Smart Cities

Cyber Security Considerations
LEADERSHIP

What Will Be the Next Major Disruptor?
By: Marcia Albers, Executive Director, Technology First

In recent years, we’ve witnessed a myriad of disruptions in every industry – fintech, healthcare and biotech, aerospace, defense, logistics, manufacturing, construction, retail, legal, academia, et al.

The evolution of technology is creating a disruption of its own. Organizations compete tirelessly to ‘think outside the box’ to solve problems before they exist. Today, top organizations can become irrelevant overnight if they don’t remain on the leading edge. The fundamental requirement for organizations to remain on the ‘leading edge’ year after year… WILL BE A DISRUPTOR.

The ability to address the fundamental need to support every disruption will be the catalyst to propel disruptors of the future. In contrast to one of the top strategic technology trends known as ‘Artificial Intelligence’, the top ‘fundamental requirement’ for strategic technology relevance is… ‘Individual Intelligence’.

The key to addressing this requirement is multi-faceted and requires interdependent matrix management.

1. Identify skills required to build disruptive technology solutions
2. Identify behaviors or traits of individuals that possess these skills as well as pathways to develop these skills beginning at an early age
3. Develop interactive communication to bridge educators and counselors with industry and leading-edge technology developers
   - K-12
   - Career Tech Centers
   - Higher Education
   - Continuing Education
4. Engage community partners and government
   - Sponsorships
   - Scholarships
   - Program Development
5. Develop programs to support growth and development of individuals

Leading technology companies need to develop a framework for identifying ‘rising stars’ in the technology world… and invest in education and skill development to support the ‘Disruptors’ of the Future.

JOIN US on August 9th to
"Build Tomorrow’s IT Workforce"

Welcome New Members!

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CIO Council

The past two CIO Council meetings were informative, collaborative, and sparked ideas in the minds of our IT Leaders! The CIO Council met in May on “Today’s Security: Multi-Factor Authentication, Endpoint Security and More...” facilitated by Tim Ewart of Materiel Command at WPAFB (pictured above) and also met in June on “Aligning Strategy for the CIO and the Business” facilitated by Scott Dennull of AtriCure. See you again on July 19th!

Before the summer hiatus, our Data Analytics SIG met on “Toolkits and Methods for Unstructured and Semi-structured Data” facilitated by Paul Moorman of Catalyst Paper. The DASIG will take a break for June and July and presume in August for “ServiceNow Performance Analytics.

The Infrastructure/Cloud SIG met over a delicious Chipotle buffet lunch as they learned about “IT Incident Response Plans” facilitated by Phil Heather of RSM. The ICSIG will take a break for June and July and presume in August for “Job Skills in a Cloud World”.

Jamie Sullivan facilitating the Inaugural Municipality SIG meeting on “How Smart Cities are Building the Future” – Thank You Jamie and AT&T for sharing your expertise!

The Municipality SIG kicked off on June 6th with a fascinating meeting on Smart Cities. The room was filled with City IT Leaders, City Managers, and other IT Professionals curious about the latest Smart City Initiatives. The Municipality SIG will meet again this September, topic TBD. Thank you to Mark Neuman of Fairborn, Darren Davey of Vandalia, and Drew Miller of Kettering for stepping up to Chair this SIG!
4 Key Benefits of Smart Cities Technology

By: Michael Zeto | Vice President of AT&T Internet of Things and General Manager of Smart Cities

The city of the future is here. Through the Internet of Things (IoT), smart technology solutions are connecting citizens to their communities in new, exciting ways and creating an environment that is safer, more efficient, and sustainable for the future. Here are four benefits of smart cities.

Citizen Engagement

In the most aspirational sense, smart city solutions use technology to put people first and drive citizen engagement. From free Wi-Fi at bus stations to interactive touch-screen information kiosks, smart cities help keep citizens connected to the community they love.

Imagine a city where a person in a wheelchair can chart a route to the local park using curb cuts and avoiding barriers. She can then connect to the park’s Wi-Fi, receive upcoming events notifications, and take e-lessons about the trees and flowers in bloom. These aren’t pipe dreams. They are smart city solutions in action.

Infrastructure

With intelligent infrastructure, smart sensors and cameras enable cities to remotely monitor the conditions of roads, bridges, buildings, parks, and other venues, through applications that are as easy to use as the smartphone we’re accustomed to. Maintenance crews can identify slick roadways during freezing weather or detect bridges that may need repairs. And that’s just one use case.

Smart lighting solutions are another example of intelligent infrastructure. We can retrofit existing street lighting and use IoT solutions to help cities monitor traffic and road conditions. This helps cities identify and proactively manage road closures or other potential interruptions before they become a problem.

