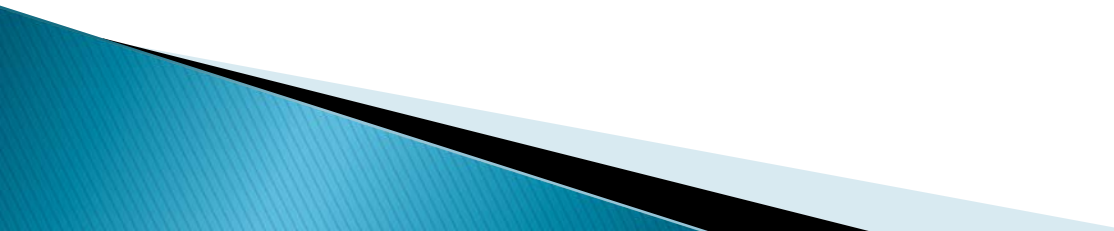


What Elected Officials Need to Know about Technology



Mitchell Darer, Executive Director
NJIT Center for Information Age Technology

Agenda

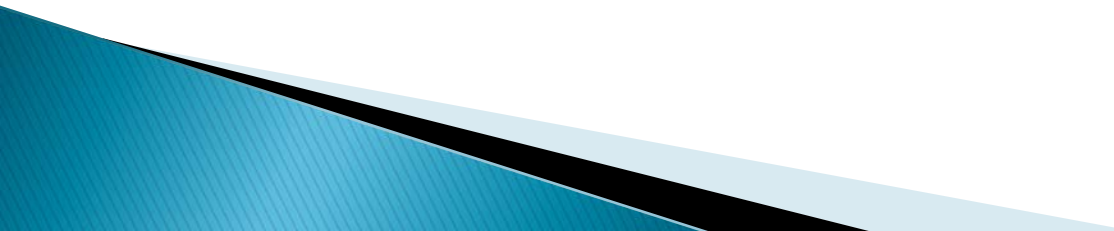
- ▶ Why is IT important?
 - ▶ What do you need from IT?
 - ▶ What does IT need from you?
 - ▶ The importance of networking
- 



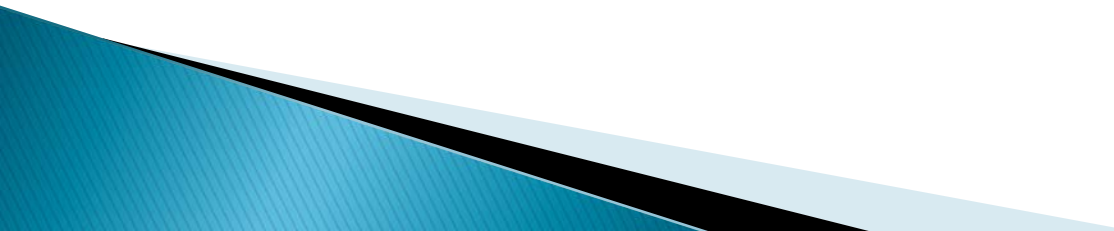
Why is IT important?

- ▶ Not just bits and bytes
- ▶ Internal agency operations
- ▶ Interactions with constituents & stakeholders
- ▶ Security Security Security
- ▶ Make or break a legal situation
- ▶ Budget
- ▶ Crucial to disaster recovery

What do you need from IT?

- ▶ Short-term AND long-term vision and issues
 - ▶ Clear, easy-to-understand terminology
 - ▶ Understand the impact of decisions
 - ▶ Proven examples
 - ▶ Honesty about mistakes, lapses and problems
- 

What does IT need from you?

