

Driving Real Behavior Change

The Complete Guide to Building a Security Awareness Program that Works



Introduction: Putting People at the Center of Your Cybersecurity Efforts

Today's most potent cyber threat isn't a zero-day vulnerability, new malware or the latest exploit kit. It's your own users.

That's because today's attacks target people, not IT infrastructure. No matter what form they take, most cyber attacks need a human victim to help activate them. They trick people into opening malicious attachments, clicking unsafe URLs, handing over account credentials and even taking direct action—such as wiring money or sending sensitive data.

Why user education is key

According to Verizon's *2019 Data Breach Investigations Report*, 94% of malware-caused data breaches are delivered to people through email.¹ And attacks such as business email compromise (BEC) and other forms of financial fraud exploit people directly—no malware needed.

User awareness training is one of the most important things you can do to secure your organization. By teaching your users how to recognize, reject and report attempted phishing, you can create a strong last line of defense against today's biggest cyber threats.

What you'll get from this guide

Starting a new training program may seem daunting. Maintaining one that keeps your users engaged, changes their behavior and

reduces your organization's exposure to threats might be an even bigger challenge.

We're here to help.

This guide shows you how to create and sustain an efficient and effective cybersecurity education program—regardless of your program maturity, vendor or obstacles you may face. It provides key facts, effective strategies, valuable resources and practical tips for security leaders at every stage of the security-awareness journey.

Here are a just a few of the questions we'll help answer:

- How do I get buy in? Who should I work with internally?
- What should I do? How often?
- How do I engage my people?
- How do I measure and share success?

A people-centric model for measuring and mitigating user risk

Just as every person is unique, so is their value to cyber attackers—and their risk to your organization. At Proofpoint, we have created the Very Attacked People (VAP)TM model to measure and mitigate three distinct aspects of user risk.

V Vulnerability

This sizes up how likely your user is to fall victim to an attack due to their susceptibility to attackers' tactics or risky digital habits. This can be measured by knowledge assessments, security awareness training quizzes and simulated phishing attacks

A Attack profile

This quantifies the volume and sophistication of attacks and attackers targeting the user. It may also take into account related or similar users inside and outside of the organization.

P Privilege

This weighs the value and sensitivity of data, systems and resources the user has access to. It can also be viewed as a way of measuring how much damage a successful attack against that user could cause.

Security awareness training is most directly related to user vulnerability. But your program should also take your users' attack profile and privilege into account. This insight helps you take a people-centric approach to user awareness that includes tailored, proactive and targeted follow-up training.

¹ Verizon. "2019 Data Breach Investigations Report." July 2019.

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SECTION 1

What to Know Before You Start

You've done it. The procurement process is finally over. Your new security awareness vendor sends you a link to your software, and the world is yours. You're ready to start launching simulated phishing attacks, gathering data, assigning training and using all the amazing features and content you've seen from your product demos.

You send out the announcement about your security awareness program. Suddenly your inbox is flooded with replies:

- Who approved this exercise?
- I'm talking to my VP about this.
- Do I really need to do this?

These are among the first obstacles our customers typically face. But they also point the way to one early step you can take to ensure a successful security awareness program: get user buy-in.

Getting users on your side

A common theme we hear from customers is some users just not wanting to be involved in security awareness training. Maybe the simulated attacks make users feel vulnerable. Others might see training as just another corporate exercise and distraction from their "real" work.

Here are some ways to overcome this common obstacle:

- **Communicate with user benefit in mind.** When you're drafting user-facing communications be aware of the "What's in it for me?" question users will be asking in their head. Bring up real-world examples such as identity theft, stolen credit cards, account breaches and other stories. Show how training will help users in their personal life. This will make the program more relatable and improve participation.
- **Balance assessments and training.** Simulated phishing assessments are popular components of programs. But sometimes they can be overused. Many customers have spoken to us about the need to balance assessments, training and awareness activities. As one customer told us: "When I only send out phishing simulations, users think we're trying to trick them." It's good to have a balance of both in a program, along with awareness and other activities such as contests.
- **Have a friendly face at company events.** Computer-based assessments and training can come off as impersonal. Having a booth at large company events or doing virtual sessions like webinars can give users a more personal connection. Start with an employee kick-off, set up learning events and provide helpful resources. Consider giving out swag or even just coffee. These steps also humanize the program with a friendly face and name.



A common theme we hear from customers is some users just not wanting to be involved in security awareness training.

Overcoming resistance

Based on conversations with customers, non-engaged users typically fall into two camps:

- **Repeat offenders:** users who continuously fail phishing simulations and other assessments
- **Non-participants:** users who refuse to take part in training

You may find yourself having tried everything to address these users—emails, in-person chats, discussions with managers, or even taking away network access. If you still can't change behavior, it is not the end of the road.

