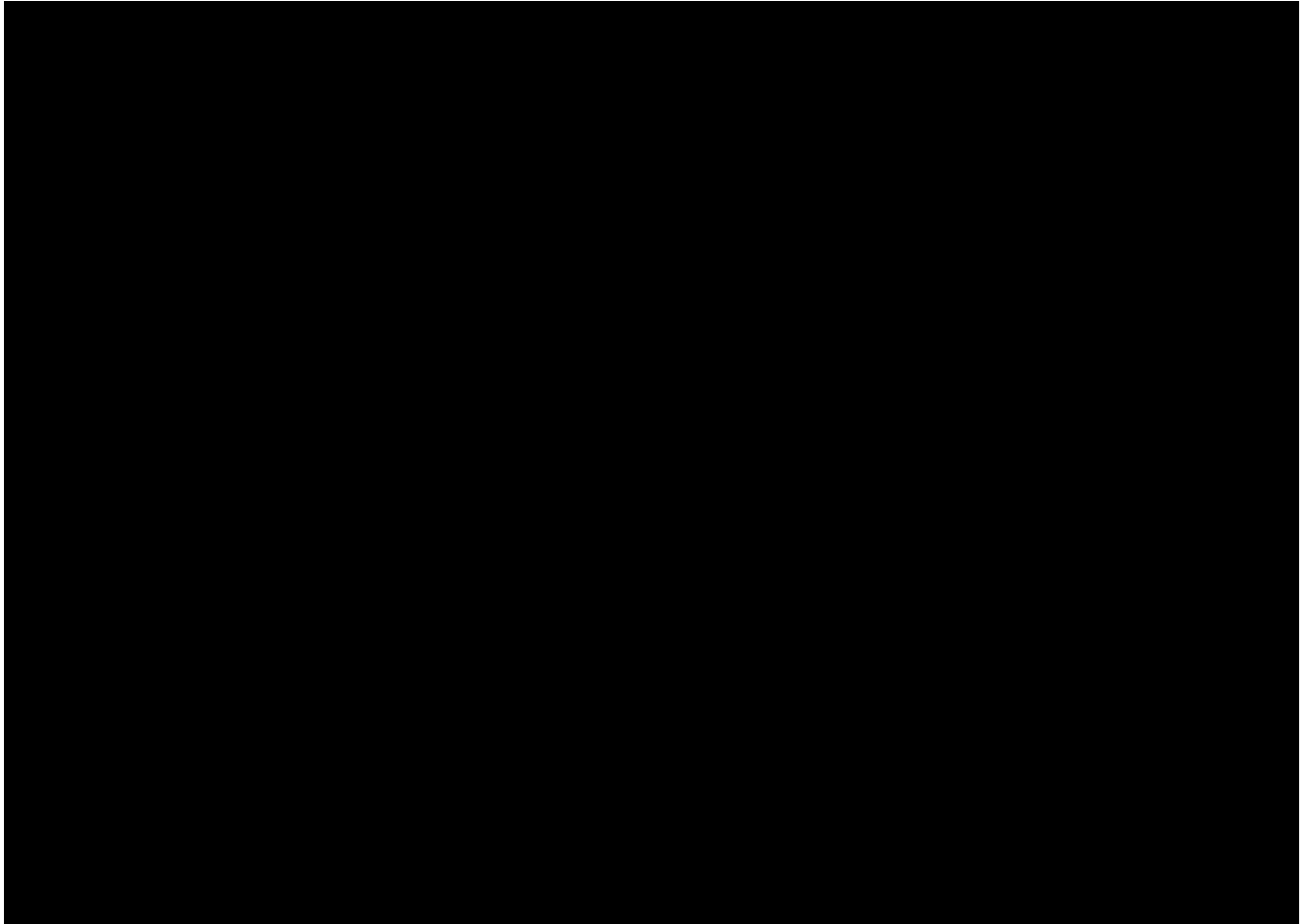
Implementation Chart



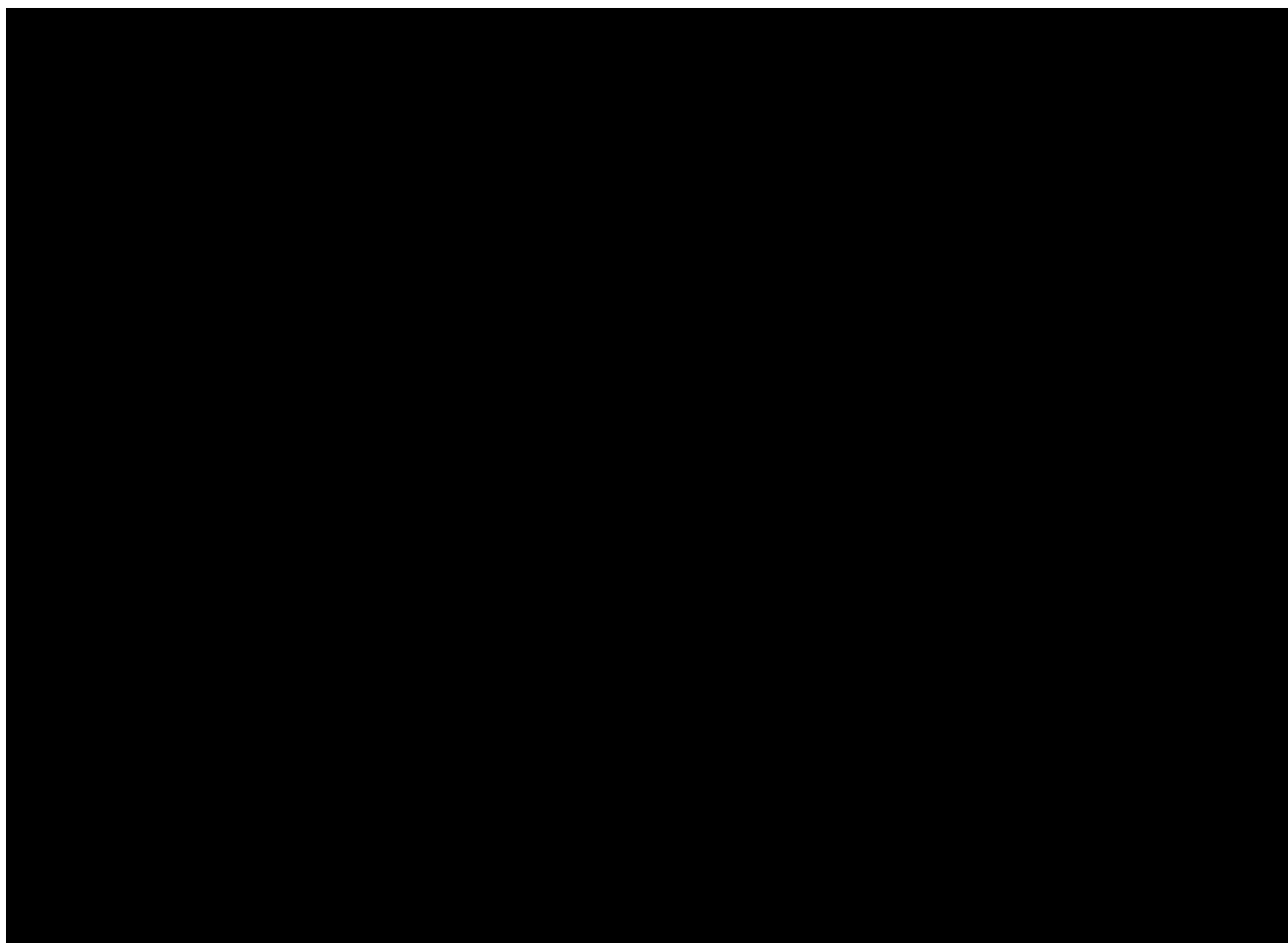
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



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In addition, Government Works augments the standard PMI-based approach with several additional tools that provide an additional level of confidence that our implementations go well and have emerged as critical success factors. These tools include the following:

Action Item Log

The Action Item Log provides a granular level of tracking and managing items beyond the task level. As the implementation progresses, issues arise as a result of discrepant events. Consequently, there is a need to highlight actions that require close monitoring or focus and manage key activities in the critical path. The Action Item Log provides a means to bring a laser-like focus on an area that needs attention. The log allows the project manager to identify what needs to be done, who is responsible to get it done, and when the action needs to be completed.

This tool is most effective when attended to on a daily basis as it provides an opportunity to effect a rapid response to keep on schedule and on budget. It allows the project manager to respond immediately to any impediment. It also results in project participants not allowing unrelated calendar commitments to dictate priorities. Projects fall behind schedule one day at a time. The Action Item Log allows managers to intercede one day at a time.

Risk Mitigation Strategy and Planning Tool

The Risk Mitigation Strategy and Planning Tool allows the project manager to engage in an exercise that identifies what may go wrong. This tool consists of the following steps. First, any anomalies that may occur are identified and assigned a probability that they may occur by assigning a numeric value to the item: 1 for low probability, 2 for medium or 3 for high. Next, a numeric value is assigned to each item indicating the severity if an anomaly occurs: 1 for low, 2 for medium or 3 for high. A weighting is calculated for each item by combining the probability and severity factors. Finally, an anomaly list is arranged in descending order based on the weighting. This ranking establishes the priority for determining which items to focus on first. The final step is to define a strategy to prevent each anomaly from occurring.

The second half of the risk mitigation and strategy planning process is to develop a back-up plan. The intent is simply to define the actions that will be taken if an anomaly occurs despite the

team's best efforts to prevent the anomaly. The rationale here is that the time to figure out how to stop a well from leaking oil after an explosion is before the explosion occurs, not after.

Communication Strategy and Planning Tool

The Communication Strategy and Planning Tool allows participants to build on the core communication flows within the project team mentioned above. ikaSystems recognizes that communication must be intentional. Miscommunication consumes time, money and focus. And the use of technology (email) amplifies the lost time by an order of magnitude. Although the steps that follow may seem simple enough, it is the internal discipline and execution that contribute significantly to project success on another dimension.

- First, in-house organs and communication channels need to be identified. The team needs to develop the messages that it wants to communicate. At a minimum, the affected audience needs to know what the company is going to do, why they are going to do it, what the expected outcome will be, what is expected from stakeholders, and how long the project is expected to take. Once these are known, the team then needs to establish the frequency of the messages by channel.
- The second phase is implementation. The team needs to announce that the project has started, deliver the message and report progress at a summary level versus the plan.
- The final phase is to celebrate success by announcing that the project has been completed successfully, spotlighting participants and their contributions, rewarding the participants publicly and identifying lessons learned.

The primary drivers of communication among the project teams are the governance groups. These groups are composed of the steering committee, the internal and external project teams, and the governance team.

The types and levels of interactivity between the project teams is determined by the complexity of the project and type of change incorporated within the products being rolled out to the organization. This dimension of the project is an ongoing determination made by the steering committee and can vary among the different working groups on the project. All levels of interactivity will involve Government Works onsite resources; however, the more complex or operational/strategic a project is will determine the types of working relationships required.

As these determinations are made, the organizational change aspect of the governance structure will be mobilized. This group is a team composed of members of all of the working groups. The focus of this team is to assess the level and complexity of the change required for the organization and to develop strategies to minimize the impact of the change. This group will reach out into the organization to involve additional groups to assist in the change management process. This effort will ensure that all affected parties are involved in the organizational change process.

The next step in the governance process is to determine consistent measurements. Measurements of key areas that will be affected by the product rollout should be completed prior to the project

inception. This will allow for an accurate measurement of organizational efficiency prior to any involvement in the project. A determination should also be made of when measurements of the selected areas will be taken post-implementation. This planning activity will ensure that accurate and consistent comparisons can be made in the identified key areas of impact.

Resources

A complete technical implementation team (programmers, project managers) will be involved in a client's implementation, supported by appropriate business analysts for each module and a relationship manager with oversight for the implementation. Resources for each project are fine-tuned to accomplish all project-related activities with the seamless synergy that ensures rapid progress toward our implementation goals. Resources from Government Works and ikaSystems usually include:

- implementation manager
- project director
- project architect
- IT infrastructure manager
- database manager
- business analysts
- systems analysts
- programmer analysts/developers
- testing/QA personnel
- IT support staff (project maintenance) .

Government Works' project directors managers have extensive operational familiarity with the healthcare industry; they have oversight of the implementation as well as a serving as a technical project manager. In addition, several subject matter experts/analysts are assigned to the implementation team based on the scope of the project. Each member of the implementation team has more than 10 years of healthcare background and has been engaged in other Government Works implementations

All of the Government Works' resources involved in an implementation also are supported by senior-level Government Works staff. The project manager is supported and supervised by the vice president of implementations. This resource provides guidance as requested and performs internal audits of protocols and processes that the project manager is using. Government Works business and technical analysts are supervised by product managers to ensure compliance with product standards and that any requested changes are appropriately documented. All Government Works resources—project managers, analysts and technical staff—also have access to extensive peer review processes, and all documentation is peer reviewed. Peer review provides support, collaboration and communication of the most up-to-date solutions and approaches to business problems and situations.

Similar to the composition of the Government Works team, the client team is usually available to delineate requirements and respond to questions. Personnel resources from the client's

organization, on an as-needed basis, typically consist of subject matter experts (SMEs) and decision-makers from all concerned departments, IT/EDI team, a project manager, QA personnel and eventually training experts. Once the client project personnel are identified, our team members will interact on a regular basis with their peers and user groups throughout the length of the project and when needed.

Configuration Management Methodology

Configuration management is a set of processes and procedures required to ensure that all hardware and software components in production environments are clearly identified and are not modified without some authorized process. In terms of a DSS/Data Warehouse, configuration management applies to all of the software code, documentation, test results and other deliverables that are produced during an information management project.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Government Works' modules are upgraded continuously to meet changing requirements or as new functionality and technology become available. Because of our technology architecture, these changes are typically not difficult to complete. We are able to keep our technology current rather than being forced to retire outdated systems and create new ones.

On average, minor releases occur every six months; major releases occur every two years. Because of the technology architecture, these changes typically are not difficult to complete. Upgrades are scheduled and clients are informed well before the release or deployment. The implementation is accompanied by technical and functional release notes.

Communication plans, including those for upgrades, will be defined with the client during information gathering. Government Works collaborates with each client to create a "notification matrix" that details who is to be contacted and by what method. The plan outlines primary contact, secondary contact and so on.

As we have described, Government Works uses best practices for unit, system, integration and acceptance testing. Each release is tested by Government Works developers and the Government Works acceptance team before being released to the client. An internal bug tracking system is used to record and communicate the status of these items. Additionally, release schedules are set up at agreed-upon intervals to release updated and improved functionality.

Clients can opt not to make any smaller upgrades, as well as skip one major upgrade. Releases are always scheduled at a convenient time for the client so as not to compromise client production times. Clients typically upgrade within six months of the release; however, we can work with a schedule that best fits BMS' needs. All custom functionality developed during implementation of the original system will be carried over across upgrades. All previous releases are being supported.

If the client has selected a SaaS solution, Government Works-generated upgrades occur at no cost to the client. However, we will need to discuss with BMS and plan for any BMS-specific or required upgrades. Hardware, operating systems, and network upgrades are the responsibility of Government Works and occur without interruption to the client's operations.

The system uses separate service accounts for QA, development, staging, and production and they are managed by different system administrators as well. First, the solution that has been configured for the client is installed in an internal test environment (QA) and the applications are tested. Once the solution is approved, it is installed in the development environment for additional testing, and then it is installed in the staging environment. The staging environment is a true copy of the production server that will be deployed for the client. user groups within the client organization (and external user groups (brokers, consultants, etc.) can access the staged solution and familiarize themselves with the tools that are being deployed for the project. Finally, the solution is installed in the production environment.

Government Works supports separate development, QA, staging and production environments. Changes in these environments undergo strict change control procedures. Every required change is logged as a ticket (internal or external) for tracking purposes. Tickets have one or multiple owners and one point of contact (POC). Clients can check the status of the ticket/change online; if they require additional clarification, the POC can be contacted. With the help of their team managers, multiple project teams coordinate to resolve changes/issues, while POCs update status.

For each implementation, the Government Works QA team lead creates a comprehensive test strategy and plan that is incorporated into this master project plan. The primary activities in the testing process are:

- regularly scheduled meetings for test participants to review and discuss test scope, test metrics, test approaches, test schedules, test cases, bug tracking and other aspects of the test program
- preparation of validation plans and test cases
- execution of test cases
- analysis of test data
- bug tracking and resolution
- closing issues
- release to production.

Resources such as staff availability and budgetary considerations can be influential in determining the scope of the test plan and may require adjustments to the plan, or the introduction of additional resources or tools.

Testers must understand the context for the project and the mission of the testing plan to help others to make informed decisions on testing results. Once a bug is found, testers craft bug descriptions and steps for recreating the bugs that are easy to understand and follow. They must also accurately communicate its impact on the system. Business analysts or developers review the defect and provide any workaround solutions that could lessen its impact. The entire test team participates in setting the quality standards for the product.

For each implementation, the Government Works QA team lead creates a comprehensive test strategy and plan that is incorporated into this master project plan. This plan is discussed in detail on page 126.

System Development and Change Management Methodologies

Government Works employs Agile development methods that divide large, long-term tasks into manageable short increments that require minimal planning and documentation, thus speeding time to delivery. An interdisciplinary team, which includes a client advocate, follows each development iteration through the entire software life cycle. Government Works' adoption of Agile development enables us to produce high quality software that meets the needs of our clients in condensed time frames that were previously considered unattainable.

Agile iterations usually last weeks instead of months and result in functioning software at the end of the cycle. Early iterations are not expected to have complete functionality, but instead are used to confirm compliance to functional requirements and to solicit feedback. In this way, Agile iterations allow for easy introduction of new requirements or modifications.

Government Works' development process is equivalent to CMMI level four.

Government Works' modules are upgraded continuously to meet changing requirements or as new functionalities and technologies become available. Because of our technology architecture, these changes are typically not difficult to complete. We are able to keep our technology current rather than being forced to retire outdated systems and create new ones.

On average, minor releases occur every six months; major releases occur every two years. Because of the technology architecture, these changes typically are not difficult to complete. Upgrades are scheduled and clients are informed well before the release or deployment. The implementation is accompanied by technical and functional release notes.

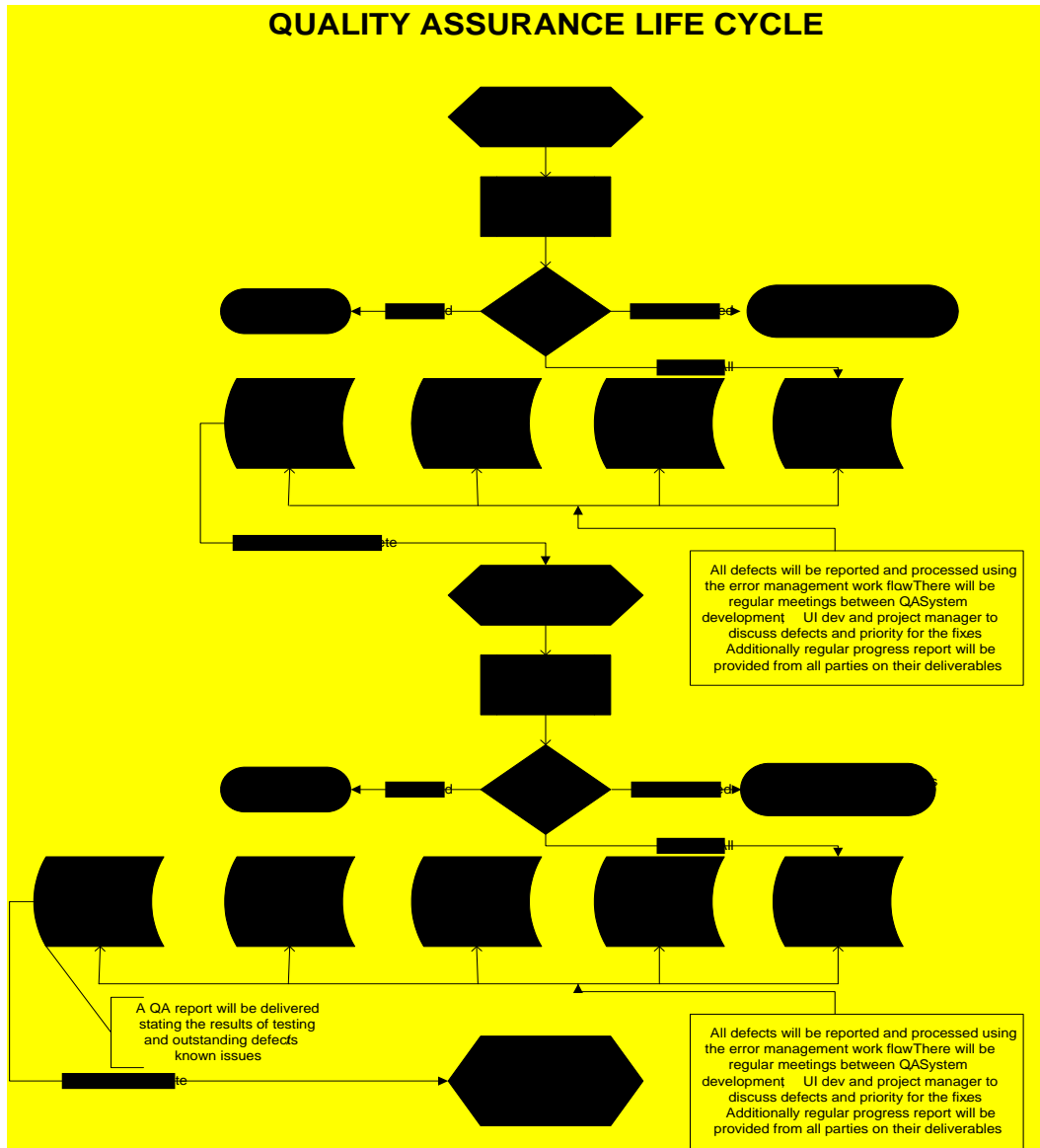
Communications plans, including those for upgrades, will be defined with the client during information gathering. Government Works collaborates with each client to create a "notification matrix" that details who is to be contacted and by what method. The plan outlines primary contact, secondary contact, and so on.

As we have demonstrated, Government Works uses best practices for unit, system, integration and acceptance testing. Each release is tested by Government Works and ikaSystems developers and the acceptance team before being released to the client. An internal bug tracking system is used to record and communicate the status of these items. Additionally, release schedules are set up at agreed-upon intervals to release updated and improved functionality.

Please see our discussion of change management on page 97.

[REDACTED]

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

SLA compliance guidelines and report management also will be included.

Service Level Agreements and Key Performance Indicators

Government Works uses automated service reporting and tracking tools, which allow a client to report technical and service-related issues directly to the Government Works technical teams assigned to the client. The service reporting tools are proactively monitored and reviewed to make certain all client Service Level Agreements (SLAs) are met.

Government Works proactively monitors usage of the Government Works tools by the client as well as monitoring trouble tickets opened by the client. As a result of this proactive monitoring, Government Works support teams are able to determine if the client is meeting performance goals and maintaining predetermined throughput measures. If trends indicate a need for additional training needs, or if the client requests onsite support, Government Works resources are deployed to the client site.

Performance credits can vary widely from health plan to health plan and by the module or modules involved. Should performance credits be required, they would be applied to the following month's invoice. Government Works would be happy to discuss this topic further to ensure that BMS has the maximum level of comfort in doing business with Government Works.

SUBCONTRACTING

We will be subcontracting with HMS Technologies, Inc. to assist Government Works in the performance of a variety of functions, including training and other activities requiring an onsite presence.

SPECIAL TERMS AND CONDITIONS

Not applicable.

SIGNED FORMS

RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



West Virginia Department of Health and Human Resources
Bureau for Medical Services
v10.0 - DW/DSS Procurement RFP MED11015

BUREAU FOR MEDICAL SERVICES

MED PURCHASING AFFIDAVIT

West Virginia Code §5A-3-16a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, delinquent workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties assessed thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as provided by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (West Virginia Code §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Government Works, Inc.

Authorized Signature: [Signature]

Date: 5/12/2011

State of Massachusetts

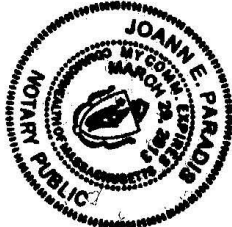
County of Worcester, to-wit:

Taken, subscribed, and sworn to before me this 12th day of May, 20 11.

My Commission expires 3-29, 20 13.

AFFIX SEAL HERE

NOTARY PUBLIC



RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



Request for Quotation

State of West Virginia
Department of Health & Human Resources
Office of Purchasing
One Davis Square, Suite 100
Charleston, WV 25301

RFQ NUMBER
MED11014

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
BRYAN D. ROSEN
304-558-0953

V E N D O R	Government Works, Inc.
	257 Turnpike Road
	Southborough MA 01772
	Phone: (774) 760-1800
	Fax: (508) 824-8539
	DUNS Number: 103532185
	www.governmentworks.com

S H I P T O	BUREAU FOR MEDICAL SERVICES
	350 CAPITOL STREET, ROOM 251
	CHARLESTON, WV 25301-3706

DATE PRINTED		TERMS OF SALE		SHIP VIA		F.O.B.		FUND	
BID OPENING DATE: 4/26/2011		BID OPENING TIME: 1:30 PM							
LINE	QUANTITY	UOP	CAT.NO.	ITEM NUMBER	UNIT PRICE	AMOUNT			
ADDENDUM NO. 2									
1. SECTION 1.17 - SCHEDULE OF EVENTS IS BEING MODIFIED AS FOLLOWS: TO CHANGE QUESTION ADDENDUM ISSUED FROM MARCH 4, 2011 TO MARCH 18, 2011									
REQUISITION NO.: MED11014									
ADDENDUM ACKNOWLEDGEMENT									
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.									
ADDENDUM NO.'S"									
NO. 1 _____									
NO. 2 <input checked="" type="checkbox"/> _____									
NO. 3 _____									
NO. 4 _____									
NO. 5 _____									
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF PROPOSAL.									
SEE REVERSE FOR TERMS AND CONDITIONS									
SIGNATURE <i>[Signature]</i>					TELEPHONE (774) 760-1801		DATE 5/12/2011		
TITLE Senior Vice President					FEIN 03-0393374				

WHEN RESPONDING TO RFP, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED "VENDOR"

RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

MED-96

AGREEMENT ADDENDUM

In the event of conflict between this addendum and the agreement, this addendum shall control:

1. **DISPUTES** - Any references in the agreement to arbitration or to the jurisdiction of any court are hereby deleted. Disputes arising out of the agreement shall be presented to the West Virginia Court of Claims.
2. **HOLD HARMLESS** - Any clause requiring the Agency to indemnify or hold harmless any party is hereby deleted in its entirety.
3. **GOVERNING LAW** - The agreement shall be governed by the laws of the State of West Virginia. This provision replaces any references to any other State's governing law.
4. **TAXES** - Provisions in the agreement requiring the Agency to pay taxes are deleted. As a State entity, the Agency is exempt from Federal, State, and local taxes and will not pay taxes for any Vendor including individuals, nor will the Agency file any tax returns or reports on behalf of Vendor or any other party.
5. **PAYMENT** - Any references to prepayment are deleted. Payment will be in arrears.
6. **INTEREST** - Should the agreement include a provision for interest on late payments, the Agency agrees to pay the maximum legal rate under West Virginia law. All other references to interest or late charges are deleted.
7. **RECOUPMENT** - Any language in the agreement waiving the Agency's right to set-off, counterclaim, recoupment, or other defense is hereby deleted.
8. **FISCAL YEAR FUNDING** - Service performed under the agreement may be continued in succeeding fiscal years for the term of the agreement, contingent upon funds being appropriated by the Legislature or otherwise being available for this service. In the event funds are not appropriated or otherwise available for this service, the agreement shall terminate without penalty on June 30. After that date, the agreement becomes of no effect and is null and void. However, the Agency agrees to use its best efforts to have the amounts contemplated under the agreement included in its budget. Non-appropriation or non-funding shall not be considered an event of default.
9. **STATUTE OF LIMITATION** - Any clauses limiting the time in which the Agency may bring suit against the Vendor, lessor, individual, or any other party are deleted.
10. **SIMILAR SERVICES** - Any provisions limiting the Agency's right to obtain similar services or equipment in the event of default or non-funding during the term of the agreement are hereby deleted.
11. **ATTORNEY FEES** - The Agency recognizes an obligation to pay attorney's fees or costs only when assessed by a court of competent jurisdiction. Any other provision is invalid and considered null and void.
12. **ASSIGNMENT** - Notwithstanding any clause to the contrary, the Agency reserves the right to assign the agreement to another State of West Virginia agency, board or commission upon thirty (30) days written notice to the Vendor and Vendor shall obtain the written consent of Agency prior to assigning the agreement.
13. **LIMITATION OF LIABILITY** - The Agency, as a State entity, cannot agree to assume the potential liability of a Vendor. Accordingly, any provision limiting the Vendor's liability for direct damages to a certain dollar amount or to the amount of the agreement is hereby deleted. Limitations on special, incidental or consequential damages are acceptable. In addition, any limitation is null and void to the extent that it precludes any action for injury to persons or for damages to personal property.
14. **RIGHT TO TERMINATE** - Agency shall have the right to terminate the agreement upon thirty (30) days written notice to Vendor. Agency agrees to pay Vendor for services rendered or goods received prior to the effective date of termination.
15. **TERMINATION CHARGES** - Any provision requiring the Agency to pay a fixed amount or liquidated damages upon termination of the agreement is hereby deleted. The Agency may only agree to reimburse a Vendor for actual costs incurred or losses sustained during the current fiscal year due to wrongful termination by the Agency prior to the end of any current agreement term.
16. **RENEWAL** - Any reference to automatic renewal is hereby deleted. The agreement may be renewed only upon mutual written agreement of the parties.
17. **INSURANCE** - Any provision requiring the Agency to insure equipment or property of any kind and name the Vendor as beneficiary or as an additional insured is hereby deleted.
18. **RIGHT TO NOTICE** - Any provision for repossession of equipment without notice is hereby deleted. However, the Agency does recognize a right of repossession with notice.
19. **ACCELERATION** - Any reference to acceleration of payments in the event of default or non-funding is hereby deleted.
20. **CONFIDENTIALITY** - Any provision regarding confidentiality of the terms and conditions of the agreement is hereby deleted. State contracts are public records under the West Virginia Freedom of Information Act.
21. **AMENDMENTS** - All amendments, modifications, alterations or changes to the agreement shall be in writing and signed by both parties. No amendment, modification, alteration or change may be made to this addendum without the express written approval of the Purchasing Division and the Attorney General.

ACCEPTED BY DHHR OFFICE OF PURCHASING:

Spending Unit: _____
Signed: _____
Title: _____
Date: _____

VENDOR

Company Name: Government Works, Inc.
Signed: [Signature]
Title: Senior Vice President
Date: 5/12/2011

RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



Request for Quotation

State of West Virginia
Department of Health & Human Resources
Office of Purchasing
One Davis Square, Suite 100
Charleston, WV 25301



MED11014

2

DONNA D. SMITH
304-957-0218

Government Works, Inc.
257 Turnpike Road
Southborough MA 01772
Phone: (774) 760-1600
Fax: (508) 624-8539
DUNS Number: 103532185
www.governmentworks.com

BUREAU FOR MEDICAL SERVICES
350 CAPITOL STREET, ROOM 251
CHARLESTON, WV 25301-3705

BID OPENING DATE: MAY 31, 2011		BID OPENING TIME: 1:30 PM	
<p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p>			
		 SIGNATURE	
SIGNATURE 		TELEPHONE (774) 760-1601	DATE 5/12/2011
TITLE Senior Vice President		FEIN 03-0393374	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFP, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED "VENDOR"

RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



Request for Quotation

State of West Virginia
 Department of Health & Human Resources
 Office of Purchasing
 One Davis Square, Suite 100
 Charleston, WV 25301

RFP NUMBER
 MED11014

PAGE
 2

ADDRESS CORRESPONDENCE TO ATTENTION OF
 BRYAN D. ROSEN
 304-558-0853

Government Works, Inc.
 257 Turnpike Road
 Southborough MA 01772
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 Fax: (508) 624-8539
 DUNS Number: 103532185
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 I CHARLESTON, WV 25301-3706
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DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FUND		
BID OPENING DATE: 4/26/2011	BID OPENING TIME: 1:30 PM					
LINE	QUANTITY	UOP	CAT.NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p align="center"> SIGNATURE Government Works, Inc. COMPANY 5/12/2011 DATE END OF ADDENDUM NO. 2 </p>						
SEE REVERSE FOR TERMS AND CONDITIONS						
SIGNATURE		TELEPHONE (774) 760-1601		DATE 5/12/2011		
TITLE Senior Vice President		FEIN 03-0393374				

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RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
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Request for Quotation

State of West Virginia
Department of Health & Human Resources
Office of Purchasing
One Davis Square, Suite 100
Charleston, WV 25301

MED11014

1

DONNA D. SMITH
304-957-0218

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BUREAU FOR MEDICAL SERVICES
350 CAPITOL STREET, ROOM 251
CHARLESTON, WV 25301-3706

BID OPENING DATE: MAY 31, 2011

BID OPENING TIME: 1:30 PM

ADDENDUM NO. 1

1. SECTION 2.4.7 PROCUREMENT LIBRARY HAS BEEN CHANGED TO READ:
THE PROCUREMENT LIBRARY CONTAINS INFORMATION WHICH SHOULD BE OF USE TO THE VENDOR IN DEVELOPING THEIR PROPOSED SOLUTION. THE PROCUREMENT LIBRARY IS BEING DISSEMINATED ON A CD, TO BE ONLY ACCESSIBLE BY A PREDETERMINED PASSWORD. CD AND PASSWORD ARE BEING DISTRIBUTED UNDER A SEPARATE COVER. ADDITIONALLY, THE BMS WEB-SITE IS NOW
2. THE BMS WEB-SITE IN SECTION 2.4.7 HAS BEEN CHANGED TO: www.dhhr.wv.gov/bms.
3. SECTION 1.17 SCHEDULE OF EVENTS IS BEING MODIFIED AS FOLLOWS:
VENDOR WRITTEN QUESTION SUBMISSION DEADLINE: FEBRUARY 25, 2011
QUESTIONS ADDENDUM ISSUED: MARCH 4, 2011.
4. CONTACT INFORMATION ON RFP COVER PAGE, SECTION 1.5 AND SECTION 1.10.3 FOR ALL DIRECT INQUIRIES IS MODIFIED AS FOLLOWS:
NAME CHANGE: FROM DONNA D. SMITH TO BRYAN D. ROSEN
PHONE NUMBER CHANGE FROM: (304) 957-0218 TO (304) 558-0853
EMAIL ADDRESS FROM: donna.d.smith@wv.gov TO: bryan.d.rosen@wv.gov
5. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID.
FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR PROPOSAL.

REQUISITION NO.: MED11014

ADDENDUM ACKNOWLEDGEMENT

I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.

ADDENDUM NO. "S"

NO. 1 ☒
NO. 2 _____
NO. 3 _____
NO. 4 _____
NO. 5 _____

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF PROPOSAL.