- ▶ Establish organizational authority
 - ▶ Share strategic plans
 - ▶ Understand the impact of decisions
 - ▶ Support policies and procedures
 - ▶ Provide budget commitment
 - ▶ Don't play favorites
 - ▶ Learn a little technology, maybe, please!!!
- 



The Importance of Networking

- ▶ ... elected officials and senior management
- ▶ ... department heads and staff
- ▶ ... “CIOs” in other municipalities
- ▶ ... your County’s CIO
- ▶ ... your school district’s CIO
- ▶ ... professional resources
- ▶ ... GMIS:
An Association of Government IT Leaders

What Elected Officials Need to Know about Technology

<http://www.njslom.com/94thconf/presentations.html>



Mitchell Darer

Executive Director

NJIT Center for Information Age Technology

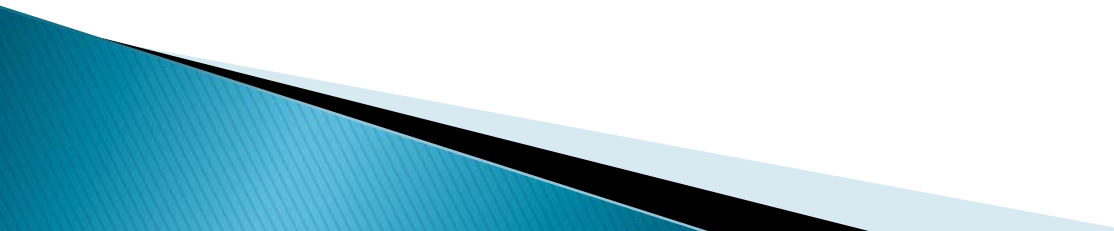
darer@njit.edu

What Elected Officials Need to Know about Information Security and Employee Technology Usage



Justin Heyman
Township of Franklin, Somerset County

Goals for This Presentation

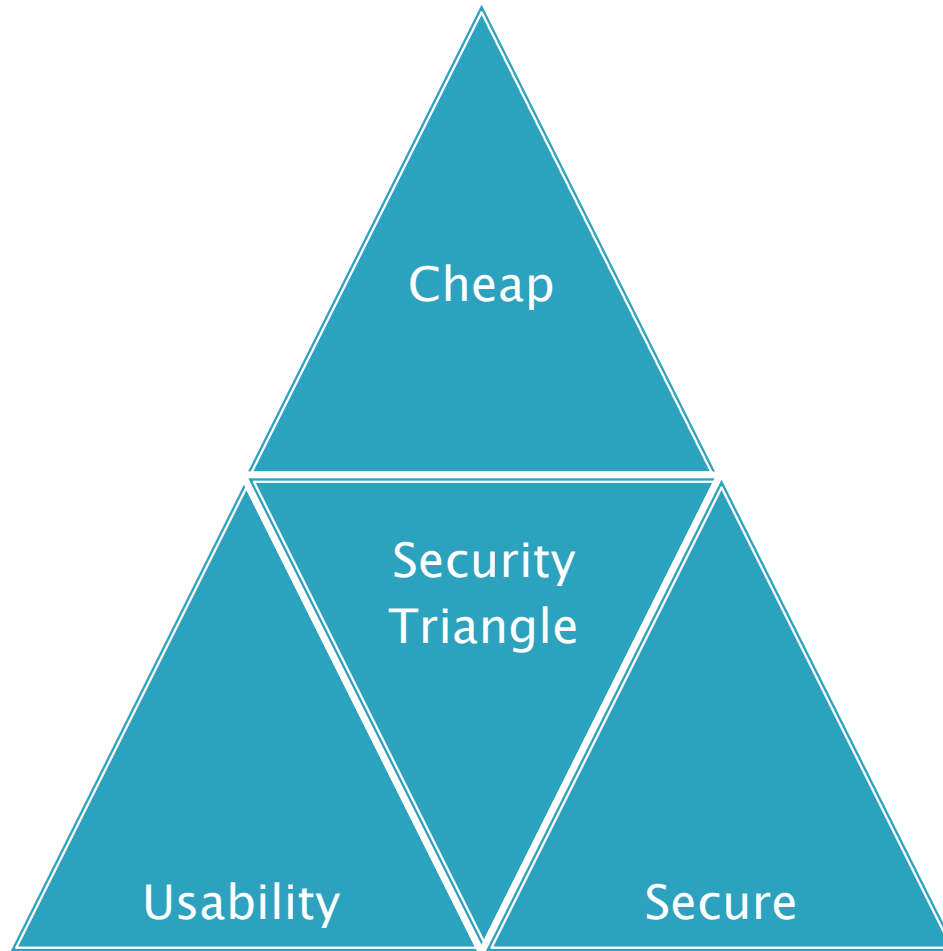
- ▶ Give a brief overview of Information Security principals in Public Sector Organizations
 - ▶ Explain why Information Security is needed in today's high tech workplace.
 - ▶ Give you at least one piece of information you may use to make yourself or your jurisdiction more secure than it was when you walked in the door this afternoon.
- 



Why do security vulnerabilities exist in such a high tech world?

