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# Three Metaphors You Can Use to Talk About Zero Trust



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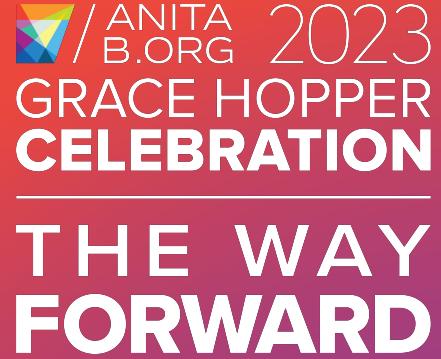
Elizabeth Schweinsberg  
Technical Advisor at Centers for  
Medicare and Medicaid Services  
(CMS)



## Who am I?

- Elizabeth Schweinsberg, Security Technical Advisor at the Centers for Medicare and Medicaid Services (CMS)
- Most recently of the United States Digital Service
  - Detailed to CMS for 2.5 yrs, leading their Zero Trust architecture since Summer 2021.
- Longtime practitioner of Digital Forensics, Incident Response, and Threat Detection in corporate environments, turned Zero Trust “Architect”.





# Agenda

What is Zero Trust?

Zero Trust is an odyssey

Zero Trust is a trip to the park

Zero Trust is a fortress

## Why should you use metaphors?

- A metaphor is a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them<sup>1</sup>
- Conceptual metaphors help to understand a new idea in terms of another.

Consider comparing a complex security topic to something your audience already knows

<sup>1</sup><https://www.merriam-webster.com/dictionary/metaphor>

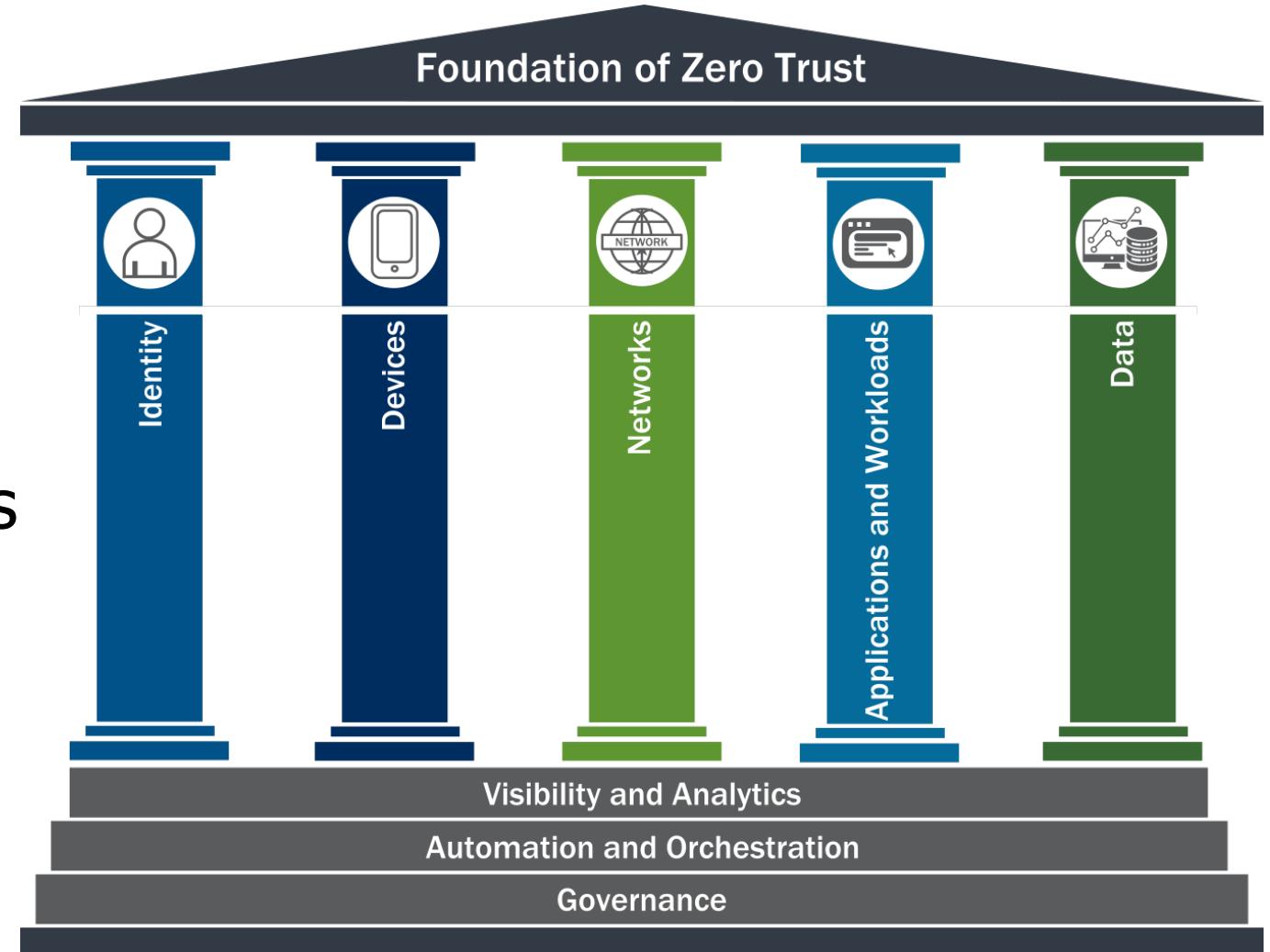
## What is Zero Trust?

