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# **2020 ISAC National Webinar**

Coronavirus Pandemic: The first severe pandemic of the Information Age

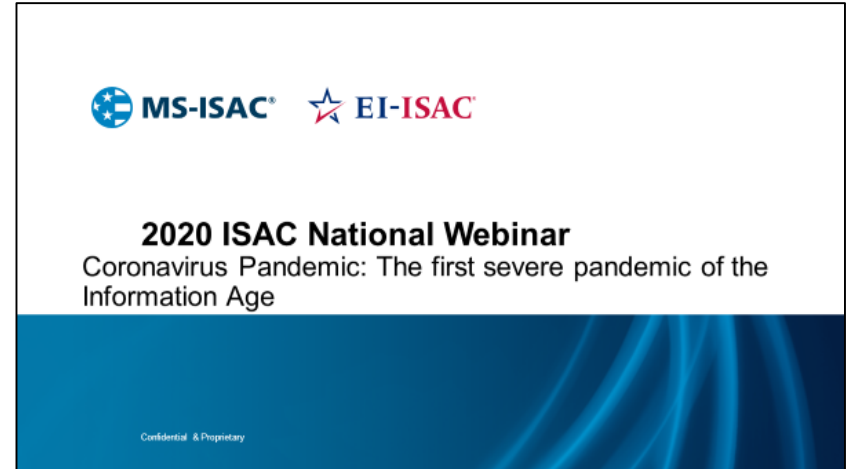


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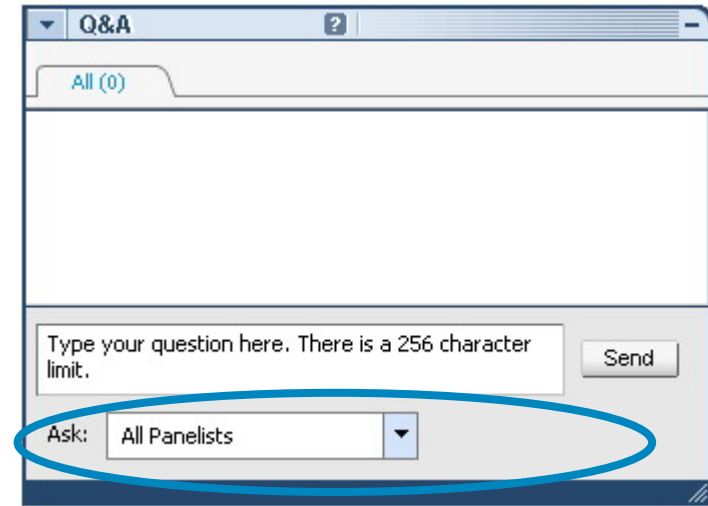
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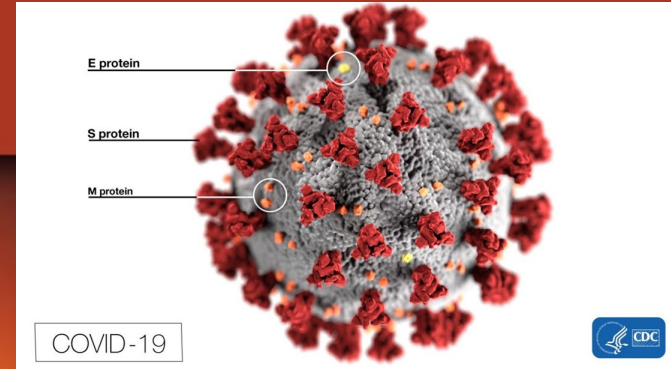


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# Coronavirus Pandemic - The first severe pandemic of the Information Age



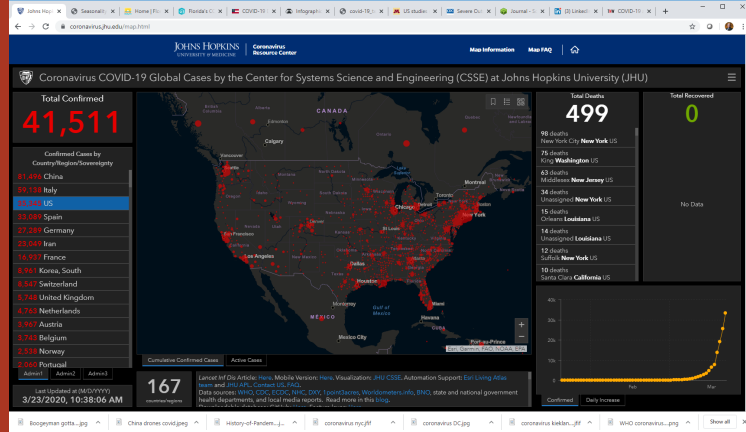
**A final opportunity to assess the readiness of your IT organization.**

