



mark43

Response to RFP# DPS1700000001:

West Virginia State Police
Records Management System (RMS)

TECHNICAL PROPOSAL – COPY 4 OF 4

Due Date & Time:

Tuesday, September 13, 2016 at 1:00PM

Submitted to:

Department of Administration, Purchasing
Division
Attn: Tara Lyle, Buyer Supervisor
2019 Washington Street East
Charleston, WV 25305
(304) 558-2306

Submitted by:

Mark43, Inc.
Scott Crouch, Co-founder & CEO
28 E. 28th Street, 12th Fl
New York, NY 10016
(212) 651-9154

2016 SEP 13 AM 8:43

WV PURCHASING
DIVISION

TECHNICAL PROPOSAL



September 9, 2016

Department of Administration, Purchasing Division
 Attn: Tara Lyle, Buyer Supervisor
 2019 Washington Street East
 Charleston, WV 25305

To Tara Lyle:

Mark43, Inc. (Tax ID # 46-1256121) is submitting a Technical Proposal in response to RFP# DPS1700000001 seeking a Records Management System (RMS) for the West Virginia State Police. We have reviewed the RFP document including Addenda 1-3 in detail and will be in compliance with the requirements, specifications, terms and conditions set forth in the RFP.

Mark43's Cobalt Platform is the *next generation* of public safety software. Cobalt is a web-based system designed from the ground up with all levels of the police department, from the patrol officer on the street to the command staff, in mind. Our solution has gained rapid industry interest resulting from our use of modern technologies combined with our innovative approaches to software development, functional deployment and all-inclusive support.

My information follows along with other contacts with authority to negotiate and contractually bind Mark43 into a contract with The State of West Virginia:

CONTACT	TITLE	PHONE	EMAIL
SCOTT CROUCH	CEO & Co-Founder	(212) 651-9154	s.crouch@mark43.com
MATT POLEGA	VP of Operations & Co-Founder	(212) 651-9154	matt@mark43.com
DAVID JOCHIM	VP of Deployments	(212) 651-9154	dave@mark43.com

Our team will gladly go on-site to demo our system. Please contact me directly if you have any questions related to our proposed solution.

Thank you for your time and consideration.

Very truly yours,

Matt Polega
 Co-founder and VP of Operations

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Company Background

Qualifications and Experience

Information regarding the company overview- current context, history, year the company was established, type of ownership of the company and parent company (if applicable),

MARK43 RESPONSE:

Introduction

Mark43 specializes in developing, implementing and supporting web-based law enforcement software. Mark43’s founding team identified an immediate need for leading edge software to alleviate burdens on the nation’s police officers to document crucial information required by major areas of justice departments while empowering them with critical information to keep our community safe. These initiatives led to the development of *next generation* law enforcement RMS, CAD and field-based report writing software.

We offer law enforcement agencies with a new choice in law enforcement software through our Cobalt platform by offering a range of critical law enforcement products:

- Records Management System (RMS)
- Computer-Aided Dispatch (CAD)
- Analysis Suite

Cobalt has been built from the ground up in *collaboration with police officers for police officers*. The result – a powerful suite of tools enabling efficiency, accuracy and flexibility.

Company Information

Mark43 is a privately held company and has been producing law enforcement software for 2 years since 2014.

Mark43 currently has 70 employees nationwide and is focused on growing our team to support market demand and interest in our RMS, CAD and Analysis Suite solutions.

Mark43 Locations	
NYC (Headquarters)	28 E. 28 th Street, 12 th Fl New York, NY 10016
Washington, D.C.	601 Pennsylvania Ave NW South Building, 9th Floor Washington, DC 20004

Organizational Structure

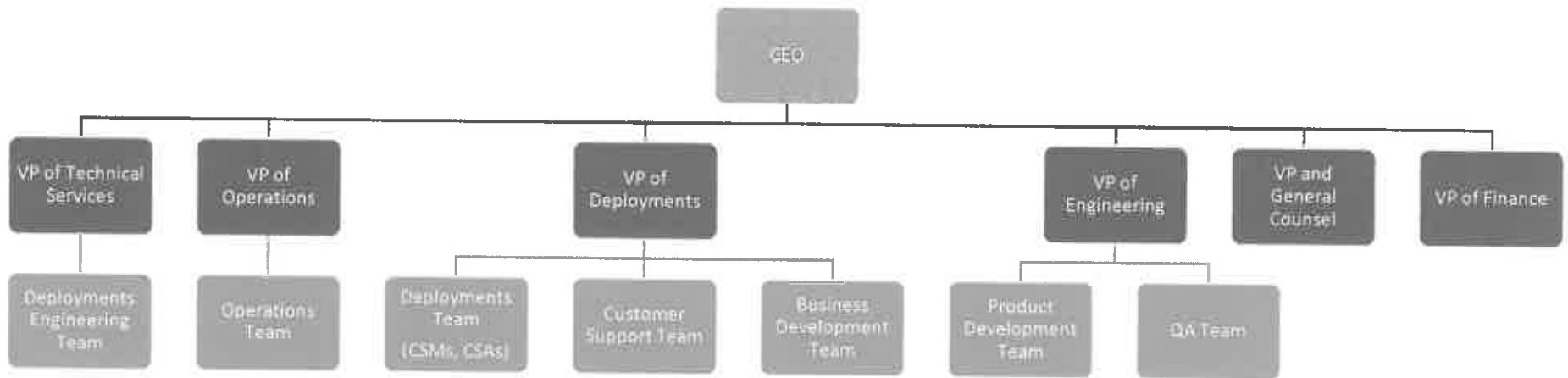


Figure 1: Mark43 High-Level Organizational Structure

Philosophy/approach to doing business,

MARK43 RESPONSE:

Mark43's mission is to empower communities and their government with new technologies that improve the safety and quality of life for all.

We are focused on developing lasting partnerships and always seeking ways to improve public safety processes with technology in an effort to enhance the lives of everyone in each community we service.

Sectors in which the vendor does business,

MARK43 RESPONSE:

Mark43 services only the public sector, specifically law enforcement agencies with CAD, RMS and Analysis suite software systems.

Financial status and company health,

MARK43 RESPONSE:

(Mark43 respectfully requests this paragraph be redacted from FOIA request) Mark43 was incorporated in 2014 and has over \$26MM in cash. Mark43 is in the process of raising an additional \$6-\$8MM in debt facility.

Since inception, Mark43 has experienced success due to the company's nimble ability to solve problems faced by law enforcement agencies. The team has successfully reached out to its target market to deliver their message and execute by delivering the solutions need by public safety agencies on time and within budget.

Mark43 has deployed its RMS platform, Cobalt in one of the largest law enforcement agencies in the nation, Washington D.C., Metropolitan Police Department and the 38 agencies operating in the DC area. The RMS product supports over 15,000 users and demonstrates the RMS product's ability to effectively serve a multi-jurisdictional/agency environment. MPD is able to seamlessly share data with various types of agencies at the Federal (e.g. Secret Service, FBI), local (e.g. Washington Metropolitan Area Transit Authority), and university level (e.g. American University Police, Howard University Police).

Mark43's growing client base includes:

1. Camden County Police Department (NJ) – Live
2. Jersey City Police Department (NJ) – Implementation in progress
3. Downey Police Department (CA) – Implementation in progress
4. South Bay Regional Public Communications Agency (CA) – Contract awarded

Investors include Spark Capital (investments include, Twitter, Tumblr and Oculus), General Catalyst Partners, one of the most prominent investor firms in Massachusetts (investments include, AirBnB, Stripe and Warby Parker) Goldman Sachs and several other well-known investment firms.

Mark43 Investor List



ALLEN & COMPANY



**General (Ret.)
David Petraeus**
Former CIA Director



Sophia Bush
Actress, Developer, Activist



Ray Rothrock
Partner, Veniseek

Ashton Kutcher
Actor

Tom Eisenmann

Vance Serchuk

Jonathan Smidt

Sheet Tyle

Ed Zimmerman

Jeff Bezos

Bryan Burk

Catherine Reynolds

Current number of agencies under maintenance and support and

MARK43 RESPONSE:

Mark43 has 3 agencies under maintenance and support.

2 agencies will also be under maintenance and support by Q4 2016. They are currently in implementation and pre-implementation phases pending go-live with Cobalt RMS.

number of agencies who are no longer customers.

MARK43 RESPONSE:

Mark43 does not have any clients who have terminated contracts or services provided by the company.

Attachment A: Vendor Response Sheet

4.4 Projects and Goals

Project and Goals: *The project goals and objectives are:*

To develop and provide a Records Management System (RMS) to the WVSP. The key goals of the project will be:

- a) *Replace the system currently being used with an off-the-shelf solution and convert all historical data into the new system.*

MARK43 RESPONSE:

Yes, Mark43 will replace WVVP's current RMS with our Cobalt RMS platform. All legacy data will be converted into Cobalt RMS as part of the proposed solution.

- b) *Deliver a fully-integrated case management system on time and within budget.*

MARK43 RESPONSE:

Yes, Mark43 will deliver a fully-integrated case management system as part of the Cobalt RMS system on time and within budget. We will not charge any additional fees as long as project requirements remain within the scope of work detailed in this RFP. Mark43 has always deployed on-time. We are prepared to commit our highest skilled resources to this project. Our team has a comprehensive project discovery and implementation plan in place to deploy projects as scheduled.

Mark43 Project Management Goals

Our project management approach is built to ensure continuous, candid communication between all parties in order to:

- Regularly review objectives
- Identify risks
- Resolve any potential issues before they negatively impact the project

Mark43 and its clients maintain a communicative dialogue through:

- Status reports
- Goal-oriented meetings
- Conference calls

All of these requirements are used to promote transparency and teamwork during the course of the project and build a mutually beneficial working relationship throughout the length of contract.

- c) *Achieve sufficient knowledge transfer through training to all staff to be capable of and confident in using the new system.*

MARK43 RESPONSE:

Yes, Mark43's proposed solution includes a full training package (outlined in this proposal). All users, super users and trainers will be trained according to their roles. Full training documentation will also be provided to WVSP.

- d) *Provide a technologically sound platform for expansion of information services into the future.*

MARK43 RESPONSE:

Yes, Mark43's proposed Cobalt RMS Solution is a technologically sound platform with ease in expansion of information services into the future. Built using modern technologies, Cobalt RMS was created to service tech savvy law enforcement agencies embracing embracing policing innovation.

The proposed solution offers numerous long-term benefits through its cloud-based architecture:

Future Proof Police Records Management with Cobalt



Figure 2: Mark43 Cobalt RMS Scalability

- e) *Establish a long term maintenance and support contract.*

MARK43 RESPONSE:

Yes, Mark43 is willing and ready to establish a long term maintenance and support contract with WVSP. If desired, Mark43 can extend maintenance and support to year 7.

- f) *Successfully implement the system with minimal disruption to users and operations.*

MARK43 RESPONSE:

Yes, one of Mark43's priorities during implementation is to operate with minimal disruption to WVSP's users and operations.

Mark43 Project Kick-Off Overview

Following contract execution, our team meets with WVSP's implementation team to review the project plan and to mutually define other key personnel for the term of this project. We work closely with your team to determine how best to work together and *limit demands* on your time. During this meeting, we also establish a weekly call schedule for regular updates and to make sure all information has been received. We will have a sign-off procedure for the agreed upon specifications. If changes are requested following sign-off, they will be reviewed and discussed with WVSP to determine the impact on the current project plan and timeline.

Mark43 will focus on a partnership with your office and dedicate the resources to ensure a smooth and seamless transition from your current environment to our proposed solution. The system is designed to be configured to your specific workflows and environment. This flexibility allows your office to have input to create the desired solution and environment that will maximize resources and operational efficiencies.

We have exceeded industry expectations in time to deploy by using modern architecture to:

- Deliver our Cobalt application with speed, meeting all project requirements
- Employ the most efficient Solution for each agency with guidance from our dedicated, experienced team by analyzing all workflow processes instead of simply implementing an out of the box configuration

Mark43 Objectives of Project Kick-Off Meeting

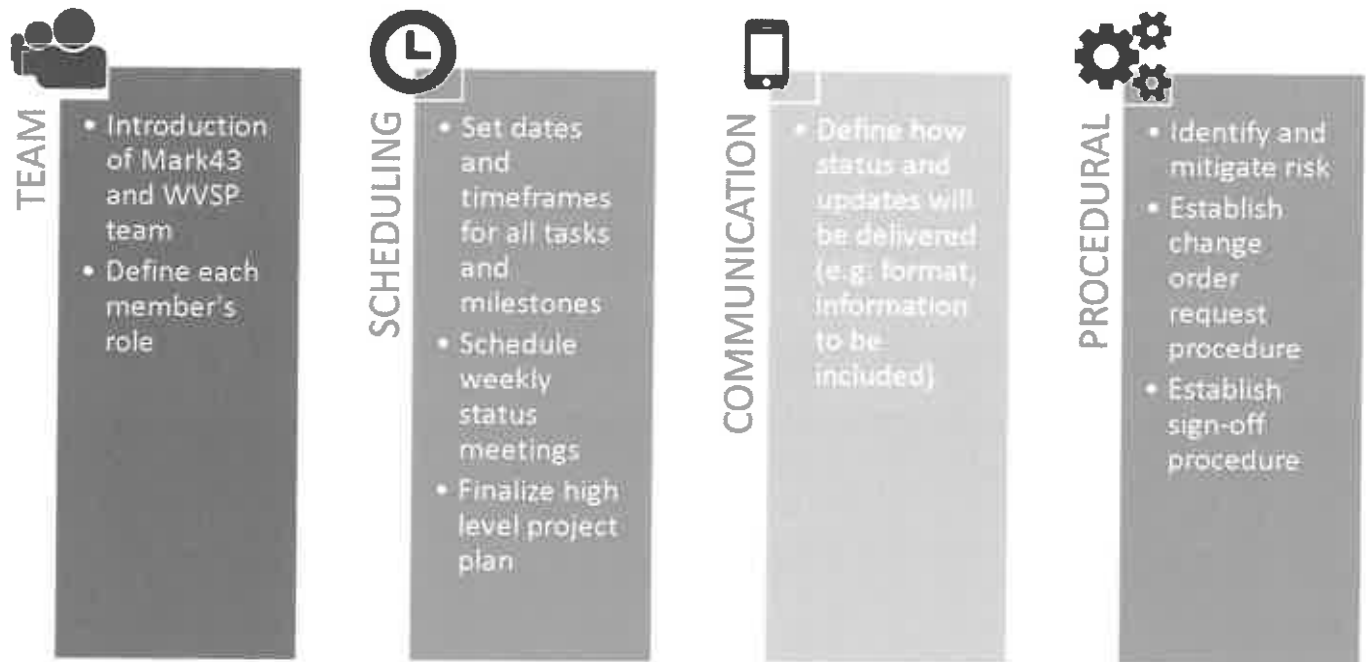


Figure 3: Mark43 Key Objectives of Project Kick-Off for RMS Projects

Mark43 Goals Throughout Course of Project:

- Limit demands on county resources and not disrupt normal operations
- Monitor and document project progression thoroughly
- Communicate all project progresses, risks and change orders
- Ease transition process from current system to Cobalt RMS
- Maximize resources and operational efficiencies

Mark43 Project Checkpoints and Monitoring Objectives:

- Confirm interpretation of the project is in line with WVSP's requirements
- Evaluate effectiveness of Cobalt RMS features to WVSP's desired workflow
- Quality verification of data migration including structures
- Quality verification and certification of requested interfaces
- Responsible for verification of the configuration, installation, test and inclusion of appropriate acceptance criteria

g) Must be able to interface into our Zuercher NIBRS reporting system.

