Using Gamification to Transform Security Awareness

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@modMasha

About me

- Background in security with a love of behavior psychology, human motivation, and behavioral economics.
- I've been building Salesforce's Trust Engagement team since 2012.
- Run a team responsible for general employee security culture, secure development and engineering practices, and customer security advocacy.
- Passionate about using transforming security behaviors from "have to" to "want to" by looking at the full scope of an employee's experience.

> Life is not a dress rehearsal.
>
> Rose Tremain

What Does Security Awareness Mean To Your Organization?

Often our requirements are very general

I want my employees to:

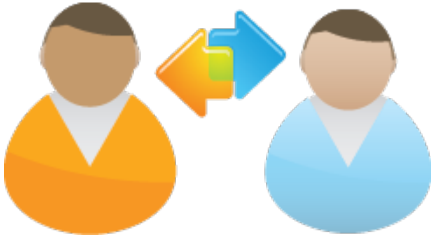
Have more security common sense

Make less security mistakes

Be more vigilant

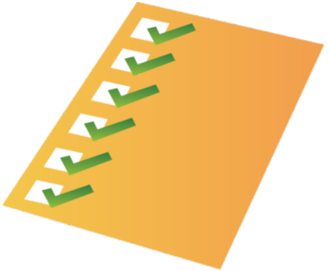
Care more about their actions

What Are Your Key Behaviors?



Ask:

What behaviors am I trying to change?



Ask:

What will people do differently after my effective program is in place?

Ask:

How will I measure this?

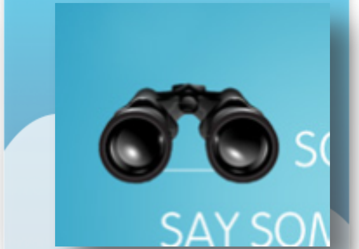
How To Prioritize Key Behaviors

1. What are your most frequent incidents?
2. What would be the most damaging to your company?
3. What are easy wins?
4. What's most visible?
5. What would have the greatest impact on your security posture?
6. What does your team already have metrics on?

Linking Results to Key Behaviors

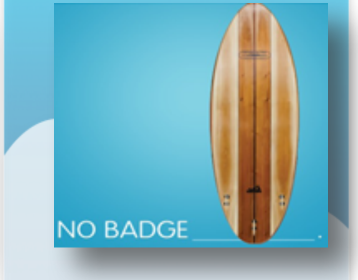
Think like a Chief Security Officer

# of Security Champions in Org



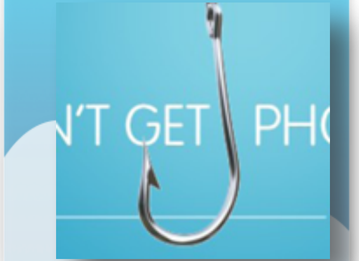
See something, say something

# of people who detect and report a vulnerability



Say no to badge surfing

# of unauthorized people accessing secure areas



Don’t get fooled by Phishing

# of people who fall victim to a phishing attack

Get certified and be ready

# of employees who completed annual security training

Investigate Root Cause

Why are these behaviors not being done?

- **Can this be solved with technology?**

  Do it! Changing mindset is the hardest way to go about enforcing change.

