Cyber-Security is dead. Long live Cyber-Resilience!

REDW... expertise.

An epic journey across high mountains of techno-babble, deep into jungles of arcane regulations, through muddy swamps of politics, across bleak deserts of funding.

This is my mother-in-law, Vivian





"Hi Vivian, this is Apple Support. Your computer has a very serious problem. But our technicians can help"





This is my friend and colleague, Bryce Gibbs CIO





"Please wire the \$60k payment on the property before tomorrow's closing"





Family, friends, co-workers every one of us is a target to be exploited.







The Internet has unleashed a dark side along with all of the cool stuff like Facebook



Cyber-Risk = Business Risk

- Hacked? = Business Interruption
- Breached? = Reputational Loss, Liability Claims
- Non-Compliant? = Fines & legal action

REDV. What exactly is Cyber-Risk?

'Cyber-Risk' means any risk of financial loss, disruption, or damage to the reputation of an organization from some sort of failure of its information technology systems

Institute of Risk Management, 2014

- Your organization gets hacked and you suffer a reportable (public) data breach
- 2. An employee opens a phishing email and infects the whole network and your operations come to a halt
- 3. You open an email and infect your machine with Ransomware that encrypts your AP, AR and GL files you have to pay the ransom in Bitcoin, but you can't get it setup in time. You lose your records and then your backup doesn't restore.
- 4. Your organization becomes collateral damage in a DDOS attack targeting another of your ISPs customers. Your access to the Internet is effectively shut down
- 5. You get a huge bill for a medical procedure you didn't have because your medical records were breached



- 6. You receive what appears to be legitimate instructions from an established vendor to wire payment to a different bank account. The money is gone by the time the vendor tells you they didn't receive the funds.
- 7. The disk storage array in your finance server fails then you realize that the backups were never setup.
- 8. A payroll employee opens a phishing email that instructs her to change her password at bank. She gives away her credentials and the payroll account is drained in 10 mins
- 9. Your credit cards stop working because 'you' reported them lost and the replacement have been mailed to someone in another state
- 10. Your IRS tax refund isn't coming it was paid to someone else



Data Breach Costs:

- s Reputation damage
- \$ Litigation defense
- Forensic and clean up costs
- s Regulatory fines
- Credit monitoring for those affected
- s Remedial technology

REDV/... How much did the recent data breach cost St. Josephs Healthcare?

- \$2.14 million to HHS Office of Civil Rights (OCR)
- \$17 million in investments in security technology
- \$7.5 million to a fund to reimburse affected individuals
- \$7.45 million in attorneys' fees
- \$15,000 to the patient that found the data online

\$34,105,000

REDW... The Problem is Us



Over 90% of all data breaches result from human error

REDW... The Problem is Us



"Amateurs hack systems. Professionals hack people"

Bruce Schneier

REDW... We no longer have physical control our data, computers or perimeter

Old

Data: On Premise

Computers: On Premise

Perimeter: Local Internet Connection



New

Data: Cloud

Computers: Anywhere

Perimeter: Everywhere



REDVV... And we no longer have physical control our firewall...

Old

Firewall: Digital Gateway



New

Firewall: People



Yes, <u>he's</u> our new firewall. seriously...

REDW. Our people are now our real firewall

This is the human firewall we'd like to think we have



REDW. Our people are our real firewall

But this is more like the human firewall we really have



REDW. So we no longer prevent data breaches and other security incidents

Old

Prevention



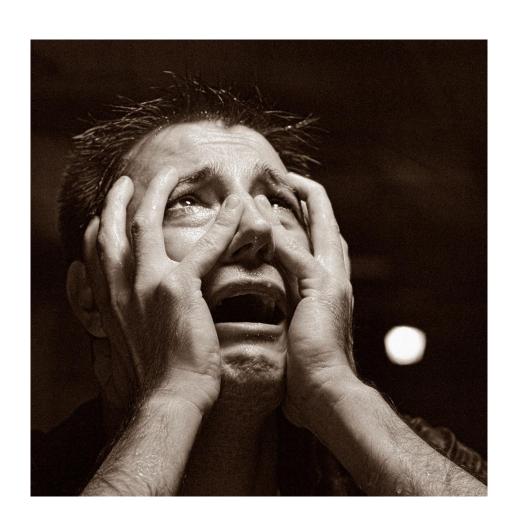
New

Resilience



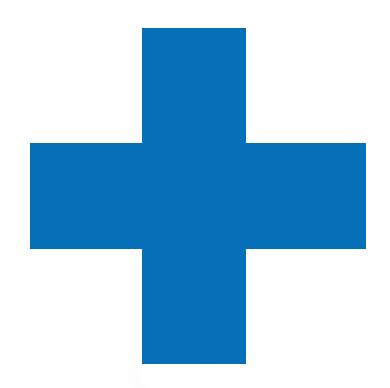
Yes, him again...

REDW... Yes, we are totally *#\$@ed.



CyberHealth

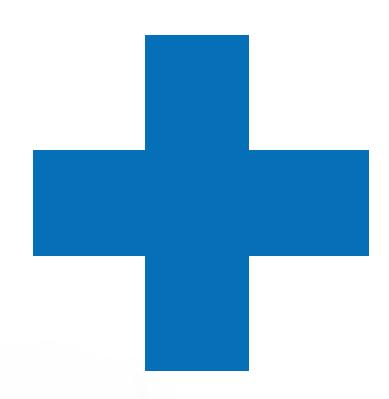
Our ability and willingness to protect ourselves and others from imminent harm, and stay safe from those who would exploit our families and community.





CyberHealth

- 1. Awareness
- 2. Clarity
- 3. Education
- 4. Hygiene
- 5. Assessment
- 6. Response
- 7. Recovery





REDW. A common, and costly misunderstanding ...

CyberHealth is no longer a technology issue

Now it's a cultural & behavioral issue

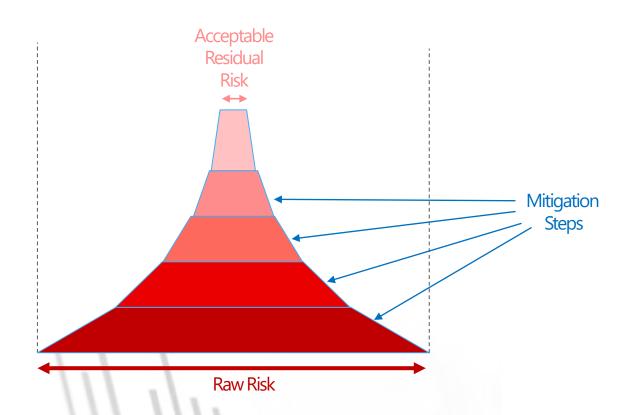


REDW ... that can result in costly, life-sucking litigation

Unless an afternoon of being cross-examined is your idea of fun.

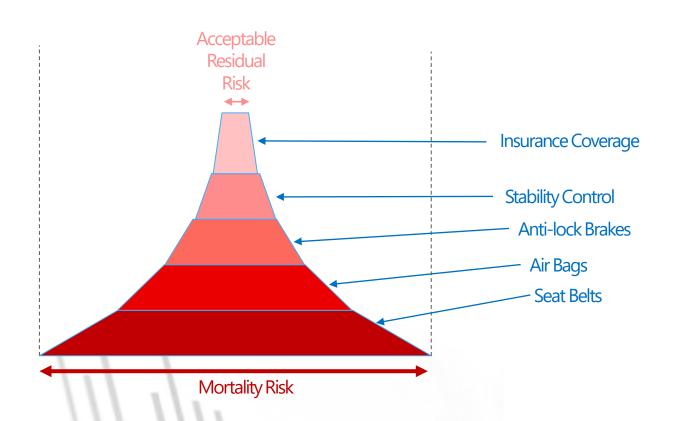


Managing Exposure by Mitigation





Mitigating Auto Safety Exposure





IT Governance Review

- How have IT strategy and planning been formulated?
- What regulatory requirements are applicable?
- Who is responsible for executing IT strategy?
- Is all software licensed and documented?

