Section 1 – General Information				
RFR Number: (Reference BPO Number)	OTHS/OTHS/14-032-S	/N00B4400363		
Functional Area (Enter One Only)	10 - IT Management Consulting Services			
	Labor Categ	ory/s		
A single support staff or support groups of up to five members may be engaged for up to six months without renewal options. Awards for Major IT Development Project (MITDP)/Program Manager/Deputy PMs may have tenure of one base year with up to two optional years, or through the end of the project within the Master Contract term. An RFR is limited to only labor categories defined in the CATS+ RFP.				
Enter the labor category/s to be prov	ided:			
1. Project Manager (Senior)				
Anticipated Start Date	May 1, 2014			
Duration of Assignment	One (1) year base period: May 1, 2014 – April 30, 2015 Two (1) one year renewal options: May 1, 2015 to April 30, 2016 (option year #1) May 1, 2016 to April 30, 2017 (option year #2)			
Designated Small Business Reserve?(SBR): (Enter "Yes" or "No")	No			
MBE Goal, if applicable	E Goal, if applicable 0%		0%	
Issue Date: mm/dd/yyyy	04/02/2014	Due Date: mm/dd/yyyy	04/23/2014TBD	
		Time (EST): 00:00 am/pm	2:00 pm	
Place of Performance:	Department of Human Resources(DHR)Office of Technology for Human Services (OTHS) 1100 Eastern Blvd. Essex, MD 21221.			
Special Instructions:  (e.g. interview information, attachments, etc.)	Interviews will be directed by DHR CIO Ms. Kenyatta Powers. Interviews will be conducted at 1100 Eastern Blvd., Essex MD. The specific date and time will be furnished after receipt of all resumes. Candidates submitting resumes must be available for an interview on that date. Interviews will be in-person and will be conducted using a standardized set of interview questions for all candidates.			
Security Requirements (if applicable):	<ol> <li>Selected personnel shall pass a background check.</li> <li>Unless otherwise determined by DHR, and in compliance with the below, the</li> </ol>			

**All Master Contract Provisions Apply** 

selected personnel shall provide their own laptop (hardware) and software. The selected personnel's hardware and software shall meet or exceed DHR's standards for virus protection and security. All deliverables produced shall be produced in a version of software that is compatible with DHR's version. For example Microsoft Office 2003 - MS Word, PowerPoint, Excel, and Adobe Pro Version 7.

- 3. When visiting State facilities, the selected personnel shall adhere to all State security requirements. This includes presenting photo ID when inside State facilities and presenting ID upon request at any time. The selected personnel shall:
  - A. Abide by the State's Security policies and procedures in force at each site.
  - B. Comply with the requirements of the State of Maryland Department of Information Technology Security (DoIT) Security Policies and Standards, including cooperation and coordination with State and federal auditors, DoIT and other compliance officers. DoIT's policies can be found at:

http://doit.maryland.gov/support/pages/securitypolicies.aspx, and include topics such as:

- Information Security Policy v3.1
- Cyber Security Evaluation Tool (CSET)
- Technical Security Plan Template
- Mobile Device Security Policy
- C. Agree to enter into a connectivity agreement with DHR. The agreement shall include, but not be limited to, the following:
  - Refraining from connecting any non-State owned or unapproved computers to any State network without prior permission and assurances that the State security standards are met.
     Commercially available diagnostic tools may receive a blanket approval for use on the network, State owned PCs or other equipment as necessary to diagnose and resolve incidents.
  - 2. Meeting or exceeding State security standards.
  - 3. Once established, not modifying security provisions for firewalls, client, and server computers without written State approval.
  - 4. Maintaining current updated virus software and virus definition files that are enabled to perform real time scans on all selected personnel supplied hardware.
  - 5. Disallowing dialup modem use while attached to the State network
  - 6. Refraining from installing or utilizing remote control or file sharing software unless explicitly approved by the State in writing.
  - 7. Signing any documents that are reasonably necessary to keep the Contractor in compliance with the State IT Security Policies.

Failure to comply with State security requirements on the part of the selected personnel will be regarded as a breach of the Contract and may be followed by termination for default.

**All Master Contract Provisions Apply** 

#### **Invoicing Instructions**

- 1. Invoices shall be submitted by the 15<sup>th</sup> business day of the month following the month the services were provided and shall be accompanied by status reports that account for all hours billed and the activity that was being performed. Upon verification and acceptance of the invoices, payment will be made to the Master Contractor.
- 2. The Master Contractor shall invoice as follows:
  - 1. Annual Labor Rate: Task Orders awarded at the Annual Labor Rate shall be invoiced monthly for 1/12 the Annual Labor Rate.
  - 2. Hourly Labor Rate: Task Orders awarded at the Hourly Labor Rate shall be invoiced monthly for actual hours x Labor Rate
- 3. Except as provided herein, payments to the Master Contractor shall be governed by the terms and conditions defined in the CATS+ Master Contract. Invoices for payment shall contain the Master Contractor's Federal Employer Identification Number (FEIN), as well as the information described below, and must be submitted to DHR CIO, Ms. Kenyatta Powers, for payment approval.
  - A. The DHR/OTHS, labor category, associated Contract Agreement number, date of invoice, period of performance covered by the invoice, and a Contractor point of contact with telephone number.
  - B. An original of each invoice and supporting documentation submitted for payment to:

Attention: Ms. Kenyatta Powers, Chief Information Officer Department of Human Services/OTHS 1100 Eastern Blvd.
Essex, MD 21221

4. Invoices for final payment shall be clearly marked as "FINAL" and submitted when all work requirements have been completed and no further charges are to be incurred under the Contract. In no event shall any invoice be submitted later than 60 calendar days from the Contract termination date.