MARK43 RESPONSE:

Yes, Mark43 will build an interface into WVSP's Zuercher NIBRS reporting system.

4.4.1 System Architecture

4.4.1.1 The vendor should describe in detail the system architecture that will be necessary to provide connectivity across the state. Included will be a diagram of the system architecture detailing the overall representation of the servers, network, peripherals, workstations, interface points, as well as a representation of the System environments (Production, Backup, and Training/Testing.)

MARK43 RESPONSE:

As an entirely web-based system, the proposed solution requires no software or hardware installations and is accessible from any terminal with a modern web browser.

Cobalt, is web-based and can co-exist on workstations with plugins and antivirus software. Patching of the application is supported by Mark43 and performed on an as needed, scheduled basis.

Mark43's proposed Cobalt solution is a true cloud solution requiring no server hardware on-site at WVSP's office to host the application.

Benefits of Deploying Cobalt:

- **No server hardware required**
- **Eliminate need to budget server hardware upgrades**
- **Redundancy is built into the Solution – additional hardware is not required**
- **Ease of use – application can be accessed from any desktop, laptop, tablet or mobile device with internet connection**
- **No third party software or plug-ins required**
- **Same interface used whether in-office or in-field**

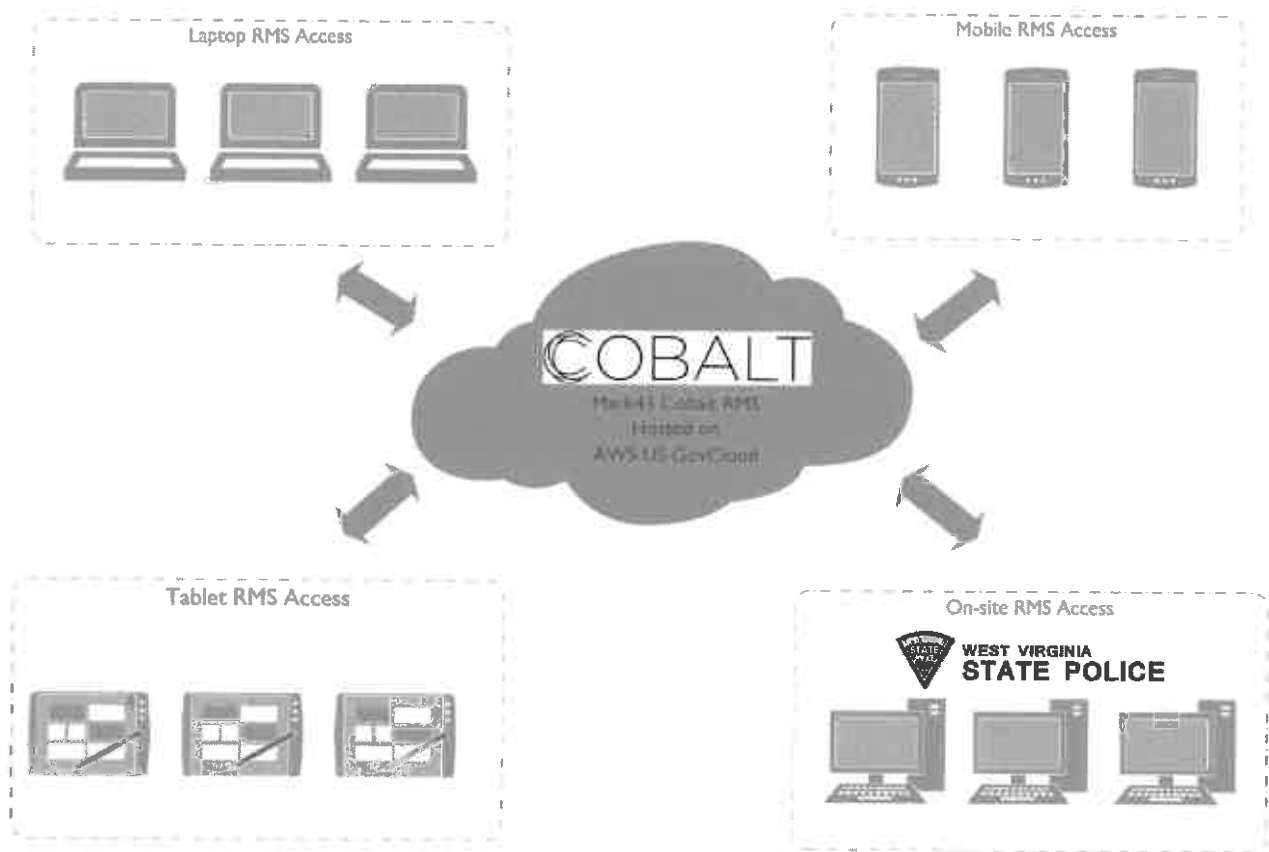


Figure 4: Mark43 Cobalt RMS Architecture and Access

4.4.2 Hardware Configuration

The vendor should describe in detail the total numbers of servers required for the system and the ability of the proposed servers to support the requirements and processing performance for at least five years from the date of overall final acceptance.

MARK43 RESPONSE:

As an entirely web-based system, the proposed solution requires no software or hardware installations and is accessible from any terminal with a modern web browser.

Server hardware is recommended for interfaces; one server per interface is recommended for optimal system performance.

Recommended hardware requirements to use Cobalt RMS is listed below.

Client Hardware and Software Requirements

REQUIREMENT	SPECIFICATIONS
Supported manufacturers	Any
Number / speed of processors	1+ CPU at 2.0 GHz+ (enough to run a modern web browser)
Memory	1 GB (enough to run a modern web browser)
Disk space	Not applicable
Network interface	1 Mbps or above internet connection. Lower speeds are possible but will result in degraded service.
Operating system / version	Mas OS (any), Windows XP and above
Required software	Internet Explorer 9+, Chrome, Safari and Firefox

Server Requirements (for integrations only – no server hardware is required at the client site to host Mark43’s CAD/RMS Solution)

REQUIREMENT	SPECIFICATIONS
Supported manufacturers	Any
Number / speed of processors	2 core
Memory	8 GB
Disk space	128 GB SSD
Network interface	1 NIC at 100 Mbps (2 NICS at 1 Gbps or greater preferred)
Operating system / version	RHEL 7, CentOs 7
Required software	Internet Explorer 9+, Chrome, Safari and Firefox

4.4.3 Performance and Availability

4.4.3.1 The vendor should describe in detail any impact to systems (e.g., interface to normal operations, system shutdown) that will occur during server upgrades and/or expansions.

MARK43 RESPONSE:

Updates and upgrades are seamlessly pushed to users in the background without the need for scheduled downtime. All updates, upgrades and system maintenance is handled by Mark43’s team. Assistance from WVSP is not needed to perform any of the above system related maintenance procedures.

4.4.3.2 The vendor should describe in detail any impact to systems that will occur during software upgrades or updates.

MARK43 RESPONSE:

Updates and upgrades are seamlessly pushed to users in the background without the need for scheduled downtime. All updates, upgrades and system maintenance is handled by Mark43's team. Assistance from WVSP is not needed to perform any of the above system related maintenance procedures.

4.4.3.3 The WVSP expects all system applications to operate concurrently at designed capacity. The vendor should describe in detail how they will ensure concurrent operation of all system components without any system degradation.

MARK43 RESPONSE:

Cobalt RMS is hosted in Amazon Web Services cloud, which allows for dynamic scaling, security, and redundancy due to multiple data centers. With traditional on premise hosted solutions, if an Agency wants to build a feature that requires additional server capacity, the Agency will have to purchase or refurbish a server. Cobalt RMS comes packaged with being part of AWS and automatically scales to meet any demands placed on the system. All infrastructure needs are supplied by the Mark43 team. The system is redundant across multiple availability zones and backup and restore procedures are automatic. The security of the system is guaranteed by Amazon's GovCloud infrastructure team and Mark43's infrastructure team according to CJIS policies.

4.4.3.4 The WVSP expects the RMS applications to be available 99.95 percent of the time. The vendor should describe in detail how they will guarantee this level of system availability both initially and during the life of any license and maintenance contract.

MARK43 RESPONSE:

Mark43 will ensure Cobalt RMS will operate as described for the entire term of the agreement. Mark43 will ensure 99.9% RMS availability to users with zero downtime due to maintenance for the full duration of WVSP's subscription to the product in accordance with our Service Level Agreement.

Mark43 Standard Service Level Agreement for Cobalt

Sample Service Levels for the Records Management System Application (RMS).

- i. **RMS Availability.** During any calendar month of a Regular Usage Period, the RMS shall be available to users no less than 99.9% of the time on a 24x7 basis, excluding scheduled maintenance of the RMS ("**RMS Scheduled Downtime**"); provided, however, that Mark43 is not responsible for any downtime of the RMS caused by third party data services over which Mark43 has no control (e.g. Department of Motor

Vehicles license plate database), and such third-party downtime will not count against the service levels promised herein. Mark43 shall provide Subscriber with prompt notification as soon as it becomes aware of any actual or potential unscheduled downtime (defined below) of the RMS, as well as continual periodic updates during the unscheduled downtime regarding Mark43's progress in remedying the unavailability and the estimated time at which the RMS shall be available.

- ii. **Error Response and Resolution.** When reporting a failure of the RMS to Mark43 (a "**RMS Error**"), Subscriber shall identify the RMS Error as a Severity Level 1, 2, or 3 (each defined below) based on Subscriber's initial evaluation. If Mark43 becomes aware of a Severity Level 1 or 2 RMS Error, Mark43 shall promptly, but in no event to exceed the Initial Response timeframe in the chart set forth below, notify Subscriber, and such notice shall identify the RMS Error as a Severity Level 1 or 2 RMS Error based on Mark43's initial evaluation. Mark43 and Subscriber shall cooperate in good faith to jointly determine whether a RMS Error is a Severity Level 1, 2, or 3 RMS Error; *provided, however*, that in the event that Mark43 and Subscriber cannot come to such joint determination despite such good faith cooperation, Mark43's determination shall control. Subscriber may report to Mark43 any Severity Level 1 or 2 RMS Error 24 hours per day, 7 days per week, and any Severity Level 3 RMS Error during Mark43's normal business hours. Upon notification by Subscriber of a RMS Error, Mark43 shall commence and diligently pursue correction of such RMS Error, at all times employing at least the level of effort ("**Level of Effort**") designated in the chart set forth below and in all instances providing an Initial Response, temporary resolution or fix (a "**Work Around**") and a permanent fix (a "**Permanent Correction**") to Subscriber within the timeframes in the chart set forth below, as measured from the earlier of the time that Subscriber notifies Mark43 or Mark43 first becomes aware of a RMS Error. Mark43 shall provide Subscriber with updates to the status of Mark43's efforts (the "**Status Updates**") by telephone, email or such other means as may be reasonably designated by Subscriber from time to time, no less frequently than the timeframes identified in the chart set forth below. For the avoidance of doubt, a RMS Error does not include, and Mark43 will not be responsible for, any feature or functionality of the RMS that is not set forth in Section 1(b)(i)(2) of this Schedule A or in a project plan created for Subscriber by Mark43.
 1. "**Severity Level 1 RMS Error**" means any RMS Error that, for fifty percent (50%) or more of Subscriber's users, renders the RMS or any material portion thereof inoperative, or materially impairs use of the RMS in a production environment. Examples of Severity Level 1 RMS Errors include, without limitation, situations in which the RMS is inoperative and causing users to experience a total loss of service, continuous or frequent instabilities, a loss of connectivity or inability to communicate as intended, or there is an inability to process transactions, a failure

of the RMS to comply with any Applicable Law, the creation of a hazard or emergency, or the inability to use a primary feature or function of the RMS.

2. **“Severity Level 2 RMS Error”** means any RMS Error that, for fifty percent (50%) or more of Subscriber’s users, substantially impairs use of one or more features or functions of the RMS, which constitute less than a material portion thereof, in a production environment, or any RMS Error occurring in a testing or other non-production environment that, if occurring in a production environment, would constitute a Severity Level 1 RMS Error. Examples of Severity Level 2 RMS Errors include, without limitation, situations in which a RMS Error is causing intermittent impact to users, loss of redundancy, loss of routine administrative or diagnostic capability, or inability to use a secondary feature or function of the RMS.
3. **“Severity Level 3 RMS Error”** means any RMS Error that, for fifty percent (50%) or more of Subscriber’s users, has a minimal impact on the performance or operation of the RMS. Examples of Severity Level 3 RMS Errors include, without limitation, a RMS Error having only a minimal impact on users and RMS Errors seen in a test or other non-production environment that, if deployed in a production environment, would not constitute a Severity Level 1 RMS Error.

Severity Level	Level of Effort	Initial Response	Work Around	Permanent Correction	Status Updates
1	Continuous best efforts, 24 hours per day, 7 days per week	Immediate, but in no event to exceed 30 minutes	6 hours	3 calendar days	Every 3 hours prior to a Work Around and every calendar day thereafter
2	Continuous best efforts, 24 hours per day, 7 days per week	1 hour	24 hours	5 calendar days	Every 6 hours prior to a Work Around and every calendar day thereafter
3	Commercially reasonable efforts, during normal business hours	1 Business Day	10 Business Days	20 Business Days	Every 2 Business Days prior to a Work Around and every 5 Business Days thereafter

4.4.4 System Failover and Restoration

4.4.4.1 The vendor should describe in detail any impact to systems (e.g., interference to normal operations, system shutdown) that will occur during server upgrades and/or expansions.

MARK43 RESPONSE:

Updates and upgrades are seamlessly pushed to users in the background without the need for scheduled downtime. All updates, upgrades and system maintenance is handled by Mark43's team. Assistance from WVSP is not needed to perform any of the above system related maintenance procedures.

4.4.4.2 The vendor should describe in detail if operations automatically failover to the backup environment in the event of a failure in the production environment.

