STRATEGIC PLANNING COMMITTEE
SPECIAL MEETING
The Metropolitan District
April 18, 2023

PRESENT: Commissioners Kyle Anderson, John Avedisian, John Bazzano, Richard Bush, Donald Currey, Allen Hoffman, Gary Johnson, Byron Lester, Jacqueline Mandyck, Alvin Taylor, Calixto Torres and District Chairman William A. DiBella (12)

REMOTE
ATTENDANCE: Commissioners Andrew Adil and Dominic Pane (2)

ABSENT: Commissioners Dimple Desai, John Gale, Joan Gentile, James Healy, Jon Petoskey, Pasquale Salemi, and James Woulfe (7)

ALSO
PRESENT: Commissioner Diane Lewis
Commissioner Bhupen Patel (Remote Attendance)
Scott W. Jellison, Chief Executive Officer
John S. Mirtle, District Clerk
Kelly Shane, Chief Administrative Officer
Robert Barron, Chief Financial Officer
Robert Schwarm, Director of Information Technology
David Rutty, Director of Operations
Jamie Harlow, Director of Human Resources
Lisa Madison, Manager of Procurement
Diana Phay, Treasury Manager
Jessica Fenner, Treasury Receivables Administrator
Olga Cordova, Manager of Human Resources
Kadian Cohen, Human Resources Generalist
Felicia Betsy, Administrative Assistant
William Pallis, Manager of Information Services
James Masse, Network Analyst
Timothy Murphy, Business Systems Analyst
Dhana Paramasivam, Project Manager
Charlotte Saab, Business Systems Analyst
Elias Sanabria, Business Systems Analyst
Joshua Tryon, Business Systems and Security Administrator
Christopher Taveras, Network Analyst
Omer Khan, Business Systems Analyst II
Chetan Bhatt, Business Systems Analyst
Jeremy Adams, Mapping Technician
Annmarie Spielman, Principal GIS Analyst
James Wysor, Principal GIS Analyst
Carrie Blardo, Assistant to Chief Executive Officer
Julie Price, Executive Assistant
David Baker, IT Consultant
Dylan Pecego, IT Consultant

CALL TO ORDER

Chairperson Avedisian called the meeting to order at 4:03 PM

PUBLIC COMMENTS RELATIVE TO AGENDA ITEMS

No one from the public appeared to be heard.

APPROVAL OF MINUTES OF APRIL 5, 2023

On motion made by District Chairman DiBella and duly seconded, the meeting minutes of April 5, 2023 were approved.

2003 BARRINGTON WELLES MANAGEMENT STUDY UPDATE
INFORMATION TECHNOLOGY AND HUMAN RESOURCES

Robert Schwarm, Director of Information Services, gave an overview of his department including its structure and changes to IT since starting at the District in 2016. William Pallis discussed IT infrastructure, followed by Tim Murphy who presented on system support operational improvements, and Chris Taveras who touched on IT asset life cycle management. Josh Tryon discussed cyber security, Dhana Paramasivam gave an overview of the IT applications team, and Elias Sanabria discussed OpenText. Annmarie Spielman and Jim Wysor gave an overview of geographic information systems (GIS).

Commissioner Adil entered the meeting virtually at 4:11 PM.

Agenda

- Introduction of Department Staff
- Management Study Recommendations Overview
  1) Reorganization
  2) Business Process Improvements
  3) Measuring Performance
  4) Succession Planning
  5) Workforce Plan
  6) Optimize IT Investments, Including SAP
- Cybersecurity
- Infrastructure Team
- Application Team
- Geographic Information Systems
- Wrap Up

2

Supporting the Business
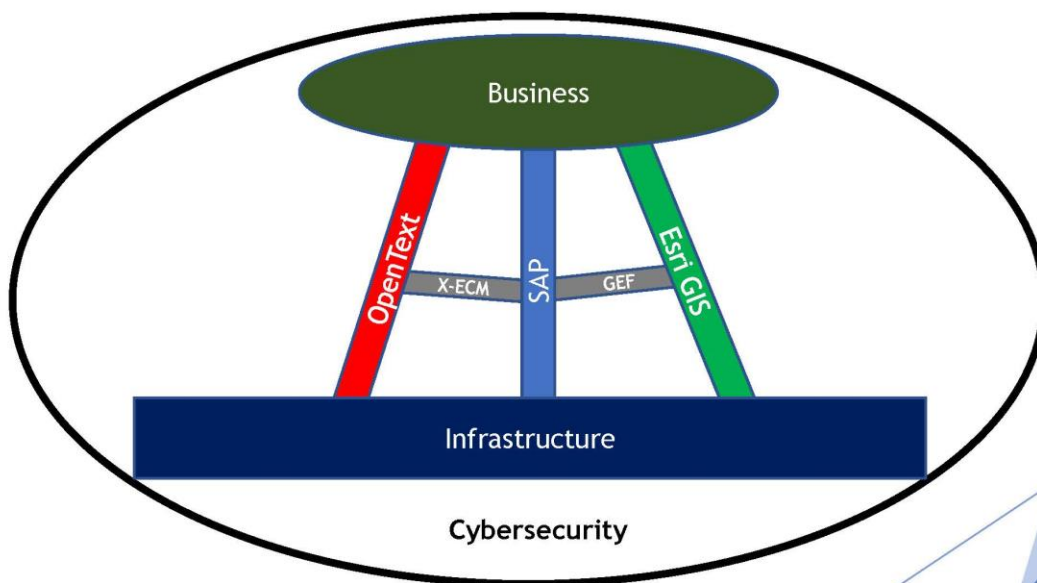
Management Study Recommendations Overview

(1) Reorganization of Departments

- ▶ In 2015 a Director was hired to advance the IT department
- ▶ In 2016 an IT Manager was added to manage the infrastructure function under IT to develop the team, improve capabilities and stabilize the network / datacenter operations.
- ▶ In 2016, the GIS department was been moved under the Director of Information Services to ensure continuity in maintaining systems and applications in a fully integrated state. Improved our capabilities to support the future integrated data and workflow needs of the District.
- ▶ In 2017, IT added a specialized focus on cybersecurity by adding an IT Security Admin role, which since being filled has been responsible for implementing and monitoring controls within the NIST Cybersecurity Framework.
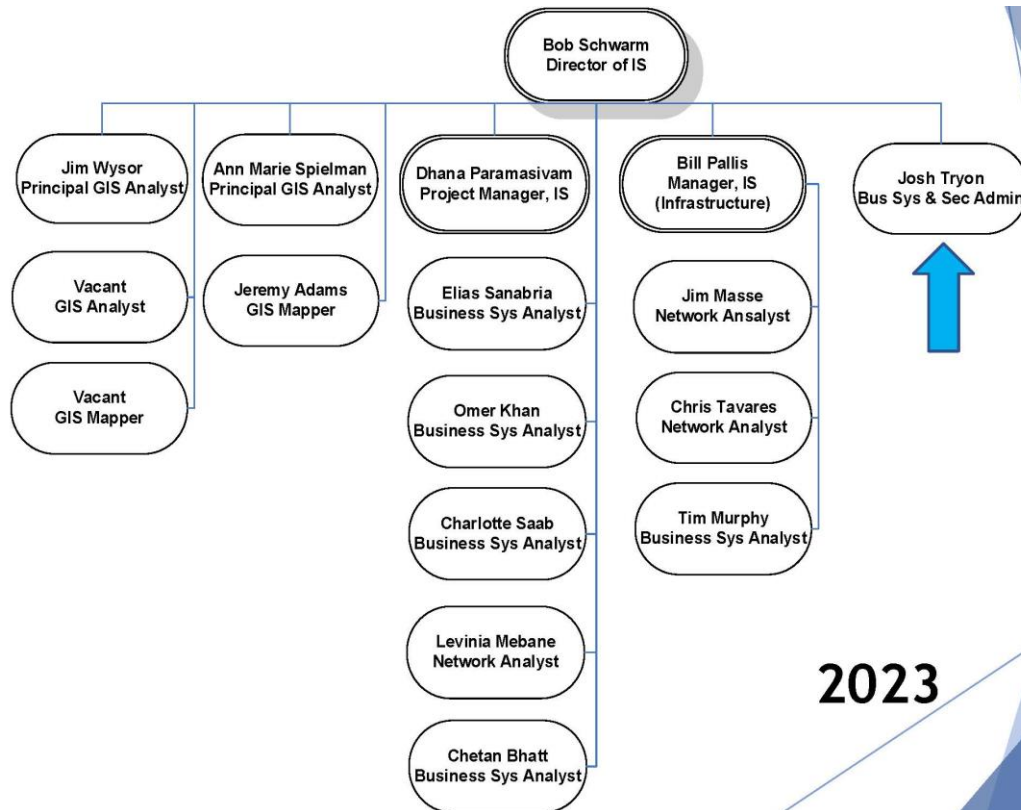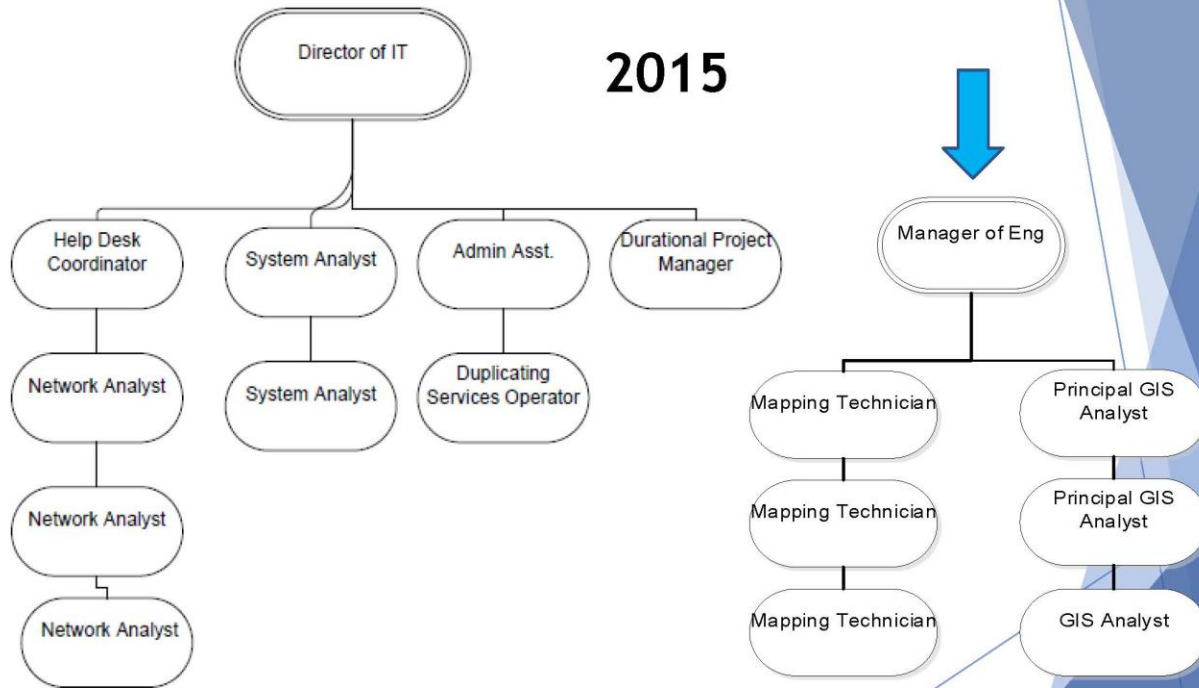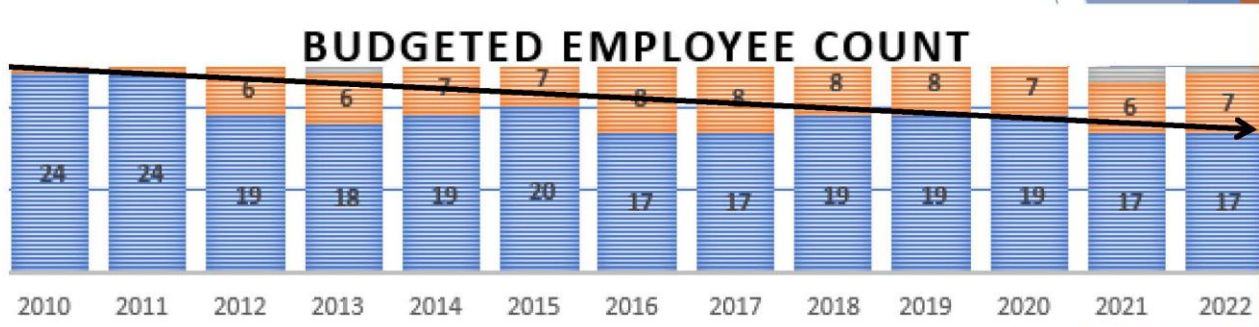
4

