## **Auditing: Considering the Future**



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## **Objectives**

- Changing Technology, Changing Ways
- Changing Issues, Changing Audits
- Changing Threats, Changing Security
- Audit Impact on Policy, Laws, & Regulations
- Fun!



## Futurist, and Beyond

Study the future and make predictions about it based on current trends.

To get to the future, we need to understand the past and present.



#### **Government Then**

"The science of government it is my duty to study, more than all other sciences; the arts of legislation and administration and negotiation ought to take the place of, indeed exclude, in a manner, all other arts. I must study politics and war, that our sons may have liberty to study mathematics and philosophy.

Our sons ought to study mathematics and philosophy, geography, natural history and naval architecture, navigation, commerce and agriculture in order to give their children a right to study painting, poetry, music, architecture, statuary, tapestry and porcelain."

— John Adams, Letters Addressed to His Wife



#### **Government Now**

No government ever voluntarily reduces itself in size.

Government programs, once launched, never disappear.

Actually, a government bureau is the nearest thing to eternal life we'll ever see on this earth! --Ronald Reagan

So, We Audit...





#### **Government Soon**

- Ready for Fundamental Changes?
  - Different directions

Different technology

World Around Us



## **Change: Two Approaches**

- Government:
  - Implement first, fix later
  - Study first, implement later

Either Way, We Audit...



## **But Once They Change...**

- Persuasion and Purchases
- Costs and Consequences
- Policies and Regulations
- Problems

So, We Audit...



## The Responsibility

Even the least among us may affect change; certainly the law and policy: Legislators, Agency Heads, and Policy Makers—but also, researchers, accountants, purchasing clerks, public relations, division directors, etc. by doing the right thing can affect change...

If you think you're too small to make a change, then you've never been in bed with mosquitoes.



#### Now and the Future

- How does all of this relate to today's topic?
- What if some of the headlines are true?
- Is your agency ready for more change than just BYOD?
- Security Breaches?
- Are you ready for change?



## Changing Technology, Changing Ways

- Green Bar and Pencils
- Spreadsheets
- Databases and Big Data
- "The Cloud"
- ▶ Tele-work, Remote Access, VPN
- Artificial Intelligence

#### Remember When

- **1980** 
  - No cell phones (1983)
  - No cd's (1982)
  - No DVDs (1995)
  - No Mouse ("Lisa Apple Mouse" 1983)
  - No Windows (1983)
  - No Walkman (1983)
- 1990
  - No e-mail (1993)
  - No MP<sub>3</sub> players (1997)
  - No World Wide Web (1991-93 ish)
  - No streaming video (MS '95, '99; )



#### Who Would Have Believed







\$16,595 (1981);

\$9,995 (1983)



#### **Who Would Have Believed**





#### Who Would Have Believed





## Today's Headlines

- Cybersecurity--Working outside the "office"
- http://www.forbes.com/sites/antonyleather/2015/ 03/16/windows-10-to-use-bittorrent-style-p2p-todeliver-updates/
- http://krebsonsecurity.com/2015/07/windows-10shares-your-wi-fi-with-contacts/
- http://www.telegraph.co.uk/technology/microsof t/windows/11782807/windows-10-privacy.html



## Security

Simpler in the past

Less interest in work

Value of data and analysis

The Challenge



## Today's Headlines

- Data Breaches
  - http://www.privacyrights.org/data-breach
- Social Changes
  - Healthcare
  - Entertainment and Recreation
  - Project Jacquard
- Employment
  - RFID requirements



#### **More Headlines**

- Changing Technology
  - Nanotechnology
  - 3-D Printing plastic, then glass, next metals?
- Artificial Intelligence
- Medical Technology
  - Nano, 3-D, viability extension, regrowth...
- ▶ Travel—How do we drive? Or fly?
- Surveillance



## Security

- Laptops
- Data Transfers
- ▶ E-Mail
- New Software
- Networks
- Hackers



#### Government in the Future?

Auditee or Auditor or Audit Managers and Supervisors?





#### The Future is Now

- Experts predict robots will take over 30% of our jobs
   by 2025 and white-collar jobs aren't immune
  - These jobs, or
  - These jobs???
  - Why not auditors?
- Science is moving unbelieveably fast right now



#### The Future

What will it look like?

If it can do this, what can it do in 5 years?

Or, will it look like this?



#### The Future

- If this came to ask questions, how would you react?
- If you had to work with this during an audit, could you do it?
- Or this?

- What policies might need to be in place?
- What changes to the Workplace?



#### **Are we OBSOLETE?**

Luckily, most people understand the differences between people—our minds, or souls—and the cold logic of the machines we build.



## **Changing Issues Changes Audits**

Trust

Opinions

Beliefs

Politics



## **Technology Improves Our Lives?**

"Going back a million years, humans had fire. One guy used it to stay warm, and the other said 'That's cheating.'

One of those is our ancestors, and one isn't."

—Dave Asprey
Founder of The Bulletproof Executive



## The Future and Change

Rethinking how we Audit...

- Technology
- New customs and customers
- Day-to-day operations
- Managing and Leading



## **Moving Forward**

"Work is not your enemy but your friend. How you work, not what you do, determines the course of your life. You may work grudgingly or you may work gratefully; you may work as a human or you may work as a robot. There is no work so rude that you may not exalt in it; no work so demeaning that you cannot breathe soul into it; no work so dull that you may not enliven it."

— Og Mandino, The Greatest Success in the World

# Unless someone like you cares a whole awful lot, nothing is going to get better. It's not.

--Dr. Seuss

#### Thank You!

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