Not 'If,' but 'When'

Cities Use Preparation and Training to Counter Cyberattacks

When the City of Newberry received ransomware letters a few years ago, asking for compensation to unlock the city's computer files that had been corrupted, the IT department and city leaders were ready.

Newberry responded to the two attacks, believed to be from hackers in Russia and Poland, by immediately isolating the computer servers that had been breached, cleaning them and restoring the information with backup servers that are kept off-site. The city also contacted the authorities, including its police department and the U.S. Secret Service.

"Even though we had ransomware letters, we never once communicated with the ransomware people. We never emailed

with them. We isolated, cleaned up, rebooted, reloaded, and in about six hours we were back online, 100%," said Matt DeWitt, Newberry's city manager. "When this happened to the City of Atlanta, they paid $20 million to have their computer files unlocked. That was the same group that attacked us."

As news of cyberattacks garner headlines and cybersecurity issues dominate planning meetings, municipalities have worked to understand the importance of being prepared.

"In today's world, there are many ways for a security breach to occur. It can come from lost equipment, passwords written

In This Issue

Municipal Population Grows in 2020 Census

In August, the U.S. Census Bureau released the first data to come out of the 2020 census, and the data showed municipalities growing at a rate that outpaced the overall state's growth. Here are some takeaways for how cities and towns have changed in the previous decade.

37%

The percentage of the state's population that now lives inside a municipality, compared to **35%** in 2010.

15%

The percentage growth of the municipal population – from about 1.6 million in 2010 to 1.9 million. The municipal population grew faster than the **11%** growth of the total state population, which now stands at 5.1 million.

115

The number of cities and towns to gain residents from 2010 to 2020, while 156 lost population. The average change for all municipalities was an increase of about 921 residents.

30,144

The largest residential growth of any municipality, recorded in the City of Charleston. With 150,227 residents total, Charleston is the largest city in the state.

1,410%

The largest growth by percentage of any municipality, recorded in the Town of Pelzer. Pelzer had 89 residents in 2010 and grew to 1,344 in 2020, following a substantial annexation.

Cities with population growth in SC

These points illustrate the 115 municipalities to have data showing population growth from 2010 to 2020.
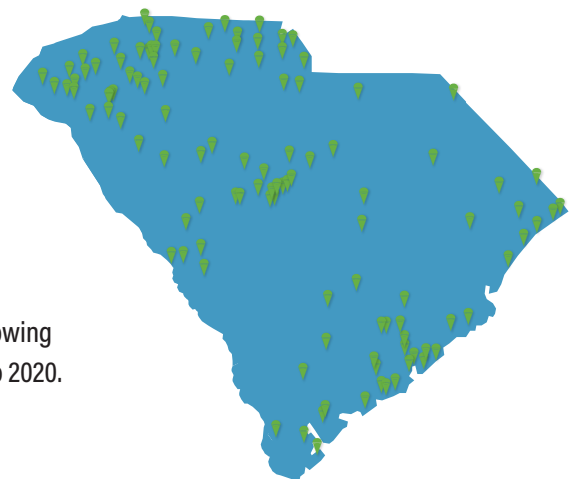
Find dashboards, files and population tables from the 2020 census release at the website of the SC Revenue and Fiscal Affairs Office, rfa.sc.gov.

Business License Standardization Deadline Is Almost Here

The SC Business License Standardization Act, also known as Act 176, established many new business licensing requirements for cities and towns that they must implement by January 1, 2022.

Standardizing license years, due dates and class schedules are just a few of the changes the act requires, and because of the limited time before the deadline, cities and towns should now be well along in the process of making the changes to their business license ordinances and procedures. The standardization process is not optional; it is now required by law.

The Municipal Association of SC developed a seven-step process to simplify the standardization requirements:

1. **Convert to the standard business license year.** The new license period, mandated by state law, is May 1 to April 30.
2. **Review all business license tax data for accuracy.** Each business needs a correctly-assigned North American Industry Classification System number, or NAICS number.
3. **Rebalance business license tax rates to prevent a windfall or loss.** Act 176 specifies that complying with the law cannot have the effect of creating a revenue windfall for the 2022 business license cycle relative to recorded 2020 revenue.
4. **Use the Association's 2021 class schedule.** The law requires that the Municipal Association create a

new class schedule every odd year, approved by the SC Office of Revenue and Fiscal Affairs, which must be adopted by every municipality.

5. **Repeal and replace the business license ordinance.** Municipalities should avoid revising their existing business license ordinances and instead adopt the Association's 2022 version of the model ordinance. Municipalities that have begun the license year transition and rebalancing process can contact Melissa Harrill at mharrilll@masc.sc for a copy of the new model ordinance.
6. **Set up an online renewal center account.** Act 176 requires cities to offer the Local Business License Renewal Center, an online portal hosted by the SC Revenue and Fiscal Affairs Office, for the renewal of existing business licenses.
7. **Notify stakeholders.** Cities and towns need to communicate changes about the law with various audiences who will be affected by it. The Association's standardization web page offers specific messages that can help explain the process for businesses, business license staff, elected officials and media contacts.

Those cities and towns that are not well on the way to completing the first five steps in this list may miss the upcoming compliance deadline.

Find more information for the business license standardization process at www.masc.sc (keyword: standardization).

NEWS BRIEFS

The Municipal Clerks and Treasurers Institute recognized two new graduates in August: **Ashley Allison**, City of Marion; and **Katharine Watkins**, Town of Seabrook Island.