- Zero Trust is a security model that emphasizes frequently verifying trust relationships
- Just because an entity is in the network doesn't mean they should get access.

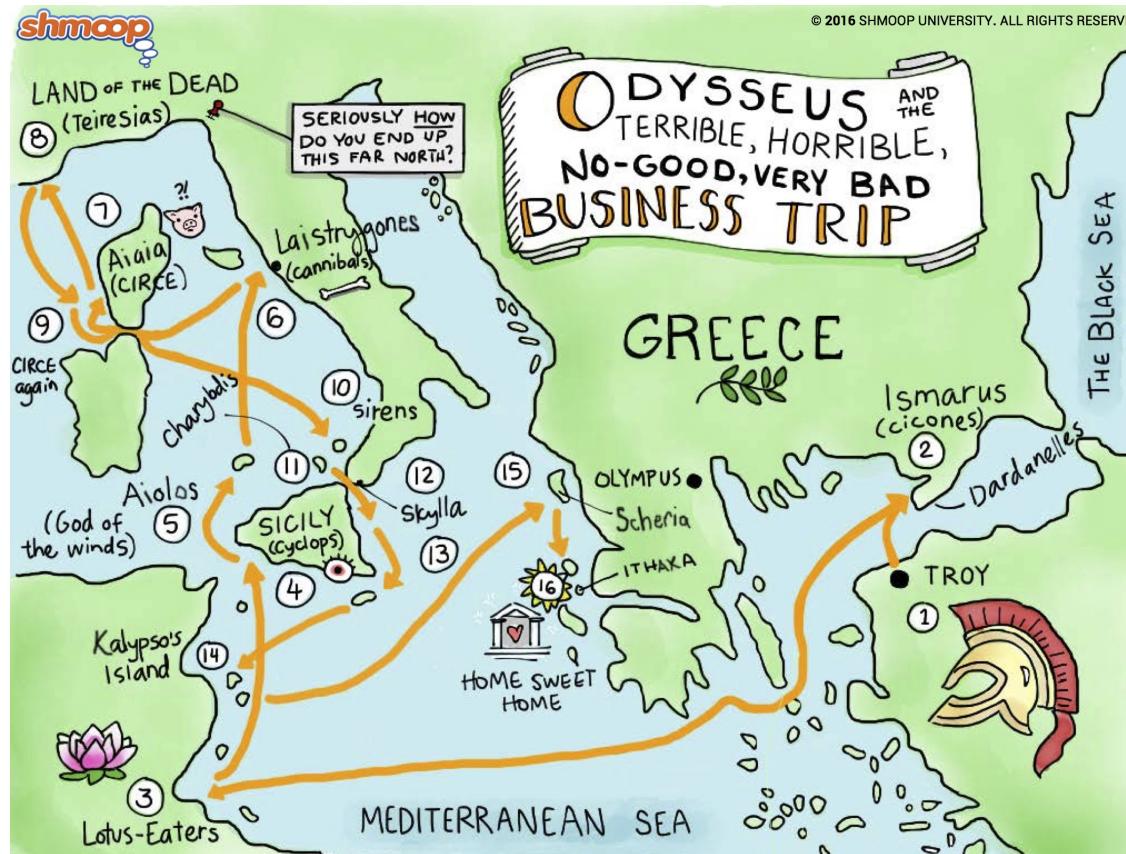
Zero Trust is a journey.