Section 2 – Agency Procurement Officer (PO) Information			
Agency / Division Name:	Maryland Department of Human Resources, Office of Technology for Human Services		
Agency PO Name:	Ms. Leah Hinson	Agency PO Phone Number:	410-238-1339
Agency PO Email Address:	Leah.Hinson@Maryland.Gov	Agency PO Fax:	410-238-1260
Agency PO Mailing Address:	Department of Human Services/OTHS 1100 Eastern Blvd. Essex, MD 21221		
Section 3 – Scope of Work			
Agency / Project Background			

**All Master Contract Provisions Apply** 

The Automated Fiscal System (AFS) is a computerized fiscal tracking system that: 1) allows DHR's fiscal users to set up, print and track payments to various vendors, including payments to child care and foster care providers; 2) maintains a history of financial transactions; 3) generates a variety of fiscal reports, including ad hoc reports for financial assistance programs and the General Ledger; and 4) produces annual 1099 data on disk for submission to the Financial Management Information System (FMIS). The FMIS is an integrated database system with purchasing and accounting components. FMIS' purchasing and accounting components are operational in virtually all Executive Branch agencies, with the exception of the University System of Maryland. FMIS runs on the Comptroller of Maryland's Annapolis Data Center's computers, and supports individual agency and statewide purchasing and accounting operations.

The AFS application is used State-wide by the Local Department of Social Services' (LDSS) Finance offices (Users) and has several levels of security to secure the data and restrict users from access to all system functions. The current AFS system is written in an antiquated and unsupported Delphi technology. The application is outdated, prone to sensitive errors and is difficult to enhance. The application cannot take advantage of the newer technologies until it is moved to a more robust application language and the User Interface is modernized. Finding resources that can support this effort is difficult and very expensive. The functionality is rigid and there is limited flexibility to make system modifications and enhancements to support changing program requirements. The LDSS offices are required to use additional financial packages to help manage their business and have created unneeded processes.

One of DHR's major goals is to standardize all software development environments (hardware, application software, and databases), and to migrate the business functionality from Delphi to .NET Framework and the database from Interbase (1999 version) to SQL Server 2012.

The new AFS will provide DHR with much needed financial management capabilities, such as: improved security, improved performance and improved response time for Users, improved User experience and standardization on system configuration. In addition, a User security profile will be created by the LDSS finance administrator who will be able to assign privileges and determine what tasks the system allows a user to perform.

The selected Project Manager's primary focus will be to begin the first of four phases of the State's Systems Development Lifecycle (SDLC). Upon initial assessment, the Project Manager may recommend the hiring of one (1) Business Analyst or other team members as appropriate. This initial core team will collectively lead SDLC Phases 1 – 4 of the AFS effort, which will involve development of a full project management plan and schedule, documenting the "As Is" functionality/processes of the current financial tracking system, and defining/documenting the "To be" functionality/processes of the replacement system. The initial team will deliver the completed functional and non-functional requirements for the AFS. As the AFS project moves from one SDLC Phase to another, up until the actual Implementation and Post Deployment support Phase, DHR/OTHS envisions the Project Manager to provide continuous and seamless project management services.

	Job Description/s				
Labor Category/s Duties / Responsibilities		Duties / Responsibilities			
	(From Section 1 Above)				
1.	Senior Project Manager (SPM)	This position shall oversee and direct the AFS project team, to be comprised of contractors, technical experts, and State personnel. Project management responsibilities include overall project planning, governance and management. Duties shall focus on project planning, monitoring and control, and serving as primary liaison with DHR and its stakeholders.			
		The selected personnel shall ensure the appropriate application of the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) and the State's SDLC in managing the project.  The Project Manager shall gather requirements and create and maintain a			
		comprehensive Requirements Document and a Requirements Traceability Matrix duly verified and accepted by DHR.			

**All Master Contract Provisions Apply** 

An Muster Contract Frovisions Apply
Additional duties include, but are not limited to:
a. Working collaboratively and communicating effectively with persons involved with the project stakeholder groups to define business, processes, requirements and system specifications.
b. Preparing business processes, functional and non-functional requirements and associated procurements to secure appropriate vendors for Commercial Off The Shelf (COTS) and/or custom development solutions.
c. Creating and regularly updating project schedules, staff task work plans, issue lists, risk lists, and other documents that allow effective management and governance of an information technology project.
d. Maintaining standard project management SDLC documentation as required for DoIT, as appropriate.
e. Completing other duties as assigned.
See Attachment 3 for a more detailed description of duties, responsibilities and deliverables.

#### **Minimum Qualifications**

For minimum qualifications, see the labor category description in the CATS+ RFP for the subject RFR labor category. In addition, qualified candidates <u>must</u> meet the minimum qualifications specified below. **Candidates that do not meet minimum qualifications will be deemed not reasonably susceptible for award and will not progress to full evaluation.** 

qualifications with the decention for the control of the control o			
Labor Category/s (From Section 1 Above)	Minimum Qualifications		
Senior Project Manager	<ul> <li>Education:</li> <li>Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business or other related discipline.</li> <li>General Experience:</li> <li>At least ten (10) years project management experience.</li> <li>Within the past ten (10), have at least five (5) years of experience in managing IT related projects. (Each project is to have a dollar threshold of \$2.5 million or more to be considered as meeting this general experience minimum qualification.)</li> <li>Current PMI certification as a PMP.</li> </ul>		
	Within the past ten (10) years, at least five (5) years experience planning,		

All Master Contract Provisions Apply

	designing, and/orimplementing new software applications, hardware solutions, and/or reporting systems.	
Preferred Qualifications		
The additional Experience/Knowledge/Skills listed below are preferred by the State.		
2. Senior Project Manager	One (1) or more years of experience in a state or city agency financial or budgeting project.	

#### **Section 4 - Required Submissions**

#### NOTE:

- o Master Contractors may propose only one candidate for each position requested.
- o Master Contractors electing not to propose in response to the RFR must submit a "Master Contractor Feedback Form" via the "Master Contractor Login" on the CATS+ web site.
- o Master Contractors proposing in response to the RFR must submit the documents below as separate files contained in two separate emails as follows:

#### Email 1 of 2 with "Technical": Master Contractor Name, RFR number, & candidate name in the subject line

- Resume for the labor category Senior Project Manager (SPM) as described in the RFR (Attachment 1)
- Three (3) current (within the past ten (10) years) references that can be contacted for performance verification of the submitted candidate's work experience and skills. Telephone number and email address of reference is needed.

#### Email 2 of 2 with "Financial": Master Contractor Name, RFR number, & candidate name in the subject line

- Price Proposal (Attachment 2)
- Conflict of Interest Affidavit (Attachment G in the CATS+ RFP)
- Living Wage Affidavit (Attachment I in the CATS+ RFP)

List any other required documents to be submitted by Master Contractors, for example, copies of professional certifications, school / training transcripts, company references, etc.