Members of the Municipal Court Administration Association of SC recently elected their 2021 – 2022 board of directors. They are **President Kimberly Poulin**, City of Anderson; **Vice President Kirsten Pressley**, City of Greer; **Second Vice President Belinda Davis**, City of Camden; Members-at-Large **Patricia McTeer**, Town of Hampton; **Sarah Farrow**, City of Beaufort; **Brenda Armstrong**, City of Charleston; and **Past President Brittany Burns**, Town of Pine Ridge.

The **City of Sumter** was named as a finalist for the 2021 All-America City awards of the National Civic League.

Condé Nast Traveler named the **City of Beaufort** among its 26 most beautiful towns in America for 2021, while *Travel + Leisure* has named the **City of Charleston** as the top city in the U.S. for the ninth year in a row.

2022 HLAD, MEO Institute Coming in February

In February, Hometown Legislative Action Day will again take place the day before the Municipal Elected Officials Institute of Government and Advanced Institute. This makes attending both sessions easier for participants.

Hometown Legislative Action Day
Tuesday, February 1 | Columbia Marriott

Municipal Elected Officials Institute of Government, Advanced Institute and Advanced Continuing Education
Wednesday, February 2
Columbia Marriott

Registration brochure available on website Monday, November 22

Hotel reservations deadline
Saturday, January 1

▪ **For the Columbia Marriott, make hotel reservations** by calling 1.800.593.6465 or 1.803.771.7000

and ask for the Municipal Association of SC HLAD rate of $165 plus taxes and fees.

▪ **For the Hyatt Place Columbia, make reservations** by calling 1.888.492.8847 and ask for the Municipal Association of SC HLAD rate of $149 plus taxes fees.

Preregistration deadline for HLAD and MEO Institute
Friday, January 21

Hometown
Legislative
Action Day
Tuesday, February 1, 2022
Columbia Marriott

Municipal Elected
Officials Institute of
Government
Wednesday, February 2, 2022

MASC Municipal Association of South Carolina™
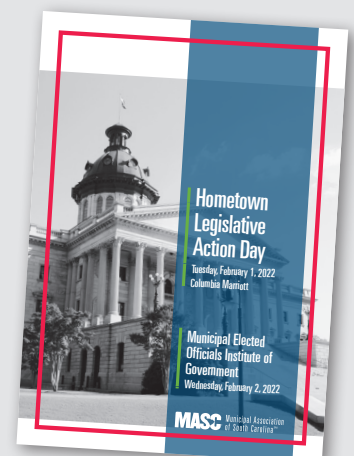
Act 176 Defines 'Gross Income' for Business Licensing

The SC Business License Tax Standardization Act of 2020, or Act 176, standardizes many aspects of local business license tax administration, including the definition of "gross income." Cities, towns and counties use a business's reported gross income as the base on which they calculate a business' license tax. Before the new law, exactly what constituted gross income varied by jurisdiction, creating confusion among businesses and local governments. With the passage of Act 176, the definition of gross income will be uniform across the state.

Effective January 1, 2022, SC Code Section 6-1-400 (e)(1) will specifically define the term "gross income" for any city, town or county that levies a business license tax. For most businesses, gross income "means the gross receipts or gross revenue of a business, received or accrued, for one calendar or fiscal year collected or to be collected from business done within a taxing jurisdiction."

Definitions for most businesses

For a business located within a city or town, the license tax will be based on the entirety of its gross income, with the tax paid to the municipality in which it resides. The business may deduct from its gross income any income on which it pays a license tax to another jurisdiction.

Standardization: New Law, New Action

For a business not located within the city where it does business, the license tax will be based upon and paid only on the income it earns from work that takes place within that city.

The law also allows businesses to deduct other types of funds from their reported gross income. Examples include "taxes collected for a governmental entity, escrow funds, or funds that are the property of a third party."

Businesses with unique definitions

There are several industries in the state for whom longstanding definitions of "gross income" are unique and included within Act 176:

- **Real estate agents and brokers** have a unique definition of gross income.
- **Insurance companies, manufacturers and telecommunications companies** all have their own definition of gross income as well.

These industries' gross income definitions were previously found in various sections of state law and local ordinances. Act 176 consolidates them into one section of state law for easy reference.

Verifying gross income

Occasionally, a business's reported gross income must be verified by a taxing jurisdiction. Perhaps the business's gross income is higher than in previous years. Maybe the business is not claiming all of the deductions allowed under the law. In those cases and others, Act 176 allows the city, town or county to inspect a business's records to ensure the accuracy of its reported gross income. According to Act 176, taxing jurisdictions may review "returns and reports filed with the Internal Revenue Service, the South Carolina Department of Revenue, the South Carolina Department of Insurance, or other governmental agencies."

Among the many changes Act 176 makes to business license tax administration, standardizing the definition of "gross income" is one of the most important. The law's definition of "gross income" will reduce confusion among businesses and local governments and help make doing business in South Carolina easier.

Learn more about Act 176 and business license standardization at www.masc.sc (keyword: standardization).

Complete the 2022 Compensation Survey

At the beginning of every year, the Municipal Association of SC asks each city and town to update its compensation information for the Association's online compensation survey. The information cities and towns provide allows for an annual report of the wages and salaries paid to South Carolina municipal employees and elected officials.

Competitive pay serves as one of the most critical tools helping cities and towns attract and retain employees. Especially during the tight workforce market experienced recently, local governments must compete for job candidates who are also being targeted by state agencies, county governments and the private sector. Data on current salary ranges can help cities and towns maintain an edge.