**Scott McPherson**

**State government CIO**

**Nationally-recognized pandemic Planner, researcher and lecturer since 2006**

# The New Normal



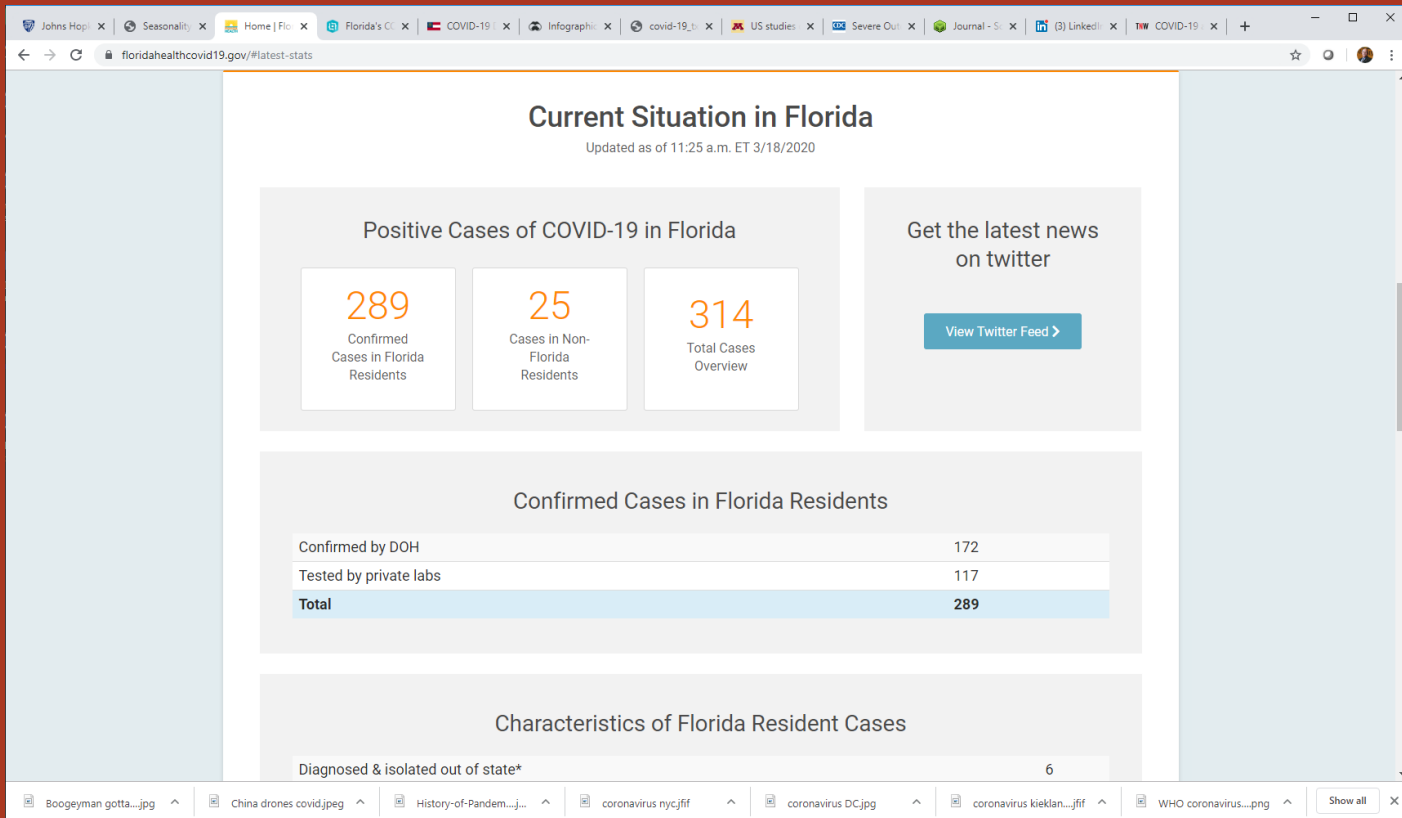


# Around the nation

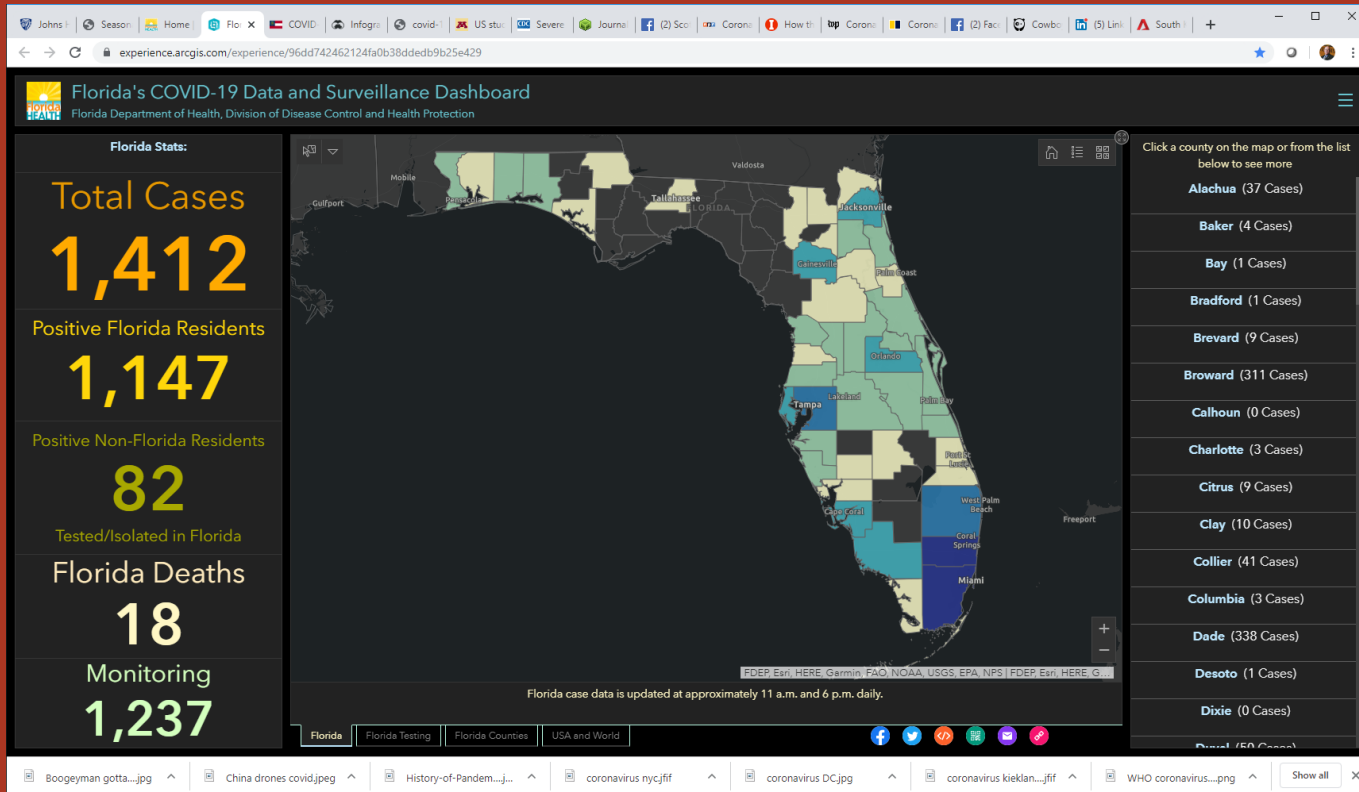




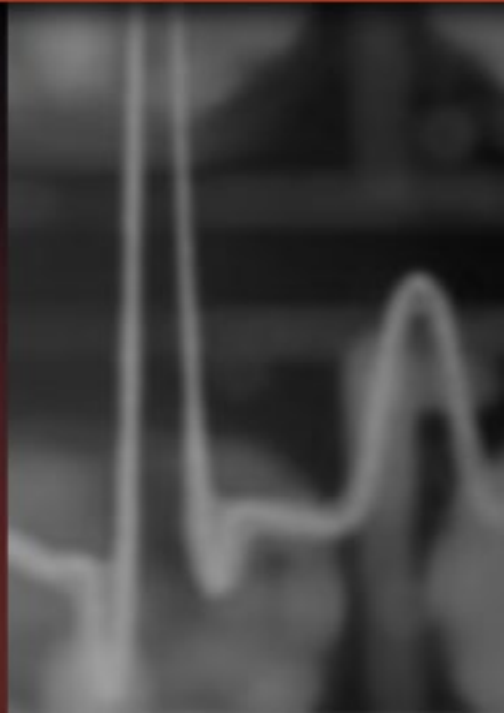
