Training adventures

Game Design in practice

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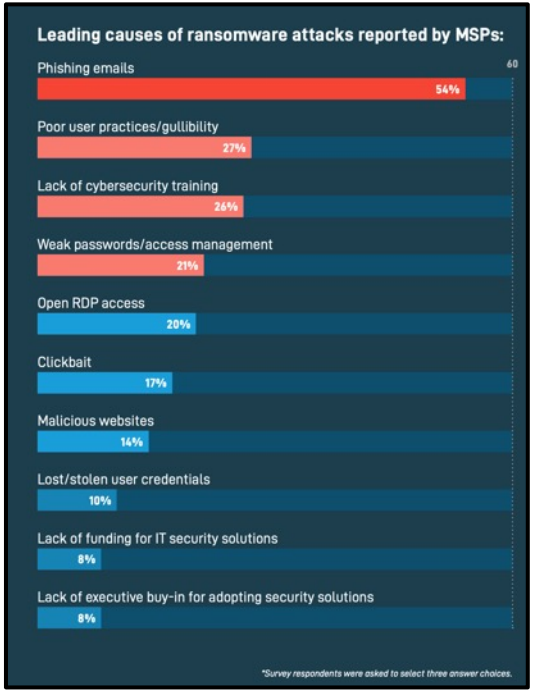
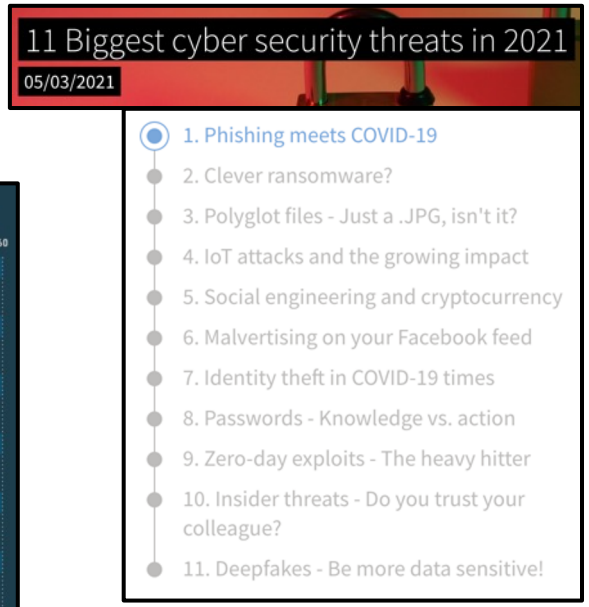
Online, July 15th 2021



Datto Inc, 2020: Dattos Global State of the Channel Ransomware Report.



https://www.gdatasoftware.com/blog/biggest-security-threats-2021

Livingsecurity 2020: 7 Essential Trends of Human Risk Management For 2021

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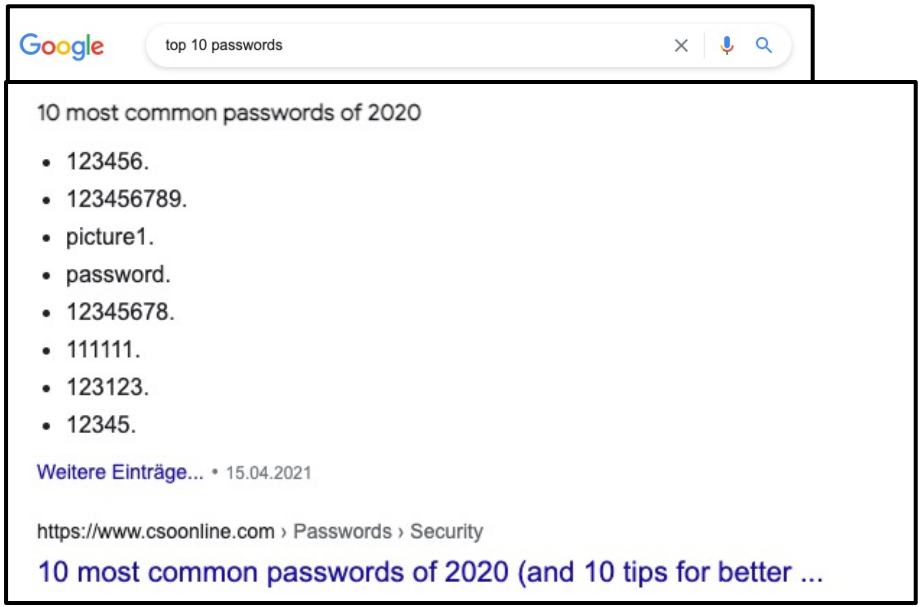
Passwords…



