

# HCCA 2018 Compliance Institute Las Vegas, Nevada

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## 109 IT for the Non-IT Compliance Professional

*Monday, 11:00 AM–12:00 PM*

**Frank Ruelas**, Facility Compliance Professional, St. Joseph's Hospital and Medical Center/Dignity Health

- Develop and broaden a practical knowledge base of IT concepts and principles and how they apply in supporting the organization's compliance program
- Learn some of the key challenges that IT professionals face in maintaining an effective IT network within the organization and how Compliance and IT can collaborate effectively to deal with these challenges
- Identify auditing and monitoring opportunities where IT and Compliance can partner in obtaining useful data to help assess key processes that maintain the security of the IT system

## But first!

What may be THE  
answer to a question that  
may be very important to  
you!



# Our Objectives

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# Our Objectives



- Practical knowledge
- Key challenges, collaboration
- Auditing and monitoring, security

# Our Approach

- Focus Points
- Hardware – Computer Equipment
- Software – Applications, Programs
- Connectivity – Networks
- Users – Authorized individuals

# Information

“the communication or reception of knowledge or intelligence”

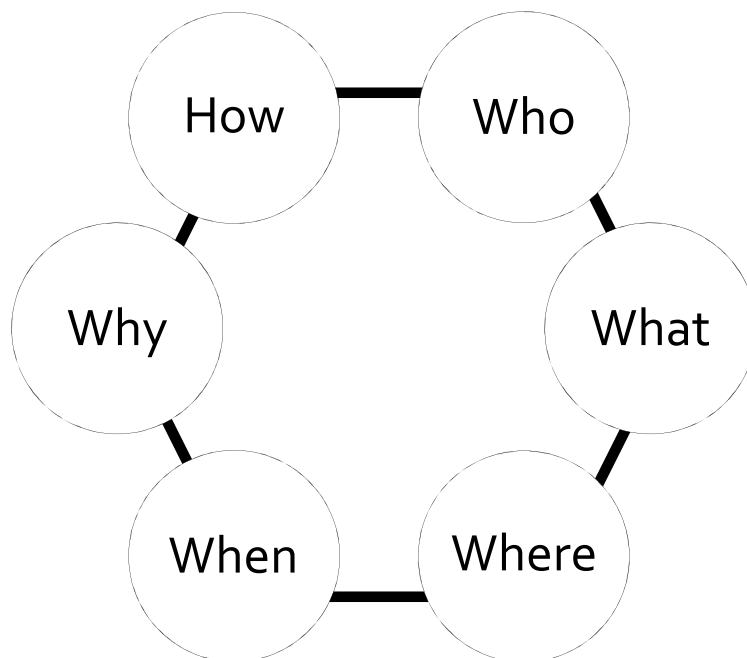
Source: <https://www.merriam-webster.com/dictionary/information>

# Technology

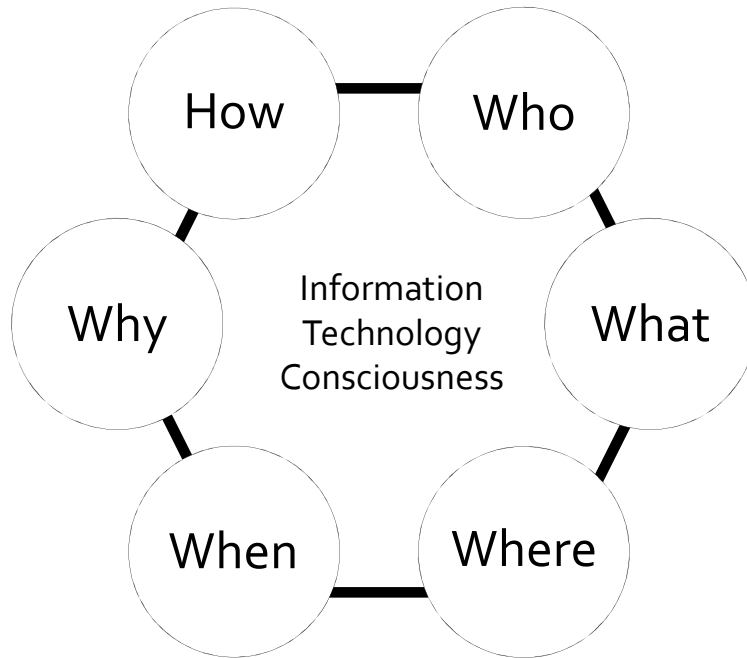
“the use of science in industry, engineering, etc., to invent useful things or to solve problems”

Source: <http://www.learnersdictionary.com/definition/technology>

5WH1



# 5WH1



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Information  
Technology  
Consciousness

# Who

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Information  
Technology  
Consciousness



# What

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Information  
Technology  
Consciousness



# Where

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Information  
Technology  
Consciousness




# When

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Information  
Technology  
Consciousness



# Why

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# How

## How is Information Used?

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- Communications
- Operations
- Decisions
- Records

