



City of Milwaukee  
Employees' Retirement System

**Bernard J. Allen**  
Executive Director

**David M. Silber, CFA, CAIA**  
Chief Investment Officer

**Melody Johnson**  
Deputy Director

June 15, 2018

Mr. Jim Owczarski  
City Clerk  
Room 205, City Hall

Dear Mr. Owczarski:

Please be advised that an Administration & Operations (A&O) Committee Meeting of the Annuity and Pension Board has been scheduled for **Thursday, June 21, 2018 at 9:00 a.m. in the Employees' Retirement System Conference Room at 789 N. Water Street, Suite 300.** If a quorum of the Board is present, this meeting will convene as a Special Board Meeting. The agenda is as follows:

- I. Approval of Quarterly Vulnerability Software Scans for Security Framework Enhancement.
- II. IT Projects Portfolio.
- III. Organizational/Personnel Update.

Sincerely,

A handwritten signature in black ink, appearing to read "Bernard J. Allen", is written over the typed name and title.

Bernard J. Allen  
Executive Director

BJA:jmw

PLEASE NOTE - Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through sign language interpreters or other auxiliary aids. For additional information or to request this service, please call 414-286-3557.

# Vulnerability Scanning Software

- This will enable IT to complete our own vulnerability scanning audit quarterly
- 3 other products were vetted:

Scanner	Duration	Yearly Maint	Implementation	Training	Y1 Cost	Y2 Cost	Y3 Cost	Notes
Rapid7 Nexpose	1 year	\$71,200.00	\$8,660.00	\$2,656.00	\$82,516.00	\$153,716.00	\$224,916.00	Experis uses, medium difficulty to implement, medium difficulty to high difficulty to use, high accuracy rating.
BeyondTrust Retina	1 year	\$86,510.00	\$12,400.00	\$0.00	\$98,910.00	\$185,420.00	\$271,930.00	High difficulty to implement, medium difficulty to high difficulty to use, medium accuracy rating.
Tenable Nessus	3 year - 512 IP	\$7,470.00	\$6,000.00	\$2,000.00	\$15,470.00	\$22,940.00	\$30,410.00	
CORE Impact	1 year	\$19,485.00	\$0.00	\$0.00	\$19,485.00	\$38,970.00	\$58,455.00	Medium to high difficulty to implement, high difficulty to use, medium to high accuracy rating.

Best Solution
2nd Best Solution
3rd Best Solution

<b>Additional Notes for Nessus by Tenable:</b>
512 IP's = Minimum Pricing Tier: ~\$8,300 per year or ~\$16.21 per IP
1,024 IP's = 2nd Pricing Tier: ~\$14,450 per year or ~\$14.11 per IP
4,608 IP's = 3rd Pricing Tier: ~\$50,000 per year or ~\$10.85

# Benefits of Vulnerability Software

- Identify weaknesses by scanning all assets for known vulnerabilities, misconfigurations and malware
- Assess how well patch management is working based on vulnerability trends over time
- Rapidly respond to changes with configurable alerts, notifications and automated actions
- Measure security posture based on security policies that align with high-level business objectives
- Streamline compliance for the widest range of regulatory/IT standards and best practices



**Administration and Operations Committee**

**ERS IT Portfolio Report**

**June 21<sup>st</sup> , 2018**

## Agenda

- Information Technology Projects Summary
- Application Stats
- ERS-IT Code Deployment Process Review
- What's Next
- IT Portfolio

# Information Technology Projects Summary

- IT Server Administrator Position (In Progress)
- Storage Area Network (SAN) Replacement (In Progress)
- Struts 2 and Optimization (In Progress)
- WebSphere, SQL 2012 and Windows Server Upgrades for MERITs (In Progress)
- ERS Phone System Enhancements (In Progress)
- ERS-IT Support Policy/Agreement to cross charge IT support services to Comptroller's office

# Application Stats

Category	High Priority	Low Priority	Total
Current Inventory	18	1	19
PIR's	5	0	5
L&F CCR's	3	1	4
Struts 2 Upgrade CCR's	5	0	5
WebSphere /SQL Server Upgrade CCR's	1	0	1
Other CCR's	4	0	4
Pending/Hold	0	0	0
Deployed(Awaiting Next stage) /Ready for Production	10	1	11
Net Current Inventory	8	0	8

