



CITY COUNCIL AGENDA

Joint Meeting with Public Utilities Commission

City of Brainerd, Minnesota
City Hall, 501 Laurel Street, Council Chambers
Thursday, December 19, 2024 @ 6:00 PM

The public is invited to attend these meetings in person

1. **Call To Order**

2. **Roll Call**

___K. Stunek ___K. Terry___T. Stenglein ___G. Johnson ___J. Czczok ___Mike
O'Day ___K. Bevans ___Mayor Badeaux

___M. Angland ___T. Erickson ___Mark O'Day ___P. Wussow ___D. Matten

3. **Discussion Items**

A. **Discuss Creation of a Single Integrated City IT Department**

4. **Adjourn**

Visit the City's Website at www.ci.brainerd.mn.us

MISSION

"Provide high quality, cost effective public services and leadership in creating a sustainable city"



City Council Agenda Request

MEETING DATE: December 19, 2024

TITLE OF ITEM: Discuss Creation of a Single Integrated City IT Department

AGENDA: Main

ACTION REQUESTED: Discussion Item

SUBMITTED BY: Nick Broyles, City Administrator,
Shawn Strong, IT/GIS Director, Aaron Andersen

DEPARTMENT: Administration

PRESENTER: Shawn Strong, IT/GIS Director, Aaron
Andersen

ESTIMATED TIME (MIN): 60 minutes

SUMMARY OF ISSUE: The Public Utilities Department has discussed increasing to their IT staffing since mid 2023. The City Council requested that the integration of all IT staff into a single department be considered prior to filling new positions. Staff has been meeting to discuss possibilities, and an IT Integration Workgroup was established by City Council to consider options. A recent staff departure from the Public Utilities Department has increased the need and urgency for a final decision to be made so that IT hiring can proceed with clear direction from City Council on whether to integrate.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS:

RECOMMENDED ACTION/MOTION: Consider the two following options:

1. Maintain the status quo with two independent IT structures, collaborate with the Public Utilities Department as appropriate, allow the Department to work with HR and add IT staff as necessary, and discontinue IT integration discussions.
2. Formally decide to create a single integrated City IT Department and direct staff to move forward with the necessary staff work including an integrated organization chart, position descriptions, financial considerations, timeline, etc.

FINANCIAL IMPACT: The 2025 Public Utilities Department budget includes additional IT staff in the Department. One position would be hired immediately subject to wage negotiations with the appropriate union. A second would be hired at a later date. If integration is pursued, a method for allocating IT costs across budgets would be developed for 2026.

BPU and City IT

Current Staffing

City IT Department:

- Focus on municipal services, including law enforcement and public safety.
- Roles: 2 IT Staff: 1 GIS/IT Director, 1 Helpdesk Support

Utility IT Department:

- Focus on critical infrastructure (electric, water, hydro dam, wastewater).
- Roles: 1 IT/OT Staff: 1 IT Supervisor

Utility IT Department (Rochester PU - for comparison purposes):

- Focus on critical infrastructure (electric and water).
- Separate IT departments from their City IT. From the Director down through Managers and Supervisors.
- Roles: 20 IT/OT Staff: 2 Managers, 1 Supervisor (over analysts), 7 System/Network Admins, 5 Analysts, 1 Security Coordinator, 2 Helpdesk Support Specialists

Conclusion: Different staffing needs and expertise highlight the complexity of integration.

Operational Deficiencies

Key Point: Specific Weaknesses in Current Operations

- **City IT Department:**
 - Limited expertise in managing industrial control systems (e.g., SCADA).
 - Challenges in scaling cybersecurity for both public safety and broader city services.
- **Utility IT Department:**
 - Limited experience in managing public safety communications and emergency response systems.

Conclusion: Each department has unique deficiencies that may not be effectively addressed through integration.

Operational Challenges

City IT:

- Prioritizes public safety and city administration.
- Challenge:

Utility IT:

- Focuses on securing and maintaining critical infrastructure.
- Challenge: Adapting to evolving cybersecurity threats for utility operations.
- Challenge: Ensuring 24/7 uptime for SCADA and utility services.

Conclusion: Integrating departments with different operational priorities could lead to conflicts and inefficiencies.

Operational Opportunities

Key Point: Potential Areas for Improvement Without Full Integration

- **Cross-Training:**
 - Opportunities to enhance expertise by cross-training staff on critical systems and public safety technologies.
- **Shared Resources:**
 - Collaboration on cybersecurity efforts without merging departments, ensuring focus remains on specialized areas.
- **Technology Exchange:**
 - Implementing lessons learned and technology used in one department (e.g., SCADA systems) to improve the operations of the other (e.g., police dispatch systems).

Conclusion: Opportunities for collaboration exist without the need for full operational integration, preserving departmental focus.

Possible Areas to Eliminate Duplicate Efforts

Help Desk Support: Combining help desk support services to streamline user assistance for both city and utility staff. (BPU currently not operating a help desk)

Standardization in Software: Implementing standardized software platforms for document management across both departments.

- ▶ Laserfiche (Which we are already doing)
- ▶ Office 365 (Not really eliminating efforts but both entities use same product)

Operational Integration - One Network

This is not a best practice design:

- ▶ Adopting the "One Network" approach—where all devices, services, and users are housed within a single, flat subnet—may sound appealing for its simplicity and ease of management. However, this approach brings significant challenges, particularly in terms of security, management, and scalability.