# Florida, March 18<sup>th</sup>, 2020



# Florida, March 24, 2020



# **Optimizing your existing pandemic IT plan**

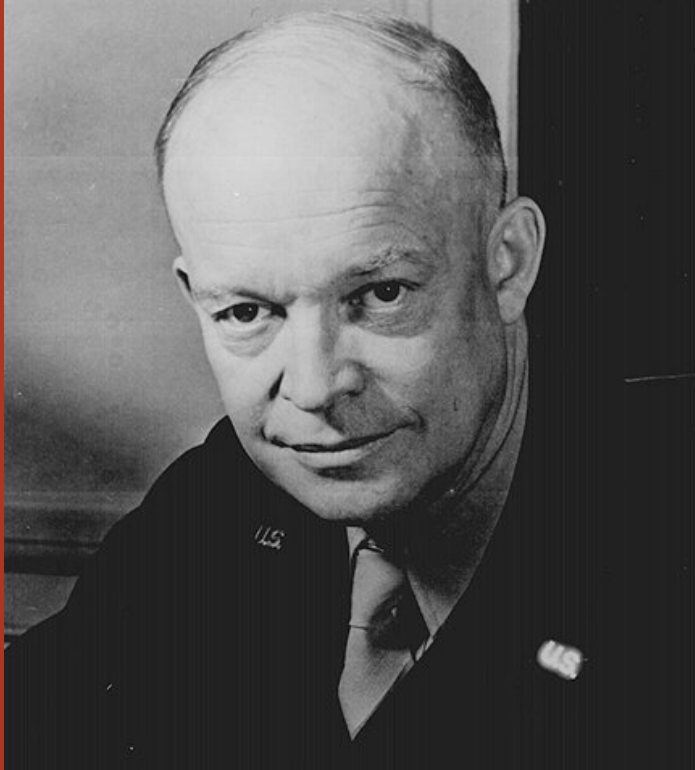


# Carl von Clausewitz (1780-1831)



“No battle  
plan  
survives  
first  
contact  
with the  
enemy.”

