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

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Points Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read article</td>
<td>50</td>
</tr>
<tr>
<td>Forward phishing message</td>
<td>50</td>
</tr>
<tr>
<td>Attend lunch and learn</td>
<td>100</td>
</tr>
<tr>
<td>Stop tailgater</td>
<td>100</td>
</tr>
<tr>
<td>Report social engineering attempt</td>
<td>100</td>
</tr>
<tr>
<td>Find security vulnerability</td>
<td>200</td>
</tr>
<tr>
<td>Give presentation</td>
<td>250</td>
</tr>
</tbody>
</table>
## Sample Reward Structure

<table>
<thead>
<tr>
<th>Level</th>
<th>Points</th>
<th>Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginner</td>
<td>100</td>
<td>Badge, T-shirt</td>
</tr>
<tr>
<td>Apprentice</td>
<td>500</td>
<td>Badge, gift card, certificate</td>
</tr>
<tr>
<td>Group Expert</td>
<td>1,000</td>
<td>Badge, executive acknowledgement, bigger gift, advisor status</td>
</tr>
<tr>
<td>Expert</td>
<td>2,000</td>
<td>Badge, C-level acknowledgment, more money, more shwag</td>
</tr>
<tr>
<td>Guru</td>
<td>3,000</td>
<td>Badge, promotion, day off...Make it worth it!</td>
</tr>
</tbody>
</table>
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
Questions?
For More Information

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