

Brave Leadership During Challenging Times
Topics Affecting Local Governments Today
VLGMA Winter 2018



Dr. Ron Carlee
Old Dominion University
February 16, 2018

Gun Violence: It Can Happen Anywhere

- [PM April 2013](#)
- [Blog Post October 2017](#)



**Leadership and Professional Local Government
Managers Before, During, and After a Crisis**

- Understand the common and effective leadership and management skills and techniques.
- Understand the lessons learned and best practice approaches.
- 25 Managers: civil disturbance, shootings, floods, fires, & storms.



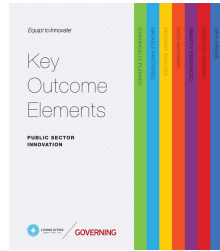
7 Drivers Transforming Government

1. Insight
2. Agility
3. Effectiveness
4. Risk
5. People
6. Engagement
7. Digital



“Equip” to

1. Dynamically Planned
2. Broadly Partnered
3. Resident Involved
4. Race Informed
5. Smartly Resourced
6. Employee Engaged
7. Data Driven






<http://www.governing.com/equip/about-the-equip-framework.html#Key+Outcome+Elements>

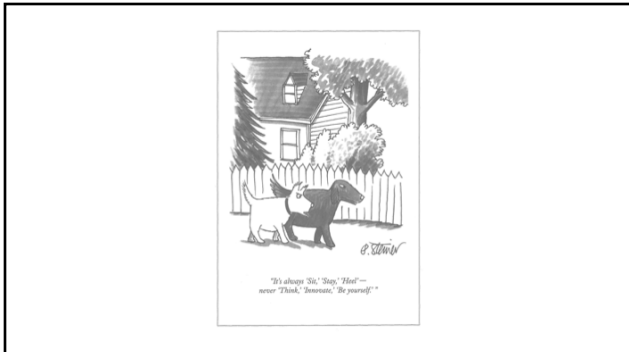
ICMA 18 Predictions

- Autonomous Vehicles
- Budgeting
- Civic Engagement
- Civil Media
- Cybersecurity
- Data Governance
- Economic Development
- Environmental Sustainability
- Equity & Inclusivity
- Homelessness
- Infrastructure
- Innovation
- Opioid Crisis
- Public Safety
- Resilient Leadership
- Succession Planning
- “The Road Ahead” –Rebuilding Trust

Overarching Themes


1. Innovation 
2. Technology 
3. Economic Development 

1. Innovation 



Terms to Know

- Agile
- AI
- AV
- Blockchain
- Cloud
- Co-Create / Co-Produce
- Critical Thinking



- Data Driven
- Design Thinking
- Ideate
- Iterate
- IoT
- Mobile

<https://learnmore.duke.edu/certificates/innovation-critical-thinking>



City of Virginia Beach

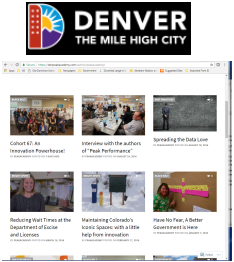
City of NORFOLK

DENVER PEAK ACADEMY

PhillyInnovates City of Philadelphia Academy for Municipal Innovation

Peak Academy believes...

- In achieving measurable results through continuous improvement;
- In our ability to make Denver the most well-run city in the nation;
- **In patience with people and impatience with processes;**
- In supporting colleagues to innovate;
- **In failure; because failure leads to breakthrough.**



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Innovation Curriculum

- Design Thinking
- Agile Process
- Process Mapping
- Data Analysis - Visualization
- Teamwork
- Appreciate Inquiry
- Negotiation

Policy Evaluation

Critical Thinking


Design Thinking: Virginia Beach & ODU

What is the problem? → How might we solve the problem? → Take action

1 Empathize (understand) 2 Define (the problem) 3 Ideate (multiple solutions) 4 Prototype (for all solutions) 5 Test (validation)

Dr. Charles Daniels and Dr. Kaitlynn Castelle
Old Dominion University

We must ask ourselves...