- ▶ Errors? User Feedback for higher usability? Software manufactures looking to “cut corners”?
- ▶ In the world of bits and bites we inherently trust data and input from non-trusted sources
- ▶ Would you let someone in the front door without verifying who they are first?

Security Triangle



Dollars and Cents of Security

- ▶ Gartner estimates that 6.3 % of government IT budgets are allocated to security
- ▶ Nationally all organizations spend approximately 6.6% of their IT budget on security
- ▶ 31% Security costs are attributed to personnel





Defense in Depth

- ▶ “No Tech” solutions include, Policy, Physical Deterrents, good management.
- ▶ “High Tech” Network Access Control, Firewalls, Anti-Virus, Content Filtering, Workstation Control etc.



What We Can't Live Without

"High Tech"

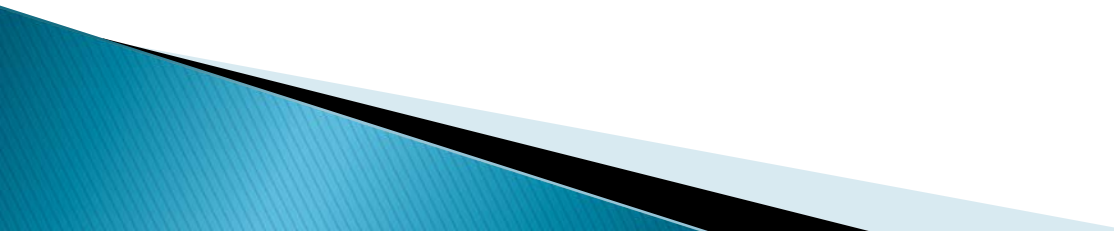
- ▶ Anti-virus
- ▶ Anti-malware
- ▶ Firewall
- ▶ Spam Filtering
- ▶ Content Filtering

"No-Tech"

- ▶ **Good Information Technology Policy**
- 



What is a good I.T. policy as it relates to security?


- ▶ Identification/Authorization/Authentication
 - Password Policy
 - User Rights Control
 - Software Installation
 - ▶ Acceptable Use
 - ▶ Ability to Audit
 - ▶ Establishment of Control
- 