One customer's strategy was having the CISO or other leader schedule 15 minutes on these users' calendars to talk about:

- The importance of user behavior and security awareness
- How the department is trying to help protect the company and users in personal situations
- Why the employee should commit to become more vigilant or take part in training to help

This kind of interaction leaves a strong impression. It conveys the importance of good behaviors and stronger participation in more personal, tangible way.

The double-edged sword of user-reported phishing



Improved reporting will be the natural outcome of an effective security-awareness program.

At Proofpoint Protect 2019, our annual conference, a customer raised his hand after a presentation.

"My users don't report phishing emails to our abuse mailbox," he said. "It's all spam or legitimate messages. Our team can't keep up. How should we handle this?"

Abuse mailboxes are a great way to reduce risk. But they are notoriously time-consuming to manage. We have found two solutions to this common obstacle:

- Help users get better at spotting true phishing email
- Automate the process of analyzing and responding to reported phishing email

Improved reporting will be the natural outcome of an effective security-awareness program. Many customers see improved reporting—more true malicious messages and fewer false positives—about six to 12 months after they deploy a consistent program that trains users to identify phishing emails.

Automating email analysis and response can ease workloads by automatically analyzing and enriching through sandboxing and threat intelligence. This reduces IT overhead by automatically removing malicious content from users' inboxes or closing out false positives.

Another benefit of automated response is that users can receive customized feedback that lets them know whether the message they reported was truly malicious. This step helps educate users and improves security, reinforcing positive behavior with a simple thanks for reporting malicious email.

SECTION 2

Timing Your Program

Timing is not an isolated detail for your security awareness training program—it is the sum of all your efforts. It is the right training, the right people, and many other tactical, organizational and strategic components that produce the composite result of “the right time.”

Every organization is unique, and no two training programs will be the same. But yours should include all the following elements:

- Defining training needs
- Identifying users with specific training needs
- Defining activities
- Creating and managing schedules
- Communicating and testing first steps
- Defining frequency and timing of program activities

Recommended order of activities: a checklist

The more diligence and planning you apply to your program, the more successful your program will be. Here are key steps that have proven helpful for our customers.

1. Define training needs.

People-centric cybersecurity starts with measuring user risk. [User assessments](#) provide insight on where users might be most vulnerable—and what training assignments they needed to improve their understanding of critical topics such as phishing, data protection, mobile security and more.

Risk doesn't exist in a vacuum. A key part of identifying training needs is understanding the current threat landscape. This is where [threat intelligence](#) plays a critical role. Timely real-world threat intelligence helps you understand current and emerging threats users may face.

2. Identify user and groups who may need a different curriculum or training tailored to their needs.

A central tenet of people-centric cybersecurity is that every user is different. A one-size-fits-all defense won't work in today's environment—and that includes security awareness programs.

These groups may require tailored or specialized training:

- **VAPs:** Users who pose an elevated risk because they're especially vulnerable to cyber attackers' tactics, are more heavily targeted in attacks, or have access to valuable data, systems or resources.



A central tenet of people-centric cybersecurity is that every user is different.

A VAP report from Proofpoint Targeted Attack Protection



- **VIPs:** C-level executives, board members and high-profile staff who may need specific training and guidance because of their importance to the organization. Many VIPs may also be VAPs.
- **Designated roles and departments:** Users in human resources, finance, legal, compliance, development or other roles may need legally mandated or other specific training. Consider different knowledge assessments and simulations for these groups as your training program matures.

3. Define key activities to include in your program.

A successful training program has the right mix of assessments, training, support materials, communications and virtual or in-person activities. Here are elements you should consider for yours:

- User assessments to gauge knowledge and vulnerabilities. These may include knowledge assessments and simulated phishing, USB and smishing (SMS/text phishing) attacks
- Computer-based training based on user needs and the current threat landscape
- Awareness activities (posters, webinars, newsletters, videos) to introduce concepts and reinforce key messages
- In-person and virtual activities such as lunch-and-learns or webinars. Get creative. For example, some of our customers have created cybersecurity escape rooms that have been successful.

4. Test and communicate first steps.

For many organizations, a comprehensive user training program might be a big change. Start with a small group of users to work out any kinks. Telegraph first steps early and often to everyone. Keep surprises to a minimum.

Two months before launch

Send a test phishing simulation to a small “in the know” group to reveal any hidden technical issues. Then send a moderately difficult baseline phishing test to all employees.

For now, send users who fall for your phishing lure to a 404 “page not found” site. (Later, you’ll send users who click to an educational landing page.)