...**Why** do we do things this way?

Why?
Why?
Why?
Why?

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Agile

Agile Methodology

Sprint 1 Sprint 2 Sprint 3

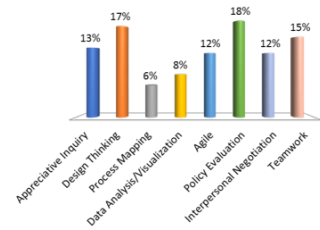
<https://www.initio.eu/blog/2018/1/18/the-agile-invasion>

A failure is only a failure if we do not learn from it.

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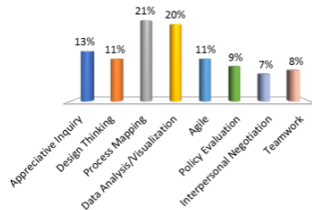
What four sessions do you consider most important to continue in IA?

- A. Appreciative Inquiry
- B. Design Thinking
- C. Process Mapping
- D. Data Analysis/Visualization
- E. Agile
- F. Policy Evaluation
- G. Interpersonal Negotiation
- H. Teamwork



What four sessions do you consider least important to continue in IA?

- A. Appreciative Inquiry
- B. Design Thinking
- C. Process Mapping
- D. Data Analysis/Visualization
- E. Agile
- F. Policy Evaluation
- G. Interpersonal Negotiation
- H. Teamwork

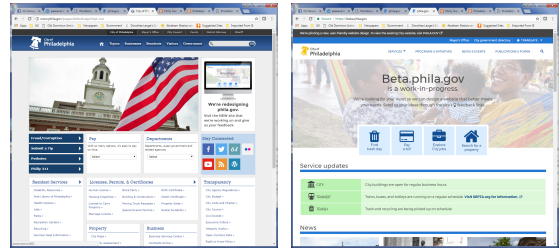


2. Technology

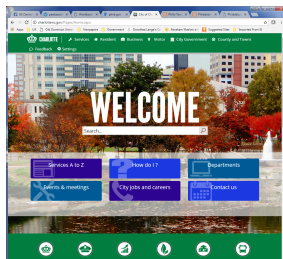
Digital Evolution

- 1.0 Basic e-gov, Paper to Digital
 - 2.0 Advance e-gov, Transactions
 - 3.0 Co-Production
- Post press release on web
 - Subscriptions to newsletters
 - Interaction in real time on Twitter & Facebook