IS / GIS Leadership

- ▶ Robert Schwarm, Director of Information Services
  - ○ 17 staff
- ▶ Bill Pallis, Manager of Information Services (Infrastructure)
  - ○ 3 staff + 5 full time contractors
- ▶ Dhana Paramasivam, IT Project Manager
- ▶ Josh Tryon, Business Systems Security Administrator
- ▶ Ann Marie Spielman, Principal GIS Analyst
- ▶ Jim Wysor, Principal GIS Analyst

5

2015

Director of IT

- Help Desk Coordinator
  - Network Analyst
    - Network Analyst
      - Network Analyst
- System Analyst
  - System Analyst
- Admin Asst.
  - Duplicating Services Operator
- Durational Project Manager

Manager of Eng
- Mapping Technician
  - Mapping Technician
    - Mapping Technician
- Principal GIS Analyst
  - Principal GIS Analyst
    - GIS Analyst

6

Bob Schwarm
Director of IS

- Jim Wysor — Principal GIS Analyst
  - Vacant — GIS Analyst
  - Vacant — GIS Mapper
- Ann Marie Spielman — Principal GIS Analyst
  - Jeremy Adams — GIS Mapper
- Dhana Paramasivam — Project Manager, IS
  - Elias Sanabria — Business Sys Analyst
  - Omer Khan — Business Sys Analyst
  - Charlotte Saab — Business Sys Analyst
  - Levinia Mebane — Network Analyst
  - Chetan Bhatt — Business Sys Analyst
- Bill Pallis — Manager, IS (Infrastructure)
  - Jim Masse — Network Ansalyst
  - Chris Tavares — Network Analyst
  - Tim Murphy — Business Sys Analyst
- Josh Tryon — Bus Sys & Sec Admin

2023

BUDGETED EMPLOYEE COUNT

| 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |

8

IT/GIS Budget 2010 – 2023

The average for percentage of the District annual budget attributed to IT/GIS since 2010 is 3.97% with a low in 2014 of 3.08% and a peak in 2016 of 5.22% (2023 is budgeted, not actual)
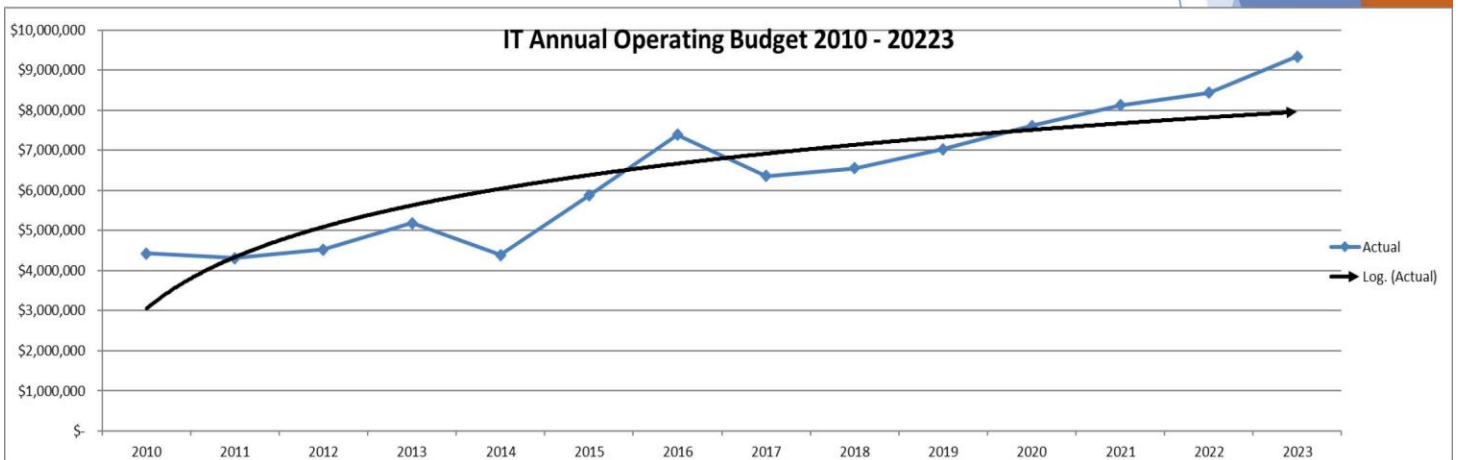
Management Study Recommendations Overview

(2) Business Process Improvements

- ▶ IT Infrastructure Improvements
  - ▶ Centralized management of the District IT Infrastructure under the Director of Information Systems to include all hardware, software, and cloud applications across the enterprise.
- ▶ Cybersecurity Incident Response Plan and AWIA Integration

10
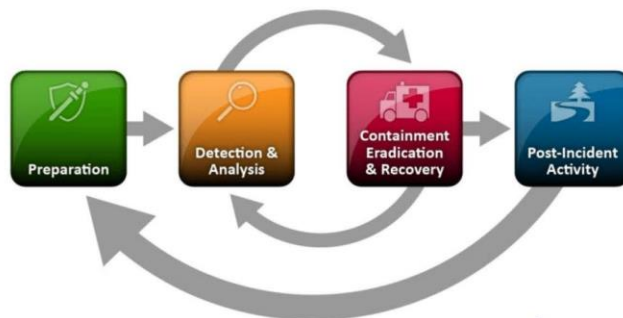
Data Centers (Before and After)

New Hartford Data Center →

← Old Hartford Data Center

Springfield Data Center →

11

Management Study Recommendations Overview

(3) Measuring Performance

▶ The data clean-up efforts across the organization in conjunction with the re-implementation of SAP has allowed for better reporting and analytics to drive management decision making across the Business.

▶ NIST Cybersecurity Framework Special Publication 800 (NIST CSF) metrics tracked to purposefully and effectively manage the District's cybersecurity risks.

▶ IT Service Management and IT Infrastructure Lifecycle (ITIL) are used to guide effective management of IT systems and for measuring the performance of IT assets, including the effectiveness of the IT change management process.

IT Project and Portfolio Management

▶ Trello started being used to track BET projects by workstream in May 2020

▶ Jira started being used to track IT Infrastructure projects, manage activities and providing dashboard reporting on the project portfolio in November 2020 .
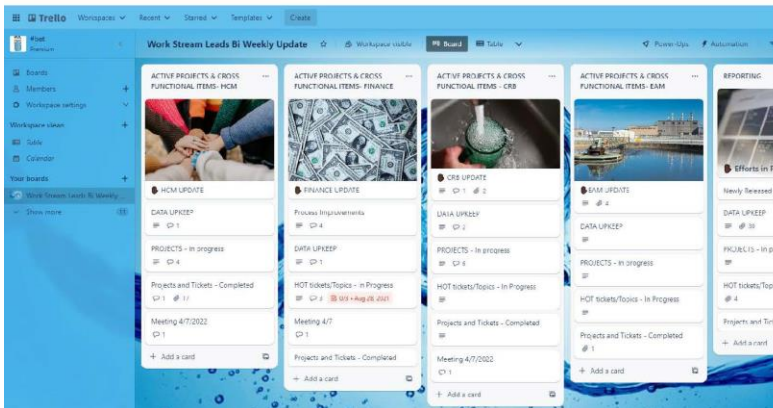
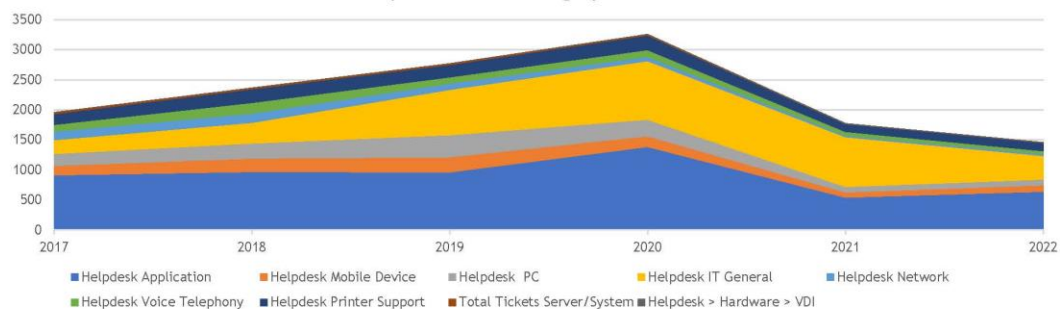# IT Infrastructure Team

▶ Bill Pallis, Manager of Information Services (Infrastructure)
  ○ 3 staff + 5 full time contractors
▶ Josh Tryon, Business Systems Security Administrator
▶ Chris Taveras, Network Analyst
▶ Tim Murphy, Business Systems Analyst
▶ Jim Masse, Network Analyst

Helpdesk – Solving Problems

Helpdesk Ticket Category 2017 - 2022

▶ **Reduced Troubles & Improved Performance**
▶ Root Cause Analysis
▶ Fault Elimination & Prevention
▶ Implementing Standard Procedures
▶ Continual Process Improvements
▶ Ticket Escalation Processes

▶ Problem Tracking & Trend Analysis
▶ MDC IT Staff provided reduced interruptions
▶ Separation of Operational and Engineering Responsibilities
▶ MDC IT Staff - Escalated Support Roles
▶ Improved Vendor Engagement

15

Helpdesk Making a Difference

I wish to inform you of the outstanding assistance and advice David provided to me with regards to my Apple Tablet. He was patient, without being patronizing, and his directions were clear and to the point! He left me with the impression that the MDC's IT Department has been bringing on-board savvy IT people with solid people skills. Thumbs-up to you and your staff; a shout-out for David!