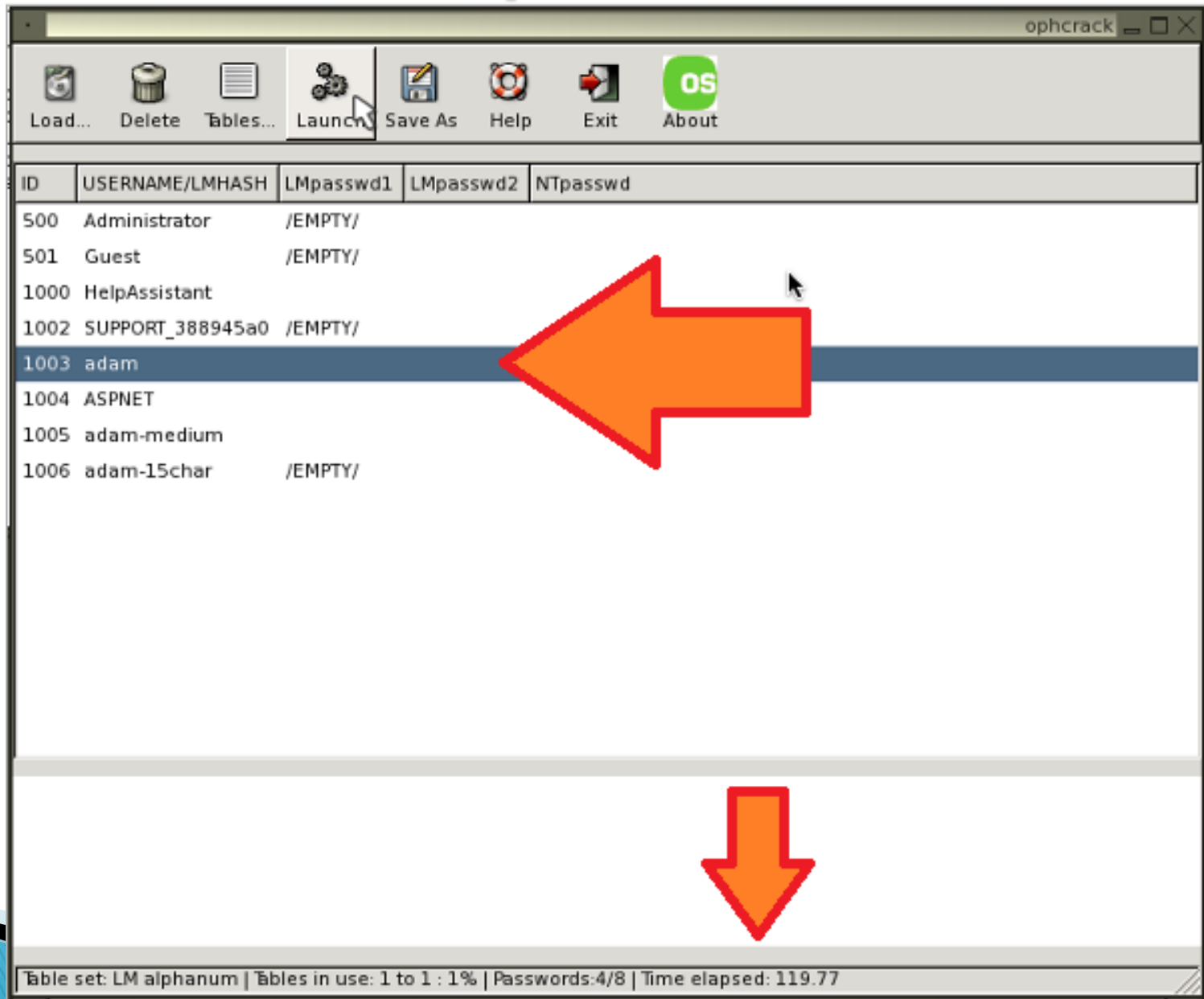
But aren't some things overkill....

- ▶ In 2006, a laptop and external drive was stolen from the home of a Veterans Affairs' data analyst. He had taken the computer home without permission. The names, dates of birth and Social Security numbers of about 26.5 million active duty troops and veterans were on the machines.
- ▶ Simple encryption of this Hard drive for a minimal cost would have prevented the data loss.

What Happens if we Can't Fund Security?

- ▶ No Antivirus/Antimalware: Cost in Helpdesk Calls and lost productivity
 - ▶ No Firewall: Violation of AG guidelines, no NCIC access, no protection from hackers and attackers
 - ▶ No Spam Filter: Lost employee productivity; higher risk for viruses and ID Theft of employees
 - ▶ No Content Filtering: Liability risk for content displayed on employees PCs
- 

Still doubt Security is needed?



The screenshot shows the ophcrack application interface. The menu bar includes: Load..., Delete, Tables..., Launch, Save As, Help, Exit, and About. The main window displays a table of users with the following data:

ID	USERNAME/LMHASH	LMpasswd1	LMpasswd2	NTpasswd
500	Administrator	/EMPTY/		
501	Guest	/EMPTY/		
1000	HelpAssistant			
1002	SUPPORT_388945a0	/EMPTY/		
1003	adam			
1004	ASPNET			
1005	adam-medium			
1006	adam-15char	/EMPTY/		

The 'adam' user (ID 1003) is highlighted in blue. A large orange arrow points to this row from the right. Another large orange arrow points downwards from the bottom of the list. The status bar at the bottom reads: Table set: LM alphanum | Tables in use: 1 to 1 : 1% | Passwords:4/8 | Time elapsed: 119.77

Still doubt Security is needed?