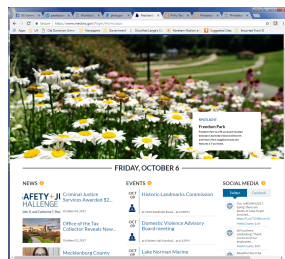
Philadelphia – Old & New Homepage



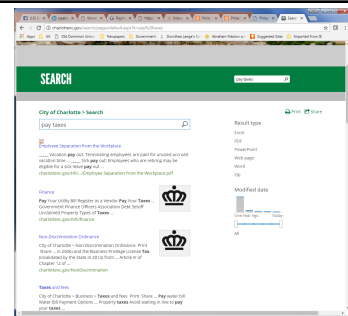
City of Charlotte

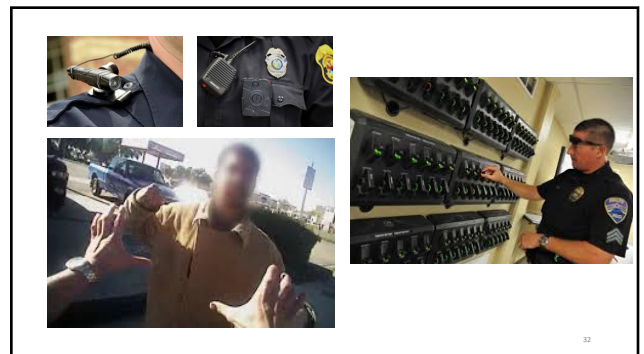
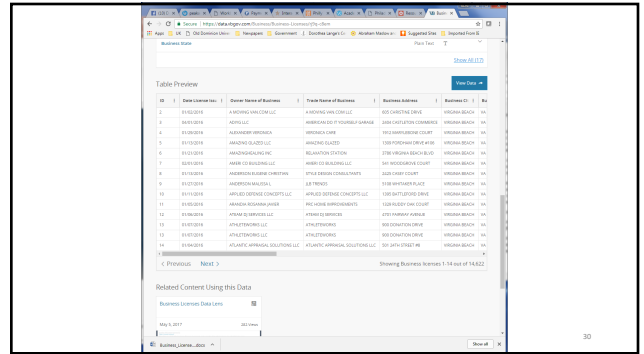
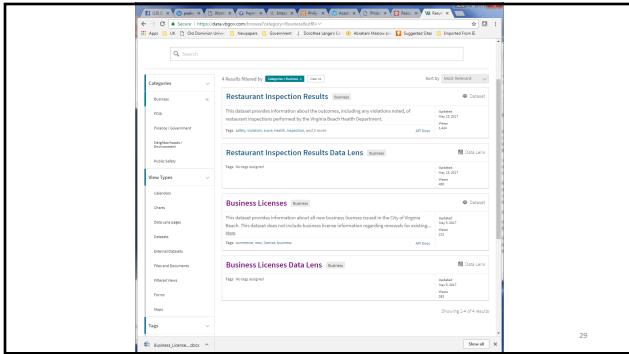


Mecklenburg County



Search Engine Must Give Relevant Results





Smart City Technologies

- Intelligent lighting
- Smart building controls
- Demand response
- LED lighting
- Solar panels
- Fuel cells
- Wireless charging for automobiles
- NFC (Near-Field Communication)
- Facial recognition
- Transportation sensors
- Wind turbines
- Intelligent Buildings
- Micro and Macro **GMDs**
- Low power semiconductors
- An "RF-like" fabric
- Integrated transportation
- A connected self-aware environment that includes but is not limited to weather changes, traffic control, crowd sourcing strategies, medical alerts, etc.

<https://smartcities.ieee.org/about.html>

GMD

1. Ground-Based Midcourse Defense
2. Gay Midget Dwarf
3. Global Monitoring Division
4. Geoscientific Model Development
5. Generalized Minimum Distance
6. Geomagnetic Disturbance
7. Gambian Dalasi
8. Groundwater Management District

Smart Cities: *Wide Open to Cyber Attacks, Civilization Threatening Events and other Unintended Consequences*



"The more technology a city uses, the more vulnerable to cyber attacks it is, so **the smartest cities have the highest risks.**"

<https://smarteridawareness.org/2015/04/27/smart-cities-wide-open-to-cyber-attacks-and-civilization-threatening-events/>

Smart City Vulnerabilities

- Lack of Cyber Security Testing
- Poor or Nonexistent Security
- Encryption Issues
- Lack of Computer Emergency Response Teams
- Large and Complex Attack Surfaces
- Patch Deployment Issues
- Insecure Legacy Systems
- Simple Bugs with Huge Impact
- Public Sector Issues
- Lack of Cyber Attack Emergency Plans
- Susceptibility to Denial of Service
- Technology Vendors Who Impede Security Research

Cerrudo, Cesar. 2015. An Emerging US (and World) Threat: Cities Wide Open to Cyber Attacks. White Paper produced by IDActive Security Services, retrieved from <https://skvisionssolutions.files.wordpress.com/2015/03/iaactive-hacking-cities-white-paper-2015-cesar-cerrudo.pdf>

Mecklenburg County, NC (12/2017)



CHARLOTTE, N.C. - Mecklenburg County leaders provided an update Wednesday afternoon regarding a [hacking attack](#) on the county's servers that caused a massive outage. Hackers breached the county's servers last week and held files for ransom. The cybercriminals, believed to be from Ukraine or Iran, froze 48 of the county's 500 servers. On Tuesday, county officials said 27 of the affected servers have been restored and that they are making progress.