MARK43 RESPONSE:

Mark43's cloud service provider, Amazon Web Services (AWS) guarantees 99.999...% durability and performs backups daily which allows for **full restoration to any second within the past 28 days**. There are **2 levels of redundancy** provided with Mark43's site subscription for WVSP.

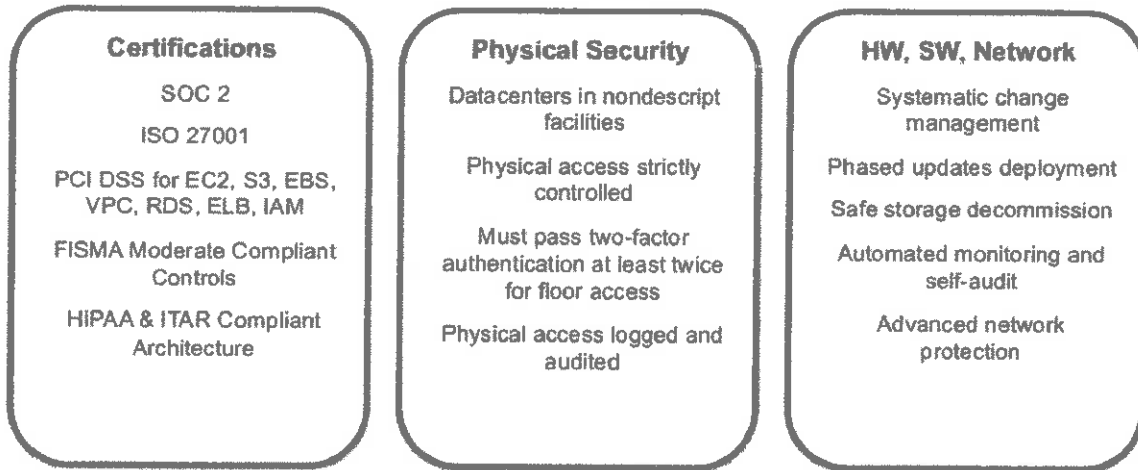
About AWS Disaster Recovery

Amazon S3 (Amazon Simple Storage Service) provides a highly durable storage infrastructure designed for mission critical and primary data storage. Objects are redundantly stored on multiple devices across multiple facilities within a region, designed to provide a durability of 99.999999999% (11 9s). AWS provides further protection for data retention and archiving through versioning in Amazon S3, AWS multi-factor authentication (AWS MFA), bucket policies, and AWS Identity and Access Management (IAM).

Amazon RDS (Amazon Relational Database Service) makes it easy to set up, operate, and scale a relational database in the cloud. You can use Amazon RDS either in the preparation phase for DR to hold your critical data in a database that is already running, or in the recovery phase to run your production database. When you want to look at multiple regions, Amazon RDS gives you the ability to snapshot data from one region to another, and also to have a read replica running in another region.

Amazon Web Services Disaster Recovery Security Features:

Built to enterprise security standards



<http://aws.amazon.com/security>

Failing back from Disaster on Cobalt RMS

1. Establish reverse mirroring/replication from the DR instance back to Cobalt RMS production instance for WVSP
2. Freeze data changes to the DR site.
3. Re-point users to the primary site.
4. Unfreeze the changes.

4.4.4.3 The vendor should describe in detail the proposed method of restoring data files.

MARK43 RESPONSE:

Cobalt RMS includes two levels of redundancy by employing Amazon RDS (Relational Database Service) Multi-AZ deployment. At any given time, data is being written is being replicated to two databases. If one database fails, failover to the secondary database is initiated.

About Amazon RDS

Amazon RDS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ). Each AZ runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable. In case of an infrastructure failure (for example, instance hardware failure, storage failure, or network disruption), Amazon RDS performs an automatic failover to the standby, so that you can resume database operations as soon as the failover is complete. Since the endpoint for your DB Instance remains the same after a failover, your application can resume database operation without the need for manual administrative intervention.



Unlike Single-AZ deployments, I/O activity is not suspended on your primary during backup for Multi-AZ deployments for the MySQL, Oracle, and PostgreSQL engines, because the backup is taken from the standby. However, note that you may still experience elevated latencies for a few minutes during backups for Multi-AZ deployments.

Source: <https://aws.amazon.com/rds>

Mark43 Amazon Web Services RDS (Relational Database Services) Database Replication

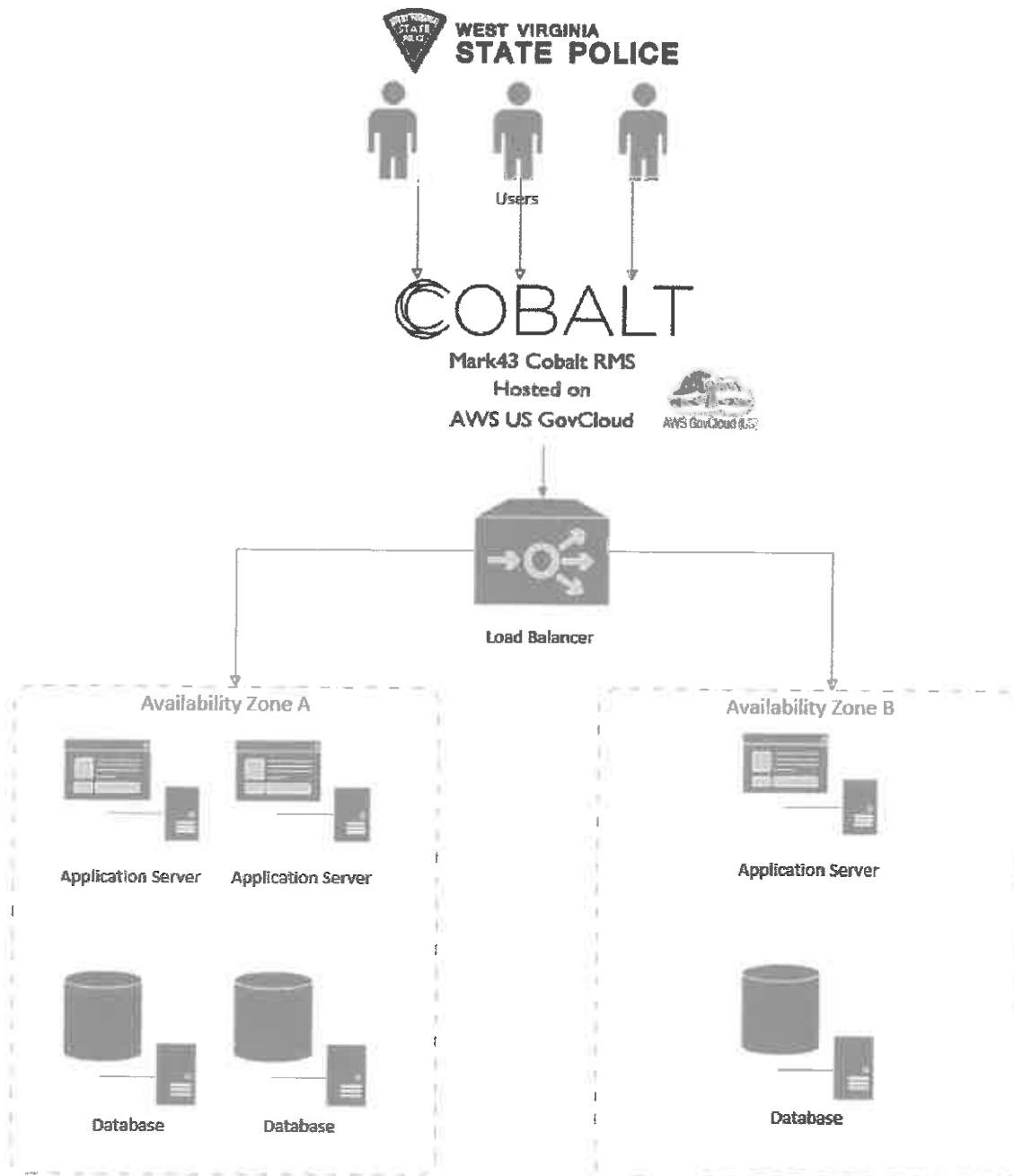


Figure 5: Mark43 Cobalt RMS on Amazon Web Services Relational Database Service (RDS) for Redundancy and Failover.

4.4.4.4 The vendor should describe in detail any limited functionality with which the system will operate during restoration process.

MARK43 RESPONSE:

When the system detects a need to initiate failover, Cobalt RMS users will either notice that their requests take longer, or requests may fail to complete for up to 30 seconds.

4.4.5 Data Conversion

4.4.5.1 The vendor should describe in detail the steps they will take to convert the Motorola NET RMS. The vendor should detail the recommended approach and experience in data conversion.

MARK43 RESPONSE:

Refer to 4.5.3 Data Conversion section in Attachment B: Mandatory Requirements for detailed response.

4.4.6 Training

4.4.6.1 The vendor should describe in detail there training plan with the end users and administrators.

MARK43 RESPONSE:

Refer to 4.5.6 Training section in Attachment B: Mandatory Requirements for detailed response.

4.4.7 Project Management

4.4.7.1 The Vendor should describe in detail the approach used in meeting with West Virginia Code 5A-6-4b, the West Virginia Office of Technology Enterprise Project Management Office (EMPO) methodology. Included in the detail plan should be an experienced project manager who has an understanding of EMPO's project management methodology based on Project Management Institute, Project Management Body of Knowledge (PMBOK).

MARK43 RESPONSE:

Refer to 4.5.5 Project Management section in Attachment B: Mandatory Requirements for detailed response.

4.4.7.2 The Vendor should describe in detail the plan on how status updates will be provided on the overall progression of the project at each phase of development.

MARK43 RESPONSE:

Mark43 recommends holding weekly status meetings with key members of the Mark43 and WVSP project team to discuss overall project progress, change work orders, issues and to re-assess risk throughout the course of the project.

Mark43 and WVSP's project team will establish a communication cadence that best accomplishes the groups' goals. At a minimum the following will be held:

- A kickoff meeting within 2 weeks of contract award at WVSP with all project team members
- Bi-weekly status updates with WVSP project manager and Mark43 deployment team
- Configuration review before launch of the RMS
- Pre-launch readiness ("go/no-go") meeting 2 days before launch of the RMS

For all meetings:

- The agenda will be published 24 hours before the meeting by the appropriate Mark43 representative
- Minutes will be published 48 hours after the meeting

Attachment B: Mandatory Requirements

The following mandatory requirements must be met by the Vendor as a part of the submitted proposal. Failure on the part of the Vendor to meet any of the mandatory specifications shall result in the disqualification of the proposal. The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the Purchasing Division.

4.5.1 Records Management system

- a) *The proposed system should capture all data and be able to submit required UCR/NIBRS reports. (Attached is a copy of the WV NIBRS required field.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- b) *The proposed system should capture all data in a typical agency; included names, vehicles, property, narrative, charges and arrests.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- c) *The proposed system must capture unlimited names, vehicles, property items, arrests and offenses.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- d) *The proposed system must have space for unlimited narrative.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- e) *Supplemental reports shall maintain same case number and be separate reports (not combined into one document).*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- f) *The WVSP must have the ability to print on demand, a complete incident report with all related information.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- g) *The system needs to be FBI compliant with updates/additions as needed.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- h) *The new system needs to be able to provide a reporting solution to enable statistical analysis.*

MARK43 RESPONSE:

Custom statistical reporting in Cobalt RMS is on the product roadmap. Cobalt CAD/RMS is currently able to support statistical reporting by supporting integration with reporting packages such as Tableau, Crystal Reports and Cognos.

4.5.1 Inquiry Features

- a) *The proposed system must have a complete inquiry module that allows searching on any of the important data elements in the system.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

Users can easily run and save custom searches through Cobalt's easy to use advanced search interface. Mark43's interface was designed to be decluttered and simple. By utilizing modern web design techniques, the average user can easily navigate to where they can start a report. Just as users would expect of any modern website, the querying function, or Search, is prominently displayed on the top right of the screen with the universal magnifying glass icon. Users can easily run and save custom searches through Cobalt's easy to use interface.

Users can perform deeper searches through Cobalt's Advanced Search Filters which allow users rich context and the ability to quickly drill down for the information they're searching for. Advanced Searching allows users to search people or reports using a wide variety of filters. Users may search by multiple filters at the same time to filter search results. Cobalt Advanced Search also supports enabling multiple criteria in each filter.

- b) *The system must provide easy retrieval of information and the ability to search for information using almost any information or combination of information within the input records.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

4.5.2 Master Name File

- a) *The proposed system must provide a central name file to hold ALL names entered into the system.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

- b) *The Master Name Index should contain, at a minimum the following information:*
1. *Full Name*
 2. *Most recent address*
 3. *Most recent phone number/cell phone*
 4. *Date of birth*
 5. *Social Security Number*
 6. *State Id*
 7. *Description -height, weight, eyes, hair, race, ethnicity, multiple scars, marks, tattoos, multiple alias, and monikers.*
 8. *Business Name*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

Screenshots available on following pages.

SEARCH
DASHBOARD
REPORTS



President Francis J. Underwood

aka Frank
Nov 5, 1959

Sexually Violent Predator
International Flight Risk

REPORTS

Date	Title	Role	
06/09/16 14:47	Arrest - AGGRAVATED ASSAULT 2C:12-1b	Defendant	▼

PEOPLE ASSOCIATES



Peter Florrick
02/13/1956
Acquaintance Of



Douglas Stamper
05/01/1964
Employs

ORGANIZATION ASSOCIATIONS

Teado
Business
Tied To

PROFILE INFO

Birth date:	Nov 5, 1959	Gaffney, SC
Sex:	Male	
Race/Ethnicity:	White/Not Hispanic Or Latino	
Marital Status:	Married/civil Partner	
Addresses:	<p>Home Address WHITE HOUSE 1600 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20500</p> <div style="background-color: #ccc; padding: 2px; margin-bottom: 5px;">VERIFIED ADDRESS</div> <p>District / Sector / City: Second District / 207 Location Type: Amusement Park Public / Private: Public</p>	
Phones (SMART):	(202) 123-1234 (cell), (202) 432-6732 (home) presidentunderwood@whitehouse.gov (work)	
IDs:	SSN #: 123-22-1234 Twitter: frankunderwood	
Appearance:	5'11" Brown eyes Hair: Brown, Short Build: Medium Height: Short	

Figure 6: Mark43 Cobalt RMS Viewing Master Name Index Information

Jamie Lannister

D.O.B 1979-02-23 NICKNAME King Slayer

MARTIAL ARTS EXPERT



IDENTIFICATION	NICKNAME	King Slayer	SSN	001-00-1111
	BIRTH INFO	1979-02-23	FBI #	000909090
	SEX	Male	STATE ID #	92893
	RACE/ETHNICITY	White / Not Hispanic Or Latino		
	CITIZENSHIP	—		

CONTACT	PHONE	work: (555) 203-2652
	EMAIL	personal: Jamieonehand@gmail.com

APPEARANCE	HEIGHT	—
	WEIGHT	—
	SKIN TONE	Fair
	HAIR COLOR	Blond
	HAIR LENGTH	Short
	BUILD	Athletic/ Muscular
	IDENTIFYING MARKS	missing hand, Hand, Right, Other

PROFILE IMAGES



Figure 7: Mark43-Cobalt RMS Viewing Master Name Index Information

- c) Allow the user to query names in the system using many combinations of search criteria, including partial name, AKA, address, social security number, phone number, date of birth, sex, race, hair color, eye color, approximate height, approximate weight, and/or scars/marks/tattoos.