The Association makes the data from its compensation survey available through its website, www.masc.sc. Municipal staff can use this online tool to make sure that their compensation scale is on par with other municipalities with comparable populations and budgets.

Kingstree Town Clerk Leonard Lowery also handles human resources and risk management for the town. He said that especially for job positions that are competitive among employers in Kingstree's general region, he will use the survey data

to benchmark and make sure that his city's salary offers are competitive and "on target."

"It's a valuable resource for me. It really is," he said.

Responding to the survey is optional, but the Association encourages all municipalities to complete it every year, since widespread participation makes the data more useful. The 2022 survey will be available for data entry from January 3 to February 25.

For more information, visit www.masc.sc (keyword: compensation survey), and for questions, contact Sara Whitaker at swhitaker@masc.sc or 803.933.1240.
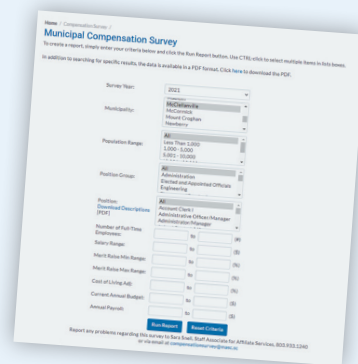
Association Highlight
Association Training Calendar

The Municipal Association of SC has meetings and training sessions taking place throughout the year, and it's easy to find information on schedules, agendas and registrations at www.masc.sc.

To find the Association Training Calendar on the website, select "Education & Events" from the top menu. This creates a drop-down menu, with the Association Training Calendar coming as the first item, allowing users to search events by date, affiliate association or training institute.

MEO Municipal Elected Officials
Institute of Government

Testyourselfmonthlyquiz

True or False:
The amount of debt municipalities may issue without a referendum is tied to the value of all taxable property.

Answer: *True.*

Article X, Section 14 of the South Carolina Constitution places a ceiling of 8% of the assessed value of the taxable property in the municipality on the amount of debt a municipality may issue. Municipalities may exceed the 8% limit with voter approval, as referendum debt does not count against the limit.

The Municipal Elected Officials Institute of Government offers the required course "Basic Budgeting and Municipal Finance" as an online, on-demand course. The next in-person courses are scheduled for February 2, 2022, the day following Hometown Legislative Action Day in Columbia. Learn more about the MEO Institute and the courses offered at www.masc.sc (keyword: MEO).

Stopping Urban Invasive Plants

by Dena Whitesides, regional urban forester, Piedmont region, SC Forestry Commission

Invasive plants are not a new problem. For centuries, they've been woven into South Carolina's landscape and used as agricultural crops, erosion control, and cover and forage to support wildlife. Most of these adopted nonnatives are harmless, but there is a small number of invasive plants that have serious, detrimental effects on the state.

Invasive-exotic plants are those nonnative species that have successfully spread on their own, invading forests, fields, parks, roadsides and rights-of-way. Since many of the seriously invasive plants are used for ornamentation in developed areas, the urban environment can be a gateway for invasive species that escape into forests.

Some of the most threatening invasives in South Carolina include the Bradford Pear/Callery Pear *(Pyrus calleryana)*, Tree-of-Heaven *(Ailanthus altissima)*, Chinese Wisteria *(Wisteria sinensis)*, Privet *(Ligustrum spp.)*, Kudzu *(Pueria lobata)*, Japanese Honeysuckle *(Lonicera Japonica)* and English Ivy (*Hedera helix),* among others.

Here are some reasons that cities and towns may want to play a role in invasive plant species management:

- **Loss of biodiversity and habitat.** Next to human development, invasives are the leading cause of native plant and animal population declines. They threaten ecosystem stability by impeding the growth of native trees and other plants. Native animals are impacted, as they rely on native plants for food and cover.
- **Reduced water quality and erosion problems.** Some invasive-exotic

A Chinese Wisteria vine girdles a pine tree. All photos: SC Forestry Commission.

Japanese Honeysuckle grows rapidly, smothering plants and girdling trees.

Planted across many community landscapes for decades, the Bradford Pear cross-pollinates and spreads rapidly.

vines pose significant threats to soil loss and sedimentation — the erosion of soil into natural water bodies like creeks and rivers. Native plant roots extend deeper into the soil and have better root structure that binds soil to improve stabilization. More native plants can help reduce flooding risk.

- **Less tree cover.** Invasive-exotic plants smother native seedlings from becoming established and growing. Some invasive vines such

as English Ivy can add significant weight to native tree canopies, leading to uproot and tree failure. Other woody vines, like Chinese Wisteria and Japanese Honeysuckle, can eventually strangle native tree trunks.

- **Increased maintenance costs**. The Bradford Pear tree is a seriously invasive tree commonly planted in urban landscapes across the Southeast. This tree's weakly attached branches often break in storms,

leading to increased maintenance costs for cities. Bradford Pear seedlings spread like wildfire in the urban and rural forest, and the trees have incredibly sharp thorns that cause significant damage to property, people and animals.

- **Negative impacts on economies and human health.** Aggressive invasive vines, such as Kudzu, can be burdensome to landowners facing infestations, and can create economic and safety hazards. A major nuisance for railways, Kudzu fruit amasses to a slick pulp on train tracks that create dangerous conditions for engineers to navigate train wheels over. Kudzu notoriously climbs the guy wires supporting electric poles, weaving into hot wires and causing power supply cuts and toppled poles.