SIGNATURE

TELEPHONE (774) 760-1601

DATE 5/12/2011

TITLE Senior Vice President

FEIN 03-0393374

ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFP, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED "VENDOR"

RESPONSE TO REQUEST FOR PROPOSALS-Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

GENERAL TERMS & CONDITIONS
PURCHASE ORDER/CONTRACT

1. **ACCEPTANCE:** Seller shall be bound by this order and its terms and conditions upon receipt of this order.
2. **APPLICABLE LAW:** The laws of the State of West Virginia and the BMS Purchasing Manual shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
3. **NON-FUNDING:** All services performed or goods delivered under BMS Purchase Orders/Contracts are to be continued for the terms of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, the Purchase Order/Contract becomes void and of no effect after June 30.
4. **COMPLIANCE:** Seller shall comply with all federal, state and local laws, regulations and ordinance including, but not limited to, the prevailing wage rates of the WV Division of Labor.
5. **MODIFICATIONS:** This writing is the parties' final expression of intent. No modification of this order shall be binding unless agreed to in writing by the Buyer.
6. **ASSIGNMENT:** Neither this Order or any monies due, or to become due hereunder may be assigned by the Seller without the Buyer's consent.
7. **WARRANTY:** The Seller expressly warrants that the goods and/or services covered by this order will: (a) conform to the specifications, drawings, samples or other description furnished or specified by the BUYER; (b) be merchantable and fit for the purpose intended; and/or (c) be free from defect in material and workmanship.
8. **CANCELLATION:** The director of the DHHR Office of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
9. **SHIPPING, BILLING & PRICES:** Prices are those stated in this order. No price increase will be accepted without written authority from the Buyer. All goods or services shall be shipped on or before the date specified in the Order.
10. **LATE PAYMENTS:** Payment may only be made after the delivery of goods or services. Interest may be paid on late payments in accordance with the West Virginia Code.
11. **TAXES:** The State of West Virginia is exempt from the federal and state taxes and will not pay or reimburse such taxes.
12. **RENEWAL:** Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon contract null and void, and terminate such contract without further order.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR § 160.103) and will be disclosing Protected Health Information (45 CFR § 160.103) to the vendor.
15. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedure, and rules.
16. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirement by any state or local agency of West Virginia, including but not limited to, the West Virginia Secretary of State's Office, the West Virginia Insurance Commission, or any other state agency or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

GENERAL TERMS & CONDITIONS
PURCHASE ORDER/CONTRACT

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8. **CANCELLATION:** The director of the DHHR Office of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
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COST SUMMARY (ATTACHMENT I)

The completed cost proposal is being sent under separate cover.

RFP REQUIREMENTS CHECKLIST (ATTACHMENT II)

A		B	C
DW/DSS RFP Requirements		Proposal Section	Proposal Page No.
3.1	Mandatory Requirements		
3.1.1	Vendor will host the BMS DW/DSS and maintain a secure site and secure back-up site within the continental United States. All work performed in association with this contract must originate from the continental United States. We will be responsible for all costs associated with supporting the facilities and ensuring that the facilities comply with legal requirements.	Assertions	49-50
3.1.2	Meet the requirements in Appendix I—Detailed Mandatory Requirements	Assertions	49-50
3.1.3	Employ a Relational Database Management System (RDBMS) or Object Oriented Database Management System (OODMS), a data infrastructure that is easily configurable, role-based with 24X7 access to data, and uses best-in-class analysis tools.	Assertions	49-50
3.1.4	Provide a detailed Reconciliation Plan within 45 calendar days of contract execution, which is reconciled to financial control totals, which includes processes to automatically maintain data integrity and verify/reconcile data against the source systems, including payment data, and accounts for discrepancies.	Assertions	49-50
3.1.5	Demonstrate a process for ensuring that data is representative of all data elements used for claims processing and payment.	Assertions	49-50
3.1.6	Agree that BMS retains ownership of all data, procedures, programs and all materials gathered or developed under the contract with West Virginia, that source code will be held in escrow with a third-party agent acceptable to the State and that BMS holds a perpetual license for all system components upon termination of the Vendor's contract.	Assertions	49-50

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

3.1.7	Agree to incorporate all applicable current and future coding standards and legislated or program necessary data requirements to ensure that the DW/DSS is current in its ability to accept and appropriately employ new standards and requirements as they occur, including, but not limited to, ICD-10, HIPAA v5010, the Patient Protection and Access to Care Act (PPACA) and the Health Information Technology for Economic and Clinical Health Act (HITECH).	Assertions	49-50
3.1.8	Provide thirty (30) user licenses and allow for the purchase of additional licenses or user seats in minimum increments of one (1) to five (5).	Assertions	49-50
3.1.9	Allocate onsite time at the WV BMS offices for their Project Manager and other Vendor staff, when requested to do so by BMS, to allow sufficient direct interaction with BMS; data warehouse users, publishers and subscribers; and the WV MMIS Fiscal Agent.	Assertions	49-50
3.1.10	Provide an Initial Project Plan based on their understanding of the scope of work presented in this RFP within ten (10) calendar days of contract startup.	Assertions	49-50
3.1.11	Perform the following activities on the DW/DSS: project startup, requirements definition and analysis, detailed system design, system construction and testing, implementation readiness, operations, enhancement and user support.	Assertions	49-50
3.1.12	Develop and deliver a Training Plan within ten (10) calendar days of contract execution.	Assertions	49-50
3.1.13	Execute the training program in accordance with the Training Plan.	Assertions	49-50
3.1.14	Request written authorization from BMS to commence operations. Operations will commence upon signatory approval from the Bureau.	Assertions	49-50
3.1.15	Receive approval from BMS to begin operations.	Assertions	49-50
3.1.16	Provide support to BMS during the CMS certification process.	Assertions	49-50
3.1.17	Provide a system that meets all CMS certification requirements.	Assertions	49-50

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

3.1.18	Provide to BMS, within thirty (30) days of being asked to do so, a Turnover Plan detailing the approach to transitioning systems and operational responsibilities to a successor.	Assertions	49-50
3.1.19	Provide a help desk during state office hours, which are typically Monday through Friday, 8:00 am to 5:00 pm EST.	Assertions	49-50
3.1.20	Utilize an industry standard Project Management Methodology to complete the work associated with this RFP.	Assertions	49-50
3.1.21	Utilize a formal Configuration Management Methodology to complete the work associated with this RFP.	Assertions	49-50
3.1.22	Utilize industry standard System Development and Change Management Methodologies to complete the work associated with this RFP.	Assertions	49-50
3.1.23	Provide a formal Quality Management Plan within ten (10) calendar days of contract execution that includes a methodology and process for sampling, auditing and continuous quality improvement and which reflects that the Vendor is responsible for the quality of the data and the reports created from that data.	Assertions	49-50
3.1.24	Provide a Security, Privacy, and Confidentiality Plan within thirty (30) calendar days of contract execution.	Assertions	49-50
3.1.25	Comply with all security policies and procedures of BMS and the WV Office of Technology.	Assertions	49-50
3.1.26	Comply with the baseline security controls for moderate impact information systems as put forth in National Institute of Standards and Technology (NIST) Special Publication 800-53, Revision 3, as updated May 1, 2010.	Assertions	49-50
3.1.27	Provide a Business Continuity Plan within thirty (30) calendar days of contract execution.	Assertions	49-50
3.1.28	Provide an Operations Management Manual within forty-five (45) calendar days of contract execution.	Assertions	49-50
3.1.29	Agree to perform according to approved Service Level Agreements (SLAs) and identified Key Performance Indicators (KPIs) with associated metrics in the areas of	Assertions	49-50

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	system availability, performance, data quality, and problem management. Vendor must consent to retention of a percentage of payment if agreed-upon KPI metrics are not achieved.		
3.1.30	Comply fully with all applicable state and federal requirements and regulations including but not limited to State Medicaid Manual, issued by the Centers for Medicare and Medicaid Services (CMS); West Virginia State Medicaid Plan; Section 1902 of the Social Security Act; Title 42, Code of Federal Regulations; Applicable West Virginia Code, Chapter 9, Human Services; and Section 508 of the Rehabilitation Act of 1973 as amended.	Assertions	49-50
3.1.31	Participate in audit activities, such as attending meetings, running reports, providing documentation, and providing access to all system components and modules as requested to do so by BMS.	Assertions	49-50
3.2	Scope of Work		
3.2.1	Vendor Hosting	Vendor Hosting	55
3.2.2	Proposed DW/DSS System	Proposed DW/DSS System	68
3.2.3	Project Staffing	Project Staffing	20
3.2.4	Initial Project Plan	Initial Project Plan	88
3.2.4.1	An Initial Project Plan within ten (10) calendar days of contract startup.	Initial Project Plan	90
3.2.5	Project Startup Activities	Project Startup Activities	98
3.2.6	Requirements Definition and Analysis Activities	Requirements Definition and Analysis Activities	99
3.2.6.1	A DW/DSS Requirements Definition Document (RDD) at the end of the Requirements Definition and Analysis Activities.	Requirements Definition and Analysis	101

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

		Activities	
3.2.6.2	A DW/DSS Conceptual Data Model at the end of the Requirements Definition and Analysis Activities.	Requirements Definition and Analysis Activities	101
3.2.6.3	A DW/DSS Requirements Traceability Matrix at the end of the Requirements Definition and Analysis Activities.	Requirements Definition and Analysis Activities	101
3.2.7	Detailed System Design Activities	Detailed System Design Activities	101
3.2.7.1	A Detailed Technical Design Document upon completion of detailed system design activities.	Detailed System Design Activities	105
3.2.8	System Construction and Testing Activities	System Construction and Testing Activities	105
3.2.8.1	A test system and environment ready to be used for testing prior to commencement of system construction.	System Construction and Testing Activities	108
3.2.8.2	A comprehensive Test Plan prior to commencement of testing.	System Construction and Testing Activities	108
3.2.8.3	Test scripts and cases prior to commencement of testing.	System Construction and Testing Activities	108
3.2.8.4	An initial Test Summary prior to commencement of UAT.	System Construction and Testing Activities	108
3.2.8.5	A Final Test Summary prior to commencement of implementation readiness activities.	System Construction and Testing	114

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

		Activities	
3.2.9	Training Program	Training Program	115
3.2.10	Implementation Readiness Activities	Implementation Readiness Activities	117
3.2.10.1	DW/DSS User Documentation to BMS prior to requesting approval to commence operations.	Implementation Readiness Activities	117
3.2.10.2	As-Delivered System Documentation prior to requesting approval to commence operations.	Implementation Readiness Activities	117
3.2.10.3	An Implementation Readiness Report at the time that it requests from BMS approval to commence operations.	Implementation Readiness Activities	117
3.2.11	Operations	Operations	117
3.2.11.1	A Turnover Plan within thirty (30) days of being asked to do so.	Turnover Plan	122
3.2.12	Enhancements and Modifications	Enhancements and Modifications	123
3.2.13	Help Desk Activities	Help Desk Activities	124
3.2.14	Project Management Methodology	Project Management Methodology	125
3.2.15	Configuration Management Methodology	Configuration Management Methodology	137
3.2.16	System Development and Change Management Methodologies	System Development and Change Management Methodologies	139
3.2.17	Quality Management Plan	Quality Management Plan	140
3.2.17.1	A Quality Management Plan within ten (10) calendar	Quality	141

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	days of contract startup.	Management Plan	
3.2.18	Security, Privacy, and Confidentiality Plan	Security, Privacy, and Confidentiality Plan	142
3.2.18.1	A Security, Privacy and Confidentiality Plan within thirty (30) calendar days of contract startup.	Security, Privacy, and Confidentiality Plan	145
3.2.19	Business Continuity Plan	Business Continuity Plan	146
3.2.19.1	A Business Continuity Plan within thirty (30) calendar days of contract startup.	Business Continuity Plan	148
3.2.20	Operations Management Manual	Operations Management Manual	148
3.2.20.1	An Operations Management Manual within forty-five (45) calendar days of contract startup.	Operations Management Manual	
3.2.21	Service Level Agreements and Key Performance Indicators	Service Level Agreements and Key Performance Indicators	148
3.3	Special Terms and Conditions	N/A	
3.3.1	Bid and Performance Bonds	N/A	
3.3.2	Insurance Requirements	N/A	
3.3.3	License Requirements	N/A	
3.3.5	Litigation Bond	N/A	
4.1	Technical Proposal Format		
4.1.1	Title Page	Title Page	N/A
4.1.2	Transmittal Letter	Transmittal Letter	2-4
4.1.3	Table of Contents	Table of Contents	5
4.1.4	Executive Summary	Executive Summary	6-8

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

4.1.5	Vendor's Organization	Vendor's Organization	9
4.1.6	Location	Location	10
4.1.7	Project Approach and Solution	Project Approach and Solution	11-13
4.1.8	Vendor Qualifications and Experience	Vendor Qualifications and Experience	14
4.1.9	Project Staffing	Project Staffing	20
4.1.10	Solution Alignment with BMS' Needs	Solution Alignment with BMS' Needs	26
4.1.11	Technology Solution	Technology Solution	55
4.1.12	Subcontracting	Subcontracting	149
4.1.13	Special Terms and Conditions	Special Terms and Conditions	150
4.1.14	Signed Forms	Signed Forms	151
4.1.15	Cost Summary	Under Separate Cover	
4.1.16	RFP Requirements Checklist (Attachment II)	RFP Requirements Checklist (Attachment II)	
4.1.17	Payment and Retainage	N/A	

ATTACHMENTS

ATTACHMENT A
FINANCIAL REPORTS

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



**FINANCIAL STATEMENT
DECEMBER 31, 2009
TOGETHER WITH
INDEPENDENT AUDITOR'S REPORT**

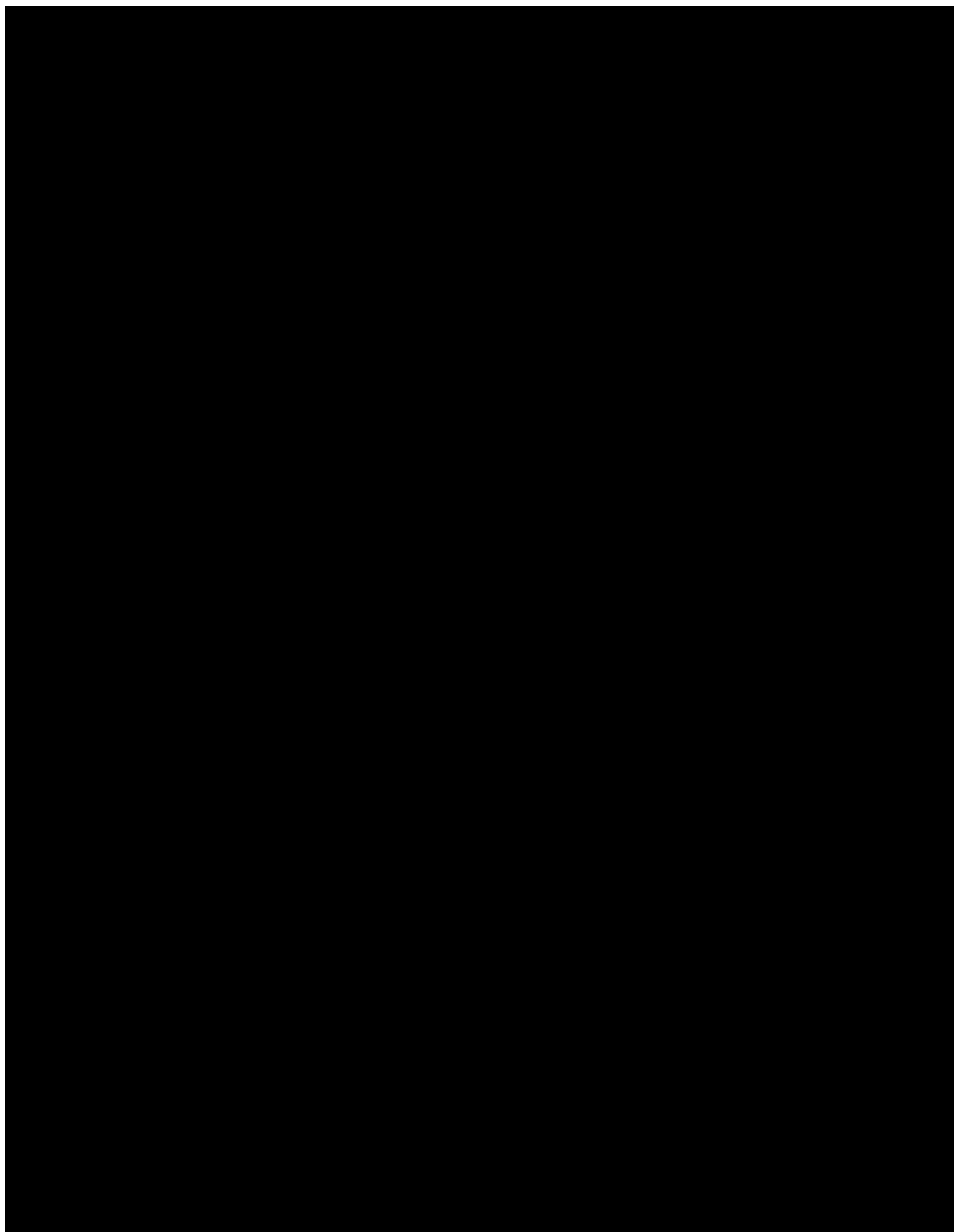
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West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

GOVERNMENT WORKS, INC.

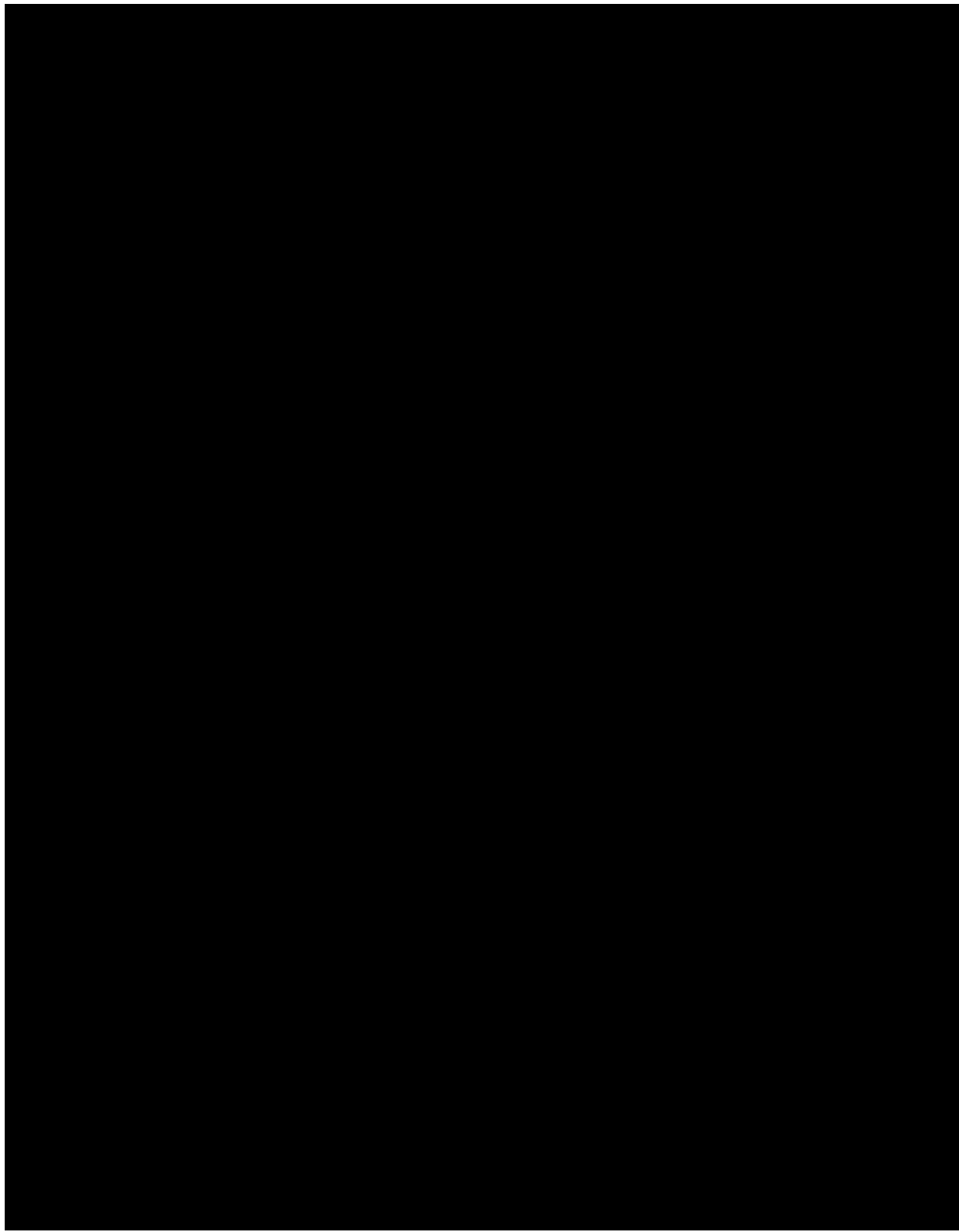
CONTENTS
DECEMBER 31, 2009

	<u>PAGES</u>
INDEPENDENT AUDITOR'S REPORT	1
FINANCIAL STATEMENT:	
Balance Sheet	2
Notes to Financial Statement	3 - 7

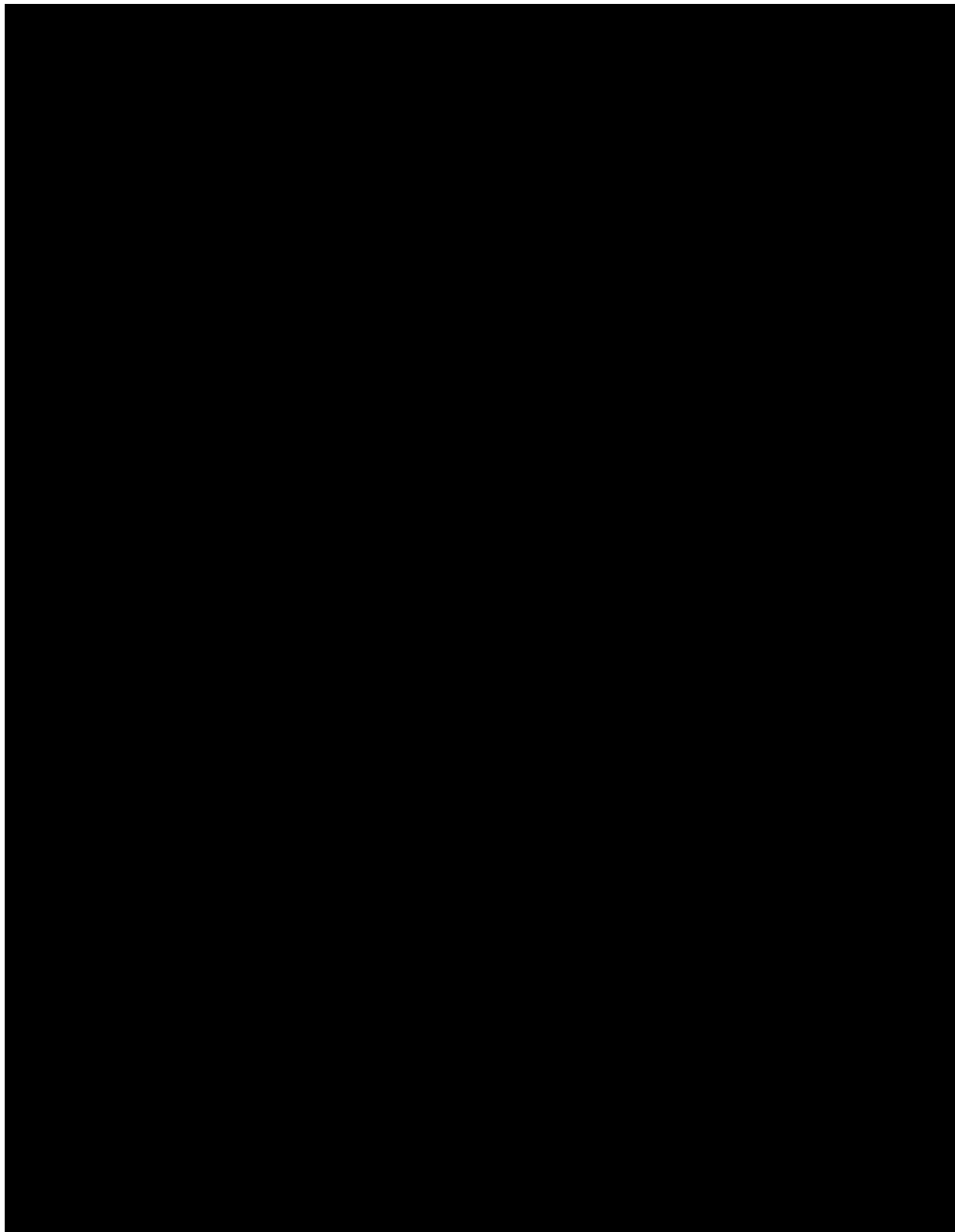
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West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



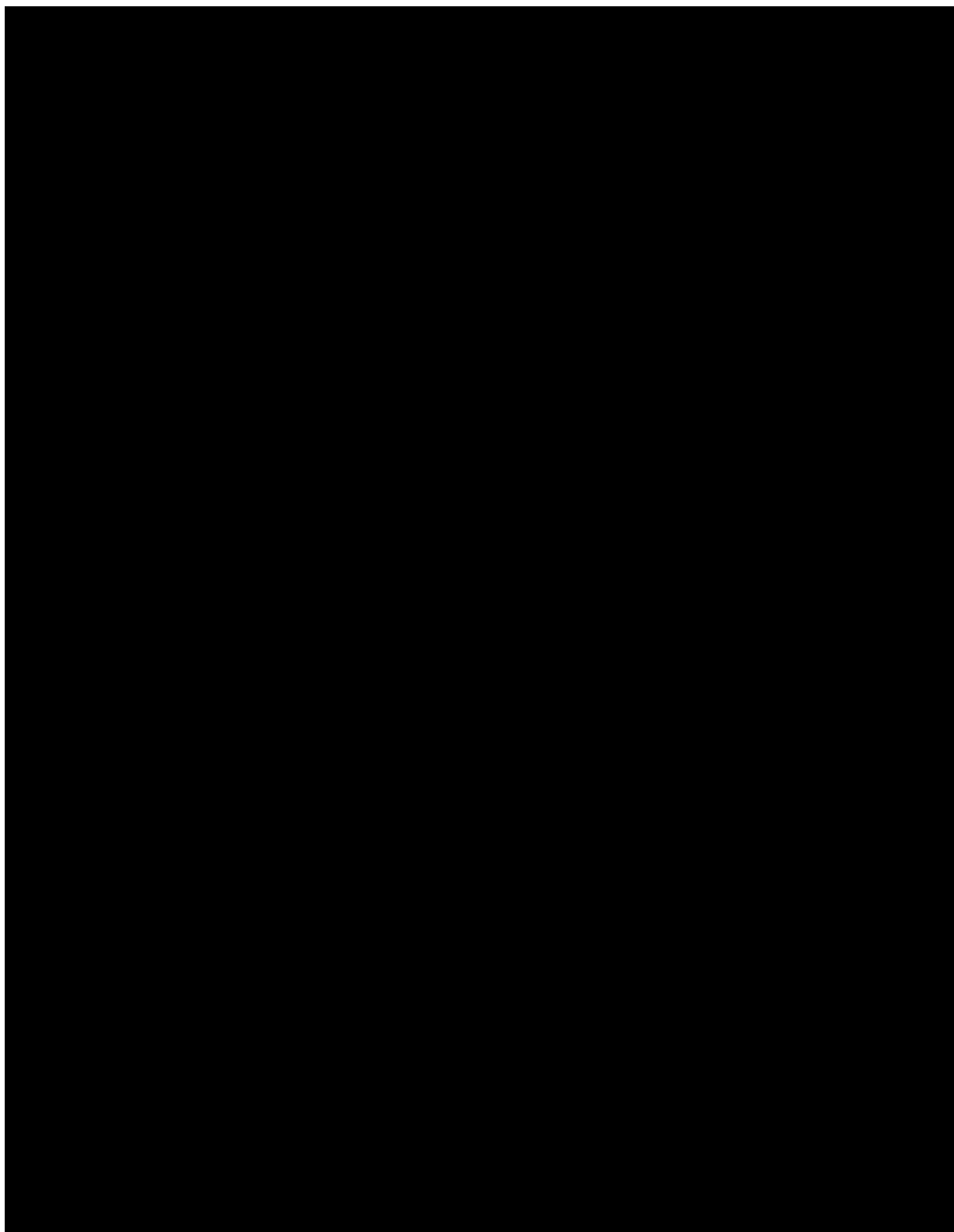
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West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



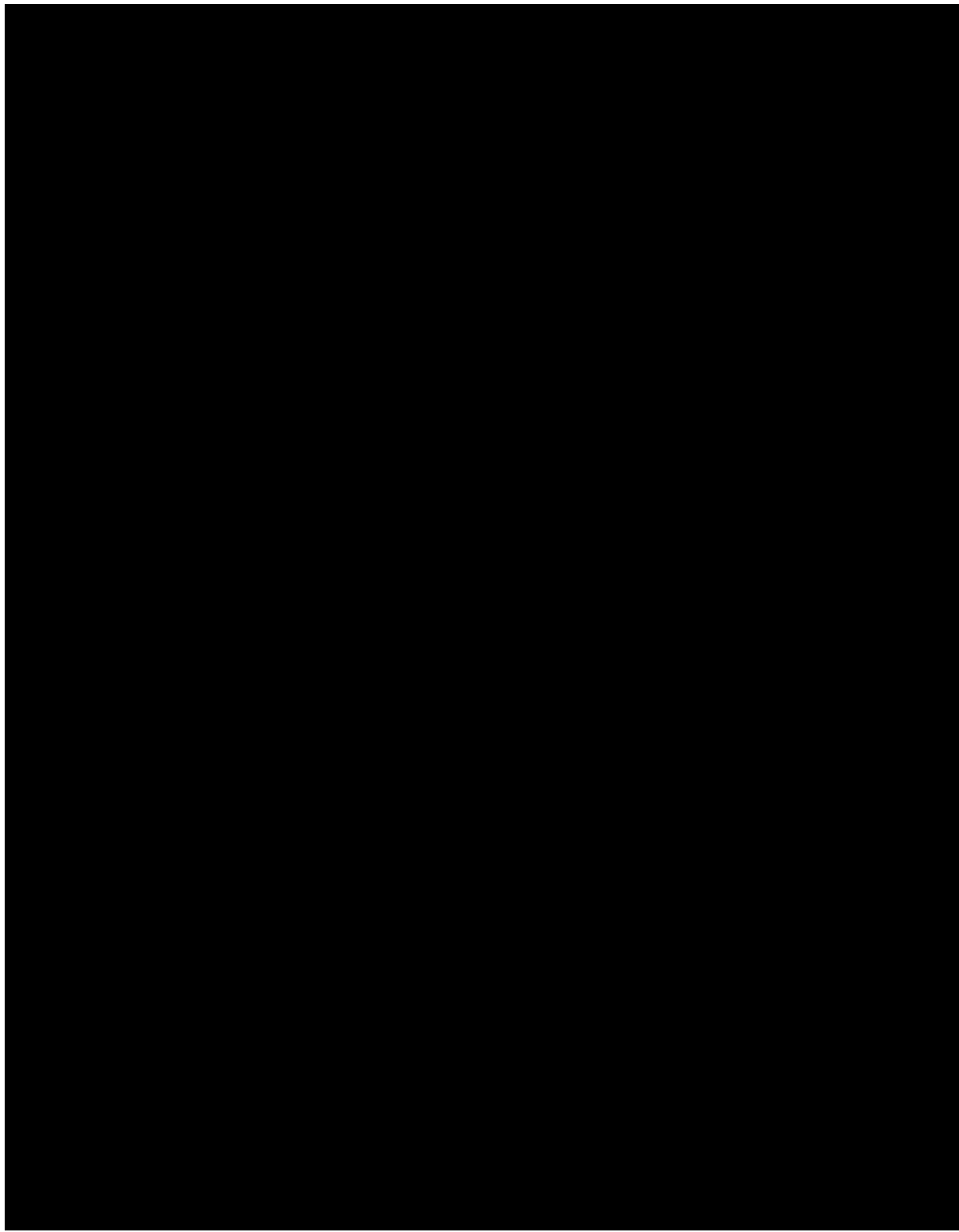
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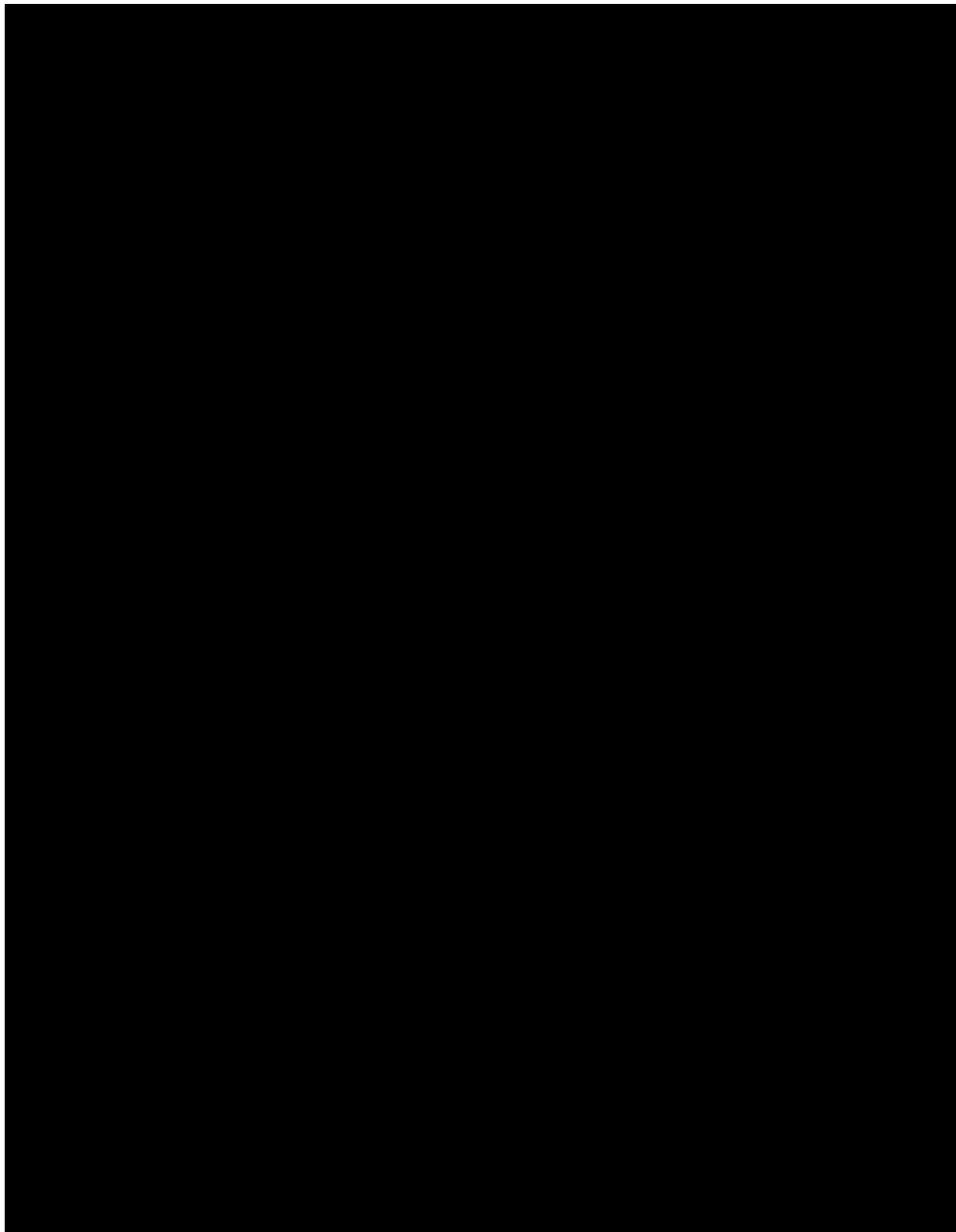
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West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



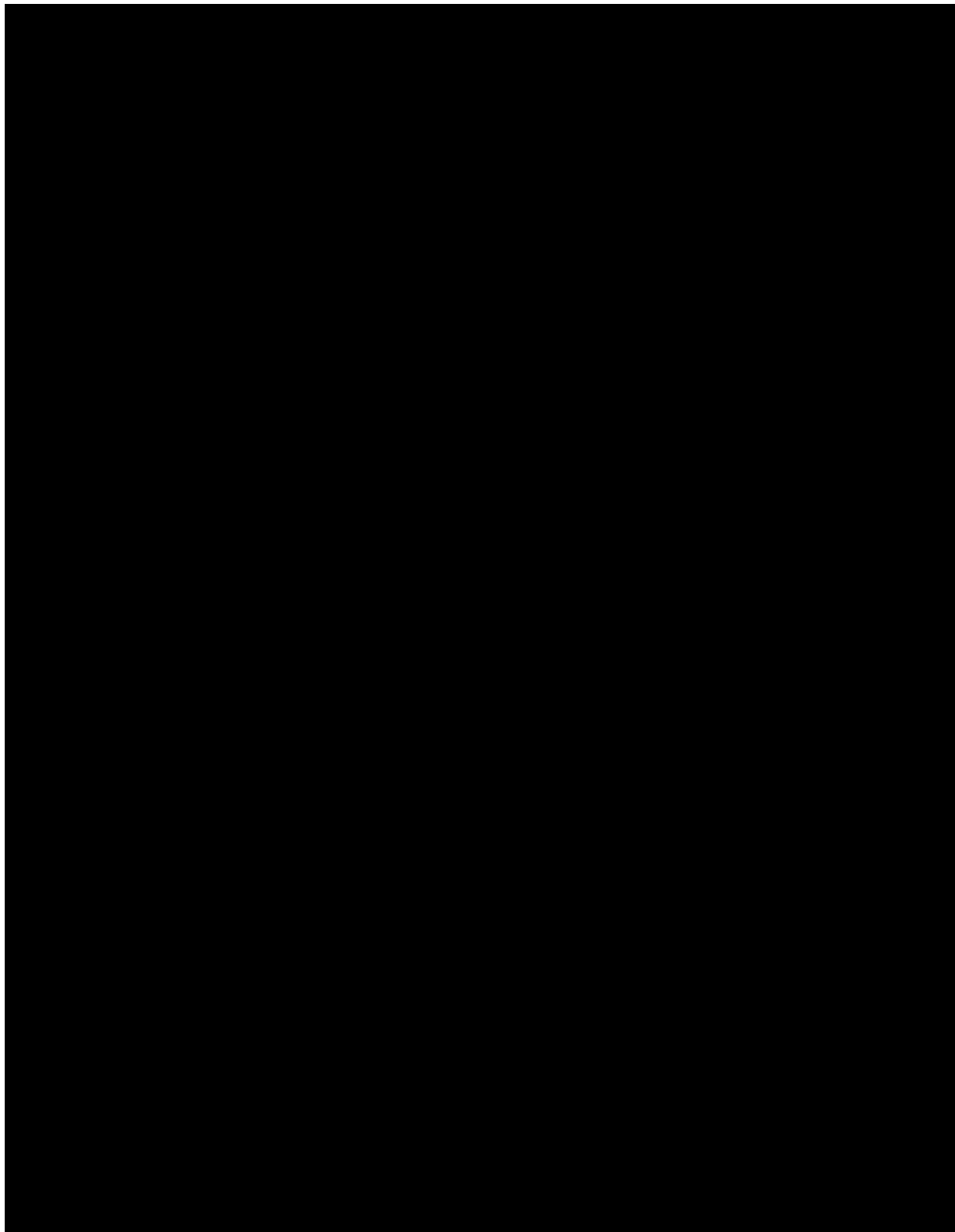
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



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West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



ATTACHMENT B
RÉSUMÉS

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Krishna Ika

EDUCATION

1991 University of Mysore Bachelors, Electrical Engineering

EXPERIENCE

20002 – Present

Government Works

Senior Vice President

Mr. Ika has functioned as a leader since helping to found Government Works. He works directly with clients to ensure that expectations are achieved and that the right team is in place to deliver the kind of high-quality products for which Government Works is known. Mr. Ika is responsible for a wide range of mission-critical activities, including business development, program management, and customer satisfaction. His project and business management skills are a key element in Government Works' successful track record of 100 percent successful—on time and on budget—implementations.