One month before launch

Announce the program to users. If you’re deploying an [email reporting add-in](#), explain its purpose and how to use it. And if you have access to content such as posters, images or other security awareness materials, post them around the office or on a wiki about your program.

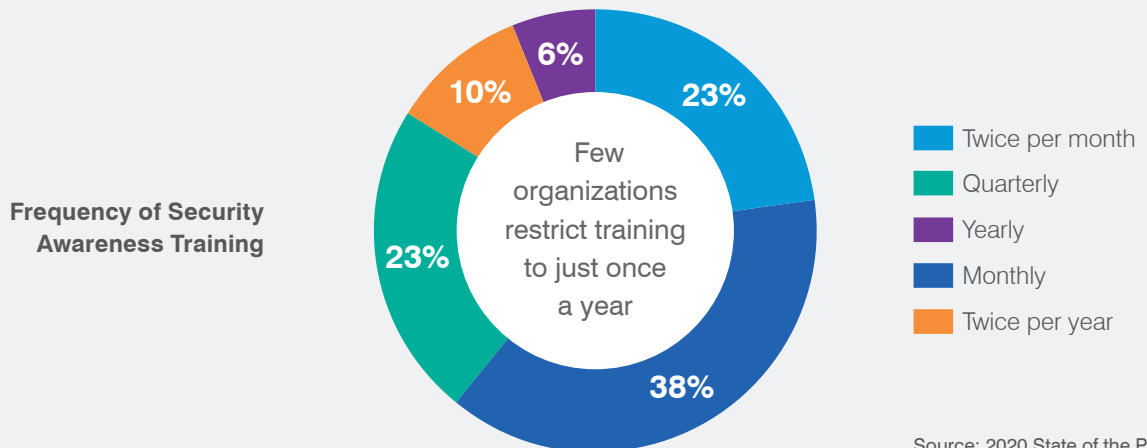
5. Define the frequency and timing of program activities.

Again, timing is everything. We recommend the following cadence for your security awareness activities:

- Send a phishing test every four to six weeks. Mixing up the types of themes and lures used.
- Use auto-enrollment on phishing tests at least once a quarter. Use a targeted follow-up training module, depending on the type of attack sent.
- Review VAP reports monthly or bimonthly. Depending on what it reveals, decide who should receive targeted training and which training content to use.
- Assign organization-wide training at least quarterly.
- Repeat broad knowledge assessments and phishing tests at least once a year to compare to baseline assessments.
- To reinforce learning retention, schedule at least bi-annual security awareness activities such as webinars, contests or (if possible) in-person activities.

Create a yearly framework to schedule the components and timing of training activities. Stay flexible, adjusting your schedule as the broader threat landscape changes.

Our [2020 State of the Phish](#) report found that security awareness training has progressed beyond yearly and quarterly activity to become a monthly or even bi-monthly event. We recommend monthly or more frequent training, including targeted training, awareness campaigns and knowledge assessments.





The threat landscape is constantly evolving. That's why your security awareness program needs a continuous approach.

When to make a change

The threat landscape is constantly evolving. That's why your security awareness program needs a continuous approach. From the initial assessment baseline, future assessments can help track user proficiency and help you plan ways to reduce risk.

Here are situations that call for changing the frequency or order of your training activities:

- **When specific user threats become more prevalent or attackers use a specific brand or lure.** Modify assessment content such as simulated phishing campaign templates or use threat-driven educational content to better manage the risk.
- **If your organization experiences an event, such as a data breach.** Consider updating your planned activities and frequency of communication, assessments and training related to that event.
- **If new laws or regulations require more training.** Follow up with a customized knowledge assessment to see how users have retained that training content.
- **When your organization releases or updates a policy or has doubts about user knowledge of an existing policy.** A customized knowledge assessment can help you find gaps in user understanding and guide training efforts.
- **If a security awareness program stopped for more than six months.** In this case, it may make sense to relaunch the program to ensure users understand its context and importance.

We do not recommend ramping up the training frequency too much—even with repeat offenders who struggle with assessments. Monthly phishing assessments and selectively enrolling users who “fail” into a single training, is a reasonable, targeted approach. But assigning those users to four training sessions may feel like punishment and cause them to resent the program.

Above all, don't try to do everything all at once. Start with the proper analysis up front, backed with threat intelligence and assessments. From there, work throughout your organization to build a realistic plan that everyone can embrace.

SECTION 3

Why Engagement Is Critical



Keeping users engaged is critical to a successful program.

It might seem obvious that security awareness training is inherently a people-centric effort. It's aimed at equipping people to recognize attacks that target them and changing user behavior.

That's why keeping users engaged is critical to a successful program. But even the most well-intentioned program can grow arduous when people don't have rich and meaningful experiences.