Governance & Compliance



Policy & Procedure Review Inventory and evaluate current policies and procedures Policies & Procedures Governance & Compliance



Cyber-Technology Review

Assess overall security technology & architecture

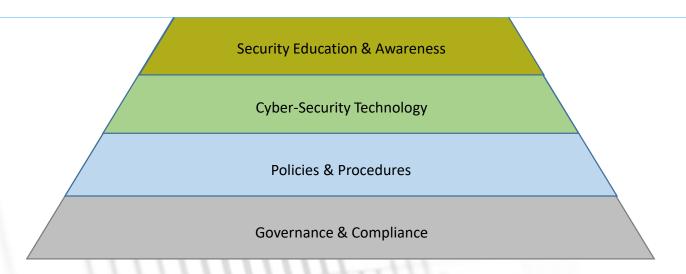
Policies & Procedures

Governance & Regulatory



Security Education & Awareness Review

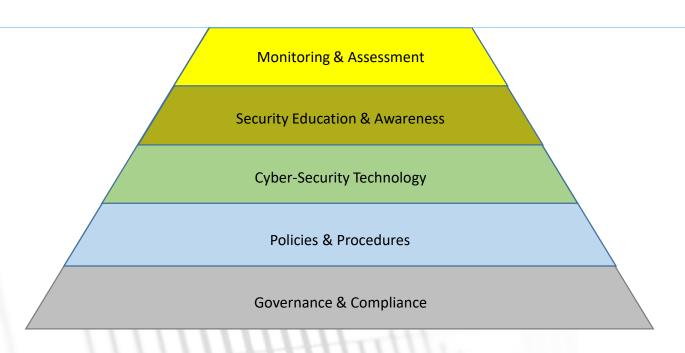
- Assess current & past security education & awareness efforts
- Identify regulatory requirements for security education & awareness





Monitoring & Assessment Review

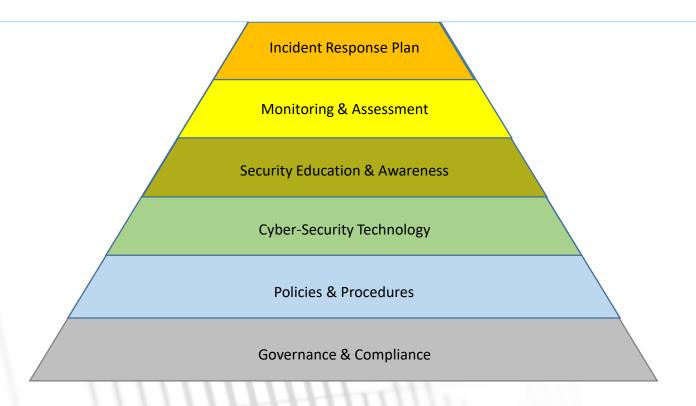
- Assess existing monitoring systems
- Assess existing assessment methods of technology systems
- Assess existing assessment methods of employee behavior





Incident Response

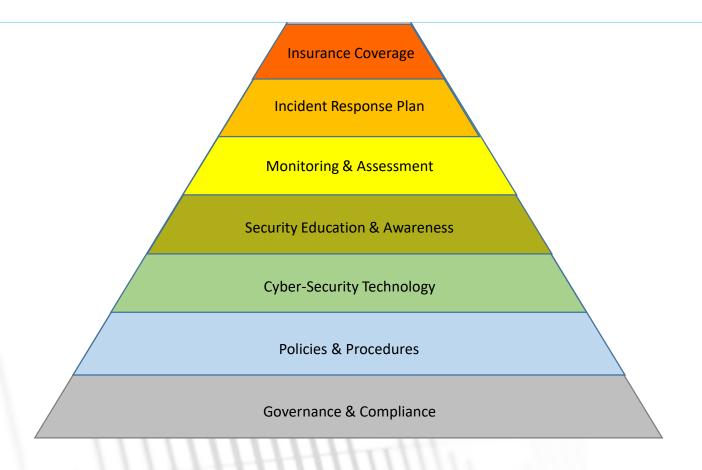
• Assess existing incident response policy & documentation





Insurance Review

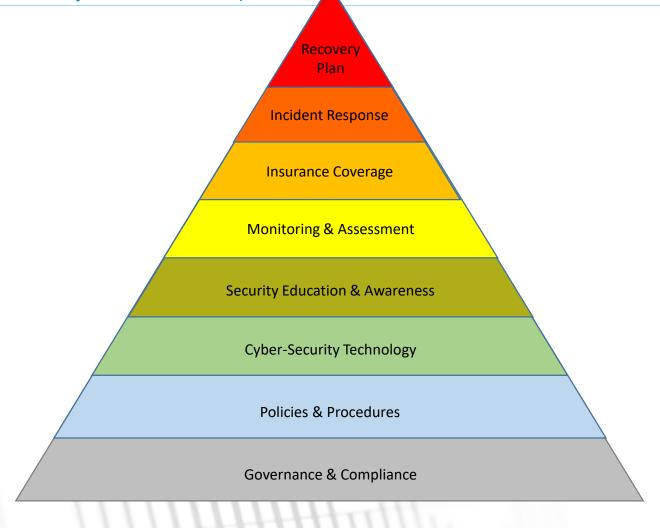
• Evaluate current coverage of existing policies





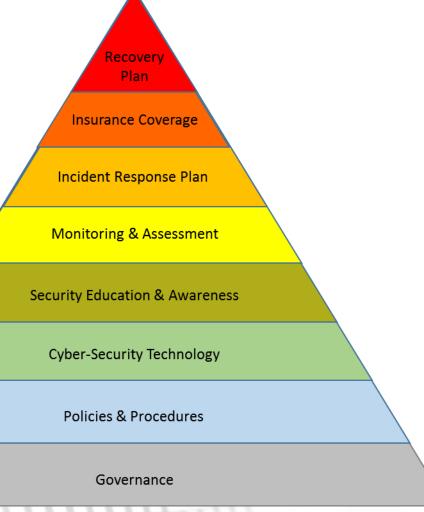
Recovery:

• The DR/BC Plan needs to be tested at least annually to ensure that recovery from a loss of operation and/or data can be assured