## The Five Pillars

- Identity
- Devices
- Networks
- Applications and workloads
- Data



# Zero Trust is an Odyssey



Map from: <https://www.shmoop.com/odyssey/chart-odysseus-odyssey.html>

# The Five Pillars of the Odyssey

- Who gets on the ship?

Identity



- Protecting the ship

Devices



- The route the ship takes through the sea

Networks



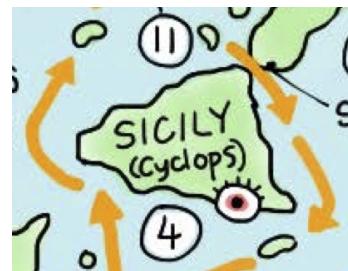
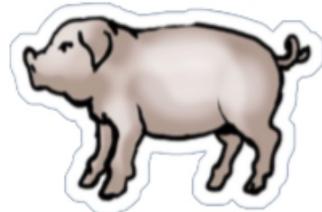
- What the ship is being used for?

Applications



- What the ship is carrying?

Data

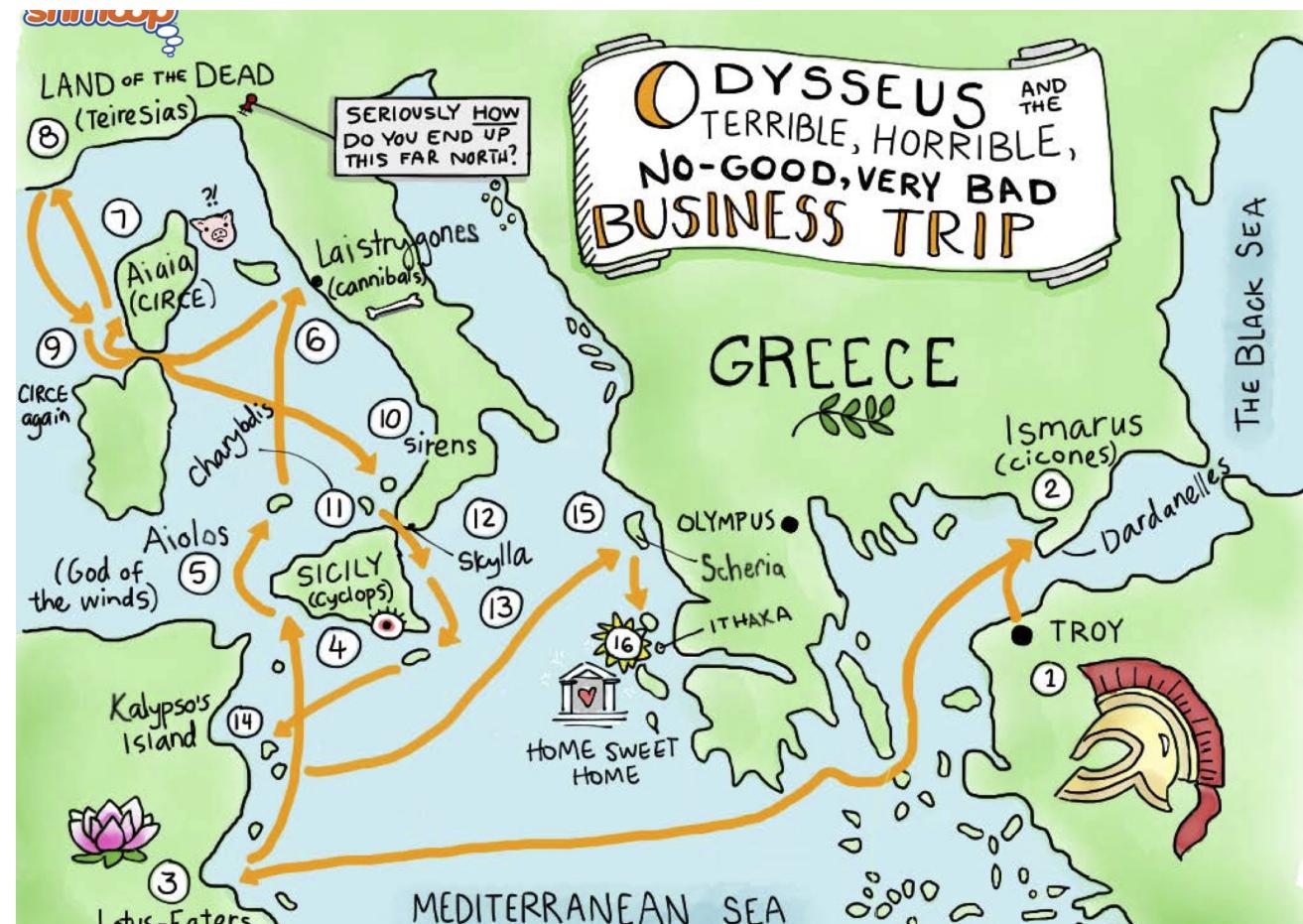


# Zero Trust is an Odyssey

Adapting security to the situation at hand

The Odyssey is a Greek legend about a man named Odysseus who has a really hard time getting home from the Trojan War.

He and his crew face a bunch of challenging situations where they have to adapt what they are doing to make it past a challenge



Map from: <https://www.shmoop.com/odyssey/chart-odysseus-odyssey.html>

# Zero Trust is a trip to the ball park



Photo from: <https://www.sportsfanisland.com/products/oriole-park-at-camden-yards-mlb-baltimore-orioles-brxlz-stadium-blocks-set>

# Go through security

When you show up to the ball park, you will go through a metal detector and have your bag checked to make sure you are not bringing in illegal snacks like pretzels.