ophcrack

Load... Delete Tables... Launch Save As Help Exit About

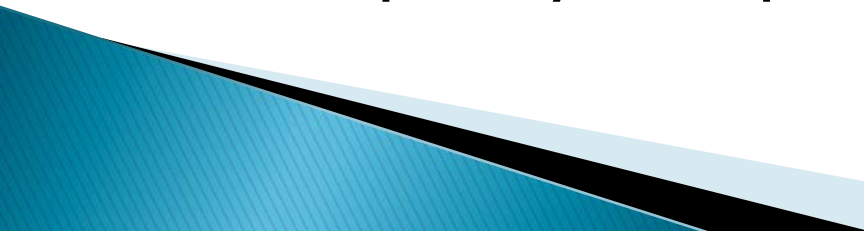
ID	USERNAME/LMHASH	LMpasswd1	LMpasswd2	NTpasswd
500	Administrator	/EMPTY/		
501	Guest	/EMPTY/		
1000	HelpAssistant	VH2GRBE	Not found
1002	SUPPORT_388945a0	/EMPTY/		
1003	adam	EASYPAS	5	easypass
1004	ASPNET	SDAFLI4	Not found
1005	adam-medium	0RNK526	Not found
1006	adam-15char	/EMPTY/		

Statistics:

hash-redux calculations: 1037465910
endpoint searched 145507
fseek operations 381026

Table set: LM alphanum | Tables in use: 4 to 4 :100% | Passwords:5/8 | Time elapsed: 2290.18

What Can You Do to help?

- ▶ As new threats and risks continue to develop it is necessary to have in place proactive measures to keep government running. Information Technology professionals insure that operations continue in spite of this fact.
 - ▶ For as many high tech solutions as IT can come up with, good policy and management must be in place to ensure good Information Security.
 - ▶ Lead by example – support your IT people in both policy and practice.
- 

What Elected Officials Need to Know about Information Security and Employee Technology Usage

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Justin Heyman

Township of Franklin, Somerset County

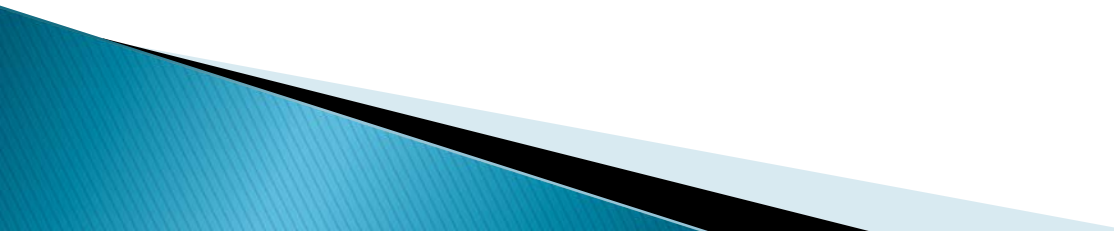
Justin.Heyman@twp.franklin.nj.us

Web Sites & Records Retention

Important Issues
Questions
Answers

Dr. Morris A. Enyeart
NJLM Internet Consultant
City Connections LLC

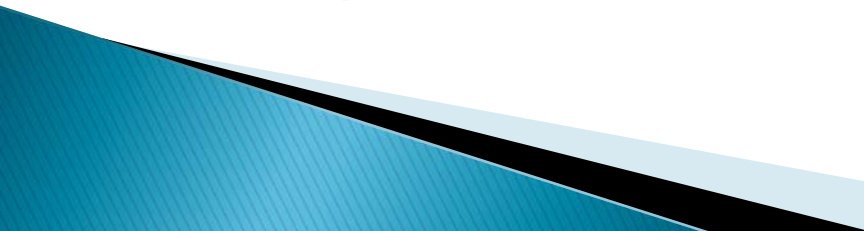
Important Items for Municipalities

- ▶ Web Site Issues You Need to Know
 - ▶ Records Retention: everything or nothing
 - ▶ Spreading the Municipal Presence
 - ▶ Resident Notification Services
- 