- **“I didn’t realize that security was part of my job.”**

  Communication, marketing, awareness campaigns

- **“I didn’t know what to do about it.”**

  Training and skills

- **“I didn’t have the resources or support to do it.”**

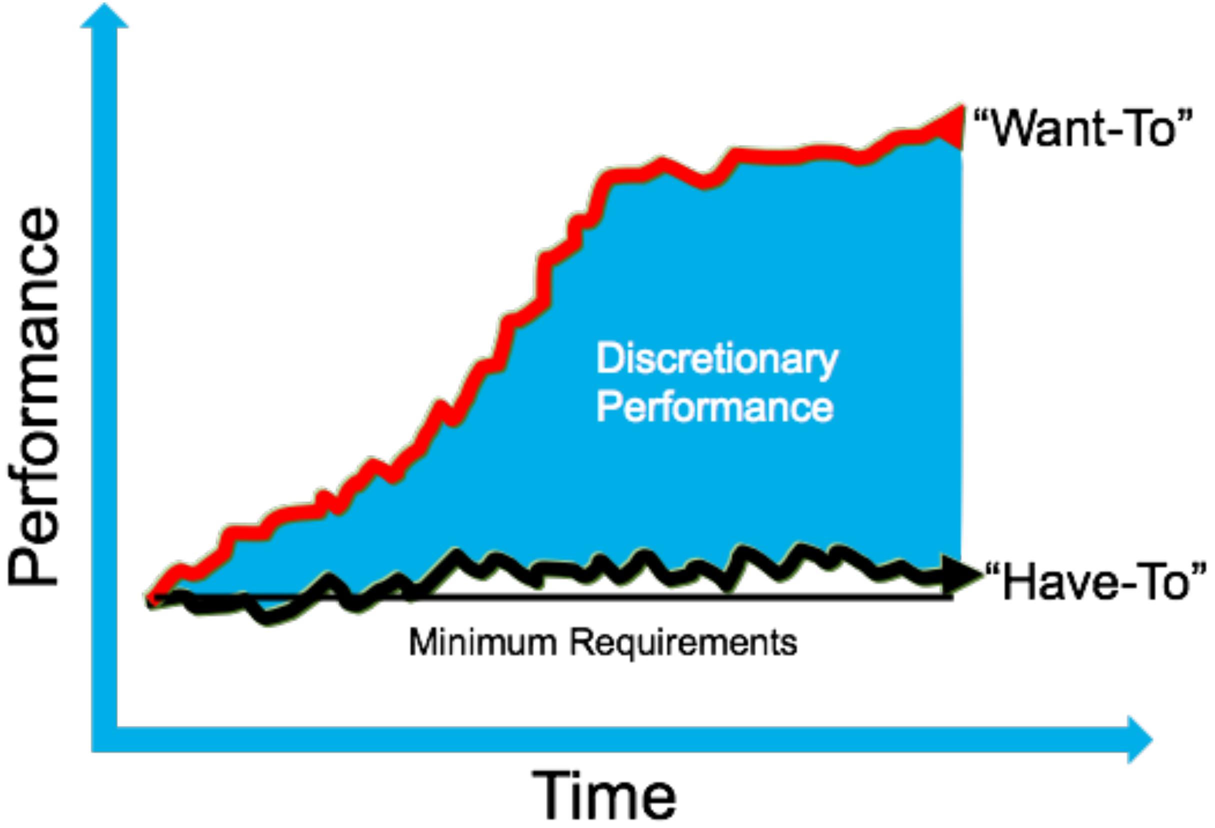
  Management alignment

- **“I didn’t want to.”**

  Gamification and incentives ⬅

When I Say Security, You Say...

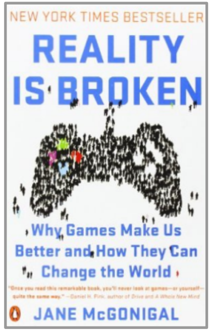
Unleashing Discretionary Performance



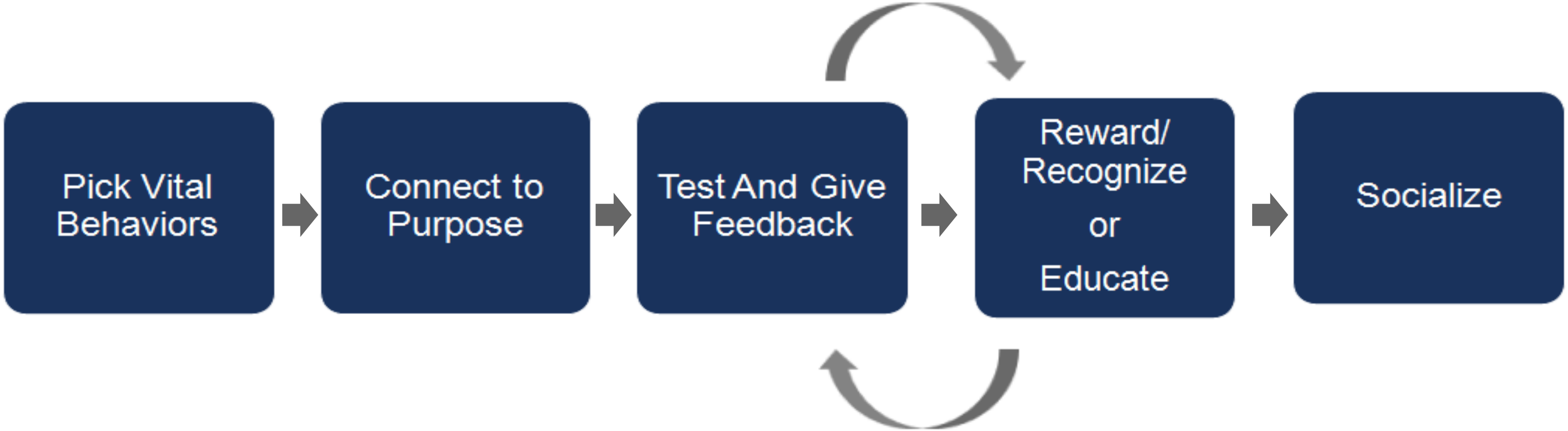
It’s Not About Playing Games At Work

Gamification Elements

1. **Autonomy:** we like having choices
2. **Mastery:** we like getting better at what we do
3. **Feedback:** we like getting feedback on how we are doing
4. **Purpose:** meaning amplifies what we do
5. **Social:** all this means more with others


