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Your presenter



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Data Breach Statistics

The overall average cost of data breach is currently...

\$4 million

The total average cost of a data breach is now \$4 million, up from \$3.8 million a year ago, according to a 2016 study by data security research organization Ponemon Institute

Data Breach Statistics

How long does it take an attacker to compromise your systems?

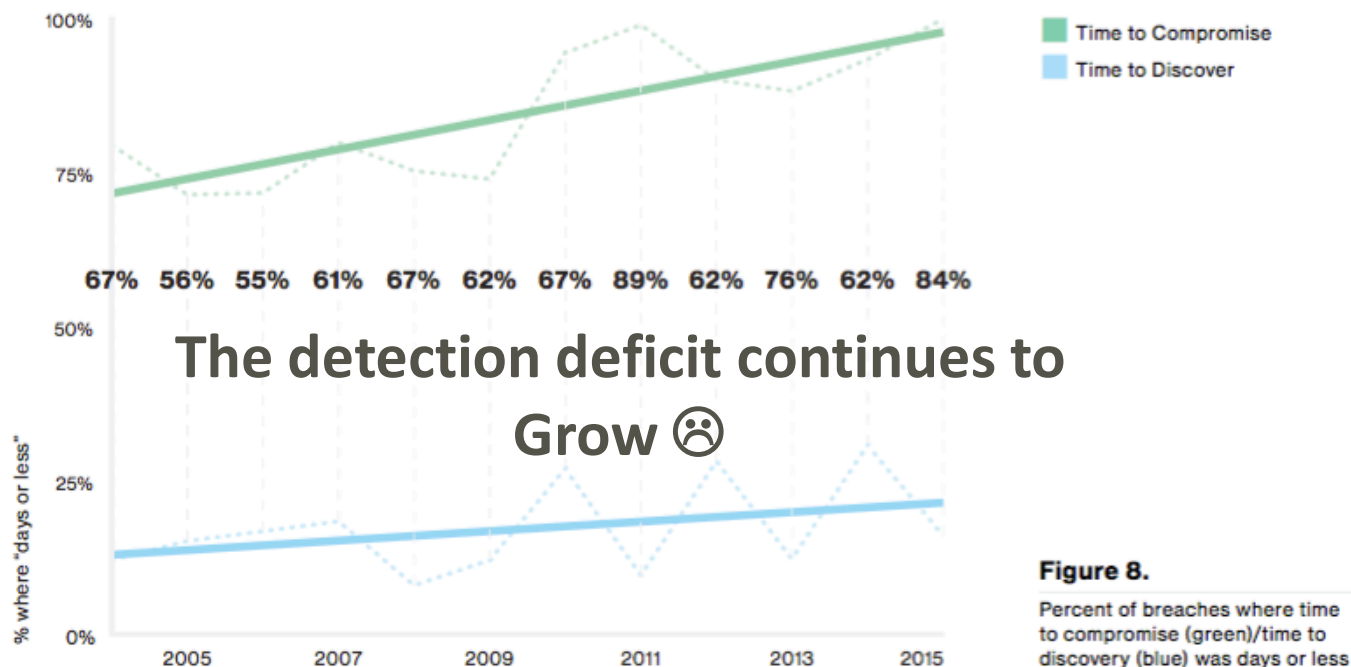
In **11%** of cases, it took attackers just **seconds** to compromise systems

In **82%** of cases, attackers were in within **minutes**

Source: 2016 Verizon Data Breach Report

Data Breach Statistics

It takes **days, weeks and sometimes months** to find out that there's been a breach



Source: 2016 Verizon Data Breach Report

Hackers – What do they want?

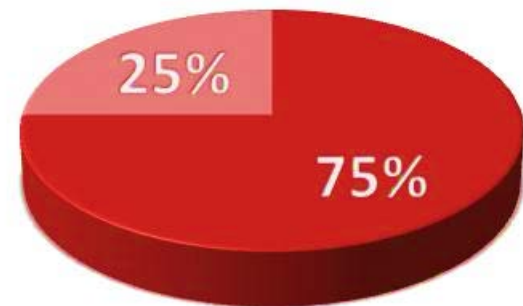
- Personally identifiable information
- Credit Card Data
- Usernames & Passwords
- Emails
- Trade Secrets
- Customer Lists
- Vendor Lists

Could be anything!