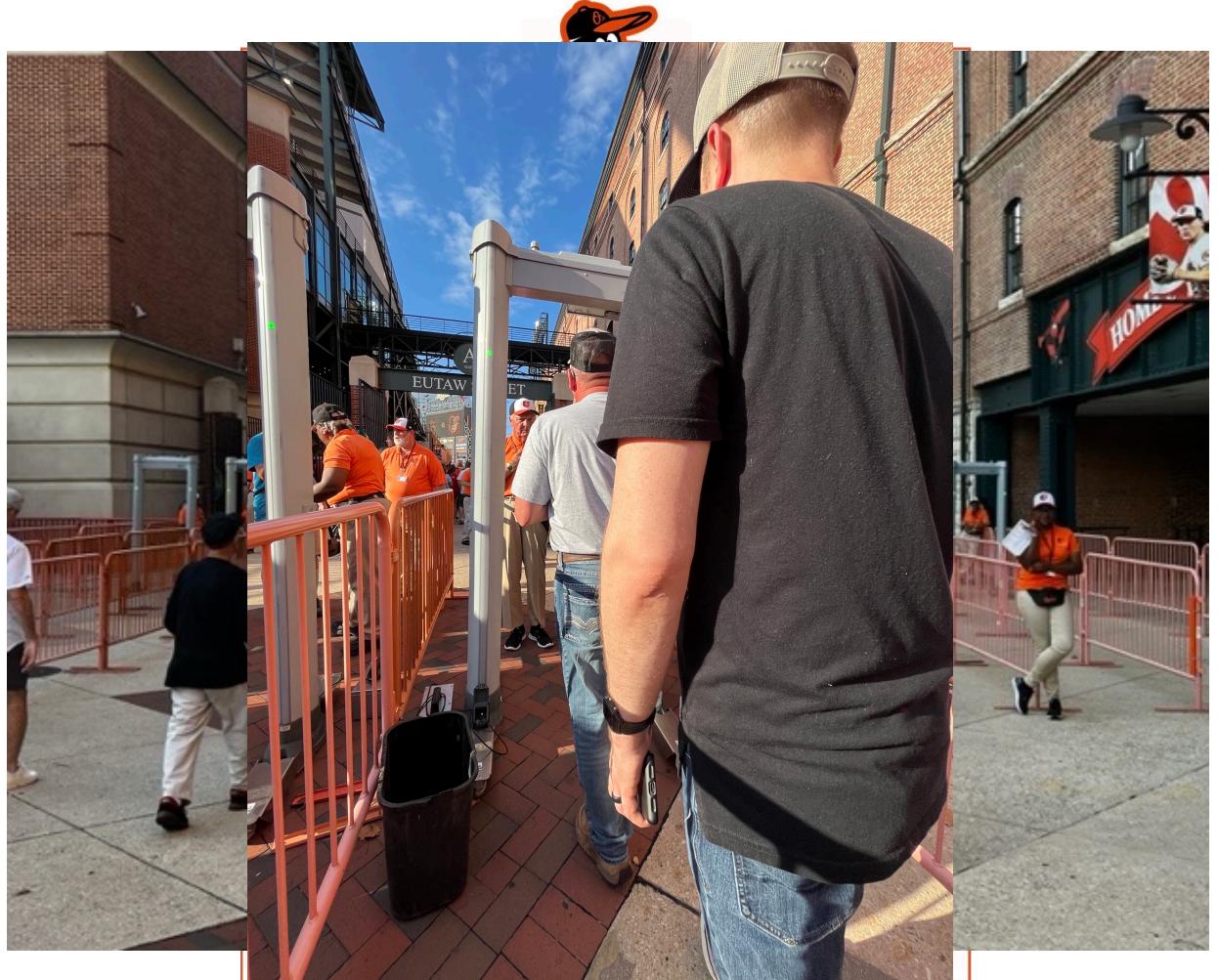


Photo Credit: Alex Ciepley, 2023; Zach Withers, 2023

# Get your ticket scanned

Then someone scans your ticket,  
makes sure you are allowed in  
for a game on the right day and  
time.

And that no one else has used  
that ticket yet.



## Find your section

Then you walk through the concourse, maybe get some snacks. If you want a beer you have to show you are over 21.

When you get to your section, you will often have to show your ticket again to prove you are in the right spot.



# Accessing the Club Level

If you have tickets for the Club level or for the suites, then you will have to show your ticket a 3rd time to prove you are allowed on that level and get access to the special snack options.