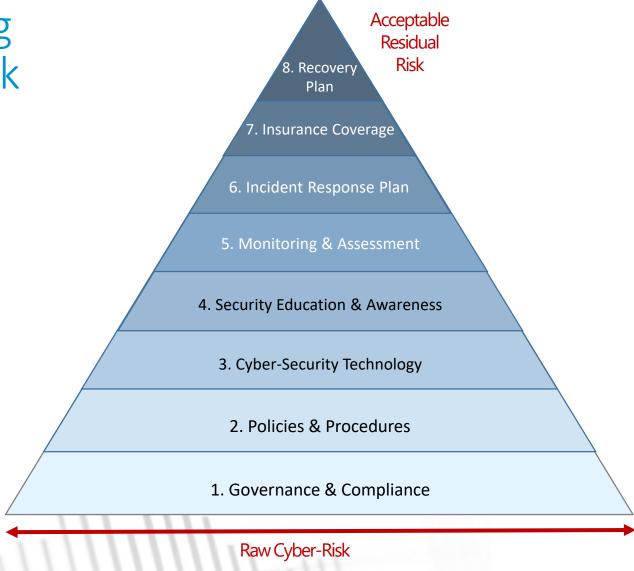


Your CyberHealth Profile



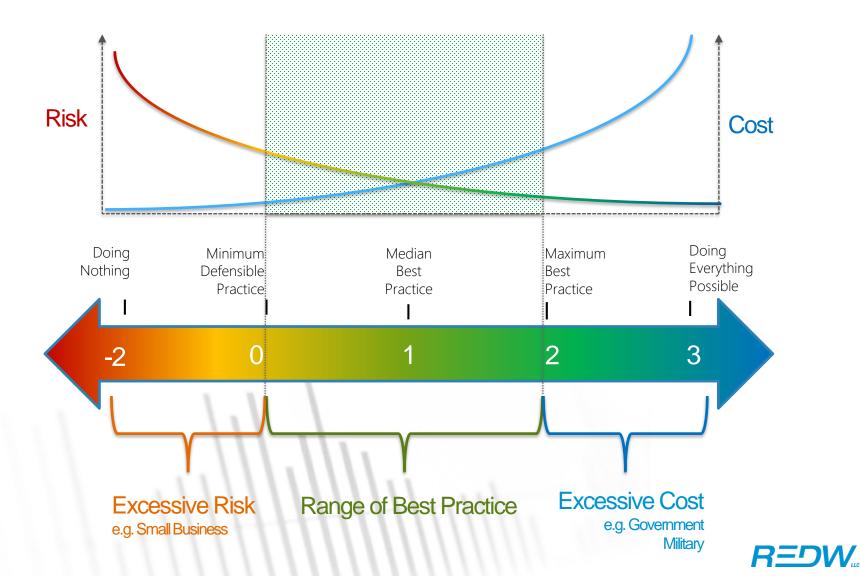


Mitigating Cyber-Risk





Balancing Risk vs. Cost



REDV... How do we come up with CyberHealth Best Practice Scoring Factors?

- 1. Peer-reviewed cyber-security journals
- 2. Court rulings on cyber-security litigation
- 3. Capabilities & costs of emergent technology
- 4. Networks of security professionals
- 5. Conferences, meetings, papers & posts
- 6. Location, size and type of organization
- 7. Regulatory compliance requirements

	CyberHealth Rapid Review Estimate	Risk Factor Average	Risk Factor Coverage	CyberHealth [©] Risk Profile Scoring Guide								
	Governance	0.3	52%									
	Governance	0.8	71%	0 = Minim	num Defe	ensible Pra	ectice		1 =	Median Be	st Practice	
	Process	-0.3	33%	An absolut						ite defensibi		
						nagement.				esents what		
	Policies & Procedures	0.4	44%	meet this b						erally doing. sidered the lo		
	Plans	0.0	56%	remediatio						t practice' ai		
	Policies	0.3	32%	negotiable	that req	uires immed	liate		tech	nology prog	resses and	
	Procedures	0.1	6%		nd not de	ferrable for	r budgetary			ilations deve while you a		
	Documentation	1.0	100%	reasons.						should be re		
								T				
	Cybersecurity Technology	0.5	58%						7			
	Firewall	1.4	100%					/				
	Email Security	1.1	80%									
	Endpoint Security	0.3	25%	Doing		linimum		Median		Maximum		Doing
	Access Control	0.6	44%	Nothing		fensible		Best		Best		Everything Possible
	Mobile/Encryption	-1.0	40%	⊿ 1		Practice		Practice		Practice		I DSSIDIE
						<u> </u>						
	Security Education & Awareness	-0.7	7%			0		1		2		3
	Administration	-1.2	0%									
	Onboarding	0.0	20%	1								1
	Ongoing (Maintenance)	-0.8	0%			/_				_\		J
					_ Y			Y		*	Y	4
	Monitoring & Assessment	0.8	48%		'			'			1	/
	Monitoring of Critical Infrastructure	1.3	67%	Exce	essive l	Risk	Range	of Best Pi	actice		ssive Cø	
	Monitoring of Security Events	0.8	55%		nall Busine						e.g. Governm	ent
	Assessment	0.4	22%								DVIIII	tary
_											/_	
	Incident Response	1.1	77%			ļ.,,					/	
	Planning	0.8	43%								/	
	Response Process	1.0	100%								- '	_
	Investigative Process	0.9	64%	2 = Optim						ssible Prac		
	Resources	1.8	100%	The secure			is			this level may rt in one dor		
				considered Best Practice. It is what higher quality organizations			to see scoring at this level across the board,					
	Insurance Coverage	1.8	100%	use to diffe	rentiate t	hemselves				es an effort		
	Planning Sixth Parts Courses	1.5	100%	from the 'p						For example y that uses r		-
	First Party Coverage Third Party Coverage	2.0	100%	above the o						ediately aler		
	Illiu raity Coverage	2.0	100%	findings. Th	is level o	f practice is		encryption	activity	is exception	al at the tim	ne
	Pacovone	0.7	80%	usually a re						vever, in a ye		
	Recovery Planning	1.3	100%	balance of leadership, talent and funding over at least a 5-year time		be demoted to Optimal Best Practice. For this reason, it is wise to monitor such practices						
	Data Protection	0.9	75%	frame.	at icust	a 5 year til	.,			on your 'wisi		
	Data Recovery	0.0	66%					consider v	vhen pric	ing drops suj	ficiently	
	Data necovery	0.0	5570									#
_	Overall Estimated Score	0.6	1111									
	Overall Factor Coverage		58%									
	Overall ractor coverage	1 1 1 1	3070									

REDW. How do we achieve resilience?

- 1. Our data
- 2. Our people
- 3. Our response
- 4. Our exposure

REDW. 1. our data





REDW... How much toxic data do you have?

- 1. Data storage became dirt cheap
- 2. It wasn't worth our time to clean up
- 3. We end up with insane amounts of data
- 4. If that data contains PII or PHI, it's radioactive
- 5. Any data you possess is discoverable by law
- 6. Ignorance is no excuse.





- 1. Inventory ALL the data you have
- 2. Decide what data you really need to do business and legally retain.
- 3. Develop a <u>comprehensive</u> Data Retention & Destruction Policy, and create a plan to get compliant within 12 months.
- 4. Hunt down data that's 'out of policy' and purge it from storage and backup tapes.

REDW. 2. our exposure

REDW. Above the Surface: Well-known cyber breach Costs

- 1. Forensic investigations
- 2. Consumer breach notification
- 3. Credit monitoring
- 4. PR/Crisis communications
- 5. Legal defense fees
- 6. Legal settlement costs
- 7. Crisis management



REDW. Below the Surface: Hidden Costs

- 1. Operational disruption
- 2. Recovery costs
- 3. Regulatory compliance fines
- 4. Cybersecurity improvements
- 5. Devaluation of trade name
- 6. Increased cost to raise debt
- 7. Lost value of customer relationships
- 8. Loss of intellectual property



Most Cyber Liability Insurance offers coverage for:

- Forensics
- PR
- Legal
- Credit Monitoring
- Business Interruption & Recovery
- Breach Coordination service

REDW. 3. our response

- data breach
- ransomware attack
- systems down

when trouble happens...



... you need responders who know what to do



REDW. We all need a Security Incident Response Plan.

- Identify the people who you can count on in a crisis
- 2. An up-to-date written, and familar plan,
- 3. Practice the process and refine the plan
- 4. Compliance with applicable regulations
- 5. Practice, practice & document
- 6. Speed is critical control the flow of information
- 7. Performance should exceed that of your peers'

4. our people

- employees
- contractors
- business associates

REDW. we are so easily hooked...





REDW...or infect our computers with ransomware.



WARNING!

Your personal files are encrypted!

11:58:26

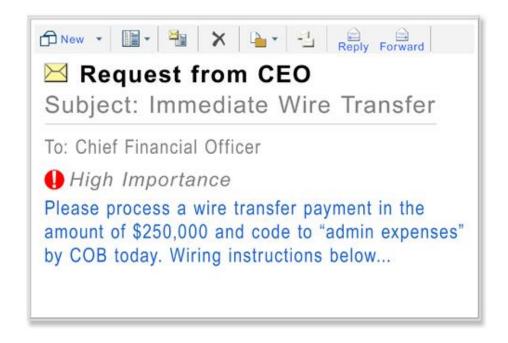
Your documents, photos, databases and other important files have been encrypted with strongest encryption and unique key, generated for this computer. Private decryption key is stored on a secret Internet server and nobody can decrypt your files until you pay and obtain the private key. The server will eliminate the key after a time period specified in this window.