Regards, Commissioner Al Taylor

All too often people send emails to make complaints, I am sending this email to praise you and your staff! Each and every time I have a problem, usually because of my own computer inadequacies, your team bails me out!!! From Wayne, Justin, Chris, Jimmy and I know I am missing a few but they are FANTASTIC!!!! Please thank your team for me and thank you!!! **Allen King**

Just an FYI. Chris, Justin and Wayne have been doing an excellent job ensuring a smooth transition to Windows 10. I know no one usually talks about IT unless there is a problem, so I wanted to let you know. Thank you all for your support.
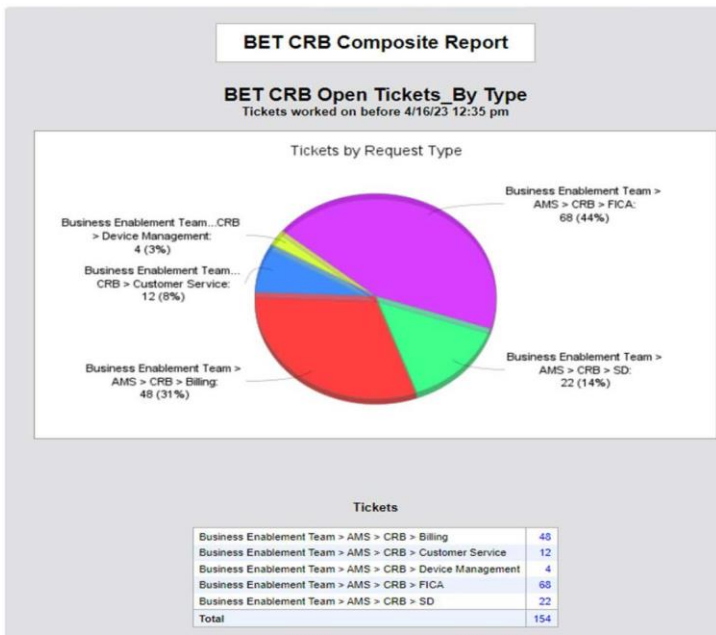
Brian S. Gregory

Good morning - I just wanted to pass along the note that about 2 months into working from home, the transition (from an IT perspective) has been excellent and seamless. You and your department deserve huge praise.

Jason F. Waterbury, P.E.

16

SolarWinds Web Helpdesk

▶ Solarwinds Web Helpdesk

▶ Configurable Ticket Portal

▶ Automated Ticket Generation – Detailed Action Rules Incident Classification

▶ Standard and Customized Reporting Capabilities

▶ Next - Migration to Cloud Based Service Desk

17

SolarWinds Service Desk

ITSM ITIL Tools

▶ Solarwinds Service Desk

▶ Cloud Based

▶ Asset Management

▶ Change Management

▶ Service Management

18

Systems Support Operational Improvements

Standard Processes, Workforce Management & Continual Improvements

▶ Established well defined Windows server patching schedule and standard procedures

▶ Trained Helpdesk Analysts, Implemented monthly server patching program

▶ Defined standard processes for SSL Certificate Management, transitioned processes to Helpdesk Analysts

▶ Established well defined processes and tools, streamlined server maintenance

▶ Develop dynamic elasticity profiles for virtual servers – Over 50 upgrades to CPU, RAM, Drive expansion with zero user impact

▶ Completed cleanup and consolidation of User file shares and DFS share implementation for ease of administration

▶ Data Center Maintenance Project, Cleanup of legacy and end of life equipment, realized 6 to 1 cabinet reduction.

19

Systems Support Projects

▶ Deployed SolarWinds Application Monitoring, provides real-time monitoring of application services – Exchange/OpenText/Other Web applications

▶ Completed SCADA server hardware infrastructure refresh

▶ Upgraded all SCADA domain servers to Windows Server 2019 OS

▶ Windows Server 2008 Decommission – 20 Upgraded to newer OS, 62 decommissioned

▶ Windows Server 2012 Decommission – 55 upgraded to 2019, 10 remaining upgrades in 2023

▶ SUSE Linux Consolidation Reduced from 79 to 65. Upgrading and standardizing on Linux OS

▶ VMWare – System Standardization, all servers to version 7.0 in 2023.

▶ Overall reduction in total virtual servers by 20% in the past 4 years.

▶ EOL Server Hardware refresh – Footprint reduction 34 to 12 Servers

▶ Migration to M365

▶ Global DNS deployment through cloud based load balancers

20

2019 Desktop Refresh

IT asset lifecycle management

Plan
Develop/ acquire
Integrate
Maintain/ upgrade
Retire
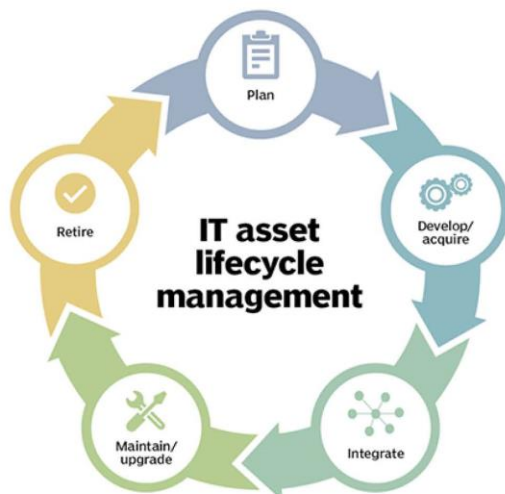
Desktop Refresh Project Challenges

▶ Unsupported End of Life Operating Systems

▶ Increased Repair Costs

▶ Poor Performance

▶ Decreased productivity

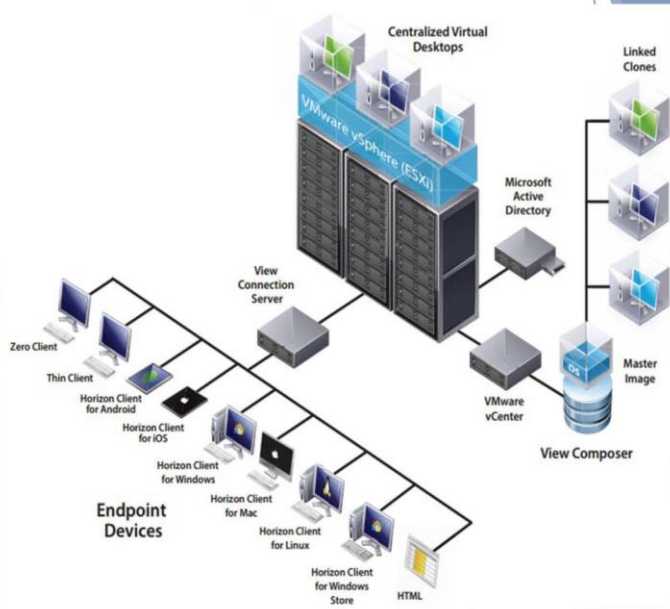▶ Increased Complexity to Support

PC as a Service (PCaaS)

▶ Hardware lease and includes extended warranty and support

▶ Upgrades to latest supported operating system

▶ Version Control

▶ Inventory Tracking

▶ Performance Increase

▶ 4 year lifecycle

21

Virtual Desktop

Migration to Virtual Desktops

- ▶ Secure
- ▶ Scalable
- ▶ Accessible
- ▶ Cost Benefit

Unified Communications Investments
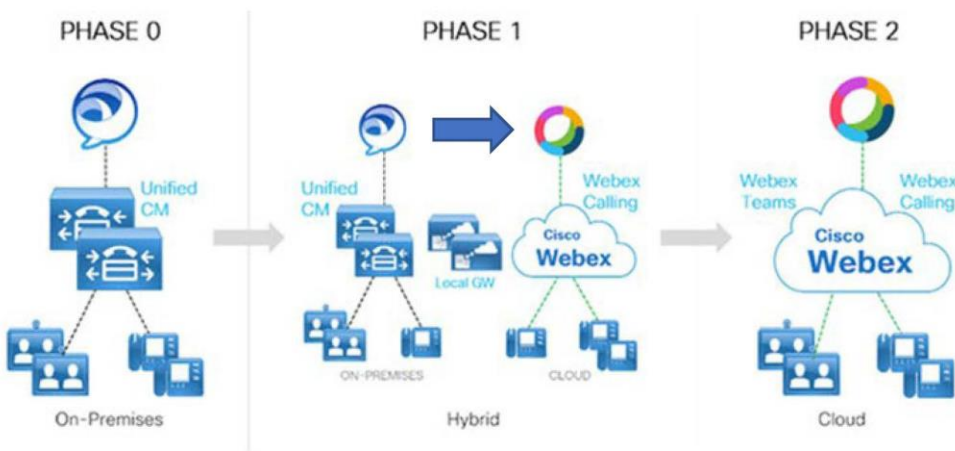
Network Resilience
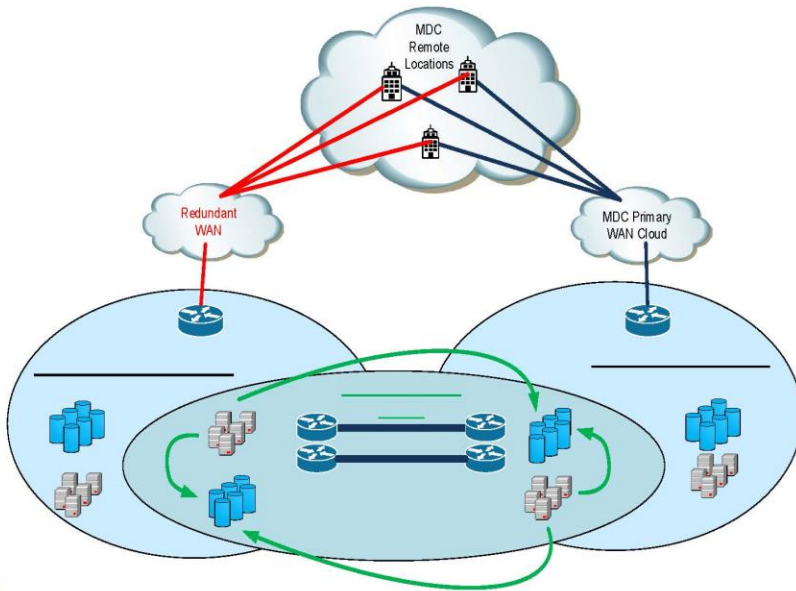
2019 Network Infrastructure Project

