

Gamifying Security Awareness

SESSION ID: HUM-T07A

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Verifying Awareness Training Compliance



Traditional Security Awareness Programs

- ◆ Typically pushes information to users
 - ◆ Videos, posters, newsletters, etc.
 - ◆ Little tracking of usage
- ◆ Forces users to take training
 - ◆ Only metrics are Pass/Fail
- ◆ Focuses on topics
- ◆ Great for some environments



What is Gamification?

- ◆ The application of game principles to business problems
- ◆ Encouragement of participatory engagement and voluntarily seeking out additional information
- ◆ Not limited to business problems
 - ◆ Getting wide use in fitness, training and marketing



Common Gamification in the Real World

- ◆ Airline frequent flier programs
- ◆ LinkedIn participation
- ◆ TripAdvisor and Yelp badges
- ◆ Hotel frequent traveler programs
- ◆ Grocery store rewards programs
 - ◆ Gas rewards, discounts only to club members
- ◆ Nike+
- ◆ Starbucks app



What They All Strive to Do

- ◆ Create brand loyalty
- ◆ Reward for extra purchases
- ◆ Encourages more of the desired behaviors
- ◆ Completely voluntary



What is Gamification of Security Awareness?

- ◆ A long-term, ongoing awareness program
- ◆ Focuses on behaviors
- ◆ Proactively rewards good security behaviors
- ◆ Encourages employees to seek out awareness training and opportunities
 - ◆ Gets employees to 'pull' awareness materials
- ◆ Reverses the awareness program paradigm

What Is **NOT** Gamification?

- ◆ An actual game
- ◆ A one-time effort
- ◆ Video based training
- ◆ Phishing simulations

If you force users to take the “gamified” training, it is not gamification!

Principles of Gamification

1. Clearly defined goals
2. Rules/limitations
3. Ongoing feedback
4. Voluntary participation



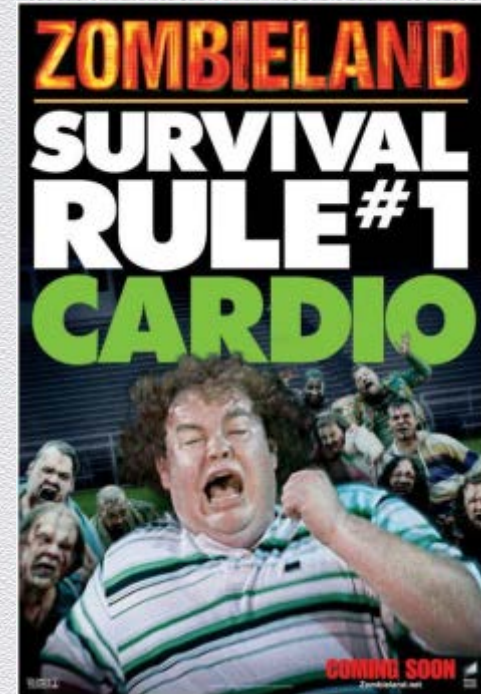
Clearly Defined Goals

- ◆ Clearly identified goals
- ◆ Clearly identified rewards for hitting the goals
- ◆ Goals are achievable
- ◆ Rewards are desirable



Rules

- ◆ Define how participants attain the goals
- ◆ Creates limitations for achieving goals
- ◆ Limitations make it engaging
- ◆ Think carrying the ball in golf or soccer



Feedback

- ◆ Participants know how they are doing towards achieving their goal
- ◆ Organization knows which employees deserve rewards
- ◆ Feedback mechanism can entice further participation

Voluntary Participation

- ◆ No one is forced to participate in program
- ◆ Rewards encourage participation
- ◆ With most gamification programs the challenge is the reward
 - ◆ Think golf

How Do You Create a Gamification Program?



- ◆ Assess your culture
- ◆ Examine your business drivers
- ◆ Identify a theme to create the program around
- ◆ Set up system to record points
- ◆ Create awareness of your program

Culture Determines Reward Structure



- ◆ What will incentivize your employees to participate in your program?
- ◆ What will upper management allow you to give?
 - ◆ Gift cards, acknowledgment, free lunch, gifts, days off
- ◆ Tiering the reward structure
 - ◆ Easy for basic rewards
 - ◆ Attainable for advanced rewards
 - ◆ Requires work for ultimate reward

Business Drivers Determines Point Structure

- ◆ What behaviors do you reward?
- ◆ What activities do you reward?
- ◆ How many points for each?
 - ◆ For example, if stopping tailgaters is a big priority for your organization, you should award more points for that than reading an article

Sample Point Structure

Behavior	Points Awarded
Read article	50
Forward phishing message	50
Attend lunch and learn	100
Stop tailgater	100
Report social engineering attempt	100
Find security vulnerability	200
Give presentation	250

Sample Reward Structure

Level	Points	Reward
Beginner	100	Badge, T-shirt
Apprentice	500	Badge, gift card, certificate
Group Expert	1,000	Badge, executive acknowledgement, bigger gift, advisor status
Expert	2,000	Badge, C-level acknowledgment, more money, more shwag
Guru	3,000	Badge, promotion, day off...Make it worth it!

Conclusions

- ◆ Gamification is better for some environments than others
 - ◆ Tech people with more autonomy tend to respond better to gamification
 - ◆ Not everyone needs to participate
- ◆ You can have multiple programs
- ◆ Culture drives reward structure and rewards
- ◆ Business drivers and security concerns drive points
- ◆ Reverses the security awareness program paradigm

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Questions?

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