Open http://maktubuyatq4rfyo.onion.link

or http://maktubuyatq4rfyo.torstorm.org

or http://maktubuyatq4rfyo.tor2web.org

REDW. wire transfer fraud.



REDW. Security Awareness Education for Your Team

"In theory, one can build provably secure systems.

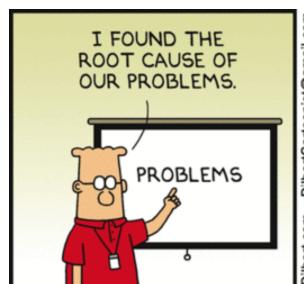
In theory, theory can be applied to practice but in practice, it can't"

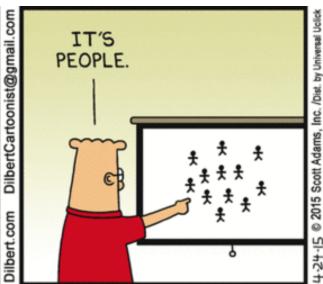
M. Dacier, Eurecom Institute

REDW. Prior 'Best Practices' at REDW

- 1. One hour live 'Security Awareness Training' every 1 or 2 years. 1 hour of CPE, but no assessment or follow-up training
- 2. New hires required to watch a video of the most recent training during their first week.
- 3. Agency 'temps' have no formal training
- 4. Independent Contractors sign a NDA and a BAA, but receive no training.

Result: Infections, crypto et. al.



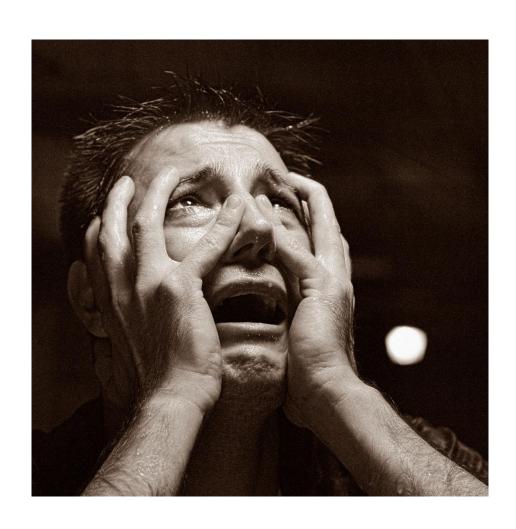








REDV... We were sitting ducks...



REDV... We needed to come up with an awesome PLAN...



REDV... The Plan and the Processes

- 1. Understand our existing culture and capacities
- 2. Select solution, validate & perform due diligence
- 3. Establish budget and obtain funds
- 4. Formulate a plan and schedule
- 5. Present to ITGC & Board of Directors for approval
- 6. Begin rollout & solicit feedback
- 7. Create policy for compliance, enforcement & sanctions
- 8. Plan for reporting and analysis of results
- 9. Incorporate new behavior into firm culture

Gartner.

Figure 1. Magic Quadrant Security Awareness Computer-Based Training



Source: Gartner (October 2015)

Figure 1. Magic Quadrant for Security Awareness Computer-Based Training



Source: Gartner (October 2017)

REDW... The Components of the Plan

- 1. A continuous education and assessment program
- 2. Immediate assessment and feedback
- 3. A more robust process for onboarding traditional employees and remote employees
- 4. A new process for onboarding Independent Contractors and Temporary workers
- 5. Educational time logged to a new time keeping service code
- 6. Monthly reporting to Tech Champions and Department Heads on compliance and education
- 7. Monthly reporting to the ITGC and the Board of Directors

REDW. Cybersecurity Education Schedule

	Quar	ter 4	Quarter 1				Quarter 2			Quarter 4		
Activity	November 2015	December 2015	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016
Communications	Send Initial Internal Communication to staff					Send Midcycle Internal Training Program Successes to Date						Send End of Cycle Internal Training Program Successes to Date
PhishGuru Campaign	Blind Phish for Baseline		Phish w/AutoEnroll - Email Quota - URL Training AutoEnroll		Phish - eFaxx		Phish w/AutoEnroll - Package Delivery - Anti-Phishing Phil AutoEnroll		Phish - Password		Phish - Virus Alert	
Training Platform Assignment	Train - Email Security (didn't train this month)	Train - Safer Web Browsing	Train Non- Clickers - URL Training	Train - Physical Security	Train - Social Engineering	Train - Security Beyond the Office	Train Non- Clickers - Anti- Phishing Phil	Train - Mobile Device Security	Train - Safe Social Networks	Train - Password Security	Train - Security Essentials	Train - PII
Training Reminders	November 15 and November 25	December 11 and 21	January 15 and January 25	February 15 and February 25	March 16 and March 25	April 16 and April 25	May 15 and May 25	June 15 and June 25	July 15 and July 25	August 15 and August 25	September 16 and September 25	October 16 and October 25
CyberStrength Assessment	CyberStrength					Short CyberStrength					CyberStrength	

REDW. Education & Assessment

"Amateurs hack systems, professionals hack people"

Bruce Schneier

REDV... Wombat Components

1. CyberStrength

- Library of 20 Security Awareness Training Modules with in-line assessments (10 - 20 minutes)
- Library of 180+ canned questions to build custom Security Awareness Assessments
- Create custom questions for any type of assessment such as general technology literacy

2. PhishGuru / ThreatSIM

- Library of 100+ phishing emails in 8 categories along with a custom option.
- PhishAlarm / PhishAnalyzer

REDW. CyberStrength Training Assignments



Avoiding Dangerous Attachments

identify and avoid dangerous email



Avoiding Dangerous

Recognize common email traps and avoid dangerous links



Data Entry Phishing

Learn to identify and avoid scams that request personal or sensitive data



Data Protection and Destruction

Use portable storage safely and properly discard sensitive data



Safer Web Browsing

Stay safe on the Internet by avoiding risky behavior and common traps



Security Beyond the Office

Avoid common security mistakes while working at home or on the road.



Security Essentials

Recognize security issues commonly encountered in daily business and personal activities.



Security Essentials: Executive

Recognize and avoid threats encountered by senior managers at work and at home



Email Security

Learn to identify phishing emails, dangerous attachments, and other email sname.



General Data Protection Regulation

Learn how protecting personal data changes under the European General Data Protection Regulation.



Introduction to Phishing

Recognize email traps and avoid phishing scams



Mobile App Security Learn how to judge the safety of

mobile apps.



Social Engineering

Recognize and avoid social engineering scams



Travel Security

Explore how to keep data and devices safe when working in airports, in hotels, at conferences, and in other public spaces



Learn how to spot fraudulent URLs

URL Training USB Device Safety

Protect yourself, data, and systems when using USB devices



Mobile Device Security Use Important physical and technical

Use important physical and technical safeguards to protect your devices and your data.



Password Policy

Learn how to create passwords compliant with your company's policy.



PCI-DSS

Recognize warning signs and improve security of credit card data



Diny

Learn how to protect people and property.



Anti-Phishing Phil

Learn how to spot phishing attacks by identifying traudulent URLs.



Anti-Phishing Phyllis

Learn how to recognize phishing emails by identifying red flags.



Ы

Protect confidential information about yourself, your employer and your customers



Protected Health Information

Learn why and how you should safeguard Protected Health Information (PHI).