NEW YORK TIMES BESTSELLER
REALITY IS BROKEN
Why Games Make Us Better and How They Can Change the World
JANE McGONIGAL

Gamifying Security



Pick Vital Behaviors

Connect to Purpose

Test And Give Feedback

Reward/ Recognize

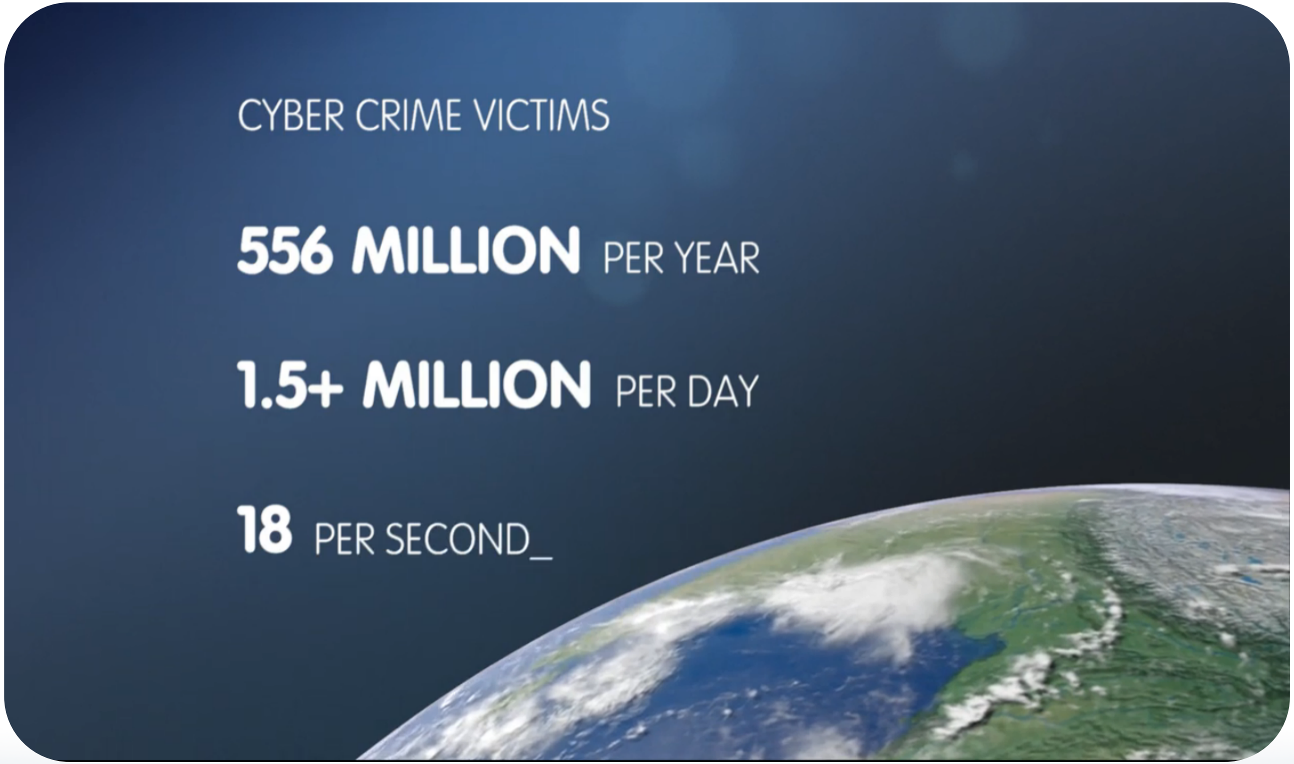
or

Educate

Socialize

Key Behaviors: Phishing, Reporting, and Badge-Surfing

Connect to Purpose



CYBER CRIME VICTIMS

556 MILLION PER YEAR

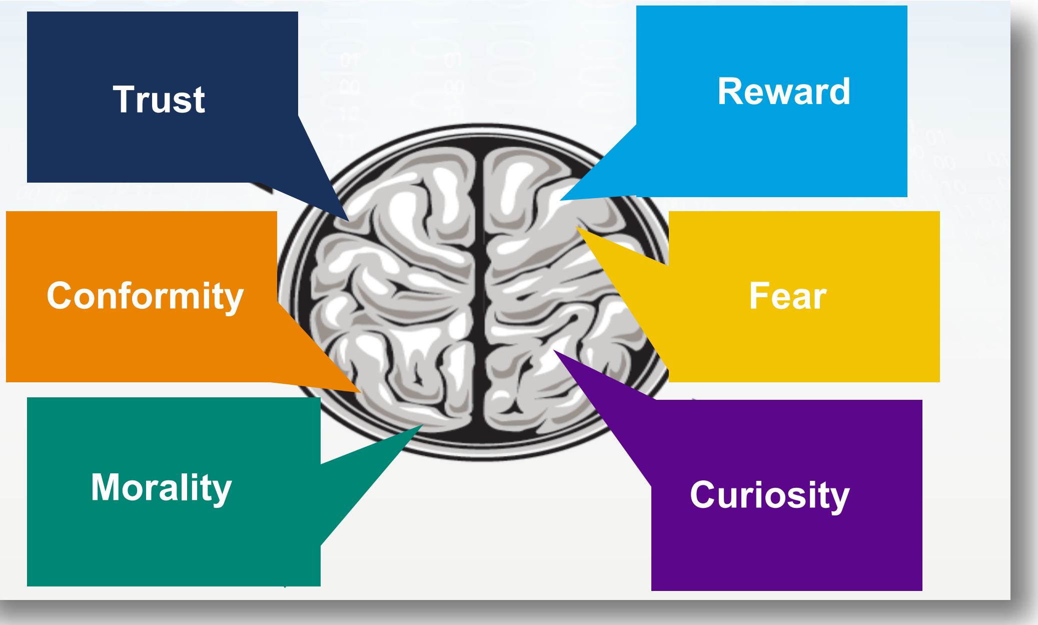
1.5+ MILLION PER DAY

18 PER SECOND_

Source: Verizon Breach Report 2014

Connecting to Purpose

Employees experience how attackers exploit “bugs in human hardware”