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

Filters available in Cobalt Advanced Search: Persons

Tab	Description	Filter Options	Other Search Options
Persons	This is the most comprehensive way to find people within Cobalt.	Name Sex DOB	Can search for a person by their name, nickname, sex, or DOB (or age range).
Physical Characteristics	These filters allow users to narrow down your search by physical characteristics.	Race Ethnicity Build	Expand the menu with down arrow on the right for additional filters.
Behaviors	These filters allow you to narrow down your search by behavior characteristics	Exhibits Cautions	Expand the menu with down arrow on the right for additional filters.
Identifiers	These filters allow you to narrow down a search by Unique Identifiers	State ID SSN (Social Security Number)	Expand the menu with down arrow on the right for additional filters.
Associated Address	These filters allow you to search addresses for people associated with that address.	Home Work Known hangouts	Expand the menu with down arrow on the right for additional filters.

Search results are displayed on the bottom of the page. Users can easily reference filters used to run their search by clicking on 'Show Filters'. Filters can also be modified where users can simply 'Refresh Results' to run a search based on the new filters. Cobalt also support sorting of results where users can change sort criteria and order of results.

Filters available in Cobalt Advanced Search: Reports

Tab	Description	Filter Options	Other Search Options
Event Date	This filter allows you to search by different pre-determined time ranges, or enter a custom date range.	Pre-determined time ranges Enter custom date ranges	Expand the menu with down arrow on the right for additional filters.
Report Details	This filter allows the searcher to narrow down by details about the report itself.	District Statistics reporting Keywords in narrative	Expand the menu with down arrow on the right for additional filters.
Personnel	The personnel filter will narrow a report down by involved personnel.	Report owner Authors Involved officers	Expand the menu with down arrow on the right for additional filters.

Sample screenshots of Cobalt advanced search screens and results on following pages.

ADVANCED SEARCH FILTERS

The screenshot displays the 'ADVANCED SEARCH' interface of the Mark43 Cabalt RMS. The form is organized into several sections:

- Basic Information:** Includes text input fields for 'First Name', 'Last Name', and 'Sex'. A 'Deceased' checkbox is located to the right of the 'Sex' field. Below these are 'Nickname, Alias', 'OOB', 'Age Range' (with a range selector), and '6-10+ yrs'.
- PHYSICAL CHARACTERISTICS:** This section contains multiple dropdown menus for 'Race', 'Ethnicity', 'Build', 'Hair Color', 'Hairstyle', 'Facial Hair', 'Eye Color', 'Vision', and 'Physical Attributes'. It also features two sliders: 'Weight Range' (set to 80-150 lbs) and 'Height Range' (set to 4'5"-7'0").
- Additional Filters:** Includes a 'Description' text field, a 'Body Part' dropdown menu, and a 'Type of Mark' dropdown menu.
- BEHAVIORS:** This section includes dropdown menus for 'Behavioral Characteristics' and 'Cautions'.

Figure 8: Mark43 Cabalt RMS Advanced Search Filters

SAVED SEARCH

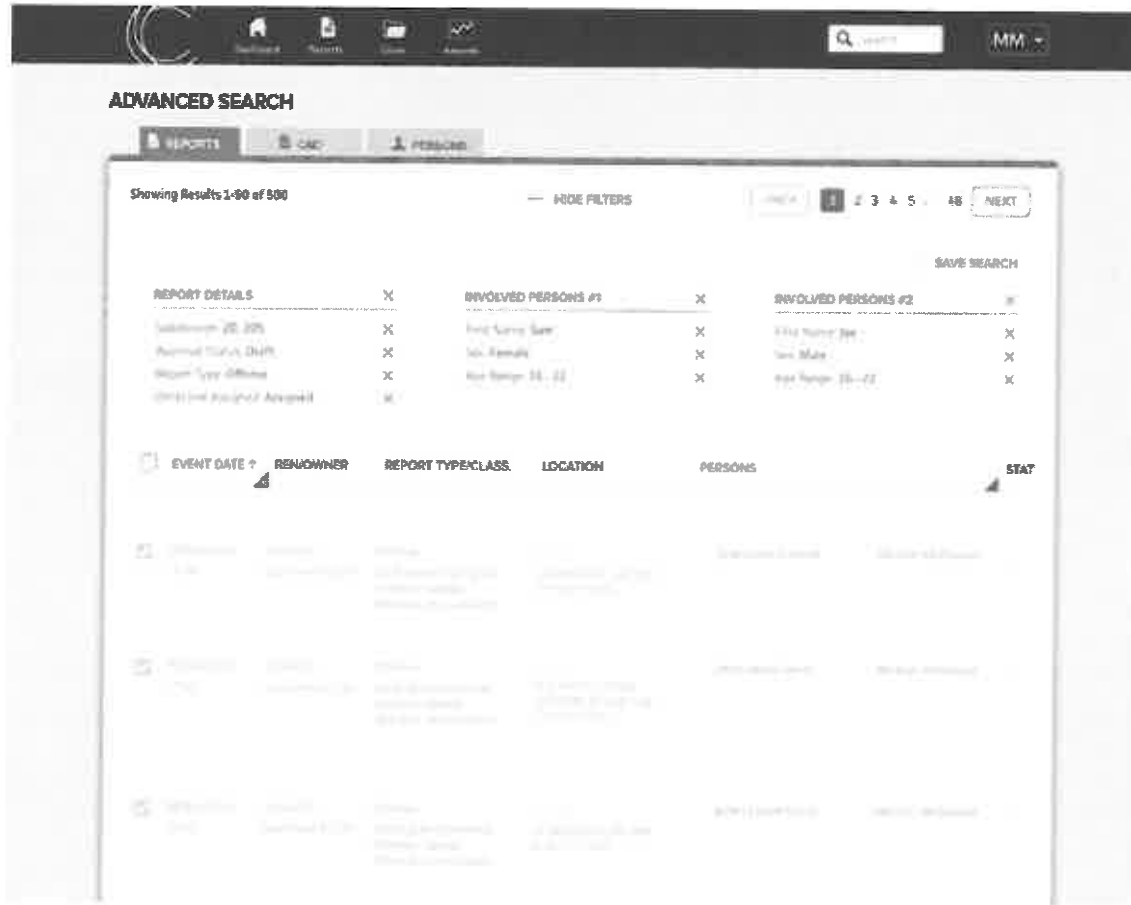


Figure 9: Mark43 Cobalt RMS Listing of Saved Searches

4.5.4 Master Vehicle File

The proposed system must capture all necessary vehicle information, and store it for easy retrieval, presently, and in the future. This feature must have the following elements:

- a) License plate number and state*
- b) VIN (vehicle identification number)*
- c) Year, Make, Model*
- d) Registered owner*
- e) Accommodate all types of vehicles, including cars, trucks, motorcycles, boats and airplanes and provide a field for indicating this type.*
- f) Allow the user to inquire into the vehicle file under many combinations of search criteria, including licenseplate, VIN, make, model and year.*

MARK43 RESPONSE:

Yes, Cobalt RMS will meet this requirement.

FORD FOCUS (1998)

COLOR **Blue** TAG **A51ECP** STATE **—**

IDENTIFICATION TAG **A51ECP**
VIN/HIN # **1234567890**
REG. STATE **—**
REG. YEAR **—**
REG. TYPE **N/A**

APPEARANCE MAKE / MODEL **FORD FOCUS**
YEAR OF MANUFACTURE **1998**
COLOR **Blue**
CATEGORY **Passenger Car/automobile**
BODY STYLE **Other: no**
DESCRIPTION **Test**

OWNER DETAILS OWNER NAME 
ADDRESS 
PHONE # 
PROOF OF OWNERSHIP **None**

Figure 10. Mark43 Cobalt RMS Viewing Master Vehicle File Information

4.5.5 Project Management

Pursuant to West Virginia Code §5A-6-4b, the WV Office of Technology Enterprise Project Management Office (EPMO) has the responsibility for managing information technology projects and providing oversight for state agency information technology projects . EPMO uses a project management methodology based on the Project Management Institute, Project Management Body of Knowledge (PMBOK). EPMO offers a methodology to its customers and their vendors that encompass a variety of templates and tools for project management.

The successful bidder will be required to utilize a formalized approach to project management, which is compliant with the PMBOK and includes the following:

- a) The successful vendor will be responsible for applying project management methodologies in the areas of project planning, resource management, project monitoring, production control, configuration management, quality assurance, test planning and execution, training plan, implementation methodology, change management and business process re-engineering, post-implementation support and documentation.*

MARK43 RESPONSE:

Mark43's Cobalt Solution includes an extensive project management package including:

Mark43 Cobalt Implementation and Project Management Package Features	
Dedicated Project Team	Dedicated Project Manager, Client Solutions Manager, Client Solutions Associate, Development Lead, Training Specialist and Customer Support Lead.
Accountability	The Project Manager will be responsible for Mark43's project team members' performance and attendance.
Communication	The Project Manager and Client Solutions Manager will also be responsible for initiating and scheduling all necessary meetings and conference calls to ensure both parties understand requirements and expectations of the Solution. Meetings will be scheduled to discuss project progress, issues, resolutions and change requests.
Project Planning	The Project Manager and Client Solutions Manager will be responsible for developing a project plan and documenting progress into easy to understand status reports. Our team understands that consistent documentation is key to staying organized and successfully managing a project with the specifications required by WVSP.

To ensure each project stays on track, our deployment team employs these standard project management practices to plan realistic timeframes where milestones are met on schedule to reach true client satisfaction.

Mark43 Best Practices Employed to Ensure Project Timeliness

- Proper planning
- Appropriate resource allocation
- Negotiating an agreeable and controlled project scope
- Risk mitigation
- Consistent communication

- b) *The successful vendor is required to present a comprehensive project plan showing time and resources required to accomplish tasks. The plan shall include three (3) major phases: planning, implementation and post- implementation.*

MARK43 RESPONSE:

Understood and will comply. A sample Cobalt RMS project plan is being included for review. Tasks and milestones may change depending on project kick-off discussions.

See following pages for Cobalt RMS Detailed project plan.

Mark43 Cobalt RMS Detailed Project Plan

DRAFT					
ID	Task Name	Duration	Predecessors	Start	Finish
1	Project Commencement	1 day		Tue 1/10/17	Tue 1/10/17
2	Contract Signing, SOW Agreement	1 day		Tue 1/10/17	Tue 1/10/17
3	Kickoff meeting	0 days		Tue 1/10/17	Tue 1/10/17
4	Current State (Systems/Business Processes) Assessment	15 days		Tue 1/17/17	Mon 2/6/17
5	Existing RMS Interfaces	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
6	RMS End User Research	3 wks	3FS+1 wk	Tue 1/17/17	Mon 2/5/17
7	Workflow analysis	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
8	Infrastructure	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
9	Support	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
10	Training	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
11	Policy	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
12	External partners	2 wks	3FS+1 wk	Tue 1/17/17	Mon 1/30/17
13	Publish Analysis	0 days	5,7,8,9,10,11,12	Mon 1/30/17	Mon 1/30/17
14	Client Approval	1 wk	13	Tue 1/31/17	Mon 2/6/17
15	Client Approves Analysis	0 days	14	Mon 2/6/17	Mon 2/6/17
16	RMS	80 days		Tue 1/10/17	Mon 5/1/17
17	RMS Development	20 days		Tue 2/7/17	Mon 3/6/17
18	Establish dev environment	1 day	5,6	Tue 2/7/17	Tue 2/7/17
19	RMS Feature Development	20 days		Tue 2/7/17	Mon 3/6/17
20	Engineering Review Gap Analysis	1 wk	14	Tue 2/7/17	Mon 2/13/17
21	Booking	1 wk	20,18	Tue 2/14/17	Mon 2/20/17
22	Stat Reporting	1 wk	20,18	Tue 2/14/17	Mon 2/20/17
23	Product Research	1 wk	20,18	Tue 2/14/17	Mon 2/20/17
24	User Feedback	1 wk	21,22,23	Tue 2/21/17	Mon 2/27/17
25	Redesign	1 wk	24	Tue 2/28/17	Mon 3/6/17
26	Implementation Review	1 day	21,22	Tue 2/21/17	Tue 2/21/17
27	Features Complete	0 days	26	Tue 2/21/17	Tue 2/21/17
28	RMS Interface Development	16 days		Tue 2/7/17	Tue 2/28/17
29	Engineering Review Gap Analysis	1 wk	14	Tue 2/7/17	Mon 2/13/17
30	CAD	2 wks	18,29	Tue 2/14/17	Mon 2/27/17
31	Coplogic	2 wks	18,29	Tue 2/14/17	Mon 2/27/17
32	NLETS and Regional State Specific Query	2 wks	18,29	Tue 2/14/17	Mon 2/27/17
33	Camera Download of Evidentiary Photographs	2 wks	18,29	Tue 2/14/17	Mon 2/27/17
34	Recorder Download of Evidentiary Audio Record	2 wks	18,29	Tue 2/14/17	Mon 2/27/17
35	Implementation Review	1 day	30,31,32,33	Tue 2/28/17	Tue 2/28/17
36	Interfaces complete	0 days	35	Tue 2/28/17	Tue 2/28/17
37	RMS Deployment	80 days		Tue 1/10/17	Mon 5/1/17
38	Establish training environment	1 day	27FF,36FF	Tue 2/28/17	Tue 2/28/17
39	Establish production environment	1 day	27FF,36FF	Tue 2/28/17	Tue 2/28/17
40	RMS Configuration	27 days		Tue 2/7/17	Wed 3/15/17
41	Update Policy	1 mon	14	Tue 2/7/17	Mon 3/6/17
42	Create stat reports	2 wks	38,14	Wed 3/1/17	Tue 3/14/17
43	User setup	1 wk	38,14	Wed 3/1/17	Tue 3/7/17
44	Fields	2 wks	38,14	Wed 3/1/17	Tue 3/14/17
45	Permissions	1 wk	38,14	Wed 3/1/17	Tue 3/7/17
46	User Enrollment	1 day	38,14	Wed 3/1/17	Wed 3/1/17
47	Configuration review	1 day	41,42,43,44,45,46	Wed 3/15/17	Wed 3/15/17
48	Open access to Mark43 platform	0 days	46	Wed 3/1/17	Wed 3/1/17
49	RMS Support Planning	40 days		Tue 1/31/17	Mon 3/27/17
50	Develop support model	1 mon	9	Tue 1/31/17	Mon 2/27/17
51	Write SLAs	2 wks	50	Tue 2/28/17	Mon 3/13/17
52	Customer reviews SLA	2 wks	51	Tue 3/14/17	Mon 3/27/17