Operational Integration - One Network Contd..

Security Vulnerabilities:

- ▶ **No Segmentation, Higher Risk:** In a "One Network" setup, the absence of network segmentation means that every device operates in the same broadcast domain. This lack of isolation makes it easier for threats to propagate across the network, increasing the risk of widespread incidents such as malware outbreaks or unauthorized access.
- ▶ **Insufficient Access Control:** The "One Network" approach limits the ability to enforce strict access controls. Without segmentation, it's challenging to restrict communications between different types of devices or user groups, leaving the network more vulnerable to internal threats or compromised devices.
- ▶ **Susceptibility to Broadcast Storms:** A single subnet in a "One Network" setup can be overwhelmed by excessive broadcast traffic, potentially leading to network disruptions or even a denial-of-service (DoS) scenario.

Operational Integration - One Network Contd..

Management Complications:

- ▶ **IP Address Exhaustion:** As the "One Network" grows, it can quickly deplete the available IP address space, especially in a smaller subnet. This complicates network expansion and can lead to inefficient IP address utilization.
- ▶ **Troubleshooting Difficulties:** Managing a large number of devices within the "One Network" creates challenges in identifying and resolving network issues. The high volume of broadcast traffic can obscure the root cause of problems, making diagnostics more complex and time-consuming.
- ▶ **Performance Bottlenecks:** The "One Network" approach can lead to performance degradation as more devices are added. Increased broadcast traffic and lack of isolation can result in higher latency and reduced overall network efficiency.

Operational Integration - One Network Contd..

Scalability Concerns:

- ▶ **Device Overload:** Network devices may become overwhelmed by the sheer volume of traffic within the "One Network," leading to performance bottlenecks or even outages. This can be particularly problematic as the network scales.
- ▶ **Limited Growth Flexibility:** As the organization grows, the "One Network" approach may hinder scalability. Expanding the network often requires a complete redesign, which can be costly and disruptive.

Operational Integration - One Network Contd..

Compliance and Monitoring Challenges:

- ▶ **Inconsistent Monitoring:** The "One Network" approach complicates the monitoring of network traffic and security events. With all traffic mixed together, it becomes harder to identify anomalies or enforce differentiated security policies across various departments or user groups.
- ▶ **Compliance Risks:** Regulations often mandate the separation of sensitive data or systems (e.g., PCI-DSS, HIPAA, FERC, MNDoh, FERC). The "One Network" model can make it difficult to achieve and demonstrate compliance, potentially exposing the organization to regulatory penalties.

Structural / Personnel Integration

Potential Integration Approaches:

- **Full Integration:** Combining both departments into a single IT organization with shared leadership and resources.
- **Partial Integration:** Merging only certain functions, such as help desk support, while keeping specialized teams for city and utility operations separate.

Challenges:

- **Cultural Differences:** Navigating the different organizational cultures, with city IT focused on public service and transparency, and utility IT focused on operational efficiency and security.
- **Specialization Needs:** Ensuring that the integrated structure retains the necessary specialized skills for both public safety and critical infrastructure management.

Position Titles and Position Descriptions

City IT Department:

- **IT/GIS Director:** Oversees all IT operations related to municipal services, including the police department. Also manages City GIS software and services (Shared license with the county)
- **Help Desk Support:** Focuses on securing law enforcement and emergency response systems.

Utility IT Department:

- **IT Supervisor:** Oversees all IT and OT operations for critical infrastructure, including the electric grid, hydro dam, and water and wastewater utilities. Also manages unique Utility-licensed GIS software and services. License cannot include city as the license is Utility Only. Specializes in managing and securing SCADA systems for utility operations. Focuses on protecting the utility's critical systems from cyber threats.

Integrated Positions (Hypothetical):

- **Director of IT Operations:** Oversees both city and utility IT operations, ensuring alignment of priorities and resources.
- **Unified Cybersecurity Team Lead:** Manages a combined cybersecurity team responsible for protecting both City and Utility systems.
- **Network Operations Manager:** Supervises the integrated network infrastructure, ensuring secure and reliable connectivity for all operations.

Organization Chart - Chain of Command

City IT Department (reports to City Administrator -> City Council -> Tax Payers/The People)

- **IT/GIS Director:** Oversees all IT operations related to municipal services, including the police department. Also manages City GIS software and services (Shared license with the county)
 - **IT Specialist:**

Utility IT Department (reports to Public Utilities Director -> PUC -> Rate Payers)

- **IT Supervisor:** Oversees all IT and OT operations for critical infrastructure, including the electric grid, hydro dam, and water and wastewater utilities. Also manages unique Utility-licensed GIS software and services. License cannot include city as the license is Utility Only. Specializes in managing and securing SCADA systems for utility operations. Focuses on protecting the utility's critical systems from cyber threats.
 - **Network Administrator:** Focuses on managing and maintaining BPU's growing computer network infrastructure.
 - **System Administrator:** Focuses on maintaining, upgrading, configuring and monitoring BPU's hardware and software.

Pros and Cons of All Options Contd...

Partial Integration:

- **Pros:**
 - Maintains specialized teams for critical functions.
 - Allows for shared services in areas like help desk support.
 - Reduces risks associated with full integration.
- **Cons:**
 - Requires careful coordination between departments to avoid overlap and ensure effective communication.
 - Potential for confusion in chain of command and responsibilities.