Trends in Information Security

Targets — victims of opportunity:

Some will be **a target** regardless of what they do, but most become a target **because of what they don't do** related to security.

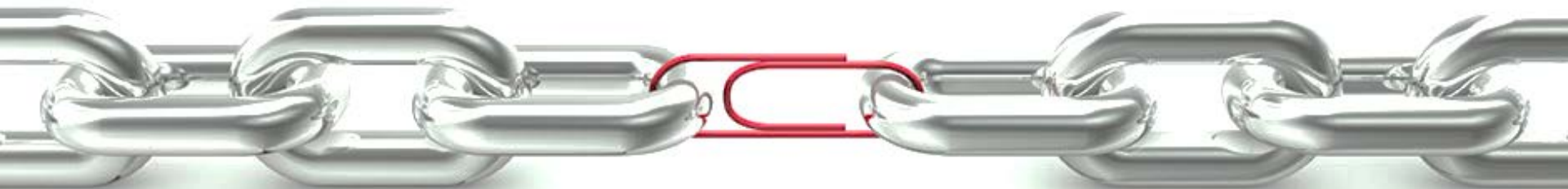


■ Victim of Opportunity
■ Targeted Attack

Trends in Information Security

Most common attack — social:

Most attacks began socially. **Employees** are your greatest asset, but often your weakest link to security. Hackers **know** this, and have developed social scams by the thousands, hoping **that** one will **fall victim**