There are many ways for municipal leadership to proactively address the problem of invasive-exotic plants:

- **Educate the community.** Discourage the planting of serious invasive plants. Consider hosting a "Bradford Pear Bounty" in the community. Since 2019, the SC Forestry Commission has partnered with

Famous for its rapid growth, infestations of kudzu can choke out the native vegetation of large areas.

Clemson University in development of this highly successful program that aims to educate landowners on serious invasive threats, like the Bradford Pear, and rewards their removal with free, native replacement trees. Learn more at https://www.clemson.edu/extension/.

- **Lead by example.** Avoid planting invasive-exotics on public space, and prioritize the removal and control of serious invasives that negatively impact cities. Focus on planting native trees and shrubs on public space to promote better diversity and increase sustainability of the city's urban forest.
- **Put it in policy.** Prohibit the planting of serious invasive-exotic plants on public space in the city's tree ordinance as they significantly

The Tree-of-Heaven is a preferred host for the Spotted Lanternfly, an invasive insect that substantiall damages agricultural crops.

threaten the native integrity of South Carolina's forests.

- **Focus on the big ones and don't worry about the small ones.** Allocate resources to combat the most threatening invasive plants that negatively impact the state — Bradford Pear, Tree-of-Heaven and others. For information on identification and management of invasive-exotic species, visit the SC Forestry Commission's Invasive Species publication at http://www.trees.sc.gov/pubs/invasivespecies.pdf.

The Municipal Association Needs Your Updated City Information

It's time again for each South Carolina city and town to review, update and verify its vital information with the Municipal Association of SC. This year's deadline for handling data on the Municipal Information Dashboard is Monday, November 22. Information cities and towns provide to the Association includes a variety of data points.

Updating this information every year helps the Association effectively engage with municipalities on key issues. With accurate and up-to-date contact information, the Association can provide

- updates on the legislative action at the State House that can have a major impact on local government operations;
- registration opportunities for meetings, conferences and workshops, including the Association's Annual Meeting and

Hometown Legislative Action Day; and

- other training opportunities from the Association's affiliate organizations and Risk Management Services.

The information that comes from this updating process also enters into the South Carolina Municipal Directory, a resource available online at www.masc.sc (keyword: municipal online directory), as well as in print. The directory, published annually, features contact information for all 271

municipalities. It also lists out the specific form of government for each city and town and the regular schedule of council meetings and the names of all elected officials and key staff positions. The online version of the directory allows users to search for municipalities based on characteristics like the county in which the municipality is located, its population, or which state representatives and state senators serve it.

The Association allows only one person from each municipality to handle the annual update — the municipal clerk or the clerk's designee — as a way of maintaining the accuracy of all submitted information. For assistance with the information submission process, or to make a new designation for the person responsible for the update, contact Joanna Ayers at jayers@masc.sc or 803.933.1259.

Economic Development Through Diversity and Team-Building

When Mary Helmer Wirth served as the Main Street Director handling downtown development in Emporia, Kansas, she reached out to the downtown's Hispanic business owners, who made up about a quarter of the district's business owners. She wanted to find ways for her program to address their needs, get the Hispanic community involved, and counteract the lack of diversity she saw in her program's board.

Wirth failed to connect with them at scheduled group meetings, and decided to meet with the business owners at the Catholic church where most attended. Even then, speaking to a business owner, she found that the woman would not work with Main Street until she understood the program's purpose. It was only after the priest said that he knew Wirth and her work that she was invited to speak to a large gathering of Hispanic business owners following a weekday Mass.

"We never would have connected with the Hispanic community if we had not had the opportunity to meet the business owners where they were at," Wirth said.

Since 2013, she has served as the state coordinator of Main Street Alabama, a group which counts dozens of participating downtown programs across that state. In August, she visited Florence for the Main Street South Carolina director's retreat to discuss the importance of diversity in economic development programs for communication, outreach, recruitment and partnership-building.

Wirth pointed to diversity among board members and volunteers as a key aspect of any downtown development organization's success. Diversity can come in many forms, including age, race, religion, nationality and gender. When setting up an effective board, she said, leaders need to try to include every relevant community, profession and business sector, and all need to have term limits defined by bylaws to further ensure wide representation.

"Think about what your gender and ethnic split is. Is there a variety of professions? Does it look like your district?" she said.

Building a diverse base of volunteers requires fulfilling the motivations people have for volunteering, and Wirth reviewed common motivations. These range from the desire to have influence over programs to the seeking of recognition, an aim to improve the community or a desire to accomplish something.

"The biggest thing for volunteer recruitment: what's in it for me?" she said. "What do I get out of it? Is it because I want to be in a room with my friends, or I'm passionate about a particular project?"

Wirth also advocated for careful development of partnerships for economic development programs, including making sure that whomever the program partners with has compatible values and long-term purposes. A partner interested only in a particular fundraising event or a social cause unrelated to the city's economic development efforts would not be a good partner, nor would a group focused on redeveloping a dilapidated shopping mall on the edge of town be a good fit for downtown development professionals.

"Mission-match, and do your research," she said. "A lot of times we'll be looking at funders or partners and not understand why they don't want to be involved with us, because we haven't done research to see what they do."

She added that partnering groups and people need to have strengths that are complementary to the development professionals, such as matching people who think about large-scale strategy with those who excel in implementation.

"You really don't need another one of you. You really need to bring in other people," she said.

Economic development strategies that accurately reflect a city's diverse residents build lasting and meaningful communities. Intentional outreach and working towards shared prosperity city-wide ensure sustainable economic development practices.