Pros and Cons of All Options Contd...

No Integration:

- **Pros:**

- Preserves specialized focus on city and utility IT operations.
- Avoids the risks associated with merging different IT environments.
- Simplifies regulatory compliance by keeping operations separate.

- **Cons:**

- Continued duplication of efforts in areas like support services (Help Desk).

Budgetary Considerations / Implications

Initial Costs of Integration:

- **Infrastructure Upgrades:** Significant investments required to integrate IT systems, especially for managing both public safety and critical infrastructure.
- **Training Costs:** Comprehensive cross-training for staff to handle a broad range of systems, from police dispatch to SCADA systems.
- **Consulting and Integration Services:** High costs for external consultants and specialists to facilitate the integration.

Ongoing Operational Costs:

- **Maintenance and Support:** Potentially higher costs due to increased complexity and the need for specialized skills.
- **Cost Overruns:** Risk of exceeding the budget due to unforeseen challenges in integrating complex systems.

Resource Allocation Conflicts:

- **Competition for Resources:** A combined budget could lead to conflicts over resource allocation, affecting the funding of essential projects.
- Tax vs rate funding.

Unrealized Savings:

- **Potential for Increased Costs:** Savings may not materialize, and integration might lead to higher operational costs.

Legal or Contractual Barriers to this Course of Action

Existing Contracts and Service Agreements:

- **Vendor Contracts:** Different contracts with vendors tailored to specific needs, such as police systems or utility control software, may not be easily renegotiated.
- **Service Level Agreements (SLAs):** Integration could violate existing SLAs, particularly those related to critical infrastructure like the hydro dam, leading to legal penalties.

Regulatory Compliance:

- **Differing Regulatory Frameworks:** Utility IT must comply with stringent regulations for critical infrastructure, while city IT must adhere to public safety and transparency regulations. Integrating these systems could create conflicts and increase the risk of non-compliance.

Public and Stakeholder Approvals:

- **Scrutiny and Oversight:** Integration would likely require approval from multiple governmental bodies and could face opposition from the public and other stakeholders.

Labor Unions and Employment Contracts:

- **Union Agreements:** Different labor unions representing city and utility employees may have conflicting agreements, potentially leading to legal disputes.

Summary of Reasons Not to Integrate

Key Points:

- **Divergent Priorities:** Conflicting operational focus between city services and critical infrastructure.
- **Security Risks:** Increased vulnerability of critical systems.
- **Regulatory Challenges:** Complex and potentially conflicting compliance requirements.
- **Cultural Differences:** Potential misalignment leading to inefficiencies.
- **Budgetary Concerns:** High integration costs with uncertain savings.
- **Legal Barriers:** Significant challenges in contract renegotiation and regulatory compliance.

Final Thought: The risks and challenges associated with integration outweigh potential benefits, making it advisable to maintain separate IT departments for the city and utility services.

- Integrating a city IT department with a utility IT department presents significant challenges beyond the operational and technical realms. The potential for increased costs, both in the short and long term, can strain budgets and lead to unanticipated financial pressures. Moreover, the legal and contractual barriers are substantial, with existing agreements, regulatory requirements, and labor concerns potentially complicating or even preventing a successful integration. These factors make it critical to carefully evaluate the risks and benefits before pursuing such a course of action. Maintaining separate IT departments, with distinct budgets and legal frameworks, may better serve the needs of both the city and the utility, ensuring that each can focus on its unique challenges without the complications of integration.

Top Cyber Actions for Securing Water Systems

- ▶ The White House, National Security Council, and U.S. Environmental Protection Agency (EPA), directly engaged with state officials to emphasize the increasing cyberthreats facing the nation's water systems.
- ▶ The messaging calls on states to ensure local water systems comprehensively assess their current cybersecurity practices. The goal is to identify any significant vulnerabilities, deploy basic practices and controls to reduce cybersecurity risks where needed, and exercise plans to prepare for, respond to, and recover from a cyber incident.
- ▶ Minnesota IT Services (MNIT) is releasing this state-level communication in collaboration with the Minnesota Department of Health (MDH) and the Minnesota Pollution Control Agency (MPCA) along with partners at Met Council, Department of Public Safety (DPS), and the Minnesota Fusion Center (MNFC) in response to the federal announcement.

BPU Cyber Action Items List

- ▶ 1. Reduce Exposure to the Public-Facing Internet
- ▶ 2. Conduct Regular Cybersecurity Assessments
- ▶ 3. Change Default Passwords Immediately
- ▶ 4. Conduct an Inventory of OT/IT Assets
- ▶ 5. Develop and Exercise Cybersecurity Incident Response and Recovery Plans
- ▶ 6. Backup OT/IT Systems
- ▶ 7. Reduce Exposure to Vulnerabilities
- ▶ 8. Conduct Cybersecurity Awareness Training

IT Integration Discussion

City of Brainerd / Brainerd Public Utilities

October 2, 2024

Current Staffing

City

IT/GIS Director
IT Specialist

BPU

Technology Supervisor
IT Data Analyst

Current Operational Deficiencies / Challenges / Opportunities

City

Staffing sufficient for day-to-day operations
Limited capacity for complex projects
Not just Airport, other large projects

Police migration to new platform will increase after hour needs – will no longer route through County (~14 FTE)