# ERS-IT Applications Review

- A decision was made to have an external entity review and provide feedback on the way the ERS performs the MERITS code deployment process
- Code deployment is a difficult area to review or audit (requires a special skillset that is not common)
- DXC (aka Hewlett Packard) has an external business unit that allowed us to get informed feedback on industry trending software development processes and compare the ERS-IT process to industry best standards
- The major goal of the ERS-IT Strategic Plan to ensure best practices with a security framework is constantly being evaluated and improved upon in all areas of IT



Area	Function	Health	Overall Health	Observations and Recommendations
Operations	Service Desk	Good	Good	<p>Observations:</p> <ol style="list-style-type: none"> <li>Lean Management practices are followed.</li> <li>All applicable processes in the below given areas are followed as appropriate. <ul style="list-style-type: none"> <li>- Due Diligence</li> <li>- Build</li> <li>- Verification and Validation</li> <li>- Preventive and Corrective measures</li> <li>- Process Controls</li> <li>- Periodical Audits</li> <li>- Compliance to Regulatory Requirements</li> <li>- Sign-off processes for deliverables</li> </ul> </li> <li>Serena Tracker is used as KEDB (Known Error Database) for quick turnaround of the repetitive incidents.</li> <li>The coding standards are implemented.</li> <li>Quality Management practices are diligently followed.</li> <li>All other Project management processes are followed as applicable.</li> <li>There are no specific process gaps seen.</li> <li>The overall project health is good.</li> </ol> <p>Recommendations (Nice to have):</p> <ol style="list-style-type: none"> <li>Consolidated Standard Operational Procedural Manuals can be prepared for Production Support and Development portfolios separately.</li> <li>Periodical Process Audits can be planned.</li> <li>DEV Team can be involved in Call Tree Exercise as part of BCP and DR Drills</li> <li>Comprehensive Delivery Dashboard can be introduced for senior management</li> <li>All the process documentation (Templates and Checklists ) can be standardized</li> <li>All the guideline documents shall be periodically reviewed and updated as appropriate</li> <li>DEV Team should ensure access to Project artefact library that comprises end to end project deliverables to refer as required as part of continuous Knowledge Management.</li> <li>DEV team should familiarize the ITSM events, processes and artefacts that have been occurred and built by Tech team and other stakeholders after the build process (DEV work).</li> </ol>
	Technical Management			
	Application Management			
	Operations Control			
	Availability Management			
	Capacity Management			
	Business Continuity Management			
	Information Security			
	Governance (RACI)			
	Metrics			
Process	Resource Management	Good	Good	<p>Recommendations (Nice to have):</p> <ol style="list-style-type: none"> <li>Consolidated Standard Operational Procedural Manuals can be prepared for Production Support and Development portfolios separately.</li> <li>Periodical Process Audits can be planned.</li> <li>DEV Team can be involved in Call Tree Exercise as part of BCP and DR Drills</li> <li>Comprehensive Delivery Dashboard can be introduced for senior management</li> <li>All the process documentation (Templates and Checklists ) can be standardized</li> <li>All the guideline documents shall be periodically reviewed and updated as appropriate</li> <li>DEV Team should ensure access to Project artefact library that comprises end to end project deliverables to refer as required as part of continuous Knowledge Management.</li> <li>DEV team should familiarize the ITSM events, processes and artefacts that have been occurred and built by Tech team and other stakeholders after the build process (DEV work).</li> </ol>
	Quality Management			
	Change Management			
	Configuration Management			
	Release Management			
	Communication Management			
	Knowledge Management			
Delivery	Estimations	Good	Good	<p>Recommendations (Nice to have):</p> <ol style="list-style-type: none"> <li>Consolidated Standard Operational Procedural Manuals can be prepared for Production Support and Development portfolios separately.</li> <li>Periodical Process Audits can be planned.</li> <li>DEV Team can be involved in Call Tree Exercise as part of BCP and DR Drills</li> <li>Comprehensive Delivery Dashboard can be introduced for senior management</li> <li>All the process documentation (Templates and Checklists ) can be standardized</li> <li>All the guideline documents shall be periodically reviewed and updated as appropriate</li> <li>DEV Team should ensure access to Project artefact library that comprises end to end project deliverables to refer as required as part of continuous Knowledge Management.</li> <li>DEV team should familiarize the ITSM events, processes and artefacts that have been occurred and built by Tech team and other stakeholders after the build process (DEV work).</li> </ol>
	Requirement Analysis			
	Design			
	Coding and Unit Testing			
	ST / SIT			
	UAT			
	Deployment			
	Warranty			