The most successful programs:

- Using branding to make their relevance clear to users
- Use scientifically proven learning principles to change behavior
- Reinforce training with a diverse mix of content and media
- Enlist champions across the organization for support and improvements
- Guide users with the right balance of incentives and consequences

Think of these five principles as pillars of a framework for an effective program that your users value. Customers across a wide swath of industries have used these concepts to create security awareness training programs that reduce risk, cut costs and support data privacy compliance.

Brand your program

The right name can help users understand what your security awareness training program is for and why it should matter to them.

For instance, your organization may need users to treat EU customer data with extreme caution to comply with General Data Protection Regulation (GDPR). A title as plain and forgettable as "GDPR training" may not spark the user engagement you need to inspire changes in behavior.

A better theme might be "Become a Data Privacy Defender." The title clearly highlights the program's purpose (data privacy) and the user's role (an active contributor to the privacy effort).

Your organization's culture may call for a more direct approach, with more practical themes. Even then, naming your programs around specific topics—such as phishing, social engineering, email, working from home—is an improvement.

Use learning science principles

Your program should draw on decades of learning science for the most effective learning, retention and behavior change. A well-rounded program provides both conceptual and procedural knowledge— give users the big picture and specific lessons. Here are some proven techniques:

- **Serve small bites.** Keep training to minutes (vs. hours) and focus on single topics as often as possible.
- **Reinforce lessons.** Provide feedback, and keep training and awareness persistent.
- **Train in context.** Assign training relevant to roles and threats.
- **Give immediate feedback.** Give real time results on training or phishing exercises.

- **Let users set the pace.** Everyone is unique and learns at different speeds.
- **Tell a story.** Give real-world examples.
- **Vary the message.** Ensure that topics have multiple content sets that vary in wording and phrasing.
- **Involve your students.** Interactive content and exercises improve retention.
- **Make them think.** Exercises should test how students can apply their knowledge.
- **Measure results.** Assess students up front and track progress continuously.

Keep training interesting with diverse content and media

According to the “Rule of Seven,” advertisers must get their message in front of a prospect at least seven times to make it stick. The learning process is similar.

Regardless of what security awareness training solution you are using, deliver lessons through multiple channels and activities. Here are just a few examples of activities and channels you might use to deliver them.

| Activities | Channels |
|---|--|
| Attack simulations (phishing, USB, SMS and so on) | Security awareness training tools |
| Knowledge assessments | Security awareness training tool or survey tool |
| Identifying and monitoring VAPs | Threat intelligence/email gateway |
| Computer-based training | Security awareness training modules through an online platform or other learning management system (LMS) |
| Awareness campaigns | Posters, videos, podcasts, webinars, guest speakers, infographics |
| In-person or virtual awareness and training exercises | Lunch-and-learns, webinars, booths at company events, speaking slots at company events, in-person training, escape rooms |
| Contests/gamification | Acknowledge positive behavior change through an existing company channel such as a newsletter or wiki |
| Security awareness information | Company wiki, intranet or shared company calendar |
| Security awareness updates | Company newsletter, chat app channel (such as Microsoft Teams and Slack), or integrated into another department’s communications |
| User feedback about security awareness training program | Survey tool or shared mailbox |
| User phishing reporting | In-client email reporting add-in solution or abuse mailbox address |



When users think poorly of their organization's security awareness training, they can be indifferent and may even resist it.

Enlist other departments and people in key roles to help

IT security, marketing, HR, and key executives can play important roles in your program. Draw on their expertise to support and improve your approach, content and delivery.

Here are a few ways other departments can help:

- **IT security** may be able recommend content to make it relevant to corporate policy (such as a password policy). It can also reveal users who might need more training because they're more heavily targeted in cyber attacks or handle sensitive data.
- **Marketing** can help design security awareness materials and other content so that they align with your organization's brand elements.
- **HR teams** can advise on organizational dynamics and provide insight on working with executives and line of business (LOB) leaders.
- **The CISO** (or other key CxOs or business leaders) can communicate support and stress the importance of the program.

Carrot vs. stick: guiding users toward better behavior

When users think poorly of their organization's security awareness training, they can be indifferent and may even resist it. So far, we've outlined steps that can help set the stage for a program that's well received and shows real value. When it comes to "carrot-vs.-stick" approaches to training, most of our customers favor the carrot.

But every so often, user resistance may call for a stick. In these rare cases, a consequence model can help ensure compliance with training policies. While they should be a last resort, here are consequence models our customers have used:

- A "three strikes" program in which users who click on three simulated phishing emails will have a consequence such as discussion with manager or temporary limited network access or loss of access privilege
- Consequences such as: HR writeups; cuts in pay, bonus or benefits; and, in rare cases, termination

A best practice is to focus on carrot-style incentives and use consequence models as a last resort. Our customers find that an overreliance on the latter makes users less likely to engage with the program. But if you work in a highly regulated or especially sensitive industry, the stick may be necessary.