Mr. Ika has leveraged his engineering and project management expertise to launch a successful entrepreneurial career in software development and IT infrastructure support. Working in both the government and commercial sectors, Mr. Ika advanced to senior program management responsibilities, successfully building and leading technical teams that were recognized for their innovative, cost-effective solutions.

For the past eight years, Mr. Ika has managed a wide range of projects for the Federal Government, including the General Services Administration, Department of Justice, U.S. Department of Transportation and the Department of Veterans Affairs. He has also been involved at the managerial level in Government Works projects for the National Guard Bureau, U.S. Coast Guard, the White House Communication Agency and the National Naval Medical Center located in Bethesda, Maryland. These projects spanned such requirements as healthcare IT, administrative and contract support, healthcare administration, engineering support, infrastructure services, and procurement. Mr. Ika has managed projects both locally in Massachusetts and throughout the northeastern United States.

Among the many projects on which Mr. Ika has served as project manager are the following:

- Under a contract with the Centers for Medicare and Medicaid, Government Works developed and offers CMS Gateway, an innovative software product that automates the complexity of CMS data exchanges, delivering greater accuracy and speed. Government Works is one of only two companies that hosts a copy of the Medicare Beneficiary Database (MBD) from the *Medicare* Advantage Prescription Drug System (MARx)—streamlined access to this information allows GWI-CMS Gateway to perform instant eligibility queries, speeding the path to critical answers and eliminating the need for batch processing. In addition, information is fully integrated with and auto-populates enrollment screens, dramatically increasing efficiency. Specifically, GWI-CMS Gateway
 - Accommodates rapidly growing Medicare membership without building an extensive infrastructure
 - Minimizes the need to commit highly skilled personnel to comply with CMS data submission requirements

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Enhances cash flow and captures lost revenue through more accurate and timely enrollment processing and reconciliation
 - Maintains full control of every process and helps leaders make more informed business decisions—even through crunch enrollment periods
 - Stays ahead of enrollment trends affecting administrative, financial, and sales arenas through comprehensive data warehousing and reporting.
-
- Under the Advanced Information Technology Services (AITS) contract, GWI with SRA, providing a broad range of IT services and solutions to the Army Reserve Component. Under this contract, Mr. Ika participated in the design and review of Exchange sites and recommended various solutions for implementing the states' specific Exchange 5.5 to Exchange 2003 e-mail migrations. Government Works and SRA also supported the successful migration of the client environment from Exchange 5.5 to Exchange 2003 and the migration of multiple NT resource domains to a single Microsoft Active Directory forest and domain controller infrastructure.
-
- Electronic Data Systems Corporation (EDS) selected Government Works to provide support for the EDS United States Government Services' (USGS') project needs and requirements. The projects were completed with on time and within budget. Activities included:
 - Redefining the sourcing process
 - Reducing total costs over the life of the agreement
 - Eliminating inefficiencies and expedite business transactions
 - Improving working capital
 - Continuously improving delivery quality and service levels
 - Implementing industry best practices and technology enhancements.
-
- Government Works was selected by the Department of the Interior's National Business Center (DOI-NBC) to analyze, design, install, test and train users on its Quarters Management Information Systems (QMIS) software. This includes the calculation of rents for approximately 20,000 government-occupied housing units, managed by 23 client agencies for more than 500 users. Under Mr. Ika's leadership, Government Works evaluated the present system upgrade methodology at the DOI-NBC, in order to provide initial recommendations. Government Works then implemented a solution design. On-site user training was provided for 500 users in batches of the QMIS. The training program addresses specific issues arising from the implementation of the new system and involved the co-development and delivery of training events addressing business concepts and the systems applications and processes.
-
- As a team member with EDS in the Defense Manpower Data Center project, Government Works provided the user support—a tier one call center solution that includes 24/7 support and voice-over Internet protocol capability. It also includes support for the worldwide Real-time Automated Personnel Identification System, Common Access Card, and the OCONUS Defense Biometric Identification System. Government Works' maintenance support to the Defense Enrollment Eligibility Reporting System (DEERS) verified the medical eligibility of DoD beneficiaries at every military treatment facility around the world.
-
- For the Department of Veteran Affairs, Mr. Ika managed the following projects
 - Employee Education Center

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Government Works performs program management services, program support, event management support services, and other administrative services
- Hunter Holmes McGuire Veteran Affairs Medical Center, Richmond VA
- Government Works provides medical clerk support services
- VA Boston Health Care System (90C)
- Government Works provides professional support services in the areas of civilian payroll, accounting, health systems specialist services, and clinical pharmacy technician support.
- VA New Jersey Healthcare Systems, East Orange, NJ
- Government Works provided Human Resources Assistant Support Services
- VA Information Technology Center, Hines IL
- Government Works provides Administrative Assistant Support Services
- Cleveland Business Center, Brecksville OH
- Government Works provided Web development support for VA/CBC VistaU Internet 6102 compliance initiative, as well as graphic design and 508-compliant content development.
- Government Works provided temporary secretarial support to the General Service Administration. Government Works, under Mr. Ika's leadership, also provided administrative support to the U.S Army Legal Service Agency (USALSA). Government Works also provides acquisition management support to the U.S. Marshals Service and to the Department of Justice in addition to contracts management support to the Department of the Navy. Also for the Department of Justice, U.S. Attorneys Office, Government Works provided financial analysis and budget analysis support services. With Mr. Ika's guidance as Project Manager, Government Works provides software development and maintenance support to the Department of the Interior's National Business Center. For the National Oceanic and Atmospheric Administration, National Seafood Inspection Lab in Pascagoula, Mississippi, Government Works provided clerical support services

1995-2002

Envitech Corporation

President

At Envitech, Mr. Ika provided consulting services to commercial entities such as insurance, healthcare, and financial companies, providing customized applications for those industries. His experience included working with products such as employment agency computer systems design configuration management software, development environment software, enterprise application integration software, and graphical user interface development software.

Solomon J. Zak, M.D.

EXPERIENCE

May 1, 2004 to Present: Vice President Business & Medical Intelligence, Government Works

- Lead CMS MARx database team for hosting of Medicare Member Eligibility / Entitlement / Enrollment for automated access to BEQ - real time or batch eligibility query vide CMS-Government Works
- Lead CMS and MARx monthly payment team for development and implementation in MAOs based on CMS-HCC risk adjustments for Parts A\B and Part D. This system is validated against CMS' MMR reports for payment reconciliation.
- Leading the team for development of automated RAPS report generation for MAOs to CMS
- Developed web based interactive automated Disease Management system that supports collaboration amongst patients, providers and MAO (health plan) Staff; system also emphasizes patient self care. The System components consist of:
 1. Analytics and data derived from on-line Health Risk Questionnaire, Authorizations and Claims, to identify patient diagnoses and health status, and to provide scheduled workflow of Provider Visits based on clinical and financial filters.
 2. Parameters of patient results that allow Disease Managers to track patient progress and to re-assign to intensity schedules of care.
- Re-designed HEDIS to free it of expensive chart audit, and to convert it to Pro-HEDIS (Proactively monitoring performance of HEDIS and other quality measures during the current plan year in contrast to retrospective HEDIS reporting). While HEDIS is a compliance exercise, Pro-HEDIS is an ongoing quality improvement activity. This is accomplished by providing providers with monthly notification of performance requirements on all of their patients, so that by the 10th month of the calendar year, at least 95+% of quality measures are already met. Providers can observe, in real time, their individual progress is achieving HEDIS goals. This technology is web based and can form the basis for Pay for Performance activity. Designed and implemented in commercial, Medicare and Medicaid plans, a bottom line metric for HEDIS plus additional quality measures to quantitate quality of care for plans and primary care physicians, called ZQI.
- Supervised and designed a comprehensive claims administration system for processing Medicare, Medicaid and Commercial claims. Incorporated electronic input via EDI using BizTalk. Interfaced claims system with Medicare 3M grouper for DRGs (IPPS) and APCs (OPPS) and developed a proven rebundling system for claims processing.
- Developed a "Fraud and Abuse detection and management subsystem".
- Developed provider credentialing system for physicians, paramedical and other facilities
- Developed an online referrals and authorizations management system to enable MAO physicians to request online referrals and authorizations and MAO health plan administrative staff to evaluate medical necessity and administer referrals and authorizations.
- Developed metrics in 1990 for evaluating physician practice management providing profiles for primary care physicians, specialists and facilities. These metrics included rigorous case-mix adjustment methodology similar to HCC based RAPS system implemented

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

in 2003 by CMS for MAO payments.

July 26, 1990-May 1, 2004:

- Founded PCSD, Inc., dba DATAMEDICA™, a consulting and software development firm to the Health Care Industry, President and CEO, PCSD, Inc., dba DataMedica was acquired by ikaSystems on May 1, 2004. Established software for metrics for economic and quality of medical utilization and claims administration systems.
- Concurrently managed a medical practice consisting of Internal Medicine with subspecialty in Hematology and Oncology since 1966.

January 1989 - May 1990:

- Consultant, O'PIN Systems, Inc., a computer software development company. I was the principal in the design and sales of a Provider Profiling data system whose purpose it was to turn around Health Maintenance Organizations (HMOs) to a profit making status, and to enhance quality of care. In addition to the design and sales activity, duties included direct consultation and implementation of HMO action plans defined by the analytic data system.
- Concurrently managed a medical practice consisting of Internal Medicine with subspecialty in Hematology and Oncology since 1966.

March 1986 to Jan. 1989:

- Consultant to Humana Hospital Corporation in Medicare Risk Contracting. Special advisor in the purchase of IMC, the then largest Medicare Risk Plan in the U.S.
- Consultant to the University of Minnesota Dept. of Family Practice in the establishment of a successful Minnesota licensed HMO. UCARE.
- Consultant to DCA, Inc., a Minnesota based Third Party Administrator (TPA) in the management of complex claims assessment, policy decisions and participation in the conduct of seminars.

August 1984 to March 1986:

- Corporate Medical Co-Director, Share Development Corporation, a wholly owned subsidiary of United Health Care, an HMO Management Company. My duties included the development of Quality Assessment and Utilization Review Programs for Share Development Corporation HMOs and for other United Health Care Plans. I served also as Medical Director of Share Health Plan of Minnesota, a Minnesota Non-profit HMO, managed by Share Development Corporation. My duties included oversight of Utilization Review and Quality Assurance Assessment and implementation for the Health Plan's network of affiliated Medical Groups. Provided training to Medical Group Managers and Physicians to assist them in making the transition from fee-for-service practice to an understanding of the requirements of practice in a capitated and risk bearing health care financed model. Provided the underwriting functions for the Medicare Risk component, covering some 40,000 seniors, one of the earliest such entities in the United States.
- Conducted the recruitment of 200 new community PCPs into an IPA primary care capitated program. Established a credentialing database of prospective physicians, mapped out procedures and model correspondence for the recruitment process; participated in the development of the affiliation contracts and reimbursement system, and conducted all phases

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

of actual recruitment, from initial contact through presentations to contract closure. Member of the Corporation Committee of Share Health Plan; elected to the Share Minnesota Board of Directors and served on the Executive and Audit Committees of the Share Board of Directors, and reported to the Board on Consumer Affairs.

August 1983 thru July 1984:

- Share Health Care Associates, PA, Site manager. Converted own practice to a mixed pre-paid and fee-for-service delivery site belonging to one of several professional Associations forming Share of Minnesota's medical delivery network.
- Implemented all HMO systems into the practice. Responsibilities beyond direct patient care included supervision of facility physicians and management of the assigned office staff which belonged to a labor union, providing some experience in labor relations.

1968 through 1980:

- Planned, developed and together with three other Physicians, incorporated the Emergency Physicians Professional Association (EPPA). This organization became and remains the largest and most successful emergency room company in the twin Cities. Acted as its first treasurer and a Board Member of the Corporation.

1966 through 1983:

- Practice of Internal Medicine with subspecialties in Hematology and Oncology while conducting teaching and research activities at the University of Minnesota School of Medicine.

1963 through 1973:

- Staff Appointments University of Minnesota School of Medicine:

1971 - 1973	Assistant Professor of Medicine – Hematology & Oncology
1966 - 1969	Clinical Instructor Internal Medicine
1963 - 1966	Full time Instructor in Internal Medicine and Director of the Allergy Clinic University of Minnesota Hospitals

AWARDS:

- Borden Award for Medical Research 1957
- Andrews Prize and Election to permanent membership in the Society of the Sigma Xi for Meritorious Research, 1957.

MEDICAL LICENSURE: Minnesota

Society Memberships:

Certified as Diplomat American Board of Internal medicine 1965 and recertified in 1976.

- Wadsworth Alumni Association
- Hennepin County and Minnesota State Medical Associations

Rudra Duddala, MD

Professional Experiences:

Dec '04 to Present: Title: Medical Director IkaSystems Corporation, Southborough, MA

Research and development, marketing, sales, implementations, maintenance of medical management systems viz Dataware House, Disease and Case Management Systems, Utilization/Authorizations Management Systems, HEDIS, Utilization Analytics and Provider Profiling and Provider Portal Systems

July '99 to Nov '04: Title: Operations Manager MediClinic, Houston, TX.

Established in 1980, MediClinic is a multi location family practice and industrial medicine clinic system in the Greater Houston and Conroe, TX areas. MediClinic provides lab, x-ray, EKG, spirometry, tympanometry, physical therapy services as one-stop shopping in a primary care setting.

Responsible for day to day operations, physician and staff recruiting, physician credentialing with Medicare, Medicaid and other managed care organizations such as United Health Care, Aetna, BCBS of TX, Humana, Unicare, Americaid, Gulf Quest IPA, HUB/MWBE certifications, Medical Policy, patient chart review for compliance, OSHA, CLIA, TX Dep of Radiation, HIPAA and all other Federal, State, City and County Regulatory Agencies, clinical research

April '89 to Nov '98: Title: Director Dr. Rudra ENT Hospital, Bandimet, Secunderabad, India.

This is a full service ear, nose and throat hospital with operating room, out patient, inpatient, audiometry and speech therapy clinics.

My functions included conducting out patient, in patient rounds and surgeries, clinical research and overseeing audiology and speech therapy departments.

Aug '90 to Oct '96: Title: Ear, Nose and Throat Surgeon Entity: AYJ National Institute for the Hearing Handicapped, Ministry of Welfare, Government of India.

Teaching staff for Osmania University for Bachelor's Degree and Master's Degrees in Science (Bachelor of Science - Audiology and Speech Therapy & Master of Science - Audiology and Speech Therapy).

Clinical research with Department of Dermatology, Gandhi Hospital and Department of Obstetrics and Gynecology, Gandhi Hospital.

April '84 to Feb '89: Title: Ear, Nose and Throat Surgeon Ministry of Health and Medical Education, Government of Iran

Conducting out patient, in patient rounds and surgeries, clinical research and overseeing audiology and speech therapy departments.

Membership: Hyderabad State Medical Council, Hyderabad, India. Reg # 8803, 1980
American Medical Society of Vienna, Austria, # IV-6532, 1989.

Research Activities:

2001-2004: With Mercury Research Inc at MediClinic, Houston, TX.

A prospective, Randomized Double-blind, Multi-center, Comparative Trials to Evaluate the Efficacy of Ciprofloxacin Once Daily Extended Release 500 mg Tablets QD for Three Days versus Conventional Ciprofloxacin 250 mg Tablets BID for Three Days in the Treatment of Patients with Uncomplicated Urinary Tract Infections (uUTI).

A Randomized Double-blind, Multi-center, Parallel Group Study to Assess the Efficacy and safety of Oral Augmentin St 2000/125 mg Twice Daily for 7 Days in the Treatment of Adults with Acute Exacerbation of Chronic Bronchitis.

Prospective, Uncontrolled, Open-label, Multi-center Clinical Trial Evaluating the Efficacy and Safety of Paropenem Daloxate 300 mg PO BID for 10 Days in the Treatment of Patients with Community Acquired Pneumonia.

A Randomized, Double-blind, Placebo-Controlled Trial of FK614 in Type 2 Diabetes Inadequately Controlled on Sulfonylurea.

A Randomised, Double-Blind Multi-center, Two-Arm Study to Investigate the Safety and Tolerability of Flexible Doses of Vardenafil or Sildenafil Given on Demand in African American, Hispanic and Caucasian Males with Erectile Dysfunction.

A Randomized, Multi-center, Placebo-Controlled Parallel Group Study of Four Months Duration Per Patient to Evaluate the Safety and Efficacy of Treatment with 24 ug BID and 12 ug BID Formoterol, Double-Blind and 12 ug BID Formoterol with Additional On-Demand Formeterol Doses, Open-label, in the Adolescent and Adult Patients with Persistent Stable Asthma.

2001-2002: “Management of First Episode of Acute Low Back Pain: A Comparison of Two Treatment Protocols” with Ashraf Ali, Ph. D., in part fulfillment of his Doctoral Degree at the Texas Women’s Univeristy and MediClinic, Houston, TX.

1997: “A Study of 25 cases of Hearing Evaluation to assess hearing loss in children whose mothers received Tab. Nitrofurantoin 500 mg QID for 7 days during the second trimester of pregnancy”.

1997: “A Study of 25 cases of Hearing Evaluation to assess hearing loss in children whose mothers received Inj Gentamicin 80 mg BID for 7 days in resistant cases of UTI during the second trimester of pregnancy”.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- 1994-96: “A study of Vitiligo cases for Sensorineural Hearing Loss”, the National Insitiute for Hearing Handicapped, Govt of India
- 1994-96: “Real-Ear Performance in School going children”, the National Insitiute for Hearing Handicapped, Govt of India
- 1982-84: “A study of 50 cases of Tracheostomy” as part fulfillment for my Post-Graduate degree in Surgery (Ear, Nose and Throat), Kakatiya Univeristy, India
- Education:** 1980: Bachelor of Medicine & Bachelor of Surgery, Gandhi Medical College (Osmania University), India, equivalent to M.D. in the US. Gandhi Medical College is a US regionally accredited medical college.
- 1984: Master of Surgery (Ear, Nose and Throat Specialty), Kakatiya Medical College (Kakatiya University). Kakatiya Medical College is a US regionally accredited medical college.
- 1994: Diploma in Computer Applications, Jawaharlal Nehru NYC, Govt of India
- 1997: Post Graduate Diploma in Computer Applications, Jawaharlal Nehru NYC, Govt of India.
- US Equivalent:** Professional Degree in Medicine - Doctor of Medicine (M.D.)
Bachelor Degree in Science - Computer Science

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Jack n. Shoemaker

SUMMARY

Results-driven Senior Executive with broad health-care experience and a proven track record of deploying appropriate technology to solve complex business problems. Recognized for strong technical qualifications in business-intelligence platforms and complex project management. Demonstrated ability in establishing and managing cross-functional teams to achieve desired business objectives on time and at budget.

•Systems integration	•Operating Platforms
•Business intelligence platforms	•Informatics
•Executive dashboards	•RFP responses

PROFESSIONAL EXPERIENCE

ikaSystems, Southborough, MA

2009 to Present

IT solutions vendor of an entire suite of administrative software for health plans, managed-care organizations, and other health-care payers.

Senior Consultant

- Product designer for new application modules. Result: Designed a new Network Manager product to provide complete management of provider networks from contract negotiation through system set up, payment, and profiling.
- Program manager for implementations. Result: Developed robust project-management techniques to lead and direct multiple implementations of ikaSystems software on accelerated time lines.
- Led project to create a manual of operating procedures. Result: Documented important control processes like release management, change control, and business continuity that enhance the company's ability to grow at a rapid pace.

WELLCARE HEALTH PLANS, INC., Tampa, FL

2002 to 2008

Multi-state insurer focused on government-sponsored programs – Medicare Part D drug card, Medicare Advantage HMO, Medicare Advantage PPO, Private Fee-for-Service, and Medicaid and Supplemental Child Health HMO programs.

Vice President, System Integration

- Technical lead on RFP response for new Georgia Medicaid program. Result: Awarded default-plan status in all six Georgia regions resulting in a doubling of covered Medicaid membership and \$1 billion increase in premium revenue.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services - Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Technical lead on RFI response for Northeast region of Ohio Medicaid program. Result: Awarded both CFC and ABD programs for Northeast region with an aggressive six-month implementation deadline, resulting in \$200 million increase in revenue.
- Led cross-functional teams to provide operating platform for expansion into Georgia and Ohio Medicaid markets. Result: Both Georgia and Ohio programs launched on time, on budget, and accurately.
- Led cross-functional teams to provide operating platform for expansion of Medicare Advantage HMO into new and existing states. Result: Operating platform ready for crucial open-enrollment period prior to January effective date.
- Key member of team charged with selecting appropriate platform for new Medicare Part D business. Result: Expanded existing platform to serve Part D membership. Required a multi-version upgrade, resulting in strategic advantage of a single core processing platform.
- Led cross-functional team to perform multi-version upgrade of existing core processing system. Result: Successful upgrade completed twelve weeks in advance of Part D implementation, without disruption to on-going claims-processing activities.
- Technical lead on due-diligence team investigating purchase of Chicago-based health plan. Result: Determined that WellCare could integrate acquired health plan onto existing WellCare operating platform.
- Led cross-functional team to integrate acquired health plan onto the WellCare operating platform. Result: Completed full integration and conversion in six months, leading to increased revenue of \$250 million.

Vice President, Finance

- Provided decision-support services to all corporate operating departments using the SAS business-intelligence platform. Result: Enabled informatic needs in all operating areas of the company to take full advantage of SAS product suite.
- Designed and managed OLAP cubes and associated meta-data repository to provide controlled and traceable access to sensitive private health information. Result: Established single-point of truth for critical informatic needs.
- Designed and implemented corporate dashboard using spark-line techniques. Result: Established regular, information-rich dashboard to assist senior executives in the running and monitoring of the business.

Vice President, Office of CEO

- Technical lead on due diligence team. Result: Leveraged buy out of 450,000-member plan from private owners.
- Recruited and selected initial senior management team. Result: Provided excellent management platform on which to execute growth strategy.

THOTWAVE TECHNOLOGIES, Cary, NC

2001 to 2002

Software consultancy which provides creative, data-driven solutions to complex business problems in the energy, finance, health, and life-sciences sectors.

Software Consultant

- Senior developer on projects for Duke Energy and American Electric Power. Result: Used SAS Risk Dimensions product to create a web-based decision-control system that provided mark-to-market, earnings-at-risk, and value-at-risk valuations across a broad portfolio of energy contracts and holdings.

ACCORDANT HEALTH SERVICES, Greensboro, NC

1999 to 2001

Complex disease-management company which provides disease-management services for commercial health-insurance payers.

Director of Data Integration

- Designed, constructed and implemented a multi-payer data repository of administrative and clinical data to support the Accordant disease-management program. Result: This SAS-based, robust data repository provided the raw material for patient identification and subsequent cost-savings analysis.
- Designed web-based assessment tool. Result: Patent awarded for this work which was used for quarterly health assessments for patients in one of Accordant's disease-management programs.
- Enhanced existing patient-identification algorithms. Result: Data-driven approach to algorithms made them more flexible to change and modification. Also improved sensitivity and specificity of algorithms which resulted in better customer satisfaction through a decrease in false positive identification as well as an increase in revenue due to an increase in positively-identified patients.

OXFORD HEALTH PLANS, Norwalk, CT

1997 to 1999

Multi-state health maintenance organization which serves commercial, Medicare, and Medicaid beneficiary populations.

Project Manager at Oxford Specialty Management

- Led team of clinical researchers and informatic analysts to provided technical support for this division of Oxford. Result: Provided computing algorithms for a new adjudication system using global episodic fees. Provided prevailing pricing information to establish baseline costs for episodic contracts.
- Internal consultant for several OHP projects. Result: Identified over payments for DRG-based reimbursement; reconciled Medicare beneficiary rosters with HCFA (now CMS); and, developed a risk-adjusted scoring and tracking system for specialist providers.

Project Manager at Oxford Health Plans

- Led an enterprise-wide project to enhance the corporate information delivery system. Result: Created a web-based system of reports to surface essential business information for use in the maintenance and grooming of the core adjudication system.

EDUCATION:

HARVARD UNIVERSITY, Cambridge, MA Master of Science in Health Policy and Management

- Research thesis: “Role of Information in a Managed Care System”

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA Bachelor of Science in Economics

- Undergraduate thesis: “Review of Income Targeting and Demand Shifting Theories Explaining Physician Behavior”

PATENTS

- “System and Associated Method for Interactively Assessing the Progression of a Disease”

EXPERIENCE

Jan. 2008 – present: Project Manager/Database Architect, ikaSystems

- **Objective:** Run the HEDIS Quality measures for the health plan to increase their quality index among various services/measures.
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- **Responsibilities:**
 - Managing the team.
 - Design the data model/data warehouse and the processes.
 - Developing oracle pl/sql, packages for the processing.
 - Setting up the unix scripts for the data cleaning and processing.
 - Trouble shooting issues.
 - Performance tuning.

Mar. 2006 – Dec. 2007: Database Architect/DBA, Verisign, Inc.

- **Objective:** Point of Sale data from different retailer/vendor combinations are stored in a data warehouse and the reports are generated off of this data based on the requirements for different clients. This also includes the inventory data at different locations along the supply chain. Currently we are working on making our data warehouse global so that it should be able to store/report different languages. Efforts are also in place to replace the current Qlikview/WRB based reporting with Microstrategy.
- **Responsibilities:**
 - Creating new API's (Oracle Packages) for the enhanced functionality.
 - Data modeling changes to handle the dimension attributes and currencies for globalization and also the changes to the existing table columns to store languages.
 - Database creation/configuration and maintenance.
 - Trouble shooting the database issues and performance tuning.
 - Writing API's for the data/fact table movements between different databases for a given vendor as a part of load balancing.
 - Supporting backup and recovery when required.
 - Also created and configured Streams environment for the dimension data replication from the control center (database which handles the metadata and etl processing) and data stores (database which contains the vendor/retailer dimension and fact data).
 - Trouble shooting issues with streams.

Previous Employment History:

The Boston Globe, Boston, MA

Position: Database Architect/Engineer

08/01/05 – 03/10/06

Project: Campaign Management

Gillette Company, Boston, MA

Position: Tech Lead

06/01/1999 - 07/31/2005

Project: Supply Chain (Data Hub)/Orders and Shipments

IBM/Lucent Technologies, Morris Town, NJ

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Position: Database Developer 11/16/98 - 06/15/1999

Project: Sales & Marketing Reporting/Trouble Reporting System

US WEST Communications, Denver, CO

Position: Oracle Developer /Team Lead 06/01/97 - 10/27/1998

Project: Network Legacy on Unix (Circuit Match)

P & O Nedlloyd, United Kingdom

Position: Oracle Developer /Team Lead 03/01/95 - 05/31/1997

Project: Documentation & Revenue System (DRS)

TECHNICAL PROFICIENCIES & TOOL SETS

Data Warehousing/Reporting:	Oracle Warehouse Builder, DAA995, ETI-Extract, Informatica SAP BIW, Web Focus, Microstrategy and HTML DB, TOAD , DBArtisan, EDI.
Data Modeling:	ERWin, Sybase Power Designer, ER Studio, Physical Architect.
Databases:	Oracle 7.X, 8.X , 8i, 9i, 10g , Informix
Development Tools:	AWK, SED, Adobe Acrobat, Lotus Notes, MS Project, ODBC, PL/SQL, Pro*C, SQL * LOADER, SQL*Plus, Unix Shell scripts, Syncsort, VISIO, Forms 4.5, Reports 2.5, Autosys
Functional Areas:	Inventory, Products, Sales, Supply Chain Management, Orders and Shipments, Media Products and Point of Sales.
Languages:	C, Cobol, Pascal,C ++
Hardware:	RS6000 IBM SP2, HP 9000, HP T 5000 SUN SPARC, SEQUENT, UNISYS, U6000 PENTIUM, IBM PC Compatibles,AIX, Sun Solaris
Operating Systems:	Unix SVR 4, HP-UX 10, 11, Windows 95/98/2000/NT/XP, MS-DOS, IBM/AIX, , AT&T Unix, Sun Solaris.

EDUCATION

- Masters in Electrical Engineering
- Bachelors in Electrical Engineering/Sciences

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Srikanth Ravi

EXPERIENCE

Oct 2008 – present:

Sr. Business Analyst, ikaSystems

- Managed and supervised the business and technical specifications for major health insurance clients of the company
- Led a team of developers in designing and developing front and back end portals for clients in developing their insurance technology
- Managed performance of the development team to the agreed upon technical specifications for each client and worked with client representatives to ensure client satisfaction within proposed guidelines
- Conducted information sessions to gather user requirements and analysis information from clients
- Analyzed such compiled information for further analysis, design, and implementation, while also resolving and identifying any client issues and problems
- Drafted and analyzed all business documentation, manuals, and requirements documents to the specific needs of the clients, developers, managers, and all parties involved

Mar 2007-Jan 2008:

Business Analyst, nLeague Services, Inc.

- Engaged in using Business Process Management (BPM) for application integration for clients
- Conducted information sessions to gather user requirements and analysis information
- Analyzed, identified, and resolved any and all any client issues and problems
- Implemented Service Oriented Architecture (SOA) for clients for projects involving XML and Java
- Communicated and acted as liaison between clients, developers and testers for various projects including the company portal and streamlined documentation between the various parties involved
- Learned the business aspect of management showing how pricing, cost structures, requirements, and other functionalities are provided for these clients
- Created front-end and back-end components for the company portal
- Streamlined company HR and Marketing software solutions

Jun 2002 – May 2003:

Software Consultant, Kenexa, Inc.

- Created scalable Oracle solutions involving analyzing gathered information from clients and implementing client needs in these applications while also communicating with all the various parties involved and documenting all required information and the entire step process
- Developed PL/SQL procedures, blocks, and packages for Oracle Integration and Manufacturing for several clients as well as documented all software solutions and acted as liaison for certain procedures between testers and clients
- Customized software programs for effective inventory management and warehousing for

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

such clients as Sears and Univance

- Developed front-end PL/SQL server pages (PSP) for Oracle integration
- Lead Project Manager on designing and fully integrating an Oracle 9iAS Portal with the various corporate applications including tiered secured access
- Communicated with various leaders in the organization to gather information and analysis for creating the corporate portal
- Acted as a manager, developer, implementer, and tester for the corporate portal project involving conducting meetings for user requirements, documenting all user data, managing the preparation of the project schedule and the roll-out date, identifying any problems and client concerns and resolving them, and communicating with all various parties involved, as well as documenting all information

Jun 2000 – Jan 2001:

Software Engineer, Lucira Technologies, Inc.

- Became an integral team member and leader in starting up a new company involving making my own decisions in terms on project management, analysis on what parts of the company to develop and maintain as well as communicate with all team members in creating a product in time for launch
- Programmed front-end ASP and HTML components for Lucira's product, Mobile Secure to allow real time securing and tracking web pages
- Established the technical help solutions division by gathering information on the end user clients and their needs as well as through the developers the software limitations and documenting all the information and presenting it in a simple end solution for the clients
- Designed & implemented an Interactive Voice Response (IVR) system that interacted with the Mobile Secure website involving gathering all the end client problems and resolutions and analyzing all the information and documenting it until this system was designed and implemented, and thoroughly tested for the end clients to use and troubleshoot their problems
- Developed telecommunication application that translates and logs caller information
- Created and maintained the corporate web site using ASP, HTML, & Flash making sure all user and developer needs were taken care of in a simple to use site interface

EDUCATION

- College of Engineering – Masters of Computer Science, December 2006 (Scholarship Awarded)
- College Of Liberal Arts – Bachelors of Science, Computer Science, May 2001

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Peter Kite

EXPERIENCE

2008-present: Implementation Manager, ikaSystems

- Managed the implementation of deployments of client portals to IkaSystems Medicare member enrollment, management, reconciliation and reporting system.
- Worked with client to define and agree statements of work for the projects
- Developed detailed project plans to manage project execution
- Interfaced with client leadership team to review, define and resolve issues and enhancements
- Maintained communication between client and ika on all technical and business issues related to the ongoing management of the account.

2005-2008: Principal Marketing Consultant (contract)

- Various client assignments, including EMC Corporation
- Launched customer service offer for IP based secure remote support, developed go-to-market plan and created marketing collaterals, positioned the solution and developed compelling value propositions,
- Acted as offer advocate to early adopter customers and to EMC service professionals.
- Developed and coordinated customer facing materials including flash demo, solution presentation, marketing collaterals and white papers.
- Initiated e-marketing programs to drive customer awareness and adoption.
- Reduced service cost by \$10M in first year and TTR by 3 days.