# What would Ike do?



- Ike famously said:
- “The plan is useless – it’s the planning that’s important.”
- Ike's point is that events will never go according to The Plan -- but a mature planning process will help you prevail.




## **Review and engage your plan.**

- Make last-minute adjustments
- Keep in mind the WHO said in a flu pandemic, the time period from a large outbreak in a population center to Main Street in your town will be no more than **21 days**. That's three weeks (maximum) you'll have left to prepare. Many, if not most of you are already in that boat.
- **Engage the Plan.** Go with what you got.



# Pandemic plan checklist for IT

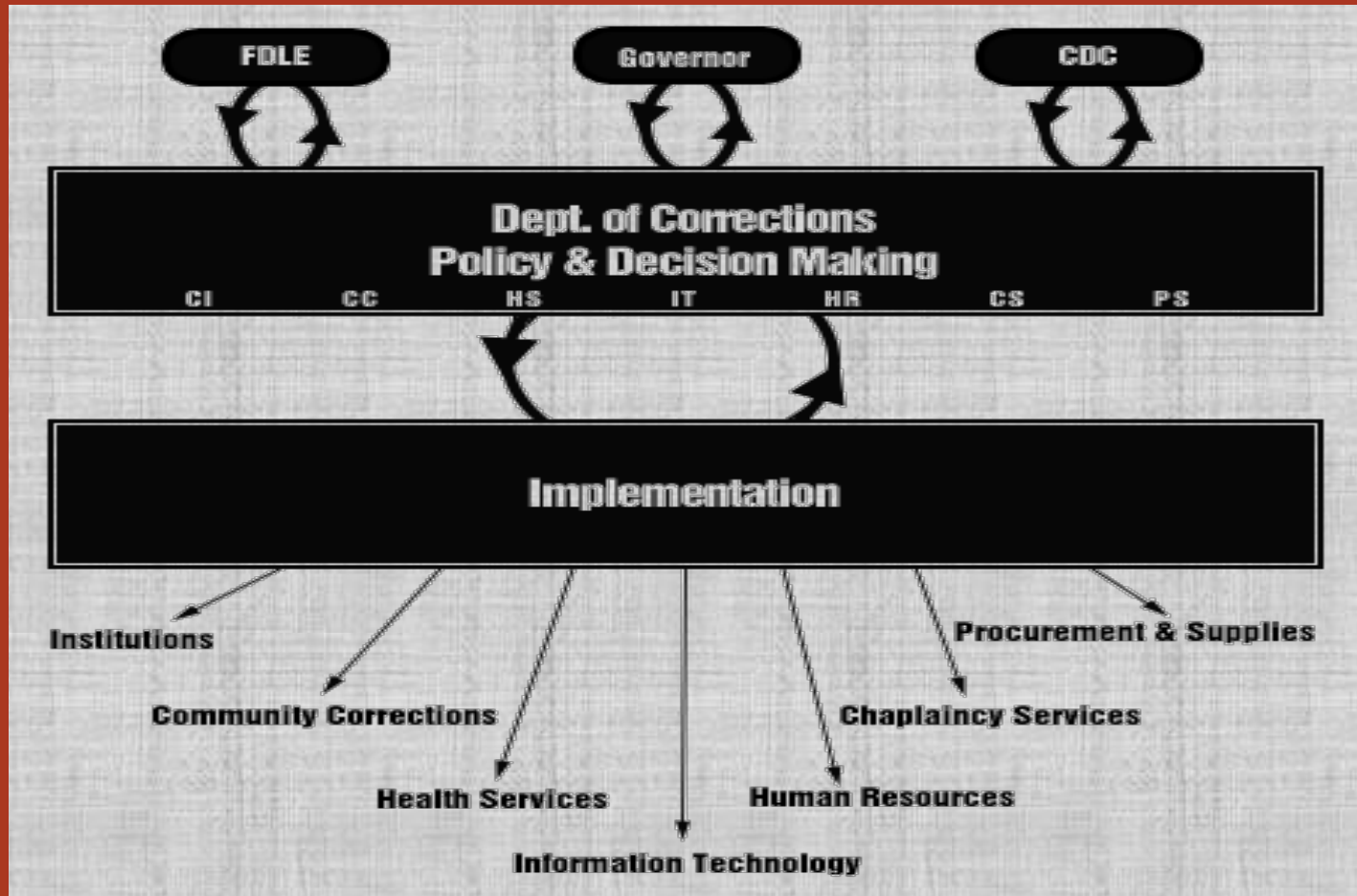
- GET YOUR PEOPLE DECLARED “ESSENTIAL!”
- Encourage creation of agency pandemic planning team
- Ensure “retail government” ops continue
- Acquire protective equipment (good luck with that)
- Prepare to shut down nonessential IT services
- Cross-train your staff
- Design, implement and support Work at Home plans
- Prepare for supply chain failures
- ***Survey your cloud, SaaS and upstream and downstream business partners!***
- Prepare Communications Plan
- Teach protective actions
- Find trusted sources for coronavirus information and updates
- Leverage this planning for similar scenarios
- Update DR and COOP plans **NOW**



**Encourage creation of an agency  
pandemic planning team (please tell me  
you have an active planning team that  
looks similar to this!)**

- Legal
- Human Resources
- Training Development
- Information Technology
- Procurement/Purchasing
- Communications/Press Secretary
- Facilities/Maintenance/janitorial
- And at the top..... Your agency head,  
chief administrator, or chief surrogate.