SECTION 4

The Essential Role of Data

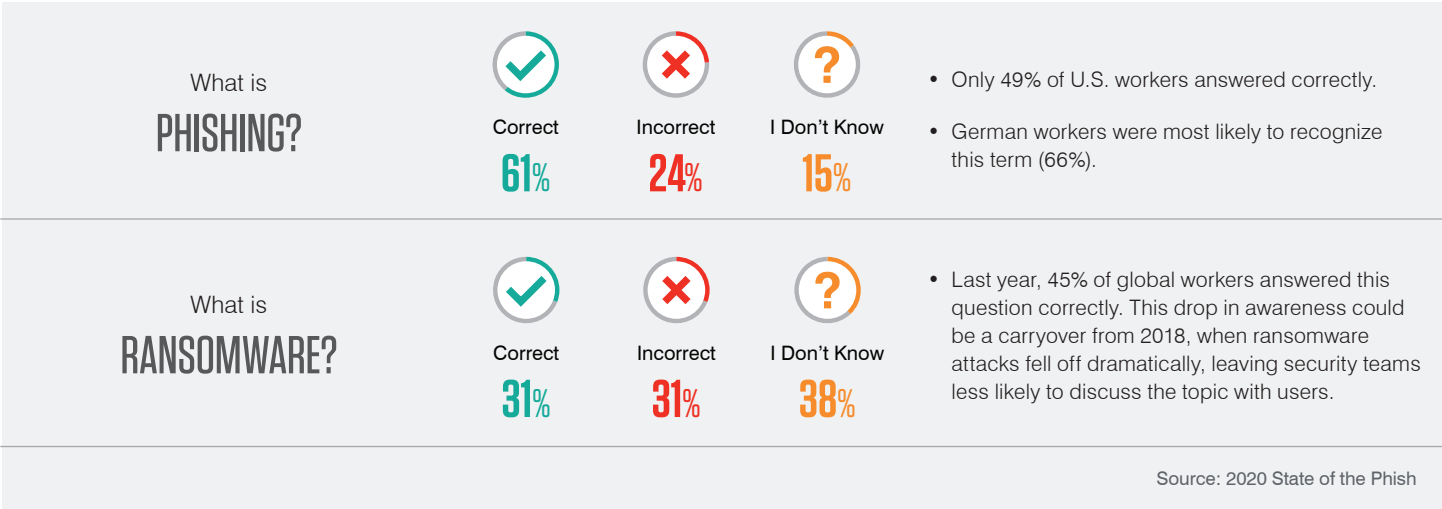
After getting approval to run your security awareness program, you're probably eager to jump right in with simulated phishing attacks and advanced user training.

But it's important to start with a strategic plan. To maximize the benefits (lower user risk) and minimize the costs (users' time), your first steps should be providing foundational knowledge, understanding users' vulnerabilities, and focusing training where it's needed most.

Building a foundation

Your first instinct as a security expert might be to simulate advanced phishing attacks or train users to identify the biggest threats facing your organization. While it's a logical impulse, it won't have the impact you're hoping for if your users still don't know the basics.

In our [2020 State of the Phish](#) report, we found that many working adults can't define terms such as phishing and ransomware.



These knowledge gaps are why we highly recommend foundational training in core topics such as security essentials and phishing before you assess or train on more advanced topics.

Many training solutions, including ours, allows for onboarding training assignments for new hires. We recommend that these include several fundamental training modules. That way, you're always providing foundational training for all users before they're asked to complete more advanced assessments and training.

Identify vulnerable users and VAPs

Using the VAP model we described in the introduction, your program should give extra attention to users who pose an elevated risk because they're:

- Especially **vulnerable** to cyber attackers' tactics
- More heavily targeted in **attacks**
- Have access **privileges** to valuable data, systems or resources

(See [“A people-centric model for measuring and mitigating user risk,”](#) on page 2.)



Quantifying user risk under the VAP model enables you to focus your training program and reduce risk more quickly.

Measuring vulnerabilities, attacks and privilege

For vulnerabilities, simulated phishing attacks and question-based knowledge assessments are invaluable. They can help you pinpoint who might need more training, what tactics users might fall for, and what areas to cover.