Main Street South Carolina is a technical assistance program that empowers communities as they revitalize their historic downtowns, encouraging economic development and historic preservation. Learn more at www.masc.sc (keyword: Main Street).
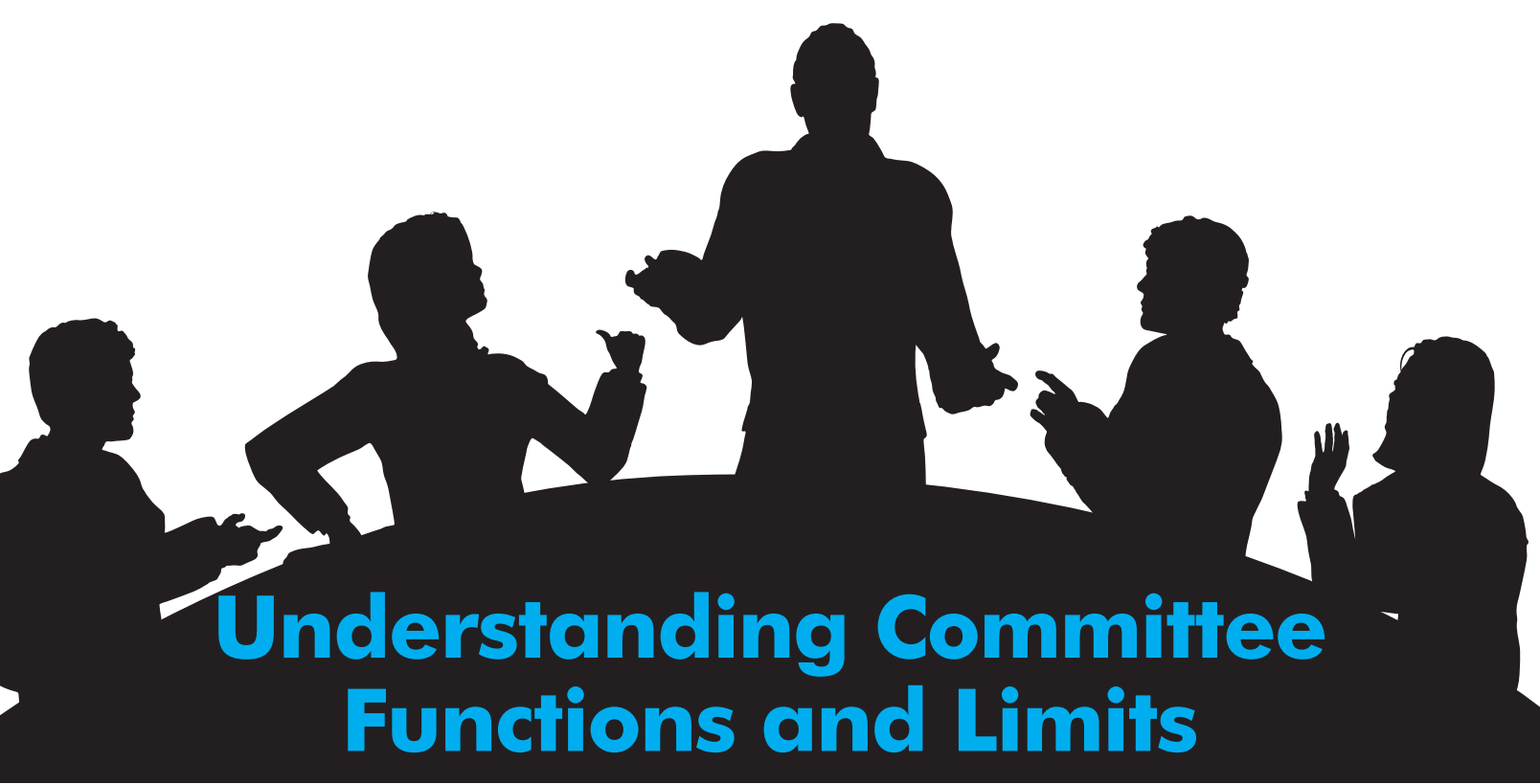
Understanding Committee Functions and Limits

I n the private sector, corporate boards of directors often work using committees, each made of select members of the entire board. These subsidiary bodies may perform delegated functions, make recommendations to the board and streamline operations. City and town councilmembers often ask if committees or other subsidiary bodies of the council may accomplish similar roles in local government.

In general, councils may freely establish subsidiary bodies, but significant limitations apply to them. Creating committees can also lead to friction among councilmembers in the form of questions about how they should be structured and what authority they should have. Two principles of South Carolina law — only the council may exercise the legislative function, and governments must conduct their business in the open — serve as restrictions on committee work.

Establishing a committee and making appointments

When councils decide to establish standing committees of their members, they should enact an ordinance to define how the system will work. The ordinance should establish clearly that the committees are subordinate to council and that they exist entirely as a resource to the council — for example, by vetting issues and promoting efficiency in the council's work.

The ordinance should also specify how the council appoints members to the committees, and define the length of the appointments. State law does not specify how a council should handle the appointments. Unless a local ordinance states otherwise, the Municipal Association of SC recommends that councils operate with the assumption that the power to decide on committee appointments falls to the entire council, rather than just with the mayor or any other subgroup.

Restrictions on delegating power

SC Code Section 5-7-160 provides that "[a]ll powers of the municipality are vested in the council." The courts and the SC Attorney General have interpreted this provision to mean that councils cannot delegate legislative powers. For example, the Attorney General's office issued an opinion on November 13, 2003, stating "[a] municipal governing body cannot delegate to a municipal officer or *even to one of its own committees* the power to decide legislative matters" [emphasis added].