Dedicated GIS (0.5 FTE) would be beneficial to many departments – especially field work

When/if CLC ends PEG collaboration, staff (0.5 FTE) would be necessary or cable channel should be discontinued (cable franchise fees involved)

BPU

Requesting 1-2 additional staff
Network Administrator
System Administrator

BPU needs depth, backup, etc

Allocation of IT Data Analyst position should be addressed as part of needs assessment

Large network/infrastructure improvements continuing for at least a few more years

Possible Areas to Eliminate Duplicate Efforts

- Helpdesk centralization (first point of contact, basic troubleshooting, elevate to additional resources when needed)
 - Removes/reduces disruption for higher skilled (and \$) staff performing mundane tasks
- Microsoft 365 tenant/domain administration
- Support of standard software (Office, Adobe, Laserfiche, etc)
- Hardware and software updates, upgrades, patching
- Various security components including VPN, multi factor authentication, malware protection, mobile device mgmt (MDM), etc
- Phone administration – desk and mobile
- Purchasing – standardize hardware, software/licensing, services
- Data backup processes
- GIS...

Operational Integration – One Network

- Both entities currently have multiple non-connected networks, any level of IT integration would not change the need to maintain distinct networks. ‘One Network’ is not technically possible, a more realistic option could be ‘One Network Administrator’ but even that may not be ideal.
- Standardization of hardware, software, services, etc could only be done during replacement cycles and when it makes sense. Some resources could be many years out. Example - access control, camera systems, or finance packages have 10-20 year life expectancies.

Structural / Personnel Integration

Position Titles and Position Descriptions

- IT/GIS Director

Performs difficult professional work planning, organizing, and coordinating the development and operation of the City's information technology software, hardware, and data. Provides leadership in establishing long-term IT vision and direction; advises City staff on strategic information technology issues; develops and applies information technology to support the City's goals, policies and strategies. Responsible for the overall IT operations of the City of Brainerd; develops and implements technology policies; and monitors IT operating and capital expense budget. Coordinates the development, implementation and operation of GIS in support of all city departments...

- IT Specialist

Performs highly skilled technical work providing technical support, administers enterprise applications, installs and maintains hardware and software, maintains files, troubleshoots complex hardware and software issues...

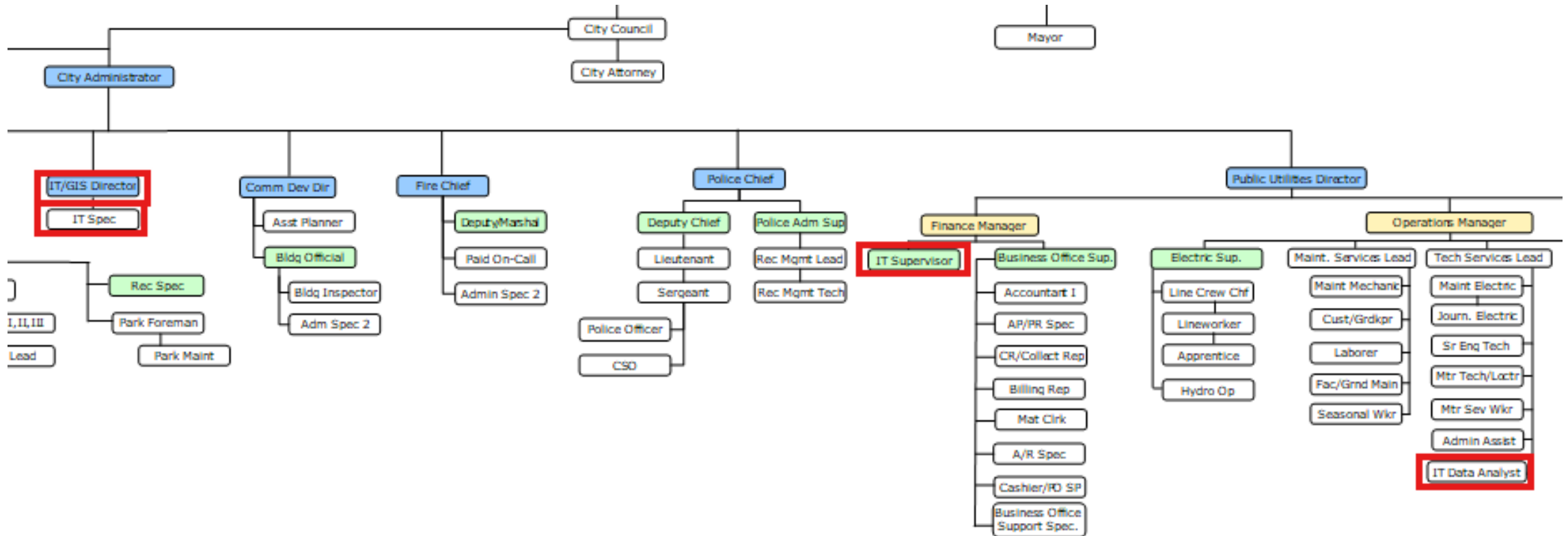
- Technology Supervisor

Under the general direction of BPU Department Heads, the Technology Supervisor provides leadership in establishing long-term IT vision and direction; advises BPU staff on strategic information technology issues; develops and applies information technology to support BPU's goals, policies and strategies. The Technology Supervisor is responsible for the overall IT operations of BPU; develops and implements technology policies; and develops and monitors BPU's IT operating and capital expense budget...