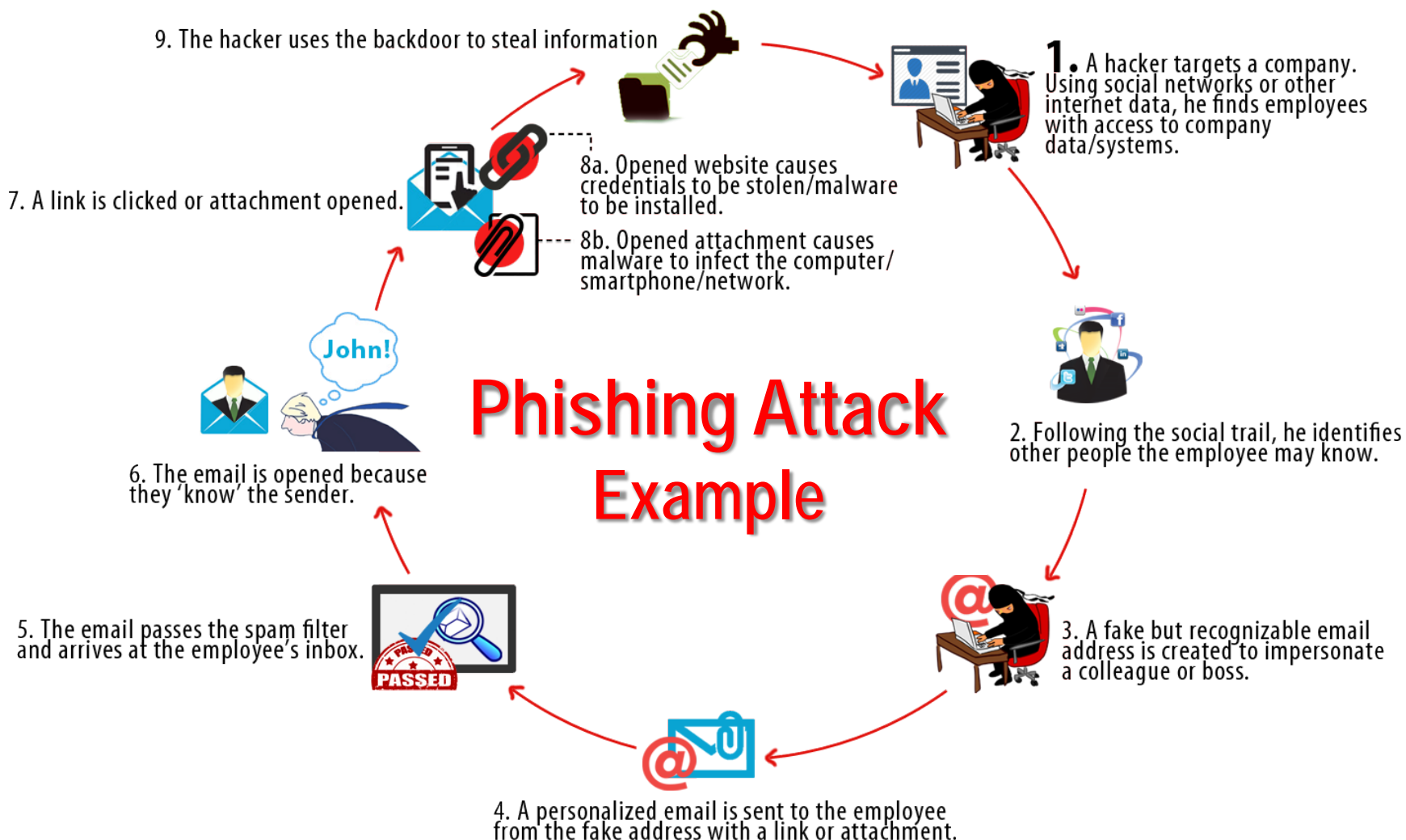


Trends in Information Security

Prevention — not rocket science:

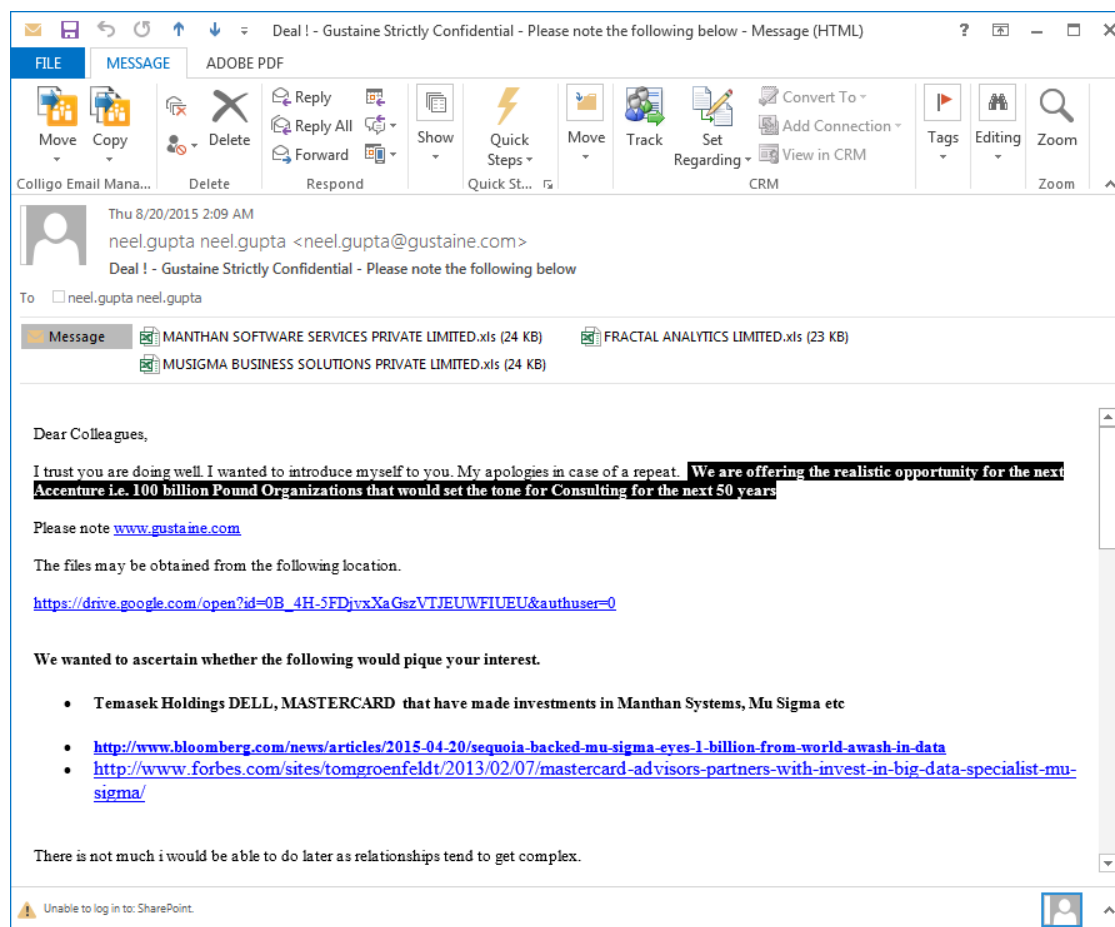
Most victims weren't overpowered by unknowable and
unstoppable attacks. **We** know them well enough and we
also **know how to stop** them.