For attacks, knowing which users are being most heavily targeted, how, and by whom requires insight from your security team's threat intelligence solution. We identify these VAPs through our Attack Index, a composite score that takes these factors into account:

- **Attacker type.** The attacker's level of sophistication and, in turn, risk to the organization. For example, a state-sponsored attacker gets a much higher score than a small-time cyber criminal.
- **Targeting type.** A way of describing how narrowly the attack is targeted. Did the threat hit only one user or the entire planet? Was it focused on a user, company, industry or geography? Or was it a “spray-and-pray” campaign seen by half the globe? The more targeted the threat, the higher score it gets.
- **Threat type.** This component reflects the type of malware involved in the attack. In most cases, the malware used in an attack can reveal how severe the threat is or how much effort the attacker put into it. A remote access Trojan (RAT) or stealer, for example, gets a higher score than a generic consumer-focused credential phishing attempt.

For privilege, organizations can start by taking an inventory of all the potentially valuable things people have access to: data, financial authority, key relationships and more.

The user's position in the org chart is naturally a factor in scoring privilege. But it's not the only factor—and often, not even the most important one. An administrative assistant might make a more appealing target than a mid-level manager for corporate espionage because the assistant has access to the CEO's calendar. In the same way, a hospital nurse with access to patient records might be a more useful target than the CEO for identity thieves.

PASSWORD HABITS



use a password manager



rotate between 5 and 10 different passwords



manually enter a different password for every login



use the same 1 or 2 passwords for all accounts

Source: 2020 State of the Phish

Using VAP data beyond training

Quantifying user risk under the VAP model enables you to focus your training program and reduce risk more quickly. It may also provide context as to why attackers are targeting these users. With this insight, you can keep a closer eye on these users and ones with similar titles and deploy adaptive controls such as isolating browser activity or stepping up authentication requirements as needed.

Blending this information with threat intelligence—including the rich insight from a tool such as Proofpoint Targeted Attack Protection (TAP)—provides greater insight into whether users are targeted with malicious content.

Knowing whether users are clicking simulated phishing email is helpful. Knowing if they're clicking real malicious content is even more important, even if that click is blocked. This data can put potential risk and gaps in sharp relief.

Beyond phishing: addressing other hot-button topics

Phishing is the most discussed topic in security awareness training. But focusing your program solely on email-based threats can leave major gaps in other important topical areas.

Consider using a broad-based knowledge assessment to understand users' knowledge of cybersecurity topics and your organization's own policies or guidelines.

Our *2020 State of the Phish* report revealed several risky behaviors. Here are just a few of the findings:

- 45% of working adults admit to using the same passwords for multiple accounts
- Only 49% password-protect their home Wi-Fi networks
- 26% believe they can safely connect to a free Wi-Fi network in a trusted location (such as a coffee shop or airport)
- 17% aren't sure whether open-access networks in these locations are safe

Such behaviors expose your organization to serious risk. Diversifying your program to address these and other potential areas of weakness can reduce your exposure.

When covering these topics, use real-life stories and vivid examples. Relevant, concrete details help users understand how attackers work—and why it matters.

Keeping your program agile

Every organization has a unique threat landscape, user base and security awareness culture. And as important as planning ahead is, so is agility.

An agile program adapts to changing circumstances, targeting your training to the right people at the right time. It helps ensure that your program is comprehensive, effective and efficient. And it helps reduce user risk by making the most of one or two hours per year most organizations can spare for security awareness training.

The most effective programs align training exercises to real and potential threats. Adapt your program as circumstances dictate. Life is unpredictable, and sudden changes can create new knowledge gaps and user risks.

Here are some examples of situations where you may change your plan based on need or newly revealed vulnerabilities:

- Your phishing assessments show users understand link-based attacks, but they have trouble spotting attachment-based attacks
- Your organization is targeted with a growing volume of business email compromise (BEC) attacks
- Your email security team notices attackers using a specific brand of phishing lure or type of attack
- In your knowledge assessments, you notice a specific department struggles with an essential topic

Automating follow-up training

Automating these efforts can make your efforts even more agile. For instance, our customers use the auto-enrollment feature of our solution to automatically assign training sessions based on how users fare in simulated attacks and knowledge assessments. The feature directs training to users who need it most but doesn't force them to complete it at that moment.

Automated follow-up is a good way to tailor training to actual vulnerabilities and gaps rather than using a one-size-fits-all approach that assigns the same training to all users. Targeted training saves users time and makes it easier for stakeholders to embrace.

Letting users test-out

Another way to tailor training is letting users "test out" by showing they understand cybersecurity concepts and are demonstrating good behavior. If users have taken their foundational training, consistently reject (or report) simulated phishing attacks, and perform well on knowledge assessments, they may need less training overall.

The promise of being able to test out may help users feel better about the training and give them an incentive to engaging more thoughtfully with assessments.