DRAFT					
ID	Task Name	Duration	Predecessors	Start	Finish
53	Customer approve SLA	0 days	52	Mon 3/27/17	Mon 3/27/17
54	RMS Testing	76 days		Tue 1/10/17	Tue 4/25/17
55	Draft test plan	1 mon	3	Tue 1/10/17	Mon 2/6/17
56	Approve test plan	2 wks	55	Tue 2/7/17	Mon 2/20/17
57	Interface Testing	2 wks	36	Wed 3/1/17	Tue 3/14/17
58	Network Load Test	2 wks	27,36	Wed 3/1/17	Tue 3/14/17
59	System Test	2 wks	27,36	Wed 3/1/17	Tue 3/14/17
60	Security Audit	2 wks	27,36	Wed 3/1/17	Tue 3/14/17
61	Support Model Test	2 wks	27,36	Wed 3/1/17	Tue 3/14/17
62	Client Acceptance Test Period	30 days	61	Wed 3/15/17	Tue 4/25/17
63	Final Acceptance	0 days	62	Tue 4/25/17	Tue 4/25/17
64	RMS Training	36 days		Tue 2/7/17	Tue 3/28/17
65	Develop training plan	4 wks	14	Tue 2/7/17	Mon 3/6/17
66	Approve training plan	2 wks	65	Tue 3/7/17	Mon 3/20/17
67	Train superusers	1 day	66,48	Tue 3/21/17	Tue 3/21/17
68	Train system administrators	1 day	66,48	Tue 3/21/17	Tue 3/21/17
69	Mass training	5 days	66,48,67	Wed 3/22/17	Tue 3/28/17
70	RMS Cutover	43 days		Thu 3/2/17	Mon 5/1/17
71	Develop cutover plan	3 wks	27,46	Thu 3/2/17	Wed 3/22/17
72	Go/No-Go Review	4 days	71,69,63	Wed 4/26/17	Mon 5/1/17
73	Go Live	0 days	57,58,59,60,72,61	Mon 5/1/17	Mon 5/1/17

- c) *The successful vendor is required to assign an experienced and skilled project manager to the project. The vendor's project manager will be responsible for the compilation of the project plan and will be required to maintain the detailed plan through the full term of the project or until such time the vendor has completed the contract obligation.*

MARK43 RESPONSE:

Mark43 Deployments Project Team

Mark43 currently has 70 employees nationwide and is focused on growing our team to support market demand and interest in our RMS, CAD and Analysis Suite solutions. Our Deployments team has been scaled prior to launch for planned installations in full preparation for a successful go-live. With complete support from our Executive team, we are ready to staff up as necessary to support our client base with:

- Unsurpassed implementation support
- Comprehensive training
- Ongoing support including a minimum of 4 major upgrades per year at no additional cost

We have carefully selected leading talent as part of our deployments team and most importantly individuals who have a deep passion to do more to help our community in realizing our company's mission to implement the next generation of law enforcement software nationwide. We believe *powerful analytics* and *searching capabilities* are critical tools for law enforcement agencies to intelligently prepare themselves when patrolling our neighborhoods or responding to calls. Our team is committed to transform the conventional processes of incident reporting and public safety records management to take law enforcement agencies to a higher level of records management. It's not just about gathering and storing data. It's about smart records management resulting in secure, accessibility of records paired with robust reporting capabilities.

Mark43 team members have served in all branches of the US Military and several members have work experience at the Federal Bureau of Investigation (FBI) and National Security Agency (NSA).

Mark43 Assigned Project Manager for WVSP RMS Project

Mark43 assigns a Project Manager and project team who will work with all involved parties to execute our Cobalt application's standard phased project plan.

Due to the importance of this project, Mark43 has elected to assign **David Jochim, VP of Deployments** as the Project Manager on this proposal. Dave has over 10 years of experience leading complex, enterprise wide technology deployments applying best practices in project management and change management in both private and public sectors. He brings valuable knowledge from his extensive background in managing operational and technical initiatives at the United States Air Force. Dave will oversee the overall project and be the primary point of contact to raise any concerns to during the course of the deployment. He will coordinate with **Florian Mayr, VP of Technical Services** the assigned Development Lead, on the progress, initiatives and requirements of the RMS project for WVSP. Dave will stay abreast of all project development and act as an escalation point for WVSP.

Proposed Mark43 Key Personnel Assigned to WVSP Implementation

Role / Name / Title	Responsibilities
Project Manager David Jochim - VP of Deployments	Main point of contact for Mark43 and WVSP for all matters. 1 st point of escalation contact.
Development Lead Florian Mayr - VP of Technical Services	Lead technical efforts in interface development and data conversion.
Deployment Lead Allan Mackiewicz - Client Solutions Manager	Oversee implementation and communicate concerns between stakeholders.
Training and Deployment Specialist Domenico Pellegrini - Client Solutions Associate	Lead initial department assessment, training, and go-live product launch.
Customer Support Lead Greer Davis - Technical Support Manager	Assist in training and provide on-site and remote product support.

Please note: Staff assignments are best projections made considering our current implementation queue and assumption this contract is awarded and executed as scheduled. If there is any change in staff assignments, Mark43 will notify WVSP and obtain approval on substitute team assignment(s) prior to proceeding with project kick-off.

Mark43 Project Team Organizational Chart



Figure 11: Mark43 Project Team Organizational Chart

Estimated required time, hours per month by role:

	Month 1	Month 2	Month 3
<i>Client Solutions Manager</i>	100	60	160
<i>Client Solutions Associate</i>	200	200	200
<i>Technical Services Associate</i>	200	160	160
<i>Customer Support Lead</i>	100	100	200

Resumes on following pages.

DAVID JOCHIM, PMP

Vice President of Deployments - Mark43, Inc.

EDUCATION

Master of Business Administration, University of Notre Dame Notre Dame, IN

Bachelors of Science, University of Notre Dame Notre Dame, IN
Mathematics

RELEVANT WORK EXPERIENCE

Mark43, Inc. New York, NY
VP of Deployments *June 2015 – Present*

Dataminr, Inc. New York, NY
VP of Public Sector *Feb. 2013 – May 2015*

- Developed program plans and pricing models for emerging government vertical that delivered initial \$1M in revenue
- Implemented team structure, developed positions requirements, hired and trained deployment team to support worldwide operations; expanded team from three to eight in less than one year
- Directed on-boarding and customer engagement activities for nearly 1000 public sector users in agencies ranging from Federal to State and Local governments.
- Established project management practices in startup environment including scheduling, risk management, and status reporting for ongoing government-focused efforts
- Guided market research team to identify target opportunities worth over \$10M across multiple government clients

Deloitte Consulting, LLP

Arlington, VA

*Manager, Strategy & Operations**Sep. 2010- Feb. 2013*

- Led a seven person team that achieved 10% annual efficiency improvements for the test and evaluation, logistics, and engineering groups within the TSA's Office of Security Capabilities
- Crafted project charters, project plans, agency budget requests, spend plans, contract documentation and reporting tools for a \$22M aviation security technology program at 400 federalized airports
- Collaborated with multiple senior government leaders to create a risk-driven requirements management process for TSA's Mission Analysis Division that ensures aviation security capabilities are linked to clearly articulated program goals

Motorola, Inc.

Shaumburg, IL

*MBA Summer Intern**June 2009 – August 2009*

- Modeled operational risk across at all Motorola sites worldwide and provided senior management key metrics to determine investment priorities for the company's security budget

Branch Chief*June 2006 – August 2008**United States Air Force, Rapid Capabilities Office* *Pentagon, Washington, DC*

- Directed the efforts of over 100 contractors to develop and test communication systems and install long-haul networking capabilities for multiple Air Force Chief of Staff directed programs valued at over \$6 billion.
- Analyzed capability gaps and negotiated technical requirements and budget constraints of various stakeholders at Air Force operational commands, the Department of Defense, and National agencies
- Represented US Air Force as the operational and technical lead for a multi-agency satellite communications system resulting in quadrupled capability in critical areas of operation
- Led the development of the relevant sections of the requests for proposal (RFP), evaluated responses, and conducted kick off activities for two major program efforts in excess of \$50M

Program Manager**Hanscom AFB, MA***United States Air Force, Electronic Systems Center**June 2015 – Present*

- Supervised a 30-member military, government, and contractor team that executed a \$400M acquisition program integrating key airborne and ground force operations
- Procured, installed, and sustained custom hardware and software suites for over 400 users at 17 worldwide bases

Project Officer**Hanscom AFB, MA***United States Air Force, Electronic Systems Center**June 2002 – June 2004*

- Led a team of 10 military and contractor personnel executing over \$6M in analysis efforts for multiple Air Force customers
- Managed system architecture assessments and applied results to Air Force and Department of Defense budget inputs—increased combat effectiveness of complex command and control systems

FLORIAN MAYR

Co-Founder and Chief Deployment Officer - Mark43, Inc.

EDUCATION

Bachelors of Science, Harvard University Cambridge, MA
Mechanical Engineering, GPA: 3.3 May 2013
 Relevant coursework: Counter-gang research, social network analysis, functional programming and algorithms

United States Military Academy West Point, NY
 Advanced Network Analysis and Targeting Course July 2012

Naval Post Graduate School Monterey, CA
 Core Labs Network Analysis Training Course August 2012

RELEVANT WORK EXPERIENCE

Mark43, Inc. New York, NY
Co-Founder & Chief Deployment Officer Feb. 2012 – Present

- Runs day-to-day support and maintenance for our deployments
- Works with engineering team and our clients on integrations and interfaces
- Works in the field with every department to understand their technical situation and their business workflow processes
- Designs and builds many of our social network analysis algorithms

Draper Labs/Harvard Counter Gang Research Team
Researcher

- Developed image meta-data extractor and mapper
- Performed an in-depth study and analysis of gang graffiti
- Studied effect of land development projects on Springfield, MA

AWARDS

- 2015: Forbes 30 Under 30: Enterprise Tech
- 2014 Inc. Magazine 35 Under 35 Best Entrepreneurs in America
- 2013 Harvard President’s Challenge Grand Prize Winner for Social Entrepreneurship

mark43

Allan Mackiewicz
Client Solutions Manager

EXPERIENCE

Mark43, Inc. New York, NY
Client Solutions Manager Aug 2015 – Present

- Project manager for post-sales product implementations (e.g. Records Management System, Computer Aided Dispatch) and post-launch client management

Dataminr, Inc. New York, NY
Client Solutions Manager Nov 2014 – Aug 2015
Deployment Specialist Aug 2013 – Nov 2014

- Managed all aspects of client engagement for Dataminr Public Sector product deployments from lead generation to contract negotiations
- Successfully deployed the Dataminr for Public Sector product at corporate global crisis watch centers, federal government agencies, DHS fusion centers, High Intensity Drug Trafficking Area (HIDTA) regional offices, state and city offices of emergency management, and state and local law enforcement agencies

National Security Agency Fort Meade, MD
Multi-disciplined Intelligence Analyst 2006-2013

- Proficiently identified time-sensitive signals intelligence regarding transnational issues, corroborated validity of information with open source research, and issued NSA intelligence reports for use in briefings to customers including the U.S. President, Secretary of State, and National Security Council
- Nominated as specialized briefer due to subject matter expertise and excellent briefing skills for NSA intelligence presentations to agency leadership, U.S. ambassadors, State Department officials, and Central Intelligence Agency analysts

Travelex Currency Services, World Bank-IMF Staff Federal Credit Union Washington, DC
Supervisor 2005 - 2006

- Solely responsible for implementing and hosting the first foreign currency ATM in the entire Mid-Atlantic Region, increasing efficiency while reducing costs for Travelex with regards to World Bank/IMF contracts
- Proactively investigated and resolved outstanding issues involving foreign wire transfers and bank drafts for World Bank, International Monetary Fund (IMF) and International Finance Corporation (IFC) staff

EDUCATION

The George Washington University Washington, DC
 B.A., International Relations (International Economics & Development Studies) 2001 – 2005

mark43

Domenico Pellegrini
Client Solutions Associate

EXPERIENCE

Mark43 Inc.
New York, NY: Feb 2016-Present
Client Solutions Associate

- Involved in the full spectrum of post-sale implementation of the Mark43 platform at client sites. Research current technologies, processes, and policies in order to recommend implementation strategies for mass roll-out of the product.

Goldman Sachs
New York, NY: Jan 2015-Feb 2016
Commodities Sales, Base Metals and Industrials, Associate

- Price and structure derivative and physical commodity trades providing comprehensive hedging and supply solutions for industrial and corporate clients. Collaborate with trading, credit, legal, and logistical support groups to create strategic solutions for physical base and precious metals clients.
- Contributed to 200% YTD year-over-year growth for the physical metals business

New York, NY: Apr 2014-Dec 2014
Securities Division, Client Strategy Group, Analyst

- Analyzed business practices and trends within sales and trading identifying gaps and opportunities to better serve client franchise. Planned and drove strategic initiatives with sales and trading leadership across products to capitalize on identified opportunities.
- 2014 Veterans Integration Program participant. 13% acceptance rate (71 total interns) and one of two candidates hired full time within the Securities Division.

Mackey RMS
New York, NY: Jan 2014-Mar 2014
Institutional Sales, Ground Floor Employee

- Sold research management system throughout the investment industry regularly meeting with portfolio managers, compliance officers, technology officers and partners. Led daytoday company sales operations in the New York City area. Shaped business operations, software development, and sales strategy for continued growth and sustainability. Managed accounts for two multibillion dollar multi-strategy hedge funds managing client relations and research databases.

United States Marine Corps, Captain, Infantry Officer
Sangin, Afghanistan: Sept 2012-Dec 2013
Company Advisor, Security Force Assistance Advisor Team 2-2-215

- Advised two Afghan National Army (ANA) companies in Sangin District, Afghanistan. Deployed as the Marine Corps' last combat advisors in the region. Tasked with leading Afghans through the fighting season and responsibly ending the battalion level advising mission. Planned and advised partnered combat operations, force distribution, future operations, and logistical support for 10 patrol bases and 200 soldiers in Afghanistan's most violently contested district.
- Managed and led the advising effort for major counteroffensive to Taliban's 2013 summer offensive. Coordinated with ANA, Afghan Uniformed Police, Afghan and American Special Forces, and coalition force air support. Fought alongside 1,000 Afghans during 3 weeks of sustained combat operations resulting in an end of the Taliban offensive.