Google search: top 10 passwords, July 14 2021, 5pm CET

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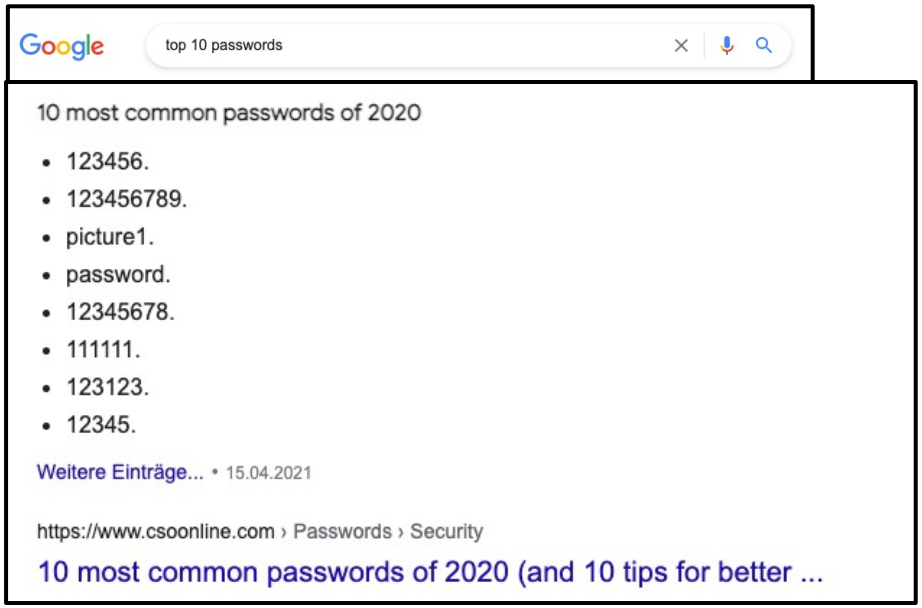
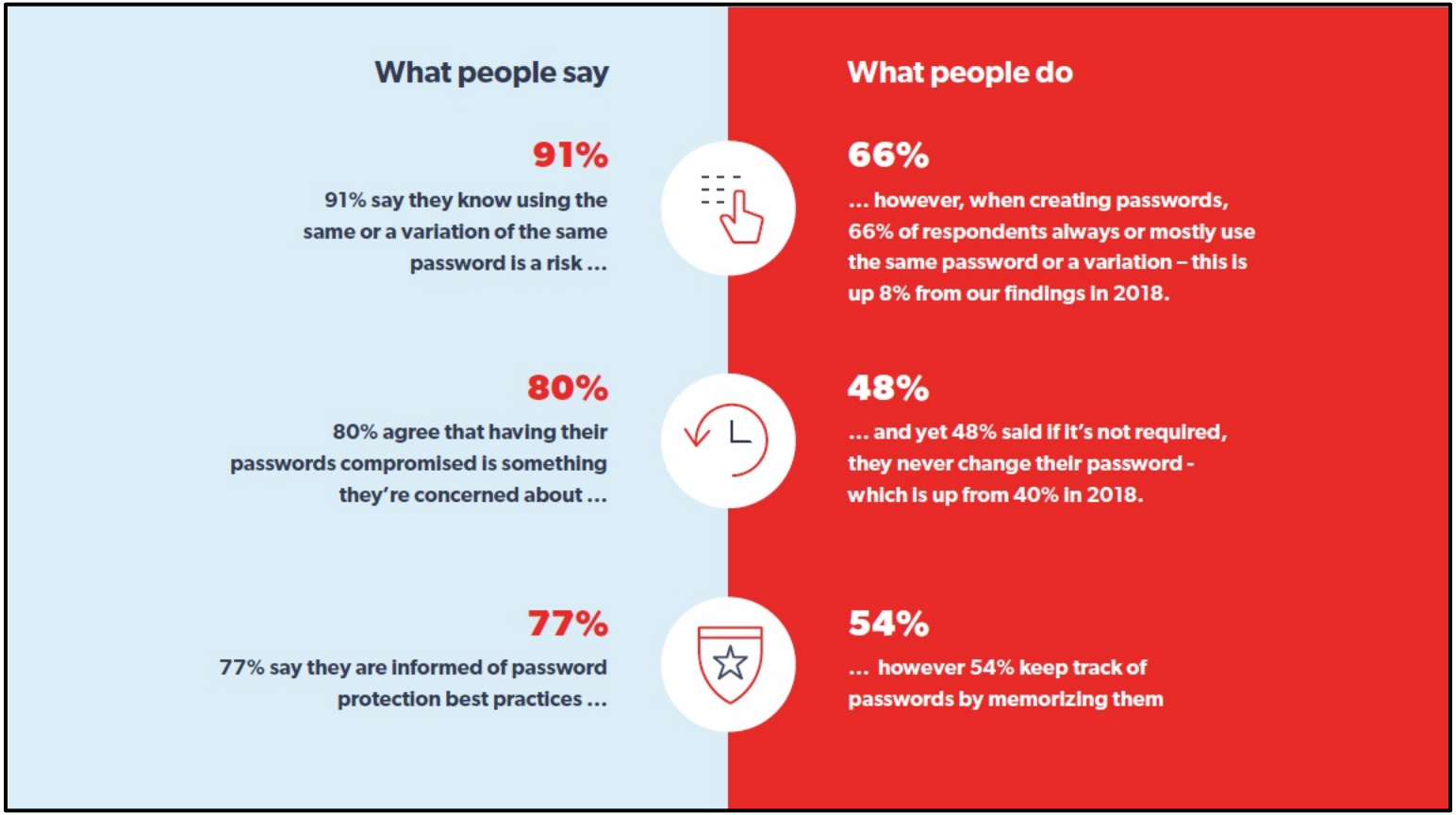