Transportation

Smart cities technology is helping to improve how citizens get from point A to point B. Digital signage lets commuters know in near real-time when the next bus or train will arrive. Citizens can rent electric bikes with the tap of a smartphone at stations across the city – helping to reduce traffic. And at large, cities can better manage traffic patterns of pedestrians at stadiums, parks, and busy intersections.

We’re also starting to realize the full potential of IoT to connect cars to each other and their surroundings. Smart cities will play an important role in connected vehicles being able to communicate with things like traffic lights and other transportation infrastructure. This connectivity will help assure and accelerate the adoption of automated vehicles.

Public Safety

Public safety stands to benefit in a big way as cities become more tech-driven. Take drones, for example. Imagine if paramedics could see what was happening at a car accident before they arrived. The potential to deploy a connected drone and collect information from the scene of an emergency could help EMS personnel make key decisions and jumpstart their response.

We’re also connecting first responders with wearable cameras to provide “see-what-I-see” capabilities to support search and rescue. And gun fire detection technology can help law enforcement determine when and where a shooting occurred.

Conclusion

Smart cities will continue to evolve and transform how we work, live and play. Investing in smart cities technology is a commitment to address the needs of citizens today and in the future. And it’s a commitment that AT&T will continue to make.
Upcoming Events

Small / Medium Business - Special Interest Group
"Protecting Your Data Like Fort Knox"
• Tuesday, July 10th; 8:30 – 10:00 am
Business Solutions Center
1435 Cincinnati Street, Suite 300
Dayton, Ohio 45417

CIO Council (invitation only)
"Customer Experience Management"
• Thursday, July 19th; 11:30 – 1:00 pm
Presidential Banquet Center
4572 Presidential Way
Kettering, OH 45429

CIO Council (invitation only)
"Building Tomorrow's IT Workforce"
• Thursday, August 9th; 11:00 – 1:00 pm
Business Solutions Center
1435 Cincinnati Street, Suite 300
Dayton, Ohio 45417

Data Analytics - Special Interest Group
"ServiceNow Performance Analytics & Reporting to Drive a Data Driven Operation"
• Friday, August 24th; 8:30 - 10:00 am
Business Solutions Center
1435 Cincinnati Street, Suite 300
Dayton, Ohio 45417

Infrastructure/Cloud - Special Interest Group
"Job Skills in a Cloud World"
• Friday, August 24th; 11:30 - 1:00 pm
Business Solutions Center
1435 Cincinnati Street, Suite 300
Dayton, Ohio 45417

Women 4 Technology
Collaborative Event with PNC Women Connect and LexisNexis Women Connected
“Women in Leadership”
Give Back and Connect – Community Outreach
• Wednesday, September 6th; 9:00 - 11:00 am
Lexis Nexis Auditorium – Bldg. 4
9443 N Springboro Pike
Miamisburg, OH 45342

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Safe Streets... a growing economy... thriving neighborhoods... innovative government... this is what being a Smart City is about.

By: John Putnam, Smart Cities Program Manager, Cincinnati Bell

What is a Smart City?

What if traffic signals could automatically react to real-time traffic patterns and expedite traffic flow? What if your website or app could let drivers see available parking spaces, especially during events and other peak times? What if your police department had access to video cameras citywide, and shot-spotter technologies to help insure personal safety?

What if your economic development team could tell a business contemplating locating in your city exactly how many people walked in front of a retail space, who they are, what they like, and how long they stayed? Even better if they had the ability to send a targeted email or text message to thousands of people announcing their grand opening. These are the tools that attract and retain businesses in a growing vibrant city.

Imagine a city where all children have equal access to High Speed Internet, to learn Pre-K, after school, and all summer long... a city where adults can access online job training, and city, county, state and federal resources, all in the palm of their hand... A city where everyone is connected to the health resources that can improve their quality of life.

How Do We Get Started?

Many cities struggle with how to approach their Smart City initiatives: What are best practices? How do we fund? Where do we start? While each city is different, the process is similar. Build a foundation of fiber and Wi-Fi, then prioritize and implement the Smart City technologies critical to growing your city. Is your priority economic development? Or bridging the digital divide? We have a myriad of solutions to develop the best formula for your city’s current and future growth.

Wi-Fi Wireless and Fiber Backhaul - The Foundation for a Smart City

Whether you source your fiber from a technology provider or purchase your own, fiber is a future-proof asset that is a requirement to deliver and maintain the Gigabit Internet speeds required for a smart city deployment.

For more than a decade, WiFi has been effectively deployed in large public and private venues. Many iconic venues in the Greater Cincinnati and Dayton areas have FREE public WiFi, including US Bank Arena, Great American Ballpark, Riverbend Music Center, with The City of Fairborn and Levitt Pavilion coming on line in August. Having FREE public WiFi areas enable Smart Cities to blossom.