- IT Data Analyst

The IT/Data Analyst will strive to constantly monitor mission critical applications in order to identify abnormalities, see events before they happen and, if possible, mitigate them before they become critical. Works to query, analyze, and interpret data from Brainerd Public Utilities (BPU) IT systems, operational/utility system data, customer data and meter data to identify trends or patterns in complex data sets. The IT/Data Analyst will be involved in testing, documentation, building automation, and will provide metrics, reports, and actionable insights to BPU staff...

Organization Chart – Chain of Command



Pros and Cons of All Options

- Some efficiencies could be gained for standard operations and processes, while additional complexities may also be introduced due to the larger footprint and differing industry requirements and needs.

Pros

- Specialization – staff focusing on specific areas instead of everything
- Depth/backup – after-hours, time off, projects, etc

Cons

- Few changes, if any, could be made initially - integration could only trickle out slowly over many years.

Budgetary Considerations / Implications

- City IT is part of the general fund paid with tax levy dollars
- BPU IT is an enterprise fund paid with ratepayer dollars

Payroll

Fixed Assets

Capital Planning

State laws regarding separation of municipal utilities from the city?

Legal or Contractual Barriers to this Course of Action

- Individual networks are governed by their own set of compliance requirements
- Union contracts
- The City auditors (CLA) and financial advisers (Baker Tilly) both recommend against financial integration, this puts additional limits on many of efficiencies/benefits that could be done with IT integration.

Summary

- While there are some possible efficiencies that may be gained by integrating IT, there would likely be many new complexities that may negate much of the perceived benefits.
- Specialized network segments cannot be combined. For example, the City network cannot access the Police network and will never be allowed. Similarly with BPU, certain networks must remain separated.

IT Integration Discussion



City of Brainerd / Brainerd Public Utilities

Current IT Staff - Introductions

CITY

Shawn Strong - IT/GIS Director

Started with City: Dec 2006 (18 years)

Tech career: ~26 years

IT/GIS Director, Lyon County MN

GIS Specialist, LOGIS (metro)

Lori Turkowski - IT Specialist

Started with City: May 2004 (20.5 years)

Degree: BS Information Systems

BPU

Aaron Andersen – BPU IT Supervisor

Started with BPU: May 2017 (7.5 years)

Over 20 Years of Combined Professional IT Experience

Multiple Industries Including:

- Utilities
- Private Manufacturing
- Hydraulic Fracking (NorDak)
- Architectural/Engineering
- Public School Systems
- United States Marine Corps

Data Chief / Security / Network Administrator

(Multiple Honors and Awards including from Brigadier General Leins, US Army and Rear Admiral Greene Jr., US Navy)

Multiple Colleges (Including CLC, CTC, Westood - Denver North)

- 2 Degrees
- 3 Certificates

16+ Professional Licenses and Certifications

- Including: Microsoft; VMWare; Solarwinds; Google

Past Presentations

- In August, IT staff (City and BPU) were asked to create presentations outlining challenges and opportunities regarding possible integration of our IT departments
- Both draft presentations were included in your packet, neither were complete or ever formally presented
- IT staff collaborated to create a combined version of the presentations that was used to guide discussion at a few meetings. If following 18 slides are unchanged since Oct 2

IT Integration Discussion



City of Brainerd / Brainerd Public Utilities

October 2, 2024

Current IT Staffing

City IT

IT/GIS Director - Shawn

IT Specialist - Lori

Administration / Finance / HR

Comm Dev / Building

Public Works / Engineering

Streets and Sewer

Parks

Transit (and 3rd party)

Police

Fire

Airport (not city EEs)

Cable Channel (collab w/CLC)

BPU IT

Technology Supervisor - Aaron

(IT Data Analyst) - Abby

Finance / Business Office / Service Center

Electric

Water

Wastewater

Hydro

Example: Rochester

- Focus on critical infrastructure (electric and water)
- Separate IT departments from their City IT
 - From the Director down through Managers and Supervisor
- RPU Roles: 20 IT/OT Staff:
 - 2 Managers
 - 1 Supervisor (over analysts)
 - 7 System/Network Admins
 - 5 Analysts
 - 1 Security Coordinator
 - 2 Helpdesk Support Specialists

Current Operational Deficiencies / Challenges / Opportunities

City

Staffing sufficient for day-to-day operations

Limited capacity for complex projects

Not just Airport, any large projects

Police migration to new platform will increase after-hour needs – will no longer route through County (~14+ FTE)

Dedicated GIS (0.5 FTE) would be beneficial to many departments – especially field work

When/if CLC ends PEG collaboration, staff (0.5 FTE) would be necessary or cable channel should be discontinued (cable franchise fees involved)

BPU

Requesting 1-2 additional staff

Network Administrator

System Administrator

BPU needs depth, backup, focus, etc

Allocation of IT Data Analyst position should be addressed as part of needs assessment

Large network/infrastructure improvements continuing for at least a few more years

Possible Areas to Eliminate Duplication

- Helpdesk centralization (first point of contact, basic troubleshooting, elevate to additional resources when needed)
 - Removes/reduces disruption for higher skilled (and \$) staff performing mundane tasks
- Microsoft 365 tenant/domain administration
- Support of standard software (Office, Adobe, Laserfiche, etc)
- Hardware and software updates, upgrades, patching
- Various security components including VPN, multi factor authentication, malware protection, mobile device mgmt (MDM), etc
- Phone administration – desk and mobile
- Purchasing – standardize hardware, software/licensing, services
- Data backup processes
- Web and social media
- GIS...