# What's Next...

- Server Admin Position
- Continue SAN Upgrade
- MERITS Windows Server, SQL and WebSphere Upgrades
- ERS Phone System Cutover
- Struts/Optimization
- Complete IT Disaster Recovery Test to Femrite/BCP Planning
- Procure Vulnerability Software and Create Implementation Plan
- Desktop Rotation and upgrades

# Glossary of Terms

- *Applications/Acronyms Definitions:*

- **Perforce:** Primary application the development team uses to make code changes to MERITS. It provides the environments for testing, development and CCR/PIR deployments.
- **AccPac:** Accounting software that supports the general ledger.
- **Altiris:** Asset management software the technical team uses to inventory and support all IT assets. This application manages updates to computers, imaging, and software distribution from a centralized console.
- **Websphere Application Server (WAS):** The application server that we use to connect Web site users to Member Self Service and other MERITS related web services.
- **JAVA:** The programming language that MERITS was developed in and is running.
- **PIR:** Problem Incident Report- A person reports a bug with the application and requests priority resolution.
- **CCR:** Change Control Request- A person request a new feature, change or enhancement to MERITS.
- **Retirement Application Processing (RAP):** Functional module in Merits that processes retirement applications through workflow.
- **Merits Program Lifecycle Management (MPLM):** Process to upgrade, patch and keep current all of the MERITS related subsystems and ERS business applications.
- **Storage Area Network (SAN):** Primary storage technology used to centrally store all ERS data and manages Disaster Recovery.
- **Disaster Recovery Plan (DRP):** The technical planning, design and testing of all IT systems and staff to ensure that all technical systems can run at the off site location in Madison, WI called Femrite. IT staff does semi annually testing to ensure all applications and IT services are up and running within the designated service level objectives.
- **Recovery Time Objective/Recovery Point Objective (RTO/RPO):** These are I.T. service level goals for the amount of time it takes to cutover I.T. services to the Femrite location and the point in time (per the last backup) where we recover at. Currently at 24 hours recovery time and 8 hours for any loss of data. I.T. currently exceeds this expectation based off the last 2 tests.
- **Business Continuity Plan (BCP):** The process that ensure the ERS can continue running its services and daily operations at the Remote Office in the event that the primary location is not accessible. We engage ERS business users to physically work at the Remote office location and document the results on a reoccurring basis.
- **Remote Office (RO):** Backup Remote work facility located at TPP 10850 W. Park Place. It is connected to both the 789 N. Water Street facility and the Femrite Data Center in Madison, and users can physically work there and connect to any needed data center.
- **MERITS Optimization:** Project approved in 2012 to go through all 17 application modules in MERITS and clean up code, ensure best practices are implemented, SQL stored procedures for faster performance, reporting and user experience. It is the clean up of any non ERS related code that may have been carried over from the original jClarety (HP software) implementation.
- **ARIS:** Web based software used for mapping legal opinions to MERITS workflow processes and procedures.