Google search: top 10 passwords, July 14 2021, 5pm CET

2020 - CH

1. 123456
2. 123456789
3. passwort
4. 12345678
5. 1234567890
6. hallo123
7. qwertzuiop
8. 1234567
9. lolipop
10. Passwort

Datengrundlage sind 45'882 Zugangsdaten aus dem Datenbestand des HPI Identity Leak Checkers, die auf E-Mail-Adressen mit .ch-Domäne registriert sind und 2020 geleakt wurden.



LastPass 2020: Psychology of Passwords: The online Behavior that's putting you at risk

We don’t know what we don’t know.

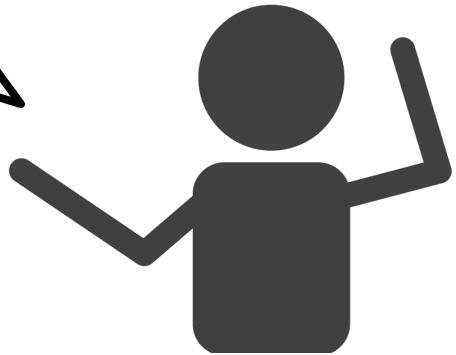
We don’t care.

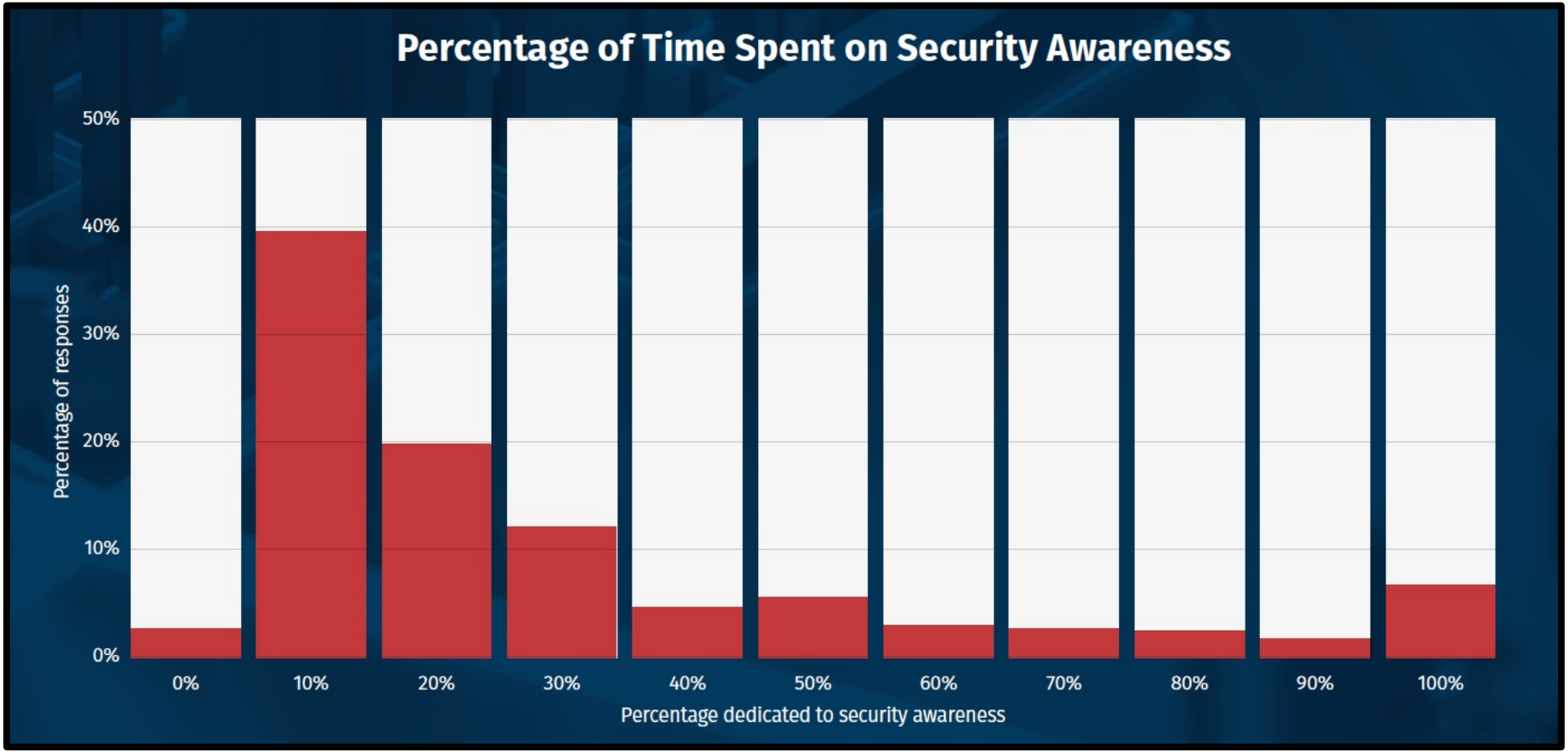
SECURITY AWARENESS

AWARENESS
Raising awareness of and interest in a special topic

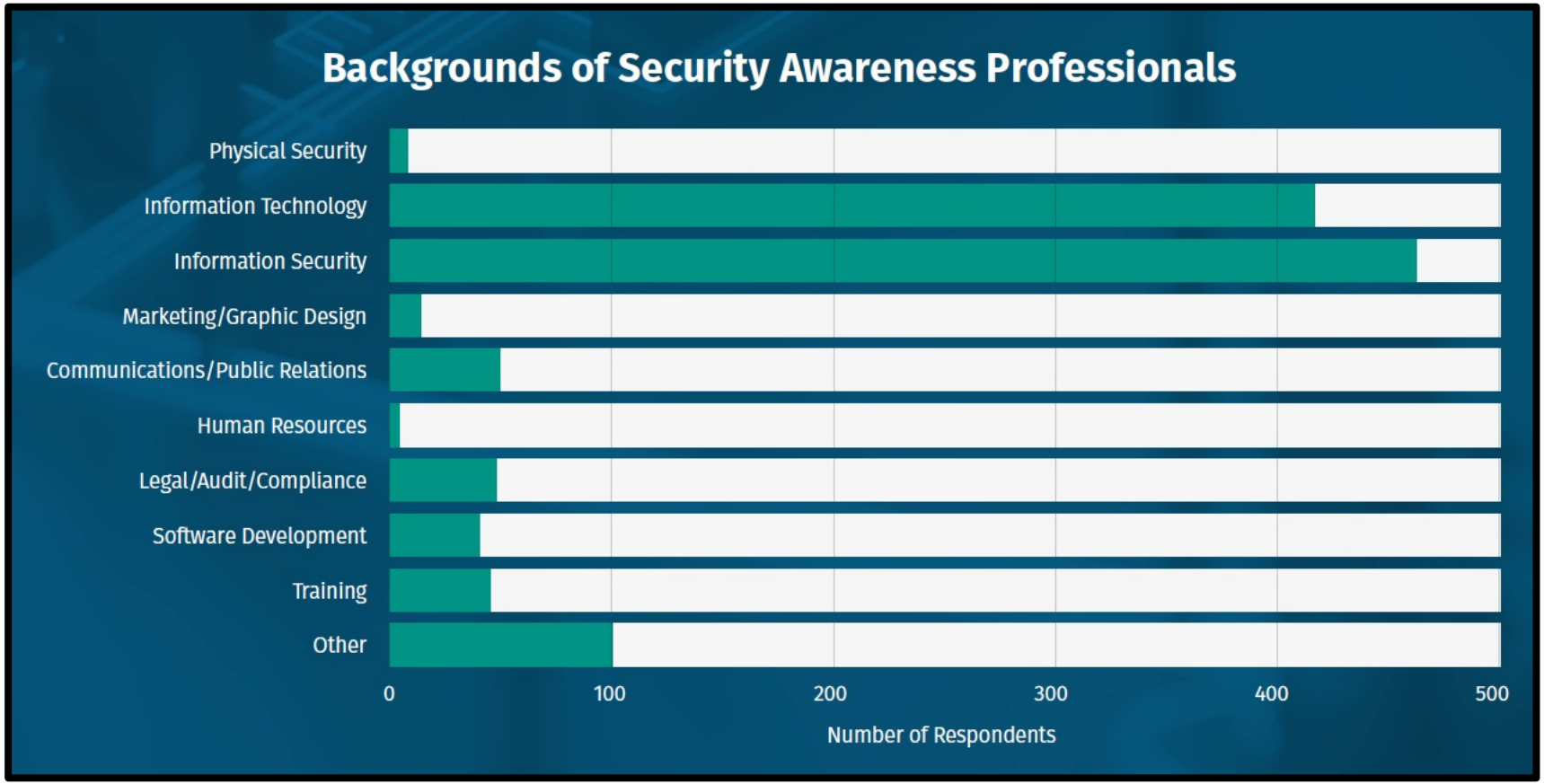
EDUCATION
Learning new skills and the theory behind them