Operational Integration – *One Network*

- Both entities currently have multiple non-connected networks, any level of IT integration would not change the need to maintain distinct networks. '*One Network*' is not legally or technically possible.
- Standardization of hardware, software, services, etc could only be done during replacement cycles, when it makes sense to do so, and when cost-effective. Some resource turnover could be many years out. Example - access control, camera systems, or finance packages have 10-20 year life expectancies (most of which are fairly new at both locations).

Position Titles and Position Descriptions

- **City - IT/GIS Director**

Performs difficult professional work planning, organizing, and coordinating the development and operation of the City's information technology software, hardware, and data. Provides leadership in establishing long-term IT vision and direction; advises City staff on strategic information technology issues; develops and applies information technology to support the City's goals, policies and strategies. Responsible for the overall IT operations of the City of Brainerd; develops and implements technology policies; and monitors IT operating and capital expense budget. Coordinates the development, implementation and operation of GIS in support of all city departments...

- **City - IT Specialist**

Performs highly skilled technical work providing technical support, administers enterprise applications, installs and maintains hardware and software, maintains files, troubleshoots complex hardware and software issues...

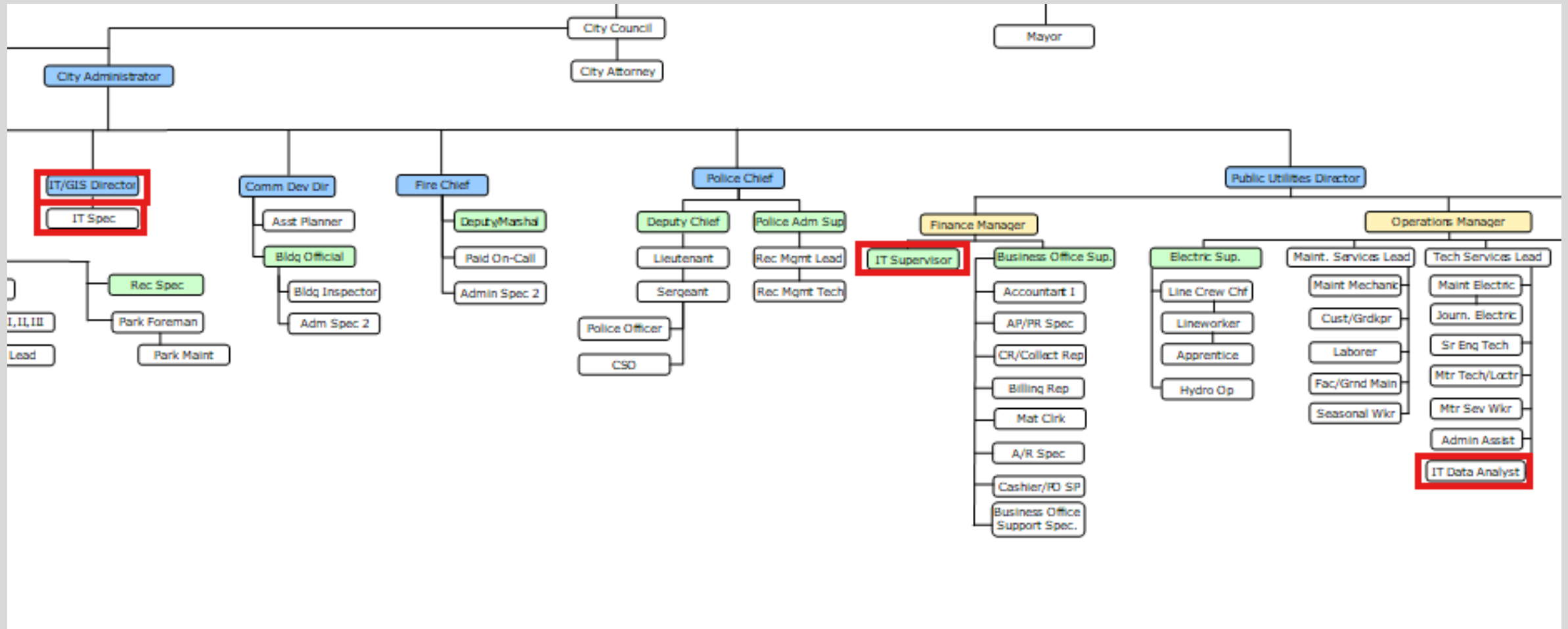
- **BPU - Technology Supervisor**

Under the general direction of BPU Department Heads, the Technology Supervisor provides leadership in establishing long-term IT vision and direction; advises BPU staff on strategic information technology issues; develops and applies information technology to support BPU's goals, policies and strategies. The Technology Supervisor is responsible for the overall IT operations of BPU; develops and implements technology policies; and develops and monitors BPU's IT operating and capital expense budget...

- **BPU - IT Data Analyst**

The IT/Data Analyst will strive to constantly monitor mission critical applications in order to identify abnormalities, see events before they happen and, if possible, mitigate them before they become critical. Works to query, analyze, and interpret data from Brainerd Public Utilities (BPU) IT systems, operational/utility system data, customer data and meter data to identify trends or patterns in complex data sets. The IT/Data Analyst will be involved in testing, documentation, building automation, and will provide metrics, reports, and actionable insights to BPU staff...