The hard question is to identify those "legislative" functions that cannot be delegated. Any matter that requires an ordinance under SC Code Section 5-7-260 cannot be delegated. Many other council functions, however, are legislative and so the council cannot delegate them. The

best practice for city and town councils is to avoid allowing subsidiary bodies to make final decisions on any council business unless specifically allowed by law.

Transparency requirements

The SC Freedom of Information Act applies to "committees, subcommittees, advisory committees, and the like." In *Quality Towing v. City of Myrtle Beach*, the SC Supreme Court held that FOIA open meeting laws applied to a committee consisting entirely of staff who could only recommend a procurement award. FOIA requires open meetings after appropriate notice, even for a committee with no elected officials and without final decision-making authority.

It is sometimes difficult to determine whether a subsidiary body is a "committee, subcommittee, advisory committee, [or] the like." If the council itself established the subsidiary body, then open-meeting rules will almost certainly apply. Other situations may present a closer call. The safest course is to assume that any formally constituted subsidiary body will be subject to open-meeting requirements.

Learn more about open-meeting requirements under FOIA in the SC Press Association's Public Official's Guide to Compliance with the S.C. Freedom of Information Act *handbook, available at www.scpress.org.*

down in plain sight, phishing and physical intrusions, to name just a few. This is one of the issues that keeps me awake at night. In most cases, it is not a matter of if you are attacked, but when," said Tommy Sunday, the chief technology officer for the Town of Bluffton.

For municipalities, that means making sure both the systems and the city staff are kept up-to-date.

"Our IT department implemented a cybersecurity training program a few years ago that is required for all our end users. The human firewall can stop many of these attacks," Sunday said. "Each quarter, we require anyone that uses a town email address to complete cyber training."

The training includes topics ranging from email security and social media to incident reporting and internet use, he said. Bluffton also does a simulated phishing test with the staff many times a year to help them recognize illegitimate emails.

While the best antivirus software and firewall equipment can help prevent various styles of attacks, nothing is perfect and some dangers will still get through those defenses.

"The end user is always the best firewall," Sunday said.

Keeping those users updated and informed is key, said Jason Thomton, Town of Fort Mill information technology administrator and current president of the Municipal Technology Association of South Carolina.

"I've been doing this for 15 years, and you used to hear people say that security is an IT problem and not a user problem. As the security landscape has evolved, that's not true anymore," Thomton said. "You're only as good as the weakest link in a chain."

And that means it's key to get users to buy in to the importance of recognizing possible hacks before it becomes a crisis.

"It's so important to have a good relationship [with employees] where they can say, 'I got an email' or 'I got a text message I thought was weird.' Having that interaction is huge," Thomton said.

Thomton said he shares headlines and articles explaining cyber threats, and flags staffers about things like bogus emails regarding gift cards, showing them how to better recognize threats.

"The majority of people aren't tech people, but we need to make sure they understand," he said. "Communications is key on how we are expected to handle things and how we get people to be more mindful of what you're clicking on. It's about communication and holding that line open all the time so they feel like they can come to you."

As it did with many facets in the workplace, the COVID-19 pandemic caused IT directors to broaden the number of topics to think — and worry — about.

"When COVID hit last year, it seemed like every week our mail filtering system was being hammered with new types of phishing emails," Sunday said. "With people working from home during that time, it was clear that the hackers were looking for new ways to try and compromise a system."

Aside from keeping the end users educated, cities and towns also must make sure they are using the best software and technical procedures to prevent cyberattacks from creating major problems.

Like many other municipalities, Sunday said Bluffton does on-site backups, cloud-based backups off-site, and bare-metal backups for all of its vital servers. While normal backups only back up data that is saved, bare metal backups do a complete backup of the servers and their settings. That improves response time if networks are compromised.

"It is also very important to test your backups. We know they are there, and everyone gets those pretty reports each day saying that they backed up something, but when was the last time you took time to verify that what they are backing up is good data? This part could be the difference in keeping your job or updating your resume," Sunday said.

Cities without strong backup systems can end up having major issues or being forced pay the ransom in cyberattacks.

Without a backup system, "you're fighting everything with one hand tied behind your back. You're not in a position to withstand any type of adversity. If you have something crash, how do you get it back if you don't know what's on there or what's lost?" Thomton said. "It's the boring stuff that nobody thinks is exciting and fun. And it's not. But it's the boring stuff that's important. Your documentation, testing your backups, those are the things that are gravely important. And in time of crisis, it can set up an IT team in a city for success or for failure."

Along with off-site backups and communication with employees, cities are also adding measures such as two-factor identification for all network users to further isolate servers from being hacked. The SC Law Enforcement Division also offers an intrusion detection system at no cost to cities.

And even when a city does everything correctly and takes precautions, cyberattacks can still happen.

"The message here is to be prepared. And we were prepared," Newberry's DeWitt said. "We have great IT people, we kept up with what was happening in the news, seeing that cyberattacks were more prevalent. We had team meetings to see how to prepare ourselves. The last thing we wanted to do was come in one day and find out all of our information was locked up."

Still, in just the six hours Newberry was offline following each of the two cyberattacks, the city estimated it cost $17,000 in lost productivity, with staffers unable to do their jobs because they couldn't access necessary information.

"So, it's not to say it doesn't hurt, but it could have been a whole lot worse," DeWitt said. "We could have been bent over a barrel by these ransomware people."