## Agency example: Florida Department of Corrections, 2006



# Get your IT staff declared “Essential”

- States and localities are increasingly shifting from a strategy of containment and mitigation to “suppression.”
- This could require issuing “papers,” or documentation allowing you and your staff to move freely during “shelter in place” orders such as California’s.
- In this era of working from home, it is folly to require staff to telework and not declare the people who actually enable and support telework to be declared essential!

# Batten down the hatches.

- We will never be as vulnerable to cyberattacks as we will be during a pandemic.
- This will be because of the shift to working from home (or trying to), plus the absenteeism of cyber personnel, plus the ability to bring down an organization remotely with the click of a mouse on a bad link. Ransomware anyone?
- **HARDEN EVERYTHING THAT YOU CAN WITHIN REASON.** If possible, implement emergency policies. And remember that kids will be home.

# **Block, block, block.**

- Consider blocking all nonessential traffic on your VPN. No video, no streaming OF ANY KIND on the VPN. And limit shopping, entertainment and sports/recreational sites. Sorry.
- Have instructions for users to engage in videoconferencing and streaming activities on the common Internet and outside of the VPN.



## Ensure “retail government” ops continue

- Try if you can to move more business processes and applications to the Web for customers and employees alike
- Preserve the ability of the agency to generate data and, more important, *cut checks*.
- Prepare *now* to do these things.
- Remember you could be down 30%+ in attendance.
- Discontinue nonessential ops.



# Ensure “retail government” ops continue

- Retail government service delivery offices in the social, medical and law enforcement “safety net” domains may be under intense pressure to remain open, and certain employees may have to remain exposed to citizens while at work.
- Keeping offices open will be essential to preserve the integrity of government and to care for its customers.
- Can you imagine what will happen if government fails its citizens when they need it the most?

# Ensure “retail government” ops continue

- Focus on data center/cloud integrity **first**. (Here’s your last chance to implement your multi-cloud strategy, if you have the time).
- Inventory business processes with intent to move them to “eGov” operations
- Work with business partners to ensure they are “on top of” pandemic planning
- Pay more to have priority restoration if networks fail
- Have redundant communications plan (cellphones, aircards, mobile hotspots, broadband wireless, satellite, etc.) if network or Internet fails
- Work hard to convince public health pros and Governors to allocate antivirals such as Remdesivir (if proven to be successful) for **key IT workers. (Back to the “essential” label)**

# Prepare to shut down nonessential IT services

- *Grab your list of IT services (ITIL) and (re)prioritize them with governance board*
- Prepare to shut down **ALL** nonessential services or to abandon SLAs for same (allow them to fail if they fail)
  - Do not bring these services back up if they fail, unless you can support them later
- If not an ITIL shop, then work with upper management to prioritize applications by criticality. Maintain the list and review annually as part of Dr/COOP.

# Cross-train your staff

- Create written instructions/ procedures for critical processes that can be carried out by others
- Cross-train your staff, ideally three-deep
  - Anticipate 30% morbidity (illness) within staff
  - Assume absenteeism due to closure of schools, day care centers
  - Train by TASK, not by what somebody does
  - Maintain a matrix of staff training and widely distribute and post in disaster recovery books and agency COOP plan
  - Cross-train inside and outside of Data Center; in other words, could you cross-train non-data center people in simpler technical tasks such as tape rotation?
  - Don't cross-train on services you will disconnect or allow to fail!

# Design and support true Work at Home plans

- In response to a pandemic, business, corporate America and government are all attempting to enable “Work at Home Plans.”
- But just what is meant by working at home? How will paper get home to people? Who will deliver it? How will people input data?
- How will people complete their work? What infrastructure will be necessary in order to facilitate this? Who will pay for it?
- How will you secure the thousands of home PCs needed to fully implement such a plan?
- Be prepared to “lose the Internet” (Booz, Allen)



# Let's define “work”

- Government still relies heavily on paper
- Forms may still have to be inputted into computer systems
- The business process must be taken apart in order to be streamlined
- Tremendous opportunity to further digitize government – and we **cannot afford to lose this crisis/opportunity to streamline and digitize government ops!**
- Inventory business processes with intent to Webify them as “eGov” operations

# Can you properly support a remote worker?

- Pre-qualify those who might have to work from home.
  - Does the user have broadband? Amazingly, many do not. Eliminate those who do not, or prepare a plan to have the agency pay for home broadband or issue mobile hotspots *if you can get them*.
  - Does the user have a work-issued laptop or PC? Eliminate those who do not, or else prepare to supply those users with laptops (better idea).
  - Is the OS patched? How will you continue to patch? Patch management must continue as we discover vulnerabilities and exploits.
  - If people have to resort to using a home PC, does the user have the appropriate applications suite, antivirus and antispyware? Prepare to have legal review your existing licensing agreements (“Seat” may allow you to install on a home PC if the office PC is turned off).
- Any other security nightmares such as *children*?