▶ Improved Network Resiliency –
Diverse Carriers & Paths

▶ Data Center WAN Redundancy

▶ Standardized IP and Domain
Name Service

▶ Improved Application
Performance

▶ Reduction in Downtime
Increase Application
Availability

24

Cloud Ready Infrastructure
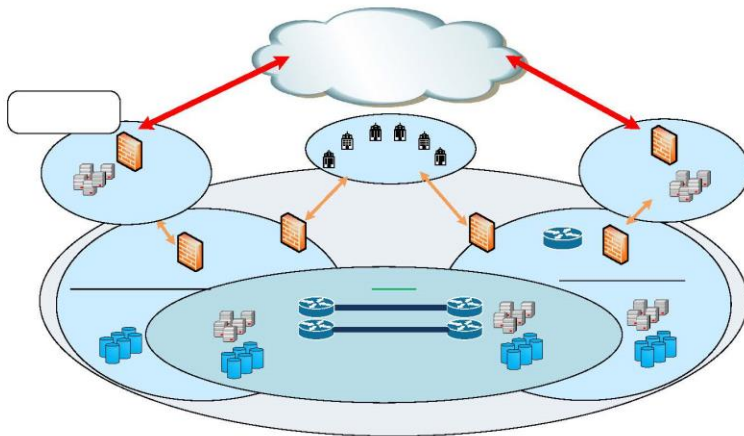
2023 Cloud Ready Architecture

▶ Low Latency Resilient
Internet Uplinks

▶ Internet2 Connecticut
Education Network ISP

▶ Adoption of Industry
Standard Protocols

▶ Enterprise routing transition
to Industry Standard BGP
Protocol

25

Multi-Cloud Strategy
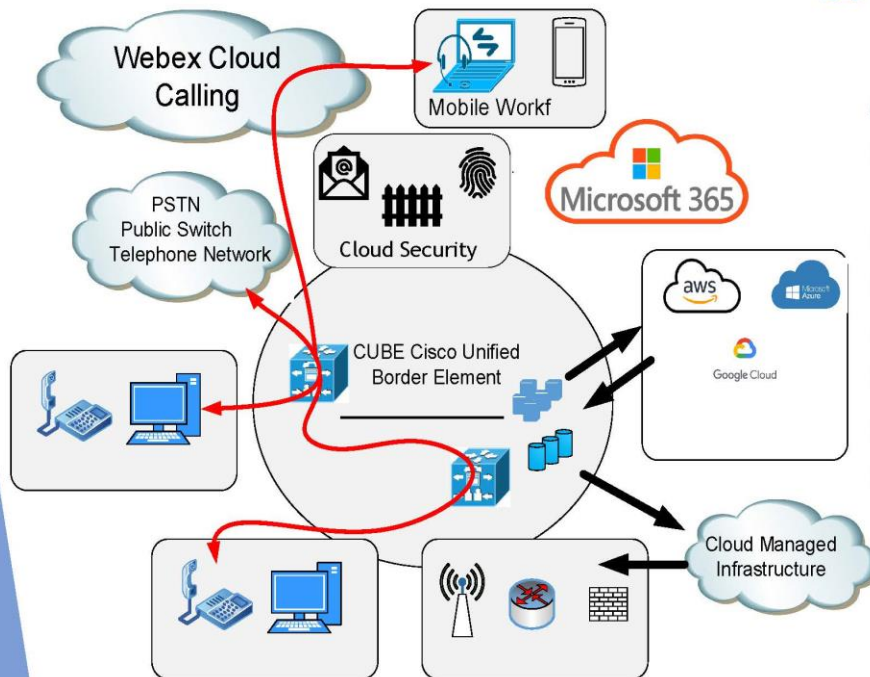
MDC Multi-Cloud Adaptation

▶ Webex Cloud Calling & Collaboration

▶ Secure Cloud Backup

▶ Elastic Capacity

▶ On Demand Bandwidths

▶ Cloud Disaster Recovery

▶ Office 365

▶ Multi-Domain Cloud Management

26

Cybersecurity Program Development

▶ Advanced email filtering

  ▶ More than 30% of the emails coming in are spam or otherwise malicious

  ▶ Added their Secure File Sharing platform as well as Data Loss Prevention module

▶ Multi-factor Authentication

  ▶ Securing the three major methods of logging in – OWA, VPN, and VDI

▶ Collaboration with the SCADA Team

  ▶ Weekly meetings to keep all projects on track and track vulnerabilities

▶ Introduction of Security Awareness Training in 2022

  ▶ "Securing the Human"

  ▶ 70% completion average on training modules

▶ Recently completed our 2023 penetration test

27

Cybersecurity Program Development (cont.)

▶ Intrusion Detection System

   ▶ Established real-time monitoring of both the IT and SCADA network traffic

   ▶ Reporting of potential vulnerabilities on the network that may not otherwise be visible

▶ Network Operations Center

   ▶ 24 x 7 x 365 monitoring of the MDC network

   ▶ Off-hours reporting and notifications of events based on severity

   ▶ Escalation procedure to internal IT staff, and capabilities for NOC to quarantine devices when necessary

▶ Cyber Yankee 2023

   ▶ 9th year of the event with CT National Guard and fellow New England Utilities

   ▶ Our 6th year of participation

28

Network Security Improvements 2023 and beyond

▶ Upgrade to Next-Generation Firewalls for the SCADA environment

   ▶ Improved security measures available including user-based rules and real-time monitoring, threat prevention, and zero-day threat detection

   ▶ Dynamic updates and controls of firewall features reduce administration and ensure they are always up to date

   ▶ Centralized management of all SCADA site firewalls under one view reduces the need for multiple changes when a rule change is requested

▶ Major VPN overhaul with security improvements

   ▶ Additional security measures applied including access provisions and tightened Multi-Factor Authentication (MFA) controls

▶ Security Information and Event Management (SIEM) launch

   ▶ Ingestion of logs from multiple sources including the network, server, endpoint, and security devices to be able to correlate events between all of them

   ▶ Allows for much longer and centralized log retention
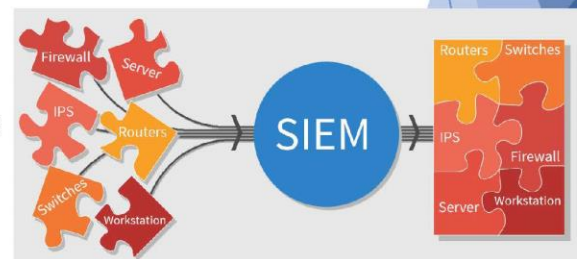
29

IT Applications Team

- ▶ IT Project Manager – Dhana Paramasivam
- ▶ Business Analyst – SAP Technical/Basis, Levinia Mebane (not in picture)
    - ○ SAP System Maintenance and Access Management
- ▶ Business Systems Analyst – OpenText, Elias Sanabria
    - ○ Creates and Maintains Automated Workflows
    - ○ System Maintenance and Upgrades
- ▶ Business Systems Analyst – Reporting, Charlotte Saab
    - ○ Creates and Manages SAP Reports for Data Analysis
- ▶ Business Systems Analyst – SAP Finance/CRB – Chetan Bhatt
    - ○ IT Liaison to Finance and Customer Service
- ▶ Business Systems Analyst – Technical – Omer Khan
    - ○ Applications Technical Project Support and Security Administration

MDC's SAP Journey
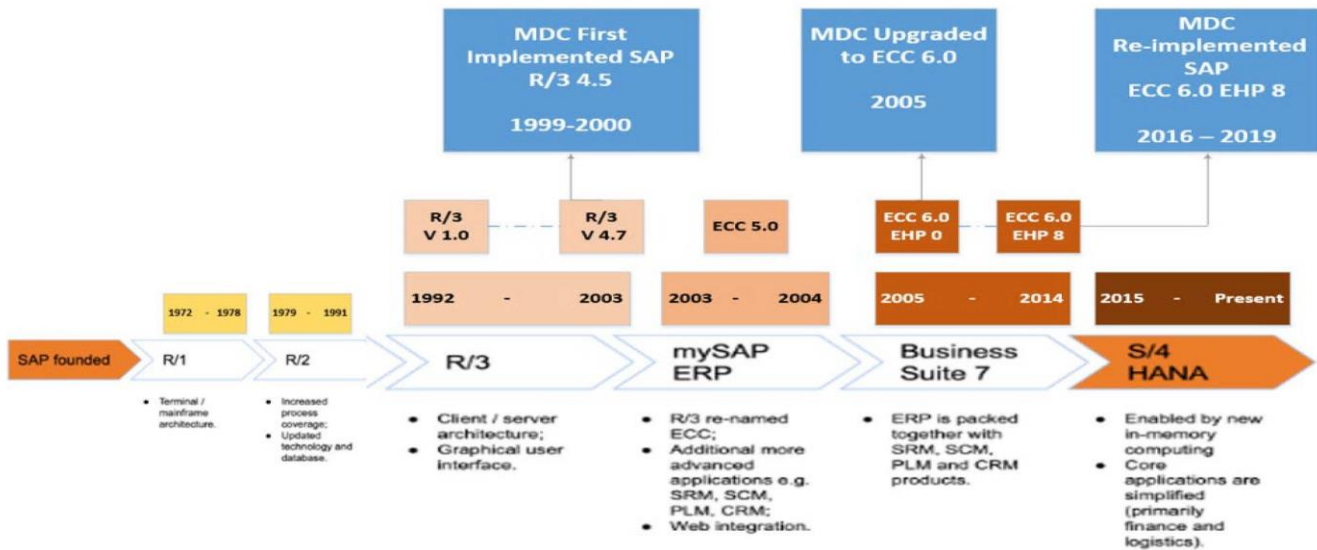
SAP Technical / Basis
Responsibilities

- Manage SAP users, authorizations, and profiles
- Introduce technical changes into the environment using a structured approach
- Live patching for critical and important security issues
- Install and configure all required SAP database servers and application servers
- Participate in the planning and implementation of SAP system upgrades
- Perform regular maintenance and performance Tuning for Database and SAP systems
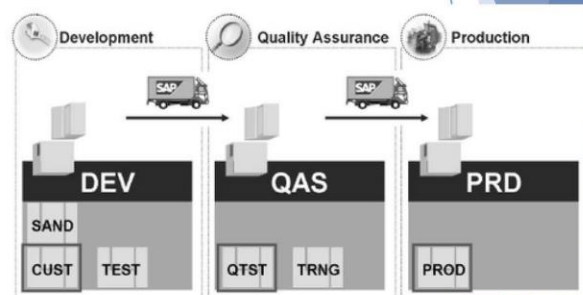- System Backups to support Disaster Recovery/High Availability
- Administration of SAP integration, interfaces and support tools
- Maintain SAP workloads, batch processes and background activities

32

SAP Technical / Basis

2020 New System Go Live Accomplishments

- Implemented ECC 6.0 EHP 8 on HANA database v 2.0 from ECC 6.0 on unsupported Oracle database
- Went from Windows OS to Suse Linux which is more supported by SAP
- Implemented SAP's Process Orchestration which enables the MDC to automate HCM, Webster, and Kubra file transfers
- Streamlined user access/security

Continuous Improvement – Current Projects

- Daily monitoring of all critical processes
- Implementing SAP security notes through the systems in a timely manner:
- Perform all OS/database/system updates to keep current with SAP product updates/patches

Future Goals & Road Map

- Migrate to full S/4 HANA to better position the MDC for future technological innovations
- Implement GRC (Governance, Risk and Compliance)
- Improve Disaster Recovery Process

33

Production Support
Responsibilities

▶ Working with business partner to provide SAP functional support

▶ Collaborating with AMS Support Partner to provide functional and technical support

▶ Support resolution of critical and time-sensitive production issues in a timely manner

▶ Deliver master data change requests on priority basis

▶ Provide testing support during system upgrades

34

Reporting and Analytics
Responsibilities

▶ Supporting the Reporting Lead to develop and implement business line specific reporting requirements.