Portfolio as of June 1, 2018

Project Health	% Complete	Project Priority	Complexity (S / M / L)	Project Name	Project Mgr	Description	Strategic Goal	Status	External Vendor Required: Y/N	Actual Start Date	Target Completion Date	Estimates (Hours)	Actuals (Hours)	Hours Variance = Estimates - Actuals	Hardware/Software & External Labor Budget (\$)	Actual Spent-to-Date on Hardware /Software & External Labor (\$)	Estimate to Completion (ETC) (of Hardware/ Software & External Labor Costs)
Y	90%	1	L	Phone System Enhancements	Zaffiro	Create a better phone experience for members and staff	4	IP	Y	3/23/18	4/27/18	127	214	(87)	\$7,340	\$12,043	(\$4,703)
G	30%	2	M	SQL Server and Windows Upgrade	Manchu	MPLM project; Java and Websphere have reached end-of-life.	1	IP	Y	4/16/18	8/24/18	920	251	669	\$45,463	\$19,694	\$25,769
G	22%	3	L	SAN Upgrade	Raynal	Replace existing SAN arrays in 789 and 809 with Flash Arrays.	1	IP	N	5/14/18	11/2/18	206	4	202	\$428,832	\$428,832	(\$0)
G	80%	4	L	MERITS Code Deployment Process Review@	Manchu	Review and improve process of code deployment	1	IP	Y	3/26/18	7/1/18	199	45	154	N/A	\$0	N/A
G	72%	5	L	Struts 2 Upgrade (functional areas besides MAM)	Manchu	Software development upgrade all functional areas but MAM.	1	IP	Y	10/17/16	8/15/19	11,438	5,894	5,545	\$730,290	\$273,808	\$456,483
G	70%	6	L	CAD/CAR/GL Optimization	Manchu	MERITS optimization & clean-up of Cash Disbursements, Cash Receipts, and General Ledger	1	IP	N	10/6/17	12/27/18	1,738	891	847	N/A	N/A	N/A
G	15%	7	M	Electronic Signatures- Phases 1 and 2	Siddiqui	Pilot to implement electronic signatures for select documents	4	IP	Y	5/23/18	8/15/18	175	8	168	\$4,916	\$4,916	\$0
G	99%	8	L	2018 Network Replacement	Benedict	Create a more resilient network with all gear under support. Replaces Network Re-Architecture	1	IP	Y	2/1/18	6/1/18	511	578	(67)	\$374,118	\$374,692	(\$574)

Green = On Target - No Significant Issues  
 Yellow = On Watch List – Issues Being Addressed  
 Red = Project cannot move forward as planned without management attention or approval.

NS = Not Started      OH = On Hold      @ = Activity (no charter)  
 IP = In Process      C = Completed

Special Note: Struts 2 Upgrade costs are part of the 3-year HP maintenance contract.

Completed Projects & Tasks in Last 12 Months	Finished	Hours / \$ Spent
2017 Desktop Rotation (Powell)	5/8/2017	269 hrs / \$39,520
Member Education Videos [POC] (Zaffiro)	5/19/2017	67 hrs / \$1,889
Websphere Server Patching @ (Manchu)	5/26/2017	81 hrs / \$8,762
VMware vSphere Upgrade @ (Raynal)	6/15/2017	73 hrs / N/A
IT General Controls Audit @ (Reid)	6/20/2017	39 hrs / \$13,320
Printer Maint. Contract @ (Zaffiro)	6/21/2017	64.5 hrs / N/A
BAA / PAP Optimization (Manchu)	7/7/2017	3,129 hrs / N/A
DR Test (IT Only) @ (Dugan)	7/11/2017	67.5 hrs / N/A
Install Print Monitoring Software @ (Xiong/Zaffiro)	9/21/2017	57.7 / N/A
Upgrade Network Infrastructure Firmware @ (Benedict)	9/22/2017	48 hrs / N/A

	Finished	Hours / \$ Spent
BCP Test @ (Siddiqui)	9/28/2017	17 hrs / N/A
HCP Optimization (Manchu)	10/2/2017	958.3 hrs / N/A
CMERS.com Upgrade & Redesign (Zaffiro)	11/13/2017	149.75 hrs / \$18,600
100 Meg Femrite Cutover @ (Xiong)	1/5/2018	18.5 hrs / N/A
IT Strategic Planning @ (Reid)	1/29/2018	100 hours / N/A
Social Engineering Audit @ (Reid)	1/31/2018	45 hours / \$9,600
Altiris Upgrade (Raynal)	2/9/2018	535 hours / \$30,590
Video Conferencing Options @ (John)	3/21/2018	55.3 hours / \$10,152
OSC Optimization (Manchu)	4/9/2018	975.25 hours / \$75,444
IT Vulnerability Audit @ (Reid)	5/11/2018	100 Hours / \$33,800

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**City of Milwaukee  
Employees' Retirement System (ERS)**

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***IT Support Policy for Comptroller's Office***

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## 1. Overview

This policy covers the use of ERS IT resources (personnel only) by the Comptroller's Office.