Municipal IT Budgeting in Three Parts

By John Hey, director of operations, VC3

Information technology is a critical part of a municipality's annual spending. It's important for cities and towns to flesh out a fairly detailed IT budget to uncover inefficiencies, save money, and better develop operational goals.

This high-level overview describes how to use an IT budgeting process to help fix what's broken, find ways to save money in the long-term and execute a municipality's strategic vision.

1. Fixing what's broken

Bad technology impacts the bottom line every day, and it's often a hidden source of increased expenses. Here are several points to consider for identifying broken technology.

- **Is data backup tested and operational?** All it takes is one data loss incident to impact a municipality's budget significantly.
- **Is the hardware more than five years old?** Hardware provides substantially diminishing returns after three to five years — costing the city money once it becomes obsolete, ineffective and unable to meet the demands of municipal business.
- **Has the city recently evaluated its internet service provider or telecom provider?** If it has neglected to examine or challenge this line item for many years, the budget item may be ripe for potentially saving money with a change.

2. Maximizing IT investments

Creating sound long-term IT investments helps municipalities from a budget standpoint and allows them to benefit from the evolution of various technologies.

- **Does the city need all its hardware?** Many systems and services previously needing on-site servers are now accessible through the internet.
- **Is there a hardware lifecycle replacement plan?** Cities that plan to replace their hardware after three to five years do the best job of maximizing those investments.
- **Has the city evaluated its software lately?** By "subscribing" to software per user, cities avoid paying for expensive servers and software licenses. This includes remote-access solutions, cloud applications, and video conferencing tools to make remote working and collaboration easy.
- **Are all IT support needs covered?** Proactive maintenance will offer savings in the long-term when cities no longer pay to fix recurring problems that seem to never go away.
- **Does the city waste time on manual data backup?** Automated data backup may be a better investment in terms of cost, certainty and productivity.

3. Let technology spur the vision

Many towns and cities often separate vision conversations from technology conversations. Instead, leaders should let technology help enact their vision.

- **Create a list of projects with options.** For example, the city may want an expensive accounting system that fulfills all its demands, but its IT staff or vendor provides an option that has 95% of what leaders want for 50% of the cost.
- **Don't forget any operational goals.** Are there ways for technology to make accounting, public safety, finance, city hall, or other departments more efficient?
- **Think about making residents happier and more informed.** Explore ways to improve the website, video streaming capabilities and social media. Or, think about ways to improve the online payment process and offer more resident services online.

Once a city fixes its broken technology, starts to truly maximize its IT investments, and connects its vision with technology, it can make positive leaps forward in ways that its leaders never before imagined.

John Hey is the director of operations at VC3, the Municipal Association's technology partner.

Cities Use Technology to Improve Utility Reliability

In the past two decades, technological advances have helped municipalities improve and regulate the delivery of water, sewer and electrical services. But the systems that allow cities to receive readings on water meters without having to send a reader out on the streets also create a doorway for hackers and spyware. No technology is bulletproof, say those who are paid to keep watch over the cybersecurity of cities' water and power systems, and very often the biggest concern isn't the technology at all — it's the people.

"Your people are your largest vulnerability," said Bill McKelvey, director of information technology and telecommunications for the Piedmont Municipal Power Agency, a joint agency formed by 10 municipal electric utilities in the northwest corner of South Carolina. "But they are also your first line of defense."

Still, there are some best practices that cities can use to keep the hackers out and keep the lights on.

The risks to cities and towns fall primarily into two categories: the technology that runs the systems, often called the integrated control systems, and the technology that keeps track of customer billing, including bank account numbers and other sensitive information.

Understanding the distinct threats to each system are key to protecting them.

"We're trying to catch a bad connection before something bad happens," he said.

For its water services, the City of Florence has a fully automated surface water treatment facility that operates on a closed-loop system for security, said Utilities Director Michael Hemingway.

"You can only make a change or adjustment or get those readings from inside the facility," Hemingway said. "There is no external access."

That is key to protecting those systems from outside hackers, McKelvey said.

"It is extremely important that we protect those resources and keep them segregated from the regular network," McKelvey said.

Florence's surface water treatment facility is staffed 24 hours a day, and workers monitor chemical treatments to the water and keep an eye on sensors that measure water pressure that can signal a break in the line. Hemingway said technology makes the job of providing dependable service a little easier, but workers still must be vigilant.

"The computer system does allow for some complacency where you just sit and watch the monitor rather than verifying that the computer is right," he said. "Anything can lose its calibration, so you always need to do verification."

Above: Jermaine Holmes, water operator for the City of Florence, monitors groundwater pumps, elevated tank levels and surface water treatment filters in the control room at the city's Surface Water Treatment Plant. Photo: City of Florence.

Right: Laurens Commission of Public Works Operations Director Keith Wood handles a drone used to inspect water towers. Laurens CPW also uses infrared cameras to find hot spots in the electrical system.

Verifying before acting is also important on the other system side — protecting private customer information. Most often when those systems have been breached, leading to the exposure of information such as credit card or bank account numbers, it is the humans operating the systems that let the hackers in.

"The vast majority of ransomware cases are due to breaches caused by an employee or vendors and more often than not, it's a phishing email sent to an employee who clicked a link and got their computer compromised," McKelvey said. "From there, an attacker could move horizontally from workstation to workstation and hide themselves all over the place."

At the Laurens Commission of Public Works, IT systems monitor the load on

the electric system and can help control electrical demand, especially on days with peak usage.

Keith Wood, operations director for the Laurens Commission of Public Works, said his team stresses vigilance among workers, but he also uses an outside firm that tries to break into his system to find weak spots.