A Vision of the Future as a Smart City

Once the foundation of Wi-Fi and Fiber backhaul is in place, technology providers will work with your city and community stakeholders to prioritize the hundreds of smart city technologies. Once priorities have been established, and funded, Cincinnati Bell (for example) has developed a continuing process to move each smart city priority: from ideas and best practices, to proof of concept, and then to testing and successful implementation.

“As broadband needs continue to grow, fiber technology allows us to remain competitive, attract new businesses to our community and increase productivity. We partnered with Cincinnati Bell to provide a public WiFi network downtown as part of the city’s economic development efforts and commitment to supporting consumers and small businesses with fast, affordable and reliable Internet access.”

— Pete Bales, Fairborn Assistant City Manager

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A brief list of deliverable Smart City solutions and technologies to consider:

**A Growing Economy**
- Create a vibrant and growing city by attracting visitors and new businesses, and retaining existing businesses.
- Engage and inform visitors of relevant information while in the city.
- Drive business growth with analytics and targeted engagement.

**Thriving Neighborhoods**
- Bridge the digital divide for pre-K, grade school, high school, and adults.
- Residents have improved access to health programs and information.
- Improve financial health of residents by helping them to move away from check cashing services, money orders, and buy here pay here auto loans.
- Access to job training and local, state and federal programs.

**Safer Streets**
- Reduce crime.
- Mass notification via text & email.
- Video surveillance cameras.
- Shot spotter integration.
- Opioid Crisis Solutions.

**Innovative Government**
- Cameras monitor traffic and integrate with lights to improve traffic flow based on real-time info.
- Increase knowledge of visitors and residents through data analytics.
- Energy savings: use LED street lights which save +30% over traditional light fixtures.
- Improve parking and communicate locations of available parking spaces.

"Public WiFi offers a new dimension to Covington’s urban core by offering a public service while also strengthening public spaces. It opens possibilities for distribution of information and broader community engagement. We are grateful for this partnership with Cincinnati Bell."

— Katie Meyer, Executive Director of Renaissance Covington

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Contact: sponsorships@technologyfirst.org or 937-229-0054 for more information
**Name:** Mark Neuman  
**Company:** City of Fairborn, Ohio  
**Job Title/Area of Responsibility:** Information Technology Services Manager  
**Time in current role:** 23 and a half years

**What was your first job?**
I held a few jobs after high school while I was in college, but my first full-time real job was as a Combat Documentation Officer (Combat Camera) for the US Air Force. It was that job that eventually brought me to Wright-Patterson AFB.

**What advice would you give to aspiring IT leaders?**
Someone once told me the worst thing people working for you can do – is to do “exactly” what you tell them to do. You need them to be able to think beyond what you tell them to do for the moment and buy into the bigger picture you are trying to paint. You need them to be comfortable thinking and challenging your thinking from time to time as everyone on your team moves toward the same goal. I would encourage new IT leaders, or any leaders to take the same approach. Let your folks take some ownership of their projects, hold them to it to the point they are pushing towards the same picture you have in your mind. Be prepared for changes that may come up, don’t be locked in cement – but do stay true to your picture. If you do you will find you whole team will actively follow. And remember “It is amazing how much you can accomplish if you don’t worry about who gets the credit – that will come when due.”
Key Cybersecurity Considerations for Middle Market Companies

RSM US MMBI Cybersecurity Special Report 2018

Middle market organizations must evaluate several important issues to address their potential cyber vulnerabilities.

Third-party vendor management:
This area is often overlooked, but many third parties store, process, access and transmit potentially sensitive data. Therefore, companies need to make sure that this information is protected when using third parties, such as cloud providers.

Identify and access management:
IAM: Companies should invest in technology to secure their applications and systems by leveraging centralized single sign-in and two-factor authentication (such as a username and password, but then also token or text message to a smart phone.)

Vulnerability management program (VMP):
Organizations should conduct regular testing for known vulnerabilities, for both external (internet) and internal environments. Developing and implementing a program will help ensure that identified vulnerabilities are mitigated in a timely manner.

Culture and awareness:
Employee awareness of security-related issues can have a significant impact on the overall security program. By implementing a proactive security awareness campaign in conjunction with periodic phishing tests, companies can help ensure that end users are actively aware of the latest threats.

Benchmarking:
Conducting annual risk assessments can provide visibility into an organization’s overall risk posture. Benchmarking results year over year and comparing the results to industry averages can provide context to risk appetite developed by senior leadership.