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- Planned and led over 40 dismounted and motorized combat patrols in support of the advisor mission. Regularly briefed leaders at every level up to and including Commanding General, regarding force laydown and combat operations.
- Team Leader: "Thrived in dynamic, frictionfilled combat environment of Sangin District. Able to assess the situation, analyze solutions, and articulate his plan with confidence. Poised and composed on and off the battlefield. Always provided timely and accurate reporting while under enemy fire or threat thereof."

Middle East/Camp Lejeune, NC: Nov 2011-Aug 2012

Company Executive Officer, Golf Company, Second Battalion, Second Marines

- Managed the training and combat readiness of 160 Marines. Responsible for the accountability, maintenance, and deployment readiness of over 6 million dollars of weapons and equipment. Selected above 10 First Lieutenant platoon commanders to fill the role of Executive Officer while deployed.
- Planned, coordinated, and led the debarkation and reception of 200 Marines, 25 million dollars of gear, and 33 armored vehicles from US Navy ships after an 11month deployment to the Mediterranean and Middle East areas of operations.
- Planned and led a 2week theatre security cooperation mission in Djibouti, Africa. Coordinated with Jordanian Military and government liaisons for US Customs agricultural inspections in Aqaba, Jordan. Supervised 4 days of contracted maintenance and inspections.
- Battalion Commander: "Top Lieutenant in the Battalion. Hand selected to deploy as an advisor to the ANA."

Mediterranean Sea/Horn of Africa: June 2010-Nov 2011

Rifle Platoon Commander, Company G, 22nd Marine Expeditionary Unit

- Responsible for the training, welfare, combat readiness, and employment of 46 Marines. Consistently the platoon was designated the battalion main effort. Deployed the platoon on 28days' notice in support of NATO operations in Libya.
- Developed the Task Force Golf tactical recovery of aircraft and personnel (TRAP) standard operating procedure, integrating signals intelligence, explosive ordnance disposal, public affairs, and air support. TRAP force commander for Operation Unified Protector and Libya contingency missions enabling NATO air support.
- Commanders: "A fast rising star in the battalion...A naturally confident, demanding and calculated leader with a strong bias for action; he inspires a close knit, aggressive and dependable platoon team."

Quantico, VA: Sept 2009-June 2010

Student, The Basic School and Infantry Officer Course

- Graduated in top 10% of The Basic School class with final rank of 15 out of 237 Marine Corps officers.

EDUCATION

Harvard University, Class of 2009

B.A. History, Focus on United States History.

mark43

Greer Davis
Technical Support Manager

EXPERIENCE

Mark43, Inc.
 New York, NY: Dec 2015 - present
Technical Support Manager

- Manages day to day support team operations and projects
- Oversees creation and editing of all external product documentation including user guides, online knowledge bases, training guides, product release notes, and internal support process documentation
- Tracks support response metrics; reports trends to product team for assessment and makes suggestions for improvements based on user feedback

Bindo Labs, Inc.
 New York, NY: Jun 2014 – Oct 2015

- Managed Client Services team and coordinate processes and communications between Sales, Service, and Development teams
- Served as a product expert and provided direct client and internal technical support
- Conducted one-on-one & group training for new clients via online webinar and in person
- Managed content creation and maintenance for product knowledgebase and internal processes; wrote scripts, created, voiced over, and edited learning videos
- Assisted with product QA and testing

Holiday Cards Unlimited
 Chicago, IL: Oct 2009 – Jul 2012

- Customer support management and coordination for remote staff
- Served as product expert and Wrote process manuals, voiced over and created customer support staff training videos
- Managed large-volume print orders and typeset logos and greetings to send to print

EDUCATION

Roosevelt University, Chicago College of Performing Arts
Master of Music, Vocal Performance

Chicago, IL
 2004-2006

University of Kansas
Bachelor of Music, Vocal Performance

Lawrence, KS
 2000-2004

Vendor must provide a project manager to act as the primary contact with the State.

MARK43 RESPONSE:

Understood and will comply.

The project manager will be required to provide status reports to the State and adhere to the directives of the State point of contact.

MARK43 RESPONSE:

Understood and will comply.

During the course of the project, until Final System Acceptance, the vendors project manager will:

- a. Submit regular status reports, covering such items as:
 - i. Progress of work being performed*
 - ii. Milestones attained*
 - iii. Resources expended*
 - iv. Problems encountered*
 - v. Corrective action taken*
 - vi. Status of issues/problems**

MARK43 RESPONSE:

Understood and will comply.

- b. Participate in project status conference calls*

MARK43 RESPONSE:

Understood and will comply.

- d) The vendor will provide a realistic implementation project schedule that starts at contract signing. The schedule should describe tasks to be performed by the WVSP as well as by the Vendor.*

MARK43 RESPONSE:

Mark43 Sample Project Schedule – High-Level Summary

Mark43 organizes the project schedule into a series of phases. Each of these phases has a particular intent and generates deliverables, resources, and information for future phases of the project.

Implementation Project Schedule – High Level Summary

PROJECT COMMENCEMENT				
NO	TASK	STATUS	Resources Required	
			MARK43	WVSP
1	Sign contract		50%	50%
2	Deliver project plan and project team		80%	20%
3	Resource evaluation and department organization review		50%	50%
4	Build master schedule		80%	20%
TECHNICAL EVALUATION				
NO	TASK	STATUS	Resources Required	
			MARK43	WVSP
5	INTERFACE ASSESSMENT Mark43 works with agency personnel to better understand the technical scope of existing system interfaces.		80%	20%
6	HARDWARE & INFRASTRUCTURE ASSESMENT Mark43 reviews the existing laptops, tablets, and mobile devices that will be responsible for accessing Mark43 applications and ensures that they meet the minimum operational requirements.		90%	10%
7	OPERATIONAL ASSESSMENT Mark43, with the help of the City completes a formal review of existing phase-specific resources need for training, system administration and civilian responsibilities in the application.		70%	30%
8	PRODUCT & ENGINEERING ASSESMENT - Determine scope of necessary configurations - Define additional or unidentified requirements and design		90%	10%

DEPLOYMENT				
NO.	TASK	STATUS	Resources Required	
			MARK43	WVSP
9	CONFIGURE APPLICATION Add agency-specific offense codes, drop down mappings, roles, permissions and users to the application.		90%	10%
10	BUILD INTERFACES Following the interface assessment, build the interfaces that will be sending and receiving data to and from Mark43 applications.		90%	10%
11	POLICY REVIEW Agency policy personnel review how the new Mark43 application may at all have to be reflected in their official policies and standard operating procedures and make those updates.		20%	80%
USER TESTING & ITERATION				
NO.	TASK	STATUS	Resources Required	
			MARK43	WVSP
12	RUN USER TESTING Run initial round of application testing and user acceptance testing to identify any potential operational deficiencies.		60%	40%
13	UPDATE APPLICATION After reviewing any failed tests, Mark43 makes configuration updates to the application to satisfy agency needs come cutover.		90%	10%
TRAINING				
NO.	TASK	STATUS	Resources Required	
			MARK43	WVSP
14	SUBJECT MATTER EXPERT (SME) / SYSTEM ADMIN TRAINING Mark43 master instructors spend dedicated time with agency personnel to provide an in-depth knowledge of the application. These individuals will be responsible for training County trainers.		80%	20%
15	TRAIN THE TRAINER Agency SMEs train instructors who will be responsible for teaching the department masses.		80%	20%
16	MASS TRAINING Trainers train all agency members.		80%	20%

CUTOVER				
NO.	TASK	STATUS	Resources Required	
			MARK43	WVSP
17	DESIGN OPERATIONAL CUTOVER PLAN Mark43 works with City IT, sworn, and training personnel to design a script that will prescribe the steps necessary to successfully launching the application.		80%	20%
18	SYSTEM STABILITY, MONITORING AND ADOPTION Following launch, Mark43 works with the agency to ensure system adoption and reception is positive.		80%	20%
POST-LAUNCH SUPPORT				
NO.	TASK	STATUS	Resources Required	
			MARK43	WVSP
19	DESIGN OPERATIONAL CUTOVER PLAN Mark43 works with City IT, sworn, and training personnel to design a script that will prescribe the steps necessary to successfully launching the application.		80%	20%
20	SYSTEM STABILITY, MONITORING AND ADOPTION Following launch, Mark43 works with the agency to ensure system adoption and reception is positive.		80%	20%
21	SUSTAINED SUPPORT (ONGOING SUPPORT & MAINTENANCE) Mark43 transitions from onsite presence to support mode in which County can successfully manage day-to-day operations surrounding application.		TBD	TBD
IMPLEMENTATION MEETINGS				
NO.	TASK	STATUS	Resources Required	
			MARK43	WVSP
22	WEEKLY STATUS MEETINGS These meetings serve as a time when the project team reviews the master schedule. During this review, parties report on the completion status of tasks on which they're currently working on, identify any tasks that are behind and strategies to correct delinquent tasks, address allocation of resources for upcoming tasks and any tasks to be added to the master schedule.		80%	20%

23	<p>MONTHLY LEADERSHIP This meeting serves as a regular opportunity to brief project sponsors, executive leadership and other controlling parties on project status. Additionally, any critical issues requiring resolution from executive sponsor(s) or department leadership will be addressed here.</p>		80%	20%
IMPLEMENTATION ARTIFACTS & DOCUMENTS				
NO.	TASK	STATUS	<i>Resources Required</i>	
24	<p>PROJECT PLAN This document describes project intent, Mark43 and agency deliverables, a high-level timeline, pricing, and any other agreed-upon terms pertinent to the successful completion of the project.</p>		90%	10%
25	<p>MASTER SCHEDULE This is a Microsoft Project document that describes all project tasks, dependencies, resources, durations and task start and end dates.</p>		90%	10%
26	<p>WEEKLY STATUS REPORTS This is a document that outlines, for both Mark43 and County, an executive summary of the last week, work accomplished in the last week, work looking to be completed in the coming week, identified risks, Mark43 and County needs, and upcoming deliverables.</p>		90%	10%
27	<p>PHASE-SPECIFIC STATUS REPORTS As required, the project team will send out phase-specific status reports to review a particularly important phase's current status or closure. For example, a status report following the completion of the training phase may be sent out to inform all relevant parties of any notable outcomes from training, newly-identified risks, or any other information which the project team believe to be pertinent.</p>		90%	10%
28	<p>RISK REGISTER This document serves a master compilation of all identified project risks. Each item includes a description of the risk, exposure created by the risk, potential impacts of the realization of the risk, and mitigation strategies. Additionally, it includes the</p>		90%	10%

course of action decided by the project team for each risk.			
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Typical resources needed from Police Department:

- **Personnel**
 - **Project Management**
 - **Primary POC(s) to represent:**
 - **Patrol Services**
 - **Investigative Services**
 - **Records**
 - **IT/Admin**
 - **Dispatch**
 - **Evidence Room Personnel for evidence module investigation**
 - **Access to facilities for meetings and training**
 - **Mark43 recommends unescorted access be given to project team members if possible. Mark43 will submit names and other information required for background checks if needed.**
- **Infrastructure**
 - **Server on which to run our interface client (TBD post Department Assessment)**

Department Assessment

Mark43, with input from the WVSP team, will conduct an assessment across several aspects of the department in order to define the final project scope and schedule. The assessment will be led by the Mark43 project manager as part of the Executive Steering Committee, however it will require input from all working groups. The ESC will be required to approve the findings of the assessment before the implementation can begin.

The specific areas covered in the assessment are:

- **Interfaces**
- **Workflow (e.g., report approval)**
- **Technology infrastructure**
- **IT support**
- **Training infrastructure (e.g., police academy)**
- **Policy issues related to RMS**
- **External partners (e.g., courts)**

Feature Development

The Mark43 engineering and deployments team will review technical gaps (i.e., those that can't be fulfilled by workflow changes) identified during the Department Assessment and create implementation documentation for the Cobalt platform. Feedback from the WVSP team is extremely valuable during this phase. Mark43 will hold an implementation review to present the final feature set based on identified gaps. However, all final design decisions will be at Mark43's discretion in accordance with the Cobalt platform architecture and roadmap.

Interface Development

The Mark43 will review external system interfaces that are required to be implemented in Cobalt platform. In some cases, Mark43 may recommend an alternative interface method, such as modifying or phasing out the external system, based on the Cobalt platform architecture and roadmap. The final interface design will be presented at an implementation review. Mark43 will require access to external systems vendors and/or system administrators. This access will be coordinated through the technology working group or Executive Steering Committee as required. For WVSP, the following external interfaces are expected to be implemented as part of this project:

- Property/Evidence push to existing RMS
- Pull CAD data from existing CAD system

RMS Configuration

The Department Assessment will be used to inform specific client-level configuration items available in the RMS. These items will be configured in the RMS by Mark43 and/or WVSP IT personnel. Specific policy or general order changes required will also be drafted and approved in this phase. The final configuration of the RMS will be made available for access in the training environment at the end of this phase. Specific configuration items accomplished in this phase are:

- Configure approval chain
- Configure picklist values
- Configure charge list
- Setup user roles
- Enroll users
- Setup configurable fields
- Customize Headers and Footers on Printed Police Reports

RMS Support Planning

Mark43 will develop a support model that integrates into existing WVSP procedures. This model may require all calls to come directly to Mark43 support personnel or define Mark43 as an escalation point in the existing process. The service level agreement (SLA) to be used post-launch will also be drafted. The support model and SLA must be approved by the Executive Steering Committee and/or WVSP procurement officials as required.

RMS Testing

Once the RMS is available in the test environment, WVSP personnel may begin testing individual components and the end-to-end RMS system. The specific method for each test (and underlying assumptions) will be set out in a test plan drafted by the technology working group and approved by the ESC. Specific tests that will be performed are:

- Interface Testing
- Network Load Test
- System Test
- Support Model Test

RMS Training

Based on the specific findings of the Department Assessment, the training working group will develop a plan for training the WVSP force. As a starting point, Mark43 plans to use a “co-training” model to implement the RMS. The intent of this model is to leave behind a cadre of WVSP personnel who are fully qualified to teach the platform in the future while ensuring a low risk transition for current personnel. Additional training models, such as train-the-trainer, direct training, and virtual training will also be considered. In the “co-training” model:

- Mark43 Master Instructors will conduct the courses for super users, administrators, and support personnel
- Super users will conduct courses for the remainder of WVSP. Each session will have a Mark43 Master Instructor present to assist.
- Mark43 will provide the following materials for all training courses
 - Lesson Plans
 - Mark43 Application (Training Environment)
 - Slide Show
 - Quick Help Guides
 - User Guide
- The courses offered by Mark43 as part of the RMS implementation can be found in Appendix A.