"You've got to spend some money to protect against that," Wood said. "These guys keep up with how the hackers work and they try to get in like a hacker, but they are the white-hat guys."

For utility services like water and electricity, reliability is extremely critical. As technology has helped in the process of running utility systems, it has also opened up careful IT work as another factor for keeping the systems operating and safe.

Virtual Training Options Offer Convenience for Municipal Officials

The COVID-19 pandemic brought about a need to move many meetings to an online format, but virtual meetings can be a good option for some training functions at any time. Here are several online training options available through the Municipal Association of SC.

Municipal Elected Officials Institute of Government

For years, the MEO Institute maintained a variety of online, on-demand training sessions. The on-demand courses address such topics as

- budgeting and municipal finance,
- the Freedom of Information Act in South Carolina;
- forms of municipal government;
- municipal economic development and
- municipal governance and policy.
- Learn more about online and in-person courses at www.masc.sc (keyword: MEO).

Planning and zoning training

In 2020, the Association launched the "Online Orientation Training for Planning and Zoning Officials." This six-hour course, available to elected officials as well as relevant staff at no charge, meets a state training requirement for all officials working in that area.

The Association initially established this training after an amendment to the SC Comprehensive Planning Act made such training a requirement for planning and zoning officials. The training is six sessions, each lasting an hour, as well as video exercises and knowledge-check quizzes. Each of the sessions provides its own completion certificate. At the completion of the full six-hour orientation training, municipal planning officials can receive a copy of their transcript.

Learn more at www.masc.sc (keyword: Planning and Zoning training).

Risk Management Services training videos

The Association's Risk Management Services recently began developing safety training videos available to members of the SC Municipal Insurance Trust and SC Municipal Insurance and Risk Financing Fund. The videos, available through the LocalGovU online training system www.localgovu.com/masc, can be set up by employers in a customizable list to provide both safety orientation and refresher sessions.

The videos developed so far cover such topics as

- emergency action planning;
- energy control procedure, or lockout/tagout;
- fall protection;
- forklift safety; and
- heat stress.

SCMIT and SCMIRF members can find the Risk Management Services online training videos at www.localgovu.com/masc.

Technology Projects Eligible
for American Rescue Plan Funds

When Congress passed the American Rescue Plan Act in March as a way to create economic relief from the damages of the coronavirus pandemic, it opened up a total of $65.1 billion for municipal governments to use in a number of ways. Municipalities are now working through fund usage ideas using the Interim Final Rule, also known as the IFR, a guidance document created by the U.S. Department of Treasury. That document outlines several ways cities and towns can use their funds for technology projects.

Broadband development

Because the pandemic powerfully demonstrated the importance of high-speed internet for work, healthcare and education, ARP fund recipients can use their money for broadband internet projects.

Projects generally must create internet access that reliably reaches at least 100 megabits per second, both for download and upload speeds. The IFR document allows for a lower upload speed standard of 20 Mbps in cases where excessive cost of the project, or geography or topography creates difficulties, as long as the project is "scalable" to the higher 100 Mbps standard.

These eligible projects must also provide service for areas that have been underserved by internet availability. The IFR defines this as areas lacking internet service with at least 25 Mbps as a download speed, and 3 Mbps as an upload speed.

The Department of Treasury has also encouraged the use of funds for "last-mile connections," connecting existing networks across the final distance to new users. It also encouraged projects that involve those networks affiliated with nonprofit and cooperative groups rather than for-profit providers.

Cybersecurity

The IFR indicates that cybersecurity modernization projects are an allowable use. This can be "hardware, software, and protection of critical infrastructure, as part of provision of government services up to the amount of revenue lost due to the public health emergency."

Learn more about ARP rules and U.S. Treasury Department guidelines at www. masc.sc. (keyword: American Rescue Plan).

Calendar

Scheduled in-person meetings are subject to change based on the Municipal Association's COVID-19 restrictions in place at the time of the meeting. Information about events and how members can access the virtual events will be updated on the Association's website.

NOVEMBER

4 South Carolina Association of Stormwater Managers Fourth Quarter Meeting. Seawell's, Columbia.

4 Managers/Administrators Fall Forum. DoubleTree, Columbia.

9 Risk Management Services Annual Members Meeting. DoubleTree, Columbia, and Virtual.

17 – 19 SC Municipal Human Resources Association Annual Meeting. Hyatt House, Charleston.

DECEMBER

3 SC Municipal Attorneys Association Annual Meeting and Continuing Legal Education Seminar. Marriott, Columbia.

8 SCMIT/SCMIRF Public Works/ Utilities Risk Management Training. Cooperative Conference Center, Columbia.

2022
JANUARY

12 Business License Essentials – Sending Out Renewals. Virtual.

FEBRUARY

1 Hometown Legislative Action Day. Marriott, Columbia.

2 Municipal Elected Officials Institute of Government. Marriott, Columbia.

9 Business License Essentials – Manufacturers. Virtual.

MARCH

3 SC Association of Stormwater Managers First Quarter Meeting. Cooperative Conference Center, Columbia.

9 Business License Essentials – How to Calculate Business License & Declining Rates. Virtual.

14 – 16 SC Utility Billing Association Annual Meeting. SpringHill Suites Greenville Downtown.

24 Municipal Technology Association of SC Spring Meeting. Cooperative Conference Center, Columbia.

APRIL

8 Municipal Court Administration Association of SC Spring Meeting. Cooperative Conference Center, Columbia.

13 Business License Essentials – Gross Receipts, Deductions, Verification, Documentation. Virtual.