TRAINING
Learning and training (new) skills





SANS: 2021 Security Awareness Report. Managing Human Cyber Risk



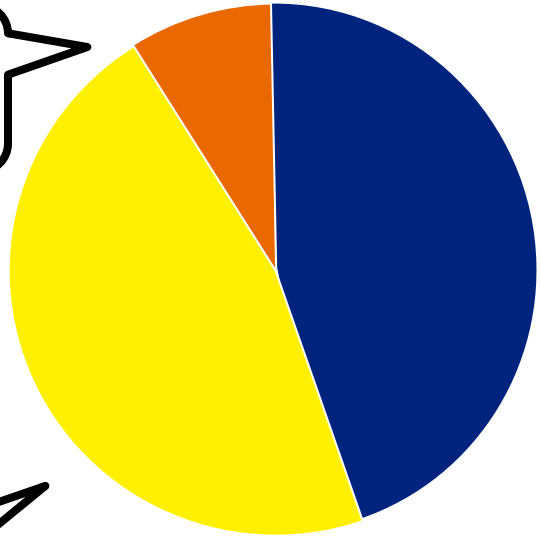
SANS: 2021 Security Awareness Report. Managing Human Cyber Risk

We don’t have the expertise.

We don’t have the time.

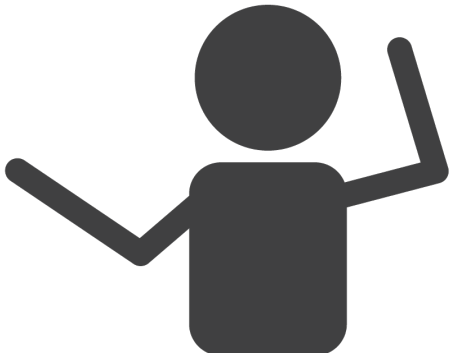
Security Awareness nowadays

AWARENESS
Increase awareness and interest in a specific topic



EDUCATION
Teaching new skills and the theory behind them

TRAINING
Teaching and practicing (new) skills



Game Design vs. Gamification

https://en.wikipedia.org/wiki/Game_design

https://en.wikipedia.org/wiki/Gamification

What do you want to do?