- 1. Resume showing evidence of all skills listed in Section 3 Scope of Work Attachment 1
- 2. Copy of current PMI Certificate
- 3. Statement within the Price Proposal that rate is all inclusive Attachment 2 Price Proposal. Submit in PDF format.

#### Section 5 - Evaluation Criteria -

Candidates meeting the Minimum Qualifications listed in Section 3 above will be evaluated for overall best value, as follows:

(Provide a list of evaluation criteria in descending order of importance)

- 1. Candidate clearly communicates an understanding of how to manage application development to meet requirements for reports, interfaces, data conversion and added functionality
- 2. Candidate clearly communicates knowledge and understanding of common challenges to custom or COTS integration
- 3. Strong understanding of the complete SDLC from project inception through operations and maintenance
- 4. Relevant IT project management experience
- 5. Training and education
- 6. References
- 7. Price

All Master Contract Provisions Apply

#### **Basis for Award Recommendation**

The Task Order PO will recommend award to the Master Contractor whose proposal is determined to be the most advantageous to the State, considering price and the evaluation factors set forth in the RFR. The Task Order PO will initiate and deliver a Task Order Agreement to the selected Master Contractor. Master Contractors should be aware that if selected, State law regarding conflict of interest may prevent future participation in procurements related to the RFR Scope of Work, depending upon specific circumstances.

All Master Contract Provisions Apply

# ATTACHMENT 1 RFR RESUME FORM

	RFR # <b>N(</b>	00B4400363		
Instructions: Enter resume info Labor Category described in Se each proposed candidate.		o not submit other resume	formats. Subm	it only one resume per
Labor Category	Project Manager (Senior	)		
(from Section 1 of the RFR)				
Candidate Name:				
Master Contractor:				
A. Education / Training				
Institution Nam	e / City / State	Degree / Certification	Year Completed	Field Of Study
<add as="" lines="" needed=""></add>				
B. Relevant Work Experience relevant Work experience relevant Section 3 of the RFR. Starts with the section 3 of the RFR.	vant to the Duties / Responsibi			=
[Organization]	Description of Work			
[Title / Role]				
[Period of Employment / Work] [Location]				
[Contact Person (Optional if current employer)]				
[Organization]	Description of Work			
[Title / Role]				
[Period of Employment / Work] [Location]				
<add as="" lines="" needed=""></add>				
C. Employment History List employment history, s	tarting with the most recent e	mployment first		
Start and End Dates	Job Title or Position	Organization Nam	ne R	eason for Leaving
<add as="" lines="" needed=""></add>				
D. References List persons the State may	contact as employment refere	ences		

	Reference Name	Job Title or Position	Organization Name	Telephone / Email	
<a< td=""><td>dd lines as needed&gt;</td><td></td><td></td><td></td></a<>	dd lines as needed>				
	*"Candidate Rel		INNEL RESUME SUMMARY  1 CONTINUED)  De filled out. Do not enter "see	resume" as a response.	
Pro	posed Individual's Name,	/Company:	How does the proposed individual meet each requirement?		
		LABOR CATEGORY TITLE -	- Project Manager (Senior)		
Rec	uirement		Candidate Relevant Experi	ence *	
Edu	cation:		Education:		
<ul> <li>Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business or other related discipline.</li> </ul>					
Gen	eral Experience:		General Experience:		
•	At least ten (10) years project management.	of experience in			
•	Within the past ten (10) years, at least five (5) years of experience in managing IT related projects. (Each project is to have a dollar threshold of \$2.5 million or more to be considered as meeting this general experience minimum qualification.)				
•	Current PMI certificati	on as a PMP			
Spe •			Specialized Experience:		
	The information provided on this form for this labor category is true and correct to the best of my knowledge:  Master Contractor Representative:				

All Master Contract Provisions Apply

### **ATTACHMENT 2** PRICE PROPOSAL RFR # **N00B4400363**

(This form is to be filled out by Master Contractors - Submit with the Financial Response)				
Base Period 1				
	Α	В	С	D
CATS+ Labor Category	Fully Loaded Annual Labor Rate*	Fully Loaded Hourly Labor Rate	Evaluation Hours	PERIOD 1 Evaluation Price (B x C)
Project Manager (Senior)	\$	\$	2000	\$
		Total Period 1 Ev	aluation Price:	
	Option #1- Pe	riod 2		
	Α	В	С	D
CATS+ Labor Category	Fully Loaded Annual Labor Rate*	Fully Loaded Hourly Labor Rate	Evaluation Hours	PERIOD 2 Evaluation Price (B x C)
Project Manager (Senior)	\$	\$	2000	\$
Total Period 2 Evaluation Price:				
Option #2 -Period 3				
	А	В	С	D
CATS+ Labor Category	Fully Loaded Annual Labor Rate*	Fully Loaded Hourly Labor Rate	Evaluation Hours	PERIOD 3 Evaluation Price (B x C)
Project Manager (Senior)	\$	\$	2000	\$
	Total Period 3 Evaluation Price:			
	Total RFR P	rice (Sum of Peri	od 1-3 Prices):	\$
Authorized Individual Name	-	Company	Name	
Title	-	Company	Tax ID #	

<sup>\*</sup>The Agency reserves the right to award each individual position at either the proposed Annual Labor Rate or proposed Hourly Labor Rate. The Annual Labor Rate requires a minimum of 1920 hours worked annually. The Hourly Labor Rate cannot exceed the Master Contract rate, but may be lower. Both rates must be fully loaded, all inclusive, and shall include all direct and indirect costs for the Master Contractor to perform under the TOA. Evaluation Hours are for evaluation purposes only and do not represent actual hours to be worked or invoiced.