Section 5

Metrics That Matter: Measuring Your Success

If you run a security awareness program, you're probably familiar with click rate, also known as failure rate. It's the first and primary statistic we hear about from customers seeking to measure how effective their program is. And to be sure, it's important to track.

Reporting rate

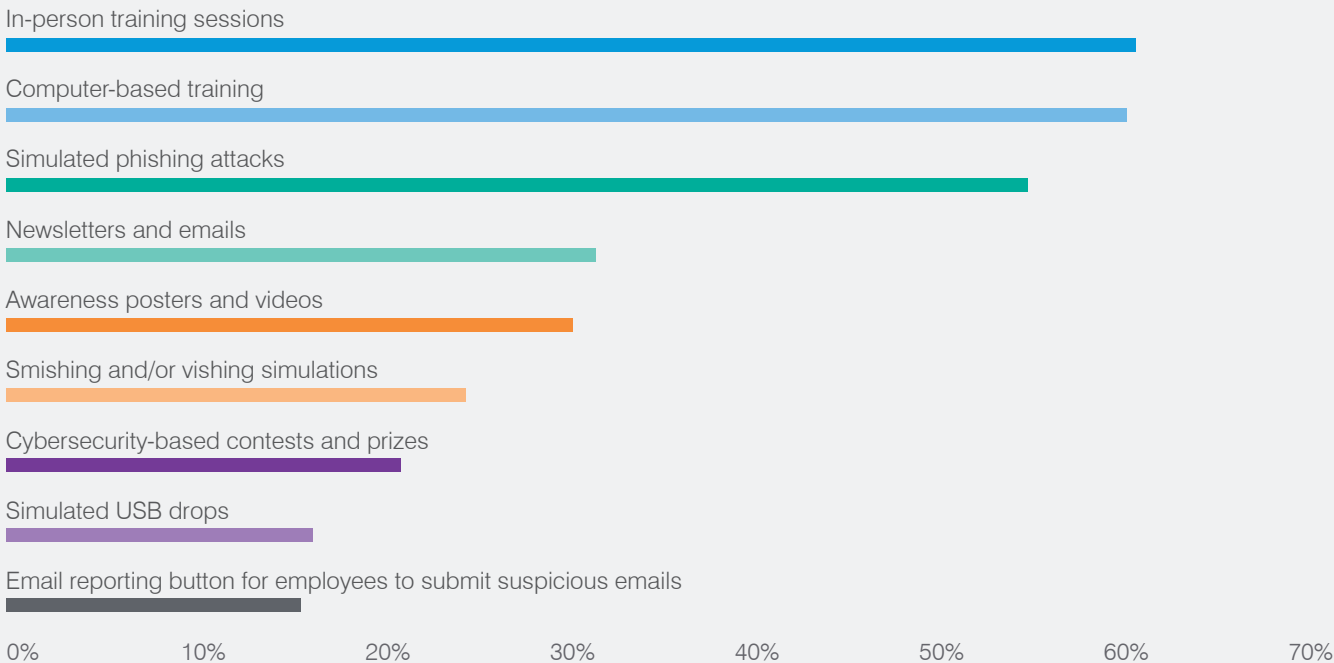
But it's not the only metric that should be on your radar. Measuring the rates at which users actively report malicious email (actual and simulated) can provide key insights.

Email reporting add-ins enable users to easily alert their security team to suspicious emails. These tools can also measure how many users who receive a simulated phishing email report it, a metric known as the reporting rate.

Unfortunately, just 15% organizations are using these tools in their security awareness program, according to our [2020 State of the Phish](#) survey.

Our data found more variability in the reporting rate than click rates, suggesting that the reporting rate is a better overall indicator of behavior change.

Tools Organizations Use in Their Programs*



* Multiple responses were allowed.

Source: 2020 State of the Phish



As a rule, click rates (or failure rates) of **under 5%** are considered good.

Knowledge levels

Another source of insight is knowledge levels. Click rate and reporting rate can measure user resilience to phishing attacks. But knowledge assessments measure how well they understand other topics such as data privacy, passwords and mobile security.

For instance, highly regulated organizations or departments may require specific training. Understanding users' knowledge levels—and whether they're rising or falling—is essential.

Benchmarking click and reporting rates

If you send out a simulated phishing email, what is considered a "good" click rate? The answer depends to two main factors:

- How difficult and targeted the simulated phishing email is
- How experienced your users are

As a rule, click rates (or failure rates) of under 5% are considered good. But a more accurate measure is how much above or below the rate is vs. the average failure rate (AFR) across a broader swath of organizations.

Proofpoint, along with many other vendors, provides the AFR of different [simulated phishing](#) templates. As shown in this screenshot, a 5% failure rate reflects a poorer-than-average result for some templates.