What	How
• Memorize information. • Communicate information. • Explain a specific topic in detail.	Non-performative Learning
• Raise interest. • Teach soft skills. • Deal with content without fear and pressure.	Performative Learning

Advantages of Game Design in Training

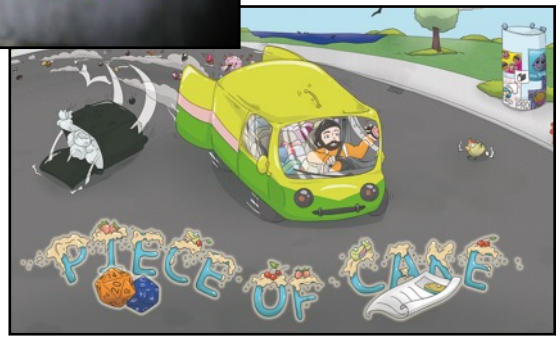
Fun	• positive attitude • learning with (positive) emotion creates sustainable engagement
Freedom to fail	• dealing with a topic without fear • creativity

Our objectives

1. **Raising interest for security**
   - positive contact with IT security
   - demystify hackers
   - Empower participants

2. **Reflect knowledge about IT security**
   - gain knowledge
   - apply knowledge
   - improve knowledge

SWITCH Security Awareness Adventures



A training to remember…

The **hands-on** experience, emotional **involvement** and **teamwork** approach raise sustainable interest in information security.

…in 3 steps

1. **Learn**: in an introduction the participants are introduced to the topic of cyber crime and are provided with relevant security knowledge.
2. **Apply**: during the game the team needs to work together and apply the knowledge they received before.
3. **Recall**: in the debriefing the participants discuss what they experienced while recalling what they just learned.

https://swit.ch/security-awareness-adventures

CYBER

Track
Hacker

Game Design in training – a balancing act

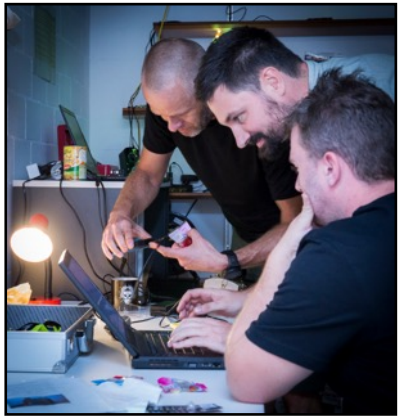
Game	Training
Game objective	Training objective
Pretending	Relevance for reality
Challenge	Frustration

Hack The Hacker – the escape room

Hack The Hacker – the escape room

Duration:	ca. 2 h	Training topics:
Participants:	max. 6 pers.	• Password security • Backups • Dumpster diving • Brute force methods • Social engineering • Phishing • Encryption
Target group:	employees of all fields	

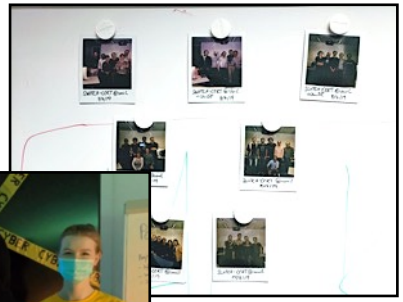
https://swit.ch/hack-the-hacker

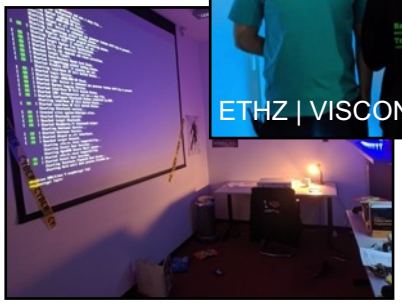


Hack The Hacker goes mobile

Frankfurt | Denic | Dez. 2018

Lausanne | UniL | Apr. 2019/Feb. 2020





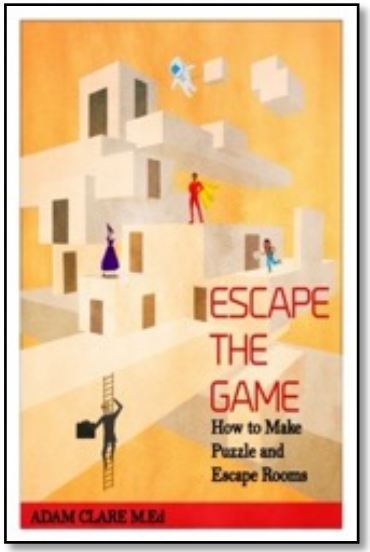
Düsseldorf | Phishbot | Jun. 2019

Lugano | USI | Jul. 2019

Hack The Hacker - Objectives

Game:
- Find decryption key
- Save the organisation

Training:
The participants understand the risk of poor security measures and the importance of strong passwords.



