TRANSFORMING DEVELOPERS INTO SECURITY PEOPLE

About Chris Romeo

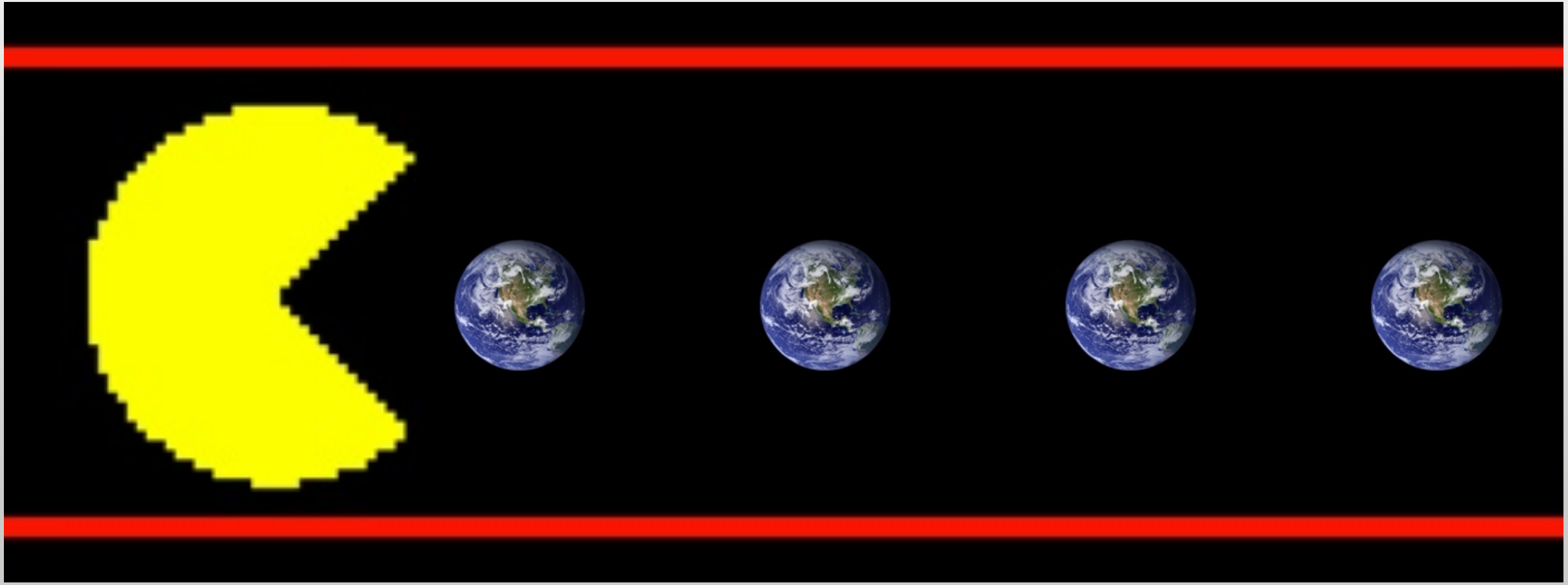
- **CEO / Co-Founder / Security Culture Hacker @ Security Journey**
- **Experience**
  - ***20 years in the security world, CISSP, CSSLP***
  - ***10 years at Cisco, leading the Cisco Security Ninja program & CSDL***
- **Speaker at RSA, AppSec USA, AppSec EU, & ISC2 Security Congress**
- **Co-host of the #AppSec PodCast**

@edgeroute

Agenda

- Security Matters, Developer
- Security is a Stretch for Developers
- Four Developer Responses to Security
- Security Behaviors

Software is Eating the World



The Mindset of the “Average” Developer

Aleksey Shipilëv
@shipilev

Follow

When software is eating the world, it becomes your *social* responsibility to write correct, maintainable and understandable code.

Objections to Application Security

We Already Have a ”Security Department”

Source: BSIMM-7

State of Developer Security

Security is a stretch.

Security IQ is low.