Protecting Against Ransomware

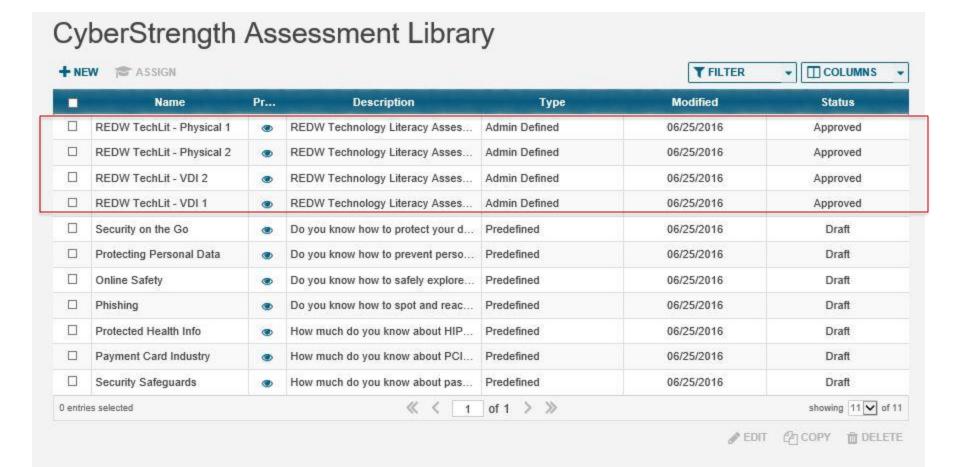
Learn to recognize and prevent ransomware attacks.



Safe Social Networks

Learn how to use social networks safely and responsibly.

REDW... CyberStrength Assessments



REDW. Email Notification of Assignment

From: Tech Education [mail to:TechEducation@REDW.COM]

Sent: January 15, 2018 9:58 AM

To: Jennifer Moreno [mail to:JMoreno@redw.com]

Subject: You have been assigned Cyber Security Training

Hi Jennifer,

The REDW ITGC Technology & Security Awareness Platform (a.k.a. Wombat) provides educational tools to assess and improve your technology and cyber security skills both at work, and at home.

You have an assignment awaiting your completion. Please click on the link below to start your assignment, 2018 January - Dangerous Links, which is due by 02/02/2018.

https://redw.securityeducation.com/ticketAuth/a56af384983841edb29ed5e425fdd32c

Once you have finished the cyber security assignment please enter your time to the Administrative client and use the Technology Training service code 90024.

If you have any questions or any feedback, please reach out to us at techeducation@redw.com.

Thank you, REDW Tech Education Team

REDW... Example Assignment Question

cat1049.174

Choose one of the following answers:

As you are typing a long email, Outlook freezes and become unresponsive, but your computer otherwise seems seems OK. You don't want to lose your work, so what can you do?

Use the Snipping Tool to make a copy of your work

Use Task Manager to end Outlook and hope that a draft of your work has been saved

Invoke the magical power of digital deities to heal Outlook

All of the above

REDW. Example Assignment – Correct Response



Use the Snipping Tool to make a copy of your work

Use Task Manager to end Outlook and hope that a draft of your work has been saved

Invoke the magical power of digital deities to heal Outlook

All of the above

Good job!

The best first step is to take a Snip of your work. The other options might work, but often don't

REDW. Example Assignment – Incorrect Response

Use Task Manager to end Outlook and hope that a draft of your work has been saved

Invoke the magical power of digital deities to heal Outlook

All of the above

Oops!

The best first step is to take a Snip of your work. The other options might work, but often don't

Next

REDW Part 1 - Onboarding

- 1. ALL new employees, temporary and independent contractors read & sign a 'Welcome to REDW Technology' document before they can access REDW Protected Data.
- 2. Enroll all new workers in 4 training modules to be completed the first week
 - URL Training
 - PII
 - Security Essentials
 - Anti-Phishing

REDW. Part 2 - Proactive Security Awareness Training

Bi-annually Firm-wide CyberStrength Assessments Twenty (20) Security Awareness Training modules

- Training modules to be assigned bi-monthly
- Allow 3 weeks to complete with a completion reminder after 2 weeks

Annual training and assessment schedule

REDW... Part 3 - General Technology Literacy

- 1. Technology Literacy Assessment (completed)
 - Assigned to new hires after 30 days
- 2. Future REDW Technology Literacy Assessments
- 3. Can customize assessment questions

REDW. Phishing

"Phishing is a major problem because there really is no patch for human stupidity"

Mike Danseglio Microsoft

REDV... Wombat Components

1. CyberStrength

- Library of 17 Security Awareness Training Modules with in-line assessments (15 20 minutes)
- Library of 156 canned questions to build custom Security Awareness Assessments
- Create custom questions for any type of assessment such as general technology literacy

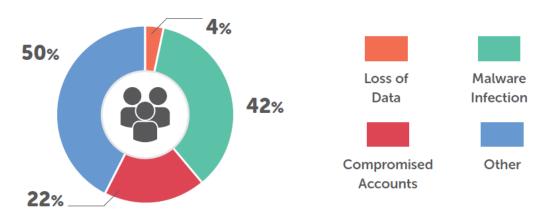
PhishGuru / ThreatSIM

- Library of numerous phishing email templates in 10 categories along with a custom option.
- PhishAlarm / PhishAnalyzer

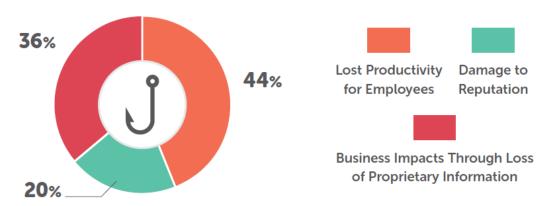
What Is the Impact of Phishing on Your Organization?

The aftermath of phishing attacks can be devastating to an organization, whether through loss of employee productivity, damage to reputation, or money lost. We surveyed security professionals to understand how they viewed the impact of phishing on their organization and how they measured the cost of phishing incidents.

What, if any, of the following impacted your organization? (choose all that apply)



How do you measure the cost of phishing incidents?



REDW... Phishing Schedule

	Quar	ter 4		Quarter 1			Quarter 2			Quarter 3		Quarter 4
Activity	November 2015	December 2015	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016
Communications	Send Initial Internal Communication to staff					Send Midcycle Internal Training Program Successes to Date						Send End of Cycle Internal Training Program Successes to Date
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Training Platform Assignment	Train - Email Security (didn't train this month)	Train - Safer Web Browsing	Train Non- Clickers - URL Training	Train - Physical Security	Train - Social Engineering	Train - Security Beyond the Office	Train Non- Clickers - Anti- Phishing Phil	Train - Mobile Device Security	Train - Safe Social Networks	Train - Password Security	Train - Security Essentials	Train - PII
Training Reminders	November 15 and November 25	December 11 and 21	January 15 and January 25	February 15 and February 25	March 16 and March 25	April 16 and April 25	May 15 and May 25	June 15 and June 25	July 15 and July 25	August 15 and August 25	September 16 and September 25	October 16 and October 25
CyberStrength Assessment	CyberStrength					Short CyberStrength					CyberStrength	

REDW... The Blind Phish Dilemma

Pro: obtains the most accurate baseline of behavior vs.