2004-2005: Senior Marketing Manager, BIO-key International

- Responsible for all market facing activities, including opportunity definition, power positioning, value proposition, pricing, promotion and sales programs, for the law enforcement product set of wireless mobile data solutions.
- Increased service revenue by \$2.5M p.a. by delivering high-touch programs to restore customer confidence, corporate credibility and neutralize competitive threats.
- Engaged customers in the product development process through user meetings, customer advisory board and focus groups.
- Developed and launched marketing programs accelerating product revenue growth by 35%.

2003-2004: Independent Marketing Consultant, Milvus Associations

- Various consulting assignments including:
- Business review and development of a strategic marketing plan for a small enterprise in compensation planning and HR management (ICR Ltd now Salary.com).

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Market and customer attitude research for a large company in the Bio-pharmaceutical industry planning to launch a new product (Millipore Corp.).
- Root cause analysis for the failure of a direct marketing campaign and development of a revised go-to-market strategy (Millipore Corp.).

2001-2003: Sr. Product Marketing Manager, EMC Corporation

- Eliminated \$250M inventory of slow moving product, avoiding obsolescence write down by implementing a program to accelerate sales; increased sales by 10 fold exhausting inventory in 2 quarters.
- Expanded addressable market opportunity by 50% and reduced customer total cost of ownership 30%, by establishing a suite of performance tests to simulate real world customer requirements.
- Increased margin contribution at market sweet spot by 12% while maintaining competitive price through restructuring product pricing.

1997-2001: Senior Marketing Manager, GTECH Corporation

- Initiated and conducted strategic analysis and SWOT evaluation of core business, resulting in increasing the market opportunity by over 220%.
- Drove a cross-functional project targeted to generate a 35% ROI from a \$12.4M investment by implementing a new category of product.
- Directed the marketing and business management for a multi-company product development project; planed and implemented the go-to-market strategy; acted as solution advocate; worked with early adopters to launch and promote the product.

1994-1997: Sr. Product Manager, Kronos, Inc.

- Achieved 10 consecutive quarters of revenue growth exceeding performance goals; maintained revenue growth at more than 25% per annum.
- Created and implemented Windows and Client/Server product platform strategies while preserving the revenue generating capability of the legacy products.
- Developed strategic alliance relationships with hardware, software and component technology vendors.

EDUCATION

- BSc in Engineering, University of London, London, UK
- Diploma in Management (MBA comparable), University of Central England, UK
- Certificate in Internet Age Marketing, Bentley College, Waltham MA. - Partial

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Jacob Joseph

Summary:

Database professional with approximately 20 years of experience in the information technology industry and over 16 years experience as an Oracle DBA with strong skills in Managing database team and provide technical support for database administration that includes Performance tuning, Capacity planning and forecasting, Backup and Recovery, installation, configuring, troubleshooting, migration, up-gradation of databases. Expert knowledge in implementing security policies and high-availability solutions. Designed database Service Level Agreements (SLA) for many Global database projects at different time zones. Designed and implemented Database security/auditing for Sarbanes-Oxley Act (SOX). Domain expertise includes health care, pharmaceutical, government and commercial agencies.

Technical Skills

Hardware	SUN Ultra 5/10/30/60/80, E-450, E-4500, E-6500, E-15K, E-25K, Intel, HP9000, IBM RS6000, IBM P Series, DELL PowerEdge Series
Operating System	Sun Solaris 2.5/2.6/2.6/2.8/2.9, Red Hat Linux (RHEL – 3.0/4.0), Windows XP/2000/ NT / 98 / 95 /3.1 and , HpUx10.2-11, AIX
RDBMS	Oracle 10g/ 9i / 8i / 8.x / 7.x / 6.x and SQL server 7/2000
Database Tools	PL/SQL, SQL * Plus, SQL, iSQLPLUS, TOAD, SQL Navigator, Explain plan, TKPROF, STATSPACK, DATAPUMP, DBArtisan 8.0, Quest Central 4.5/5.0, Foglight, OEM, Oracle Failsafe Manager, MS Cluster administrator
Languages	SQL, C, PRO*C, PL/SQL, JAVA, Shell, PERL, CGI, DBD, DBI and HTML
Design Tools	ER Studio, Oracle Designer 6i

Certifications/Education/Training:

- Oracle Database 10g : **Oracle Certified Associate (OCA)** – July 2006
- **Linux system administration** - May 2006
- Oracle Database 10g : **Administration Workshop I** – June 2006
- Oracle Database 10g : **New Features for the Administrators** – July 2004
- Oracle 9i Database : **Advanced Replication** June 2004
- Oracle 9i Database : **Performance Tuning R2** May 2004
- Oracle 9i Database : **Advanced backup and Recovery using RMAN** April 2004
- Training in **Java** – 2002
- Training in **Unix, C & Oracle** – 1992
- Training in **VAX/VMS** - 1991
- Post Graduate Diploma in computer Applications - 1991
- Bachelor of Science (Major Physics) - 1990

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

DBA Skills:

- Large Database design, implementation, Management in Oracle.
- **Global** Database support for various time zones
- Managed multiple database infra-structure projects simultaneously.
- Well versed with installing and managing database using **Oracle 10g Grid Control**.
- Install and Manage different versions of Oracle on **Unix, Linux and Windows** platform
- Vast experience in handling different type of databases like **HYBRID, OLTP & DSS**.
- Installation of Oracle databases and evaluation of the hardware for the database servers. Planning and designing databases including logical structures and forecasting future expansions.
- Experienced in designing **Service level agreements** for the Database team
- Experienced in evaluating **Oracle Security patches** (released every quarter).
- Well versed in developing and implementing Proactive Database **Monitoring** strategies.
- Implemented **Disaster Recovery** plans for fortune 500 Companies.
- Hands on experience in performance tuning using **Statspack, TKPROF & Explain Plan**.
- Analyze performance issues using **Oracle Waits**.
- Experienced in converting data from SQL Server and Access databases to Oracle Using **Oracle Migration Workbench**
- Experienced in providing High availability solutions like **Data Guard, Oracle FailSafe and Hot Standby**.
- Extensive knowledge on configuring **Oracle Transparent Gateway** for SQL Server
- Extensive knowledge in Configuring and administering multiple **RMAN** recovery catalogs
- Testing and Migration/Upgrading of the database to a newer version of RDBMS
- Experienced with implementing Database **security policies** and Database **Audits**.
- Extensive knowledge in implementing Backup and Recovery solutions.
- Experienced in supporting databases on a **Microsoft Cluster** environment.
- Implementing **Shared server Architecture (MTS)** for large user volumes.
- Extensive scripting experience using **Shell , Perl, Perl DBD and Perl DBI**
- Evaluated **RAC** configuration on Linux platform
- Provided **24 x 7 global support** for Production, Development and QA databases
- Populated the Oracle Tables from Flat files Using **Oracle External Tables** and **SQL Loader**
- Well versed in moving data across database using **Transportable tablespaces**.
- Providing **expert consultation** to the developers on Oracle technologies.
- Extensive experience in creating **Database objects**
- Extensive experience in very large database environment and **data mart, Oracle partition, Parallel Query/DML, materialized views**
- Experienced in supporting **Oracle Text/Intermedia, XML** database technologies

PROFESSIONAL EXPERIENCE

Ika Systems Manager / Technical Lead – Databases Feb 2007 - Current

Key Responsibilities:

- Provide database technology roadmap to the ikaSystems Product lines.
- Manage a team of 5 people which includes DBA's, Linux and Storage Administrators.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Design and implemented SLA's with other groups for the successful delivery of Products to the customers.
- Implement High availability solutions to provide the database uptime to 99.99%.
- Supported and managed large databases size that exceeds over 1TB.
- Analyze Oracle performance problems and recommends solutions to the development team.
- Involved in data modeling for the IkaSystems suite of products.
- Implemented Database security policies to meet HIPAA regulations
- Automated many Database activities using Shell Scripts and PERL.
- Keeping abreast of emerging Oracle technologies and industry trends.
- Analyze development team workflow and procedures and recommend technologies to satisfy their needs.
- Provide recommendations to project teams in the implementation of new/upgraded designs.
- Acts as a liaison between the developers and other technical groups to resolve operating system, network and hardware problems.
- Responds to Database issues and work with Oracle Support to resolve the same.
- Providing technical support to the developers in Tuning SQL queries and debug PL/SQL programs.
- Design, implement and test Disaster Recovery procedures.
- Perform Backup and recovery of databases using RMAN.
- Perform 24x7 on call duties on a rotation basis.

Commonwealth of Massachusetts Sr. Database Administrator Feb 2006 – Feb 2007

Key Responsibilities:

- Provide Technical expertise to the DBA team.
- Maintain and administer OLTP, DSS databases for EOHHS agencies
- Mentoring and educating Junior DBA's
- Evaluating Proof of Concepts for new features of Oracle.
- Writing Technical Documentation for the Best Practices/Standard Operating Procedures
- 24 x 7 Global Database support by carrying the On-Call duty pager

Pfizer Inc, Groton, CT Sr. Database Administrator Oct 1998 – Feb 2006

Key Responsibilities:

- Primary Database support for 80 production, 55 Non production Globally.
- Lead many database infrastructure projects. (Database consolidation; Database monitoring, Backup and Recovery, Auditing/Security policies).
- Evaluated and design implementation plan for a new version /patches of Oracle software
- Implementation of Physical structures of the Application
- Configured and Maintained Multithreaded Architecture /Shared servers
- Implemented the backup solution for ~ 800 databases using RMAN

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Configured and implemented Oracle Transparent Gateways for SQL Server.
- Design and implement Service level agreements.
- Implemented script to maintain database logs and trace files
- Designed and implemented user managed backups.
- Design and test Disaster Recovery procedures.
- Implemented scripts for proactive monitoring on database objects (Ex: broken jobs, tablespace space issue, errors in alert log)
- Implemented scripts to check the Database health and alert Primary DBA when required.
- Analyze Security patches released by Oracle and designing implementation plan
- Designed and implemented database Security and Audit requirements
- Designed and developed Infra structure adhoc reports for all the databases using Perl and Shell scripts
- Configured and supported databases configured in a Microsoft clustered environment using Oracle Fail safe
- Configured and Maintained Data Guard architecture to provide 24 x 7 database availability
- 24 x 7 Global Database support by carrying the On-Call pager
- Team member of the 'Performance Tuning Group' that analyzes long running queries / bad SQL and providing solutions to the Customers.

Other responsibilities include:

- Performance Tuning using tools like Explain Plan, TKPROF and Oracle wait events
- Perform Backup and recovery of databases,
- Refresh development/ test databases as per the customer's request,
- Documenting the Standard Operating Practices for the database
- Re organize the fragmented database objects in the scheduled Maintenance Windows.
- Migrating /Upgrading the databases to the newer version of RDBMS

**Seagate Technologies , San Jose, CA
- Sep 1998**

Sr. Database Administrator May 1998

Key Responsibilities:

- Installation and maintenance of Oracle software on Solaris and Windows Platform
- Participated as a member of the architecture team in designing full life cycle application development.
- Developed logical models, implemented design changes into physical schema/instance.
- Performed normalization and de-normalization on data to achieve high performance.
- Implemented Backup and Recovery solutions.

**New England Business Solutions, Groton, MA Sr. Database Administrator Jan 1998 -
May 1998**

Key Responsibilities:

- Administer and Support 4 production, 4 staging and 6 development instances.
- Performance tuning of production instances
- Implemented Multi master replication

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Timex Corp, Shelton, CT

Database Administrator

May 1997 – Dec 1997

Key Responsibilities

- Supporting 2 production, 2 testing and 1 development environments, and 80GB in all with 100 users and 30 concurrent users with 24/7 configurations.
- Installation of Oracle software. Upgrading Oracle databases.
- Day today DBA tasks

Binnariang Communications, KL, Malaysia

Database Consultant

June 1995 - April 97

Key Responsibilities

- To maintain five databases spanning multiple machines.
- Planning and designing the logical and physical model of the database.
- Creation of database, storage structures and database objects.
- User Management (Creating users), Security management .

Perubadanan Shipping Lines, KL, Malaysia Database Consultant Dec 1994 – May 1995

Key Responsibilities

- Oracle DBA, responsible for Database installation, configuration, Performance tuning, Design, Table Design, Write back end procedures, Upgraded, migrated and configured Oracle 6.x./7.3.x database.
- designed and implemented disaster recovery and backup/restoration procedure

BITECH, Madras, India

Systems Executive

Mar 1992– Dec 1994

Key Responsibilities

- Installation, of Oracle and Oracle tools
- Creating databases for the Off shore and In house projects.
- Creating Database triggers, packages, stores procedures, and Integrity constraints.
- Designed and implemented database schema for both logical and physical data models.

Madras Christian College – Data Center, Madras Developer Jan 1991 – Feb 1992

- Design and develop Application packages according to the needs of the College.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Damodar Reddy

Summary

- 7+ Years experience as Oracle Database Administrator specifically on 10g RAC on IBM AIX, Linux, Solaris platforms & 9i databases and Oracle Apps DBA on 11.5.9/10 environments. And 8+ years of IT experience on the whole.
- Played a lead role in 10g RAC Linux project (migrating databases from Solaris to Linux) and implementing ASM.
- Strong database, operating system and networking concepts.
- Good shell scripting, batch programming, PL/SQL skills.
- Automated several routine DBA tasks and scheduled these jobs in CRON and other scheduling tools like Appworx, Grid Control.
- Proficient in DBA tools like – Autodba, Toad and OEM. Scheduling tools like Appworx, Grid.
- Providing Onsite support to Barclays RAC databases for the countries India, UAE and whole of Africa.
- Providing Database support remotely for GE Health Care Datacenters with a team of onsite and offshore Production Support model.
- Technical lead of a team of 15 DBA's, administering 300+ critical databases in BUSINESS SOLUTIONS wing on GE Healthcare, taking owner ship of databases, problem analysis, resolution and escalation to Global DBA manager.
- Server owner for all the databases on 10g Linux Grid.
- Worked on Various UNIX environments like Solaris, AIX, HP.

Professional Experience

IKA Systems Corp (Southborough,MA)

Dec – 2009 to Till

Date

Role: Senior Oracle DBA.

Responsibilities (As Oracle DBA):

- Setup the 10g/11g clusters and created RAC and standalone databases on Linux platform for the clients
- Support and maintenance of the databases and resolve the issues arising.
- Setup DB Control Grid control for easy DB administration.
- Setup cron scripts and automated daily, weekly maintenance jobs
- Setup RMAN catalog database and scheduled daily, weekly DB, archive backup jobs for all the prod and nonprod databases.
- Upgrade the databases to Enterprise Edition, to higher versions.
- Worked with the user community to resolve day to day issues related to the database.
- Worked with the application developers in identifying and resolving the bottlenecks using AWR, ADDM reports.
- Worked with NFS, GPFS file systems

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Rebalanced the instances across the cluster nodes to improve performance.
- Opened SRs with Oracle and resolved RAC/Linux specific issues on a production cluster.
- Configured the DR setup using Oracle Dataguard and handled the Full DR Testing concerned with the Database Team.

Falcorp Technologies Ltd. (South Africa)

Nov – 2007 to Dec – 2009

Client: Barclays Bank, UK.

Role: Senior Oracle DBA.

Responsibilities (As Oracle DBA):

- Setup the 10g clusters and created RAC databases(10.2.0.3) on AIX platform for the countries India, UAE,Pakistan and whole of Africa(Egypt, Uganda, Mauritius, Seychelles, Kenya, Botswana...)
- Support and maintenance of the RAC databases and resolve the issues arising.
- Setup cron scripts and automated daily, weekly maintenance jobs
- Setup RMAN catalog database and scheduled daily, weekly DB, archive backup jobs for all the prod and nonprod databases.
- Worked with the user community to resolve day to day issues related to the database.
- Worked with the application developers in identifying and resolving the bottlenecks using AWR, ADDM reports.
- Worked with NFS, GPFS file systems
- Worked with the Tivoli storage manager(TSM) in backing up, restoring the Databases.
- Reinstalled the cluster ware and added the services to the cluster to resolve production cluster issues.
- Moved the databases from 1 cluster to another.
- Rebalanced the instances across the cluster nodes to improve performance.
- Opened SRs with Oracle and resolved RAC/AIX specific issues on a production cluster.
- Configured the DR setup and handled the Full DR Testing concerned with the Database Team.

Wissen InfoTech Pvt. Ltd (India)

Sep – 2003 to Oct – 2007

Client: GE (Healthcare), Waukesha, WI, USA.

Role: Oracle Apps DBA

ERP Team is responsible of handling over 150 oracle applications databases. Technologies involved - Oracle Apps version 11.5.5, 11.5.9 & 11.5.10 on Sun Solaris, HP-UX, multi node RAC system, F5 setup for load balancing web services, BC technology for backup.

Responsibilities:

- Administering production databases as large as 4TB on a 4 node RAC installation (Sun SPARC machines), with 8 node PCP configuration exclusively for Concurrent Processing, Load balancing form services and apache through F5 setup on 3 web servers.
- **Administering and maintaining** Production Apps 11i instances, 24X7 **Production Database Support and maintenance.**
- Involved in **maintaining applications** using various **AD Utilities.**

- Executed **11.5.x to 11.5.10 Point-release upgrades** on several DEV/TEST and production databases.
- Implemented Shared APPL_TOPs.
- **Staging, installation** and implementation of latest releases of Oracle Applications.
- Specific Tech-stack and applications component upgrades to the latest certified versions.
- Sound experience in **multi-node and RAC** environments including configuration of **PCP**.
- Experience in installation and configuration of 9iAS Rel 1, Rel 2.
- Troubleshooting various Oracle Apps related issues - login issues (Apache, Jserv), concurrent manager issues, Forms tracing and FRD (Forms Runtime Diagnostics).
- Applying several one off application patches on a daily basis. Also applying RDBMS patches (Patching databases to the most current release levels). Applying periodical security patches like - CPU (Critical Patch Updates) patches on a quarterly basis, DST (Daylight Savings) Patches.
- **Cloning APPS** databases using various technologies like BC technology, hot refresh, cold refresh. (Cloning ~15 Apps Databases every week). Cloning a **multi node system to single node**.
- Managing Daily backups using Net backup, BC Backup.

Client: GE (Healthcare), Waukesha, WI, USA.

Role: Senior Oracle DBA, Technical Lead of the Team

Responsibilities (As Technical Lead of Oracle Team):

- Worked with the team members in resolving technical issues related to clusterware, databases etc.
- Developed standard for directory structures on new UNIX boxes.
- Performed numerous Installations of various versions 9.2.0 and 10.2.0
- Performing database upgrades as part of new releases
- Regular database activities, backups monitoring, issue resolving through Remedy
- Tuned Oracle databases, Oracle Applications, Custom Built Applications and poorly performing sql's.
- Created a number of database instances for development, testing and production.
- Working with VERITAS Net backup Technology to take the hot and cold backups.
- Scheduled hot and cold backups using Appworx Scheduler.
- Automated cloning of the Oracle databases using Appworx scheduler.
- Appworx chains and modules creation for BC Backups and DB Refreshes.
- Migrated databases between machines.(San migration)
- Installed patchsets and upgraded Oracle (RDBMS).
- Applied database patches using Opatch utility.
- As a part of Performance Team, has been involved in several scenarios helping users in tuning their bad sql's and helping in rectifying the init parameters for better performance

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

and also involved in tuning databases consuming high CPU and high IO waits in coordination with teams concerned.

- Leveraging the features of 8i including Statspack, Local tablespace management etc.
- Coordinated and interfaced with Oracle support for upgrades, certification issues and tars
- Performed number of dev, test and stag cloning from PROD databases.
- Worked on 9i RAC databases.
- Managed 1.2 tera byte cluster database which having 3 cluster nodes.
- Performed cross version Instance refreshes.
- Performed number of Media recoveries, tablespaces and datafiles recovery and point in time recoveries.
- Managed tablespaces and other database objects.
- Installed statspack, AWR in the database to monitor the database and identify the bottlenecks.
- Performed application and database tuning.
- Created custom schemas, maintained archived log files
- Prepared and developed number of shell scripts (Solaris,AIX (UNIX flavors)) to manage oracle databases.

Technical Expertise:

Operating Systems:	Sun Solaris, HP-UX, AIX, Linux RedHat, Windows 2000, XP
Database:	Oracle 8i, 9i (RAC Solaris), 10g (RAC), 11g
Database Tools:	Autodba, OEM, Toad, Appworx, Quest, GRID Control.
Backup Technologies:	Blib, BC Backup, NetBackup, RMAN
Scripting/Programming:	Korn Shell scripting,

Education Qualification:

- B.Engg (Bachelor Of Engineering, Computer Science) Gulbarga University, Gulbarga, Karnataka, India.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Karunanithi Rajarathinam

EXPERIENCE

2004-present: QA Manager, ikaSystems

- As QA Manager, I was responsible for leading the SQA team that delivers the ikaPortal Solutions product suites.
- Set up augmented black box testing and white-box testing environments.
- Set up and administer defect tracking tool HP Quality Center and Automated tool Quick Test Professional.
- Project Management: Scoping, resource allocation, lab hardware/software requirements analysis/fulfillment, escalation support.

Oct 2000-Sept 2003: Sr. QA Lead/System Analyst, Envitect Corp. for National Grid

- Tested the GIS application for Functional, regression tests in different construction types like OH, DOH, UGH, TOH etc.
- Developed test plans and Functional test scripts and smoke test scripts which are required to test the applications.
- Regression test conducted in different scenarios after installing different features in GIS application.
- Knowledge in basic concept of all the features involved in the application.
- Excellent knowledge for trouble shooting the application if there is an error messages coming out of the system while running the Reconfigure and final posting of the feeders.
- After making permanent verified the database whether correct data's are updated in the database or not by running SQL queries in SQL/Plus Window.
- Knowledge in entering the bugs into bug tracking tool, retesting those bugs as per the resolution.
- Expertise in writing release notes.
- Coordinated with the field engineers to Test the actual scenarios of fieldwork.

April 2000-Sept 2000: Senior QA Analyst, Evitect Corp. for Priceline.com

- Developed Business requirements and Test Cases base
- A Walk through had been implemented with the developers and analyzed the system for functional aspects
- Developed the Test Cases based on the Business requirements.
- Tested web Application Involved in Functional Testing and User Acceptance testing as per the Test case and Defects have been logged to the Test Director.
- Excellent experience in writing SQL Queries, which are required for the back-end Testing-using SQL Navigator.

- After Submitting the Promotions, the DLL's are monitored through Event Viewer whether they are normalizing properly.
- Exposure in scheduling batch servers manually for fulfillment process and remotely possible 32.
- Tested the application for GUI aspects (cosmetic).
- Tested the web application in deferent web browsers for compatibility.
- Automated Testing
- Developed Data Driven Test cases for checking different test cases for the application.

April 1998-Jan 2000:

Sr. QA Tester, Bharath Computers Pvt. Ltd., India

- Manually tested Flow of Business processes.
- Interacted with Developers (Walk Through) and analyzed the system for functional aspects
- Developed the Test Cases using the Business requirements.
- Interacted with Developers (Walk Through) and analyzed the system for functional aspect.
- Automated Testing – Win runner.
- Tested the Application by Win runner tool also.
- Recording the scripts as per the test cases written
- Using the TSL Language has enhanced test scripts.
- Tested functional, Regression and GUI testing.
- Developed Data Driven Test cases for checking different test cases for the application.
- By using function generators enhanced the test Scripts for GUI objects.
- Tested with test cases for each and every New Build.
- Written Test cases for cyclic testing and estimated how much time takes for each and every test.
- By testing system by cyclic testing optimized the Database activities like insert, updating of records.
- Tested the application for GUI aspects (cosmetic).
- Tested the application for Functional aspects.
- Environment: Visual Basic 6.0, Oracle 7.3 and Windows NT. Win runner

TECHNICAL PROFICIENCIES & TOOL SETS

Hardware: Pentium workstations, IBM PCs, PC based NT 4.0 windows 2000 Servers, LAN and WAN.

Software: C++, Java J2EE, VB Script, ASP, SQL, PL/SQL, HTML and XML

Operating Systems: IBM S390, Windows NT 4.0, MS Windows 3.11, MS Windows 95/98, Windows XP

RDBMS: SQL Server 2000 & 2005, Oracle 8.x, (SQL * Plus, PL /SQL), TOAD and MS Access

Others: Microsoft Visio. Microsoft Power Point.

Automated Tools: Quick Test Professional 8.2, Mercury Quality center 8.2
Win Runner 5.0/6.0 and Load Runner GUI knowledge: HTML. XML, Visual Basic 6.0,

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Bug Tracking Tool: Clear case – DDTS, Test Director

EDUCATION

B.S (Mechanical)	Bharathiyar University, India	1983 to 1987
IBM S/390 Main frame Software)	Certification course Completed	(Pentafour 1998

Suneeta Pulla

EXPERIENCE

July 2008 – present:

Quality Assurance Analyst, Government Works

- Develop/Communicate/Document overall quality testing project plan using MS Visio. Present requirements and Train new business users in the project needs and customized in house policies and procedures
- Define testing and validation requirements.
- Design a project plan with in-depth detail of all UAT. Review resources and create timelines and guidelines for all deliverables.
- Reviewing and validating Use Cases defined by the business users.
- Used MS Share Point skills-Maintained team documents and artifacts
- Interact with the stakeholders to get a better understanding of client business process.
- Create Use-Cases and Business Use-Case Models after accessing the status and scope of the project and understanding the business processes.
- Create Traceability Matrix to map requirements to Test Cases
- Develop Test Cases and Test Plans using HP Quality Center.
- Manage project with advance analysis and scheduling in MS Project and coordinated them effectively to meet project deadlines.
- Facilitated user groups with UAT testing cycle before product implementation.
- Ensured complete Knowledge Transfer and hands-off to client of deployed systems.
- Prepare summary and lessons learnt document after the project completion for future reference.
- Take lead in preparing the user training material for new team members of consumer process.
- Successfully train batches of team members on the training material.

Jan 2003 to Feb 2005:
Hospital

Dietetics Assistant, Lawrence Memorial

- Monitor the computer printouts for diet orders and diet changes and verifies any discrepancies by checking orders in Meditech.
- Record any changes in the cardex file and processes changes on the menu.
- Evaluate, calculate, correct, and process patient selective menus according to food preferences and diet order.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Report any unsolved problems or concerns to the dietician and provide nutritional screenings on new admissions when assigned.

TECHNICAL PROFICIENCIES & TOOL SETS

Applications: MS Excel, MS Visio, MS Share Point

Operating Systems: Windows Vista, XP/2000

Testing Tools: Quality Center, UAT, Data Analysis/Validation, Mercury, HP Testing Centre

EDUCATION

- Bachelors in Sciences: Majoring in Nutrition & Dietetics - Andhra University, India
Grade A with GPA 4.0
- Certificate in Principles of Laboratory Instrumentation - University of Massachusetts, MA

Bijendra P. Malik

Director of Network Operations/Infrastructure

Hands-on leader with a proven ability to build new IT departments as well organized, productive business units. Solid knowledge of creating strategies and processes that improve and maintain a high level of security and enhance service offerings. Diverse IT experience in big industry, manufacturing units, service organizations and medium companies contributes to fast problem resolution times. Strong management and leadership skills, with the ability to manage cross-functional, cross cultural teams and to keep high tech professionals motivated.

Extensive knowledge in disaster recovery planning and execution for both systems/infrastructure and business continuity; contract negotiations; various hardware architectures; system/network environments and languages.

The ability to meld strategic thinking and business acumen with hands-on technical expertise has led to a diverse background in management, both senior and executive, and non-management roles, a technology consultant for several global & fortune 500 companies, such as GE & LG Electronics.

Professional Experience

ikaSystems Corp. - December 2003 - present

Director of Infrastructure

Southborough Massachusetts

Responsible for the Operation and Security of 3 datacenters with more than 100 servers, Built a team of System Administrators, Security Engineers, Database Administrators and Application Developers. Improved uptime from 99.2% to 99.9%. Implemented the EMC SAN, redundant Cisco switching, Cisco PIX Firewalls, data protection using replication between sites. Company customer base increased 300% in 3 year period. Scaled the service's website through strong growth periods. Implemented performance and availability monitoring. Implemented strong access control using Safeword secure tokens on production servers. Conducted security audits on ikaSystems operations. Designed a Disaster Recovery plan for the ikaSystems service, using highly integrated blade servers. Negotiated datacenter deals & hardware vendors.

Designed implemented & managed data replication over WAN using “Delta Changes” technology to achieve the instant recovery with zero data loss in case of server or site failure.

Designed implemented and managed Cisco based VPN for remote and mobile user using Safeword secure ID tokens (Dual factor authentication).

Migrated legacy phone system to VoIP based phone system using Lucent Avaya and Cisco IP products. Setup conference bridges, IP tunnel between sites.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Implemented Oracle 10g data guard to replicate transactions to remote site for data recovery.

GE Silicones – Feb 2002 - November 2002

SAP Consultant Albany, New York

Migration of SAP systems from OSi to GE Network.

Designed & implemented SAP R/3 Subsystems for Demand & forecast management.

Performed SAP BASIS functions: Managed SAP users, created user id, setup the access, unlocking users, and solved printing problems.

Migrated Citrix system from OSi to GE Windows 2000 terminal server environment.

Scansoft Inc. USA, - May 2000 to Feb 2002 Network Manager

Responsible for migration project to Windows 2000 from Windows NT and Novell Netware. L&H USA Burlington location was primarily on Windows NT, & Newton location was on Novell Netware servers. Mix environment of Windows NT domains and Novell NDS with Netware 4 and 5 was migrated to Windows 2000 with MS Active directory.

Implemented security solutions, plug security loopholes before Windows 2000 security audit conducted by external agency. Job involved scanning entire security implementations, domain groups, generic users on Active Directory consisting of 50 servers at multiple locations.

LG Electronics India Ltd- India Senior Executive - IT

Migrated Linux & POP3 based email system to Lotus Notes R5 consisting of 18 Domino server & SMTP gateway Responsibilities included designing of messaging systems, organization & OU structure, user's naming convention, discussion with vendors & Installing of Lotus Notes servers, connectivity thru VSAT, leased lines configuring connection document, & SMTP gateways.

Implementation of Citrix server for faster access to WAN user of ERP (M-Project). Job involved design, planning & implementation of 10 Citrix server, configuring load balancing, client configuration & remote printing.

Larsen & Toubro Limited (1989 to 1999) Faridabad – India Network Engineer

Responsible for managing monitoring & troubleshooting of heterogeneous network having Windows NT 4.0 Servers & NetWare Servers.

Maintained e-mail system (GroupWise 5.2 & Lotus Notes 4.5) having direct connectivity with 85 locations world wide through VSAT & dial up connectivity to mobile users.

Implemented one of the first intranets in L&T containing ISO 9001 Manuals, Product information, Management circulars, In-house Magazines etc.)

Managed implementation of ERP (SAP R/3) package at Faridabad location.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Managed the entire Windows NT/2000 Network using HP OpenView Network Management Software.

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Upgraded NetWare 4.11 to NetWare 5. Job involved installation of NetWare 5 server on HP LH3 server with RAID 5, up gradation of NDS tree, configuration of NetWare 4.11 for co-existence with NetWare 5. Updating of Windows 95 & Windows NT clients for TCP/IP access to NetWare 5. Also installed Netscape Fast track server, ManageWise 2.6 & APC makes UPS for communication with server.

Designed and implemented Novell's ZEN Works (Zero Effort Network) allowing hardware & software inventory, Centralised software distribution, System policies & remote control of Windows 95 & Windows NT workstations.

Education & Professional Certifications

- Bachelor's Degree in Electrical Engineering
- Microsoft Certified Systems Engineer – MCSE
- IBM's Certified Lotus Professional - CLP
- Cisco Certified Network Associate – CCNA
- Checkpoint Certified Security Administrator – CCSA
- Certified Novell Engineer - CNE

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Josephine (Jo Lane) Thomas, M.F.A

SKILLS SUMMARY

Thorough knowledge of and frontline experience in proposal process, from outlining through distribution using the Shipley method, as well as other approaches; superior concept development and writing abilities, especially in the areas of science, medicine, and health care; organizational and project management expertise; collaborative concept development skills; detailed substantive and copy editing experience; excellent client relations skills; team commitment interaction skills; fully versed in the use of GPO, Chicago, AMA, and APA styles; fluent in the use of Microsoft Office 7, Excel, and Powerpoint/Windows XP.

SELECTED AREAS OF EXPERTISE

Alcoholism, accountable care organizations, allied health, managed care, alternative health, biological sciences, clinical trials, consumer health, epidemiology, genomics, healthcare IT information technology and medical data management; hospital and practice management, mental health and psychology, military health, neurology, project management, rehabilitation, staffing and placement, women's health, children's health, and specific diseases and topics such as breast cancer, lung cancer and genetics, heart disease, obesity, sexually transmitted diseases, and more.

EXPERIENCE:

Technical Writer and Proposal Manager Government Works, Inc. February, 2010 to Present

Writes and edits various documents for clients and for company-wide distribution. Develops and writes web site content. Collaborates with subject-matter experts to produce technical documents. Works with development team to prepare software documentation. Works closely with Vice President of Business Development to document advances in the IT healthcare industry and to analyze and document trends, such as accountable care organizations and episode grouping. Conducts industry research. Works with subject-matter experts and company management to write, edit, and manage the production of proposals.

Proposal Manager HealthCare Resolution Services August, 1999 to January 2010

Managed, wrote, and prepared for delivery small task order proposals for the Air Force, for health care and IT professionals. Tracked opportunities in Input and Salesforce and participated in bid/no bid meetings. Wrote outlines and worked on teaming plans with other companies for larger proposals that did not come to fruition. Supervised writer who prepared white papers for Web and for submission to CMS, with my input. Prepared scope of work for major grant opportunity. Worked with subject matter experts (SMEs) and others to prepare materials. Wrote and edited Web and newsletter copy, as well as Web site tag line. Supervised development of proposal preparation processes. Analyzed and outlined numerous state and federal RFPs, RFIs, and RFQs. Prepared a series of daily reports. Wrote, edited, and managed one major IDIQ opportunity, of which HCRS was one of three winners.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Proposal Manager ValueOptions, Inc. December, 2008 to May 2009

Participated in the development of several public sector and EAP proposals, working remotely. Analyzed proposals and prepared plans of action and then followed through with assignments and strategy calls. Collaborated successfully with proposal leads and subject matter experts. Formatted all proposals in ValueOptions style, using Word and Excel, and maintained documentation and files relevant to specific bids. Interacted with other staff on a regular basis and participated in QC for various proposals. Managed public sector proposals from start to finish. Worked regularly with RFP Machine and RFP Express. Worked in AP style as an editor and reviewer.

Senior Proposal Writer and Editor Magellan Health Services 2005-December, 2008

Researched, wrote, and edited a variety of public and private sector proposals for Magellan's busy Proposal Strategy and Development department. Since beginning at Magellan, two public sector proposals on which I served as the lead writer were procured (Florida Area 11 and the Commonwealth of Pennsylvania for radiology); three major proposals on which I served as part of the writing team won (Florida Areas 2,4, and 9, CIGNA, Anthem, FAA), and several others on which I served as lead writer, as a member of the writing team, or as editor have gone to Best and Final (Florida Areas 3 and 8, Commonwealth of Pennsylvania *HealthChoices*). Worked with production staff to ensure the quality of finished product. Worked extensively in RFP Machine and RFP Express. Collaborated with subject matter experts throughout the company. Worked in a variety of styles, including GPO, AMA, APA, and Chicago. Fluent in Word, Powerpoint, and Excel.