▶ Work with the work streams and other stakeholders in identifying reporting needs and data requirements.

▶ Define and structure a reporting catalogue of the newly created and existing reports.

▶ Implement Reporting Governance process

▶ Provide support and guidance in data mapping, requirements/design documentation and change management activities surrounding reporting
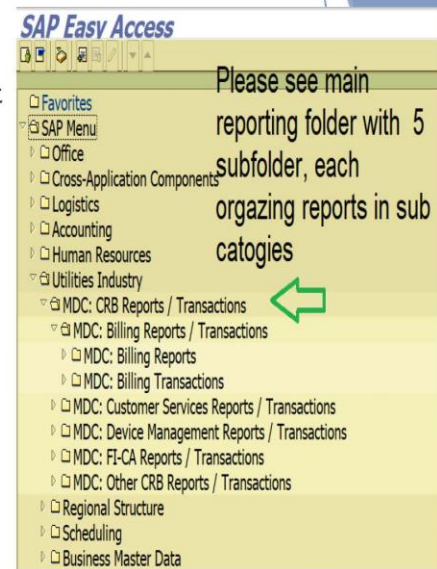
35

Reporting and Data Analytics

2020 New System Go Live Accomplishments

- Provided support for Migration, cleansing and validation of data from legacy to new system
- Re-engineered query reports on new system to make it user friendly
- Migrated and Re-implemented legacy reports to new system

Continuous Improvement - Current Projects

- About a hundred data exception reports have been created in the new system
- Provide technical support and assistance to the business regarding SAP standards reports and custom reports
- Provide technical support to the project data manager on reporting needs
- 280+ custom reports are in use by MDC Business users

Future Goals & Road Map

- Implement flexible Reporting Tools for large data sets
- Develop new capabilities with Business Warehouse and Data Analytics solutions to meet growing business demands

36

OpenText Responsibilities

▶ Maintain MDC's Content Management System to provide a secure platform to centralize the business content and information assets
– single source of truth

▶ Increase productivity and collaboration via automated workflows, notifications and approvals

▶ Eliminate manual processes and increase efficiency of operations
– cost savings and business transparency
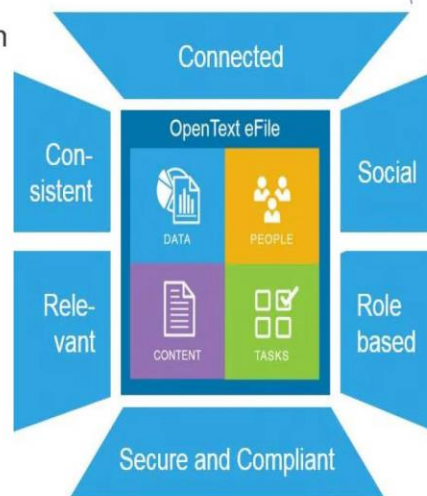
37

OpenText Enterprise Content Management

2020 New System Go Live Accomplishments

- Established OpenText as the Content Management system for MDC
- Migrated all data and documents from Oracle to OpenText
- Enabled seamless flow of documents from SAP to OpenText via business workspaces benefitting Customer Service, Procurement, Engineering and Finance areas

Continuous Improvement – Current Projects

- Providing support for LCRR project
- Implement a workflow based invoice approval process supporting Procurement, Finance and Engineering
- Upgrade OpenText to newer version to ensure compatibility with SAP

Future Goals & Road Map

- Further automate Employee and Consultant on-boarding workflow
- Expand use and support integrated workflows with SAP and GIS

38

Path Forward - IT and Business Alignment

▶ Derive maximum value from SAP investments

▶ Keep aligned to MDC's Strategic Business objectives

▶ Keep pace with SAP's product evolution – End of maintenance support at 2027

▶ Embrace the path to Digital transformation with minimal business disruption

39
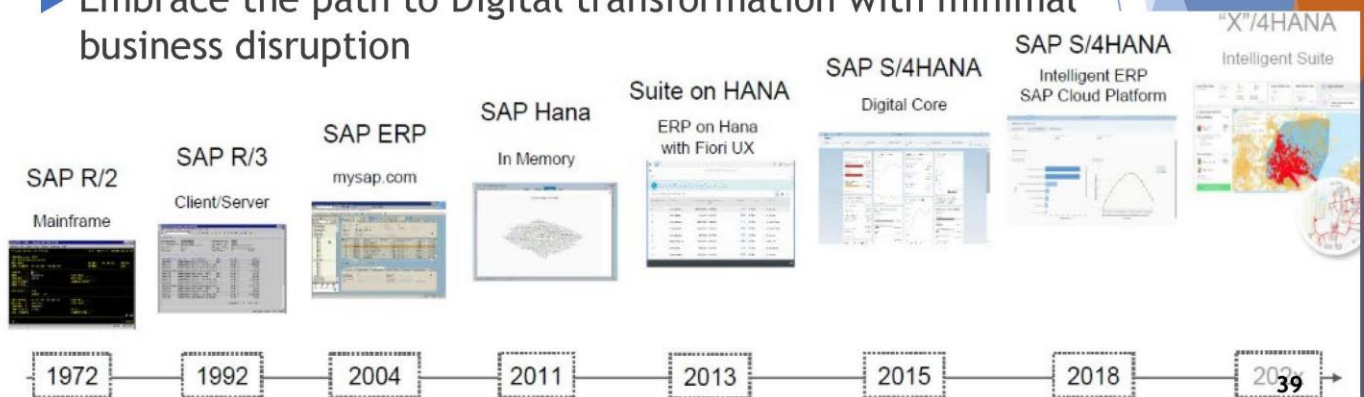
GIS Team

▶ Ann Marie Spielman, Principal GIS Analyst

▶ Jim Wysor, Principal GIS Analyst

▶ Jeremy Adams, Mapping Tech

History of GIS at The District
Spatially enabling the business for over 30 years!

1929
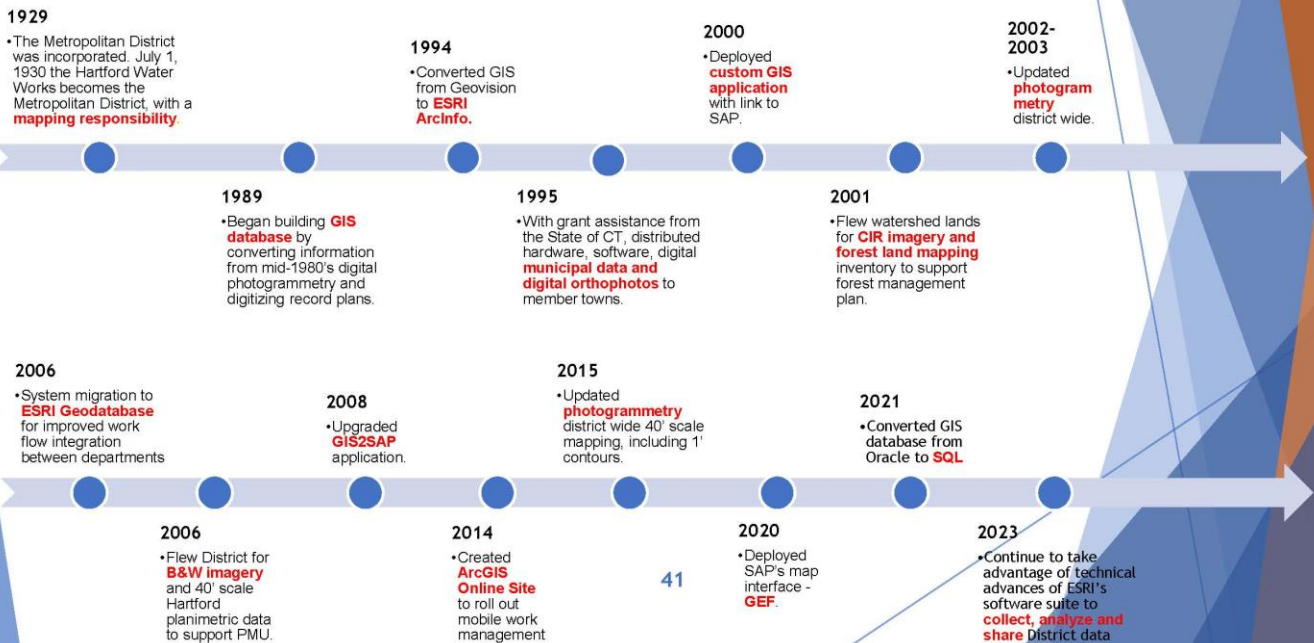- The Metropolitan District was incorporated. July 1, 1930 the Hartford Water Works becomes the Metropolitan District, with a **mapping responsibility**.

1989
- Began building **GIS database** by converting information from mid-1980's digital photogrammetry and digitizing record plans.

1994
- Converted GIS from Geovision to **ESRI ArcInfo**.

1995
- With grant assistance from the State of CT, distributed hardware, software, digital **municipal data and digital orthophotos** to member towns.

2000
- Deployed **custom GIS application** with link to SAP.

2001
- Flew watershed lands for **CIR imagery and forest land mapping** inventory to support forest management plan.

2002-2003
- Updated **photogrammetry** district wide.

2006
- System migration to **ESRI Geodatabase** for improved work flow integration between departments

2006
- Flew District for **B&W imagery** and 40' scale Hartford planimetric data to support PMU.

2008
- Upgraded **GIS2SAP** application.

2014
- Created **ArcGIS Online Site** to roll out mobile work management

2015
- Updated **photogrammetry** district wide 40' scale mapping, including 1' contours.

2020
- Deployed SAP's map interface - **GEF**.