Con: perceived to be deceptive by actively tricking users

We decided that the seriousness of the threat justified the perceived risk of deceptive practice

REDW... Example Phish



emailcenter <emailcenter@maildeliverysystem.net>

Jennifer Moreno

Thu 3/15

Undelivered eMail

Retention Policy Email Retention (2 years)

Expires 3/14/2020

f Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

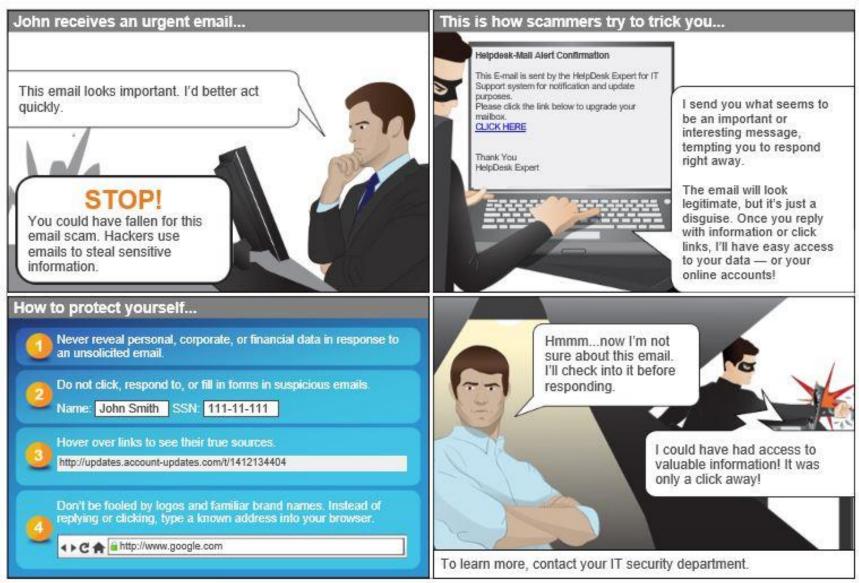
Our server Detected [19] undelivered mail messages on Thursday, March 15, 2018, awaiting approval to be delivered.

Please note that this may cause mailbox malfunctions. Therefore, follow instruction below:

- 1. Proceed to allow messages to Inbox
- 2. Proceed to mail cleaning with our admin server.

Note: Messages will be lost if above actions are not taken

Oops! The email you just responded to was a fake phishing email. Don't worry! It was sent to you to help you learn how to avoid real attacks. Please do not share your experience with colleagues, so they can learn too.



Oops! The email you just responded to was a fake phishing email. Don't worry! It was sent to you to help you learn how to avoid real attacks. Please do not share your experience with colleagues, so they can learn too.

Stay Alert for Dangerous Attachments

Downloading infected files puts you and your employer at risk



This was a test — a dangerous attachment could have given hackers access to your computer, compromised your company's network, or infected your system with malicious software

Beware of These Warning Signs

- · Unsolicited emails that contain attachments
- Random requests to download forms, fill them out, and return them
- · Free software or media files that seem too good to be true

Email Safety Tips

- · Don't download any attachments in suspicious emails
- Delete suspicious emails with attachments without responding
- Ask your IT department for advice if you're unsure

Acknowledge

REDV... Part 4 - Reactive Security Awareness Training

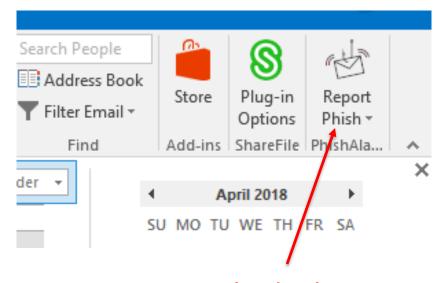
Auto enrollment for failing a Phish

- Teachable moments provide immediate feedback
- Allow only a few days to complete the auto-enrolled Anti-Phish training module

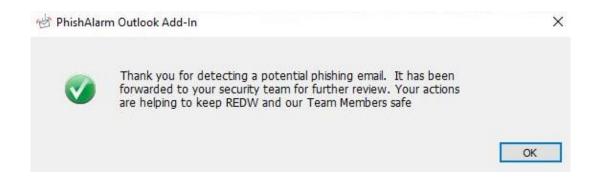
Auto enrollment for training for underperforming the CyberStrength Assessment

REDV/ PhishAlarm

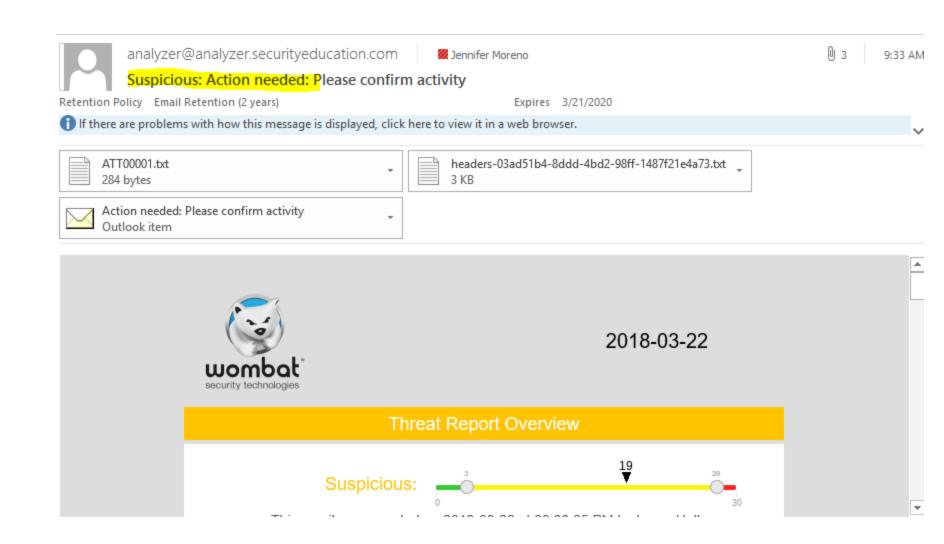
PhishAlarm makes it easy to deal with suspicious emails. Just one-click, and no need to contact tech support..



Outlook Plug-In



REDW... PhishAnalyzer



REDW. Reporting

"There is no castle so strong that it cannot be overthrown by money"

Cicero – 63 BC

REDW. Individual CyberStrength Assessment Report

Scores By Module

Module Name	Best Score	Last Score
Anti-Phishing Phil	97%	97%
Anti-Phishing Phyllis	91%	91%
Email Security	91%	91%
Passwords	100%	100%
Safer Web Browsing	100%	100%
CyberStrength	100%	100%
PII	87%	80%
Data Protection and Destruction	93%	93%
Social Engineering	100%	100%
URL Training	91%	91%

Page 1 of 2 > >>

User Assignment Status

Assignment	Status	Modules Remaining
Tech Literacy IT	Completed	
Dec 2015 - Safer Web Browsing	Completed	
Feb 2016 - URL Training	Completed	
April 2016 - Email Security	Completed	
May 2016 - Anti-Phishing Phil	Completed	
June 2016 - Security Essentials	Completed	
July 2016 - PII	Completed	
August 2016 - Social Engineering	Completed	
October 2016 - Physical Security	Completed	
REDW 2016 CyberSecurity Assessment	Completed	