**All Master Contract Provisions Apply** 

## **ATTACHMENT 3** RFR # N00B3400399 **SENIOR PROJECT MANAGER (SPM)**

DUTIES & RESPONSIBILITIES				
1. ROLE DEFINITIONS The purpose of this section is to distinguish among the roles interacting with the SPM obtained through this RFR.				
Task Order (TO) Procurement Officer – State staff person responsible for managing the RFR process up to the point of TO award.				
TO Manager – State staff person who oversees the SPM's work performance and administers the TO once it is awarded.				
TO Contractor – The CATS+ Master Contractor awarded a TO as a result of this RFR. The TO Contractor shall provide the SPM resource and be accountable for SPM work performance under the TO.				
Senior Project Manager (SPM) – The person provided by the TO Contractor as a result of this RFR. The SPM is responsible for overall project planning and execution. The SPM is responsible for performing the duties and responsibilities described in Attachment 3, and for completing all assigned tasks and deliverables under the TO. The SPM reports directly to the TO Manager and shall oversee and direct the Project Team made up of State and contractual personnel.				
Other Project Contractors – The Contractors responsible for project implementation, including their SPM and other personnel assigned to the project. The Contractors report to the SPM for project purposes with oversight by the TO Manager.				

#### SENIOR PROJECT MANAGER DUTIES AND RESPONSIBILITIES

The SPM shall oversee and direct the project team comprised of State and contractual personnel. Responsibilities include overall project governance and direction, and risk management as needed. Duties shall focus on project monitoring, control, team integration, change integration, and corrective action as needed. The position shall ensure the application of PMI and State SDLC standards in managing the project.

The SPM shall report to the TO Manager and perform the tasks described in the table below. The SPM shall be capable of performing all assigned tasks with self-sufficiency and minimal guidance from the TO Manager. SPM performance shall be rated by the State frequently, based on performance in the nine PMBOK knowledge areas as applied to the Project, and the quality of the written deliverables described in Section 7 below (See Exhibit 1

**All Master Contract Provisions Apply** 

#### - Deliverable Product Acceptance Form for performance rating criteria).

The SPM shall be accountable for the creation of any and all written deliverables that do not exist for the project and for the updating of those that do exist. The SPM shall ensure that all deliverables are consistent with standards in the PMI PMBOK and State of Maryland SDLC (see Section 3 below).

standards in the PMI PMBOK and State of Maryland SDLC (see Section 3 below).				
/*\ .	SPM Project Management Duties			
An asterisk (*) by the section number below and bold italics identifies a deliverable associated with the duty / responsibility. Refer to Section 7 for full descriptions of all deliverables and time of performance.				
2.1	Become thoroughly knowledgeable on all aspects of the AFS Project.			
2.2	Provide guidance and Project Management consistent with PMI and PMBOK principles of project management and the State of Maryland SDLC. Assess the need for appropriate project resources, assist in the hiring and creation of Project Management Team, manage and integrate project resources including oversight of the project team. Exercise project management best practices for the project and oversee project activities consistent with the nine knowledge areas including:			
	<ul> <li>Procurement Management - consisting of procurement planning, contracts planning, authoring solicitations, evaluation, requesting solicitation responses, selecting contractor(s), administering contract(s), and contract(s) closing activities.</li> </ul>			
	Schedule Management - consisting of activity definition and sequencing, resource estimating, duration estimating, schedule development, and schedule control activities.			
	Integration Management - consisting of project plan development, project plan execution, and integrated change control activities.			
	Scope Management - consisting of project initiation, scope planning, scope definition and scope change control activities.			
	Cost Management - consisting of resource planning, cost estimating, budgeting and cost control activities.			
	Human Resources Management - consisting of organizational planning, project team acquisition and staff development activities.			
	Risk Management - consisting of risk management planning, risk identification, risk quantitative and qualitative analysis, response planning, monitoring, and control activities.			
	Quality Management - consisting of quality planning, quality assurance and quality control activities.			
	Communications Management - consisting of communications planning, information distribution, progress and performance reporting, and stakeholder communications management activities.			
2.3 *	Create and manage updating of the <i>Project Management Plan (Deliverable 7.1)</i> .			
	Ensure that plan components adequately document how the project will be executed, monitored and controlled.			
	Ensure that the plan adequately defines the managerial, technical, and supporting processes and activities necessary for sound project development.			
	Ensure that the plan adequately covers topics such as Scope Management, Schedule			

	Management, Quality Management, Resource Management, Communications Management, Project Change Management, Risk Management, Procurement Management and others as deemed necessary to manage the project.
2.4 *	Create and manage updating of the <i>Work Breakdown Structure (WBS) (Deliverable 7.2)</i> consistent with PMBOK standards for all project work.
2.5 *	Create and manage updating of the <i>Integrated Master Schedule (Deliverable 7.3)</i> based on the WBS (see 2.4 above) and usable for tracking project activities.
	This schedule should include all project management, agency and contractor activities in sufficient detail to manage the project.
	<ul> <li>The schedule should include milestones, deliverables, periods of performance, degrees of completion, and assigned resources for all project activities.</li> </ul>
	The activities duration in the master schedule should be at appropriate level of granularity to manage and track project progress.
	<ul> <li>Oversee appropriate updates to the Project Management Plan (see 2.3 above) and related project components as outlined in the SDLC.</li> </ul>
2.6	Oversee integration of other project contractors' schedules and methodologies into the Integrated Master Schedule (see 2.5 above) to track all project progress.
	<ul> <li>Ensure appropriate updates to the Project Management Plan (see 2.3 above) and related project components as outlined in the SDLC.</li> </ul>
2.7 *	Create and manage updating of the <i>Communications Management Plan (Deliverable 7.4)</i> for all project stakeholders.
	<ul> <li>Include stakeholder contact list, distribution structure, description of information to be disseminated, schedule listing when information will be produced and method for updating the communications plan.</li> </ul>
	<ul> <li>Ensure all appropriate stakeholders have been identified and their requirements and expectations have been documented and managed within the scope of the project.</li> </ul>
2.8 *	Create and manage updating of the Risk Management Plan (RMP) and Risk Registry (Deliverable 7.5).
	At a minimum the RMP shall:
	Identify and prioritize potential risks to successful completion of the SDLC Phases.
	<ul> <li>Incorporate pertinent risk information found in the Master Project Status Report (see 2.14 below).</li> </ul>
	Include a Risk Registry of all project risks that will be updated throughout the project.
2.9	Develop, document and implement issue escalation and resolution processes for the project and communicate the process to all stakeholders.