RMS Cutover

Mark43 will prepare a checklist of “go/no-go” items for approval by the Executive Steering Committee. As the cutover date approaches, Mark43 will develop a cutover plan which will detail the minute-by-minute steps required to transition from the existing RMS to the Cobalt RMS. The cutover plan will also recommend staffing levels around WVSP facilities and on-call requirements during the days surrounding the launch. The final “go” decision to execute the cutover will be made by the WVSP project sponsor based on the items in the

4.5.6 Training

The vendor must provide custom training on the new system to all users. This training will be a mix of train-the-trainer and end-user training, as agreed upon by the vendor and the WVSP. The WVSP will provide the training facilities and workstations for the training. The vendor will provide:

- a) *A training program for the WVSP project implementation team that includes the training necessary to understand the overall system architecture, interface configurations, data import/export capabilities and workflow configuration options.*

MARK43 RESPONSE:

Mark43 Training Package Overview

Mark43 will hold on-site training sessions which include interactive lessons accompanied by leave-behind material. Mark43 trainers will be on-site to provide instruction to West Virginia’s Police Department’s trainers and provide support during instruction. Our trainers will be on-site for the full duration of the training program agreed upon during project kick-off.

Mark43 Training Principles

Mark43’s training curriculum is based on the general principles proposed by Malcolm Knowles (outlined below):

MOTIVATION	<ul style="list-style-type: none"> • Users will be internally motivated rather than externally pressured into learning. E.g., users will be engaged in learning how to use Cobalt because it will help them better do their job.
ORIENTATION	<ul style="list-style-type: none"> • Training is scenario-based and objective-driven.
NEED TO KNOW	<ul style="list-style-type: none"> • Users will need to understand motivation behind why they’re being trained. Hence, “Why Mark43 Cobalt?”
READINESS	<ul style="list-style-type: none"> • Users will better respond to training when they understand why and how it impacts their day-to-day work and why it’s relevant to them.
FOUNDATION	<ul style="list-style-type: none"> • Training sessions simulating in-field activities will give trainees hands-on experience and help them better retain information.

- b) *A training program for application administrators that include the training necessary to configure, monitor and administer the system's technical and functional aspects.*

MARK43 RESPONSE:

Understood and will comply.

- c) *A training plan and training documentation to support the training of all end users (e.g.records administrators and secretaries) in the functionality of the system.*

MARK43 RESPONSE:

Understood and will comply.

- d) *All training material shall be provided at least three (3) weeks prior to the start of any training course.*

MARK43 RESPONSE:

Understood and will comply.

- e) *A training system that will allow the users to simulate live operations for the System without degrading system performance.*

MARK43 RESPONSE:

Understood and will comply.

Except for post-implementation training, all training must be completed in a satisfactory manner before the WVSP will give formal final system acceptance.

MARK43 RESPONSE:

Understood and will comply.

Mark43's detailed training schedule and plan proposed for WVSP is available for review on following pages.

Mark43 Training Projections for The State of West Virginia

A sample master training schedule proposed for The State of West Virginia is available for review. Note, schedule may change based on WVSP needs addressed during project kick-off and implementation phases.

Approximate PD Members (including sworn and civilian employees)	700
Super users (5% of Department)	35 super users
Non-super users	665 non-super users
Super User Training Days Required	1/2 Day
Non-super users	4 hrs per class
Total Number of Classes (15-student classes)	25 Classes
* Three Concurrent Training Rooms for Masses	
Approximate Total Training Length	16 Days

Mark43 Training Sessions

Lesson Plan	Details	Trainees	Trainer
Train the Trainer SME Training – Officer	Mark43 Master Instructors spend dedicated time with future department officer trainers to provide an advanced, comprehensive understanding of the application, particularly concerning search and reporting.	Department members intended to train deputy trainers; often academy personnel.	Mark43 Master Instructor
Train the Trainer SME Training – Investigations	Mark43 Master Instructors spend dedicated time with future department investigative trainers to provide an advanced, comprehensive understanding of the application, including reporting, but particularly search and case management.	Department members intended to train investigative trainers; often academy personnel.	Mark43 Master Instructor
Train the Trainer SME Training - Field Operations/Patrol	Mark43 Master Instructors spend dedicated time with future department patrol trainers to provide an advanced, comprehensive understanding of the application.	Department members intended to train patrol trainers; often academy personnel.	Mark43 Master Instructor
Train the Trainer SME Training – Records Personnel and Other Administrative Personnel	Mark43 Master Instructors spend dedicated time with department members who may be involved in fulfilling civilian duties. These can include booking, expungements, NIBRS coding, and offense code mapping and management.	Members/civilians that may be in charge of: expungements, booking, NIBRS coding.	Mark43 Master Instructor
Train the Trainer SME Training - System Admin	Mark43 Master Instructors spend dedicated time with department admins to provide an advanced, comprehensive understanding of the application, particularly concerning user setup, permission management, and application configuration.	Members/civilians that may be in charge of: system administration and configuration, attribute configuration management, offense code management,	Mark43 Master Instructor

		user enrollment and management.	
Help Desk Training	Mark43 Master Instructors spend dedicated time with department members who will support troubleshooting responsibilities after cutover. These can include questions concerning password resets, browser issues, and printing issues.	Support members meant to help with basic application functions, including: password retrieval; browser issues; diagnosing printing issues.	Mark43 Master Instructor
Mass Training – Officer	Department trainers (having been trained by department SMEs) lead a class that provides comprehensive instruction for sworn deputy members. The main subjects covered are search and reporting.	Department deputy rank-and-file	Department Officer Trainer
Mass Training – Investigations	Department trainers (having been trained by department SMEs) lead a class that provides comprehensive instruction for sworn investigative members. The main subjects covered are search and case management with a lesser emphasis on reporting.	Department investigative rank-and-file.	Department Investigations Trainer
Mass Training - Field Operations/Patrol	Department trainers (having been trained by department SMEs) lead a class that provides comprehensive instruction for sworn patrol members. The main subjects covered are search and reporting.	Department patrol rank-and-file.	Department Patrol Trainer

Mark43 Lesson Plans – SME (Subject Matter Experts)

Class Type	Lesson Plan
Train the Trainer SME Training – Officer	<ol style="list-style-type: none"> 1. Describe role as department Officer SME 2. Why Mark43? 3. Consumer websites vs. installed thick clients 4. Personal dashboard and reports dashboard 5. Creating a new report 6. Report type overview 7. Common UI elements in Mark43’s Cobalt system 8. Submitting reports 9. Supplements paradigm 10. Approving and rejecting reports
Train the Trainer SME Training – Investigations	<ol style="list-style-type: none"> 1. Describe role as department Officer SME 2. Why Mark43? 3. Consumer websites vs. installed thick clients 4. Personal dashboard and reports dashboard 5. Creating a new report 6. Report type overview Common UI elements in Mark43’s Cobalt system 7. Submitting reports 8. Supplements paradigm 9. Approving and rejecting reports 10. Case dashboard and creating a case 11. Case summary and reports 12. Managing case personnel 13. People/Organizations/Items 14. Case notes, case reviews and changing case status
Train the Trainer SME Training - Field Operations/Patrol	<ol style="list-style-type: none"> 1. Describe role as department Field Operations/Patrol SME 2. Consumer websites vs. installed thick clients 3. Why Mark43? 4. Personal dashboard and reports dashboard 5. Creating a new report 6. Report type overview 7. Approving and rejecting reports
Train the Trainer SME Training – Records Personnel and Other Administrative Personnel	<ol style="list-style-type: none"> 1. Describe role as department Records Personnel and Administrative SME 2. Why Mark43? 3. Consumer websites vs. installed thick clients 4. Personal dashboard and reports dashboard 5. Creating a new report 6. Report type overview 7. Common UI elements in Mark43’s Cobalt system 8. Submitting reports

	<ol style="list-style-type: none"> 9. Supplements paradigm 10. Approving and rejecting reports 11. Booking 12. Expungements
<p>Train the Trainer SME Training - System Admin</p>	<ol style="list-style-type: none"> 1. Describe role as department System Admin SME 2. Why Mark43? 3. Consumer websites vs. installed thick clients 4. Reporting, high level 5. Case management, high level 6. Creating users 7. Building roles 8. Enrolling users in roles 9. Attribute management 10. Approval chains 11. Field management
<p>Help Desk Training</p>	<ol style="list-style-type: none"> 1. Describe role as department Help Desk 2. Why Mark43? 3. Consumer websites vs. installed thick clients <ol style="list-style-type: none"> a. Diagnosing issues on a web client vs. an installed client 4. Browser compatibility 5. General user management overview <ol style="list-style-type: none"> a. Resetting passwords b. Checking duty statuses c. Understanding roles and permissions <ol style="list-style-type: none"> i. Impact to read-only and case access 6. Printing
<p>Mass Training – Officer</p>	<ol style="list-style-type: none"> 1. Why Mark43? 2. Consumer websites vs. installed thick clients 3. Personal dashboard and reports dashboard 4. Creating a new report 5. Report type overview 6. Common UI elements in Mark43’s Cobalt system 7. Submitting reports 8. Supplements paradigm 9. Approving and rejecting reports
<p>Mass Training – Investigations</p>	<ol style="list-style-type: none"> 1. Why Mark43? 2. Consumer websites vs. installed thick clients 3. Personal dashboard and reports dashboard 4. Creating a new report 5. Report type overview 6. Common UI elements in Mark43’s Cobalt system 7. Submitting reports 8. Supplements paradigm

	<ol style="list-style-type: none"> 9. Approving and rejecting reports 10. Case dashboard and creating a case 11. Case summary and reports 12. Managing case personnel 13. People/Organizations/Items 14. Case notes, case reviews and changing case status
<p>Mass Training – Field Operations/Patrol</p>	<ol style="list-style-type: none"> 1. Why Mark43? 2. Consumer websites vs. installed thick clients 3. Personal dashboard and reports dashboard 4. Creating a new report 5. Report type overview 6. Common UI elements in Mark43’s Cobalt system 7. Submitting reports 8. Supplements paradigm 9. Approving and rejecting reports

Based on previous successful training events, Mark43 recommends a combination of direct and “Train the Trainer” methods. In this training method, supervisory levels will receive training tailored to their purposes, as will the systems staff responsible for administering and maintaining the system.

Note on SME vs. “Train the Trainer” lesson plans

While subject matter expert (SME) lesson plans appear similar, SME training is meant to be highly in-depth. There is more focus on field-level data, “do’s and don’ts,” and less focus on andragogy (SMEs are expected to have a certain degree of training in adult education).

“Train the trainer” training still aims to provide an in-depth look at the Cobalt application but also works to ensure trainers are capable of instructing other users. Through “teach-back” exercises and coordinated lesson plan review, “train the trainer” courses increase the likelihood that trainers will be competent and effective.

Training Materials, User Guides and FAQs

Training materials will be provided in hard copy and soft copy:

Mark43 Cobalt Training Materials	
Lesson plans	See below for master listing of lesson plans
Slide show	Visual training aids for lesson plans
Videos	Visual training aids showing users how common tasks are performed
User Guide	Full User Guide illustrating and detailing every function on the Cobalt platform.
Quick Help Guides	Condensed version of the User Guide based on job function addressing common tasks and questions.
Online FAQs	Answers to frequently asked questions available on-line to be accessed anytime, anywhere

4.5.7 System Testing

The vendor must provide a system implementation that includes adequate provisions for functional, performance and reliability testing before final system acceptance. The WVSP requires the vendor's involvement in the development and execution of all tests plans to assure the system delivers the expected results.

MARK43 RESPONSE:

Mark43 includes test plans as part of the proposed Solution. These plans are included as deliverables in the project plan to ensure Cobalt RMS behaves as expected by WVSP.

Cobalt RMS Test Plans	
Functional Test Plan – Core System	<p>Purpose: Test each function in Cobalt RMS.</p> <p>Test Plan Description: Cobalt RMS is delivered as a SaaS product and all QA is performed in-house. Each function in Cobalt RMS is tested rigorously by Mark43’s QA team. Work flow testing is accomplished via parallel processing.</p>
Functional Test Plan – Interface	<p>Purpose: Test each interface built in Cobalt RMS as requested by WVSP.</p> <p>Test Plan Description: A functional test plan will be included for each interface requested and agreed upon as part of the RMS for WVSP.</p> <p>Actual test plans will be developed during interface specification assessment once details for each interface are provided during project kick-off.</p> <p>Functional Test Plan [Interface] Process:</p> <ol style="list-style-type: none"> 1. Determine impacted functionality/features in the target system 2. Determine acceptance criteria 3. Ensure acceptance criteria is met
Performance Test Plan	<p>Purpose: Test performance of Cobalt RMS in production and in the field.</p> <p>Test Plan Description: One of Mark43’s key indicators of measuring a successful implementation is to ensure proper performance in the field. Mark43 performs a performance test before each release. Mark43 will provide WVSP with testing methodologies and test</p>

	<p>results. Since Mark43 hosts the application on AWS with shared resources, Mark43 does not perform any client-specific testing.</p>
<p>Acceptance Test Plan</p>	<p>Purpose: Mutual sign-off on features and functions delivered in Cobalt RMS.</p> <p>Test Plan Description: Enables parties to test and sign-off Through regular project meetings with key stakeholders, Mark43 can perform reviews with stakeholder groups and ensure functionality performs as expected.</p>
<p>Reliability Test Plan</p>	<p>Purpose: Test Cobalt RMS availability and uptimes.</p> <p>Test Plan Description: Mark43 can provide WVSP with testing methodologies and test results. Mark43 does not provide any client-specific reliability testing since Cobalt RMS is a multi-tenant cloud application hosted on AWS.</p>
<p>Final Project Acceptance</p>	<p>Purpose: Final sign-off on Cobalt RMS delivery, installation and training as an indication of successful implementation.</p> <p>Test Plan Description: Mark43’s implementation team, headed by the designated Project Manager will develop a go/no-go cutover checklist and will be reviewed during meetings up until launch. The project will be accepted only if all items on the checklist are passed.</p>

4.5.8 Data Conversion

The vendor must include data conversion. The databases to be converted include the Motorola NET RMS data. The vendor will work with the WVSP to determine the precise process (including data verification and testing) which will be used to perform the data conversion. All data must be converted before go-live and must be available to the users on the new system at that time.

MARK43 RESPONSE:

Mark43 will perform legacy system data conversion as part of the proposed Solution. Data migration, validation, quality assurance and approved validation will be key tasks performed to complete a successful data conversion from Motorola NET RMS.