Page 1 of 2 > >>

REDV Module Assignment Completion

REDW

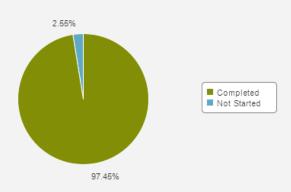
Assignment Details

Assignment: 2017 Year End Cyberstrength Assessment End Date: 01/10/2018

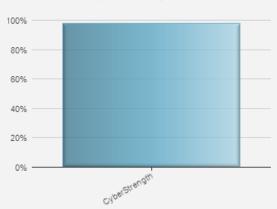
Total Users: 196

Change Report Criteria

Assignment Status



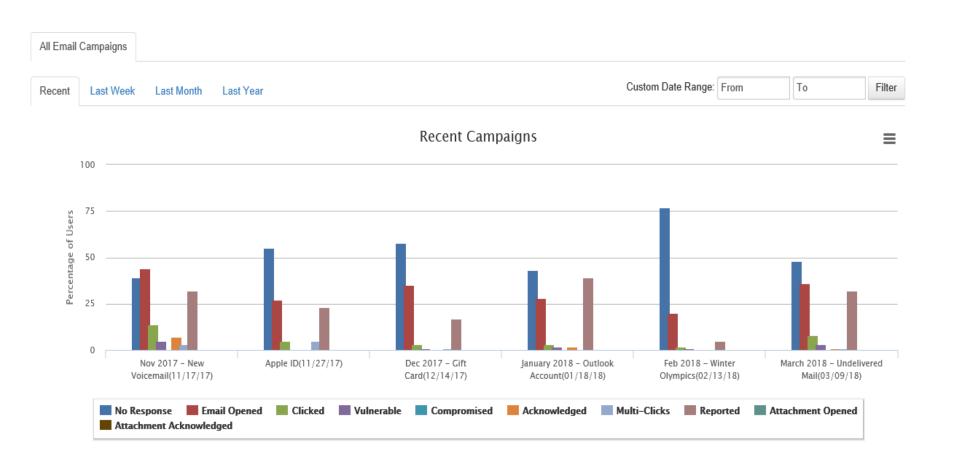
Completion % By Module



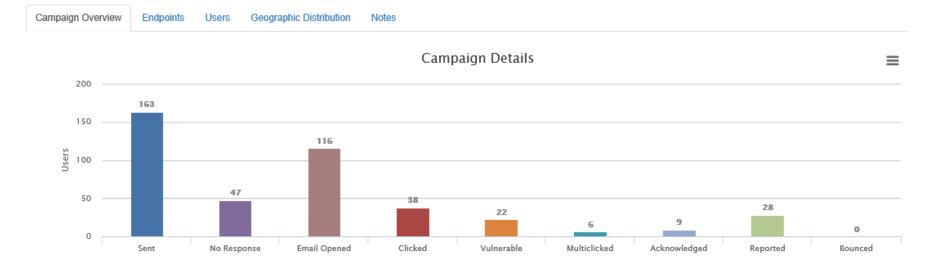
Assignment Completion By User

First Name	Last Name	Overall	CyberStrength	
Jennifer	Moreno	Completed	Completed	

REDW... ThreatSim Aggregate Campaign Report

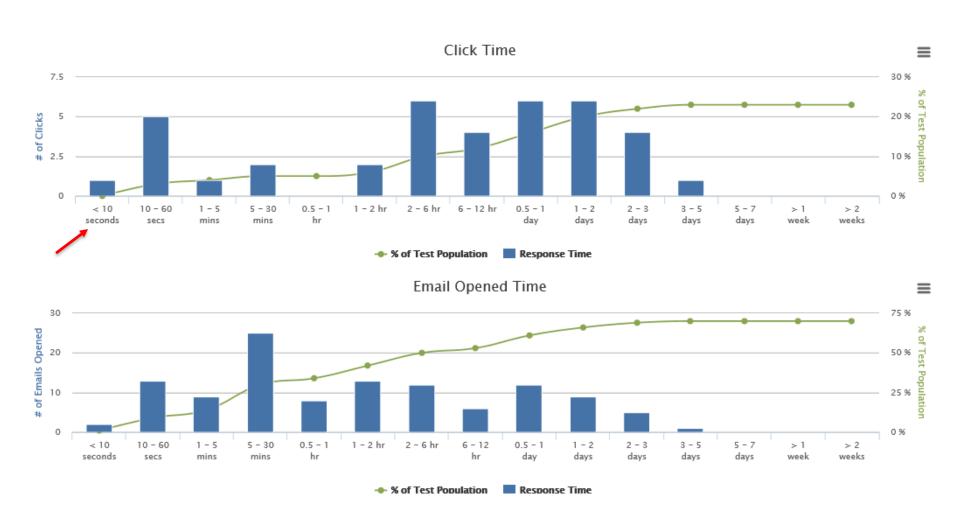


REDW... ThreatSim Campaign Details



Campaign statistics may be delayed up to 5 minutes

REDW... ThreatSim Campaign Detail

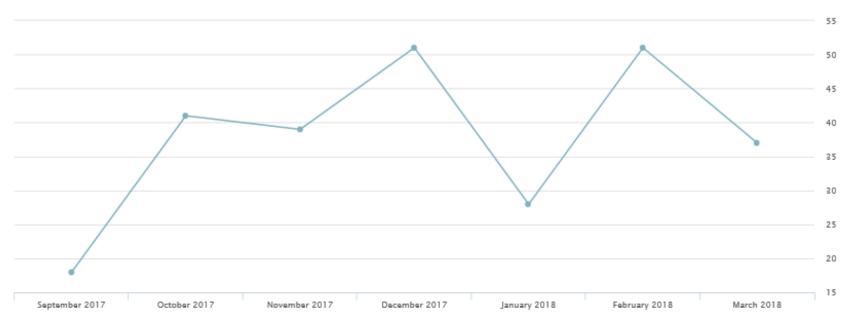


REDW. PhishAnalyzer Reporting

Total Potential Phish This Month

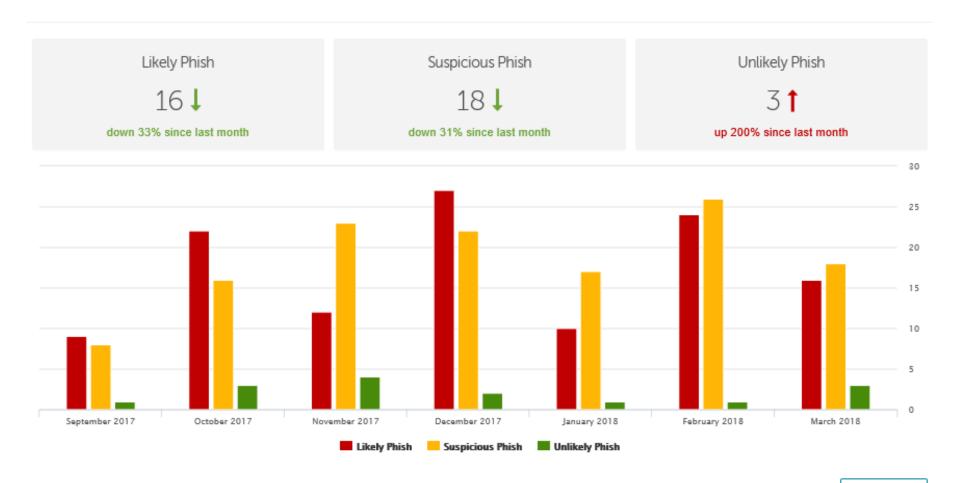
37 1

down 27% since last month



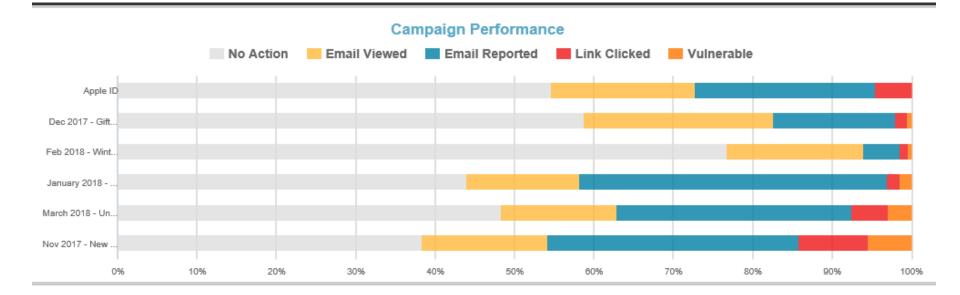
Download

REDW. PhishAnalyzer Reporting



REDW... So how's all of this working out?