Average failure rate comparison from our ThreatSim® product (in green).

| | | |
|---|-----------------------|----|
| Jump in this quick meeting | Corporate | 8% |
| FREE GDPR Readiness Tools - Targets Legal or HR | Commercial | 3% |
| College Admissions Help | Consumer | 2% |
| Online dating - Message waiting | Proofpoint - Consumer | 5% |

That's why comparing your results to these AFRs provides better insight into users' phishing awareness. AFRs can change over time as more organizations use certain templates.

For reporting rates (users who recognize a simulated phishing email as suspicious and report it), aim for 70%. Several of our customers achieved reporting rates of greater than 80%, along with a low failure rate.

One of our
customers saved
\$345,000
in headcount expenses
by using a component
of our CLEAR solution.

Measuring your effect

Security awareness metrics are important, and they should be easy to access within your security awareness software. But the real goal of any security awareness training program is reducing user risk.

To that end, external metrics can help evaluate and prove the value of your program. Key measures include:

- Number of malware infections and user machine remediations
- Time and resources spent on abuse mailbox management
- Number of successful phishing attacks from the wild
- Downtime hours for users

These metrics also can help you get continued buy-in for your program from key stakeholders. One of our customers saved \$345,000 in headcount expenses by using a component of our Closed-Loop Email Analysis and Response (CLEAR) solution. (You can read more about this in the Forrester report [“The Total Economic Impact Of Proofpoint Advanced Email Protection.”](#))

Using your data to change the conversation

A lot of metrics used to talk about security awareness training—“failure rate,” “click rate” and the like—can have negative connotations and emphasize mistakes rather than successes. Other metrics, such as reporting rates and knowledge levels, stress positive behaviors over negative ones. And they better show how users are performing as a line of defense against today’s targeted attacks.

Use this data to tell success stories about the ways users are improving your organization’s security posture. Suppose a user reports a truly malicious message and your incident response team was able to remove it before it exposed your organization. Stories like this can help sell your program internally to key stakeholders and improve your company’s security culture.

Section 6

Conclusions and Recommendations

The goal for your security awareness training program should be to move the dial on behaviors that matter most to your organization's mission. The best way to do that is to use a blend of broad and targeted education that empowers users by delivering actionable advice.

If you haven't been taking a people-centric approach to security awareness training, now is the time to start. Here are five pillars of an effective, efficient program:

Put people at the center

Anyone in your organization can be a target. And at any moment, anyone in your organization can help or hurt your security posture.

User awareness training is one of the most important things you can do to secure your organization. By teaching your users how to recognize, reject and report attempted phishing, you can create a strong last line of defense against today's biggest cyber threats.

Plan your rollout

Every organization is unique, and no two training programs will be the same. But yours should include all the following elements:

- Defining training needs
- Identifying users with specific training needs
- Defining activities
- Creating and managing schedules
- Communicating and testing first steps
- Defining frequency and timing of program activities

The more diligence and planning you apply to your program, the more successful your program will be.

Engage your users

Keeping users engaged is critical to a successful program. But even the most well-intentioned program can grow arduous when people don't have rich and meaningful experiences.

The most successful programs:

- Use branding to make their relevance clear to users
- Use scientifically proven learning principles to change behavior
- Reinforce training with a diverse mix of content and media
- Enlist champions across the organization for support and improvements
- Guide users with the right balance of incentives and consequences

Use data to identify vulnerable users, focus training and stay agile

Your first steps should be providing foundational knowledge, understanding users' vulnerabilities, and focusing training where it's needed most. Here, simulated phishing attacks and question-based knowledge assessments can be invaluable insight into where to focus your training efforts. Threat intelligence that provides insight into the attacks your users are facing can also help you align training content to real-world threats. And knowing which users have access to the organization's most sensitive data can help you tailor training and apply other security controls to high-privilege users.

Automated follow-up training and opt-out options for knowledgeable, low-risk users can help you stay agile at scale.

Measure your success with internal and external metrics

Click rates (or failure rates) for simulated phishing emails are important. But email reporting rates may be an even better measure of how resilient your users are to attacks.

Knowledge can measure how well they understand other topics.

Ultimately, external metrics such as malware infections and downtime can help show the effect and value of your program.

These metrics also can help you get continued buy-in for your program from key stakeholders. Use this data to highlight the ways users are improving your organization's security posture. They not only help sell your program internally but improve your company's security culture.

Learn more

To learn more about your users' cybersecurity knowledge, strengths and weaknesses—and how you can foster behavior change—take our free People Risk Assessment at proofpoint.com/us/people-risk-assessment.



LEARN MORE

For more information, visit [proofpoint.com](https://www.proofpoint.com).

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