Organization Chart – Chain of Command

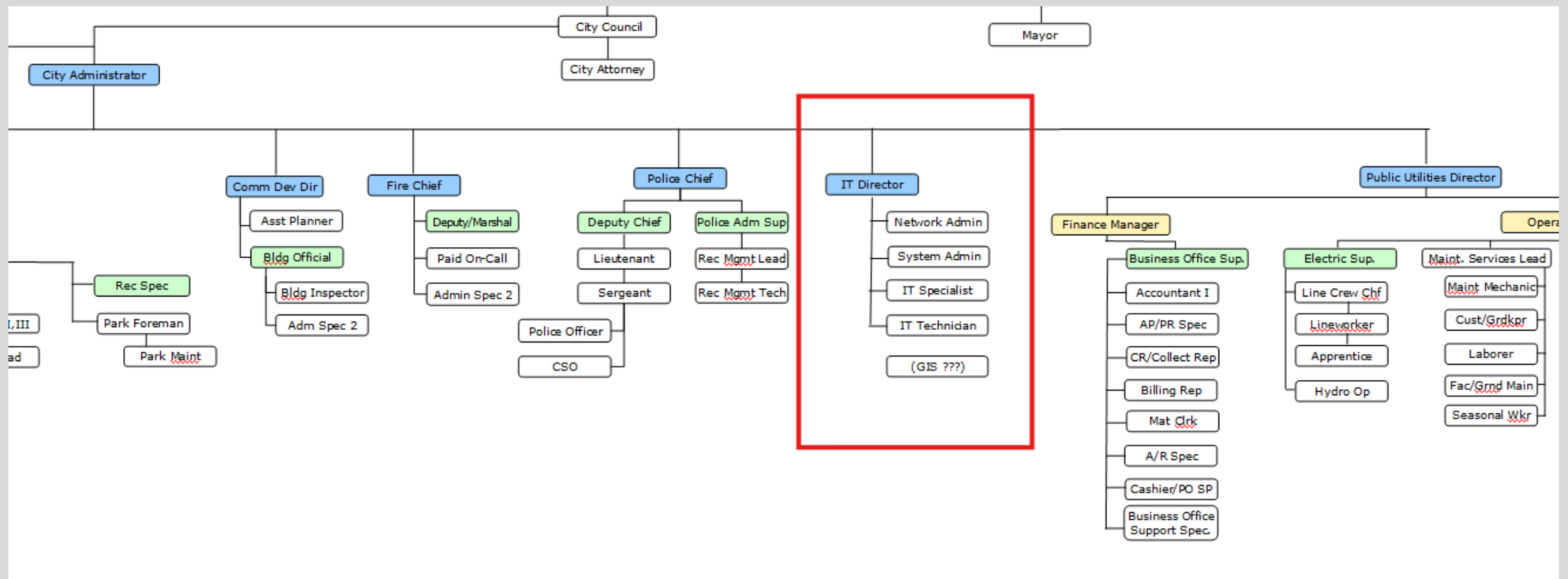


Structural / Personnel Integration

- Potential Structure if integration is pursued
 - Director
 - Management, planning, policy, budget, backup role for all
 - (Manager)
 - Manage IT team
 - Network Administrator
 - Network mgmt/security
 - (Security Administrator)
 - Firewalls, cybersecurity
 - System Administrator
 - M365, enterprise apps, dept software, web
 - IT Specialist
 - Mid level support, updates/patching, backups, phones/devices, licensing
 - IT Technician
 - Help desk, asset mgmt, records retention (ideal: tech savvy GIS person)
 - (GIS position)
 - Future dedicated GIS staff could benefit both locations

Organization Chart – Chain of Command contd

Potential Org Chart



Pros and Cons of All Options

- Some efficiencies could be gained for standard operations and processes, while some additional complexities may also be introduced due to the larger footprint and differing industry requirements and needs.

Pros

- Specialization – staff concentrate on specific areas instead of *everything*
- Focus – distractions and mundane task allocated to support positions
- Depth / backup – after-hours, time off, projects, etc

Cons

- Very few changes could be made initially - integration could only trickle out slowly over many years.

Budgetary Considerations / Implications

- City IT is part of the general fund paid with tax levy dollars
- BPU IT is an enterprise fund paid with ratepayer dollars

Payroll – how to allocate payroll costs to each fund?

Fixed Assets – existing asset ownership?

Capital Planning – future asset budgeting and ownership?