Senior Writer and Editor American Institutes for Research 2002-2004

Wrote complex reports on obesity and on cancer and genetics, newsletter articles on advancement in cancer research, tobacco control, and substance abuse for Federal Government clients, including Guidelines for the *Treatment of Asthma and Guidelines for Blood Pressure Treatment* (NHLBI). Edited a wide range of materials for various audiences and internal clients. Worked in tandem with production staff to ensure high-quality product. Produced documents for special audiences on extremely short turnarounds

Writer and Editor MasiMax, Inc. 2000-2001

Served as staff writer for NIDA NOTES, the flagship publication of the National Institute on Drug Abuse. Wrote and edited comprehensive reports for Federal Government clients

Freelance Consultant 1986-2000, 2004-2005

Translated incidence data, demographic data, trends data, comparative data, and experimental data into understandable descriptions and graphics. Edited summary statements of peer review discussions on breast and prostate cancer research and other documents. Interpreted data presentations for meeting reports. Conducted research of various data sources and interpreted data for reports and other documents, such as Treatment Improvement Protocols for the Center on Substance Abuse Treatment. Developed, wrote, and/or edited numerous promotional materials including brochures, annual reports, newsletter articles. Documented discussions and decisions of institutional review boards

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Adjunct Faculty 1988-1996 Howard Community College

Taught basic principles of English and Business Writing to undergraduate students and through adult education programs. Prepared syllabi, exercises, assignments, and tests

Public Health Advisor 1979-1984 Centers for Disease Control and Prevention

Interviewed and followed up on the contacts of patients seen in public STD clinics located in the Washington, D.C. area. Collected, analyzed, and reported data as part of a national data reporting system. Designed and conducted educational interventions

Legislative Assistant 1976-1979 U.S. Rep. Tim Lee Carter (R-Ky) (dec.)

Responsible for all general (not pertaining to his committee work) legislative correspondence and documentation, including briefing materials, backgrounders, fact sheets, and more, all of which required significant research.

EDUCATION:

M.F.A., Creative Writing and English, American University

B.A. Political Science, George Washington University

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Barbara J. Linder

EXPERIENCE

2007 – present: Vice President, Implementations, ikaSystems

- Provide implementation leadership for ikaClaims and Enterprise Systems deployments.
- Develop and execute the use of standard implementation tools.
- Work with the Development Team on System enhancements and development opportunities.
- Work closely with the Sales Team providing demonstrations of ikaClaims.
- Responsible for Request for Proposal responses for ikaClaims related inquiries.

2006-2007: Chief Executive Officer, Delta Medical Care, Inc.

- Assumed responsibility for the operations of a third party administrator specializing in Medicare Advantage claim administration
- Business development.
- Established claim production standards for the staff and streamlined processes.
- Enhanced the claim processing system, including implementation of McKesson's ClaimReview and ClaimCheck programs.
- Upgraded and improved company Web site.
- Developed international health benefit program.
- Formalized business and marketing plan.
- Provided consulting services to MSOs and IPAs.

1997-2006: various positions, Florida Hospital Healthcare System, Inc.

Chief Operating Officer/Executive Director/Privacy Officer (2004 – 2006)

- Co-Chair of Network Development Committee. Recording Secretary for Board of Directors. Member of Provider Compensation Committee.
- Assumed all finance, IS and medical management direct reports, as well as continuing all responsibility of previous position as Administrative Director.
- Designed and implemented first member Web site, decreasing interaction costs by 15% and improving member experience. Member satisfaction results of Web site has been over 95%
- Amended all physician contracts to become messenger model PHO.
- Implemented eligibility and benefits via internet for physicians and revised physician provider manual reducing call volumes by 22%.
- Assumed leadership role of 50 member PHO in Georgia.

Administrative Director of Operations (1998 – 2004)

- Assumed day to day operations of PHO and Third Party Administrator. Areas of oversight included claims, customer service, provider relations and contracting, membership/eligibility, sales, implementations, HIPAA privacy compliance and payer relations.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Reduced administrative costs by over \$3 PMPM streamlining operational functions and personnel.
- Reduced existing 45 day claims backlog to less than 10 days while reducing staff at the same time.
- Decreased average customer service average speed to answer from 2 minutes to less than 20 seconds and call abandonment from 10% to 2% with no increase in customer service staff.
- Implemented EDI and scanning for claims.
- Developed and implemented HIPAA compliant policies and procedures as Privacy Officer of the organization.
- Implemented annual physician satisfaction survey enabling significant and continuous improvements in administration of physician network and services.

Director of Commercial Sales and Business Development (1997 – 1998)

- Increased membership by over 25,000 lives in twelve months.
- Designed and implemented Master TPA contract.
- Established marketing name for network product.

1996-1997: Regional Director, Southeast Development, Options Behavioral Health

- Established initial commercial market in the southeastern United States for behavioral health services.
- Identified and resolved administrative and claims issues on TennCare Project, which was a joint venture of HCA, BCBS, PHP and Options.
- Developed physician networks as needed for commercial and Medicare markets to ensure physician access.
- Assumed subject matter expert role for RFP responses, attending all pre-bid and final presentation meetings.

1995-1996: Vice Presidents, Claims/Customer Service, Florida 1st Health Plans, Inc.

- Oversaw the day to day operation for the Claim and Customer Service Departments for a Third Party Administrator and HMO.
- Wrote and implemented policies and procedures ensuring initial NCQA Accreditation for the HMO division.
- Restructured the departments to be client specific affording better service and production.
- Implemented new mailing system that automated the printing, stuffing and mailing of all outgoing mail, which resulted in the reduction of two (2) positions?
- Implemented EDI claims capabilities, which ultimately reduced the claims backlog by 15 days.
- Attended all client meetings in an effort to continue to identify and improve customer satisfaction.
- Implemented two (2) complex clients requiring considerable testing and thinking outside the box skills to accommodate their needs.

1993-1995: Executive Vice President/Co-Owner, Quality Network Plus, Inc.

- Started, developed and marketed an ancillary Preferred Provider Organization (PPO that covered the State of Florida.
- Refined the skills necessary to start a business and remain profitable.
- Within six (6) months had 7,500 members utilizing the network.
- Provided consulting services for Third Party Administrators and claim review for clients resulting in plan design changes and implementation of new cost savings programs.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

1991-1993: Vice President, ABI Administrative Services, Inc.

- Marketed and implemented new insurance programs which included small group products and Association plans.
- Developed a self-funded department, which included establishing relationships with reinsurance carriers, administrative and claim procedures and marketing environment.
- Placed large blocks of business and Associations with carriers and/or products that would complement their needs.

1990-1991: Vice President of Field Marketing, Health Plan Administrators, Inc.

- Developed marketing materials for self-funded, short term medical and small group insurance.
- Established market presence and marketing plan.

1987-1990: VP/Director of Operations, Coordinated Benefit Plans, Inc.

- Manage the day to day operations of a Third Party Administrator, encompassing the functions of the marketing, billing, underwriting, claims, customer service, administration, product development, licensing and commissions departments. Insurance products included fully insured small group and individual health insurance, self-funded health insurance and dental insurance.
- Created and implemented plans to downsize organization to become profitable after going from a public entity to private purchase entity, ultimately reducing staff by 30%.
- Researched and implemented a more cost effective computer system for the organization.

1985-1986: Claims Manager, Power Group Designs, Inc.

- Assumed responsibility for high profile client accounts ensuring claims processing was superior.
- Researched client's claim experience for trends and made recommendations for plan design modifications.
- Began development of a new product line.

ORGANIZATIONS

Florida Hospital Association Managed Care Division (1997-Current)

Florida Association Of Health Underwriters

- Board of Directors/Chairperson for 1994 - 1997 Annual Conventions
- 2nd Vice President 1996-2000
- 110% Award and ATTITUDE Award

Central Florida Health Underwriters (1997-Current)

West Coast Association Of Health Underwriters

President Elect 1997 - 1998

First Vice President 1995 - 1997

Board of Directors 1991 - 1993

Person of the Year 1993

West Coast Regional Case Management Association (1993 – 1995)

Leukemia Society of America Board of Trustees (1995 – 1997)

EDUCATION

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

University of Nebraska Omaha, BS/BA

Craig Johnson

EXPERIENCE

2004 – present:

Sr. Systems Analyst, ikaSystems

- Produce physician Profile reports for several large clients.
- Developed new and maintained existing physician Profile software.
- Responsible for the programming and maintenance of yearly NCQA's HEDIS specifications.
- Maintain customer relations during product implementation.

1994 – 2004: Sr. Software Engineer DataMedica (purchased by ikaSystems in 2004)

- Produce physician Profile reports for several large clients.
- Developed new and maintained existing physician Profile software.
- Responsible for the programming and maintenance of yearly NCQA's HEDIS specifications.
- Hire and train new Profile programmers.

TECHNICAL PROFICIENCIES & TOOL SETS

Languages: Cobol, Pascal, Basic, Assembly, JCL, C, SQL

Operating Systems: VMS, Unix, DOS, Window XP, Vista

Software: Lotus, Excel, Word, Visio, Broadbase, Brioquery, Oracle

EDUCATION

Graduated 1994 University of Wisconsin – River Falls River Falls, WI

- B.S., Computer Science – Information Track
- Minor in Business Administration

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

James D. Poladas

EXPERIENCE

Jan. 2006 – present: Project Lead/Computer Architect, ikaSystems

- Gather requirements from clients
- Analyzed and designed HealthCare Portals for various functionality like Broker, Employer, Member, Underwriter, etc.
- Analyzed and designed the Utilization Mgmt. and Disease Management (Patent Pending)
- Created New Paradigm called Pro-HEDIS (Patent Pending) that Pro-actively evaluates the quality of HealthCare Systems
- Got the company HEDIS – NCQA Certified (We were the 13th Vendor across the US that has the ability to do quality analysis on HealthCare Systems)

Jan. 2004 – Dec. 2005: Lead Engineer, PFPC

- Designed and developed clearing house for Mutual Funds
- Designed and developed Broker / Dealer Functionality that enables to gather data in 16 different dealer formats
- Interacted with brokerage like Merrill Lynch/ Putnam to provide data and account activity of brokers

Jan. 2001 – Dec. 2003: Senior Systems Engineer, PFPC

- Developed and designed On-line Retail Portal where shareholders can buy, sell, transfer and exchange shares
- Designed and developed core functionality for retirement services which enables users to change their retirement elections, apply for loan, withdraw and choose mutual funds through the Web.
- Created Institutional Portals and Broker Portals for companies like Bank of America to buy and sell shares as Brokers and Dealers

Mar. 1998 – Dec. 2000: Systems Engineer, PFPC

- Developed core modules for Full Service Retails for batch processing
- Designed and developed core functionality of retirement services which enable users to change retirement elections, apply for loan, withdraw and choose mutual funds through the Web.
- Created Institutional Portals and Broker Portals for companies like Bank of America to buy and sell shares as Brokers and Dealers
- Gatekeeper for Y2k Conversion for the FSR business.
- Review Code for all the code changes for Y2k conversion from the contracting company
- Simulation regression testing after code changes.

Mar. 1996 – Feb. 1998: Systems Analyst, Legal & General (UK)

- Developed modules for group insurance.
- Created automated test scripts to test the system
- Made Y2k compliant.
- Use playback mode for testing the Y2K compliance.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Created automated download from different POS to feed into the system using IBM MQ Series

Dec. 1995 – Feb. 1996: Programmer Analyst, Royal Sun Alliance (UK)

- Developed the entire Claims processing modules for the insurance.
- Created test plan and implemented the code at the client site.

Jan. 1994 – Jan. 1995: Programmer Analyst, Value Software Service (India)

- Developed in Payroll and Automated Questionnaire application
- Converted a tool that converted PL/SQL Version 6.0 to Version 7.0
- Created Front Forms using CUI in form 2.0.

TECHNICAL PROFICIENCIES & TOOL SETS

SDLC Methodologies: Waterfall, UML, RAD, Extreme Programming

Operating Systems: Windows 95, NT 2000, 2003, Linux, Unix, Sco-Unix, IBM mainframe, Alpha Dec

Languages: C, C++, C#, VB 6.0, Java, COBOL, PL/1, PL/SQL, Mantis, FORTRAN

Frameworks: .NET, J2EE, Struts

IDE: Visual Studio, Visual Studio 2003, Visual Studio 2005, Eclipse, WSAD, TSO

Databases/Files: Oracle, SQL Server, Sybase, DB2, VSAM, ISAM

Patents: Utilization Management, Disease Management, Pro-HEDIS, Integrated Medical Management

EDUCATION

- Masters in Computer Science and Electrical Engineering, Indian Institute of Science, Bangalore, India
- Bachelors in Business Administration, XIME, Bangalore, India
- Bachelors in Physics (Hon's), Orissa, India

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Lavanya Gujja

EXPERIENCE

Jan. 2008 – present: **Systems Analyst, ikaSystems**

Jun 2008 – present **ikaProHEDIS Project**

PROHEDIS application is a web-based analytic, workflow system, which enables proactive quality management. Providers, care managers and members have regular access to real-time quality improvement metrics, allowing them to take action on the best available information. Physicians and care managers can track progress toward quality improvement goals, including HEDIS, in real time. In addition, physicians can easily see how their performance metrics tie to their payment, enhancing P4P results. IkaProHedis includes workflow tools allow physicians to update completed HEDIS records directly in ikaProQI, reducing the need for chart reviews at year end.

- Involved in design and development of web application.
- Involved in coding of Web Forms using C#.
- Developed web application using CSLA architecture.
- Custom code development for business objects using C#
- Developed CSS classes for the application.
- Involved in writing store procedures
- Environment: ASP.Net 2.0, C#, Oracle10g, Visual Studio.Net

Apr 2008 – Jun 2008 **Arcadian Project**

Arcadian Consumer Web Portal (CWP) was the first CWP project for IkaSystems. It helps members to directly enroll into a Medicare Plan. Implementation challenges included a bilingual (English/Spanish) interface, standardization of dynamic content, and maximizing usability.

- Involved in coding of Web Forms using C#.
- Data binding was extensively used to bind various server controls to the data from database.
- Extensive coding of T-SQL Queries, Procedures and Functions.
- Involved in writing Cascading Style Sheets for styles on web page, and calling them in ASP.Net pages.
- Addressed browser compatible issues.
- Environment: ASP.Net 2.0, C#, SQL Server 2005, Visual Studio.Net

Jan. 2008 – Apr. 2008 **ikaProHEDIS Prototype Project**

Non functional prototype was developed for IkaProHedis project, using HTML and CSS framework. Prototype Site was extensively used by the sales. Different presentation style themes were applied and browser compatibility was maintained.

- Involved in coding and development of web site; developed CSS classes and themes for site.
- Addressed browser compatible issues.
- Environment: Asp.net 2.0, C#, HTML, CSS

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TECHNICAL PROFICIENCIES & TOOL SETS

Internet Technologies:	ASP.Net, HTML, .Net Framework
Languages:	C#, Java Script
Software/Tools:	Visual Studio.Net, Visual SourceSafe
Web Server:	Internet Information Server
Databases:	MS SQL Server 2005/2000, Oracle 9i/10g, MS Access
Reporting Tools;	SQL Server Reporting Services
Web Designing Tools:	Flash, Fireworks
Other Tools:	MS Office

EDUCATION

Bachelors in Electronics and Communication Engineering
Jawaharlal Nehru Technological University, India

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Nandhini Ponninathan

EXPERIENCE

Aug. 2008 – present: Senior Developer, ikaSystems

- Involved in the design process of ikaProHEDIS+.
- Design, Develop & Implement the Web-based Portal for HEDIS Reporting.
- Implemented Single-SignOn process using RC4 Algorithm and X-509 Authentication technologies.
- Internal Reviews.
- Co-ordinate the work in Web-development team.
- Supported the following clients: Passport Health Plan, Parkview, Security Health Plan, UPMC Health Plan

July 2006 – July 2008: Developer, ikaSystems

- Involved in the design and development of Individual, Small Group Quotes, Automated Renewals and Reporting modules.
- Developed a dynamic 'ikaReports' tool for Unity which eases the process of generating reports.
- Supported the following clients: Unity Health Plan, Presbyterian Health Plan

Mar. 2003 – Jun 2006: Developer, Qwest Communications (India & U.S.)

- Worked on DirB project

Jun. 2002 – Dec. 2002: Developer, Serveen Software Systems (India)

- Worked on Defense Research & Development Organization project

TECHNICAL PROFICIENCIES & TOOL SETS

Operating Systems: OS/390, UNIX, Linux, Windows 2000

Languages: C, C++, VB, COBOL, JCL, UNIX Shell Scripts, Awk scripts

Web-related: HTML, ASP, C#, ASP.NET

DBMS: SQL Server 2000, Oracle, DB2

Real-time OS: VxWorks, pSOS+

Reporting Software: Active Reports, Crystal Reports

Encryption: RC4 Algorithm, X-509 Certificate based Encryption/Decryption

Other: CICS, INSYNC, File Aid, Visual Source Safe, New Visio Drawing, Control-M, Chopper

EDUCATION

Bachelor of Science (Computer Science and Engineering) - University Of Madras, Chennai, INDIA

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Karthik Raju

EXPERIENCE

Feb. 2009 – present: Sr. Software Engineer, ikaSystems

- ikaSystems is the premier provider of enterprise-wide process automation and intelligence management technology supporting health insurers' commercial, Medicare and Medicaid lines of business.
- As a Senior Software Engineer in the group, involving in the design and coding of the various measures of HEDIS® compliance certification. All the business logic are created in PL/SQL. Created an efficient utility package for the application which are extensively throughout the application.
- Environment: Oracle 10g/9i, SQL, PL/SQL, PL/SQL Developer, Red Hat Linux

Dec 2004 – Feb 2009: Sr. Oracle Developer, Sales Focus Solutions

- Sales Focus Solutions, a subsidiary of Phoenix American is a leading developer of financial CRM and reporting system for Mutual Fund companies.
- Worked in their MARS System, a “Software as a Service” (SaaS) architecture, to design and develop the applications business logic in the Oracle 9i/10g databases.
- As a Senior Oracle PL/SQL developer in the group, was involved in designing various modules design document, data dictionary, procedures, packages and triggers and managed a group of Oracle 9i/10g databases in various development environments.
- As an Oracle Team Lead, lead a team of PL/SQL developers and coordinated with the application developers.
- Environment: Oracle 10g/9i, SQL, PL/SQL, PL/SQL Developer, Windows 2003 Server, Sun Solaris 9

Apr 2004 – Dec 2004: Oracle PL/SQL Developer, Monsanto

- US Markets Applications is a set of web applications which automates the process of the marketing schemes and incentive packages introduced every year, thereby facilitating the payment to the customers.
- The application environment is a hybrid with both OLTP and historical data mining.
- As a PL/SQL developer implemented all the business logic in the Oracle PL/SQL procedures and packages and created the web interface for the application in ASP.
- Environment: Oracle 9i/8i, SQL, PL/SQL, ASP, VAX, JSS, Windows 2000

Jan 2003 – Apr 2004: Technical Staff, SilicoCyte, Inc.

- SilicoCyte™ is an advanced, modular, flexible and highly integrated microarray based gene expression analysis solution designed for automated image analysis, comprehensive data annotation, elaborates data analysis and advanced data visualization.
- As a technical team member, I was involved in the coding of the application and the SQL queries. As a sole member responsible for the licensing application, designed and implemented the SilicoCyte licensing web application.

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

- Environment: Oracle 9i/8i, SQL, PL/SQL, TOAD, SQL Server 2000, PostgreSQL 7.3, ASP, JSP, Tomcat 4.0, Python, XML, IBM Rational Robot, Red Hat Linux 8.0, Windows 2000 Server

Mar 2000 – Nov 2002:

Programmer, DBA Techno Education (India)

- Worked on various applications based on the client server architecture involving multiple industries across manufacturing, transport & cargo and educational. As a team member, involved in the coding in Oracle PL/SQL, SQL Server and MS Access databases and created the windows application UI in Visual Basic.
- Environment: Visual Basic 6, Oracle 7.3/8, PL/SQL, TOAD, SQL Server 7, MS Access 97

TECHNICAL PROFICIENCIES & TOOL SETS

Databases: ORACLE 10g/9i/8i, SQL Server 2000, PostgreSQL 7.2

Tools: PL/SQL Developer, TOAD

Languages: SQL, PL/SQL, Visual Basic, Python, Java, C, C++

Web Technologies: ASP, JSP, JavaScript, VBScript, HTML, XML

Operating Systems: Windows NT/XP/2000/2003, Linux, Sun Solaris.

Others: IBM Rational Robot

Configuration Tools: CVS, VSS

EDUCATION

- Master of Computer Applications (M.C.A) in Bharathidasan University, India.
- Oracle Certified Associate for Oracle 9i PL/SQL Developer (OCA)
- Microsoft Certified Professional for SQL Server 2000 (MCP)

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

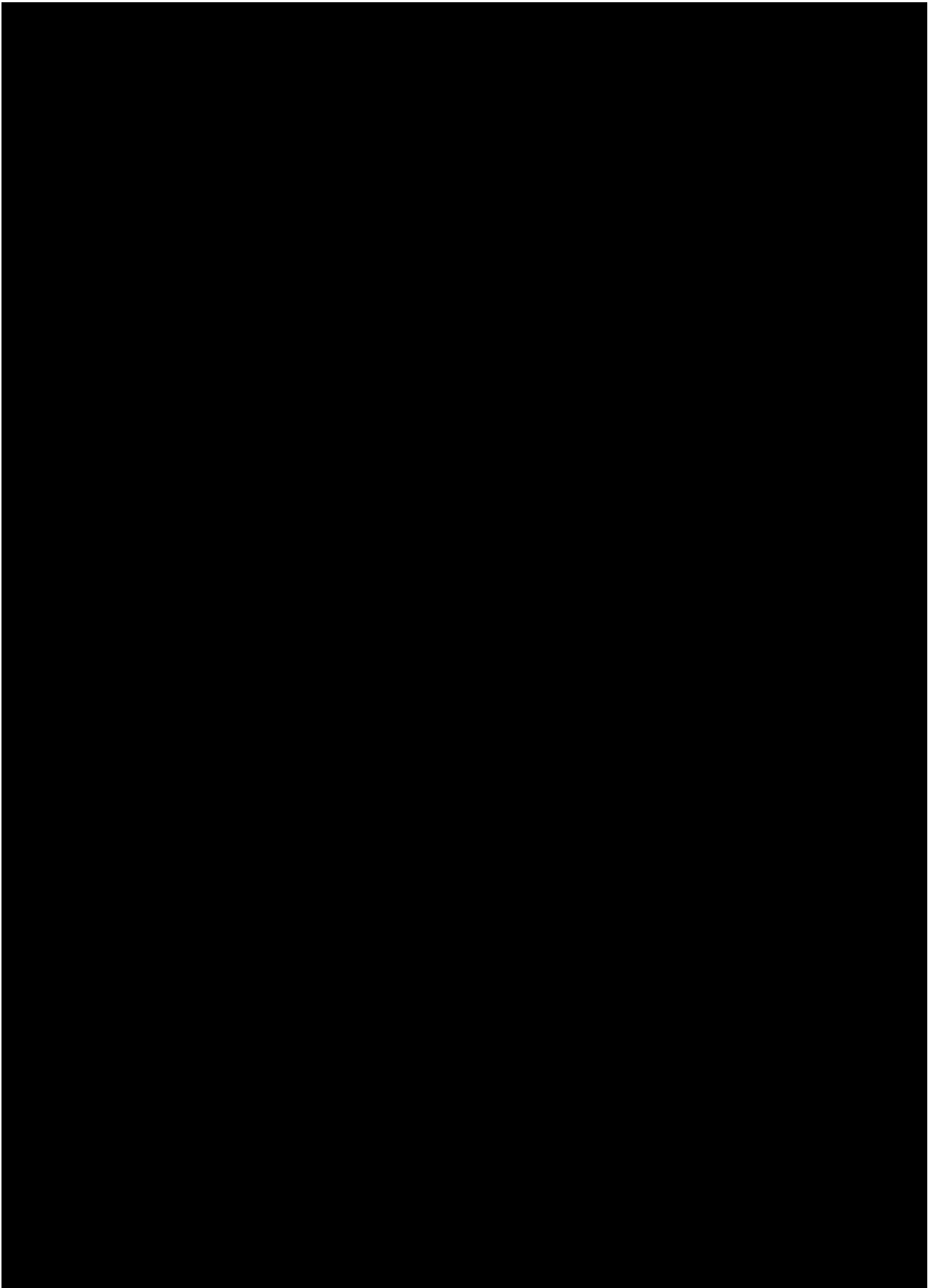
ATTACHMENT C
SAMPLE REPORTS

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

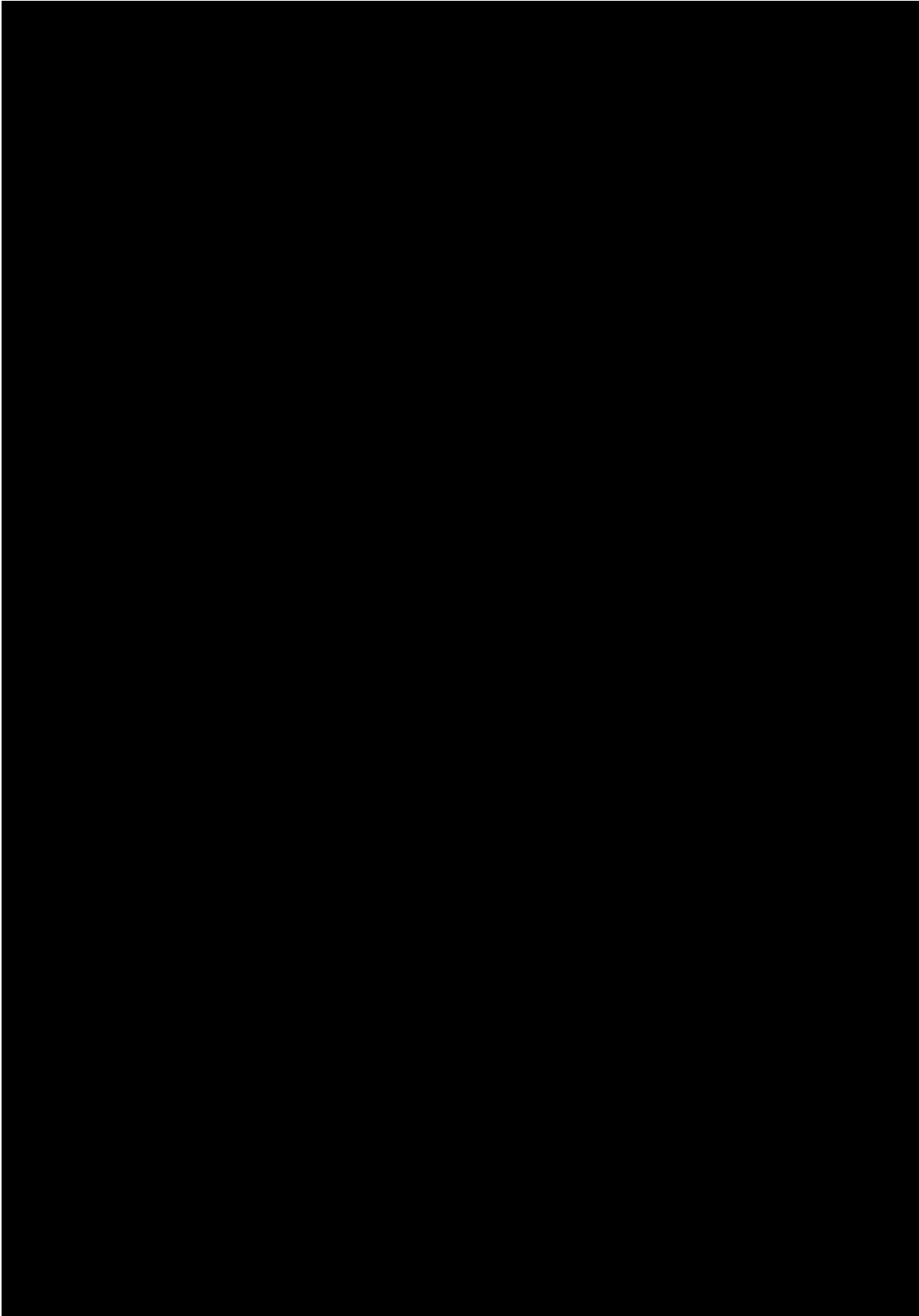


RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

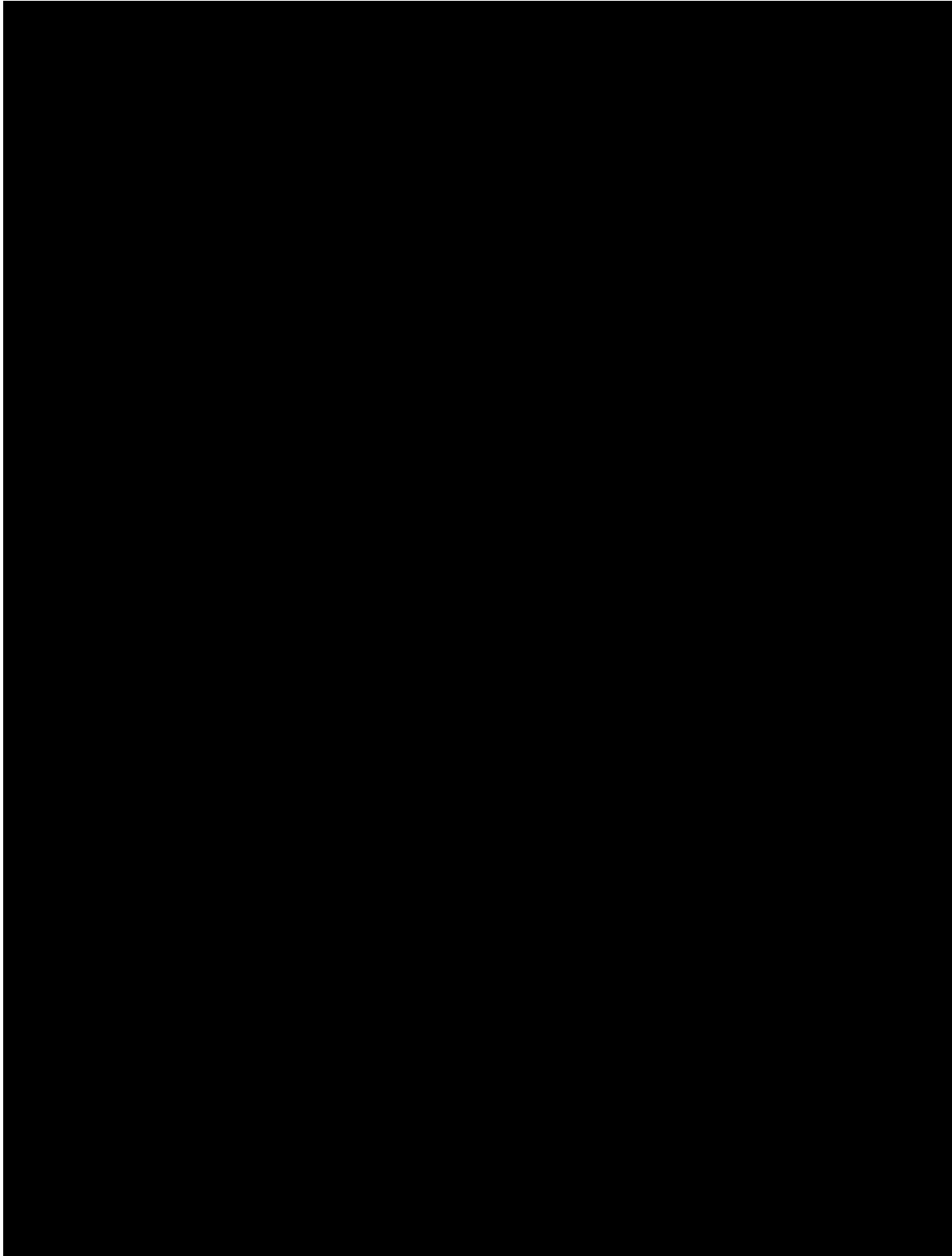


RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

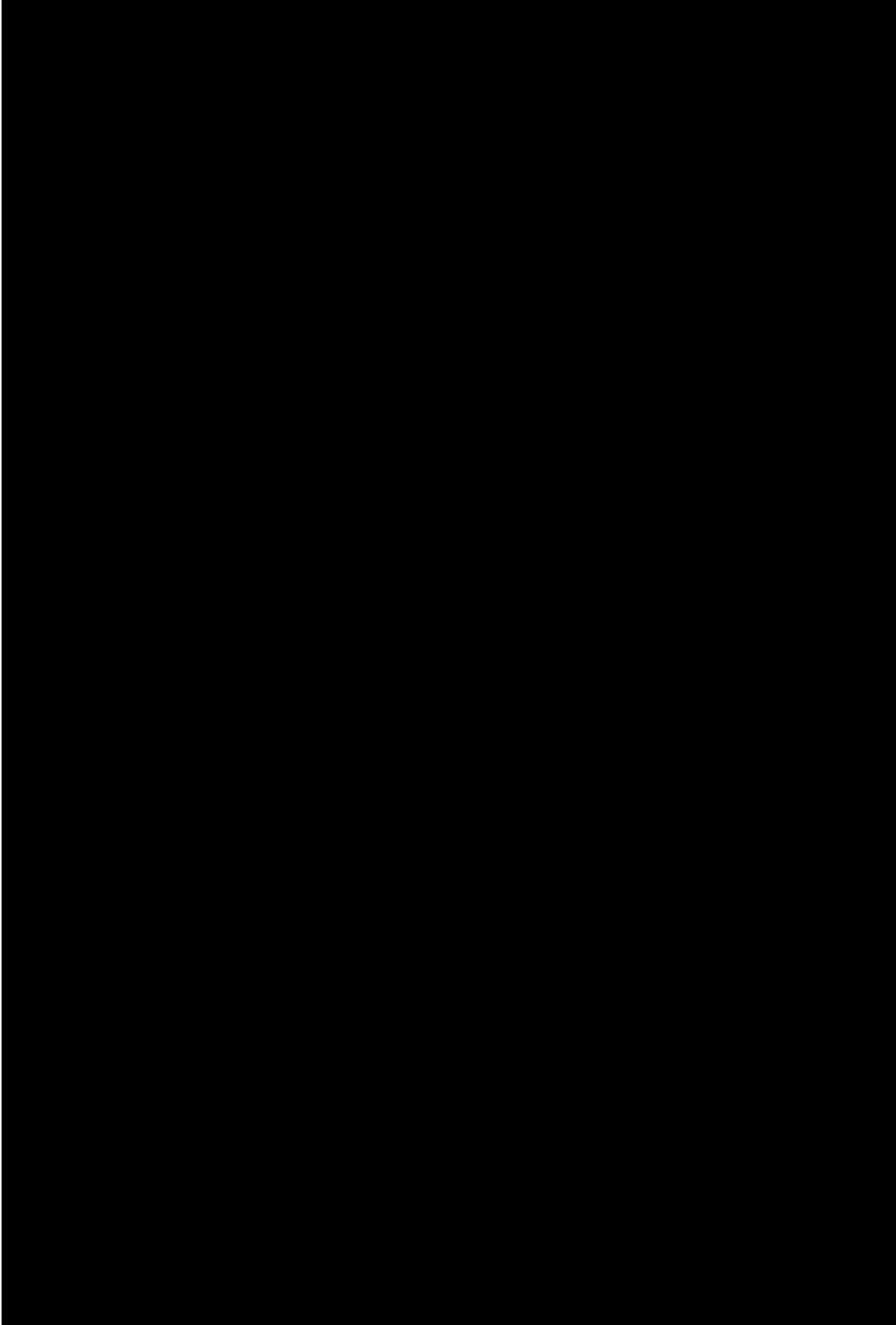


RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

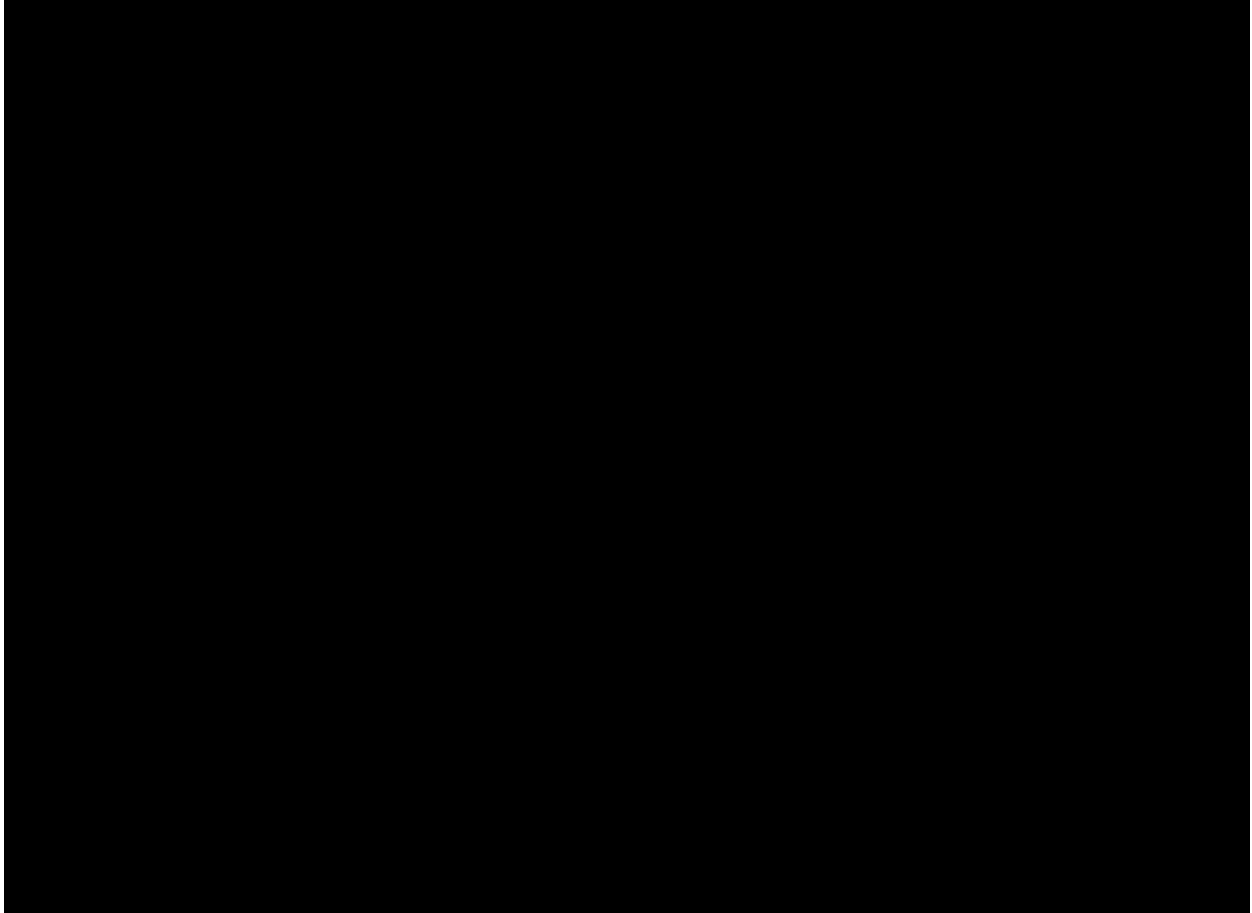
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DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