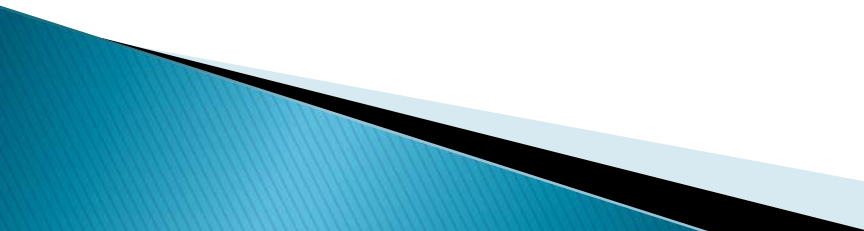
Web Site Issues You Need To Know

- ◉ Who Owns Your Web Site Address?
 - ▶ 37% of Municipalities do not own their web site address (domain name)
 - ▶ 43% do not know who the registrar is or have the passwords to the account
 - ▶ Sometimes the clerk, administrator or a police officer owns the address, Be nice to them

Web Site Issues You Need To Know

- ◉ What Are Your Rights to Your Web Hosting Account and Design?
 - ▶ For Content Management Systems? The municipality has no rights to the account or design in most cases.
 - ▶ For non-database sites, if it's not in your Annual Agreement you have no rights
 - ▶ Find out for sure and prepare a recovery plan.
- 

Web Site Issues You Need To Know


- ◉ Elements to Include in your Disaster Recovery Plan?
 - ▶ Domain Registrar, User Id and Password
 - ▶ Hosting Account – Login and Password
 - ▶ Procedure for moving your site to another hosting company or location
 - ▶ Special tools or software needed
- 

Records Retention

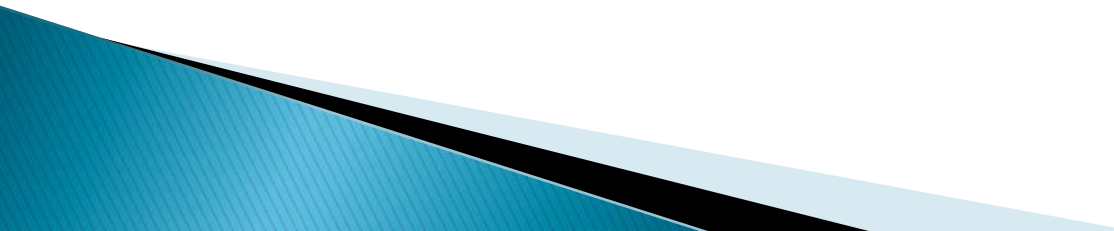
Everything or Nothing

- ◉ What and how do I need to Retain?
 - ▶ Web Site Content – An open question for now. Save every page and change?
 - ▶ E-mail accounts
 - POP3 – Staff can delete (most common)
 - IMAP – Staff cannot delete (should be considered)
 - Both need better monitoring and management
 - ▶ E-discovery – for E-mail
 - Commercial Systems, Google, PDF

Spreading the Municipal Presence?

- ▶ What about Facebook, MySpace and other social networking sites?
 - Another web site to maintain, cost and coordination.
 - It has not been demonstrated that more people follow government sites.
 - Retention issues abound.
- 

Resident Notification Services?

- ▶ RSS
 - Pushing the web
 - ▶ Twitter
 - Another web site to maintain.
 - ▶ Nixle
 - Used mainly by police departments
 - ▶ E-Mail notification systems
 - Reach the most people
- 

Web Sites & Records Retention

<http://www.njslom.com/94thconf/presentations.html>

The League of Municipalities has a free web and Internet consulting service for its municipal members.