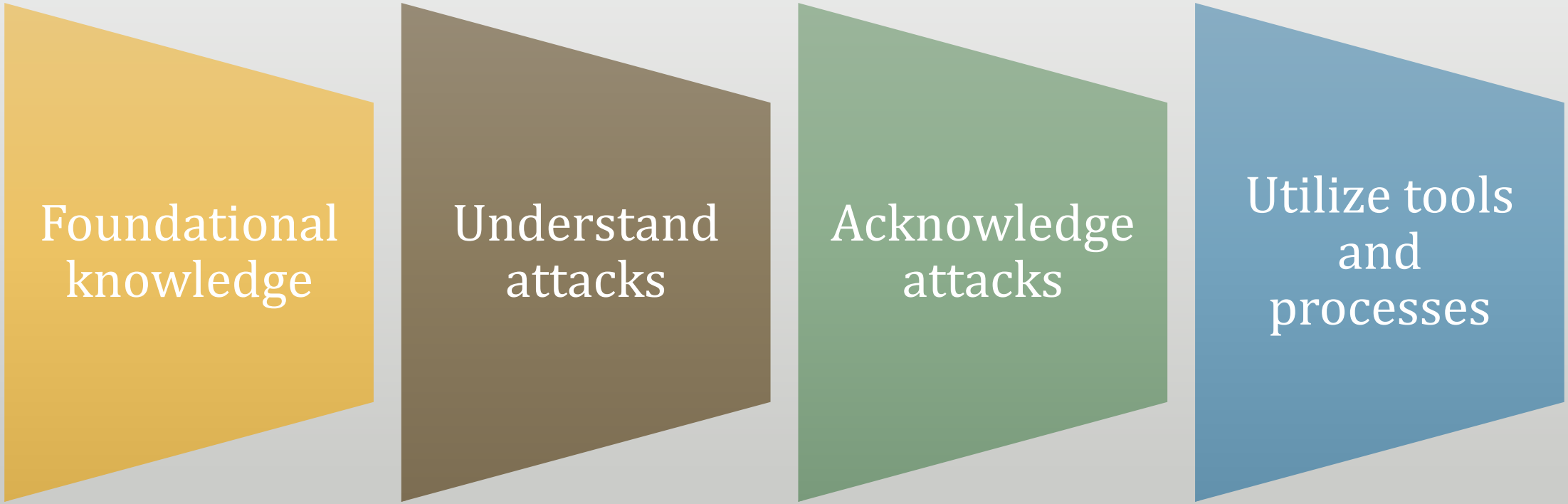
Dev is first line of defense.