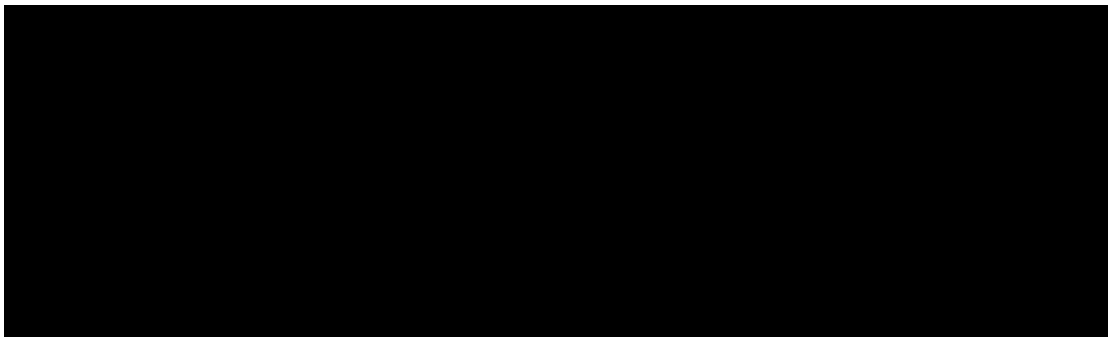
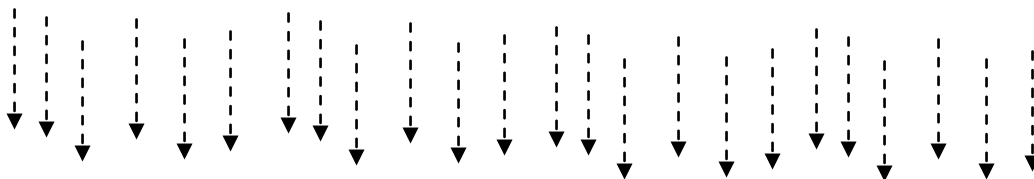
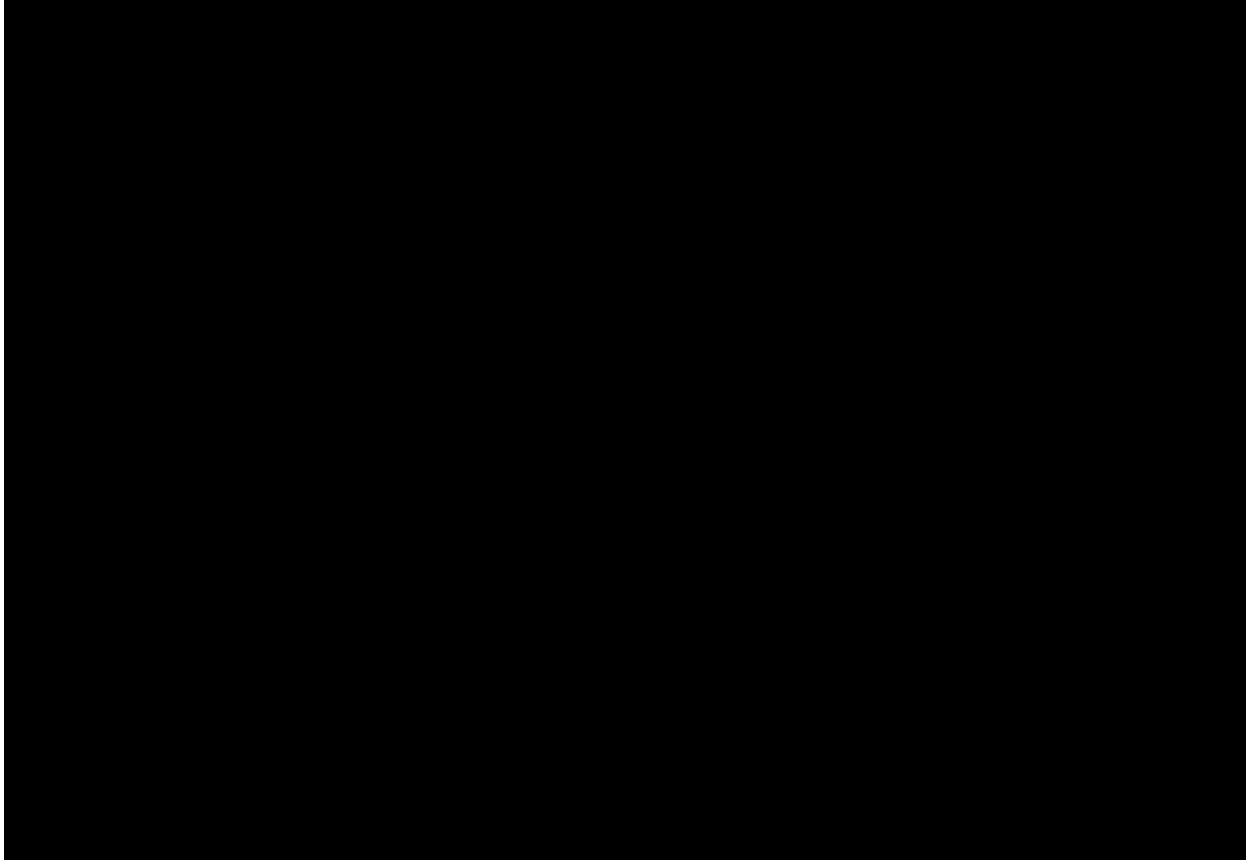
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

PRG Risk Group Specialist Performance by Specialty Category Summary



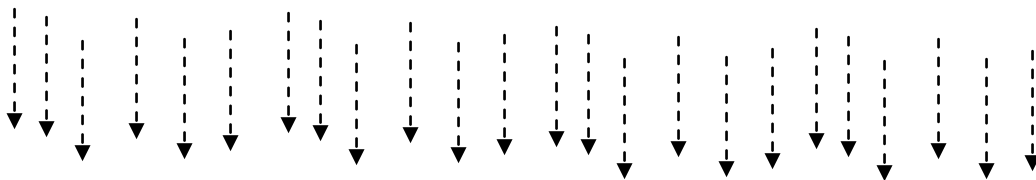
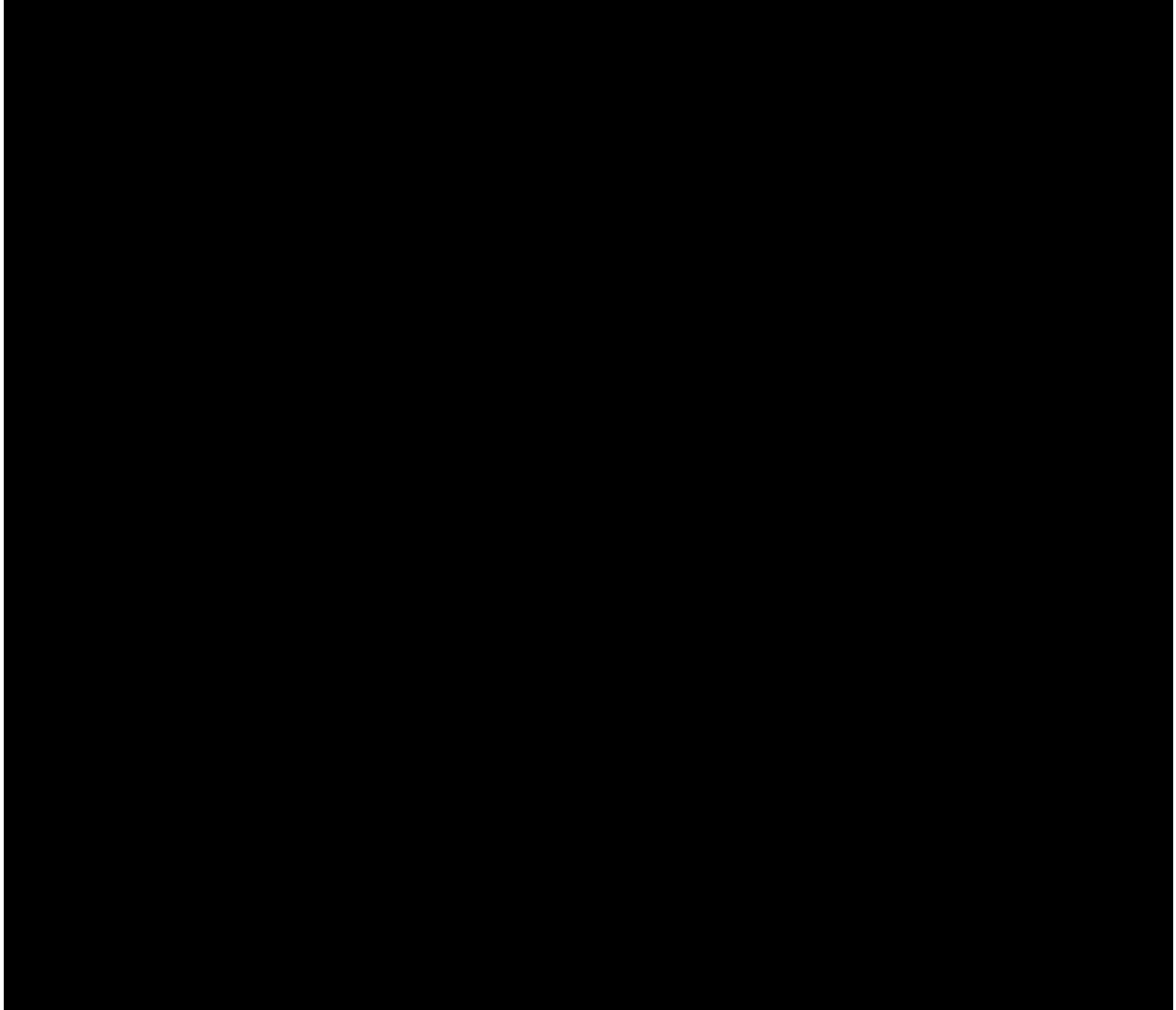
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West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Catastrophic Case Listing > 20K (Liability)



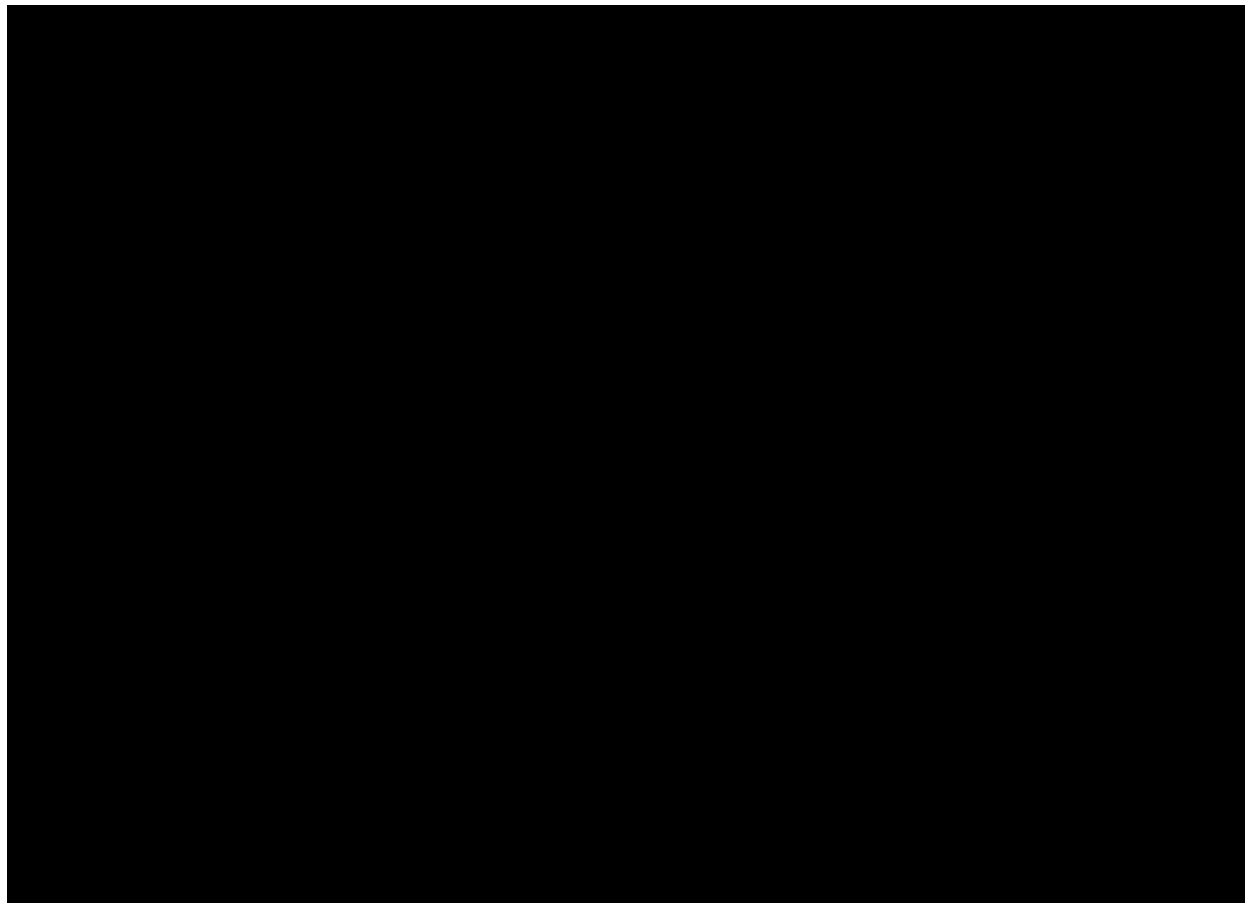
RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Inpatient Analysis Summary by Provider (Liability)



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Active Member Report



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Daily Inpatient Report

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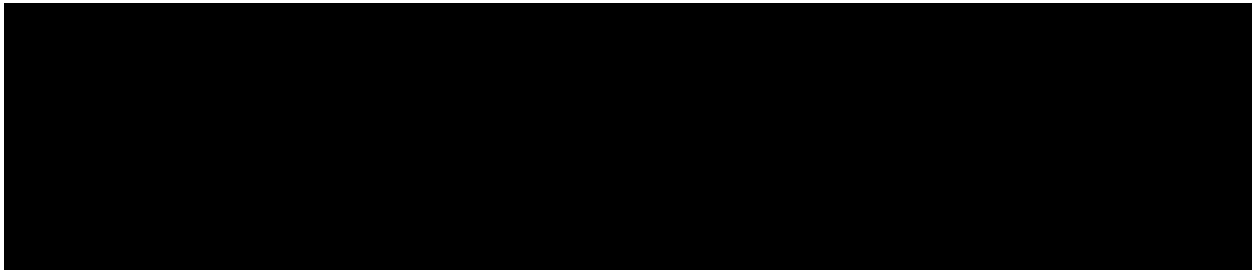
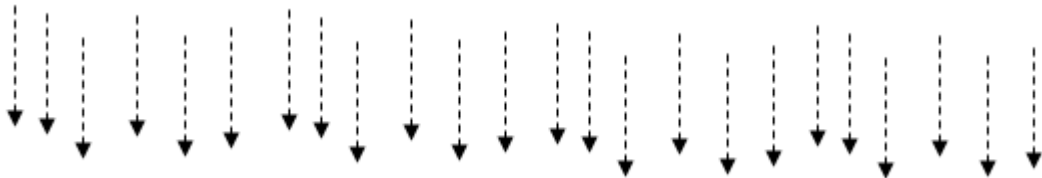
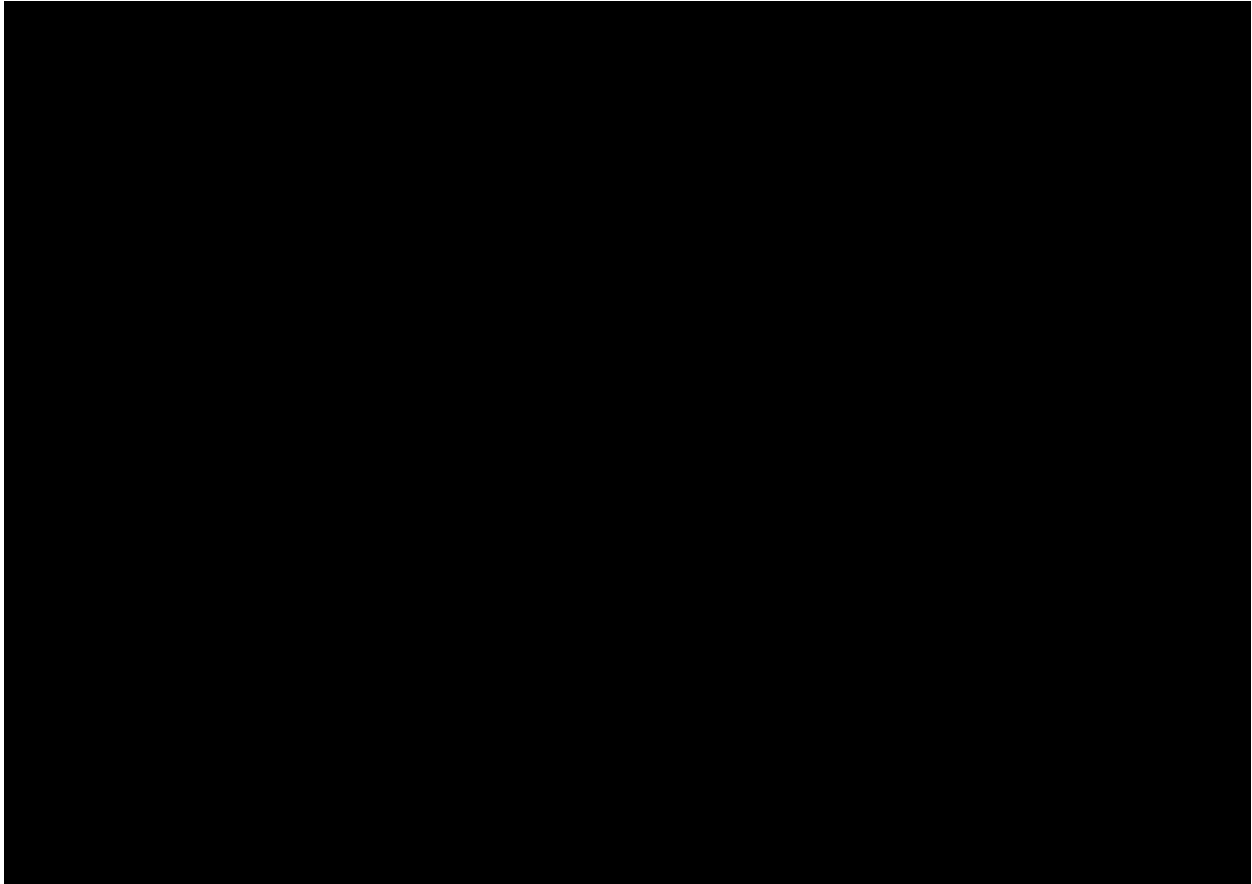
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RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Expense Summary of Events 3 Days over Avg LOS (Util. Amount)

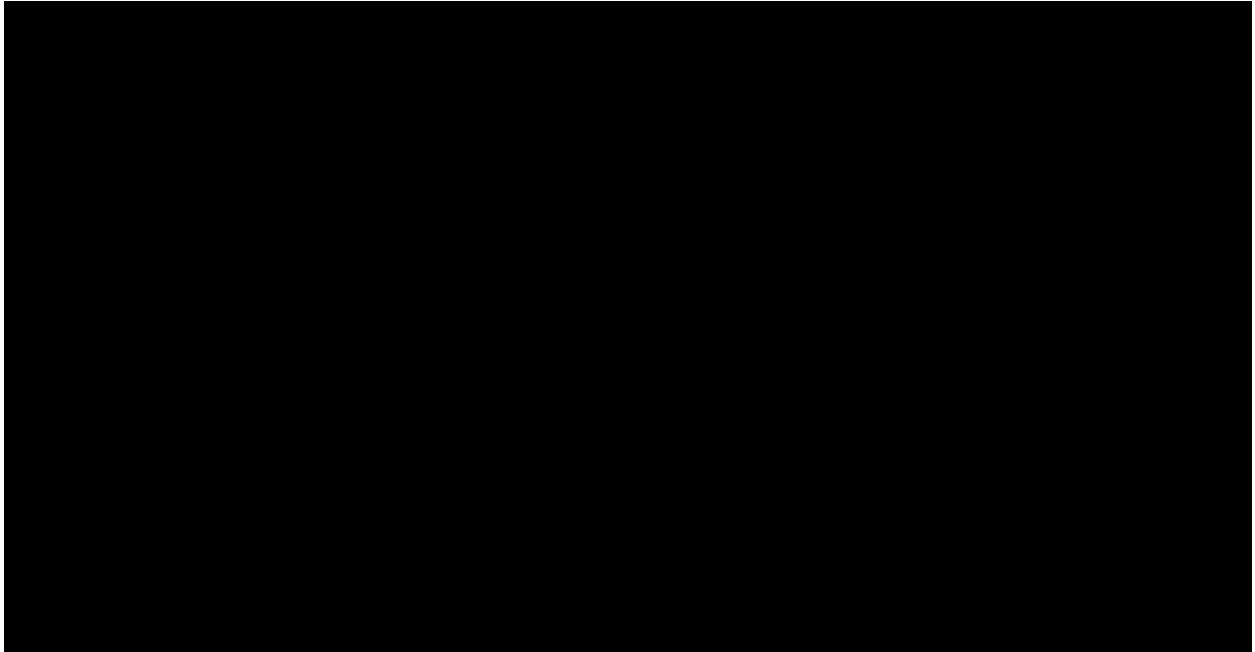


RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT



RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

ATTACHMENT - D
Appendix 2 - Detailed Business and Technical Requirements

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015
West Virginia Department of Health and Human Services
Bureau for Medical Services
DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Appendix 2 - Detailed Business and Technical Requirements

Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
	Section A - Business Requirements				
	Section A.1 - PROGRAM MANAGEMENT				
	MITA 5.6.1 Manage Program Information				
BSR PG1.1	Associates clinical data (e.g., claims attachment) with the claim record.	X		58	
BSR PG1.2	Supports retrieval and presentation of data associated with geographic indicators such as by state, by county, and by zip code.	X		58	
BSR PG1.3	Provides reports that allow users to drill down from summarized data to detailed data.	X		58	
BSR PG1.4	Demonstrates support for standard summarized data to be accessed by agency executives (e.g., Executive Information System or dashboards).	X		58	
BSR PG1.5	Provides counts of services based on meaningful units such as but not limited to:- Service category (e.g., days, visits, units, prescriptions)- Unduplicated claims- Unduplicated beneficiaries- Unduplicated providers	X		58	
BSR PG1.6	Provides the capability to produce unduplicated counts within a type of service and in total by month.		X	58	
BSR PG1.7	Reports the utilization and cost of services against benefit		X	58	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	limitations.				
BSR PG1.8	Assists in determining reimbursement methodologies by providing expenditure data through service codes including:- Healthcare Common Procedure Coding System (HCPCS), current version- International Classification of Diseases (ICD), Clinical Modifier, current version- National Drug Code (NDC), current version.	X		58	
BSR PG1.9	Analyzes cost-effectiveness of managed care programs versus fee-for-service.	X		58, 48, 50	
BSR PG1.10	Reports on any change from baseline for any program or policy change.	X		48, 50	
BSR PG1.11	Identifies payments by type such as, but not limited to, abortions and sterilizations.	X		58, 48	
BSR PG1.12	Maintains information on per diem rates, Diagnosis Related Groups (DRG), Resource Utilization Groups (RUG), and other prospective payment methodologies according to the state pLAn	X		114	
Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PG1.13	Automatically alerts administration when significant change occurs in daily, weekly, or other time period payments.	X		49	
BSR PG1.14	Provides access to information for each provider on payments to monitor trends in accounts payable such as, but not limited to, showing increases/decreases	X		48	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	and cumulative year-to-date figures after each claims processing cycle.				
BSR PG1.15	Produces provider participation analyses and summaries by different select criteria such as, but not limited to:- Payments- Services- Types of services- Beneficiary eligibility categories.	X		48	
BSR PG1.16	Provides information to assist auditors in reviewing provider costs and establishing a basis for cost settlements.	X		49	
BSR PG1.17	Monitors individual provider payments.	X		49	
BSR PG1.18	Summarizes expenditures, based on type of Federal expenditure and the eligibility and program of the Beneficiary.	X		49	
BSR PG1.19	Provides eligibility and Beneficiary counts and trends by selected data elements such as, but not limited to, aid category, type of service, age and county.	X		49	
BSR PG1.20	Provides the ability to request information online and to properly categorize services based on benefit plan structure.	X		49	
BSR PG1.21	Supports report balancing and verification procedures.	X		49	
BSR PG1.22	Maintains comprehensive list of standard PM reports and their intended use (business area supported).	X		49	
BSR PG1.23	Maintains a list of users of each standard PM report.	X		49	
BSR PG1.24	Produces a hospice report, based on a BMS defined period, showing a comparison of hospice days versus inpatient days for each enrolled hospice		X	49	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	Beneficiary and for all hospice providers.				
BSR PG1.25	Maintains online access to selected management reports and annual reports for the period of time specified by BMS, with the ability for BMS to alter the length of the retention period.	X		49	
BSR PG1.26	Ability to produce the current volume of BMS standard and operational reports or a number agreed upon in DDI. BMS works with the successful Vendor during DDI to analyze and define each report to ensure the reporting component meets overall business needs.	X		45	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PG1.27	Ability to provide authorized users direct access to MARS, SURS, and ad hoc functionality on their local workstations.	X		26	
BSR PG1.28	Data fields to be included in the Data Warehouse are to be defined and agreed upon during DDI and a process is to be developed to address the addition of new fields to the data warehouse.	X		26, 45	
BSR PG1.29	Ability to access new data fields populated with historical data where available.	X		26, 45	
BSR PG1.30	Ability to integrate all reports with the EDMS component.		X	26	
BSR PG1.31	Ability to use common names as defined by the BMS for displaying reports to end-users.		X	27, 31	
BSR PG1.32	Ability to enable users to produce highly flexible visual	X		27, 45	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	presentations of information in tabular, graphic, and chart form.				
BSR PG1.33	Ability to meet all requirements and specifications identified by CMS and the BMS for report content, storage, maintenance, and file transfers.	X		27, 45	
BSR PG1.34	Ability to produce outputs and data file extractions in accordance with the BMS's prioritization schedule, format, media, and distribution schedule.	X		31, 46	
BSR PG1.35	Provides a DSS that is a reconciled analytically-ready database that supports rapid and efficient population-based reporting across all systems and programs.	X		46	
BSR PG1.36	Integrates data, at a minimum, from the following sources:				
BSR PG1.37	Eligibility sources	X		28	
BSR PG1.38	Capitation sources	X		28	
BSR PG1.39	Claims systems (paid/denied claims and claim adjustments, in bulk and in detail)	X		28	
BSR PG1.40	Managed care encounter data from the State's MCOs.	X		28	
BSR PG1.41	Contractors, such as but not limited to, pharmacy benefit managers, behavioral health plans, CHIP contractors	X		28	
BSR PG1.42	Other as defined by BMS		X	28	
BSR PG1.43	Providers	X		28	
BSR PG1.44	Reference File	X		28	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PG1.45	Ability to use "open system" data warehousing such that query-capable applications external to the data warehouse can access data in the data warehouse.		X	31	
BSR PG1.46	Ability to manage offline storage and retrieval of archived data.	X		31	
BSR PG1.47	Ability to access (easily look-up) DSS information such as subsets, norms, benchmarks, query creation and all other objects and functions.	X		31	
BSR PG1.48	Ability to allow the user to perform prospective and retrospective policy modeling (what-if analysis) and analysis on changes listed below and others as later defined by BMS:				
BSR PG1.49	Claims edit checking and adjudication rules, claims parameters and payment rules, Provider payment rules or amounts, or claims sequencing	X		13, 31	
BSR PG1.50	Changes in Provider profile(s) such as Provider type, Provider location, Provider networks	X		13, 31	
BSR PG1.51	Changes in Member(s) profile such as demographic groups, claim types	X		13, 31	
BSR PG1.52	Changes in benefit plans such as the addition and removal of allowable services, service limits, Providers(s), and Member(s)	X		13, 31	
BSR PG1.53	Patterns in relationships between disparate data	X		13, 31	
BSR PG1.54	Ability to use or develop built-in standards and benchmarks relevant to Medicaid and other	X		13, 32	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	health care programs for Utilization, Cost, Quality of Care, Outcomes, Prevention, Access to Care, Eligibility and Administrative Performance for reporting purposes.				
BSR PG1.55	Ability to produce quality measurement reports, as defined by BMS.		X	13, 32	
BSR PG1.56	Ability to provide the data needed to support all State reporting requirements and produces all State reports.	X		13, 32	
BSR PG1.57	Ability to perform retrospective reviews, including:				
BSR PG1.58	Identify claims that appear to have been inappropriately paid such as excessive units, duplicate services, coding errors, or other errors	X		47	
BSR PG1.59	Determine if the services and billings were a medically necessary exception to usual practice	X		47	
BSR PG1.60	Reports are developed in accordance with the process defined by the BMS.		X	47	
BSR PG1.61	BMS owns the reports and no changes are to be made to reports without the prior approval of the BMS report owner(s).		X	46	
BSR PG1.62	Ability to compare encounter data claims and capitation fees vs. fee-for-service payment data to determine best utilization and payment scenarios.		X	46	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR	Ability to produce multi-dimensional, flexible, ad hoc reports across business				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

PG1.63	functions which meet reporting needs, such as:				
BSR PG1.64	Financial reporting	X		46	
BSR PG1.65	Budget forecasting		X	46	
BSR PG1.66	Fiscal planning and control		X	46	
BSR PG1.67	Claims payment accuracy	X		46	
BSR PG1.68	Cash flow	X		46	
BSR PG1.69	Timely reimbursement analysis		X	46	
BSR PG1.70	Recipient cost and user of services	X		46	
BSR PG1.71	Cost/benefit analysis	X		46	
BSR PG1.72	Third party recovery	X		46	
BSR PG1.73	Estate recovery	X		46	
BSR PG1.74	Prescription drug policy	X		46	
BSR PG1.75	Cost and user of prescription drugs	X		46	
BSR PG1.76	Recipient participation		X	46	
BSR PG1.77	Eligibility and benefit design		X	46	
BSR PG1.78	Geographical analysis	X		46	
BSR PG1.79	Program planning		X	46	
BSR PG1.80	Policy analysis		X	46	
BSR PG1.81	Federal waiver program evaluation	X		46	
BSR PG1.82	Program performance monitoring		X	46	
BSR PG1.83	Provider reimbursement policy	X		46	
BSR	Institutional rate-setting	X		46	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

PG1.84					
BSR PG1.85	Medical assistance policy development		X	46	
BSR PG1.86	Provider participation	X		46	
BSR PG1.87	Service delivery patterns	X		46	
BSR PG1.88	Adequacy of and access to care	X		46	
BSR PG1.89	Quality of care	X		46	
Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PG1.90	Outcomes assessment	X		46	
BSR PG1.91	Disease management	X		46	
BSR PG1.92	External reporting	X		46	
BSR PG1.93	Public information		X	46	
BSR PG1.94	Managed Care Plan (MCP) planning and analysis.	X		46	
BSR PG1.95	Ability to allow users the ability, with help screens, to extract data, manipulate the extracted data, and specify the desired format and media of the output.	X		50	
BSR PG1.96	Ability and flexibility for multiple simultaneous users to create and run in near real-time, ad hoc and canned reports without going through a formal change control process.	X		50	
BSR PG1.97	Ability to ensure that data is retained, archived, purged and protected from destruction according to State and Federal requirements and in accordance	X		51	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	with BMS policy.				
MITA 5.6.2 Formulate Budget					
BSR PG1.98	Ability to create a monthly extract of selected claims, Member, Provider and reference data fields and forward it to the data warehouse/DSS for use in financial forecasting. Fields as defined by BMS during DDI.		X	27, 48	
BSR PG1.99	Able to concurrently support budgeting process for multiple fiscal years.		X	27, 49	
BSR PG1.100	Ability to allow users to modify specific budget numbers and not have to change the entire budget.		X	27, 49	
BSR PG1.101	The system has the ability to track the original budget, including amendments made during the year, and distinguish between the two.		X	27, 49	
BSR PG1.102	Ability to provide a budget model or framework for forecasting purposes.	X		27, 48	
BSR PG1.103	Ability to provide budgetary control to control spending based on user-defined criteria.		X	27, 48	
MITA 5.6.3 Generate Financial and Program Analysis/Report					
BSR PG2.1	Provides and maintains encounter data in appropriate claim(s) file.	X		27, 49	
BSR PG2.2	Produces the CMS-416 report in accordance with CMS requirements. The report includes:- The number of children provided child health screening services,- The number of children referred for corrective treatment,- The number of children receiving dental services, and the State's results in attaining goals set for	X		27, 50	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	the state under section 1905(r) of the Act provided according to a State's screening periodicity schedule.				
BSR PG2.3	Produces the CMS-372 Annual reports on Home and Community Based Waiver Reports, for any HCBS Waivers that exist in accordance with CMS requirements.	X		27	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PG2.4	Provides, maintains and updates a database to support MARS extract functions. Updates to the database should occur, at a minimum, monthly.	X		27	
BSR PG2.5	Ability to accommodate reporting across all Medicaid services and Social Service payments regardless of service delivery method and financing mechanism, such as through the use of a master data management system or function.		X	27	
BSR PG2.6	Ability to schedule any report to be run at varying levels of immediacy, frequency, or user-defined condition.	X		27	
BSR PG2.7	Ability to produce all reports as defined by the BMS Master Reports List (see Procurement Library).	X		27	
BSR PG2.8	Ability for BMS authorized users to create ad hoc reports.	X		27	
BSR PG2.9	Ability to report according to current and future HEDIS administrative reporting guidelines.	X		13, 27	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