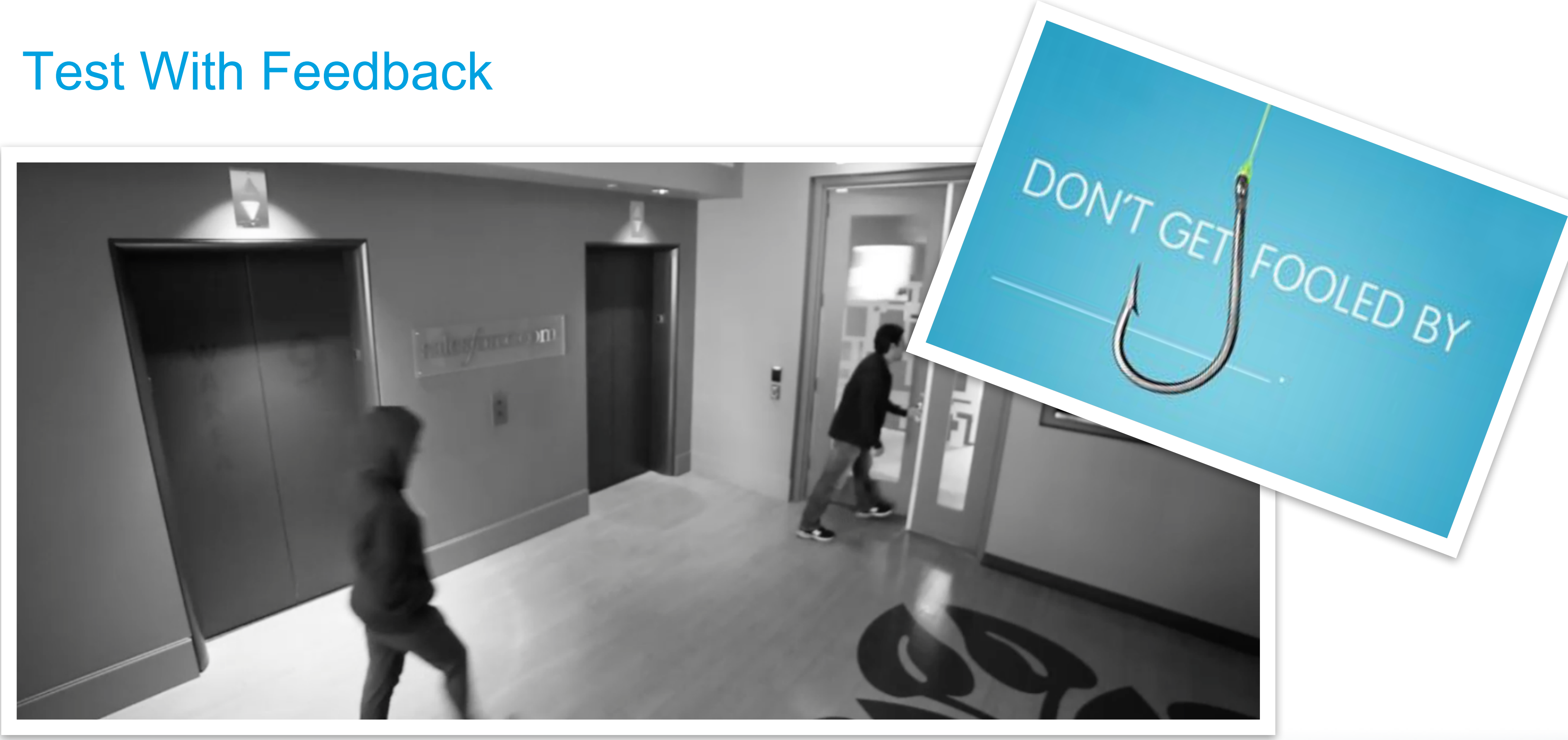


“Can you hold that office door open for me, my arm’s broken and this package is heavy.”

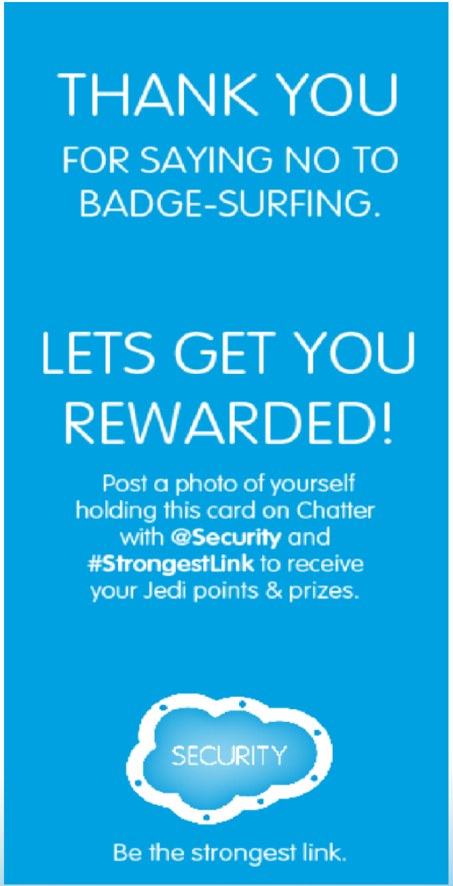
“Holy wow…Check out this video of a giant snake eating a zoo keeper!”