Common Threats



Common Threats

You don't know a Nigerian Prince, you didn't win the Malaysian Lottery, and you don't have the investment opportunity of a lifetime:



Common Threats

Ransomware (malware)



Warning Message!!

We are sorry to say that your computer and your files have been encrypted, but wait, don't worry. There is a way that you can restore your computer and all of your files

06 Days 23:59:09 Hours

When countdown ends your files will be lost forever

You must send at least [BAMOUNT] Bitcoin to our wallet and you will get your files back

Your personal unique ID:

Send [BAMOUNT] BTC to this address:

Warning Message!!

We are sorry to say that your computer and your files have been encrypted, but wait, don't worry. There is a way that you can restore your computer and all of your files

Your personal unique ID: [UID]

You must send at least [BAMOUNT] Bitcoin to address [WADDRESS] to get your files back

After you've made the payment, you will get a code, please insert it here:

Common Threats

Internet of Things

TVs

Webcams

Thermostat

Remote power Outlets

Sprinkler Controllers

Door Locks

Alarms



Breaches – Can they be stopped?



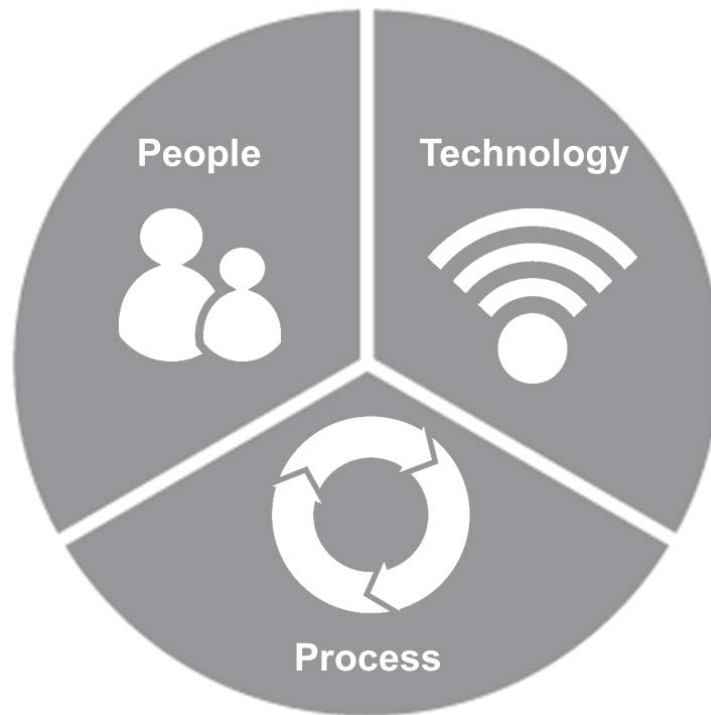
Root Causes??