Escape The Game

How to Make Puzzle and Escape Rooms

Adam Clare

CreateSpace Independent Publishing Platform 2016

CYBER
ALERT!
VIDEO GAME
IN PROGRESS

Track The Hacker – the outdoor quest

Track The Hacker – the outdoor quest

Duration:	ca. 3 h	Training topics:
Participants:	max. 6 pers.	• Data Security • Data Privacy • Social engineering
Target group:	employees of all fields	

https://swit.ch/track-the-hacker

Track The Hacker - Objectives

Game:
- Recover data
- Save the organisation

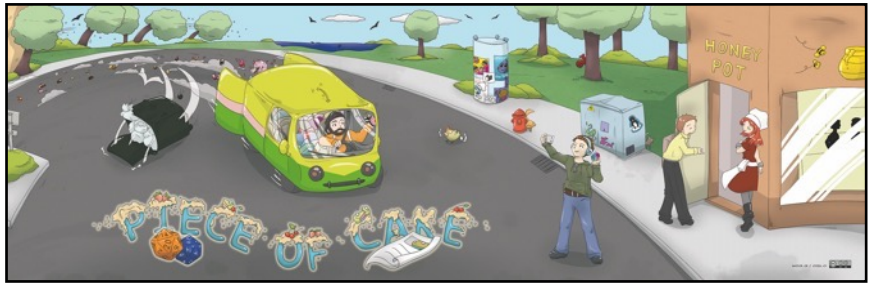
Training:
The participants learn how to deal consciously with personal data on the internet.

Actionbound
Zürich
NIEDERDORF
KREIS 1
CITY
ALTSTADT
WERD
RATHAUS
HOCHSCHULEN
Finde den Workshop!
Zuletzt geändert vor 2 Jahren
Oho! Die Zeit läuft!
Die S6 fährt um 13:01 von Gleis 41/42 vom Züri HB.
Fahrt mit der Bahn bis zum ZH-Affoltern Bahnhof.

Track
The
Hacker
The outdoor quest

Piece of Cake – the role playing game

Piece of Cake – the role playing game



Duration:	ca. 2 h	Training topics:
Participants:	max. 5 pers.	• Social engineering • Data privacy • Data security
Target group:	employees of all fields	
https://swit.ch/piece-of-cake		

Piece of Cake - Objectives

Game:
- Find receipe
- Save bakery

Training:
The participants learn how to detect and react to Social Engineering attacks.

Wait... what?

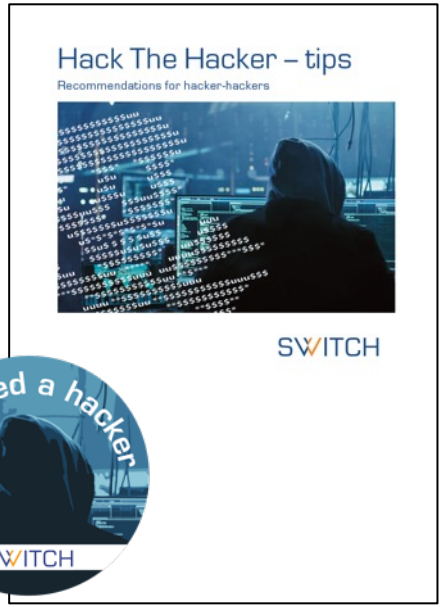
Yes, it works!
based on D&D
raise awareness