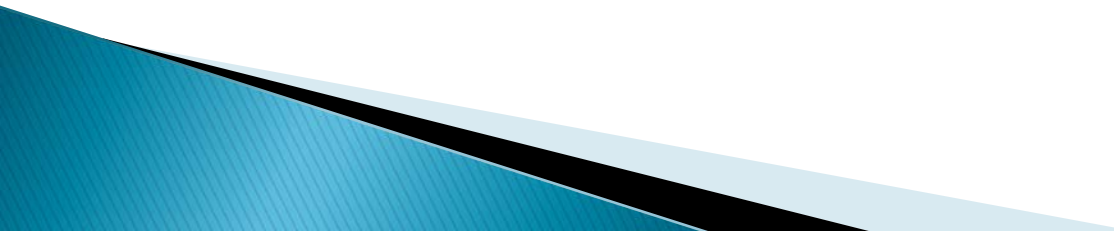
Contact: Dr. Morris A. Enyeart
City Connections LLC
5 Ebbtide Court
Barnegat, NJ 08005
(609) 660-9327

What Elected Officials Need to Know about IT – the Department



Bernadette Kucharczuk, CGCIO
City of East Orange, Essex County

Your Job

- ▶ What do you want to know about technology – organization/management – but you have been afraid to ask?
 - ▶ Not sure how to phrase it now? Ask it during the presentation or after...
- 


My Job

- ▶ Answer those Questions in 4 focus areas:
 - Personnel
 - Budget
 - Governance
 - Risk Management

Personnel

- ▶ Where is your IT staff?
 - Decentralized with some in each department
 - Centralized as division of another department
 - Separate and distinct department with seat at Cabinet/Department Head meetings
- ▶ Who are they?
 - Knowledgeable “SuperUser” with extra duty
 - The IT “guy”
 - Formally Trained with Specialized Skills

Personnel

- ▶ What are they doing?
 - Break-fix
 - Manage and maintain all computing resources
 - Strategic Partners
 - ▶ What resources are available to them?
 - Self-study journals, magazines, etc.
 - Formal training, seminars, conferences and certifications – Rutgers developing program
 - Network of peers/vendors with specialized skills
- 

Budget

- ▶ How do you fund them?
 - Annual requests
 - Multi-year programs and plans
 - Strategic funding for advancing mission and goals of the organization and the constituents we serve
- ▶ How much is enough?
 - As much organizational efficiency as you can handle
 - How much organizational transformation desired?
 - Still Need a number?
 - Technology Leaders in private sector 11%
 - Typical private sector mainstream tech adopters 5%
 - Typical government 2–3% and it is not enough

Governance

- ▶ How are IT-related decisions made?
Decisions about which systems to use, which to invest funds in, which to retire or upgrade?
 - Anarchy or Feudal systems – individuals or small group leaders decide
 - Monarchies – IT or Department Heads decide separately without much input from the other
 - Duopoly – IT and Department Heads jointly decide
 - Federation – complete executive team along with Department Heads representing different areas (such as Public Safety, Human Services, etc)

Governance

- ▶ IT Governance is not an IT issue – it is an organizational management issue
- ▶ How to improve IT governance
 - Don't fight current culture
 - Use existing processes or teams if they exist
 - Best approach may change depending on stage of process and/or decision to be made
 - Infrastructure or Architecture (especially security)
 - Operation Principles or Policies – meet business need
 - System Investment – funding


Risk Management

- ▶ Why do these things matter?
 - Fiscal Risk
 - Poor technology decisions cost real tax-payer dollars
 - Poor technology investments – missed opportunity
 - Legal Risk (and fiscal consequences)
 - Federal Rules of Criminal Procedure
 - Opra Compliance
 - Hostile Workplace Suits
 - Confiscation
 - Political Risk
 - Defacements and Image
 - Trust and Confidence

Your Job

- ▶ Any unanswered questions?

My Job

- ▶ Answered Questions in 4 focus areas:
 - ▶ Personnel
 - ▶ Budget
 - ▶ Governance
 - ▶ Risk Management
- 

My Favs –Tech Management and Organization Resources

- ▶ New Jersey GMIS – www.njgmis.org
- ▶ New Jersey SIM – www.simnet.org
- ▶ New Jersey Infragard – www.njinfragard.org
- ▶ Gov Loop – www.govloop.com
- ▶ Center for Digital Government – www.centerdigitalgov.com
- ▶ Public Technology Institute – www.pti.org
- ▶ ICMA – www.icma.org
- ▶ Gartner/Forrester/Pew Research Center/etc.

What Elected Officials Need to Know about IT – the Department



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THANK YOU

New Jersey League of Municipalities
94th Annual Conference
Atlantic City, November 17, 2009