# Can you properly support a remote worker?

- Almost all of our organizations allow support to perform a “remote takeover” of a user PC for diagnostic and software repair purposes.
- But what if the problem is hardware-oriented? What if the hard drive, motherboard or battery fails? How will you be able to repair the unit or have it repaired?
- Do you have a pool of loaner units?

## Potential failures in work at home plans

- Paper must be quarantined, lest employers inadvertently sicken otherwise healthy homes
  - CDC and St. Jude say RNA viruses become inert after 12 to 24 hours on paper and porous surfaces
  - Each stage in the paper handling process should require a day's quarantine to prevent infection (learn from the death of Inuits (Eskimos) in 1918).

# Potential failures in work at home plans

- **How will paper get home?**
  - USPS? Irregular deliveries
  - UPS? FedEx? DHL? They too will suffer loss of dependable service.
  - Will agencies put together their own delivery routes?
  - If gas is scarce, how will deliveries take place?
  - Is it realistic to expect government to set up its own postal service?

# SSL VPNs and you

- Have you implemented an SSL VPN service? If so, be prepared to scale it radically upward. If not, only you can answer if you can implement and secure it now.
- Be prepared to “lose the Internet,” as network service providers will also experience high absenteeism and be forced to scale back SLAs (Booz Allen)
- That is one compelling reason to upgrade to priority restoration with your network provider(s).





## Potential problems with broadband availability at home

- We just don't know what will happen when the bandwidth needs of millions of socially distanced remote workers will collide with the bandwidth needs of millions of kids and their parents who will be home, bored, and decide to all jump on the Internet and stream Netflix while playing Fortnite.

# Conclusion, W@H plans:

- Government cannot afford to implement “perfect” work at home plans in the current financial and political climate.
- W@H plans can be successful, if the process does not involve the moving of paper or constant online access to legacy systems; if applied properly; if created with enough advance planning; and if exercised frequently.
- Once the WHO raises the threat level to Five, be prepared to have greater difficulty in obtaining equipment and bandwidth for remote workers.
- Corporations are usually more “digital” than governments and can transition more easily. But not always.



## **Prepare for supply chain failures**

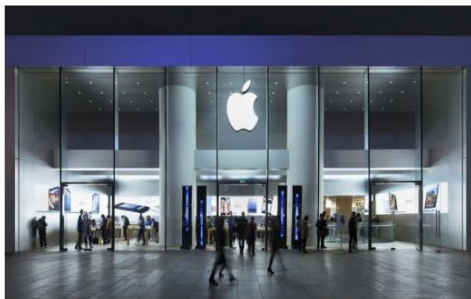
- In a pandemic of any severity, the supply chain will falter.
- In a 1918-type pandemic, **the supply chain will fail.**

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## Apple moving iPad production out of China due to coronavirus outbreak

By Kimberly Gedeon 2 days ago

## The coronavirus is wreaking havoc on the tech world



(Image credit: TonyV3112/Shutterstock)

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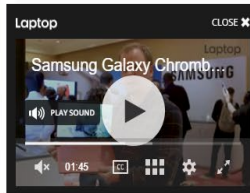
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# ***Survey your cloud, SaaS and upstream and downstream business partners!***

- **Survey all your critical vendors.** Resurrect the old Y2K adage: If they can't articulate their plans for maintaining their SLAs during a pandemic, be afraid. Be very afraid. FIND ALTERNATE VENDORS.
- In fact, go find your Y2K plans (good luck!), turn to the tab marked "Supply Chain Workarounds," update it and put it into your DR/COOP Pandemic Annex.
- I asked Michael Dell this question face-to-face in 2007. His answer was well thought-out.
- If possible, keep essential supplies/ parts stockpiled in advance (4-6 week supply).

## **Prepare Communications Plan**

- How will key managers communicate among themselves?
- How will information be conveyed to employees?
- How will employees know who to call in specific situations?
- How will information be conveyed to business partners?
- How will the public know which “safety net” offices are open and which are closed?



# Communicate with employees and teach preparedness at work and at home

- Conduct an awareness campaign within your organization **now**.
- Cover work and home issues
- Teach employees how to prepare themselves and their families FIRST and now, instead of later – when it is too late
- Teach protective actions and personal hygiene
- Prepare them for moving from office to office – even from agency to agency.



## **Consider emergency notification services**

- Companies such as Ad Hoc, Everbridge and others have affordable, SaaS/Cloud-hosted services that allow an agency to push information to employees via any type of device
- Eliminates the old “phone tree” tedium
- Includes voice synthesis and fax
- Can allow agencies to poll their workforce to see who can work and who is too sick to report
- Will be critical when trying to open offices or trying to tell people which office to report for work





## **Teach protective actions**

- Hand washing without recontamination
- Covering cough, not using hands
- Avoid putting hands to face, mouth, nose, eyes.
- Staying home if any signs of illness
- Proper use of protective equipment
- Cleaning hard surfaces, wearing gloves, using hand sanitizer and wearing masks when sick



## **Communications with the public**

- Be honest
- Be forthcoming
- Don't appear condescending or give false assurances – people want information they can act upon
- Give people a sense of empowerment over their situation – give them things they can do.
- Don't overpromise or underdeliver
- Did I mention be honest?