Campaign Comparison						
Campaign Name	Start Date	End Date	Status	Sent	% Sent	Failure %
Nov 2017 - New Voicemail	2017-11-17	2017-12-01	Completed	183	100%	14%
Apple ID	2017-11-27	2017-12-01	Completed	22	100%	5%
Dec 2017 - Gift Card	2017-12-15	2017-12-27	Completed	189	100%	2%
January 2018 - Outlook Ac	2018-01-19	2018-01-29	Completed	196	100%	3%
Feb 2018 - Winter Olympic	2018-02-14	2018-02-24	Completed	198	100%	2%
March 2018 - Undelivered	2018-03-09	2018-03-24	Sent	199	100%	8%

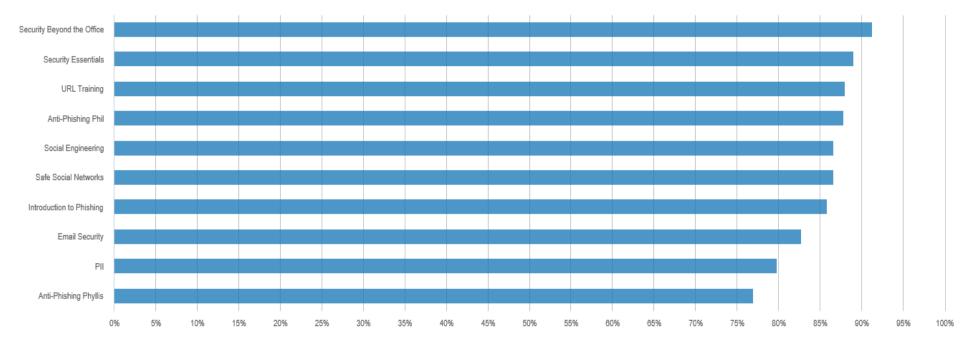


REDW. Making the grade in 2017: A- 91%

Summary						
Modules	Unique Users	Module Attempts	Average Attempts per Module	Modules Completed	% of Modules Completed	Overall Average Score
19	189	1,099	58	1,053	96	91
Vigualization						

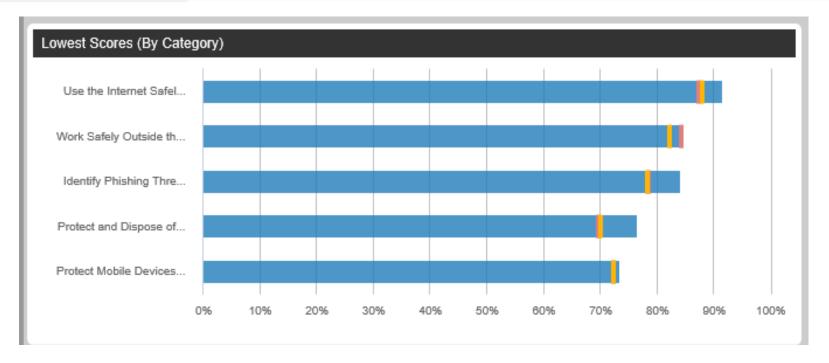
Visualization

Average Score By Module

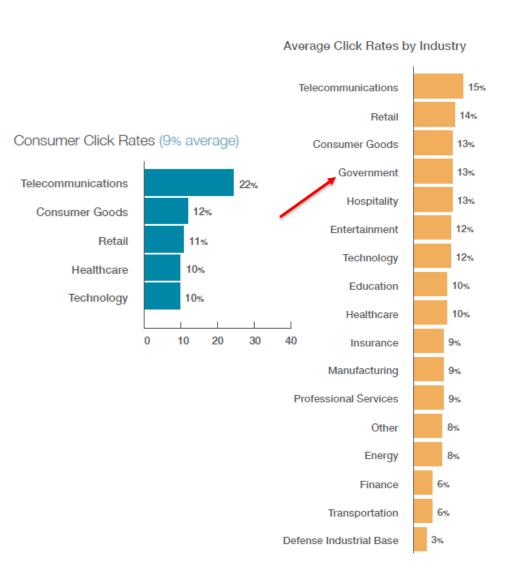


REDV... Assessing our Risk – Where do we need improvement?

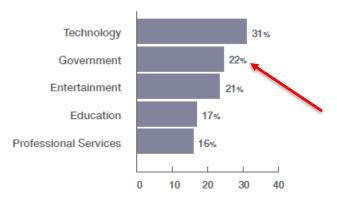
Category Information				
Category	% Correct ▲	% Incorrect	Average Score	
Protect Mobile Devices and Information		74%	26%	73%
Protect and Dispose of Data Securely		77%	23%	71%
Identify Phishing Threats		84%	16%	85%
Work Safely Outside the Office		84%	16%	91%
Use the Internet Safely		92%	8%	93%
Protect Against Physical Risks		93%	7%	96%



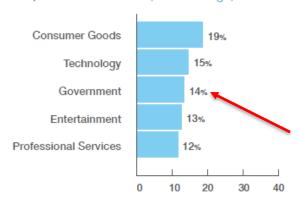
REDV/ Wombat State of the Phish 2018



Worst Performing Industries by Template Type Commercial Click Rates (12% average)



Corporate Click Rates (10% average)



REDV... Wombat State of the Phish 2018

Do you measure	2014	2015	2016	2017
your organization's susceptibility to phishing?	61%	63%	66%	76%
, in the second	YES	YES	YES	YES
Do you train end users	2014	2015	2016	2017
on how to identify and avoid phishing attacks?	86%	92%	92%	95%
	YES	YES	YES	YES

54%

of infosec professionals surveyed said they have been able to quantify a reduction in phishing susceptibility based on their training activities.

REDW. Wombat State of the Phish 2018

Consequence Models

45%

of organizations said there are ramifications if their users continue to click on simulated phishing attacks.



What types of consequences are enforced in your organization?

We asked infosec professionals about the types of consequences (if any) they have in place to incentivize employees to avoic becoming 'repeat offenders.' (Note: Multiple answers were permitted.)

74%

25%

Counseling

Removal of

from Manager

Access to Systems

11%

5%

Termination

Monetary Penalty

REDW... Ten Findings & lessons learned

- 1. Understand the prevailing culture
- 2. Educate leadership on the risk of uneducated workers
- 3. Reach out and discuss ideas with every department, every constituency
- 4. Sell the program by reminding workers that this will help them personally
- 5. Understand and plan for generational differences about personal privacy
- 6. Stand firm on what you believe your firm minimally needs
- 7. Plan early to deal with non-compliance with meaningful sanctions
- 8. Zero tolerance for those who fail to complete remedial programs
- 9. Accept that no software is perfect, and clearly understand limitations
- 10. Measure and report success as well as failure

REDW. 2008 – We hoped for the best...



"On the Internet, nobody knows you're a dog."

REDW. 2018 – We prepare for the worst...

"We only need to be lucky once. You need to be lucky every time"

The IRA to Margaret Thatcher, after a failed assassination attempt.



The 5 facts every Government Administrator should know

REDW. #1 of 5 things every Government Administrator should know



1. Cyber-attacks and security breaches *will* happen, and *will* adversely impact your organization.

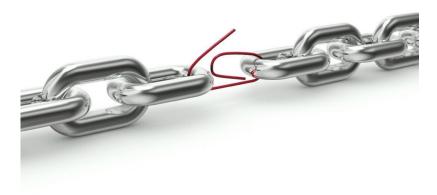
The average cost of a breach is \$4.9 million

REDW #2 of 5 things every Government Administrator should know



2. Over 60% of all data breaches originate from unauthorized access by a current or former employee, or third-party suppliers

REDW #3 of 5 things every Government Administrator should know



3. Compliance with one or more government regulatory standards (e.g. ISO 27001, NIST 800-171) is good, but not sufficient to ensure real cybersecurity

REDW #4 of 5 things every Government Administrator should know



4. Cyber liability insurance premiums are *significantly* increasing in cost and often do not cover all damages caused by a cyber breach.

REDW #5 of 5 things every Government Administrator should know



5. To achieve real information security and data resilience, it is vital to combine Managed Monitoring, Detection, and Response services with comprehensive disaster recovery and business continuity plans.

REDV... Final Summary and Action Steps

- 1. Find out where you really stand. Perform or contract an assessment of your cyber-resilience.
- 2. Inventory all data, especially regulated (PII or PHI) personal data. Expire, or prune all unneeded data per retention policy
- Regularly practice and update your Security Incident Response Plan
- 4. The most valuable investment is the security awareness and education of employees, contractors & partners
- 5. Set the right tone at the top. Leadership matters.
- 6. Secure sufficient Cyber-Liability insurance coverage
- 7. Continuous monitoring & assessment is vital

REDW. thank you!



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