“If you don’t pay the fine, your files will be locked and you will be reported to the FBI!”

Test With Feedback



Recognizing Badge-Surfing Awareness



THANK YOU

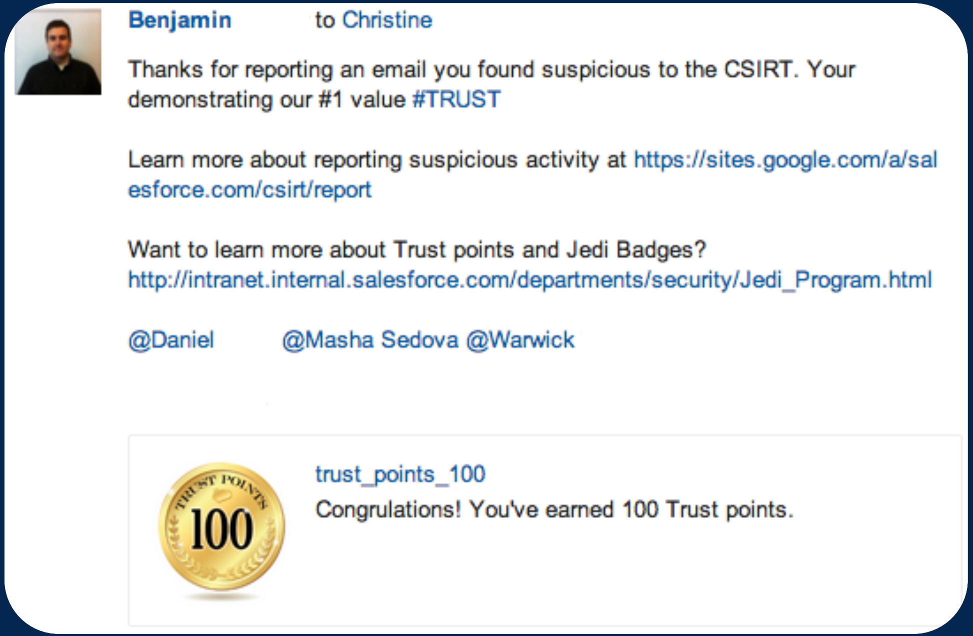
FOR SAYING NO TO BADGE-SURFING.