# Other IT Issues to consider

- Data Center operations (lights out operation, automated patching)
- Remote Access (Citrix, RAS, Terminal Services) as alternatives to SSL VPN
- Don't forget field staff!!
- Maintaining agency cybersecurity in the midst of all this
- Do you enable or eliminate Help Desk operations?
- PC support for employee personal computers? **NO**
- Ensuring security of access and data while dealing with employee personal computers **POLICY ENFORCEMENT via SSL VPN**
- **Videoconferencing as alternative to face-to-face meetings – are you prepared to support it?**
- Recovering from cascading emergencies (coronavirus on top of hurricanes, terrorism, etc.)

# Leverage this planning for similar scenarios

- Anthrax (loss of building for 3-26 weeks)
- Ricin (loss of building for 3-26 weeks)
- Bioterrorism or chemical weapons
- Natural disasters striking State Capitol
  - Hurricanes
  - Tornadoes
- Civil Disturbances
- Common themes:
  - What if my headquarters building were heavily damaged or destroyed, or people could not occupy it for an extended period of time?
  - Where would I put all the employees, and how could my agency recover and resume its core mission more quickly?

# UPDATE DR AND COOP PLANS NOW

- Armed with your information and in conjunction with all agency peers, create your Pandemic Annex to your COOP and Disaster recovery plans NOW.
- Additional questions to answer:
  1. Does agency COOP Plan have an event horizon beyond 30 days?
  2. Within a 30 day – to – 120 day context, does it have a new definition of essential and nonessential personnel?
  3. Just for grins, imagine if you had to support agency operations AND a hurricane or terrorist event came during a wave of the pandemic.
  4. What plans would you engage?

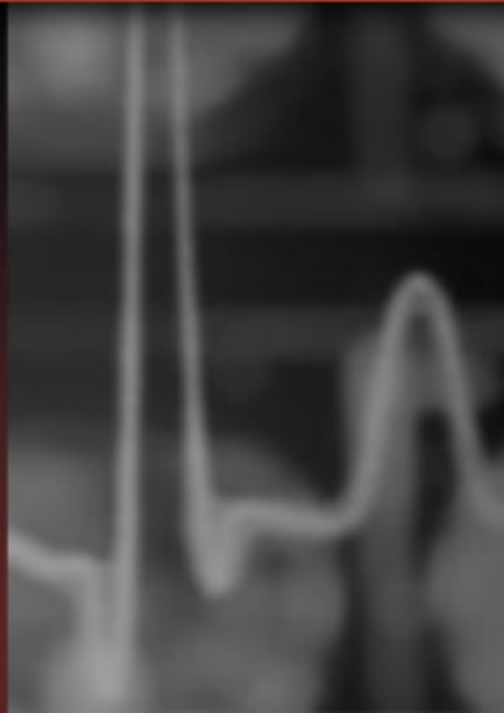
# The High Points

- All you can do is all you can do.
- COOP and disaster recovery plans must be realigned within an extended event horizon of 8 to 12 weeks.
- Work at home plans require the exact expectation of WORK.
- Business processes must be broken down and redefined by task, not by person.

# Plan ,plan, and plan some more.



**So. What have we not  
thought of yet?**





# Scott's Tips for Individual and Family Preparedness



# Stock supplies

- DHS recommends a minimum of two weeks' worth of food and water.  
[Ready.gov/pandemic](https://www.ready.gov/pandemic)
- Food, WATER\*, paper goods, batteries, flashlights, etc. You know – hurricane/ice storm supplies!
- Medicines that treat symptoms of flu, including pain killers, Gatorade (dehydration), diarrhea, cough, chest congestion.
- Masks for sick family members, if you can find any.

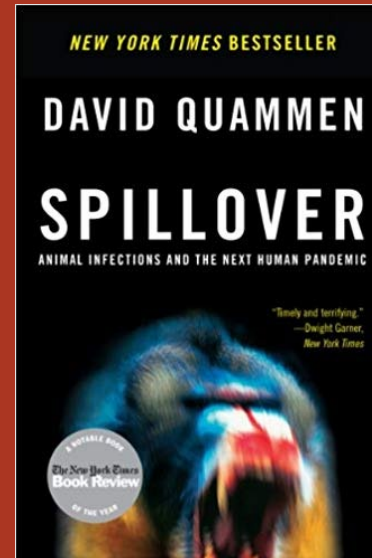
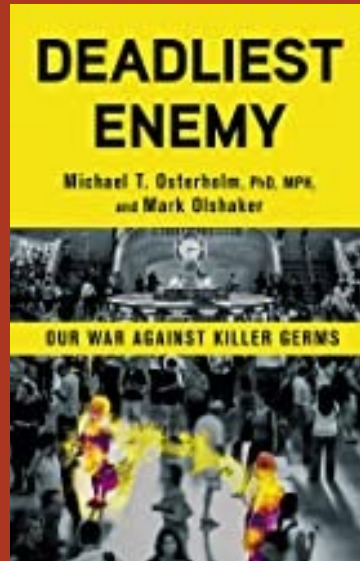
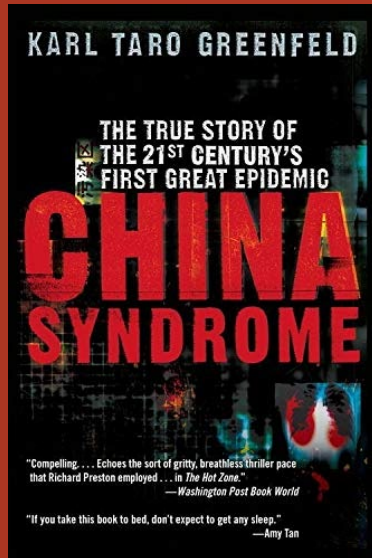
\* Municipal water treatment systems stock fewer than 2 weeks' worth of chlorine, and in many cases, even less than that.