## 2. Scope

To better utilize staff resources across City departments, the ERS will be working in conjunction with the Comptroller's Office to share IT staff. The Comptroller's Office traditionally has worked with ITMD for desktop/PC issues, but is now looking to leverage ERS staff resources for this purpose as a backup.

The support and resource sharing envisioned as part of this understanding is solely for desktop/PC support. The cost for the time spent by the resources is to be cross-charged back to the Comptroller's Office.

## 3. Policy

### Request Initiation

- a. Requests for support will be made by the Comptroller's Office through their Functional Applications manager to the CTO in writing.

### Traceability

- a. A ticket will be created in the ERS's ticket system for each request.
- b. The appropriate staff who can work on the issue will be assigned by the CTO and/or Senior Systems Administrator.
- c. Priority will always be given to ERS's needs – we are to have at least one Tech available onsite at the ERS prior to sending staff to the Comptroller's Office (unless authorized by the CTO or designee).

### Technician Responsibilities

- a. Tech must inform the entire Tech Team if they are going to be at the Comptroller's Office for an extended period of time via email to the "Tech Support Team" group. This will be for any period greater than 1 hour.
- b. Work is to be done during regular business hours only (8:00am to 4:45pm).
- c. Time spent by the ERS staff on any issues related to the Comptroller's Office will be tracked in detail in the ticket. This will include total time spent, notes about the specific work done, the user(s) involved, the date and time the work was performed, and the eventual resolution.
- d. If the work requested needs coordination with ITMD, the Tech will work with ITMD to obtain the necessary information, and/or hand-off the issue to ITMD, as necessary. If work is transferred to ITMD, a RITS ticket should be logged and that ticket id included in the ERS ticket.

- e. The ERS techs who work on assignment at the Comptroller's Office will continue to follow all practices that are in effect for the ERS (dress code, professionalism, best practices, confidentiality, and the items covered under the IT security program, including the basic office guidelines).

### Reporting and Chargeback

- a. On a monthly basis, on or around the 1<sup>st</sup> of each month, a summary report will be prepared by the QA Lead indicating the work performed in the prior month.
- b. This report will be reviewed by the CTO and then forwarded to the CFO for cross-charging purposes. A blended rate of \$75 p/hr is to be used for the cross-charge as determined by the ERS's CFO.
- c. A summary report of the time spent by ERS staff at the Comptroller's Office will also be presented to the A&O committee.

### ITMD Coordination

- a. Since the ERS staff will be working with City equipment and on the City's network, the CTO will be responsible for obtaining approval from ITMD for each staff member to gain appropriate access to the City's network. This will include obtaining administrator access to PCs, domain information, configuration information for Office 365, any configuration information for adding PCs to the domain, anti-virus information, approved applications list for PCs, etc.
- b. A point of contact at ITMD should be identified. All technicians who work at the Comptroller's Office should be aware of who to contact if an issue arises that needs input from ITMD. Technicians who need this information should contact the CTO and/or the Senior Systems Administrator.
- c. If training is needed for the ERS staff for City specific items, the CTO will assign time for each ERS staff member to obtain the necessary documentation and/or training from ITMD.

### Other

- a. The ERS will not purchase equipment and/or software for the Comptroller's Office, unless authorized by the CTO and/or ERS Deputy Director. In addition, if new software is to be installed on a PC that is not already approved by ITMD, the technician will follow ITMD's procedure to obtain approval prior to installing the application.

## 4. Enforcement

- a. Since this work involves working across departments, including access to sensitive data, employees found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

## 5. Revision History

Version	Date	Brief Description	Changed By:
1.0	6/5/2018	Initial draft	Terry Siddiqui
1.1	6/13/2018	Final Updates	Kelly Reid



# Organizational/Personnel Update

Administration and Operations Committee

Thursday, June 21, 2018

- ERS is working with DER to fill the following vacancies:
  - Pension Accounting Manager
  - ERS Server Administrator
  - Records Technician II
  - Administrative Assistant II
- ERS continues to work with DER to classify the Deputy Chief Investment Officer position.