Conversion services take place on-site at your office and data is also accessed remotely by Mark43’s deployment engineering team. A high-level overview of Mark43’s approach to data conversion is included for review.

Minimum information required prior to conversion:

1. Number of tables to be migrated
2. Number of records, quality and consistency of legacy data
3. Cutover method (run in parallel or set a cutoff date/time)

Goals/Overview:

- Maintain statistical continuity
 - The department should be able to pull comparative crime statistics across legacy data and Cobalt RMS data
- Provide situational awareness
 - Users should be able to view persons and other key entities and be able to view historical information about that entity
 - Detectives should be able to query legacy data for investigative purposes
- Provide court documents
 - Users should be able to have access to original PDF reports from the legacy system. This can be accomplished by:
 - **Option 1:** Building a searchable repository of PDF reports that users can search, access, and print reports from
 - **Option 2:** Attaching PDF reports from the legacy system to reports in the new system that users can search, access, and print

Method:

- With the help of the department, Mark43 will conduct a mapping of data fields from the legacy RMS to Cobalt RMS
- The Mark43 Interface Server will pull data directly out of the legacy RMS database and migrate it over via Cobalt's bulk data ingestion API
- Mark43 will follow a standard data validation plan that involves counts of key data elements, manual validation on a sample of data, and comparison of key statistical measures between the legacy system and Cobalt RMS
- The City will conduct data validation according to its acceptance criteria based on data migrated over within Cobalt RMS application
- Mark43 will make any edits as identified by the validation process

Out of Scope:

- Audit data (including report history)
- Data elements not supported in Cobalt RMS
 - Data elements that exist in the legacy system but not in Cobalt RMS may be migrated over as free text or be dropped altogether
- Data cleanup not directly related to the mapping of data fields and attributes
- Custom validation outside of the agreed-upon standard validation plan

Sample data conversion overview

The following key tables and data elements will be migrated:

Table Group	Size	Elements Migrated
Arrests	~56,000 rows	<ul style="list-style-type: none"> • Defendant • Address • Arrest Number • Arrest Datetime • Statement Taken By • Reporting District • County • Arrest Type • Status Date • Expungement • Booking Number • Warrant Number • Court Number • Arrest Charge • Arresting Officer
Field Investigations	~37,000 rows	<ul style="list-style-type: none"> • Field Contact Subject • Address • Investigation Number • Contact Datetime • Contact Type • Contact Reason • Reporting District • InformationSource • Field Investigation Officer • Field Investigation Vehicle
Impounded Vehicles	~20,000 rows	<ul style="list-style-type: none"> • Owner • Vehicle • Address • Impounded Number • Impound Datetime • Impound Lot • Impound Reason

<p>Cases</p>	<p>~160,000 rows</p>	<ul style="list-style-type: none"> • Towed By • Impounded Vehicle Damage • Impounded Vehicle Personnel <hr/> <ul style="list-style-type: none"> • Case Number • Address • Status • Disposition • Clearance Date • County • Review Level • Review Type • Purge Type • Purge Date • Associated Case • Associated Number • Associated Subject • Contributing Officers • IBR Info • Offense • Offense Weapon • Subject
<p>Incidents</p>	<p>~1,000,000 rows</p>	<ul style="list-style-type: none"> • Address • Incident Number • Incident Type • CFS • Review Level • Review Type • Associated Case • Subject • Vehicle
<p>People / Organizations</p> <ul style="list-style-type: none"> • GlobalJacket 	<p>~800,000 rows</p>	<ul style="list-style-type: none"> • Adult • Juvenile • Business • Alias • Nickname • Gang • Animal • Other

<p>Property</p> <ul style="list-style-type: none"> • GlobalItem • GlobalVehicle • GlobalGun 	<p>~175,000 rows</p>	<ul style="list-style-type: none"> • Owner • Property Type • Property Class • TagNumber • ItemNumber • PropertyValue • Current Value • InsuranceCompany • PolicyNumber • Property Status • Quantity • Unit Of Measure • Year Manufactured • Make • Model • Style • Color • VIN • Registration • Number/Date/Type/Year/State • Expiration Date • Serial Number • Caliber • Type
<p>Addresses</p>	<p>~600,000 rows</p>	<ul style="list-style-type: none"> • House Number • Street Name • City • State • Zip • Lat • Lon • Street Type • Location Type • Venue Name

<p>Personnel</p> <ul style="list-style-type: none"> • Personnel • SecurityUser • UserPermission 	<p>~505 rows</p>	<ul style="list-style-type: none"> • Employee ID • First Name • Last Name • Middle Name • Suffix • Phone Number • Employee Type • Status • Status Date • Race • Sex • Hair Color • Eye Color • DOB • Date Hired
<p>Order Of Protection State Accident Ticket And Citation</p>		<p>Migrated as attachment reports, with only event information migrated:</p> <ul style="list-style-type: none"> • Event Date/time • Responding Officer • Weather • Location • Reporting Person • Misc Custom Stat Fields

WVSP would participate in the data conversion process by:

- Providing data or access to data in a timely manner immediately following project kick-off
- Available to answer questions regarding the data
- Available for discussion on data abnormalities and how to proceed (if necessary)
- Testing of search results to ensure data is appearing as expected
- Sign-off of data conversion acceptance

Mark43 finds that each data conversion is unique based on the complexity and cleanliness of the legacy data, the scope of the conversion, and the method of cutover.

During the project planning and implementation phase, there will be various checkpoints and monitoring of the project being performed by the Project Manager and Client Solutions Manager to make sure data conversion tasks are meeting agreed upon timelines:

- Confirm interpretation of the project is in line with WVSP's requirements
- Quality verification of data conversion including structures

4.5.9 Reports

The vendor must provide the ability of the WVSP to produce reports from the data obtained through the current system for reports and postings.

MARK43 RESPONSE:

Cobalt RMS has an open API and can integrate with reporting packages such as Tableau, Crystal Reports and Cognos allowing WVSP to produce statistical reports ad hoc. Additionally, Cobalt includes a very advanced search feature where users can search by an extensive list of filters to customize their search to suit data they wish to see. These searches can be saved for easy retrieval at a future time.

A custom statistical reporting module is on the Cobalt product roadmap.

Letters of Reference

References

Mark43 is including a letter of reference from our current client, Downey Police Department in California. All other references will provide a verbal reference to WVSP. The letter of reference and references are available on following pages for review.



City of Downey

August 9, 2016

Colonel Jay Smithers
West Virginia State Police
701 Jefferson Road
South Charleston, WV 25309

Dear Colonel Smithers:

Mark43 is currently implementing their Cobalt RMS at my department. Given our interaction so far, Mark43 has been very attentive to my department's unique needs, have been very transparent with open lines of communication, and are moving far quicker than any vendor I've dealt with in the past. They are one of the very few companies in the public safety software space bringing a refreshingly new take on building mission essential tools. I highly recommend West Virginia State Police consider them for an RMS upgrade.

Feel free to contact me directly at (562) 904-2321 if I can offer you any assistance or answer any questions you may have.

Sincerely,

Captain Dean Milligan
Downey Police Department

:dm



City of Downey

DEAN MILLIGAN
CAPTAIN
FIELD OPERATION DIVISION

POLICE DEPARTMENT
10911 BROOKSHIRE AVENUE
DOWNEY, CA 90241

562.904.2321
Fax 562.904.6718
dmilligan@downeyca.org

Future Unlimited

POLICE DEPARTMENT | 10911 BROOKSHIRE AVENUE | POST OFFICE BOX 7016 | DOWNEY, CALIFORNIA 90241-7016 | 562-861-0771

Mark43 Cobalt RMS References

NO.	AGENCY, CONTACT	YEARS ON SYSTEM	SYSTEM INSTALLED	AGENCY SIZE
1.	<p>Washington, D.C. Metropolitan Police Department Address: 300 Indiana Avenue, NW, Room 5059 Washington, D.C. 20001 Contact: Commander Ralph Ennis, Commander, Chief of Staff to the Chief of Police E: ralph.ennis@dc.gov P: (202) 497-1470</p>	1	<p>Cobalt – RMS CAD, Live Scan, Microsoft Aware NCIC OLD RMS CJCC Courts Jails DMV Active Directory PeopleSoft</p>	<p>Agency Size: 4,000 Sworn Total Deployment Size: 15,000 Sworn Population: ~1,000,000 (during the day including commuters)</p>
2.	<p>Torrance Police Department (CA) Address: 3300 Civic Center Drive Torrance, CA 90505 Contact: Chief Mark Matsuda, Chief of Police E: mmatsuda@torranceca.gov P: (310) 901-1074</p>	3	<p>Cobalt – Analysis</p>	<p>Agency Size: 200 Sworn Population: 147,000</p>
3.	<p>Camden County Police Department (NJ) Address: 800 Federal Street, Camden, NJ 08103 Contact: Chief Scott Thomson, Chief of Police P: (856) 757-7440</p>	1	<p>Cobalt – RMS, CAD</p>	<p>Agency Size: 400 Sworn Population: 511,000</p>
4.	<p>Jersey City Police Department (NJ) Address: 207 7th St, Jersey City, NJ 07302 Contact: Bob Baker, Director of Public Safety P: (201) 547-5477</p>	N/A	<p>Currently in implementation phase. Cobalt - RMS, CAD</p>	<p>Agency Size: 912 Sworn Population: 262,000</p>
5.	<p>Downey Police Department (CA) Address: 10911 Brookshire Ave, Downey, CA 90241 Contact: Lieutenant Leslie Murray Administrative Division E: lmurray@downeyca.org P: (562) 904-2302</p>	N/A	<p>Currently in implementation phase. Cobalt - RMS, CAD</p>	<p>Agency Size: 111 Sworn Population: 114,000</p>

<p>6.</p>	<p>South Bay Regional Public Communications Agency (CA) Address: 4440 W. Broadway, Hawthorne, CA 90250 Contact: Bill Romesburg Project Consultant E: wromesburg@cit-com.com P: (951) 506-9851</p>	<p>N/A</p>	<p>Awarded Cobalt - RMS, CAD</p>	<p>Agency Size: 1,300 Sworn Population: 114,000</p>
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As reference to our implementation experience and technical skill, we point to the successful launch of our system in one of the largest law enforcement agencies in our country, Washington, D.C. Metropolitan Police Department with zero downtime since launch. We hope our prior performance offers positive indication of Mark43's ability to provide world-class implementation of a multi-tenant SaaS Solution.

Purchasing Affidavit


See following page.

Signed RFP Forms

See following pages for:

1. RFP Page
2. RFP Acknowledgement Page
3. RFP Certification and Designation Page
4. Acknowledgement of Addenda

RFP Page

	Purchasing Division 2019 Washington Street East Post Office Box 58130 Charleston, WV 25305-0130	State of West Virginia Request for Proposal 31 -- Public Safety
	Proc Folder: 230518 Doc Description: Records Management System (RMS) Proc Type: Central Contract - Fixed Amt	

Date Issued	Solicitation Closes	Solicitation No	Version
2016-07-19	2016-08-16 13:30:00	CRFP 0612 DPS1700000001	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number

Mark43, Inc.
 28 E. 28th Street 12th Fl,
 New York, NY 10016
 P: (212) 651-9154

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
 (304) 558-2544
 tara.l.yle@wv.gov

Signature X *Matthew N. Pleg* FEIN # 46-1256121 DATE September 9, 2016
 All offers subject to all terms and conditions contained in this solicitation

RFP Acknowledgement Page

REQUEST FOR PROPOSAL
(West Virginia State Police, Records Management System)

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Mark43, Inc.

(Company)

Matt Polega

Matt Polega, Co-founder and VP of Operations

(Representative Name, Title)

(212) 651-9154

(Contact Phone/Fax Number)

August 5, 2016

(Date)

RFP Certification and Designation Page

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Matthew N. Polega
 (Name, Title)
Matt Polega, Co-founder and VP of Operations
 (Printed Name and Title)
28 E. 28th Street 12th Fl, New York, NY 10016
 (Address)
(212) 651-9154
 (Phone Number) / (Fax Number)
matt@mark43.com
 (email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Mark43, Inc.
 (Company)

Matthew N. Polega
 (Authorized Signature) (Representative Name, Title)

Matt Polega, Co-founder and VP of Operations
 (Printed Name and Title of Authorized Representative)

September 9, 2016
 (Date)

(212) 651-9154
 (Phone Number) (Fax Number)

Revised 05/04/2016

RFP Acknowledgement Page

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFP DPS170000001

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input checked="" type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that 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.

Mark43, Inc.
Company

Matt Polega Matt Polega, Co-founder and VP of Operations
Authorized Signature

September 9, 2016
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

W-9



See following page.

Form **W-9**
(Rev. August 2013)
Department of the Treasury
Internal Revenue Service

**Request for Taxpayer
Identification Number and Certification**

Give Form to the
requester. Do not
send to the IRS.

Name (as shown on your income tax return)
[Redacted]

Business name/disregarded entity name, if different from above
[Redacted]

Check appropriate box for federal tax classification:
 Individual/sole proprietor C Corporation S Corporation Partnership Trust/estate
 Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____
 Other (see instructions) ▶ _____

Exemptions (see instructions):
 Exempt payee code (if any) _____
 Exemption from FATCA reporting code (if any) _____

Address (number, street, and apt. or suite no.)
[Redacted]

City, state, and ZIP code
[Redacted]

List account number(s) here (optional)
[Redacted]

Requester's name and address (optional)
[Redacted]

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Notes: If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number
[Redacted]

Employer identification number
[Redacted]

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below), and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here Signature of U.S. person ▶ [Redacted] Date ▶ [Redacted]

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.
Future developments. The IRS has created a page on IRS.gov for information about Form W-9, at www.irs.gov/w9. Information about any future developments affecting Form W-9 (such as legislation enacted after we release it) will be posted on that page.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, payments made to you in settlement of payment card and third party network transactions, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:
- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
 - Certify that you are not subject to backup withholding, or
 - Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the

withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1448 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

Resident Vendor Preference

Not applicable. Mark43, Inc. does not have offices located in West Virginia.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, 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: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. 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.

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, defaulted 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 accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"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.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Mark43, Inc.

Authorized Signature: [Signature] Scott Crouch, CEO Date: 08/11/2016

State of NY

County of New York, to-wit:

Taken, subscribed, and sworn to before me this 11th day of August, 2016

My Commission expires 08/30, 2016.

AFFIX SEAL HERE

NOTARY PUBLIC [Signature]

Purchasing Affidavit (Revised 06/01/2015)

MICHAEL SENZ
Notary Public-State of New York
No.01SE0114852
Qualified in New York County
Commission Expires Aug. 30, 2016