Mecklenburg County Manager Dena Diorio said a county employee opened an email they shouldn't have, which helped the hackers infiltrate the system. The ransomware used during the attack is a new computer virus strain called LockCrypt.

The hackers demanded two bitcoin, which equaled about \$25,000 at the time, in exchange for the files. Mecklenburg County leaders refused to pay the demand, and instead, they decided to use backup data available prior to the hack to rebuild applications from scratch.

* <http://www.wncn.com/news/local/mecklenburg-co-leaders-to-retrieve-server-hacking-update-tuesday/1620473/>
 * <http://www.wncn.com/news/local/county-officials-to-discuss-legal-developments-in-ransomware-attack/1699231/>

Sacramento Regional Transit (9/2017)



- Hackers announced their presence by defacing the agency's website with a note that read: "I'm sorry to modify the home page, i'm good hacker, i i just want to help you fix these vulnerability. This is one of the loopholes, modify the home page ..."
- However, the message was a trap. When techs made the decision to see if any damage had been done by going into the system, they activated the hacking attack that deleted 30 million files.

<http://bitcoinist.com/hackers-demand-single-bitcoin-ransomware-attack/>

Greenfield, Indiana(1/2018)

Population 22,602

GREENFIELD, Ind. -- Hancock Regional Hospital has control of its computer systems once again, after management decided to pay the ransom demanded by a hacker.

The hospital's files were attacked last Thursday by ransomware known as SamSam, infecting more than 1,400 files before hospital security managed to contain it.

Hancock Regional's CEO says they considered attempts to bypass the hack and not pay the amount demanded by the hacker – four bitcoins, worth roughly \$55,000 at the time. But several factors changed their minds.

"With the ice and snow storm at hand, coupled with the one of the worst flu seasons in memory, we wanted to recover our systems in the quickest way possible and avoid extending the burden toward other hospitals of diverting patients," said Steve Long, Hancock Regional CEO. "Restoring from backup was considered, though we made the deliberate decision to pay the ransom to expedite our return to full operations."

<https://www.theindyjournal.com/news/local-news/hancock-county/hancock-regional-pays-ransom-regains-control-of-computer-system>
<http://fox58.com/2018/01/24/hancock-regional-hospital-computer-system-hacked-running-on-gem-and-sage/>

Brave Leadership During Challenging Times



3. Economic Development

TCJA

- SALT & PAB
- Advance Refundings – No longer tax exempt
 - Tax advance refundings
 - Forward delivery bonds
 - Tenders
 - “Cinderella” Structures
 - Synthetic advance refundings
- New Bonds
 - Variable rate
 - Short calls
 - Make-whole calls
 - Hybrid calls

PFM, January 29, 2018. After Tax Reform: Municipal Market Update and Considerations