97% of breaches were avoidable

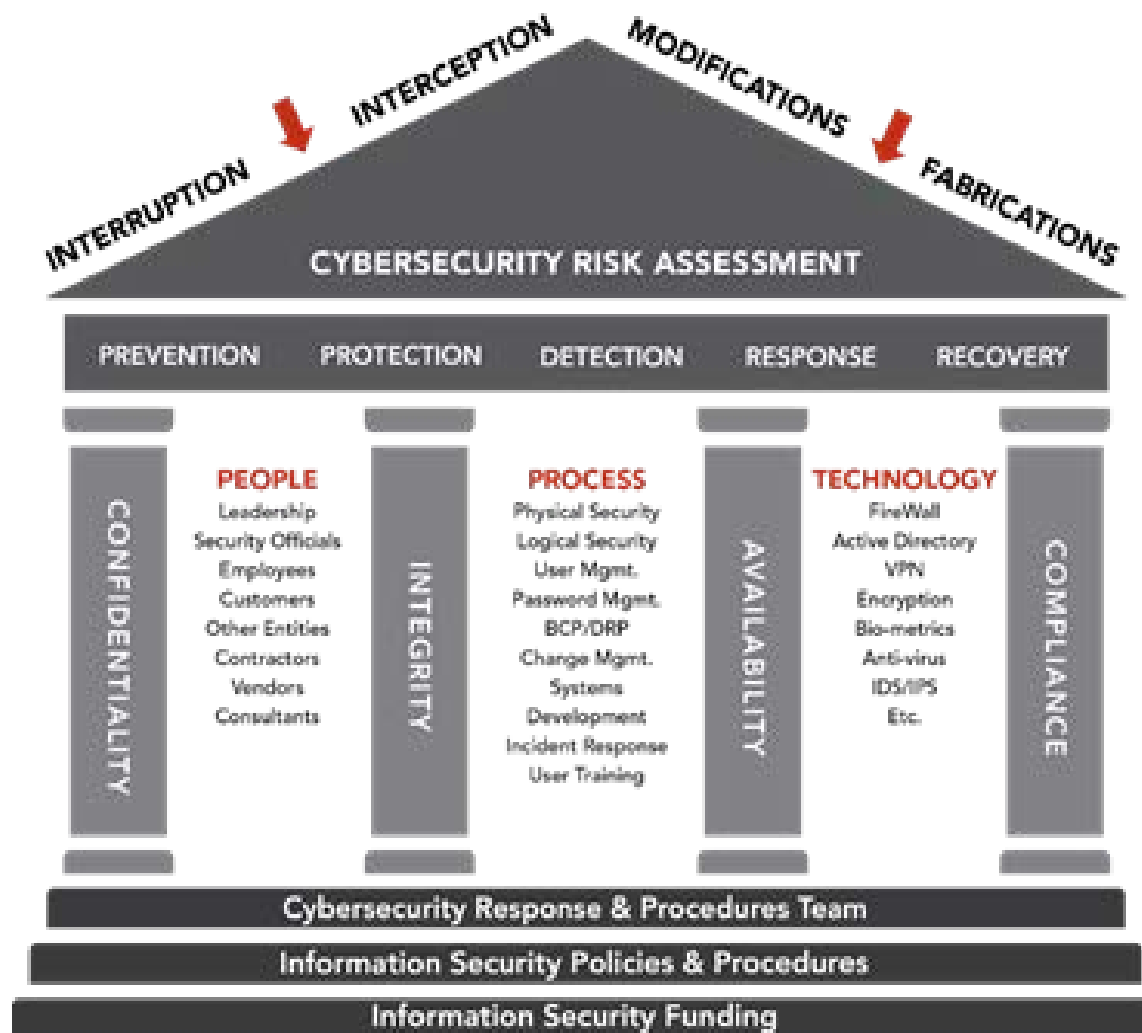
- **User Ignorance**
 - Weak user passwords
 - Poor judgment
 - Social media
 - Phishing attacks
- **Weak Infrastructure**
 - Weak design (firewalls, wireless routers)
 - Weak user authentication (users, passwords)
 - Encryption (VPN, secure portals)
 - Out-dated (patch management / anti-virus)
 - Lack of periodic testing
- **Technology Advances**
 - Mobile devices
 - Cloud computing / public portals
 - Internet of Things (IoT)

Where do I start?

Realize that Information Security is NOT
an IT issue: it is a Business issue



Where do I start?



Who is ultimately responsible?

You are!

You don't have to be a security professional to think critically!



Who is ultimately responsible?



Who is ultimately responsible?