Current Implementations

Current Implementations	City	BPU
Office Suite	M365 Government	M365 Enterprise
Finance package	BS&A	Incode
Document imaging*	Laserfiche / BS&A	Laserfiche (city) / Incode
Backup solution	Veeam	Synology
Server virtualization*	Vmware	VMWare
CAD*	AutoDesk	AutoDesk
GIS*	ESRI / ArcGIS online	Utility ArcGIS / Porta I/ ESRI / mPower
Website	CivicPlus	Mixtureweb
Cloud storage	Amazon (AWS)	Tegille / HPE Alletra (on prem)
Bldg camera system	Avigilon	exaqVision
Door/Security system	Keri	Kantech
Off net camera system	Verkada	exaqVision
Phone system	Webex (cloud)	Avaya IP Office (on prem)
Computer / Server vendor*	Dell	Dell
Switch / Firewall vendor	Cisco	Fortinet

Current Implementations

continued

Current Implementations	City	BPU
Endpoint security	Cisco Endpoint	TrendMicro / FortiClient
Threat Detection	Cisco Firepower	FortiEMS
VPN	Cisco AnyConnect	FortiClient
Remote Access*	Teamviewer	LogMeIn / Teamviewer
MultiFactor Authentication	Cisco Duo	FortiToken
DNS security	Cisco Umbrella	FortiGate Next Gen
Identity/Authentication	Cisco ISE-PIC	Microsoft
SIEM/EDR	ConnectWise	FortiAnalyzer / FortEDR
HelpDesk/Asset	AssetPanda	Solarwinds WHD
Primary 3 rd party support	Marco	Xtona / 7Sigma Systems
Spam Filter	Microsoft	FortiMail

Current IT Budgets (2024)

City IT

Personnel: \$183,731

Operating: \$247,543

Capital: \$40-80,000/yr

IT Total: \$431,000+

Dept Software: \$60-80k

BPU IT

Personnel: \$186,033

Operating: \$356,400

Capital: \$102,000

IT Total: \$645,000+

Dept Software: \$45-60k

Legal or Contractual Barriers

- Individual networks are governed by their own set of compliance requirements. Examples: HIPAA, PCI, DPS, Police CJIS, Airport FAA, BPU FERC, MDH, MPCA, EPA, industrial compliances
- Union contracts
 - IBEW admin support (City)
 - IBEW public utilities (BPU)
- Licensing Contracts and various Service Level Agreements
- The City auditors (CLA) and financial advisers (Baker Tilly) both recommend against financial integration, this puts additional limits on many of efficiencies/benefits that could be done with IT integration.

Summary

- While there are some possible efficiencies that may be gained by integrating IT, there would likely be many new complexities that may negate much of the perceived benefits.
- Specialized network segments cannot be combined. For example, the City network currently cannot access the Police network – this is an FBI/BCA requirement. Similarly with BPU, certain networks have security and compliance requirements and must remain separate.
- BPU needs at least one additional IT staff person. The ongoing role of the IT Data Analyst needs to be addressed.
 - Without integration, BPU would incur all additional staff costs (no levy increase)
 - With integration, the City would have to share in additional costs (not budgeted)

Potential Direction

- Status Quo
 - No change. BPU would likely add necessary staff under their budget, no change for City IT and therefore no added levy expense. (lowest cost)
- Collaboration
 - IT structure unchanged other than BPU adding staff. Begin discussing what efforts, if any, could be approached together moving forward.
- Integration
 - Create joint IT department – determine most effective structure and fill any open positions. (highest cost)

IT Integration Discussion

Additional Information

Updates / changes since last staff discussions

IT Staffing

- BPU *IT Data Analyst* position is now vacant and not planned to be refilled in 2025
- Many of the tasks that were being done by that position were clerical and will be performed by the new BPU *Business Office Support Specialist*
- BPU 2025 budget includes 2 additional IT FTEs
- City 2025 budget is unchanged with 2 IT FTEs

IT Staff Allocation (Financial)

- If integration is pursued, personnel costs would likely be allocated across the City and BPU budgets by estimated time, number of network users, total number of FTEs, or some other metric
- 2025 budgets are already finalized (separate)
- 2026 budgets could begin to allocate personnel costs appropriately

EXAMPLE	2024		2025		Integrated	
	City	BPU	City	BPU	City	BPU
IT Director	1		1		0.8	0.2
Tech Supervisor		1		1		1
Network Administrator				1	0.2	0.8
System Administrator				1	0.5	0.5
IT Specialist	1		1		0.5	0.5
GIS Specialist					0.5	0.5
(IT Data Analyst)		1				
FTEs	2	2	2	3	2.5	3.5

Costs Associated with IT Integration

- Additional IT Staff
 - Estimate: \$100,000/FTE/year (\$80k wage, \$20k benefits, etc)
- Office space including desks, chairs, office supplies, etc
 - Estimate: \$2,000/FTE
- Hardware – Computers, monitors, desk and cell phones, etc
 - Estimate: \$3,000/FTE
- Software – M365, Adobe, Laserfiche, security softwares, etc
 - Estimate: \$1,500/FTE/year

Summary

- Most network segments cannot be combined – even if IT is integrated, very little would change regarding network infrastructure
- Very little existing hardware or software implementations are compatible, any migrations to shared solutions could only happen over time as replacements occur and when warranted without upfront costs
- Other cities with IT have explored and tried integration and reverted to separate
- Shared basic IT support would allow specialized positions to focus more efforts on key duties/tasks
- Deeper staffing resources would allow for more backup and redundancy of personnel as well as specialization

Recommendation

BPU needs to increase their IT staffing as soon as possible, City IT has the capacity to maintain the status quo but nothing additional. Consider the two following options:

1. Maintain current structure and continue to collaborate when appropriate. BPU will add IT staff as needed. Discontinue IT integration discussions.
2. Formally decide to create an integrated IT department and direct staff to draft a plan including organizational chart, job descriptions, financial considerations, timeline, etc.

Discussion / Questions

Please ask any questions that need to be answered in order to make an informed decision.

- Staff Opinions