2021
- Converted GIS database from Oracle to **SQL**

2023
- Continue to take advantage of technical advances of ESRI's software suite to **collect, analyze and share** District data

41

Manual Mapping

Digitizing paper records into GIS

Enterprise GIS

Enterprise GIS

ArcGIS Online
- ArcGIS Online
  - Field Maps/Survey123
    - Catch Basin Cleaning
    - Manhole Inspections
    - Main Cleaning
    - Dye Testing
    - Water Leak Reporting
    - Hydrant Flushing
    - Hydrant Painting
    - Paving Program
    - Gate Box Inspections
    - Watershed Inspection
    - GPS Data Capture
  - Map Viewer
  - Dashboards
  - Web Applications
  - Data Sharing
    - Consultants
    - Planimetrics & Imagery

Master GIS
- ESRI GIS Suite
  - ArcMap/ArcCatalog
  - ArcGIS Pro
- Internal Web Mapping Viewer
- Hydraulic Model
- SWMM
- Record Plans
- Data Sharing
  - Drafting
  - Customers
  - Member Towns
  - Consultants
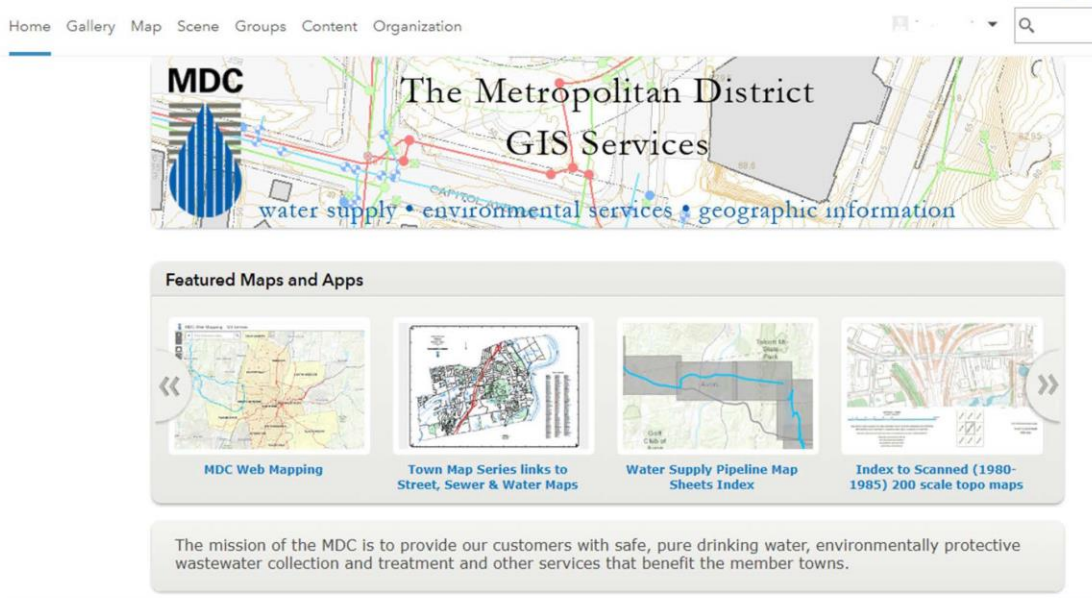- Engineering Project Maps

SAP Integration
- GEF Explorer
- Sync4GEF

Internal GIS Web Mapping Viewer -DEMO

GIS and SAP Integration

- ▶ 1999 GIS-SAP

- ▶ 2008 GIS2SAP

- ▶ 2020 SAP's GEF

45

Automate

Share

Analyze

Efficient

Optimize

Transform

Sewer Operations
- CCTV
- Manhole Inspections
- Main Cleaning
- Dye Testing
- SL-RAT
- Catch Basin Cleaning

Engineering
- Hydraulic Modeling
- Drafting
- GPS Infrastructure Capture

Headquarters
- Finance
- Outreach
- Sharing and Analysis
- Member Towns

GIS
- Detailed Basemapping
- 3", 40 Scale Aerial Photography
- Historical Photography
- 1' Topographic Contours
- State Aerial Photography
- SURRGO Soil Data
- FEMA Flood Zones
- Census Data
- Member Town Data
- Apps, Maps & Dashboards

Water Operations
- Gate Box Inspections
- Water Leak Reporting
- Work Order Creation (GEF)
- Paving Cuts
- Hydrant Flushing
- Hydrant Painting

Utility Services
- Notifying Critical Facilities
- Inspections & Call Before You Dig
- Hydrant Out of Commission

Natural Resources
- Cultural Sites
- Watershed Inspections
- Timber Harvest

- SL-RAT
- Manhole Inspections
- Dye Testing
- Gate Box Inspections
- Water Leak Reporting
- Hydrant Flushing
- Hydrant Painting
- Watershed Inspections

52

Total Pipe Length Cleaned by individual, truck and town

Select a Cleaning Date — This Month

Select a UM — Corey Patterson

Total Cleaned
57,357'

Truck 2130
5,139'

No cleaning performed by truck 2122 in the selected time frame.

Truck 2124
24,093'

Truck 2125
748'

(from catch basin cleaning)

Truck 2126
14,823'

Truck 2127
4,145'

Truck 2130
7,088'

Truck 2131
1,321'

No cleaning performed by other trucks in the selected time frame.

Lengths by UMI | Lengths by Truck | Lengths by Town | Cleaning Goal Progress

Other Highlights

- CCTV
  - Itpipes Mobile & Web
  - CCTV inspections now available the next day
  - Anyone with appropriate credentials has access to the data
  - No more hard drives or DVDs
- Vivax & Trimble GPS
  - Capture data in field and available in to District and consultants in real time
- Demonstration
  - Paving Cuts: Add Repair Location

GIS

Past

- Integration with SAP
- Conversion to Geometric Network
- ArcGIS Online & Enterprise Portal

Continuous Improvement

- Continue to provide access to the most accurate and current spatial data about the District's infrastructure
- Take advantage of latest advances in GIS technology to continue to support the collection, consumption, visualization of data and creation of applications for the business user and field user in support of the Districts goals

Future Goals & Road Map

- Drone Technology to optimize work force
- Utility Network Migration

55

Wrap Up

- ▶ IT aligns with the overall organizational goals and objectives, and to enable the company to achieve its long-term vision and mission.

- ▶ Illustrated the importance of digital transformation and innovation to improve efficiency, reduce costs, and effectively manage risk.

- ▶ Showed the effect of a robust cybersecurity framework in prioritizing data privacy and protection by providing a foundation for complying with regulations and industry standards.

- ▶ Continue focusing on designing solutions that are scalable and adaptable to changing business needs.

- ▶ Continuously plan to enhance SAP functionality and deploy new technology along with business process improvements and training throughout the organization

56

Commissioner Currey made a motion to recess at 5:38 PM. Without objection, the Strategic Planning Committee went into a brief recess.

The Strategic Planning Committee came out of recess at 5:43 PM.

Jamie Harlow, Director of Human Resources, and Olga Cordova, Manager of Human Resources, presented on the Human Resources department, including discussion on management study recommendations, diversity, hiring/onboarding, and benefits.

METROPOLITAN DISTRICT- STRATEGIC PLANNING COMMITTEE
2003 MANAGEMENT STUDY
Presented By: Jamie Harlow- Director of Human Resources
April 18, 2023

AGENDA

➢ Introduction of Human Resources Staff

➢ Human Resources Responsibilities

➢ Management Study Recommendations

　　➢ Reorganize District

　　➢ Policies and Procedures

　　➢ Business Process Improvements

　　➢ Workforce Planning

➢ Affirmative Action / Diversity

➢ Succession Planning

2

Human Resources Staff

➢ HR Staff

  ➢ Nadia Anderson- HR Generalist

  ➢ Olga Cordova- HR Manager

  ➢ Jamie Harlow-Director of Human Resources

  ➢ Kadian Cohen- HR Generalist

  ➢ Felicia Betsey- Administrative Assistant

3

Human Resources Responsibilities

➢ <u>Employees are the most important resource</u>. HR manages the processes needed to employ, train, compensate, manage and help retain employees.

➢ Responsible for managing employee life cycle
  ➢ Hiring (Recruitment)
  ➢ Onboarding
  ➢ Training
  ➢ Benefits Administration
  ➢ Employee Relations
  ➢ Labor Relations
  ➢ Leave Management
  ➢ Separation/Retirement
  ➢ Retirees
  ➢ Record/File Management
  ➢ Compliance
  ➢ Other Employee Services

4

Benefit / Vendor Partnerships

5

COMPLIANCE

6

REORGANIZE DISTRICT
HUMAN RESOURCES

➢ HR reporting to the CEO (2015)

➢ Centralized HR- create consistency across the District (POLICIES, COMMUNICATIONS, DISCIPLINE, FORMS)

    ➢ Outsourced some HR functions to Third Party Administrators (Business EFFICIENCIES).

        ➢ Pension Administration (2021)

        ➢ FMLA (2018)

        ➢ Workers Compensation (2016/2017)

➢ HR Accessibility

    ➢ Main HR phone number

    ➢ Main HR E-mail

    ➢ In person meetings with managers and/or employees

    ➢ Onboarding / Exits

    ➢ Training/Educational Sessions

7

POLICIES, PROCEDURES AND EMPLOYEE HANDBOOKS

➢ Creating an environment though process, procedures that is fair and consistent.

    ➢ Fair and consistent policies and discipline for all employees-necessary to achieve full compliance with CHRO and Affirmative Action goals.

➢ Employee Handbook and Policies updated and kept current (Employees signed acknowledgement)

➢ Stay current with legislative changes

    ➢ Legalization of Marijuana (MDC Exempt)

    ➢ Paid FMLA (MDC exempt)

    ➢ Random Drug and Alcohol Testing (FMCSA and NON-DOT)

➢ COVID- Impact and Business Continuity

    ➢ Negotiated with the Unions to have office staff work from home and alternate schedules (field staff)

    ➢ Continually monitored CDC/State guidance and established internal processes for reporting, quarantine, etc.

    ➢ Developed and implemented processes and procedures for the extended FMLA and Family First Coronavirus Response Act (FFCRA)

    ➢ Health and Safety Staff (EH&S)

➢ Whistleblower hotline created 2019

    ➢ Training conducted regarding Whistleblower 2021 and 2022

8

BUSINESS PROCESS IMPROVEMENT

➢ Efficiencies (Labor- Negotiations)- "labor agreements are complicated":

   ➢ Simplification of Contract Language- Negotiations focused on efficiencies and streamlining business practices

      ➢ Successes- pension contributions 5% to 7% and 7.5%, Vacation advance, meal allowances, clothing allowance and travel reimbursement all included in Payroll process and simplified through negotiations.

      ➢ 2022 negotiations- simplified administration across contracts.

      ➢ Consistency across groups (E&E, Local 184, Local 1026 and Local 3713) standardize rules.

➢ HR Internal controls

   ➢ Data integrity-cleansing, auditing and reporting

   ➢ HR Internal Standard Operating Procedures (SOP's) created and maintained

   ➢ HR-Keeper of records- maintain personnel files and other HR records consistent with required standards.