Most Commonly Used Passwords of 2016

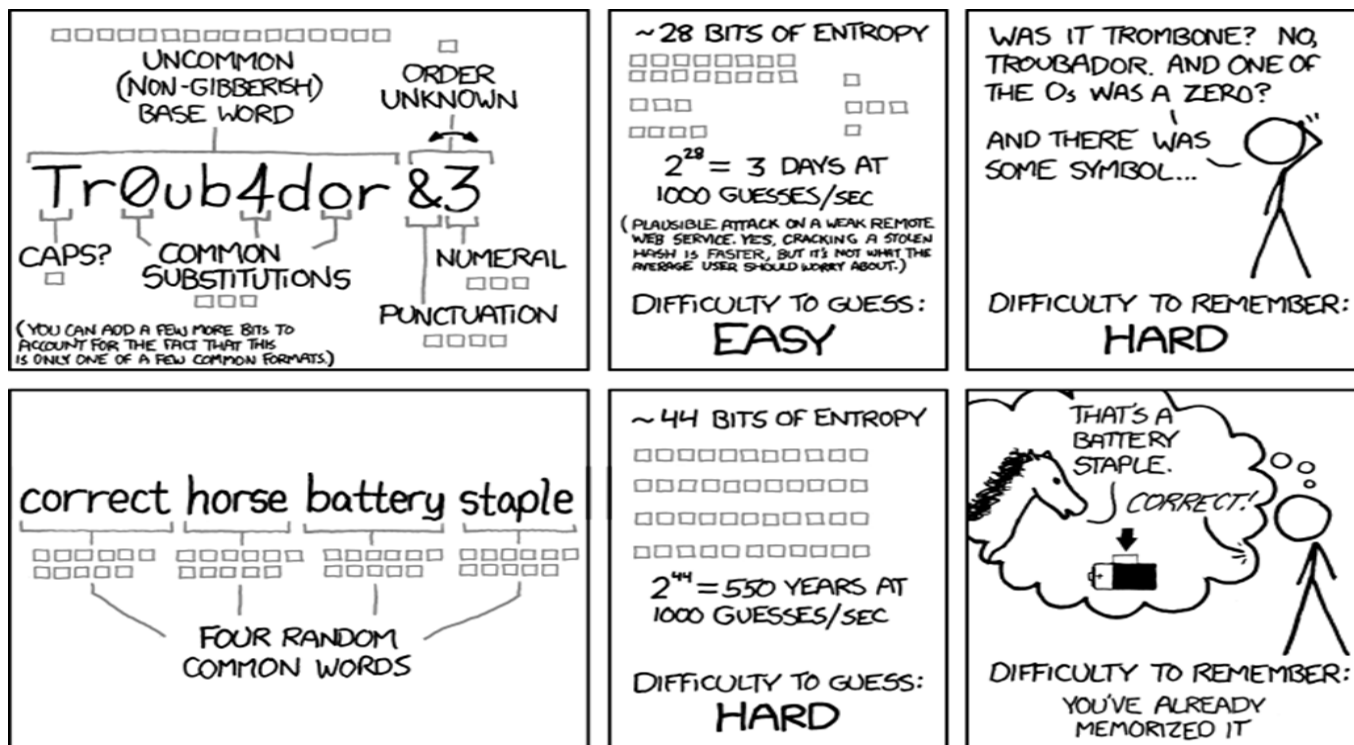
63% of confirmed data breaches involved weak, default or stolen passwords.

RANK	PASSWORD	CHANGE FROM 2015
1	123456	Unchanged
2	password	Unchanged
3	12345	2 ↗
4	12345678	1 ↘
5	football	2 ↗
6	qwerty	2 ↘
7	1234567890	5 ↗
8	1234567	1 ↗
9	princess	12 ↗
10	1234	2 ↘

Source: 2016 SplashData Report
2016 Verizon Data Breach Report

Who is ultimately responsible?

Don't use a password!



THROUGH 20 YEARS OF EFFORT, WE'VE SUCCESSFULLY TRAINED EVERYONE TO USE PASSWORDS THAT ARE HARD FOR HUMANS TO REMEMBER, BUT EASY FOR COMPUTERS TO GUESS.

How does this end?

It doesn't!

Realize that Information Security does not end. It can only be maintained through constant vigilance, training, and reassessment.

Questions?



Thank you!

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