Developers Are Not Monsters

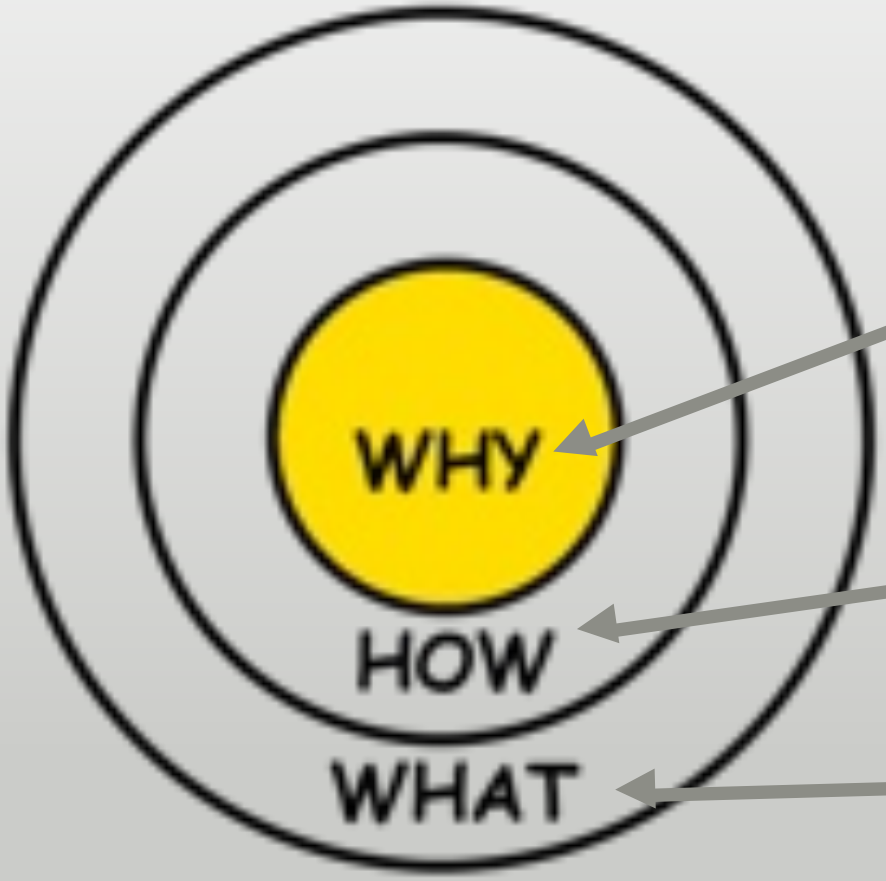
The Goal

Developers that think like security people.

The Security Person Mindset



Start with Why



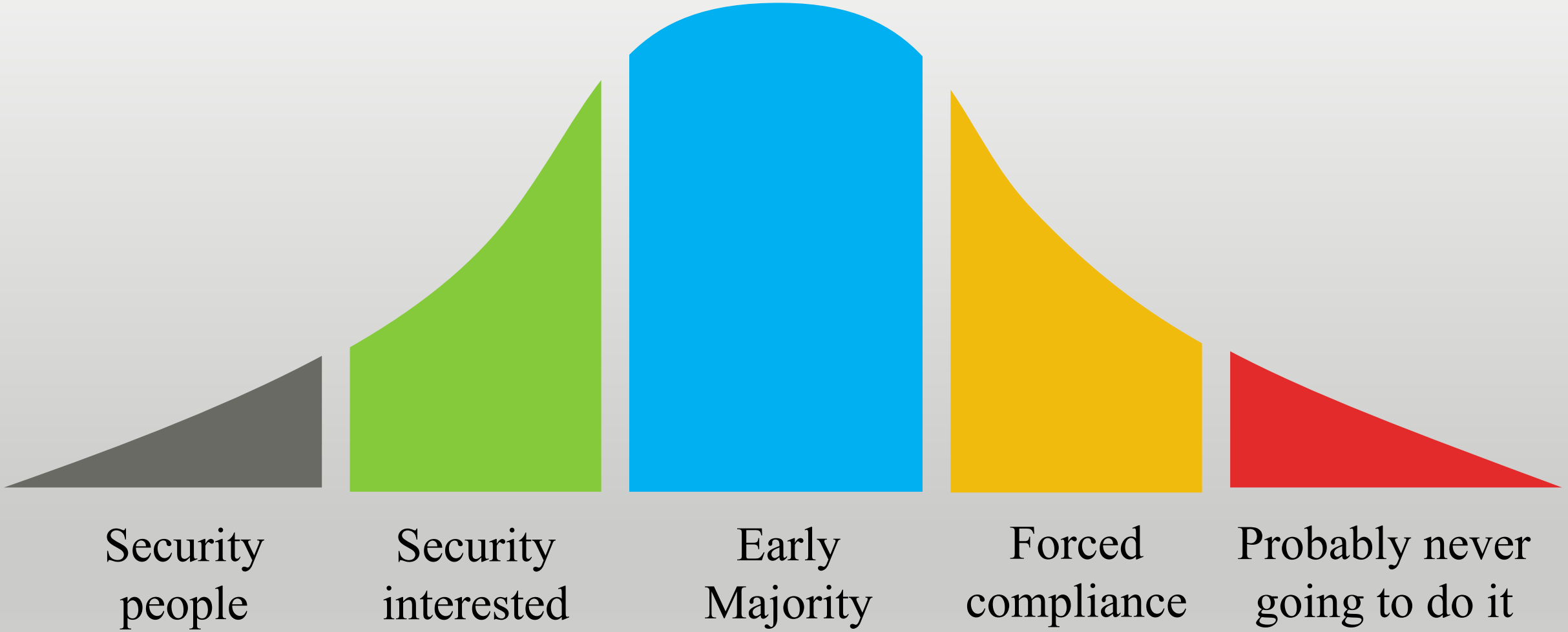
Why the heck are we doing any of this? THE PURPOSE.