# Competitive Advantage

- Cost Leadership
- Differentiation
- Innovation
- Growth
- Strategic Alliance

Source: J. Xu and M. Quaddus, Managing Information Systems, DOI: 10.2991/978-94-91216-89-3\_2, Atlantis Press 2013

# From Data to Knowledge

Data

Information

Knowledge

# Characteristics of Bad Data

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# Characteristics of Bad Data

- Communications

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# Characteristics of Bad Data

- Communications
- Operations

# Characteristics of Bad Data

- Communications
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- Decisions

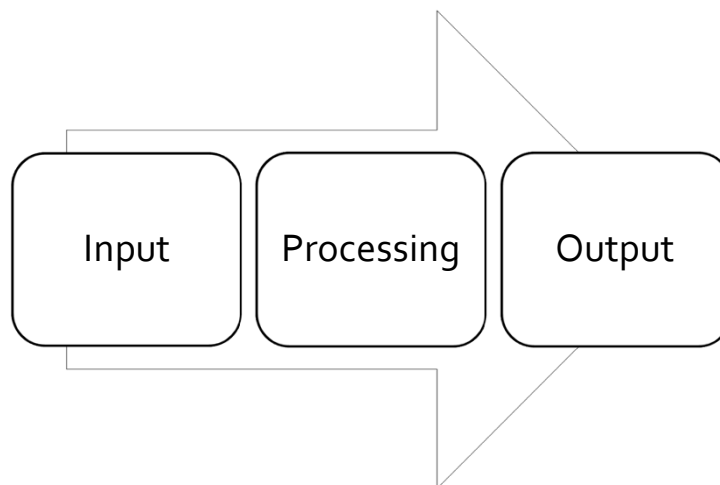
# Characteristics of Bad Data

- Communications
- Operations
- Decisions
- Records

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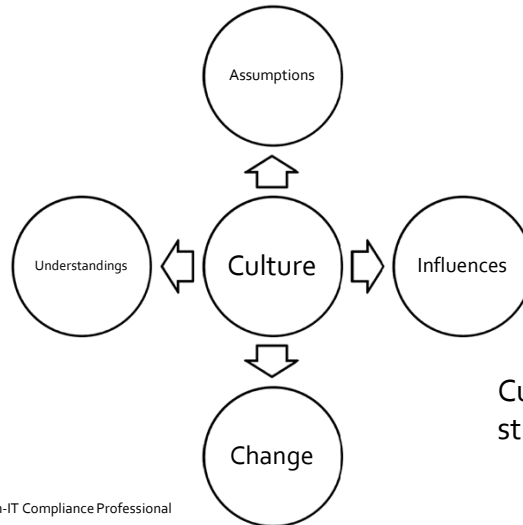
# Our IT Model



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# Organizational Culture



Culture can drive priorities,  
strategy, business decisions.

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# Software

- Programming is easier
- Proliferation of devices
- Constant demand

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# Speed

1970	1980	1990	2000	2010
2 MHz 2,000,000/sec	5 MHz 5,000,000/sec	25 MHz 25,000,000/sec	1.5 GHz 1,500,000,000/sec	3.0 GHz 3,000,000,000/sec
Midnight Cowboy	Kramer vs. Kramer	Driving Miss Daisy	American Beauty	The Hurt Locker
Bridge over Troubled Water	Call Me	Vision of Love	Maria, Maria	Tik Tok

# Hardware



# Hardware



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# Objectives

Practical Knowledge	<ul style="list-style-type: none"><li>• Powerful</li><li>• Diverse</li><li>• Everywhere</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Accounting</li><li>• Cost</li><li>• Maintenance</li></ul>
Auditing & Monitoring	<ul style="list-style-type: none"><li>• Often limited to inventory</li><li>• Time consuming</li></ul>

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# An audit to consider...

## Software

Types of software:

- Systems software (ex. Windows, Linux, MacOS)
- Application software (let's look at a list...)

# Software

- Word processing
- Spreadsheets
- Databases
- Graphics
- Presentation
- Integrated (Suites)



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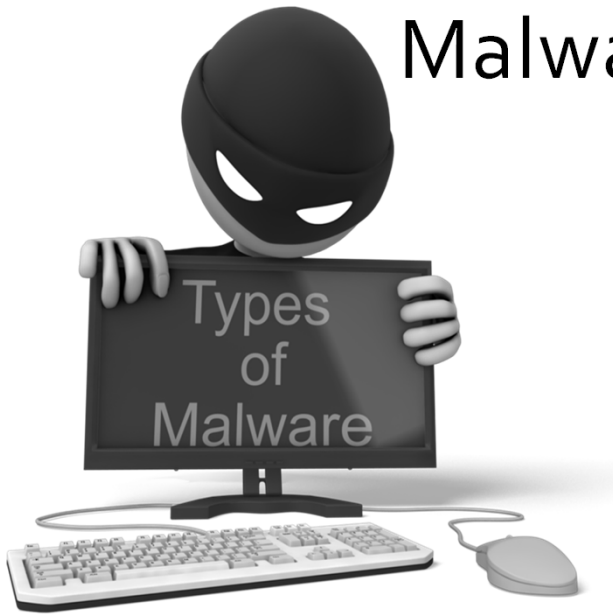
## Heard of this....