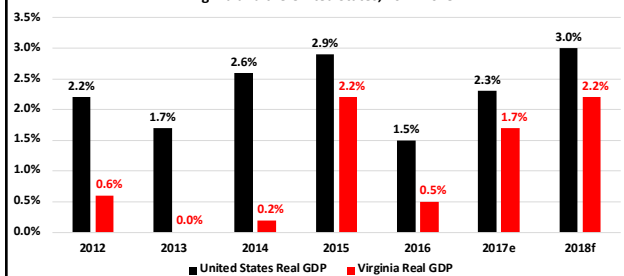


2018 Annual Economic Forecast
Dragas Center for Economic Analysis and Policy

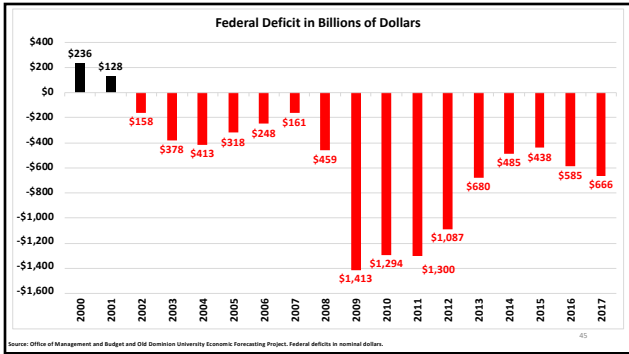
www.ceapodu.com

Professor Robert McNab (rmcnab@odu.edu)
 Professor Vinod Agarwal (vagarwal@odu.edu)

**Growth in Real Gross Domestic Product
 Virginia and the United States, 2012-2018**

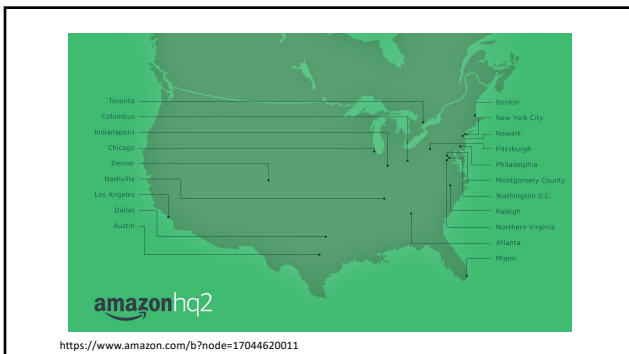


Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Real GDP measured in chained 2009 dollars. 2017 US is an advance estimate. 2017 VA and 2018 are our forecasts.



We're on our own.

- National Debt Increase
- Military Spending Increase
- Domestic Spending Decrease
- Environmental Decline
- Infrastructure Investment
- Interest Rates Increase
- Economic Disparity Increase
- Polarization Increase



Amazon Requirements

- **Stable** business climate for growth and innovation
- A **stable** and business-friendly environment
- **Urban/suburban** locations with the potential to attract and retain strong technical talent
- Communities that think big and **creatively** when considering real estate options
- A development-prepped site.
- Access to **air and road [and rail] transportation; mass transit.**
- Communications: **fiber and cell coverage.**

https://images-na.ssl-images-amazon.com/images/G/01/Anything/test/images/usa/RFP_3_V516043504_.pdf

Amazon “Fit” Criteria

Cultural Community Fit

- Diverse population
- Excellent institutions for higher learning
- Local government structure and elected officials eager and willing to work with the company
- [Stable](#) and consistent business climate

Community/Quality of Life

- Recreation Opportunities
- Educational Opportunities
- Overall “[high quality of life](#)”

https://images-na.ssl-images-amazon.com/images/G/01/Anything/test/images/usa/RFP_3_V516043504_.pdf

Economic Strategies

- Create a Synergistic Business Climate
- Market the region
- Market Internally & Externally
- Have product
 - Sites
 - Infrastructure
 - Transportation
- Have a value proposition
 - Tolerance
 - Talent
 - Technology



“Quality of Life”
“Place”

Overall Leadership Approach

- Have a vision (and values)
- Focus on the positive
- Connect the dots
- Cross boundaries; create synergy
- Push performance
- Take risks

O’Neill, Robert J., Jr. and Carlee, Ron. 2011. Reflections on the First Decade of the 21st Century: Leadership Implications for Local Government. Chapter 1, ICMA Municipal Yearbook.

Resources

1. Innovation 
2. Technology 
3. Economic Development 

- [CityLab](#) – Writing the Future of Cities
- [Living Cities](#) – Innovate, Invest, Lead; Build a New Urban Practice
- [IBM Center for the Business of Government](#)
- [Smart Cities](#)
- [What Works Cities \(Bloomberg\)](#) -- Accelerate cities’ use of data and evidence to improve people’s lives



Thank You

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