Compliance:
Companies should be aware of the various compliance regulations they are required to adhere to. In addition, once they trip the middle market threshold, companies will likely face multiple additional regulations they need to comply with, and they should therefore consider cross-compliance mapping.

Incident response planning:
As companies start to develop a larger footprint, their data breach risks will likely increase. In addition, with a larger staff, the need for formal processes is critical so employees understand what to do and are prepared to respond to a breach, both from a technical standpoint as well as a reputational perspective.

Cyber liability insurance (CLI):
The ability to transfer some portion of risk is advantageous to middle market companies. Keep in mind when renewing or looking to purchase a CLI policy, the aforementioned focus areas must be addressed. Failure to have an awareness program or an incident response program, etc., may cause premiums to increase or, in many instances, be contingent on having processes in place prior to a claim.

Cybersecurity steering committee:
This group can provide a platform to have open discussions surrounding cyber risks. The committee should include a variety of individuals, including audit, legal, human resources, IT, business owners and cybersecurity resources. The primary objective is to establish a risk appetite and provide overall business guidance on risk decisions.

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Facilitated by:
Laurence Jones, President, RiskVersity
Marcus Thompson, President, Expedient Technology Solutions

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A Drop In Cybersecurity Skills

By: RoundTower Technologies

An increasingly complex security landscape mixed with an ever-growing threat environment is pushing many businesses to search for internal resources to fill the security skills gaps in their workforce.

Along with the additional demands placed on internal technical teams, companies now must cope with changes among compliance and regulation requirements, such as the EU General Data Protection Regulation (GDPR). Creating what some are calling the ‘perfect storm,’ numerous companies are finding it difficult to find and recruit the right skills/resources to satisfy these growing demands.

It has been estimated that there are over one million unfilled cybersecurity jobs worldwide! A recent ISC2 survey shows that there has been a 20% increase in the number of vacant cybersecurity jobs since 2015 and expects to see a rise of 1.8m worldwide by 2022.

The absence of dedicated resources keeping pace with the growing number of threats means that many businesses will be forced to outsource some, if not all, aspects of their cybersecurity strategy. This skills gap is now leaving major security holes that could potentially expose organizations to unnecessary risks.

Along with the strict new standards around data protection and hefty fines, many in-house security teams are scrambling to cope with new regulatory challenges at a time when they are incredibly under-resourced.

When it comes to recruitment, maybe you’re looking in all the wrong places. Sure, you will need a security team that includes specialists in digital forensics, compliance, incident response, analytics, and threat intelligence…but don’t ignore the growing amount of people looking to apply their skills to a new career in cybersecurity.

The aforementioned ISC2 report revealed a 30% increase in employees who have successfully launched new careers in cybersecurity after holding a non-technical job in accounting, marketing, or business. Showcasing people with good business and communication skills can also make meaningful contributions to an IT team.

I understand that it might not be an excellent choice to take Tom from accounting and place him directly in the security bullpen. Security is one of the essential branches of your IT department: they are charged with protecting both the employees and the company’s valuable data, meaning someone like Tom will have to have to earn his place on the team. Taking an accountant from crunching numbers to crunching data logs may take a lot of hands-on training. But on the other hand, Tom is used to following policies and staying up-to-date on complex regulations.

Also, keep in mind that many IT professionals are well-educated graduates who do NOT possess a bachelor’s degree in Information Technology or Computer Science and may not have a degree at all. The support and services side of the industry is famously recognized for their apprentice-like training. Teaching the latest recruit about every intersection of the businesses infrastructure while endorsing vendor certification programs based on their environment.

When it comes to hiring someone for a cybersecurity role you should be looking for someone that has been taught to think vs. taught what to think. The potential candidate must possess that same thirst for knowledge and have a passion for technology. The threat landscape is dynamic, and it’s going to take a dynamic individual or team to keep up.

The truth is that there is an overwhelming need for recruits and the only way we’re going to fill this gap is by encouraging people to consider a career in information security. We also need to fix the disconnect between what upper management expects and what a new team member requires for a successful career in IT security.

Of course, there’s always the option to outsource these skills to avoid the cost of recruitment, management, and training. Not to mention the cost savings you will gain by not having to maintain and renew certifications – often quite demanding within a cybersecurity role.

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Good idea, but an augmented approach will allow you the flexibility with the mixture of an end-to-end cybersecurity services provider and residency. Keeping confidential and business-critical data under wraps but also empower the in-house cybersecurity team to sharpen their skills. This method buys you more time while we help you find the right candidate to close the gap.

Unfortunately, the skills gap in the industry is affecting everyone, and we do not have the resources to fill all security roles. The problem isn’t going to fix itself overnight, but there’s never been a more critical time to make this a career of choice.
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