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# Malware



- Adware
- Bot
- Ransomware
- Spyware
- Trojan Horse
- Virus

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# Malware



Some type of message that catches the user off guard that has something such as

"Blah, blah, blah...(gets the user's attention...click here."

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DarkoderCrypt0r



Contact Us

About Bitcoin

How to buy Bitcoins

TIME TO PAYMENT RELEASE:

3 DAYS

TIME TO LOST YOUR ARCHIVES:

5 DAYS

## Your Files has been Encrypted!

**What Happened to My Computer?**  
Your important files are encrypted.  
Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

**Can I Recover My Files?**  
Sure. We guarantee that you can recover all your files safely and easily. But you have not so enough time.  
You can decrypt some of your files for free. Try now by clicking <Decrypt>.  
But if you want to decrypt all your files, you need to pay.  
You only have 3 days to submit the payment. After that the price will be doubled.  
Also, if you don't pay in 7 days, you won't be able to recover your files forever.  
We will have free events for users who are so poor that they couldn't pay in 6 months.

**How Do I Pay?**  
Payment is accepted in Bitcoin only. For more information, click <About bitcoin>.  
Please check the current price of Bitcoin and buy some bitcoins. For more information, click <How to buy bitcoins>.  
And send the correct amount to the address specified in this window.  
After your payment, click <Check Payment>. Best time to check: 9:00am - 11:00am GMT from Monday to Friday.  
Once the payment is checked, you can start decrypting your files immediately.

**Contact**  
If you need our assistance, send a message by clicking <Contact Us>.

We strongly recommend you to not remove this software, and disable your anti-virus for a while, until you pay and the payment gets processed. If your anti-virus gets updated and removes this software automatically, it will not be able to recover your files even if you pay!

 **BITCOIN**  
ACCEPTED HERE!

Send \$300 worth of bitcoin to this address:

1KoWzXydNnrRfu2mcSbY6n7mnevkvQ6WBU

COPY

CHECK PAYMENT

DECRYPT

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# Software



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Objective	Notes
Practical Knowledge	<ul style="list-style-type: none"> <li>• Instructions needed by computers</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Patches</li> <li>• Updates</li> <li>• Learning Curve</li> </ul>
Auditing & Monitoring	<ul style="list-style-type: none"> <li>• Authorized</li> <li>• Licensed</li> </ul>

# An audit to consider...

# Let's talk about storage...



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## Data Storage

Storage	Sheets of Paper	Height
Kilobyte	1/2	-
Megabyte	500	3 inches
Gigabyte	500,000	250 feet
Terabyte	500,000,000	47 miles

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...and  
where is  
storage  
media?

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So how  
can we  
clean it up  
and how?

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# Input Devices

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## Input Devices

Most Common:

- Keyboard
- Mouse
- Touchscreen



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# Input Devices

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## Other Input Devices

- Speech recognition
- Digital devices (example: cameras)
- Optical data readers
- Magnetic strip readers
- Radio Frequency Identification (RFI)

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## Input can also include Computer to Computer



Often done automatically on a routine or ongoing basis or schedule.

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## Output Devices

- Monitors
  - Types
  - Number
- Printers
- Electronic files

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# Common Formats

- Let's talk about file extensions
- Name + extension = filename
  - Word = .docx
  - Excel = .xls
  - PowerPoint = .ppt
- ...and some very interesting "all purpose" extensions.

Some file formats  
lend themselves to  
"sharing"....

# Generic (txt, csv) to Excel

Sales Report for Jan 20XX

Salesperson: Thomas Smith	Sales Region: Northwest	Monthly Sales: \$10,000
Salesperson: Betty Wilson	Sales Region: East	Monthly Sales: \$20,000
Salesperson: James Smith	Sales Region: West	Monthly Sales: \$15,000
Salesperson: Mike Adamson	Sales Region: Northwest	Monthly Sales: \$10,000
Salesperson: Cynthia Jones	Sales Region: West	Monthly Sales: \$30,000

Salesperson	Sales Region	Monthly Sales
Thomas Smith	Northwest	\$10,000
Betty Wilson	East	\$20,000
James Smith	West	\$15,000
Mike Adamson	Northwest	\$10,000
Cynthia Jones	West	\$30,000

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# An Important Object: The Database

- Design
- Input and cleanup
- Changes and edits
- Popularity



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# And of course... The Query

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## The Cloud



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# Cloud Computing

# Cloud Computing

- Accessibility

# Cloud Computing

- Accessibility
- Scalability

# Cloud Computing

- Accessibility
- Scalability
- Infrastructure



# Cloud Computing

- Accessibility
- Scalability
- Infrastructure
- Reliability

# Cloud Computing

- Accessibility
- Scalability
- Infrastructure
- Reliability



# Privacy

- Common expectations
- Need to clarify
- Industry related requirements

## Employee Related Privacy

- Email
- Messaging
- Network Use
- File management