2.10 *	Ensure the TO Contractor's team has created and is updating a <i>Deliverable Comments Matrix</i> ( <i>DCM</i> ) ( <i>Deliverable 7.6</i> ) for each deliverable or SDLC product provided by each Project Contractor's primary point of contact.
	<ul> <li>Ensure that the TO Contractor's team reviews, and coordinates the review among appropriate stakeholders, of Project deliverables for completeness and conformance to requirements.</li> </ul>
	<ul> <li>Ensure the TO Contractor's team documents resulting issues and questions in the DCM to be resolved by the TO Contractor's team prior to deliverable acceptance.</li> </ul>
	<ul> <li>Ensure the TO Contractor's team reviews subsequent updated versions of deliverables to confirm all issues and questions have been resolved satisfactorily.</li> </ul>
	The DCM process is part of the Quality Assurance Plan (see 2.13 below).
2.11 *	Create and manage updating of the <i>Change Management Plan (Deliverable 7.7)</i> that describes the process for making changes to project scope, requirements, or cost as necessary.  At a minimum, the Change Management Plan shall:
	Describe the change management and approval processes to include:
	<ul> <li>Coordination with the TO Procurement Officer to define change order scope, cost,</li> </ul>
	and project impact of proposed changes to the project;
	<ul> <li>Coordination with the TO Manager for review and approval of proposed changes to the project;</li> </ul>
	<ul> <li>Coordination with the TO Contractor's team and any contractors for review and agreement on proposed changes;</li> </ul>
	<ul> <li>Coordination with the TO Manager and any contractors for documentation and implementation of change orders; and</li> </ul>
	<ul> <li>Project integration management consistent with the PMBOK for approved changes.</li> </ul>
	Describe the tools used (i.e. change request form)
2.12 *	Create and manage updating of the <i>Requirements Traceability Matrix (RTM) (Deliverable 7.8)</i> that describes and provides a numbering system for all project requirements for traceability through testing. The RTM process is part of the Quality Assurance Plan (see 2.13 below).
	The RTM shall include test scenarios and acceptance criteria for all technical and functional requirements.
	• Ensure that the TO Contractor's team participates in requirements development as needed and traces requirements through testing and implementation via updates to the RTM.
	<ul> <li>Ensure that RTM updates are in conjunction with weekly requirements / design reviews (see 2.14 below).</li> </ul>
	Work closely with the project team and any contractors to develop or review and update detailed project requirements. Requirements activities may include:
	<ul> <li>Stakeholder interviews;</li> <li>Documenting before and after business processes;</li> <li>Review of existing requirements documentation;</li> </ul>

• • •	in trocums (it it) for i roject manager (come.
	CATS+ Master Contract
	All Master Contract Provisions Apply
_	Joint Application Development (JAD) sessions;
_	COTS software "gap fit analysis";
_	Demonstrations of existing similar systems (benchmarking); and
_	Requirements walkthroughs

2.13 *	- COTS software "gap fit analysis"; - Demonstrations of existing similar systems (benchmarking); and - Requirements walkthroughs  Create and manage updating of the <i>Quality Management Plan (Deliverable 7.9)</i> .  At a minimum the QMP shall:
	<ul> <li>Describe the process for quality management of project deliverables via the DCM process (see 2.10 above).</li> <li>Describe the process for quality management of requirements using the RTM (see 2.12</li> </ul>
	above).
	<ul> <li>Describe the processes for quality management of testing, software development and configuration management, as applicable.</li> </ul>
	Develop a written procedure for configuration control for application code promotion.
2.14	Ensure creation and ongoing updating of the <i>PM Status Report (and Timesheet)</i> (Deliverable 7.10).
	At a minimum, the Project Management Status Report shall:
	Report on completed and planned project activities for the reporting period
	Highlight schedule deviation from baseline
	<ul> <li>Provide schedule updates, progress of work being performed, milestones attained, resources expended</li> </ul>
	Document risks, and issues encountered and corrective actions taken
	Track project cost and expenditures
2.15 *	Ensure creation and ongoing updating of the <i>Master Status Report (Deliverable 7.11)</i> . Oversee weekly project team meetings, to include any Contractors when appropriate.
	At a minimum the Master Status Report shall contain sections for the following:
	Lessons learned from the project and any other pertinent status information.
	Design / requirements reviews and discussions on project status.
	<ul> <li>Project status, risk and issue dispositions for the past week, and planned activities for the week upcoming.</li> </ul>
	<ul> <li>Project Management activities and needed updates to the Integrated Master Schedule (see 2.5 above), Master RMP (see 2.8 above), and RTM (see 2.12 above).</li> </ul>
	Performance as measured against the project schedule.
2.16	Ensure project governance and control according to the Project Management Plan (see 2.3 above).
	Work with the Project Team and any Contractors to address schedule variances.

	• Ensure the documentation of schedule variances in the Integrated Master Schedule (see 2.5 above) and Master Status Report (see 2.15 above).
2.17	Ensure that the Project Team will collect, organize, store, and manage project documents in a central repository. This includes:
	Maintaining current and archival files (electronic and paper)
	Collecting and distributing information to and from stakeholders
	Entering updates into project tracking systems
2.18	Function as a liaison between Agency personnel, project stakeholders and any Contractors.
2.19	Assign other minor duties related to project management support to the Project Team. Minor duties may include:
	Responding to phone calls and email
	Making photo copies
	Scheduling and attending ad hoc meetings
	Engaging in TO performance discussions
	Coordinating Development Contractor invoicing
	Participating in Independent Verification & Validation (IV&V) assessments.
2.20 *	Ensure the creation/updating of a <i>Human Resource Management Plan (Deliverable 7.12)</i> .
	At a minimum, the Human Resource Management Plan shall:
	<ul> <li>Identify project tasks and assignments and work with Agency and any Contractors to resolve workload conflicts.</li> </ul>
	Define roles and responsibilities needed for each resource on the project.
	Provide projections for resource and resource utilization.
	Define staff acquisition strategy including backfilling of resources if applicable.
	Document staff training plan if required.
	Define organizational structure based on resources.
2.21 *	Ensure the creation/updating of a Schedule Management Plan (Deliverable 7.13).
	At a minimum, the Schedule Management Plan shall:
	• Document tools the project will use to manage the schedule and frequency of updates.
	<ul> <li>Define process for how schedule shall be tracked and reported including metrics used to report overall schedule performance.</li> </ul>
	<ul> <li>Define process for schedule change process, including the process for baseline scheduling and approving schedule changes.</li> </ul>

All Master Contract Provisions Apply
Pation/updating of a Cost Management Plan (Deliverable 7.14).