Piece of cake
Train the DM

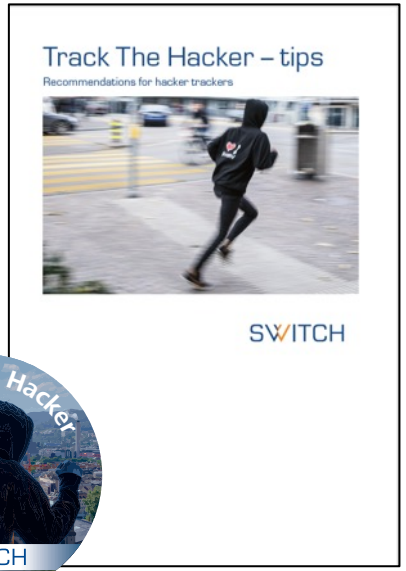
A security awareness tabletop game

PIECE OF CAKE

PIGGY BECK
SWITCH
HONEY POT
PIECE OF CAKE


Hack The Hacker – tips
Recommendations for hacker-hackers
SWITCH

I hacked a hacker
SWITCH


Track The Hacker – tips
Recommendations for hacker trackers
SWITCH

I tracked a Hacker
SWITCH

A piece of cake – tips
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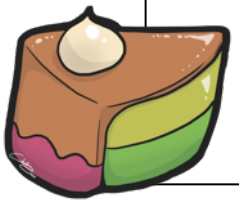
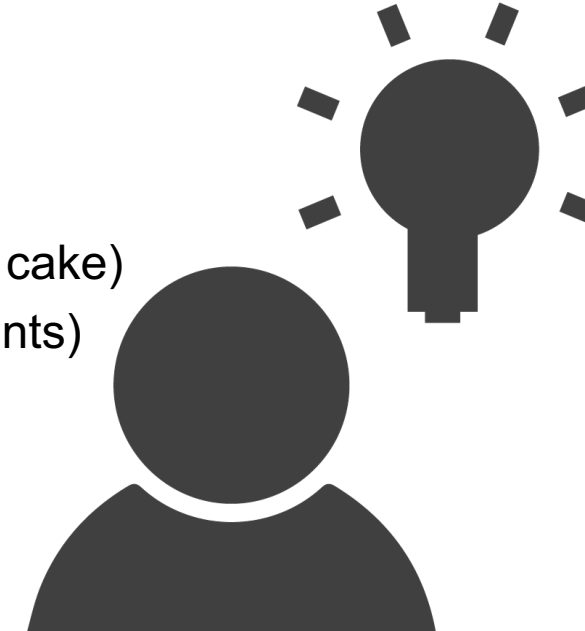
HONEY POT
SWITCH



Tips for Game Design in training

1. Use existing games
2. Every task/questions needs to be relevant for the game
3. Create an atmosphere right from the start
4. Involve all players
5. Don’t let them lose (no deadline, support, tips etc.)
6. Confirm positive feeling during debriefing (praise, picture, cake)
7. Tip-flyer ensures knowledge transfer (to you and participants)



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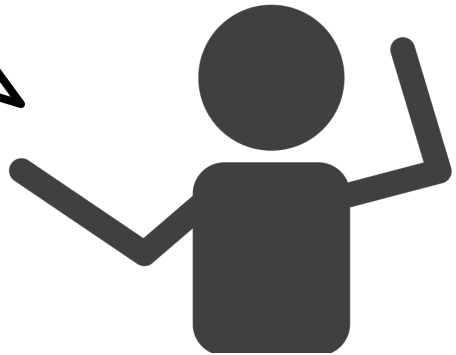

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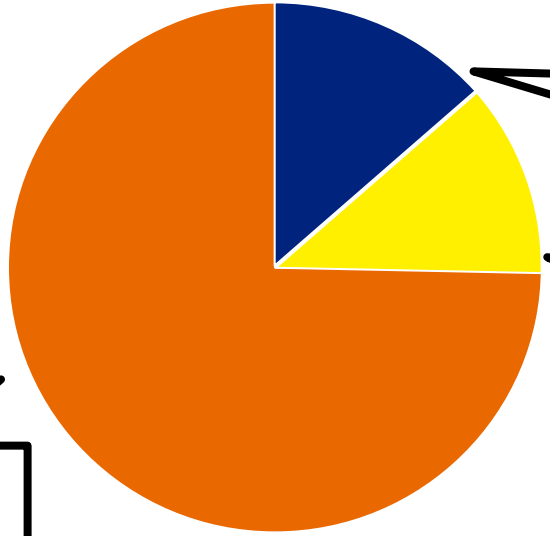

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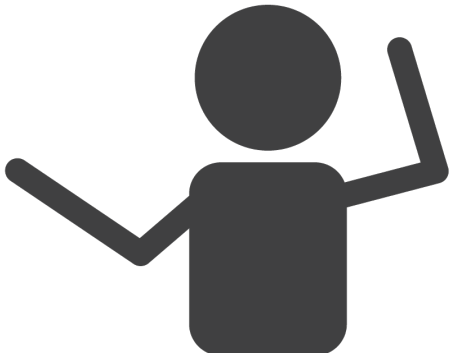

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Security Awareness Games

What you can do:

- Raise sustainable interest in security
- empower participants to deal with IT related issues
- improve the reputation of your organization/department
- improve teamwork

What you cannot do:

- provide a big collection of IT security facts, information
- educate a large amount of employees at a good price
- turn it into education at a good price
- adapt to new topics quickly

How to start

1. Choose a game
2. Understand structure of the game
3. Choose a team
4. Attune the team
5. Start a workshop
6. Test, test, test
7. Adapt your game

SWITCH

Working for a better digital world