BSR PG2.10	Provides the ability to report on unduplicated counts such as Members, Providers, and services.	X		13, 27	
BSR PG2.11	Provides the ability to report based on a member enrollment hierarchy established by the BMS.	X		13, 27	
BSR PG2.12	Ability to display to the user the number of pages that are to be printed before the user proceeds with printing a report.	X		13, 27	
BSR PG2.13	Ability to monitor the progress of claims processing activity and provide summary reports which reflect the current status of payments.	X		28	
BSR PG2.14	Ability to present claims processing and payment information that demonstrates compliance with Federal prompt payment rules.	X		28	
BSR PG2.15	Ability to analyze areas of program expenditure to determine relative cost benefit.	X		28	
BSR PG2.16	Ability to analyze the frequency, extent, and type of provider and other claims processing errors.	X		28	
BSR PG2.17	For reporting purposes, assigns to all claim line details line categories and subline categories that correspond to the CMS 64.	X		28	
BSR PG2.18	Ability to analyze provider claim filing for timeliness, fiscal controls and ranking.	X		28	
Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR	Maintains comprehensive list of	X		34 to 39	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

PG2.19	standard reports and their intended use (business area supported).				
BSR PG2.20	Maintains a list of users of each standard report.	X		34 to 39	
BSR PG2.21	Retains and maintains access to reports for the period of time specified by the BMS report owner.	X		34 to 39	
BSR PG2.22	Ability to provide staff with access to reports on changes and modifications made to benefit plans and/or related components by beginning and end dates.	X		34 to 39	
BSR PG2.23	Ability to generate reports on service limitations and exclusions for each benefit plan and/or related component.	X		34 to 39	
BSR PG2.24	Ability to generate expenditure, eligibility and utilization data by benefit plan(s) and/or any of its components to support budget forecasts, monitoring and health care program modeling.	X		34 to 39	
BSR PG2.25	Able to provide a means of obtaining various listings of the Procedure, Diagnosis, and Formulary File.	X		34 to 39	
BSR PG2.26	Provides the Statistical Report on Medical Care: Eligibles, Members, Payments and Services (Form CMS-2082).	X		34 to 39	
MITA 5.1.2 Manage Rate Setting					
BSR PG3.1	Ability to compare encounter data claims and capitation fees vs. fee-for-service payment data to determine best utilization and payment scenarios.	X		34 to 39	
BSR PG3.2	Is able to incorporate the Medicare fee schedule into rate calculations and comparisons	X		34 to 39	
BSR PG3.3	Is able to compute rates for rate-based reimbursement based on	X		34 to 39	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	user-defined calculations.				
BSR PG3.4	Ability to calculate rates for any rate-setting methodology based on a constraint of budget neutrality.	X		34 to 39	
BSR PG3.5	Ability to test rates against previously paid claims to support analysis activities such as impact analysis or fair market rate analysis.		X	34 to 39	
BSR PG3.6	Ability to utilize multiple rate-setting methodologies for long-term care facilities (i.e., NF and ICF-MR, short-term and long-term stay, traditional Medicaid and selective contracting).		X	34 to 39	
MITA 5.3.2 Formulate Budget					
Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PG4.1	Provides a budget data repository (budget module) organized to support budgetary functions (e.g., financial forecasting, tracking, reporting, development) and populated with the data necessary to perform those functions.		X	34 to 39	
BSR PG4.2	The system's budget module is to minimally be populated with the following data:				
BSR PG4.3	State agency (i.e., the agency that has or is to make the payment)		X	34 to 39	
BSR PG4.4	Date of service		X	34 to 39	
BSR PG4.5	Date of payment		X	34 to 39	
BSR PG4.6	Paid Amount		X	34 to 39	
BSR	Provider type		X	34 to 39	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

PG4.7					
BSR PG4.8	Category of service		X	34 to 39	
BSR PG4.9	Geographical location		X	34 to 39	
BSR PG4.10	Eligibility groups (including waiver programs)		X	34 to 39	
BSR PG4.11	Age (according to cohorts defined by the State)		X	34 to 39	
BSR PG4.12	Other as defined by BMS during DDI		X	34 to 39	
BSR PG4.13	Is able to automatically update data in the budget module on a monthly basis, and is capable of performing updates according to any other schedule established by BMS and upon demand.	X		34 to 39	
BSR PG4.14	Is able to forecast expenditure estimates based on actual claim data.	X		34 to 39	
BSR PG4.15	Ability to export budget data to Microsoft Excel.	X		34 to 39	
BSR PG4.16	Ability to import budget data from Microsoft Excel.	X		34 to 39	
BSR PG4.17	Ability to provide a customizable Microsoft Excel export.	X		34 to 39	
BSR PG4.18	Ability to add attachments at the detail level of the budget such as Microsoft Word, Microsoft Excel, and Adobe PDF documents.	X		34 to 39	
	Section A.2 - CARE MANAGEMENT				
	MITA 6.1 Manage Medicaid Population Health				
BSR CM1.1	Captures information on contracted MCOs, including geographic locations, capitation rates, and organization type.	X		51	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

Req #	Description of Requirement	YES Without Customi zation	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR CM1.2	Captures information identifying physicians who have agreed to provide gatekeeper services, number of Beneficiaries assigned, and capacity to accept additional patients.	X		51	
BSR CM1.3	Accepts and processes update information as changes are reported.	X		51	
BSR CM1.4	Captures termination information when an MCO contract is canceled.	X		51	
BSR CM1.5	Provides information to support assessment of adequacy of provider network. This includes identifying and collecting data on the number and types of providers and provider locations.	X		51	
BSR CM1.6	Provides information to support review of new enrollments and to prohibit affiliations with individuals debarred by Federal Agencies.	X		51	
BSR CM1.7	Accesses and reports on encounter data for the purpose of monitoring appropriateness of care.	X		51	
BSR CM1.8	Accesses and reports on encounter data for use in the determination of re-insurance to calculate true out-of-pocket costs.	X		51	
BSR CM1.9	Accesses and reports on encounter data for use in profiling MCOs and comparing utilization statistics.	X		51	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

BSR CM1.10	Collects and sorts encounter data for use in completing MSIS reports.	X		51	
BSR CM1.11	Collects and sorts encounter data for use in determining capitation rates.	X		51	
BSR CM1.12	Processes encounter data to detect under-utilization of services by enrollees of the MCO.	X		51	
BSR CM1.13	Compares FFS claims statistics and encounter data, re: cost of care, timeliness of care, quality of care, outcomes.	X		51	
BSR CM1.14	Accesses encounter data to identify persons with special health care needs, as specified by the State.	X		51	
BSR CM1.15	Is able to produce managed care program reports by category of service, category of eligibility, and by provider type.	X		51	
BSR CM1.16	Generates reports of capitation payment by various categories (e.g., by eligibility group, rate cell, etc.).	X		51	
BSR CM1.17	Generates fee-for-service (FFS) claims reporting for services furnished outside of a capitation agreement (i.e., for services "carved-out" of the managed care program).		X	51	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR CM1.18	Collects basic administrative information, for instance: - the identification of an MCO - contract start and end dates - contract period/year - capitation effective date	X		51	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	maximum enrollment threshold - enrollee count - member month - re-insurance threshold				
BSR CM1.19	Identifies Beneficiaries who are eligible for a State’s Medicaid program by qualifying under a Section 1115 waiver eligibility expansion group. Distinguishes the “1115 expansion eligibles” from other groups of Medicaid-eligibles. (Currently WV does not have 1115 Waivers)		X	51	
BSR CM1.20	Collects and maintains the data necessary to support the budget neutrality reporting requirements as specified in the State’s 1115 Waiver (including the ability to identify those Beneficiaries who would be ineligible for Medicaid in the absence of the State’s 1115 Waiver). (Currently WV does not have 1115 Waivers)		X	51	
BSR CM1.21	Gathers data and produces a variety of financial reports to facilitate cost reporting and financial monitoring of waiver programs.	X		51	
BSR CM1.22	Gathers data and produces utilization reports for monitoring cost neutrality of waiver services to a target population. The average cost of waiver services cannot be more than the cost of alternative institutional care. State may define average either in aggregate or for each participant.	X		51	
BSR CM1.23	Accesses individual Beneficiary claims and/or encounter histories to extract data needed to produce annual report to	X		50	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	CMS on cost neutrality and amount of services.				
BSR CM1.24	Collects and stores data needed to produce reports consistent with data collection plan to assess quality and appropriateness of care furnished to participants of the waiver program.	X		51	
BSR CM1.25	Monitors provider capacity and capabilities to provide waiver services to enrolled participants.	X		51	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR CM1.26	Ability to use MMIS data to support population health analyses.	X		52	
BSR CM1.27	Ability to receive population health data from various external entities. Data should include:				
BSR CM1.28	Census data		X	52	
BSR CM1.29	Vital statistics		X	52	
BSR CM1.30	Immigration data		X	52	
BSR CM1.31	Public health data		X	52	
BSR CM1.32	Other as defined by BMS during DDI		X	52	
BSR CM1.33	Ability to analyze population health data to support the development of health improvement communication materials, including the following:			52	
BSR CM1.34	Campaigns to enroll new members in existing programs		X	52	
BSR CM1.35	New program areas, services, etc.		X	52	
BSR	Updated benefits/reference		X	52	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

CM1.36	information				
BSR CM1.37	Other as defined by BMS during DDI		X	52	
BSR CM1.38	Ability to track and maintain detail for population health initiatives, including:			52	
BSR CM1.39	Originator/source of inquiry		X	52	
BSR CM1.40	Data source/s used		X	52	
BSR CM1.41	Strategy (or strategies) developed in response to data analysis		X	52	
BSR CM1.42	Changes to benefits		X	52	
BSR CM1.43	Changes to reference data		X	52	
BSR CM1.44	Record of communication materials		X	52	
BSR CM1.45	Time period/case schedule of review		X	52	
BSR CM1.46	Other as defined by BMS during DDI		X	52	
BSR CM1.47	Ability to identify FFS claims covered under MCO benefit enrollees.		X	52	
	Section A.3 - PROGRAM INTEGRITY MANAGEMENT				
	MITA 7.1 Identify Candidate Case				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
BSR PI1.1	Produces comprehensive statistical profiles of provider health care practices by peer groups for all categories of service(s) authorized under the Medicaid program (CMS).	X		25	
BSR PI1.2	Automatically identifies deficiencies and generates reports on levels of care and quality of care by provider type (CMS).	X		25	
BSR PI1.3	Automatically reports on the details of the practice of providers identified as exceptions or outliers (CMS).	X		25	
BSR PI1.4	Provides the capability to profile provider groups and individual providers within group practices (CMS).	X		25	
BSR PI1.5	Automatically identifies exceptions to norms of practice established by the agency for any type of provider covered by the State plan (CMS).	X		26	
BSR PI1.6	Displays all data by National Provider Identifier (NPI) or by a subset of the provider's practice (CMS).	X		26	
BSR PI1.7	Performs analysis of rendering, ordering, and billing practices to generate reports of aberrant utilization and/or billing patterns (CMS).	X		26	
BSR PI1.8	Applies clinically approved guidelines against episodes of care to identify instances of treatment inconsistent with guidelines (CMS).	X		26	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

BSR PI1.9	Generates early warning reports of high-cost services and service misutilization based on current payment data to quickly identify high volume practices (CMS).	X		26	
BSR PI1.10	Automatically identifies exceptions to norms of utilization or quality of care standards established by the agency for any type of Beneficiary covered by the State plan (CMS).	X		26	
BSR PI1.11	Tracks Federally-assisted program participants separately from other categories of assistance (CMS).	X		26	
BSR PI1.12	Identifies Beneficiaries who exceed program norms, ranked in order of severity (CMS).	X		26	
BSR PI1.13	Identifies services received by Beneficiaries who are enrolled in selected programs (CMS).			26	
BSR PI1.14	Identifies services received by Beneficiaries who have specified diagnoses (CMS).	X		26	
BSR PI1.15	Links all services to a single Beneficiary regardless of the number of historical changes in Beneficiary ID (CMS).	X		26	
BSR PI1.16	Profiles all services provided to a Beneficiary during a single episode of care (CMS).	X		26	
BSR PI1.17	Has the capability to generate reports of individual Beneficiaries by peer group (CMS).	X		26	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
BSR PI1.18	Utilizes a minimum level of manual clerical effort in providing information that reveals potential defects in level of care and quality of service (CMS).	X		26	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

BSR PI1.19	Provides ability to perform analyses and produce reports responsive to requests from title XIX managers, QIO and State Medicaid fraud control units by means of computerized exception processing techniques (CMS).	X		26	
BSR PI1.20	Selects claims and encounter data dating back to whatever time period is appropriate for the specific research (CMS).	X		26	
BSR PI1.21	Supports the capability to produce claim and encounter detail and special reports by provider-type and Beneficiary classification (e.g., category of service—COS) and other key variables (e.g., Group Practice, Case) (CMS).	X		26	
BSR PI1.22	Supports capability to perform focused review and to generate reports of all reviews undertaken (CMS).	X		26	
BSR PI1.23	Has the capability to suppress processing on an individual within specified categories on a run-to-run basis (CMS).	X		26	
BSR PI1.24	Provides access to all data elements outlined in the SMM Part 11, section 11335 and all additional data required for appropriate analysis of the program (CMS).	X		26	
BSR PI1.25	Generates reports as needed (CMS).	X		26	
BSR PI1.26	Facilitates export of claims-based class groupings such that data can be used by spreadsheet or database software (CMS).	X		26	
BSR PI1.27	Supports fraud and abuse investigations (CMS).	X		26	
BSR PI1.28	Supports pattern recognition and provides an automated fraud and abuse profiling system for the ongoing monitoring of provider	X		26	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	and Beneficiary claims to detect patterns of potential fraud, abuse and excessive billing (CMS).				
BSR PI1.29	Provides and stores all utilization reports in the medium designated by the State (CMS).	X		26	
BSR PI1.30	Provides the flexibility to vary time periods for reporting purposes and to produce reports on daily, monthly, quarterly basis, or other frequency specified by the State (CMS).	X		26	
BSR PI1.31	Maintains a process to apply weighting and ranking of exception report items to facilitate identifying the highest deviators (CMS).	X		26	
BSR PI1.32	Provides for development and implementation of technical and user training programs (CMS).	X		26	
Req #	Description of Requirement	YES Without Customi- zation	YES With Customi- zation	Proposal Referenc e #	NO Unable to Provid e
BSR PI1.33	Investigates and reveals misutilization of the state's Medicaid program services by individual participants and promotes corrective action (CMS).	X		26	
BSR PI1.34	Develops provider, physician, and patient profiles sufficient to provide specific information as to the use of covered types of services and items, including prescribed drugs (CMS).	X		26	
BSR PI1.35	Ability to develop Provider and Member profiles sufficient to provide specific information as to the use of covered types of services and items, including prescribed drugs.	X		26	
BSR	Ability to provide standard BMS	X		26	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

PI1.36	and CMS program integrity reports in accordance with BMS reporting standards.				
BSR PI1.37	Ability to provide a mechanism to classify Members into peer groups for the purpose of developing peer group statistical profiles for comparative analysis using criteria such as: 26				
BSR PI1.38	Age	X		26	
BSR PI1.39	Gender	X		26	
BSR PI1.40	Race	X		26	
BSR PI1.41	Geographic region	X		26	
BSR PI1.42	Aid category		X	26	
BSR PI1.43	Special programs code		X	26	
BSR PI1.44	Claims data elements		X	27	
BSR PI1.45	Other as defined by BMS during DDI		X	27	
BSR PI1.46	Ability to suppress (i.e., not generate or print) processing on individuals within a category of service or class group on a run-to-run basis.		X	27	
BSR PI1.47	Ability to provide a mechanism to classify Providers into peer groups for the purpose of developing peer group statistical profiles for comparative analysis using criteria such as:				
BSR PI1.48	Category of service		X	27	
BSR PI1.49	Provider type		X	27	
BSR PI1.50	Specialty		X	27	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
BSR	Type of practice	X		27	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

PI1.51					
BSR PI1.52	Enrollment status	X		27	
BSR PI1.53	Facility type	X		27	
BSR PI1.54	Geographic region	X		27	
BSR PI1.55	Billing versus servicing Provider	X		27	
BSR PI1.56	Number of beds	X		27	
BSR PI1.57	Claim data elements	X		27	
BSR PI1.58	Provider Ownership	X		27	
BSR PI1.59	Referring Provider	X		27	
BSR PI1.60	Other as defined by BMS during DDI			27	
BSR PI1.61	Ability to develop Provider and Member profiles sufficient to provide specific information as to the use of covered types of services and items, including prescribed drugs.	X		25-27	
BSR PI1.62	Ability to provide a mechanism to classify treatment for the purpose of developing statistical profiles by diagnosis codes or range.	X		25 - 27	
BSR PI1.63	Ability to provide information which reveals and facilitates investigation of potential defects in the level of care and quality of service provided under the Medicaid program.	X		25 - 27	
BSR PI1.64	Ability to track hospital readmissions for Members readmitted to the same or different hospitals.	X		25 - 27	
BSR PI1.65	Ability to interface with the claims processing system.	X		25 - 27	
BSR PI1.66	Ability to maintain appropriate controls and audit trails to ensure	X		25 - 27	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	that the most current SUR data is used in all processes relying on the SUR data repository.				
BSR PI1.67	Ability to conduct SUR across all Medicaid services and Social Service payments regardless of service delivery method and financing mechanism.	X		25 - 27	
BSR PI1.68	Ability to provide SUR functions, produce management summary reports and to edit control file for inactive service codes, including procedure and revenue codes.	X		25 - 27	
BSR PI1.69	Ability to generate statistical profiles for capitated plans, including the distinct profiling of Members associated with the capitated arrangement(s).	X		25 to 27	
BSR PI1.70	Ability to maintain random sampling techniques to extract data to support Provider audits, Member utilization analysis, and recoupment of funds.		X	25 to 27	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PI1.71	Ability to perform analysis of service and billing practices to detect utilization and billing problems to include but not be limited to:				
BSR PI1.72	Incidental procedures	X		25 to 27	
BSR PI1.73	Mutually exclusive procedures	X		25 to 27	
BSR PI1.74	Unbundling of procedure codes	X		25 to 27	
BSR PI1.75	Bill splitting	X		25 to 27	
BSR PI1.76	Ability to create random sample reports that include appropriate universe and sample totals to	X		25 to 27	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	support analysis at varying levels of confidence.				
BSR PI1.77	Ability to maintain a date driven parameter control file, with online real-time edit and update capability, which allows BMS staff to specify criteria, such as:				
BSR PI1.78	Data extraction criteria	X		25 to 27	
BSR PI1.79	Report content	X		25 to 27	
BSR PI1.80	Date parameters	X		25 to 27	
BSR PI1.81	Exception parameters	X		25 to 27	
BSR PI1.82	Weighting factors necessary to properly identify aberrant situations.	X		25 to 27	
BSR PI1.83	Ability to generate frequency distributions and rankings for user-selected report and statistical items.	X		25 to 27	
BSR PI1.84	Ability to review paid claims in order to:				
BSR PI1.85	Ensure that they are paid within BMS policy guidelines, and State and Federal rules		X	25 to 27	
BSR PI1.86	Ensure accuracy	X		25 to 27	
BSR PI1.87	Identify excessive quantities and duplicate billings for the same procedure	X		25 to 27	
BSR PI1.88	Identify excessive use of unlisted procedure codes and appropriateness of the use	X		25 to 27	
BSR PI1.89	Identify claims paid above their limitation	X		25 to 27	
BSR PI1.90	Ability to use historical data to support the following types of investigations:				
BSR PI1.91	Provider utilization review	X		25 to 27	
BSR PI1.92	Provider compliance review	X		25 to 27	
BSR PI1.93	Member utilization review	X		25 to 27	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
BSR PI1.94	Drug utilization review	X		25 to 27	
BSR PI1.95	Other as defined by BMS during DDI		X	25 to 27	
	Section B - Technical Requirements				
	Section B.1 - Infrastructure				
	Environments				
TEC IF1.1	The Vendor implements and supports the following deployment and support environments: Production, Unit Test, Development, UAT, Training, Failover, Backup/Recovery, and Disaster Recovery.	X		94	
TEC IF1.2	All environments have a similar look and feel.		X	94	
TEC IF1.3	The Vendor provides a production environment that is used to deploy the DW/DSS production solution.	X		94	
TEC IF1.4	The production environment is capable of supporting BMS's current production capabilities with the ability to expand in order to support the technical and business requirements in this RFP.		X	94	
TEC IF1.5	The production environment has the capacity to support data acquisition, data access, and data delivery components.	X		94	
TEC IF1.6	The Vendor provides a unit test environment used to perform full-scale system integration testing for the integrated DW/DSS solution.	X		94	
TEC	The unit test environment mirrors	X		94	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

IF1.7	production in hardware, software stack and data volumes.				
TEC IF.8	The unit test environment exists for data acquisition.	X		94	
TEC IF 1.9	The unit test environment exists for data access.	X		94	
TEC IF1.10	The unit test environment exists for data delivery.	X		94	
TEC IF1.11	The unit test environment has the ability to handle scheduled or on demand requests to refresh the data from the production environment with a full or referentially intact subset of data.	X		94	
TEC IF1.12	The unit test environment handles requests for data refresh from production within two (2) business days.	X		94	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC IF1.13	The Vendor provides a development environment used to develop and unit test all software contained within the integrated DW/DSS solution.	X		104	
TEC IF1.14	The development environment has the capacity to support the data acquisition component.	X		104	
TEC IF1.15	The development environment has the capacity to support the data access component.	X		104	
TEC IF1.16	The development environment has the capacity to support the data delivery component.	X		104	
TEC IF1.17	The development environment has the ability to handle scheduled or on demand requests to refresh data with a referentially intact subset of data.	X		104	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC IF1.18	The development environment handles requests for data refresh in a timely manner.	X		104	
TEC IF1.19	The Vendor provides a UAT environment used by BMS to test the applications and data provided within the integrated DW/DSS solution.		X	104	
TEC IF1.20	The UAT environment has the capacity to support the data acquisition component.	X		104	
TEC IF1.21	The UAT environment has the capacity to support the data access component.	X		104	
TEC IF1.22	The UAT environment has the capacity to support the data delivery component.	X		104	
TEC IF1.23	The UAT environment has the ability to handle scheduled or on demand requests to refresh data with a referentially intact subset of data.	X		104	
TEC IF1.24	The UAT environment handles requests for data refresh in a timely manner.	X		104	
TEC IF1.25	The Vendor provides a training environment used to support user training of applications within the integrated DW/DSS solution.	X		94	
TEC IF1.26	The training environment has the capacity to support the data access component.	X		94	
TEC IF1.27	The training environment has the capacity to support the data delivery component.	X		94	
TEC IF1.28	The training environment has the ability to handle scheduled or on demand requests to refresh data with a referentially intact subset of data that contains a representative set of data required for the training classes.	X		95	
TEC	The training environment handles	X		95	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

IF1.29	requests for data refresh in a timely manner.				
TEC IF1.30	The Vendor provides a failover environment user to support business continuity failover requirements.		X	95	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC IF1.31	The Vendor provides a backup/recovery environment used to support business continuity backup/recovery capabilities.	X		95	
TEC IF1.32	The Vendor provides a disaster recovery environment used to support business continuity disaster recovery capabilities.	X		95	
Hardware/OS Component					
TEC IF2.1	The Vendor provides a site that fully supports all physical needs of the WV DW/DSS system, to include hardware, electrical, cabling, location at data center, and all other physical needs of the system.	X		30	
TEC IF2.2	The Vendor provides BMS with an inventory of all DW/DSS hardware and software.	X		30	
TEC IF2.3	The Vendor coordinates delivery, installation, repair and maintenance of hardware, including all updates and patches.	X		30	
TEC IF2.4	Storage of data takes place on an open storage platform.	X		30	
TEC IF2.5	Processing of data takes place on an open server platform.	X		30	
TEC IF2.6	Server and storage hardware used have a proven ability to support the processor, memory, I/O subsystem bandwidth and storage.	X		30	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC IF2.7	Server and storage hardware have the capability to handle the capacities in the RFP.	X		30	
TEC IF2.8	Server and storage hardware have the capability to handle a highly varied workload.	X		30	
TEC IF2.9	Component hardware supporting the data acquisition platform includes a proven record of efficiency for computationally intensive operations.	X		30	
TEC IF2.10	Component hardware supporting the DW/DSS database structures supports a large number of parallel threads, which are less computationally intensive and more memory intensive.	X		30	
TEC IF2.11	Bandwidth between data acquisition and DW/DSS database servers supports fast refreshes of the DW/DSS database with minimal disruption.	X		31	
TEC IF2.12	Components to be installed on the desktops by Vendor are compatible with BMS currently supported versions of Microsoft Operations Systems, Microsoft Office Suite and Internet Explorer (IE 7 or greater).		X	31	
TEC IF2.13	Vendor's client desktop software updates and works with the then current and future versions of the State's desktop operating system and internet browser, prior to release.		X	31	
TEC IF2.14	Vendor's Client desktop software works with new desktop operating system patches and upgrades based upon BMS patch management policies.			31	
Req #	Description of Requirement	YES Without	YES With	Proposal Referenc	NO Unable

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

		Customization	Customization	e #	to Provide
TEC IF2.15	Hardware and operating systems are certified with recent major versions of the database management, data acquisition, data access, data delivery, and business continuity software.		X	31	
TEC IF2.16	The Vendor maintains compatibility with hardware and/or software throughout the term of the contract.		X	31	
TEC IF2.17	The Vendor maintains hardware and/or software to meet stated performance and availability requirements and to ensure continued support, at no additional cost to BMS.		X	31	
TEC IF2.18	All hardware purchased for dedicated use by the BMS DW/DSS is new equipment not previously used.	X		31	
Network Component					
TEC IF3.1	The Vendor installs, configures, enhances, and maintains all hardware and software and provides services for the Vendor's LAN up to the point of connection with the BMS WAN/LAN.		X	83	
TEC IF3.2	The Vendor installs and maintains data lines for required access to the BMS network from the Vendor's project site.		X	83	
TEC IF3.3	The Vendor terminates lines from the project site to the BMS network at the point of demarcation on the BMS network.		X	83	
TEC IF3.4	The Vendor provides back-up network connectivity.	X		83	
TEC IF3.5	The Vendor allows State staff access into the facilities.	X		83	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC IF3.6	The Vendor provides network support for the DW/DSS that handles:				
TEC IF3.7	60 users	X		83	
TEC IF3.8	30 users accessing the system concurrently	X		83	
TEC IF3.9	10% growth per year in the total number of users and concurrent users.	X		83	
TEC IF3.10	The Vendor establishes agreements with telecommunications network Vendors to install secure data lines to its data center.	X		83	
TEC IF3.11	The Vendor provides and maintains:				
TEC IF3.12	Servers;	X		83	
TEC IF3.13	Switches;	X		83	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC IF3.14	Hardware;	X		83	
TEC IF3.15	Racks for mounting hardware;	X		83	
TEC IF3.16	Power cabling inside of racks;	X		83	
TEC IF3.17	Keyboard, video and mouse (KVM) switches and/or terminal servers for access to server consoles;	X		83	
TEC IF3.18	Monitors for KVM switches;	X		84	
TEC IF3.19	Applications/web pages/secure socket layer devices to support https; and	X		84	
TEC IF3.20	Encrypted network connections.	X		84	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC IF3.22	The Vendor submits to BMS, prior to installation, plans for all connections to the network, which are reviewed and approved by BMS, DHHR MIS and WV Office of Technology.	X		84	
TEC IF3.23	The Vendor ensures that BMS or any authorized third-party is able to directly access the network and any equipment located in the Vendor's data center.	X		84	
TEC IF3.24	The Vendor ensures that the Vendor, BMS staff, and any authorized third-party have remote access capability to access any of the DW/DSS environments.	X		84	
TEC IF3.25	The Vendor puts in place a firewall and proxies between its private network and the connection to the State's network.	X		84	
TEC IF3.26	The Vendor assigns and configures addresses to support the ever-changing PC and printer environments.		X	84	
TEC IF3.27	The Vendor develops software as needed to support new telecommunication features, configurations and devices.		X	84	
TEC IF3.28	The Vendor provides operations staff to assist with correcting problems associated with telecommunications hardware or software.	X		84	
TEC IF3.29	The Vendor tests and troubleshoots interfaces with other Vendors for information exchange.	X		84	
	Software Component				
TEC IF4.1	The Vendor reviews, configures, generates, customizes, installs and maintains operations system software, network software, tool software, and other system software in all environments of the	X		84	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	DW/DSS.				
TEC IF4.2	The Vendor diagnoses problems related to the software.	X		84	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC IF4.3	The Vendor manages versions, acquires associated software patches and fixes, applies fixes and tests all applied fixes.	X		84	
TEC IF4.4	The Vendor develops and maintains relationships with software Vendors to keep up-to-date on new products.	X		84	
TEC IF4.5	The Vendor assists with analysis of BMS requests for new software for appropriateness to the overall architecture.	X		84	
TEC IF4.6	The Vendor develops and maintains an inventory of software including active versions, licensing requirements, and interdependencies to assist with overall management of software upgrades.	X		84	
TEC IF4.7	The Vendor develops and implements standards for software installation such as data set names, architecture and volume names to streamline installation and maintenance of software.	X		84	
TEC IF4.8	The Vendor manages scheduling of operating system upgrades to accommodate processing schedules and system availability needs of BMS.	X		84	
Database Management Component					
TEC IF5.1	The Vendor provides a Database Management System component and support services that meet the following requirements:				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC IF5.2	Supports efficient access and management for data;	X		84	
TEC IF5.3	Supports efficient storage and provides features to enable consistent data access benchmark queries for data volumes sufficient to manage the volume based on the system description put forth in this RFP and documentation provided in the Procurement Library;	X		84	
TEC IF5.4	Runs on open systems platforms;	X		84	
TEC IF5.5	Includes advanced technology critical to high performance in a large data warehouse environment such as high speed load utilities, high performing sort capabilities, efficient summary management features, and advanced indexing;	X		85	
TEC IF5.6	Affords open client access application program interfaces (APIs) including Java based, open database connectivity (ODBC) and native drivers;	X		85	
TEC IF5.7	Has tight affinity and a significant installed base with data acquisition, data access and data delivery components;	X		85	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC IF5.8	Possesses a significant installed base and efficient support for chosen application servers;	X		85	
TEC IF5.9	Employs a system which provides support for XML;	X		85	
TEC IF5.10	Supports physical database administration;	X		85	
TEC IF5.11	Maintains all databases used in the proposed solution including	X		85	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	installation, configuration, upgrades and patch, fixes; and				
TEC IF5.12	Provides day-to-day database operational support, including:				
TEC IF5.13	Problem/issue identification and resolution;	X		85	
TEC IF5.14	Definition and activation of new environments; and	X		85	
TEC IF5.15	Monitor and tune to ensure that all environments operate efficiently, and that data quality and validation is ensured.	X		85	
	Section B.2 - Data Acquisition				
	ETL				
TEC AQ1.1	The Vendor provides a DW/DSS ETL data acquisition component that:				
TEC AQ1.2	Is a mature, intuitive, easy-to-use COTS repository-based tool that addresses the requirements in this RFP;	X		77	
TEC AQ1.3	Performs a one-time load of data from sources outlined in the Procurement Library for each development environment indicated using the proposed ETL tool;	X		77	
TEC AQ1.4	Performs a timely refresh of data from sources outlined in the Procurement Library for each development phase indicated using the proposed ETL tool;	X		77	
TEC AQ1.5	Supports the population of summarized, aggregated structures based on detail data changes in the timeframe of the detail refresh window using both set-based and procedural constructs using the proposed ETL tool;	X		78	
TEC AQ1.6	Supports the population of internal analytic applications that are specifically required or proposed as	X		78	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	part of the solution;				
TEC AQ1.7	Supports the ability for multiple developers to work on the project concurrently;	X		78	
TEC AQ1.8	Supports ease in promotion of code from one environment to another;	X		78	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AQ1.9	Provides the capability to perform high-speed movement of data between source and target systems located on the network;	X		78	
TEC AQ1.10	Provides the capability to efficiently acquire, transform, and load very large data volumes to obtain the current volume of source data;	X		78	
TEC AQ1.11	Provides a development environment with the capability to quickly build and deploy new source/target combinations within the DW/DSS;	X		78	
TEC AQ1.12	Supports automated impact analysis capabilities against the ETL code base;	X		78	
TEC AQ1.13	Supports the versioning of ETL modules;	X		78	
TEC AQ1.14	Provides the capability to create ETL functions using pre-packaged transformation objects;	X		78	
TEC AQ1.15	Provides the capability to design, develop and implement reusable ETL processes for transformation, exception/error handling, audit and control, and balancing;	X		78	
TEC AQ1.16	Supports the ability to enter documentation from system level down to individual code line and includes a run-time debugger; and	X		78	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC AQ1.17	Provides automatic and manual control of caching to balance quick response with scalability.	X		78	
TEC AQ1.18	The ETL tool has extraction functionalities that:				
TEC AQ1.19	Provide service to deliver transparent, cross-platform access to remote data sources;	X		78	
TEC AQ1.20	Support the receipt of data from a variety of source systems and formats of source data;	X		78	
TEC AQ1.21	Efficiently process varying arrays and repeating groups; and	X		78	
TEC AQ1.22	Provide the capability to efficiently unload/select or filter data from source systems including the application of remote filters against the source.	X		78	
TEC AQ1.23	The ETL tool has cleansing/standardization functionalities that:	X		78	
TEC AQ1.24	Include data cleansing procedures that are the result of the identification of data quality issues discovered in the source systems that feed the DW/DSS and the internal analytic applications;	X		78	
TEC AQ1.25	Perform both set-based and procedural cleansing routines based on the data quality objectives identified;	X		78	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
TEC AQ1.26	Efficiently integrate third-party data cleaning tool(s) within the natural flow of the ETL process; and	X		78	
TEC AQ1.27	Perform address and name cleansing routines.	X		78	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC AQ1.28	The ETL tool has transformation functionalities that:				
TEC AQ1.29	Provide the capability to apply complex data mapping and domain value conversions against source data;	X		78	
TEC AQ1.30	Provide the capability to perform structural transformations against source data including summarization, partitioning, normalization, consolidation, filtering, derivation and other structural transformations;	X		79	
TEC AQ1.31	Provide geocoding capabilities for subject area addresses via tool or third-party plug-in;	X		79	
TEC AQ1.32	Provide fast, flexible lookup capabilities; and	X		79	
TEC AQ1.33	Provide a development environment in which logic for type 1, type 2, and type 3 slowly changing dimensions can be quickly and accurately written.	X		79	
TEC AQ1.34	The ETL tool has loading functionalities that:				
TEC AQ1.35	Provide the capability to perform high-speed movement of data between source and target systems located on the network; and	X		79	
TEC AQ1.36	Provide the capability to efficiently load very large data volumes.	X		79	
TEC AQ1.37	The ETL tool has overall process control functionalities that:				
TEC AQ1.38	Provide the capability to schedule and monitor transformation jobs/sessions that are used to populate DW/DSS internal analytic applications;	X		79	
TEC AQ1.39	Provide the capability to create complex job streams with interdependencies, create complex job schedules that have both serial and parallel streams, initiate jobs	X		79	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	based on time or occurrence of events, and create log files that are detailed enough to debug issues;				
TEC AQ1.40	Provide audit and control procedures that balance elements that are both additive and non-additive used to compare the data populated in the source systems to the target DW/DSS and from the source DW/DSS to any data marts;	X		79	
TEC AQ1.41	Provide the capability to re-route error or exception records to a separate target for future interrogation;	X		79	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AQ1.42	Provide the ability to correct data and subsequently re-submit corrected data to the ETL process;	X		79	
TEC AQ1.43	Provide reporting of results of an ETL session, including automatic notification of normal processing and failures of the ETL process, description and counts of exceptions;	X		79	
TEC AQ1.44	Supports the ability to generate and manage notifications and alerts, including how the alerts are registered, logged, and to whom they are posted;	X		79	
TEC AQ1.45	Supports the ability to tune ETL process steps;	X		79	
TEC AQ1.46	Supports the ability to load-balance ETL jobs or process steps; and	X		79	
TEC AQ1.47	Supports the ability to recover from the abnormal ending of a job and restart or rollback.	X		79	
TEC AQ1.48	The ETL tool has metadata functionalities that:				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC AQ1.49	Support the generation, storage, searching, reporting, importing, exporting and documentation of ETL generated metadata including:				
TEC AQ1.50	Source definitions;	X		79	
TEC AQ1.51	Mappings;	X		79	
TEC AQ1.52	Transformations;	X		79	
TEC AQ1.53	Target definitions;	X		80	
TEC AQ1.54	Data lineage;	X		80	
TEC AQ1.55	Data dependency analysis;	X		80	
TEC AQ1.56	Process flows; and	X		80	
TEC AQ1.57	Operational statistics.	X		80	
TEC AQ1.58	Stores its metadata in an open, accessible format including an open application program interface (API) which allows ease of acceptance and transport of metadata from modeling tools and to user tools.	X		80	
TEC AQ2.0	Data Quality Process				
TEC AQ2.1	The Vendor provides a tool that supplies data profiling capabilities that obtain comprehensive and accurate information about the content, quality and structure of data in the source systems as an on-going process.	X		80	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AQ2.2	The Vendor provides a tool that provides the data profiling metrics such as completeness, consistency,	X		80	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	conformity, integrity, duplication and accuracy in easy-to-understand reports, charts, graphs, etc.				
TEC AQ2.3	The Vendor provides a tool that continually monitors the data quality within the DW/DSS and internal analytic applications;	X		80	
TEC AQ2.4	The Vendor provides a tool that includes audit and control processes that identify, report, and summarize errors/defects in the data residing in the DW/DSS and the internal analytic applications.	X		80	
TEC AQ2.5	The Vendor provides a tool that includes error/exception handling processes that identify/isolate the errant data.	X		80	
TEC AQ2.6	The Vendor provides a tool that includes audit and control processes that prove that the target DW/DSS and internal analytic applications were populated accurately and completely, to include old claim data.	X		80	
	Section B.3 - Data Access				
TEC AC1.0	Web Portal				
TEC AC1.1	The Vendor provides a web portal access component to the DW/DSS that:				
TEC AC1.2	Supports the seamless integration of data warehouse components providing a central access point for the user to all DW/DSS data access and data delivery functionality;	X		70	
TEC AC1.3	Is compatible with the Vendor's proposed data access and data delivery components;	X		70	
TEC AC1.4	Supports the current levels of usage of:				
TEC AC1.5	60 active users;	X		70	
TEC	30 concurrent users; and	X		70	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