2.22 *	Ensure the creation/updating of a Cost Management Plan (Deliverable 7.14).		
	At a minimum, the Cost Management Plan shall:		
	Establish the activities and criteria for planning, structuring, and controlling project costs.		
	Establish the project cost baseline through cost estimation and budget determination.		
	Define cost estimating and cost controls for the project.		
	Define and document how costs and cost variances will be reported regularly.		
2.23 *	Ensure the creation/updating of a <b>Procurement Management Plan (Deliverable 7.15).</b>		
	At a minimum, the Procurement Management Plan shall:		
	Define the procedures for how the project will purchase or acquire all products and services needed from outside the team to perform project tasks		
	Document procurement management activities for the project.		
	Document contract management activities for the project.		
2.24	Implement organizational change management that includes a holistic approach and process for leading the Agency(ies) and its people through the planned changes from the EBS project including:		
	☐ Building buy-in for the change(s);		
	Anchoring the change(s) in business operations;		
	<ul> <li>Ensuring that the people in the organization are ready, willing, and able to adopt the change(s); and</li> </ul>		
	☐Managing and measuring the change(s) so that the change(s) implemented are sustained and the desired benefits of the changes are realized.		
2.25	Develop and review other project artifacts as assigned by TO Manager or Department.		
2.26	Perform other project-related duties as assigned by TO Manager or Department.		
3. REQUIRED	PROJECT POLICIES, GUIDELINES AND METHODOLOGIES		
guidelines affect Agreement, as the adhere to and re affecting project governmental a	eep informed of and comply with all applicable laws, regulations, policies, standards and ting information technology projects applicable to activities and obligations under the TO those laws, policies, standards and guidelines may be amended from time to time. The SPM shall emain abreast of current, new, and revised laws, regulations, policies, standards and guidelines t execution and it shall obtain and maintain, at its expense, all licenses, permits, insurance, and pprovals, if any, necessary to the performance of its obligations under the TO Agreement. These it are not limited to:		
A.	The nine project management knowledge areas in the PMI's PMBOK.		
В.	The State's SDLC methodology at: www.doit.maryland.gov - keyword: SDLC.		
C.	The State's IT Security Policy and Standards at: www.DoIT.maryland.gov - keyword: Security		
	The State's IT Security Policy and Standards at: www.DoIT.maryland.gov - keyword: Security		

**All Master Contract Provisions Apply** 

	Policy.	
D.	The State's IT Project Oversight at: www.DoIT.maryland.gov - keyword: IT Project Oversight.	
E.	The State of Maryland Enterprise Architecture at www.DoIT.maryland.gov - keyword: MTAF (Maryland Technical Architecture Framework).	
4. ANNUAL SI	PM PROJECT OVERSIGHT PERFORMANCE RATINGS	
	Contractor shall submit a Performance Evaluation Form (PEF) to the TO Manager. The TO te the SPM's performance based on the criteria described in the PEF.	
	poor or non-performance by the SPM resulting in a rating of "unacceptable," payment shall be ng the outcome of the procedures described in Section 5.	
As warranted by	N PROCEDURES FOR POOR OR NON-PERFORMANCE  or poor or non-performance by the SPM, the Agency shall pursue the following mitigation or to requesting a replacement SPM:	
A.	The TO Manager shall document performance issues and give written notice to the TO Contractor describing problems.	
В.	The TO Contractor shall respond with a written remediation plan within two business days and implement the plan immediately upon acceptance by the TO Manager.	
C.	Should performance issues persist, the TO Manager will request the immediate removal of the SPM.	

#### 6. WORK HOURS

A. The SPM will work at minimum eight-hour day between the hours of 8:00 AM and 7:00 PM, Monday through Friday, including when directed by TO Manager or Department, on evenings, weekends, State holidays, Service Reduction days or other office closures.

#### 7. SENIOR PROJECT MANAGER DELIVERABLES AND TIME OF PERFORMANCE

Note – for each of the written deliverables below, ongoing quality will be a factor in the Monthly Performance Rating described in Section 4 above.

ID#	Deliverable Description	Acceptance Criteria	Time of Performance
7.1	Project Management Plan	MS Word document (or mutually agreed upon document) that defines how the project will be executed, monitored and controlled. The document will be developed with input from the project team and key stakeholders. The plan should address topics including Scope Management, Schedule Management, Financial Management, Quality Management, Resource Management, Communications Management, Project Change Management, Risk Management, and Procurement Management as defined in the PMBOK. The Project Management Plan shall comply with Maryland's SDLC and Attachment 2, Section	Updated quarterly from NTP or as directed by the TO Manager

	1	2 requirements for the deliverable.	
		· ·	
7.2	Work Breakdown Structure (WBS)	MS Project or Excel document (or mutually agreed upon document) that contains tiers showing project milestones or phases in the top level with a breakdown of major project tasks into manageable "work packages" underneath. Work packages at the bottom level should have no smaller than two-week durations and have measurable, testable, or observable outputs suitable for tracking project progress. The WBS shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	Updated quarterly from NTP or as directed by the TO Manager
7.3	Integrated Master Schedule	MS Project document (or mutually agreed upon document) that is based on the WBS (see 7.2 above) and suitable for tracking project activities. At a minimum, the Master Schedule shall show milestones, deliverables, times of performance, degrees of completion and resources for all project activities during the SDLC. The activities durations in the master schedule should have the appropriate degree of granularity to manage and track project progress. This is a single, base-lined and periodically updated deliverable encompassing all project activities. The Integrated Master Schedule shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	Update bi- weekly from NTP or as directed by the TO Manager
7.4	Communications Management Plan	MS Word document (or mutually agreed upon document) that captures the stakeholder contact list, the types of information to be disseminated, the format for each type, a schedule of when information will be produced and disseminated, and the method for updating the communications plan. This is a single deliverable maintained throughout the life of project. The Communications Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	Updated quarterly from NTP or as directed by the TO Manager
7.5	Risk Management Plan (RMP) and Risk Registry	MS Word or Excel document (or mutually agreed upon document) that describes the risk management procedures for the project. The RMP will include a table of potential risks and recommended risk responses, and will incorporate risk information found in deliverables provided by the Development Contractor. This is a single, periodically updated deliverable encompassing all project risks. A <i>Risk Registry</i> will be created for logging all project risk using MS Excel or other appropriate table format. The Risk Management Plan shall comply with Maryland's SDLC and Attachment 2, Section 2	Update bi- weekly from NTP or as directed by the TO Manager