   ➢ Online/web enrollments- medical, FSA, Empower etc

➢ Efficiencies (Systems):

   ➢ SAP upgrade 2020 (Re-Implementation)

   ➢ Applicant Tracking (2008)

   ➢ Percipio (training)

9
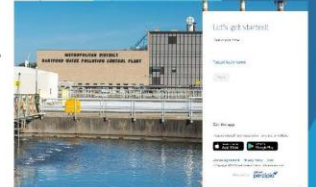
WORKFORCE PLANNING

MULT-TASKING JOBS

➢ 1026 Multi-Tasking Job Descriptions were approved by PP&I on 12/14/15 (42-34) 42 job descriptions to roughly 20

➢ 184 Multi-Tasking Job Descriptions were approved by PP&I on 1/11/16 (44-12) 44 job descriptions to roughly 26 job descriptions

➢ 3713 Multi-Tasking Job Descriptions were approved by PP&I on 2/27/2023 and 4/3/2023 50 job descriptions to roughly 19 job descriptions

➢ E&E 92 job descriptions to roughly 70 job descriptions

Job Title	Current Paygrade
Accounts Payable Supervisor	SS-04
Assistant Fleet Superintendent	
Assistant Facilities Maintenance Superintendent	SS-08
Assistant Systems Maintenance Superintendent	SS-08
Assistant Facilities Maintenance Superintendent	SS-08
Assistant WPC Superintendent	SS-08
Command Center Assistant Superintendent	SS-08
Command Center Superintendent	SS-10
Command Center Shift Supervisor	SS-04
Command Center Senior Supervisor	SS-06
Construction Services Supervisor	SS-06
Customer Service Supervisor - Call Center/Billing	SS-06
District Patrol Liutenant	
Electrical Maintenance Supervisor	SS-07
Facilities Maintenance Superintendent	SS-10
Facilities Maintenance Supervisor 1	SS-02
Facilities Maintenance Supervisor 2	SS-04
Fleet Superintendent	SS-10
Fleet Supervisor	SS-04
GateMaintenance Supervisor	SS-04
Hydrant Maintenance Supervisor	SS-04
Hydrolelectric Plant Supervisor	SS-06
Meter Supervisor	SS-04
Plant and Pump Station Maintenance Supervisor	SS-07
Senior Systems Repair Supervisor	SS-06
Sewer Maintenance Supervisor	SS-05
Stock Services Superintendent	SS-10
Stock Services Supervisor	SS-05
Superintendent of Water Supply	SS-10
Survey Chief of Operations	SS-06
Survey Chief of Party	SS-04
Systems Maintenance Superintendent	SS-10
Systems Repair Superintendent	SS-10
Systems Repair Supervisor	SS-04
Utility Services Supervisor	SS-06
Water Pollution Control Superintendent	SS-10
Water Pollution Control Satellite Supervisor	SS-07
Water Pollution Control Shift Supervisor	SS-05
Senior Water Supply Construction & Repair Supervisor	SS-06
Water Treatment Plant Supervisor	SS-07
Water Treatment Plant Shift Supervisor	SS-04
Water Treatment Plant Superintendent	SS-10

Previous:	Now:
Sewer Maintainer 1, LT05 Gate Maintainer 1, LT04 ** Hydrant Maintainer 1, LT04 Pipe Joiner, LT05	*Utility Maintainer 1, LT05*
Utility Shift Maintainer, LT09 Util Oper Maint (Primary Response), LT08 Customer Service Maintainer 1, LT07 Customer Service Maintainer 2, LT08 Compressor Truck Operator, LT07 Gate Maintainer 2, LT07 Hydrant Maintainer 2, LT07	*Utility Maintainer 3, LT09*
Sr Sewer Maint Crew Leader, LT12 Systems Repair Crew Leader, LT13	*Sr. Utility Maintainer Crew Leader, LT13*
Building & Grounds Maintainer, LT05 Parks Maintainer, LT05 YF Bed Maintainer, LT05 Water Supply Monitor, LT06 ** Plant Maintainer, LT07 Pump Station Maintainer, LT07 ** Water Supply Maintainer 2, LT07	*Facilities Maintainer 1, LT07*
Construction & Repair Specialist, LT10 Hydroelectric Plant Operator, LT08 Logging Equipment Operator, LT09 Water Supply Maintainer 3, LT08 Watershed Inspector, LT09 Equipment Operator, LT10	*Facilities Maintainer 2, LT10*
Buildf Grounds Maint Cr Leader, LT10 ** Construct & Repair Cr Leader, LT13 ** YrS Maint Crew Leader, LT12 Logging Crew Leader, LT12 **	*Facility Maintenance Crew Leader, LT13*
Yard Stock Specialist 2, LT07 Central Stock Specialist, LT07 ** Inventory Stock Clerk, LT07 Yard Stock Specialist 1, LT05	*Stock Specialist 1, LT07*
Stock Specialist, LT10	*Stock Specialist 2, LT10*
Stock Services Crew Leader, LT11 Yard Stock Crew Leader, LT13 **	*Stock Services Crew Leader, LT13*
Vehicle & Equipment Mechanic 2, LT11 Power Equipment Mechanic, LT10 Vehicle & Equipment Mechanic 1, LT07 ** Vehicle & Equipment Servicer, LT05 **	*Vehicle & Equipment Mechanic, LT11*
WPC Plant Operator Trainee, LT03 ** WPC Plant Operator 2, LT07	*WPC Plant Operator 1, LT08*
WPC Plant Operator 2, LT07, LT08/09	*WPC Plant Operator 2, LT09*

Local 3713 Position Framework

| Current Position Title (shaded individual job specifications will be replaced with multi-tasking job specifications)	Current Pay Level	New Position Title	New Pay Level	Updated Minimum Qualifications
Administrative Clerk	PT08			
Senior Clerk	PT04			
Administrative Assistant	PT11	Administrative Assistant	PT06	HS+ 4 years' experience
Administrative Analyst	PT12			
Document Management Coordinator	PT11			
Customer Service Rep	PT06	Customer Service Rep	PT03	HS+4 years' experience
Sr. Customer Service Rep	PT09			
Principal Account Clerk	PT07	Principal Account Clerk	PT04	Associates +4 years' experience
Laboratory Assistant	PT09	Laboratory Technician 1	PT06	Associates +3 years
Laboratory Technician	PT08			
Chemist	PT13	Laboratory Technician 2	PT11	Bachelors +5 years' experience
Microbiologist	PT13			
Water Pollution Control Process Analyst	PT13			

10

DISTRICT EMPLOYEES (2003 vs 2022)

➢ Staffing Changes- currently 438 (previously 600+)
  ➢ Multi-tasking job descriptions -2003 there were 300 job titles with 700 employees, today there are approximately 150 with 438 employees.

➢ Union and Non-Union Employees- approximately 438 employees
  ➢ Local 184 (Laborer Union) 41%
  ➢ Local 3713 (Technical Union) 18%
  ➢ Local 1026 (Supervisory Union) 14%
  ➢ Exempt and Excluded 27%

➢ District Locations
  ➢ Approximately 17 locations (employees assigned)
    ➢ Hartford
    ➢ Bloomfield
    ➢ West Hartford
    ➢ East Hartford
    ➢ Rocky Hill
    ➢ Windsor
    ➢ Collinsville
    ➢ Colebrook
    ➢ Barkhamsted
    ➢ Plus additional properties and facilities that are maintained
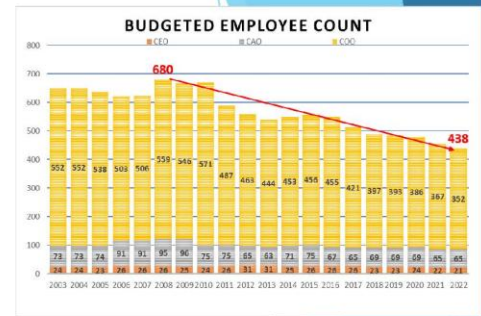
Headcount by Department	2003	2022
Executive Office	8	4
Communications	2	2
Human Resources	10	7
Legal	2	6
IT	14	12
GIS	8	5
Finance/Treasury/Budget/Procurement	52	49
EH&S	6	4
E&P	76	52
Command Center/Utility Services	30	33
Operations	101	89
Lab	14	8
COO	4	4
WPC	76	58
Maintenance/CEM/Inventory	66	54
WT&S	77	43
Patrol	9	8
Riverfront	9	0
Mid-CT	85	
	649	438

11

SAP BUSINESS TRANSFORMATION

➢ SAP- 2020 re-implementation (Go Live)

➢ HR part of Human Capital Management/Payroll

➢ Simplification of work rules

➢ Use of interface with third-party providers

➢ Hire to Retire (hiring and separations)
  ➢ System generated workflows/emails
    ➢ Active Directory
    ➢ Device Provisioning
    ➢ Badges and Access

➢ Employee Self-Service Portal
  ➢ Time Entry
  ➢ Direct Deposit

➢ Pay Statements

➢ Manager Self-Service Portal
  ➢ Time Approval

➢ Future Actions (Business Enablement Team)
  ➢ Ongoing application maintenance and support
  ➢ Continuous system and business process improvement
  ➢ Upgrade current SAP module (cloud solution)
  ➢ Enhancements to Employee Self-service

12
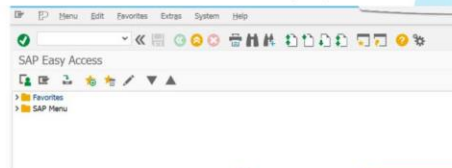
AFFIRMATIVE ACTION PLAN & DIVERSITY TRAINING

➢ EEO Officer (Rita Kelley) reports directly to CEO (since 2002)

➢ Goal of the District through its affirmative action program to achieve the full and fair utilization of minorities, women and other protected classes within the District's workforce so that our workforce reflects the composition of the greater Hartford area.

➢ The District has an Affirmative Action plan that has been presented each year to the Commission on Human Rights and Opportunities (CHRO) since 2012. The plan has been approved each year since 2012.

➢ Affirmative Action Plan

  ➢ Policies/procedures communicated annually - non-discrimination (protected classes) in terms and conditions of employment

  ➢ Establishes goals for attracting diverse candidates and measured annually

    ➢ Efforts to build interest in technical and skilled craft trades through programs such as the Learn and Earn Program, College Intern Program and partnership with Hartford High School.

  ➢ Identifies under-utilized groups (race/sex) within the workforce based on labor market

  ➢ Outreach- job fairs, partnerships, professional organizations, etc.

➢ Process/investigate internal complaints of Discrimination.

➢ Develop programs/plans to address any identified barriers/problem areas.

➢ EEO Officer works closely with HR to ensure we are working together to try to meet goals

➢ Diversity/EEO Training is integrated into the New Hire Orientation conducted by Human Resources with the training being administered utilizing the Percipio digital training platform.