LETS GET YOU REWARDED!

Post a photo of yourself holding this card on Chatter with **@Security** and **#StrongestLink** to receive your Jedi points & prizes.

Be the strongest link.

Recognizing Reporting



Benjamin to Christine

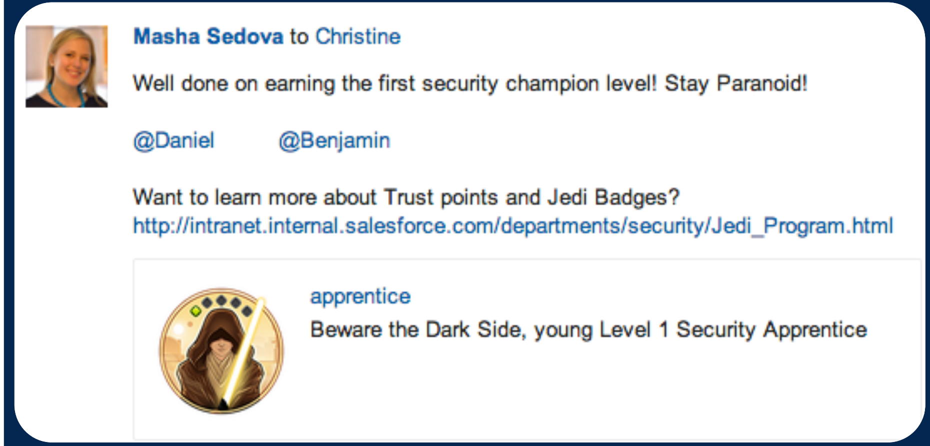
Thanks for reporting an email you found suspicious to the CSIRT. Your demonstrating our #1 value #TRUST

Learn more about reporting suspicious activity at https://sites.google.com/a/salesforce.com/csirt/report

Want to learn more about Trust points and Jedi Badges?
http://intranet.internal.salesforce.com/departments/security/Jedi_Program.html

@Daniel @Masha Sedova @Warwick

trust_points_100
Congrulations! You've earned 100 Trust points.



Masha Sedova to Christine

Well done on earning the first security champion level! Stay Paranoid!

@Daniel @Benjamin

Want to learn more about Trust points and Jedi Badges?
http://intranet.internal.salesforce.com/departments/security/Jedi_Program.html

apprentice
Beware the Dark Side, young Level 1 Security Apprentice

Reward: Security Champion Program

Apprentice	Basic awareness
Padawan	Successful Testing
Knight	Doing
Master	Teaching
Grand Master	Innovating

Trust Points

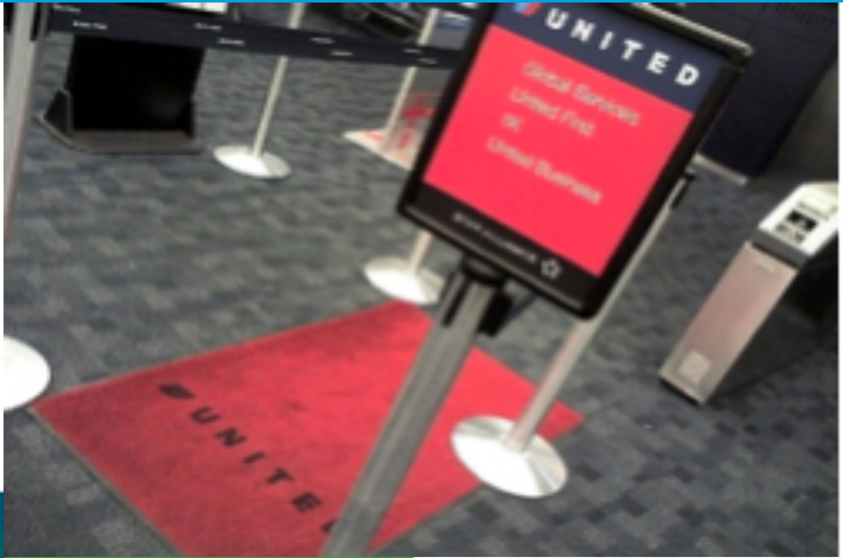
Item	Point Value
Receiving a Trust badge	50
Read security newsletter and chatter about it	50
Reporting phishing email/ social engineering call	100
Completing 100 level course	100
Completing 200 or 300 level course	200
Identifying a vulnerability (P0 - P3)	P0 =500, P1=300, P2=200, P3=50
Attending a Security lunch and learn	200
Winning a bug bounty event	500
Attending hands-on security training course	600
Teaching/Presenting on Security topic	1000
Presenting at Conference on Security	2500
Security Patent	3000
Interning with Trust	3000