AC1.6					
TEC AC1.7	A yearly growth rate of 10% in active and concurrent users.	X		70	
TEC AC1.8	Is integrated into the proposed monitoring system in order to quantify and qualify uptime, accessibility, and monitoring of system logs for preventative purposes;	X		74	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AC1.10	Satisfies the Priority 1 Checkpoints from the Web Content Accessibility Guidelines 1.0 developed by the World Wide Web Consortium (W3C).	X		70	
TEC AC1.11	Conforms to any State standards regarding the look and feel of the web.	X		70	
	Business Intelligence				
TEC AC2.0	General				
TEC AC2.1	The Vendor provides a mature, intuitive, easy-to-use Web-based COTS tool that addresses the data access requirements in this RFP with one comprehensive tool suite.	X		71	
TEC AC2.2	The Vendor provides a DW/DSS that supports the current levels of usage of:				
TEC AC2.3	60 active users;	X		70	
TEC AC2.4	30 concurrent users; and	X		70	
TEC AC2.5	A yearly growth rate of 10% in active and concurrent users.	X		70	
TEC AC2.7	The Vendor provides a data access component that continues to create reports for common and repeated	X		71	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	needs over the lifetime of this contract.				
TEC AC2.8	The Vendor maintains a library of reports organized in a manner that facilitates the use and secure access of these reports.	X		73	
TEC AC2.9	The Vendor provides a secure interface path to data accessed via this toolset.	X		73	
TEC AC2.10	The Vendor provides a data access component that includes software that supports the needs of:				
TEC AC2.11	Executive users to execute basic canned queries and canned reports via a dashboard;	X		73	
TEC AC2.12	Power users to develop complex queries executed against the data warehouse using a tool or direct structured query language (SQL) constructs;	X		73	
TEC AC2.13	Casual users to perform simple queries based on point and click technology; and	X		73	
TEC AC2.14	Business analysts to perform simple and moderate queries.	X		73	
TEC AC2.15	The Vendor provides a space that data warehouse users can use to exchange useful queries and reports that can be modified and used by other data warehouse analysts.	X		73	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AC2.16	The Vendor provides a summary level dashboard that is interactive without the need for user programming or extensive training.	X		71/75	
TEC AC2.17	The Vendor provides and administers web-enabled access for external users.	X		71	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC AC2.18	The Vendor provides a suite of high-level and/or general-level reports designed to provide indicators and general trends within and across the Medicaid population to fulfill the executive information system needs.	X		72	
TEC AC2.19	The Vendor provides a data access component that meets performance and availability requirements and that is kept current with upgrades and patches.	X		71	
TEC AC2.20	The Vendor provides a data access component that stores and makes available to BMS the SQL used to create any and all reports regardless of type.	X		71	
TEC AC3.0	Ease of Use				
TEC AC3.1	The Vendor provides a data access component that:				
TEC AC3.2	Provides the capability to allow casual users with limited knowledge of SQL to develop queries through point-and-click functionality;	X		72	
TEC AC3.3	Provides the ability to add measures to or delete measures from any report available and allow the user to develop measures without needing knowledge of SQL or other complex query language and without having to do manual table joins even if the data is stored in multiple tables;	X		72	
TEC AC3.4	Provides a menu of summary level reports, charts, maps and graphs that are available in a view-ready and print-ready format;	X		72	
TEC AC3.5	Provides an application menu that utilizes point-and-click functionality without the need for specific commands; and	X		72	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC AC3.6	Requires minimal training.	X		72	
TEC AC4.0	Sources				
TEC AC4.1	The Vendor provides a data access component that:				
TEC AC4.2	Provides the capability to connect to an industry standard compliant data source (i.e. Open Data Base Connectivity (ODBC))	X		73	
TEC AC4.3	Provides users with the capability to import a list of user-defined values or other driver data to use in order to include or exclude results for query/reporting;	X		73	
TEC AC4.4	Provides the capability to import/save user-defined data that can be used as part	X		73	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
of the filtering criteria against published DW/DSS data;					
TEC AC4.5	Has adaptors for the access of data in external sources in their native form;	X		73	
TEC AC4.6	Provides users with the ability to use data that has been stored in user-defined tables as a parameter that is used to join to the data warehouse to drive queries;	X		73	
TEC AC4.7	Can import a list of user-defined values into the user library;	X		73	
TEC AC4.8	Provides the capability of creating lists including lists of members, provider groups, individual-line servicing providers, procedure codes, and diagnostic codes; and	X		73	
TEC AC4.9	Allows importing of external data into user tables.	X		73	
TEC	Outputs				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

AC5.0					
TEC AC5.1	The Vendor provides a data access component that:				
TEC AC5.2	Supports the creation of delimited or fixed positional format data extracts;	X		115	
TEC AC5.3	Supports the export of data to .xls, .xlsx, .csv, .txt, .doc, .docx, .mdb, .xml, .pdf, .html;	X		115	
TEC AC5.4	Provides users with the ability to select the delimiter to be used in a delimited output data set;	X		115	
TEC AC5.5	Provides the ability to export reports to multiple data sheets within an Excel workbook;	X		115	
TEC AC5.6	Provides the capability to print and print preview query results;	X		115	
TEC AC5.7	Presents data in a variety of outputs;	X		115	
TEC AC5.8	Supports geocoding technology either as an inherent feature or through an interface with geocoding software;	X		115	
TEC AC5.9	Has the integrated capability to graph reports and make the reports presentation-ready without the need to export the data to a third-party software;	X		115	
TEC AC5.10	Delivers reports by fax, email or intranet posting;	X		115	
TEC AC5.11	Provides a library of canned reports that can be accessed and executed by users that have been granted access to the reports;	X		115	
TEC AC5.12	Includes descriptive names for canned reports that are organized within the library in a way that facilitates ease of use;	X		115	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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TEC AC5.13	Contains a library to store query/report multiple control files;	X		115	
TEC AC5.14	Allows the user to store data subsets, lists, user-developed tables, custom reports, and customized norms in user online libraries;	X		115	
TEC AC5.15	Includes mapping software with the capability of GIS functionality;	X		115	
TEC AC5.16	Includes the ability for a user to create large data objects to support complex data analysis;	X		115	
TEC AC5.17	Allows the creation of standard format reports, charts, graphs and GIS displays which are printable on all Vendor BMS supplied local and network printers;	X		115	
TEC AC5.18	Allows the creation of standard format reports, charts, graphs and GIS displays to be transferrable to other applications;	X		116	
TEC AC5.19	Provides the ability to display Medicaid demographic data by type of delivery system on geographical maps at various levels;	X		116	
TEC AC5.20	Provides the ability for BMS-approved users to automatically publish, save and send reports, charts, graphs and other static type documents.	X		116	
TEC AC5.21	Provides the ability to print reports, text, tables, maps and charts/graphs in hard copy form, on all BMS local and network printers.	X		116	
TEC AC6.0	Query				
TEC AC6.1	The Vendor provides a data access component that:				
TEC	Provides the ability to create, save,	X		116	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

AC6.2	modify, publish and share queries;				
TEC AC6.3	Provides pre-defined templates;	X		116	
TEC AC6.4	Supports parameter based queries;	X		116	
TEC AC6.5	Supports query prediction;	X		116	
TEC AC6.6	Supports outer joins, unions, intersections, minus operations of multiple datasets;	X		116	
TEC AC6.7	Supports correlated sub-queries;	X		116	
TEC AC6.8	Supports current American National Standards Institute (ANSI) SQL standards;	X		116	
TEC AC6.9	Supports the capability to hand-code, cut/copy & paste or import SQL;	X		116	
TEC AC6.10	Provides the user the capability to create flexible reporting formats and flexibility in selecting data items to be included in the report;	X		116	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AC6.11	Allows for independent analysis and study by providing drill-down capabilities to the level of individual member, provider, or claim line;	X		116	
TEC AC6.12	Provides the ability for power users who understand the complex data model to create their own dynamic joins between tables;	X		116	
TEC AC6.13	Provides query editing capabilities to support user query development and modification;	X		116	
TEC AC6.14	Provides the capability to sort, filter and find data in query results;	X		116	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC AC6.15	Includes a graphical interface showing table structure, relationships and built-in expression builders or a natural-language interface where the user can type in a question and the system converts the entry into SQL or other code;	X		116	
TEC AC6.16	Provides flexible filtering or "sub-setting" to specify the selection criteria for reports;	X		116	
TEC AC6.17	Provides ready-to-use subsets that are appropriate for Medicaid;	X		116	
TEC AC6.18	Provides a subset that supports complex "and/or" logic;	X		116	
TEC AC6.19	Provides user ability to re-sort or re-group the data returned from a query, without issuing a new query to the database repository; and	X		116	
TEC AC6.20	Provides the ability to perform unduplicated counts, including unduplicated counts of members, providers, claims, claim lines and services.	X		116	
TEC AC7.0	Analysis				
TEC AC7.1	The Vendor provides a data access component that:				
TEC AC7.2	Provides multi-dimensional reporting capabilities that would include slice and dice, drill-down, drill-up, drill across and pivot result;	X		116	
TEC AC7.3	Provides the ability to select measures, dimension, subsets and time period from a menu and apply selections as flexible objects that can be inserted through drag-and-drop technology to make cross-tabular and multi-tabular reports and allow flexible pivoting of rows to columns and vice versa;	X		117	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC AC7.4	Provides pre-defined logical drill paths so the user can move quickly up or down in levels without defining a new query and allow the user to skip levels in the drill path or modify the drill path in real-time;	X		117	
TEC AC7.5	Performs summarization grouping functions;	X		117	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC AC7.6	Supports stratified random sampling with appropriate statistics and generation of random sampling with associated statistics;	X		117	
TEC AC7.7	Provides the capability to build custom formulas and derivations;	X		117	
TEC AC7.8	Supports what-if and reverse analysis;	X		117	
TEC AC7.9	Provides aggregation or summarization rules based on the existing reports and data filters that are pre-defined and static;	X		117	
TEC AC7.10	Provides analytic slicing and drilling capabilities to ensure a fast response;	X		117	
TEC AC7.11	Provides the following summary level information:				
TEC AC7.12	Financial indicators;	X		117	
TEC AC7.13	Eligibility indicators;	X		117	
TEC AC7.14	Utilization indicators; and	X		117	
TEC AC7.15	Access to care indicators.	X		117	
TEC AC7.16	Allows weighting and ranking to be applied in analysis;	X		117	
TEC	Provides linear programming	X		117	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

AC7.17	capabilities;				
TEC AC7.18	Provides predictive modeling capabilities; and	X		117	
TEC AC7.19	Supports random number assignment of members, providers, and stratified random sample with appropriate statistics and generation of a random sample with associated statistics, including national trend data, such as US Census.	X		117	
TEC AC8.0	Presentation				
TEC AC8.1	The Vendor provides a data access component that:				
TEC AC8.2	Allows for online maintenance of reports to include addition, deletion, editing, copying and pasting actions;	X		117	
TEC AC8.3	Integrates data visualization techniques useful for exception reporting;	X		117	
TEC AC8.4	Provides exception highlighting where thresholds have been met and notifies the user when certain user-defined criteria have been met; and	X		117	
TEC AC8.5	Includes a menu with the ability to review reports, graphs, charts and other related documents in multiple formats and levels utilizing latest data.	X		117	
TEC AC9.0	Scheduling				
TEC AC9.1	The Vendor provides a data access component that:				
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
TEC	Accommodates the scheduling of	X		117	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

AC9.2	reports to be run immediately or scheduled in the future, based on time or event trigger; and				
TEC AC9.3	Provides the capability to schedule reports for execution and route the result sets automatically to select addresses through email.	X		117	
TEC AC10.0	Help Functions				
TEC AC10.1	The Vendor provides a data access component that:				
TEC AC10.2	Provides user-friendly online help features including but not limited to:				
TEC AC10.3	How-to examples;	X		117	
TEC AC10.4	A comprehensive index;	X		117	
TEC AC10.5	A comprehensive glossary;		X	117	
TEC AC10.6	User manuals; and		X	117	
TEC AC10.7	Command instructions.	X		117	
TEC AC11.0	Metadata				
TEC AC11.1	The Vendor provides a data access component that:				
TEC AC11.2	Supports an online/contextual help function;			118	
TEC AC11.3	Supports descriptive text and search capabilities for elements, derivations, and reports;	X		118	
TEC AC11.4	Provides the capability to import metadata from the database catalog and other external products;	X		118	
TEC AC11.5	Provides the capability to export metadata to other external products; and	X		118	
TEC AC11.6	Provides an ease of maintenance of metadata updates.	X		118	
TEC AC12.0	Administrative Functions				
TEC	The Vendor provides a data access component that:				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

AC12.1					
TEC AC12.2	Provides the capability to generate alerts when business thresholds have been exceeded;	X		118	
TEC AC12.3	Notifies the user when certain user-defined criteria have been met;		X	118	
TEC AC12.4	Provides detailed alert systems to notify managers of emerging trends, detection of excessive costs, and achievement of goals;		X	118	
TEC AC12.5	Provides the ability to terminate runaway queries;	X		118	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
TEC AC12.6	Provides the capability to version reports and queries;	X		118	
TEC AC12.7	Provides a method to perform impact analysis due to proposed changes;	X		118	
TEC AC12.8	Performs load balancing;	X		118	
TEC AC12.9	Allows for query optimization;	X		118	
TEC AC12.1 0	Provides the ability to index user created tables in user libraries to drive queries;	X		118	
TEC AC12.1 1	Provides space that data warehouse users can use to exchange useful queries and reports that can be modified and used by other data warehouse analysts; and	X		118	
TEC AC12.1 2	Provides an interactive, adjustable time-out feature for inactivity where the user is notified and timed-out after a specified period of inactivity based on BMS policies.	X		118	
TEC AC13.0	Architecture				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC AC13.1	The Vendor provides a data access component that:				
TEC AC13.2	Includes a Web-based browser interface with a seamless integration with the standard ODBC Microsoft Windows operating environment; and	X		118	
TEC AC13.3	Works efficiently in a Web portal environment.	X		118	
TEC AC 13.4	Data has to be accessible using Cognos which is already in use by BMS and DHHR staff.	X		118	
Section B.4 - Data Delivery					
TEC DE1.1	The Vendor provides a data delivery component that:				
TEC DE1.2	Provides a uniform Web-based interface to extract large volumes of data maintained in the DW/DSS based on selection criteria submitted;		X	100	
TEC DE1.3	Provides an integrated, intuitive, and user friendly Web-based portal interface to request and schedule dataset creation and to monitor the status of requests;		X	100	
TEC DE1.4	Maintains the following information related to the requestor:				
TEC DE1.5	Date and time of request;	X		100	
TEC DE1.6	Date and time of initiation of execution;	X		100	
TEC DE1.7	Date and time of completion of execution;	X		100	
TEC DE1.8	Duration of execution;	X		100	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
TEC DE1.9	Volume of data extracted;	X		100	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC DE1.10	Acknowledgement of data extraction;	X		100	
TEC DE1.11	Receipt of data;	X		100	
TEC DE1.12	Data elements requested; and	X		100	
TEC DE1.13	Selection criteria for extraction.	X		100	
TEC DE1.14	Provides the capability to extract the data in a number of formats;	X		100	
TEC DE1.15	Publishes data to a final location destination or to an intermediate location destination where the requestor can then retrieve the data;	X		100	
TEC DE1.16	Provides secure access to this data delivery functionality and to the data elements received;	X		100	
TEC DE1.17	Schedules the data extraction based on time or on the occurrence of events;	X		100	
TEC DE1.18	Provides the administrative functions of:				
TEC DE1.19	Deletion/cleanup of extracted datasets;	X		100	
TEC DE1.20	Monitoring and control of jobs that contain data extraction requests;	X		100	
TEC DE1.21	Creation of automatic alerts sent to operators when errors occur during the process; and	X		100	
TEC DE1.22	Notifications sent to requestor concerning the details of the extract, such as duration of execution, size of extract;	X		101	
TEC DE1.23	Generates administrative reports that detail and summarize the data delivery requests and executions.	X		101	
Section B.5 - Managed Metadata Environment					
TEC MM1.1	The Vendor provides a DW/DSS ETL MME data content component solution that:				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC MM1.2	Provides the ability to capture and synchronize metadata from data mappings, ETL tools and processes, data modeling tools, relational database data dictionaries and catalogs, data quality tools, multiple reporting/query tools, data extraction tools, messaging and transactions, static documentation libraries, external (non DW/DSS sources) and application run-time environments in a timely fashion;		X	75	
TEC MM1.3	Provides the ability to extend and/or customize the capabilities to capture metadata from sources not currently defined or anticipated, but discovered and required in later phases of the project;		X	76	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
TEC MM1.4	Provides an integrated, intuitive, user friendly Web-based portal interface to view and report the metadata;	X		76	
TEC MM1.5	Provides keyword and attribute based search capabilities to locate the required metadata;	X		76	
TEC MM1.6	Provides a central interface that would be used to manage/maintain the MME;	X		76	
TEC MM1.7	Provides an extraction capability to allow metadata to be exported and distributed in open and non-proprietary formats by users;	X		76	
TEC MM1.8	Provides an automated method to extract business metadata into the proposed BI Pull Down reporting tool repository;	X		76	
TEC	Provides a relational database	X		76	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

MM1.9	repository for persistent storage of metadata content (if centralized approach) and for registry (if decentralized approach);				
TEC MM1.1 0	Is able to version the metadata content stored;	X		76	
TEC MM1.1 1	Includes the technical infrastructure to capture, store, and report the various forms of metadata described in the metadata content section and run natively in an open systems environment;	X		76	
TEC MM1.1 2	Maintains a secure interface that would allow users with varying roles the ability to maintain and/or view the metadata that they are authorized to maintain and/or view;		X	76	
TEC MM1.1 3	Accommodates a sufficient volume of metadata content for the proposed solution; and		X	76	
TEC MM1.1 4	Accommodates up to 60 active users, 30 concurrent users and allow for 10 percent growth per year in the total number of users and concurrent users.	X		76	
Section B.6 - Data Model					
TEC DM1.1	The Vendor provides a DW/DSS data model component that is TO be maintained in an open systems modeling tool that has the capability to support:				
TEC DM1.2	Syntax of proposed relational database management system;	X		77	
TEC DM1.3	Import and export of metadata;	X		77	
TEC DM1.4	Logical and physical data models;	X		77	
TEC DM1.5	Version control of logical and physical models;	X		77	
Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

TEC DM1.6	Forward engineering capabilities;	X		77	
TEC DM1.7	Reverse engineering capabilities;	X		77	
TEC DM1.8	Volumetric calculation capabilities;	X		77	
TEC DM1.9	Comparison capabilities for different logical and physical data model versions;	X		77	
TEC DM1.10	Report generation capabilities; and	X		77	
TEC DM1.11	Capability to enforce object naming standards.	X		77	
Section B.7 - Testing System Requirements					
TEC TS1.1	The Vendor should:				
TEC TS1.2	Provide a DW/DSS test system that can be refreshed as requested by BMS. This BMS approval is needed to prevent instances where a refresh may inadvertently wipe out any current testing efforts and results;		X	111	
TEC TS1.3	Provide a test system that mirrors the production system with all current releases, patches and fixes installed for the DW/DSS;		X	111	
TEC TS1.4	Install the same database management tools and utilities for the test system that are installed on the production servers for the DW/DSS;		X	111	
TEC TS1.5	Develop and implement, upon acceptance by BMS, a configuration management system to control the migration of tested hardware and software (system and application) to the production environment;		X	111	
TEC TS1.6	Include access to the UAT test system as an option on the DW/DSS Web portal;	X		111	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC TS1.7	Provide access to the DW/DSS test system to allow for BMS review, testing and acceptance;	X		111	
TEC TS1.8	Provide a test system to support the following activities:				
TEC TS1.9	Production problem research and resolution;	X		111	
TEC TS1.10	Test area to validate software vendor patches and fixes before promoting in production;	X		111	
TEC TS1.11	Test area to validate edits and updates to the following components: Metadata information, user tools and the Web portal;	X		111	
TEC TS1.12	System and user acceptance testing;	X		111	
TEC TS1.13	User area to test new queries and reports prior to execution in production;	X		111	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC TS1.14	Data conversion as needed to seed the DW/DSS; and	X		111	
TEC TS1.15	DW/DSS ETL process;	X		111	
TEC TS1.16	Provide a DW/DSS test system that addresses the functionality provided by the following functions:				
TEC TS1.17	Data Acquisition;	X		111	
TEC TS1.18	Data Delivery;	X		111	
TEC TS1.19	Data Access;	X		111	
TEC TS1.20	Metadata; and	X		112	
TEC TS1.21	Business Continuity;	X		113	
TEC TS1.22	The test system should:				

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC TS1.23	Use the same hardware, operating system (OS), and RDBMS that is being used in production.		X	113	
TEC TS1.24	Have the same make and model of servers (database, application and ETL) to mirror those that are being used in the production data warehouse environment		X	113	
TEC TS1.25	Provide the same database capacity and structure for the test system as is available for the production data warehouse database.		X	113	
Section B.8 - Security Management					
MITA 5.6.1 Manage Program Information					
TEC SP1.1	Contains a data classification schema with data items flagged to link them to a classification category and has an access privilege scheme for each user that limits the user's access to one or more data classification categories.		X	139	
TEC SP1.2	Supports data integrity through system controls for software program changes and promotion to production.	X		139	
TEC SP1.3	Provides the capability that all system activity can be traced to a specific user.	X		139	
Security, Privacy and Confidentiality Plan					
TEC SP2.1	The Vendor:				
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC SP2.2	Delivers a Security, Privacy and Confidentiality Plan within thirty (30) calendar days of contract startup;	X		139	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC SP2.3	Revises the Security, Privacy and Confidentiality Plan annually and submits for BMS review and approval	X		139	
TEC SP2.4	Submits an updated Security, Privacy and Confidentiality Plan to BMS for review and approval thirty (30) business days prior to the start of DW/DSS Operations.	X		139	
TEC SP2.5	The Security Plan is compliant with:				
TEC SP2.6	All policies issued by the OT and found at http://www.technology.wv.gov/about-wvot/Pages/policies-issued-by-the-cto.aspx ;		X	139	
TEC SP2.7	National Institute of Standards and Technology Special Publication 800-53, revision 3, as updated May 1, 2010;	X		139	
TEC SP2.8	Applicable requirements under the Office of the National Coordinator certification criteria for electronic health record technology, and	X		139	
TEC SP2.9	HIPAA Security and Privacy requirements.	X		139	
Data Security					
TEC SP3.1	The Vendor provides a DW/DSS security solution that:				
TEC SP3.2	Permits supervisors or other designated officials to set and modify user security access profiles at a fine grain level.	X		139	
TEC SP3.3	Allows BMS to require user password changes by a specified frequency with user notice prior to expiration.		X	139	
TEC SP3.4	Allows BMS to require strong passwords.	X		139	
TEC SP3.5	Stores passwords in encrypted form.	X		139	
TEC SP3.6	Supports file, record, and field level security.	X		139	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC SP3.7	Provides document security.	X		139	
TEC SP3.8	Permits the system administrator to re-set user passwords.	X		139	
TEC SP3.9	Prohibits display of passwords on the sign-on screen when entered by the user.	X		139	
TEC SP3.10	Allows system lock-out after a specified period of user inactivity.	X		140	
TEC SP3.11	Supports the easy and flexible addition or deletion of user roles.	X		140	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC SP3.12	Makes it easy for Security Administrators to add or remove individuals from established roles.		X	140	
TEC SP3.13	Is able to establish different roles for the metadata database.	X		140	
TEC SP3.14	Prevents unauthorized access and safeguards the confidentiality of person/consumer data in compliance with applicable State and Federal law.	X		140	
Security Audit					
TEC SP4.1	The Vendor provides a DW/DSS security solution that:				
TEC SP4.2	Provides an audit trail of record changes, including user and date of change.	X		140	
TEC SP4.3	Has the ability to implement audit trails to allow information on source documents to be traced through the processing stages to the point where the information is finally recorded.	X		140	
TEC SP4.4	Has the ability to trace data from the final place of recording back to its source of entry.	X		140	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC SP4.5	Tracks user logon and logoffs into the data warehouse system by user identifiers so that a history of valid and non-valid logon requests by user can be available for investigative purposes.	X		140	
Network					
TEC SP5.1	The Vendor provides a DW/DSS security solution that:				
TEC SP5.2	Provides a DW/DSS network infrastructure solution that is self-contained in its own security perimeter		X	140	
TEC SP5.3	Secures the perimeter of the Vendor's network through the use of International Computer Security Association (ICSA) compliant firewalls.	X		140	
TEC SP5.4	Only connects to the State's internal computer network with prior, written consent of the State, which the State reasonably provides if necessary or appropriate for support purposes.		X	140	
TEC SP5.5	Secures the Vendor's own connected systems in a manner consistent with the State's then-current security policies, which the State provides to the Vendor on request.		X	140	
TEC SP5.6	Provides Internet security functionality to include the use of firewalls, intrusion detection, HTTPS, encrypted network/secure socket layer, and security provisioning protocols such as secure sockets layer, and Internet protocol security (IPSEC).		X	140	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

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TEC SP5.7	Includes mechanisms to safeguard data integrity and confidentiality of data passing over public networks.	X		140	
TEC SP5.8	Places firewalls between the private network and the connection to the State's network.	X		140	
TEC SP5.9	Keeps any information passing through networks confidential.	X		140	
TEC SP5.10	Contains measures to mitigate any new network security risks created by connecting the DW/DSS network to a third-party network.	X		140	
TEC SP5.11	Establishes responsibilities and procedures for remote use in compliance with WV requirements.	X		140	
TEC SP5.12	The Vendor's Network Architecture and all proposed network hardware and software are compliant with:			141	
TEC SP5.13	All policies issued by the OT and found at http://www.technology.wv.gov/about-wvot/Pages/policies-issued-by-the-cto.aspx	X		141	
TEC SP5.14	National Institute of Standards and Technology Special Publication 800-53, revision 3, as updated May 1, 2010; and	X		141	
TEC SP5.15	Applicable requirements under the Office of the National Coordinator certification criteria for electronic health record technology.	X		141	
	Application				
TEC SP6.1	The Vendor provides a DW/DSS security solution that:			141	
TEC SP6.2	Applies a consistent security policy across all applications.	X		141	
TEC SP6.3	Ensures all applications are protected.	X		141	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC SP6.4	Provides an easy and consistent mechanism for configuring operational rules and security policies	X		141	
TEC SP6.5	Provides a structure in which applications can be developed without needing to understand the specifics of security implementation.	X		141	
TEC SP6.6	Ensures that all applications comply and are compatible with existing State and		X	141	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
Federal guidelines preventing unauthorized access.					
TEC SP6.7	Employs export and import capabilities that provide user-level security options to control access to sensitive information.	X		141	
Section B.9 - Business Continuity					
Backup/Recovery					
TEC BC1.1	The Vendor backs up all data files and transaction logs that reside on the multiple environments.	X		141	
TEC BC1.2	Any data set or transaction log is restorable from the backup medium within ten hours of the notification that a restoration is needed.	X		142	
TEC BC1.3	The Vendor backs up all databases on a weekly basis.	X		142	
TEC BC1.4	The Vendor stores weekly backups at a secure off-site location approximately 12-15 miles from the primary site.	X		142	
TEC BC1.5	The Vendor provides a backup/recovery component comprised of a high capacity backup and recovery infrastructure	X		142	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

	for all required component data within the data acquisition, data access and data delivery components.				
TEC BC1.6	Secure backups include but are not limited to the following datasets:				
TEC BC1.7	Database data;	X		142	
TEC BC1.8	Files;	X		142	
TEC BC1.9	Operating System Software;	X		142	
TEC BC1.10	RDBMS Software;	X		142	
TEC BC1.11	Documentation;	X		142	
TEC BC1.12	Program Code; and	X		142	
TEC BC1.13	User libraries of reports, queries, etc.	X		142	
TEC BC1.14	Frequency, speed, and flexibility provide the capacity to meet BMS warehouse service levels detailed in this RFP.		X	142	
TEC BC1.15	The Vendor stores all back-up copies in a BMS approved back-up storage location for 3 months.		X	142	
TEC BC1.16	The Vendor covers the cost associated with the back-up storage process and the back- up storage location.	X		142	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC BC1.17	The Vendor turns over all back-ups to the successor Vendor as described in the BMS approved Turnover Plan.	X		142	
TEC BC1.18	The Vendor maintains an onsite copy of the most current backup	X		142	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	version.				
TEC BC1.19	The Vendor develops and maintains an automated scheduling system for running the back-up processes for all environments.	X		142	
TEC BC1.20	The Vendor develops and maintains the process to verify that back-ups were run appropriately.	X		142	
Failover					
TEC BC2.1	The Vendor provides a failover component designed to minimize business outages due to hardware or network malfunctions.	X		142	
TEC BC2.2	The Vendor provides a failover component with immediate failover capability.	X		142	
TEC BC2.3	The Vendor has the capability to switch operations from the production environment to the failover environment.	X		142	
TEC BC2.4	The Vendor establishes a hierarchy of critical services and infrastructure to determine the order that services are restored.	X		142	
Disaster Recovery					
TEC BC3.1	The Vendor has another computer site at a separate location to be designated as the disaster recovery site.	X		142	
TEC BC3.2	The Vendor has in place a Disaster Recovery Plan (DRP) that addresses recovery of data warehouse functions, human resources, and technology infrastructure.	X		142	
TEC BC3.3	The Vendor develops and maintains the DRP.	X		142	
TEC BC3.4	The Vendor ensures the DRP is available and present at the BMS site.	X		142	
TEC BC3.5	The Vendor ensures a copy of the DRP is available at an offsite location approved by BMS.		X	143	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

TEC BC3.6	The Vendor maintains a DRP that provides for the recovery of critical data warehouse services during a service disruption, the declaration of a disaster, or upon a production site becoming unsafe or inoperable.	X		143	
TEC BC3.7	The Vendor maintains a DRP that provides for critical services and then full functionality to be restored according to the recovery point objectives and recovery time objectives as presented in the BMS approved DRP		X	143	
Req #	Description of Requirement	YES Without Customization	YES With Customization	Proposal Reference #	NO Unable to Provide
TEC BC3.8	The Vendor maintains a DRP that details procedures to address the following potential events:				
TEC BC3.9	Natural disasters;	X		143	
TEC BC3.10	Terrorist acts;	X		143	
TEC BC3.11	Power disruptions or power failures;	X		143	
TEC BC3.12	Computer software or hardware failures;	X		143	
TEC BC3.13	Computer shutdowns due to hackers or viruses;	X		143	
TEC BC3.14	Significant compromise/degradation of data warehouse performance;	X		143	
TEC BC3.15	Processing shutdowns; and	X		143	
TEC BC3.16	Labor strife.	X		143	
TEC BC3.17	The Vendor develops, maintains, and submits to BMS, all proposed off-site procedures, locations and protocols, which are reviewed and approved by BMS, DHHR MIS	X		143	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015*West Virginia Department of Health and Human Services**Bureau for Medical Services***DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT**

	and WV Office of Technology.				
TEC BC3.18	The Vendor ensures that each aspect of the DRP is detailed as to both Vendor and BMS responsibilities.	X		143	
TEC BC3.19	The Vendor ensures that each aspect of the DRP satisfies all requirements for Federal certification.	X		143	
TEC BC3.20	The Vendor ensures that the DRP is available to State auditors at all times.	X		143	
TEC BC3.21	The Vendor modifies the DRP and procedures as needed to reflect any changes in disaster recovery capability.	X		143	
TEC BC3.22	The Vendor provides BMS with up-to-date copies of the DRP in an electronic and printed version semi-annually or when substantive changes are made.	X		143	
TEC BC3.23	The Vendor publishes the DRP in the metadata repository.	X		143	
TEC BC3.24	The Vendor executes a test of the DRP as part of Acceptance Testing.	X		143	
TEC BC3.25	The Vendor performs an annual review of the disaster recovery back-up site, procedures for all off-site storage and validation of security procedures.	X		143	
TEC BC3.26	The Vendor submits a report of the annual back-up review annually to BMS.	X		143	
TEC BC3.27	The Vendor provides two independent power sources for the primary site, both capable of sustaining operation of the system and its components, and all environmental controls.	X		143	

RESPONSE TO REQUEST FOR PROPOSALS–Solicitation # RFP MED11015

West Virginia Department of Health and Human Services

Bureau for Medical Services

DATA WAREHOUSE/DECISION SUPPORT SYSTEM PROCUREMENT

Req #	Description of Requirement	YES Without Customi zation	YES With Customizatio n	Proposal Referenc e #	NO Unable to Provid e
TEC BC3.28	The Vendor provides an uninterruptible power source (UPS) at both primary and alternate sites and informs BMS of how long it should support the system.	X		143	
TEC BC3.29	The Vendor provides back-up network connectivity.	X		143	