Implementation Guide

SDL

Source: Simon Sinek, “Start with Why”

The Security Culture Bell Curve



1. Application security is about the people.
2. The developers are the key.

Developer Responses

Unfamiliar

Overworked

Apathetic

Gung Ho

Developer Response #1: Unfamiliar / Ignorance

1. “Why? like legit why do we need to do security?”
2. “Don’t understand security and don’t know what to do.”
3. “We’re little. No one would go after us.”
4. “Security causes change, and change is too risky for our apps.”

Action: Foundational Lessons

Security Fundamentals

Attacks & Attackers

Simple SDL

Security Myths

Privacy & Customer Data Protection

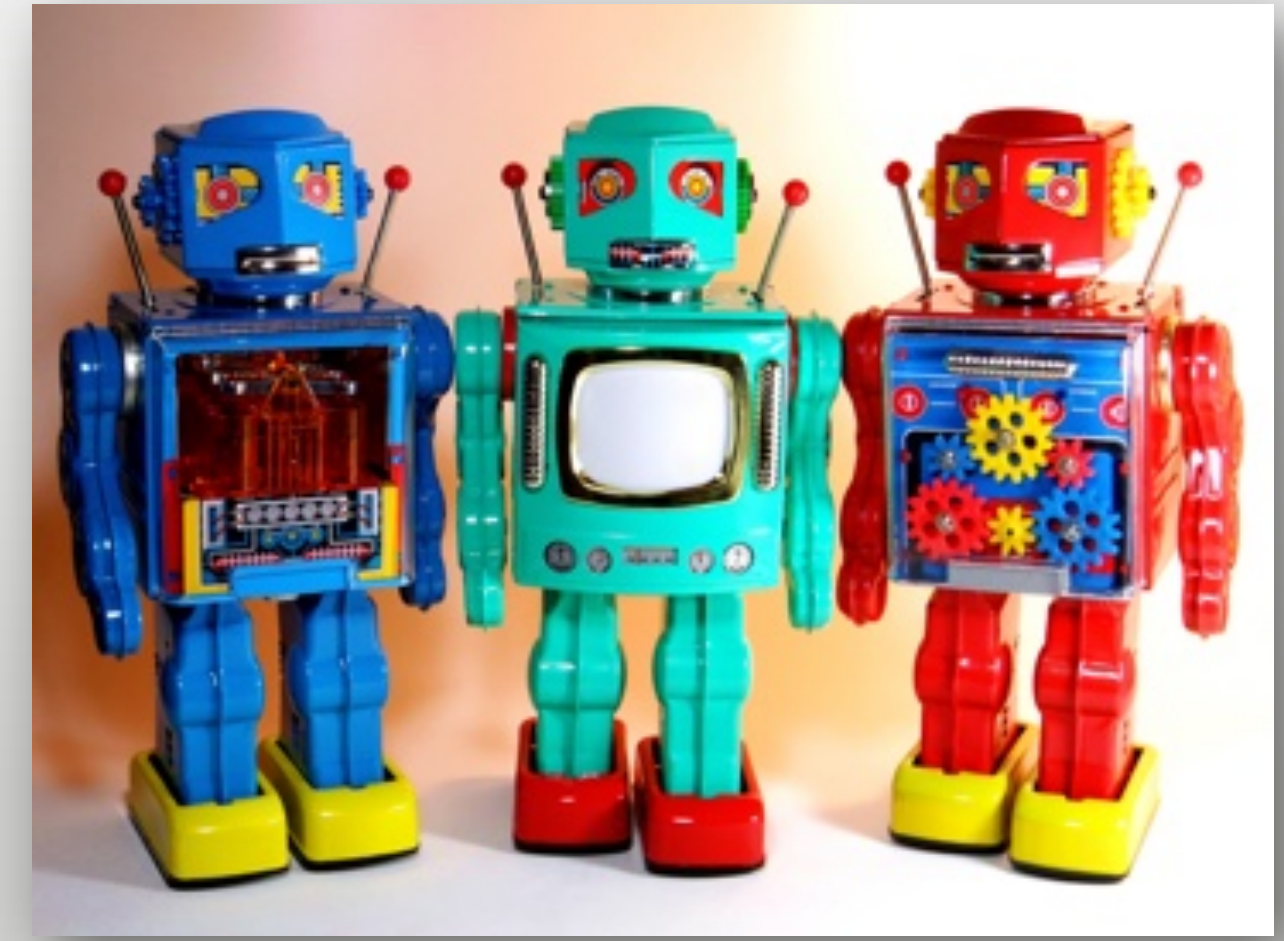
Security Business Case

Action: Everyone is a Security Person

Developer Response #2: Overworked

1. “Too much other work to do”
2. “Management does not provide time for security”
3. “Security is an unfunded mandate.”
4. “We don't have time to build in security.”