## **Get your seasonal flu shot**

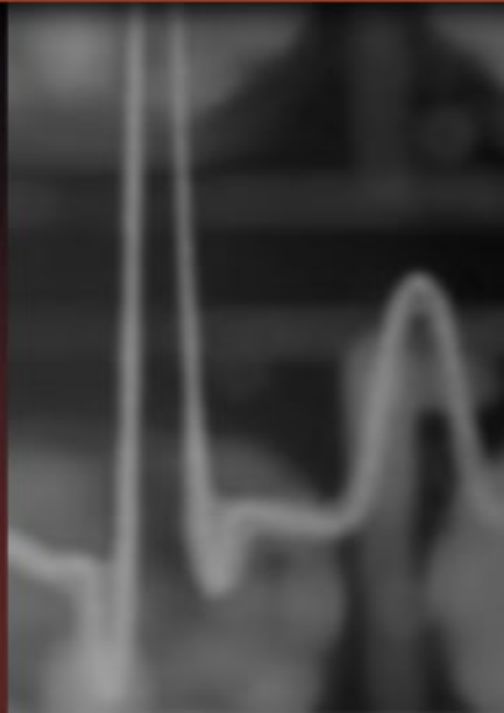
- That way, if you have your pneumonia vaccine, and your seasonal flu shot, and there's a coronavirus pandemic, and you fall ill..... Well, then you have a pretty good idea what it is and what it isn't.

# References and Suggested Reading Materials

- “The Great Influenza,” John M. Barry (Viking, 2004 hardcover).
- Centers for Disease Control and Prevention, [www.cdc.gov](http://www.cdc.gov)
- World Health Organization Website <http://www.who.int>
- National Academy of Sciences, Institute of Medicine <http://www.iom.edu/>
- University at Albany (NY) Public Health Pandemic Course, [http://www.ualbanycphp.org/learning/registration/detail\\_Pandemics.cfm](http://www.ualbanycphp.org/learning/registration/detail_Pandemics.cfm)



# Final Thoughts



# Commentary available at [www.scottmcperson.net](http://www.scottmcperson.net)

## Scott McPherson's Web Presence

IT DOESN'T TAKE A PANDEMIC TO CREATE HAVOC

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## How a possible coronavirus pandemic may affect you and your family.

Posted on Wednesday, February 5, 2020 at 08:56AM by  Scott McPherson in [coronavirus, influenza and infectious diseases](#) |  [Post a Comment](#)

When some very serious people (such as Drs. Mike Osterholm and Anthony Fauci) start mentioning the "P" word in public settings. It is past time to focus on the ways a potential/likely coronavirus pandemic will affect you. And a pandemic will affect you in ways you cannot imagine.

We still do not know so many things. We do not know if this virus will actually sustain itself to a pandemic level. We do not really know its virulence in the intermediate term, let alone the long term. We do not know if the Chinese countermeasures are going to slow down the virus' advance well enough to beat it back like the world beat SARS back in 2003.

But we do know it likes to infect people. A lot. And we do know it can kill you.

The virus won't be on your doorstep tomorrow. Or next week. That is a very good thing, because we have a lot of prep to do in case it DOES land on your doorstep eventually. So you are right to ask: What sensible things can I do now to prepare that won't break the bank, won't make me look like a nut and won't waste time?

Here is a list of the things you should be thinking about. This list is by no means complete, although it is really comprehensive. Feel free to build upon it in your own way. I have listed the precaution and the timeframe.

### Flu shot and PPV vaccine (always)

Breaking news: I did not get a flu shot this year. Breaking News: I got the flu (and so did my wife) three weeks ago. Whoops. I did beat it back (again), using my special Tamiflu cocktail of taking two pills right off the bat. But go and get the shot now. Today it won't ward off coronavirus. But then if you do get flu-like symptoms and pandemic is raging, the actual medical diagnosis of your condition will be somewhat easier. PPV is the bacterial "Pneumonia" vaccine. The pneumonia accompanying Wuhan is viral. So PPV won't guard against Wuhan-centric pneumonia. PPV will help against influenza-related pneumonia, and it will aid doctors if they have to diagnose you if, Heaven forbid, you contract Wuhan coronavirus.

### Soap and water (always!)

No countermeasure of any kind will mean as much to you and your family as the act of washing hands using plenty of soap and plenty of water. Take all the time you want. The duration should be somewhere between the song "Row row row your boat" and the drum solo from "In-a-Gadda-Da-Vida." Only settle for hand sanitizer when no soap and



**Don't be these guys.**





**Feel free to share this with others.**

Scott McPherson