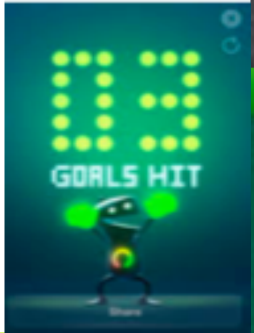
Creating effective leaderboards

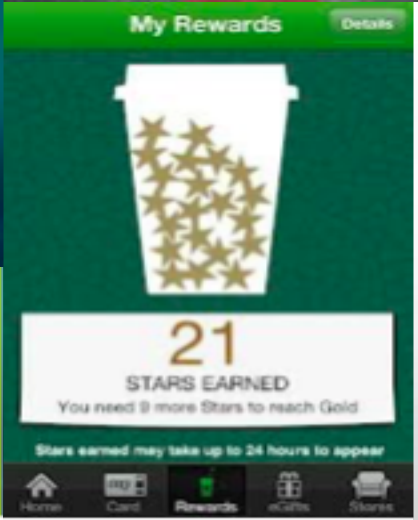
- New participants should see the impact of their progress on leaderboards
  - Same 5 people were on top with little rotation.
- Post leader of the week or per activity.
- Have points that expire.
- Consider the experience for the other 90% of participants who don't top the chart.
  - Does it become demotivational?

Incentives and Rewards

- Competition
- Achievement
- Status
- Self-Expression
- Altruism
- Access







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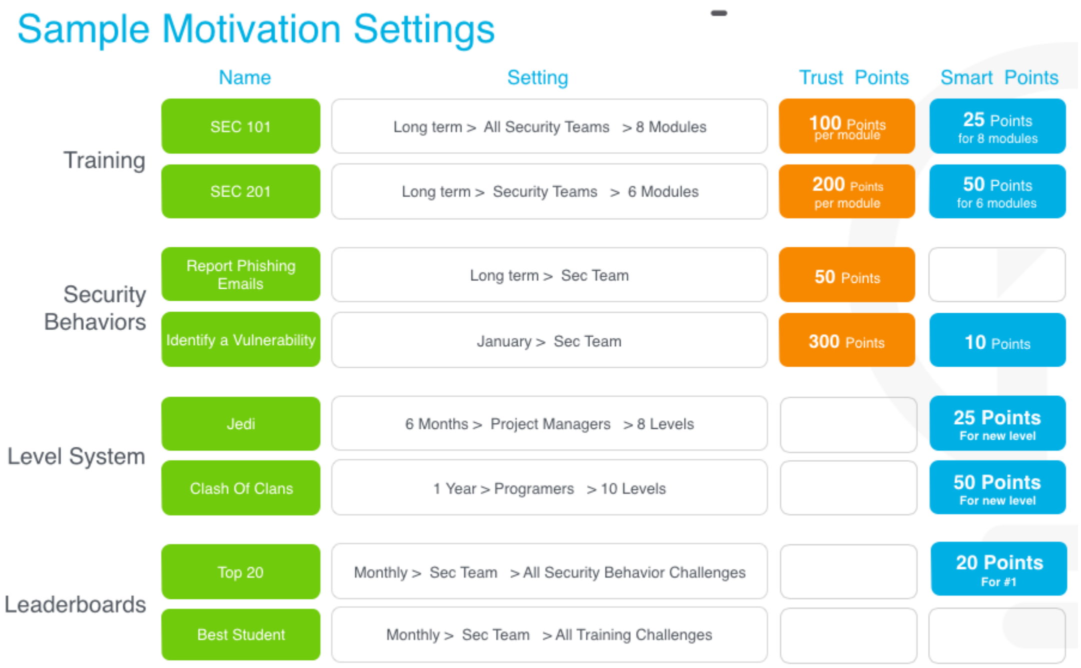
STARS EARNED

You need 9 more Stars to reach Gold

Stars earned may take up to 24 hours to appear

Creating effective point systems



Sample Motivation Settings

	Name	Setting	Trust Points	Smart Points
Training	SEC 101	Long term > All Security Teams > 8 Modules	100 Points per module	25 Points for 8 modules
	SEC 201	Long term > Security Teams > 6 Modules	200 Points per module	50 Points for 6 modules
Security Behaviors	Report Phishing Emails	Long term > Sec Team	50 Points	
	Identify a Vulnerability	January > Sec Team	300 Points	10 Points
Level System	Jedi	6 Months > Project Managers > 8 Levels		25 Points For new level
	Clash Of Clans	1 Year > Programers > 10 Levels		50 Points For new level
Leaderboards	Top 20	Monthly > Sec Team > All Security Behavior Challenges		20 Points For #1
	Best Student	Monthly > Sec Team > All Training Challenges		

Create a two point system:

Smart points can be spent at our online store for swag that interests the player.