Action: Automation and Simplify

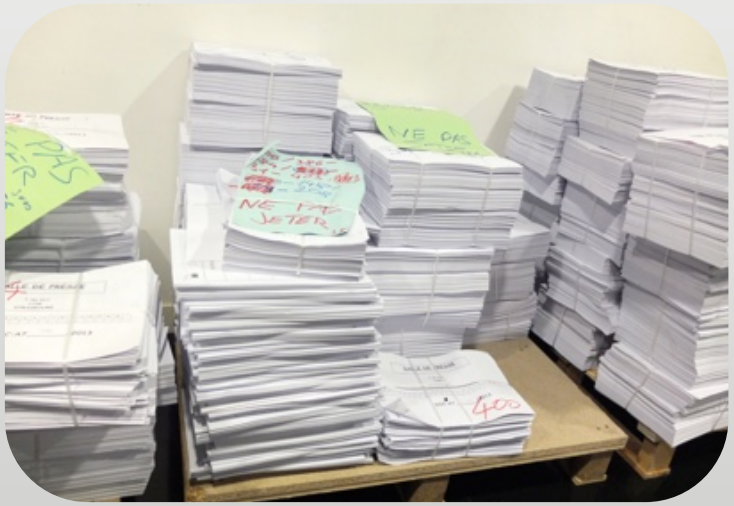


Action: Management / Executive Education

Developer Response #3: Apathetic / Complacent / “Know it All”

1. “It's too hard. That sounds really complicated.”
2. “It's someone else's responsibility, not mine.”
3. “We have nothing worth protecting.”
4. “We’ve always done things THIS way.”
5. “I already know all this stuff.”

Action: Shock Value



11.5 million documents

214,488 offshore entities

2.6 terabytes of data

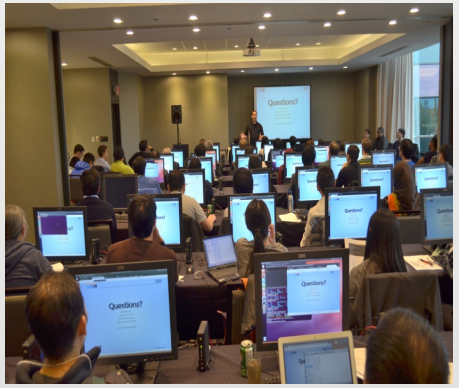
Action: Compliance

Developer Response #4: Gung Ho

1. “Where can we learn more about security?”
2. “Is there someone that can mentor me to help me grow as a security person?”
3. “I could see security as a job I could transition into full time.”

Action: Build Security Community

Build a security [advocate, guild, champion] program



Monthly Training

Security Days

Internal Capture the Flag

Conferences

Who do you encounter the most?