		requirements for the deliverable.	
7.6	Deliverable Comments Matrix (DCM)	MS Word or Excel document (or mutually agreed upon document) that is used to capture comments and recommended changes to each Project deliverable prior to acceptance. A separate DCM is required for each deliverable or SDLC product. The DCM shall comply with Attachment 2, Section 2 requirements for the deliverable.	Project deliverable due date + 5 working days
7.7	Change Management Plan	MS Word document (or mutually agreed upon document) that describes the procedure for proposing, evaluating, approving, and documenting changes to project scope, schedule, and cost. This Plan should include any tools or templates used for change management, for example, change request form. The Change Management Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	Updated quarterly from NTP or as directed by the TO Manager
7.8	Requirements Traceability Matrix (RTM)	MS Word or Excel document (or mutually agreed upon document) that describes technical and functional requirements. At a minimum, requirements should be numbered for traceability, testable and the descriptions unambiguous. The RTM should contain acceptance criteria for each requirement and a test method for verifying completion based on the criteria. The RTM shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	Updated bi- weekly from NTP or as directed by the TO Manager
7.9	Quality Assurance (QA) Plan	MS Word document (or mutually agreed upon document) that describes how quality, meaning conformance to project requirements, will be monitored throughout the project life cycle. The QA Plan should describe the steps for deliverable review and updating via the DCM process (see 7.6 above). The QA Plan should describe the requirements tracking process via the requirements traceability process (see 7.8 above). The QA plan should define signoff procedures for project milestones and deliverables. The Quality Assurance Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	Updated quarterly from NTP or as directed by the TO Manager
7.10	Project Manager Status Report and Timesheet	MS Word document (or mutually agreed upon document) that captures and tracks ongoing PM activities and status. The report will capture activities completed in the past reporting period, activities planned for the following reporting period, and the completion status of project deliverables. The report will describe issues identified on the project and the status of efforts to resolve issues.	At least bi- weekly from NTP or as directed by the TO Manager
7.11	Master Status	MS Word document (or mutually agreed upon document)	At least bi-
		I	1

All Master Contract Provisions Apply

	Report	that captures and tracks ongoing project activities and status. The report will capture activities completed in the past reporting period, activities planned for the following reporting period, the completion status of project deliverables and status of Project costs (planned vs. actual). The report will describe issues identified on the project and the status of efforts to resolve issues and mitigate risks.  The report will have sections describing necessary updates to the Integrated Master Schedule (Deliverable 7.3) and Risk Registry (Deliverable 7.5). The report will document lessons learned from the project and any other pertinent status information.	weekly from NTP or as directed by the TO Manager
7.12	Human Resource Management Plan	MS Word or Excel document (or mutually agreed upon document) that describing how and when human resource requirements will be met on the project. The plan shall consider resource needs for the full life of the system including operations and maintenance and address staff acquisition, timing and training needs. The Human Resource Management Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	To be determined by the Project Manager
7.13	Schedule Management Plan	MS Word document (or mutually agreed upon document) that establishes the specific procedures for how the project schedule will be managed and controlled and is as detailed as necessary to control the schedule through the life cycle based on the size, risk profile, and complexity of the project. The Schedule Management Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	To be determined by the Project Manager
7.14	Cost Management Plan	MS Word document (or mutually agreed upon document) that establishes the activities and criteria for planning, structuring, and controlling project costs. The Cost Management Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	To be determined by the Project Manager
7.15	Procurement Management Plan	MS Word document (or mutually agreed upon document) that define the procedures to purchase or acquire all products and services needed from outside the team to perform project tasks. The document shall define processes for plan purchases and acquisitions including acquisition strategy, contract administration, and contract closure. The Procurement Management Plan shall comply with Maryland's SDLC and Attachment 2, Section 2 requirements for the deliverable.	To be determined by the Project Manager

(The rest of this page was left intentionally blank)

#### ATTACHMENT 4

ATTACHWENT 4				
PERFORMANCE EVALU	JATION FORM (PEF)			
FOR SENIOR PROJECT MANAGER				
(Submitted Annually by	y the TO Contractor)			
TO Contractor:				
Name of SPM Being Evaluated:				
Date Submitted:				
Performance Period (Month / Year):				
Agency Name:				
TO Manager / Agency Contact:				
RFR / Reference BPO #				
The Information Below Shall Be Filled-In by the Agen	асу			
PROJECT MANAGEMENT PERFORMANCE RATING DIS	POSITION:			
	PM Processes	Rating**		
Integration	Procurement Management			
Procurement	Schedule Management			
	Scope Management			
	Cost Management			
Risk	Risk Management			
	Human Resources Management			
	Quality Management			
bommunications	Communications Management			
	Integration Management			
HR Quality	Total Average Score			
	**Rating is based on <i>Project Manage Performance Rating Criteria Sheet</i> . Project Team should maintain score of higher for each process area and/or a score of 3. Scores below 3 may trigge Mitigation Procedures defined in Secabove.	The of 3 or average er the		
Performance is acceptable	Performance is unacceptable			
	(for reasons indicated below).			
REASON(S) FOR UNACCEPTABLE PERFORMANCE RATING (List Deliverables or PM Process Areas):				
TO Manager Signature	Date Signed			

### **Project Management Performance Rating Criteria**

The TO Manager will evaluate and rate the FPM's management performance based on the overall Project Team's performance in each of the nine Knowledge Areas below. Applicable processes should score at 3 or higher.