13

RECRUITMENT

➢ Job Postings- protocols vary (EE, 3713, 1026 and 184)

  ➢ Posting requirements

  ➢ Internal and/or external candidate eligibility

➢ HR Review of candidates- minimum qualifications

➢ Candidate selection

  ➢ Written Examination

  ➢ Practical Examination

  ➢ Interviews

➢ Review of candidates and selection

  ➢ Manager and HR

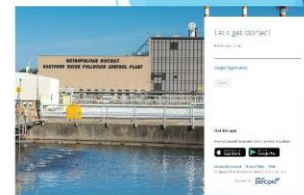 ➢ Affirmative Action compliance

14

ONBOARDING

- Pre-employment Process
  - Background Checks
  - Pre-employment Drug and Alcohol Test
  - Pre-employment Physicals
- Pre-employment compliance (role specific)
  - OSHA-10 hour
- New Hire Orientation (in-person orientation)
  - Benefit information and overview
    - Health and welfare plans
    - Retirement Plans
    - MDC overall benefits
  - Benefit enrollments

- Wellness
- System introductions
- Policy introduction and sign-off
  - Handbook
  - Code of Ethics
  - Violence in the workplace
  - Drug and Alcohol Policy
  - Information Systems
  - Family Medical Leave Act (FMLA) policy
  - Affirmative Action Policy
- Sexual Harassment Prevention training
- Whistleblower Policy review

15

TRAINING AND DEVELOPMENT

- Training- in person and Percipio
  - Skill Soft -Percipio (Digital Training Platform -2018)
    - Administers and track employee training.
    - Provides employees access to training on a variety of topics, including Safety, Leadership, Management, Security, Software and Compliance training.
    - Role based assignments- by job title and assigned/unassigned to the employee at hire/transfer/termination
  - Sexual Harassment Prevention Training- All MDC staff 2020/2021 (in-person and online in orientation)
  - Whistleblower- most MDC staff 2021/2022 (in-person)
- Health and Safety Compliance training for Operational staff is based on the employees role and potential workplace hazards the employee can be exposed to during the course of work (in-person and online).
  - Employees receive approximately 2-4 hours of safety compliance training every month and completion is tracked through the LMS.
- Working to expand Management and Supervisory training
  - Additional online offerings

16

MULTICULTURAL DIVERSITY COMMITTEE (MDC)

- ➤ MULTI-CULTURAL EVENTS
- ➤ Internal Committee MDC employees (16 members)
- ➤ Mission: celebrate and promote multiculturalism and diversity across the District
  - ➤ Explore educational opportunities
  - ➤ Celebrate our unique identities
  - ➤ Share our cultural experience
  - ➤ Promote effective communication
- ➤ Recent Event- Black History

17
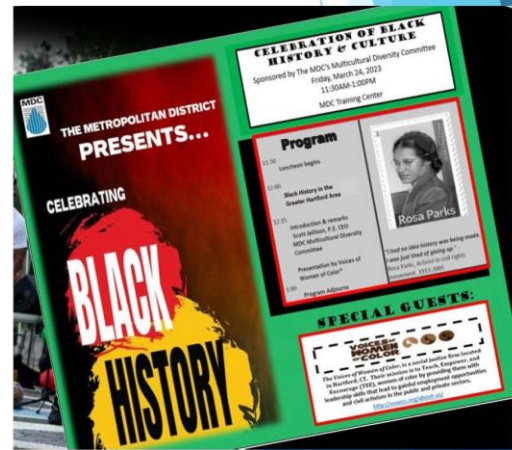
BENEFITS, WELLNESS AND OTHER PROGRAMS

- ➤ Benefits
  - ➤ Work with PPI/DB to ensure District benefits program is competitive and flexible to anticipate benefit trends
  - ➤ Work with Unions to create flexibility with benefit programs
    - ➤ Developed a new HSA plan for employee's hired after 2018 to encourage the employees to make an investment and take responsibility for their health care.
    - ➤ Pension Contributions
- ➤ Engaged Benefits Consultant around 2013- changed to USI (through BID) 2021
- ➤ Wellness funds with healthcare provider

- ➤ Wellness Activities/Communications
  - ➤ Wellness Newsletter
  - ➤ Marathon Reimbursements
  - ➤ Fitness Challenges
  - ➤ Healthy Snacks
  - ➤ On-site Fitness Classes
    - ➤ Yoga, HIIT, Zumba
- ➤ Other Programs/Benefits
  - ➤ Employee Assistance Program (EAP)
  - ➤ 457b- investment option with Roth option (financial wellness)
  - ➤ Local support- volunteering, food pantry
  - ➤ Blood Drives

18

Preventative Care Program (WellSpark)

➢Like the State of CT, MDC has negotiated the 1st Preventative Care Plan for MDC Union Contracts (WellSpark) -2023 Preventative Care Program

➢Employees and Enrolled Spouses under MDC Medical Plans

➢Complete Age and Gender appropriate wellness exams (US Preventative Services Task Force and American Cancer Society)

➢Non-compliance (employee and/or spouse) in plan year 2023 will result in 5% premium increase in plan year 2024

WORKERS COMPENSATION TRUST

➢ Self-insured since 1991-1992 (MDC pays claims not insurance company)

➢ Managed Care Program since October 1, 2000 (network of pre-approved physicians)

➢ Workers Compensation Trust (WCT)

   ➢ Claims Administrator (2016/2017)

      ➢ Trust Telecare- triage (report of injury)

   ➢ FMLA Administrator (2018)

➢ Return to work program

➢ Work closely with EH&S- accident investigation and prevention where possible

➢ Program Overview

   ➢ Stable Claims Volume (considering physical nature of work)

   ➢ Below CT average incident rate

   ➢ Below CT average DART (Days Away Restricted transfer)
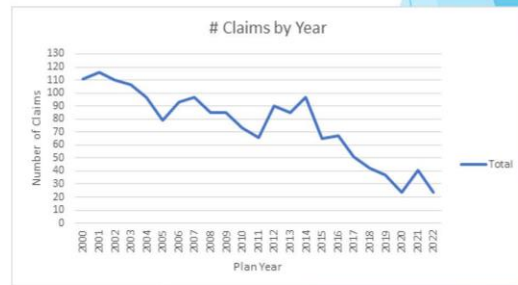
MILLIMAN (PENSION ADMINISTRATION)

- Milliman Pension Administration (Milliman Benefits Service Center)-2021
  - Human Resources
    - Employee meetings
    - Advise employees on retirement payouts
    - Advise employees on retiree medical and dental benefits and related costs
    - Medicare eligibility discussions (age 65)
  - MARC Website
    - Perform your own pension estimates
    - Electronically request forms
    - View plan documents and Summary Plan Description
    - Process final retiree paperwork necessary for monthly pension payments
  - Toll-free number
    - Obtain answers to pension related questions
    - Request benefit estimates
    - Request pension forms (necessary for retirement)

21

SUCCESSION PLANNING

- The District has been successful in negotiating more flexible language into the contracts which provides more opportunity for the District to train, promote and hire qualified and experienced successors.
  - Internal and external postings for union positions 1026 (ALL); 3713 (ALL) and 184 (FM1's and UM1's)
  - HR and Management involvement in interviews
  - Written and Practical exams where appropriate
- Established a training program (union positions) - provided training opportunities to staff that are interested in furthering their career through development of skill and knowledge. Following the program, staff are qualified to perform multi-tasking work and promotions within the labor union are made based on truly qualified and most senior.
- Increased promotion of staff based on qualifications rather than promotion based on seniority.
  - In 2022 there were 25 new hires and 53 internal promotions.

2021 Employment Activity	
New Hire	26
Promotion	20
Retirement	28
Transfer	3

2022 Employment Activity	
New Hire	25
Promotion	53
Retirement	28
Transfer	3

22

LEARNING OPPORTUNITIES/ TALENT PIPELINE

➢ District developed programs to attract and retain qualified staff that can be developed for future leadership roles.

➢ Creation of Entry level roles/programs

  ➢ Learn and Earn (High school Interns)

  ➢ College Intern Program

  ➢ Professional Level Trainee (All PLT's to date have been promoted to other positions)

  ➢ Plant Operator in Training (POIT)-Water and Waste Water

23

LEARN AND EARN PROGRAM (High School Interns- member towns)

The Metropolitan District's "Learn and Earn" program is **a 4 week long paid** high school internship program. It was created to educate and introduce students to the many career opportunities
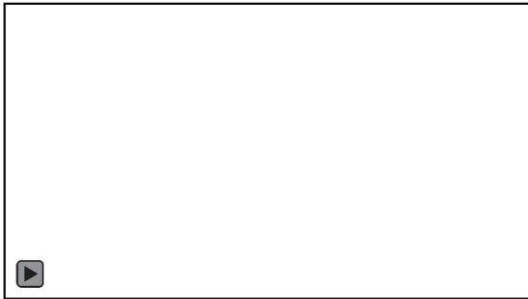
MDC

➢ *Week 1-2 (Directed Learning)*

  ➢ *Tour facilities and departments*

  ➢ *Meet MDC staff and administrators*

  ➢ *Hands-on activities*

  ➢ *Career introduction presentations*

➢ *Week 3-4 (temporary placement)*

  ➢ *Work in a District department*

  ➢ *Work alongside industry professionals*

  ➢ *View projects in action*

24

2022 LEARN AND EARN PROGRAM

25

COLLEGE INTERN PROGRAM

The Summer College Internship Program -hiring students each summer to provide an experience that relates directly to that individual's course of study while in return providing meaningful work for the MDC. We believe our interns provide new ideas, skills, and insight that provide a positive impact on our workforce while also exposing them to possible career paths.

➢ 9 week Program (1st week June- 1st week August)

➢ During the course of the 3 month program students cannot work more than 40 hours per week. *There are no benefits associated with a student intern position.*

➢ Must be enrolled as a student at an accredited college or university.

➢ MDC Facility tours are conducted throughout the course of the program so that interns can view the different MDC facilities. The program coordinator will give instruction on the proper clothing required to wear prior to the tours.

➢ Interns take part in regular trainings (help prepare them for the workforce)

➢ Interns will participate in a volunteer opportunity in the Hartford community.

MDC

26

CONCLUSION
HUMAN RESOURCES

➢ Dedicated Team

  ➢ Multiple contact points with employees and retirees

  ➢ Help manage business partnerships to best support the District and our most important resource

  ➢ Help maintain internal infrastructure and records

➢ Business Process Improvements

  ➢ Streamlined business processes

  ➢ Through negotiations with Unions- updated contract language to provide more flexibility

  ➢ Created multi-tasking job specifications- doing more with less

➢ Workforce Planning and Succession Planning

  ➢ Working to build talent pipeline- outreach, L&E, Interns, POIT and PLT's

  ➢ Committed to attracting and retaining a diverse staff reflective of the communities we support

  ➢ Cross-trained staff and improved succession planning by promoting qualified candidates from within

27

Commissioner Mandyck exited the meeting at 7:04 PM.

OPPORTUNITY FOR GENERAL PUBLIC COMMENTS

No one from the public appeared to be heard.

ADJOURNMENT

The meeting was adjourned at 7:16 PM

ATTEST:

John S. Mirtle, Esq.   _____
District Clerk   Date of Approval