Trust points are an aggregate of all the points you’ve earned over your lifetime.

Incentives gone wrong

Choose your key behaviors carefully

3017 TONKIN - Hanoï — Promenade du Dragon, rue des Éventails

Incident Detection Results

- Salesforce employees trained to report *any* suspicious activity
- Customer reports also welcome

“My browser proxy settings were changed.”

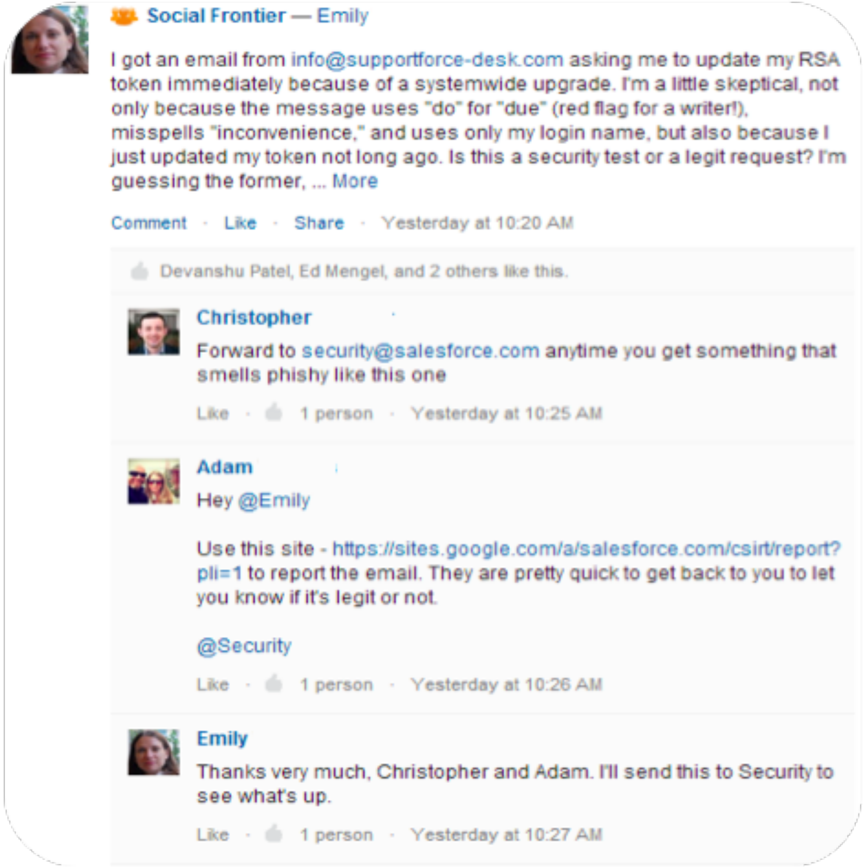
“My mouse cursor is moving by itself.”

“Someone just badge surfed in our main floor.”

“I lost my sweater on the subway.”

“Is this email really from American Express?”

Connecting it to Social



Social Frontier — Emily

I got an email from info@supportforce-desk.com asking me to update my RSA token immediately because of a systemwide upgrade. I'm a little skeptical, not only because the message uses "do" for "due" (red flag for a writer!), misspells "inconvenience," and uses only my login name, but also because I just updated my token not long ago. Is this a security test or a legit request? I'm guessing the former, ... More

Comment · Like · Share · Yesterday at 10:20 AM

Devanshu Patel, Ed Mengel, and 2 others like this.

Christopher

Forward to security@salesforce.com anytime you get something that smells phishy like this one

Like · 1 person · Yesterday at 10:25 AM

Adam

Hey @Emily

Use this site - https://sites.google.com/a/salesforce.com/csirt/report?pli=1 to report the email. They are pretty quick to get back to you to let you know if it's legit or not.

@Security

Like · 1 person · Yesterday at 10:26 AM

Emily

Thanks very much, Christopher and Adam. I'll send this to Security to see what's up.

Like · 1 person · Yesterday at 10:27 AM

salesforce1 Chatter

Takeaways

Gamification: applying game mechanics to business

- Tap into discretionary performance

Steps to build your program:

1) Identify your key behaviors that you want to gamify

    - Prioritize them
    - Make sure gamification is the right approach to address the root cause

2) Communicate the expected behaviors to your employees.

- What you want them to do and why

3) Reward/recognize people for the right behaviors when they do them

- Measure it! Share it! Do it again!

thank y☁u