Projec	t Integration Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not established practices, standards, or processes for project. Work performed in ad hoc fashion and does not include integration management.	<ul> <li>Project Charter</li> <li>Project Management Plan (PMP)</li> <li>Integrated Project Plan</li> <li>Updated Project Schedule</li> </ul>
2	Project Team has established basic, documented processes for project planning and reporting exist. Management only involved on high-visibility projects.	
3	Project Team has institutionalized the Project integration efforts with documented procedures and standards. SPM is beginning to integrate all project data.	
4	Project Team utilizes processes/standards for project on a regular basis and integrated with other processes/systems. Decisions on project based on performance metrics.	
5	Project Team has established best practices including project integration improvement procedures utilized. Lessons learned are regularly examined and used to improve documented processes.	
Projec	t Scope Management	
0	Not applicable for project.	Indicators of Process
1	Project has general statement of functional requirements. Little or no scope management or documentation for project. Management and stakeholders are aware of key milestones only.	Project Scope     Statement     Change Request and     Approval Process     Requirements     Traceability Matrix     (RTM)     Change Control Board
2	Project Team has put basic scope management process in place. Scope management is meeting techniques irregularly.	
3	Project Team has implemented full project management process documented and is actively utilizing process on regular basis. Stakeholders are engaged and actively participating in scope decisions.	
4	Project Team is utilizing full project management processes for the project. Projects managed and evaluated in light of other competing requirements.	
5	Project Team's effectiveness and efficiency metrics drive project scope decisions by appropriate levels of management.	
Projec	t Time/Schedule Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not established planning or scheduling standards. Lack of documentation makes it difficult to achieve repeatable project success.	WBS     Schedule Management Plan     Activities duration based on historic data
2	Project Team has established basic processes, but is not performing planning and scheduling on a regular basis.	
3	Project Team has established document time management processes and utilizes on a regular basis. Project-wide integration includes project dependencies.	
4	Project Team has established good practices in time management including utilization of historical data to forecast future performance. Project management decisions based on efficiency and effectiveness metrics.	
5	Project Team has additionally incorporated improvement procedures utilized for time management processes. Lessons learned are examined and used to	

	improve documented processes.	
Project	Cost Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not established practices or standards. Cost process documentation is ad hoc and individual project members follow informal practices.	Cost Estimates Activity     Project Cost Baseline     Cost Management Plan     Cost Control
2	Project Team has established processes exist for cost estimating, reporting, and performance measurement. Cost management processes are used for the project.	
3	Project Team has standardized cost management practices for project team. Costs are fully integrated and reflect the true cost of the project.	
4	Project Team has integrated cost planning and tracking with Project Office, financial, and human resources systems. Standards tied to agency processes.	
5	Project Team leverages lessons learned to improve documented processes.  Project Team and management are actively using efficiency and effectiveness metrics for decision making.	
Project	Quality Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not established project quality practices or standards.  Management is considering how they should define "quality".	<ul><li>Quality Assurance Plan</li><li>Deliverables Acceptanc</li></ul>
2	Project Team has established basic organizational project quality policy has been adopted. Project Management and Team encourage quality processes and policy for project.	Criteria defined     User Acceptance     Criteria (UAC) per SDLC     phases     Formal Deliverable     Acceptance Process
3	Project Team has established well documented quality management process and instituted standards for the project. Regular quality management activities are being executed including deliverables acceptance.	
4	Project Team has best practices for standard quality management processes. Management is actively involved in coordinating quality standards and assurance. Some metrics are developed.	
5	Project Team has implemented guidelines for implementing improvements back into the process. Metrics are key to product quality decisions throughout the SDLC.	
Project	: Human Resource Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not performed planning and staffing activities for project.  Project teams are ad hoc. Human resource time and cost is not measured.	Organization Chart     Roles and responsibilities matrix     Staffing Management Plan     Team Training Plan     Team performance assessment
2	Project Team has put processes in place that defines how to plan and manage human resources. Resource tracking is loosely performed for project.	
3	Project Team has established a regularly resource management process. Professional development program activities for team and organization have been established for successful implementation of project.	
4	Project Team has implemented resource management best practices including resource forecasts used for project planning and prioritization. Project team performance measured and integrated with team development.	
5	Project Team includes HR processes which engage teams to document project lessons learned. Improvements are incorporated into human resources management process.	

0	Not applicable for project.	Indicators of Process
	Project Team performing communications management on an ad hoc basis with	Communication     Management Plan     Project Performance     Reports     Stakeholder Contact     Processes for     communication of Risk,     Issues and Decisions
1	Project Team has established basic communications process including	
2	Communications Management Plan. Project progress reporting is occurring on a more regular basis.	
3	Project Team has active involvement by executing a formal project communications plan. All stakeholders and project team members are aware of communications process.	
4	Project Team has implemented best practices for communications management plan for the project.	
5	Project Team has put additional improvement process in place to continuously improve project communications management. Lessons learned are captured and incorporated.	
Project	Risk Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not established any risk management practices or standards for project. Documentation is minimal and results are not shared. Risk response is reactive.	Risk Management Plan     Risk Register     Process for Risk Register updates and communication of risk     Contingency plans for risk
2	Project Team has established basic risk management processes and have documented for the project. Team members are involved with risks process and risks are shared for project.	
3	Project Team has established regular risk management processes and risk activities, including identification and mitigation planning, are actively utilized for project.	
4	Project Team has integrated risk processes with all aspect of project reporting including time, cost, and resource systems. Metrics are used to support risk decisions for the project.	
5	Project Team has established best practices in risk management including continuous improvement processes to ensure project is continually measured and managed against performance metrics.	
Project	Procurement Management	
0	Not applicable for project.	Indicators of Process
1	Project Team has not established procurement process for project. Processes are ad hoc at best with no clear plan defined.	Procurement Management Plan  Contract Statement Of Work  Evaluation Criteria  Cost Benefit Analysis  Make/Buy Decisions
2	Project Team has established basic process for procurement of goods and services for project. Procurement Management Plan has been developed for procurement of all project goods and services.	
3	Project Team has established standards for procurement management on project and integrated with Agency processes.	
4	Project Team has leverage procurement management best practices such as make/buy decisions for the agency and project. Project procurement practices are integrated with project management mechanisms.	
5	Project Team has instituted on-going process improvements focus on procurement efficiency and effective metrics.	