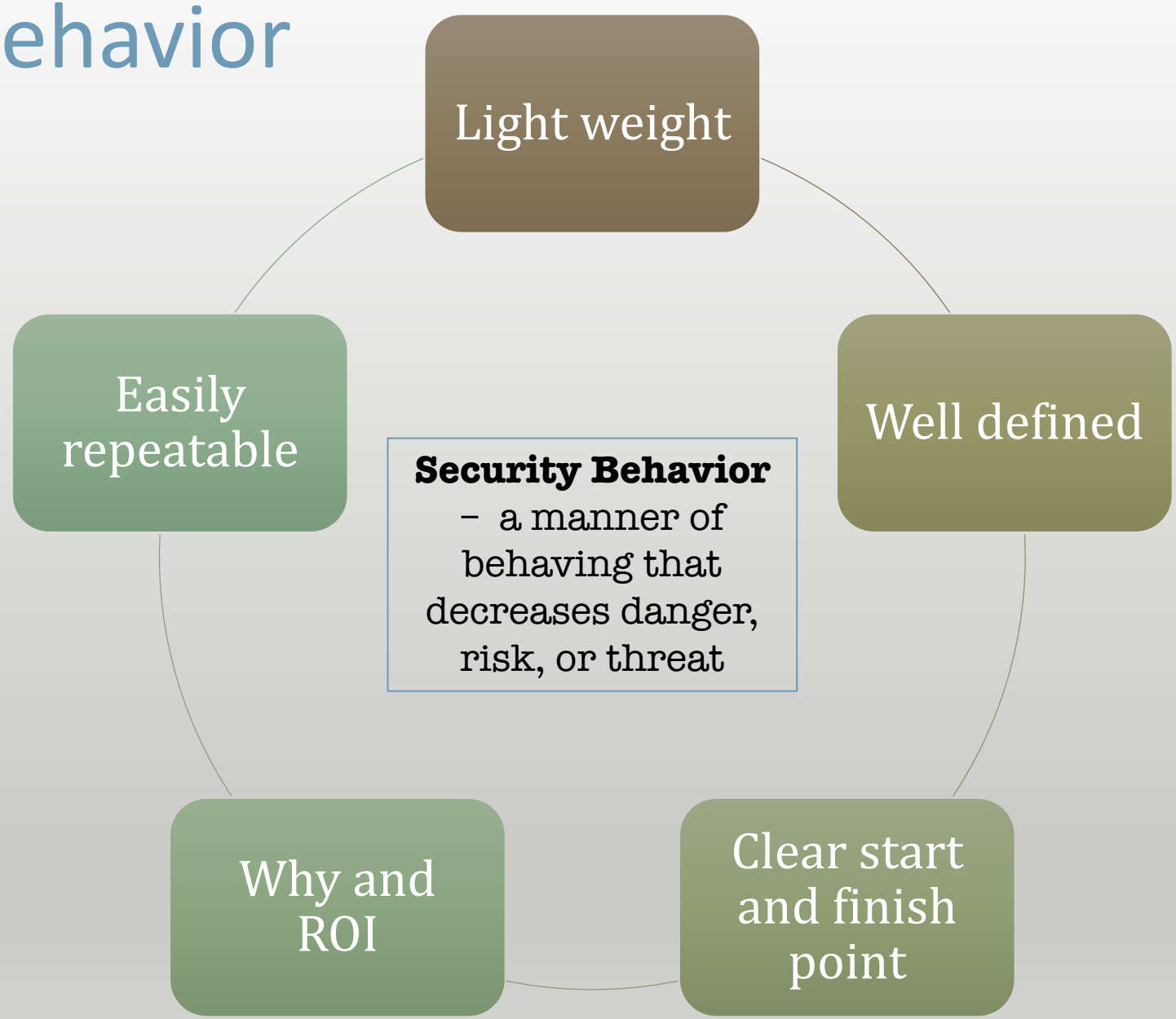
Unfamiliar

Overworked

Apathetic

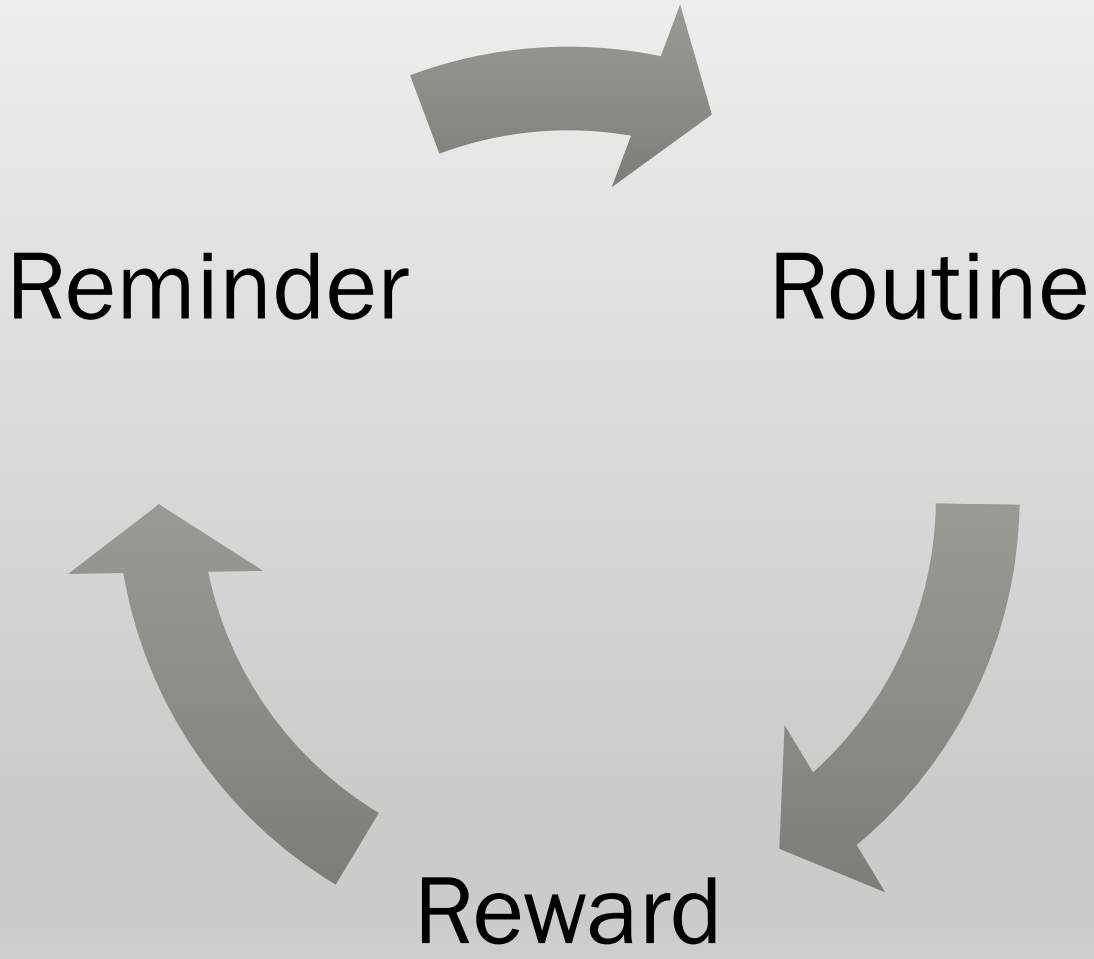
Gung Ho

Security behavior

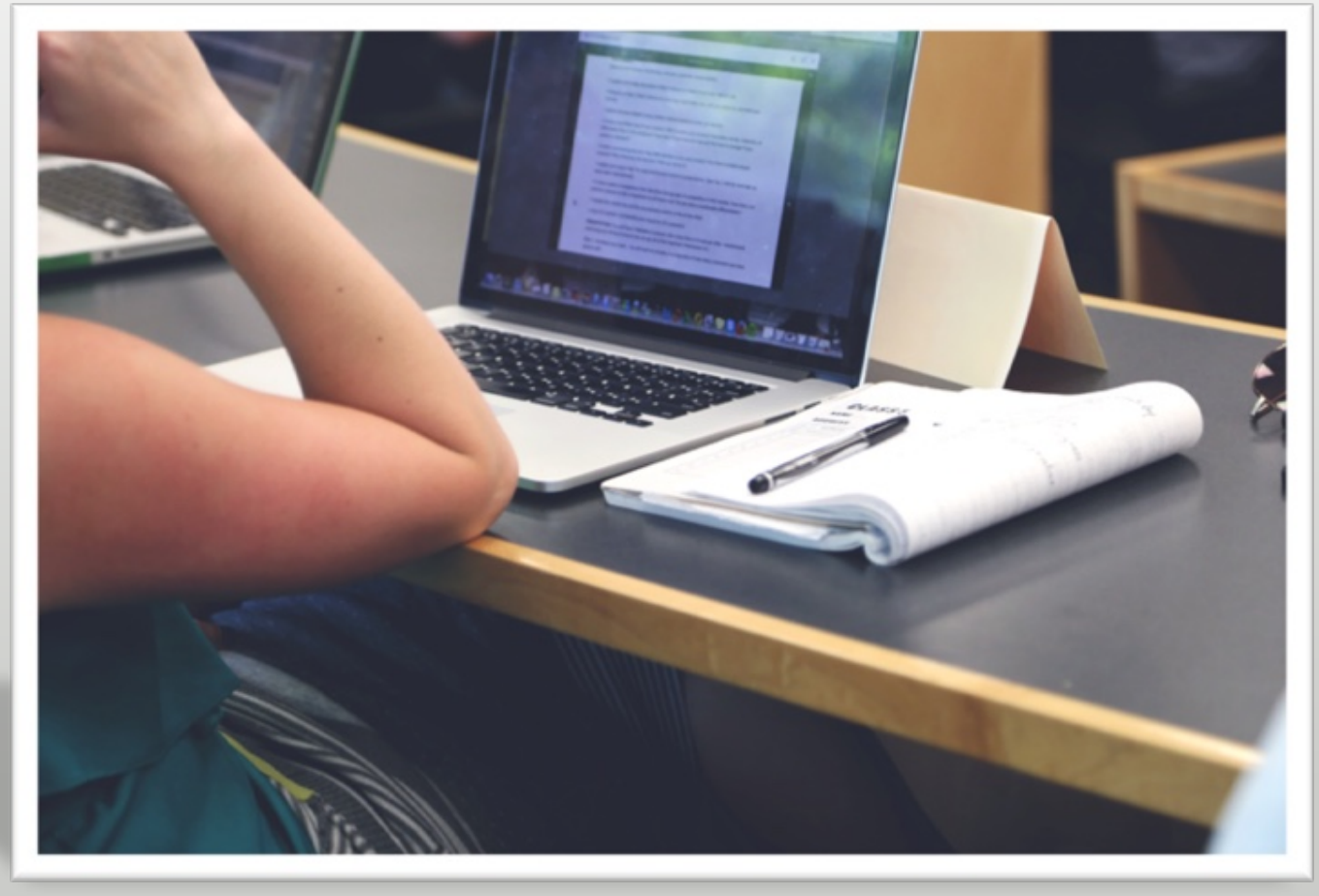


What is a security behavior NOT?

Security Habits



Learning



Experience

>_codebashing.

SECURE CODE WARRIOR

Community

Manager: Plan Resources

Threat Modeling

Code Review

Red Teaming

Response

Responses

- Unfamiliar
- Overworked
- Apathetic
- Gung Ho

Transforms

- Knowledge
- Automation / Education
- Shock Value / Compliance
- Community

Behaviors

- Learning
- Experience
- Community
- Plan Resources
- Threat Modeling
- Code Review
- Red Teaming
- Response

Apply What You Have Learned Today

- Next week:
  - *Assess your organizational security culture*
  - *Survey developer population to gauge response to security*
- In the first three months:
  - *Prioritize security behaviors and form a plan*
  - *Focus on the security behavior that is your top priority and invest in making it successful*
- Within six months:
  - *Branch out to your top three security behaviors and focus in*
- Within one year:
  - *Roll out all the security behaviors*

Key Takeaways

1. Application security is a stretch for the average developer
2. Everyone has an excuse; break on through
3. True security culture change comes through behavior and not process

Q+A and Thank you!

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