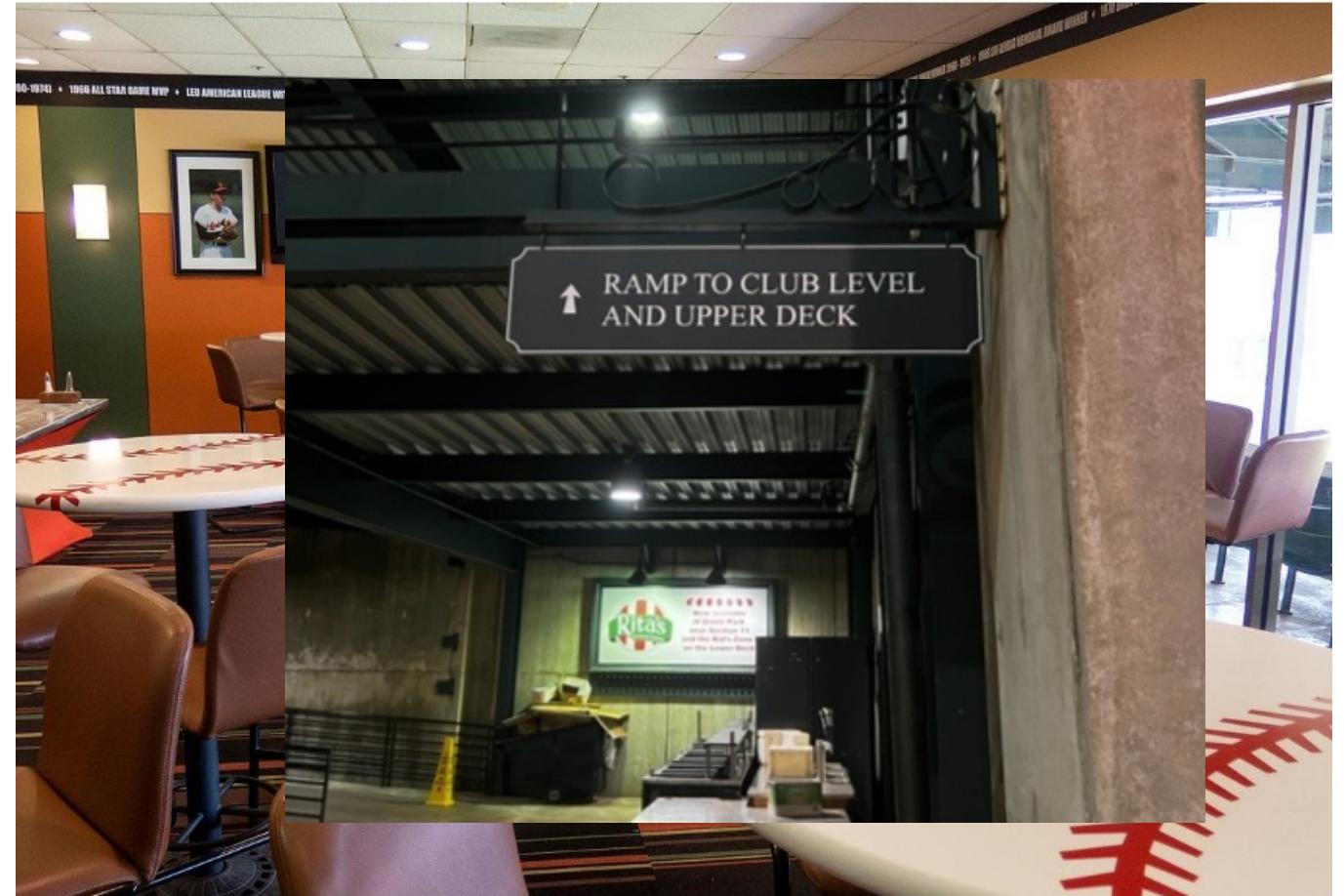


Photo Credit: Club Sign: Alex Ciepley, 2023; Club interior: <https://www.bizjournals.com/baltimore/news/2013/05/15/orioles-luxury-suite-sales-still-wait.html>

## Extra special access

Press, staff, and players aren't going to need tickets, but are going to have some sort of badge to help prove they belong in the stadium at this time.

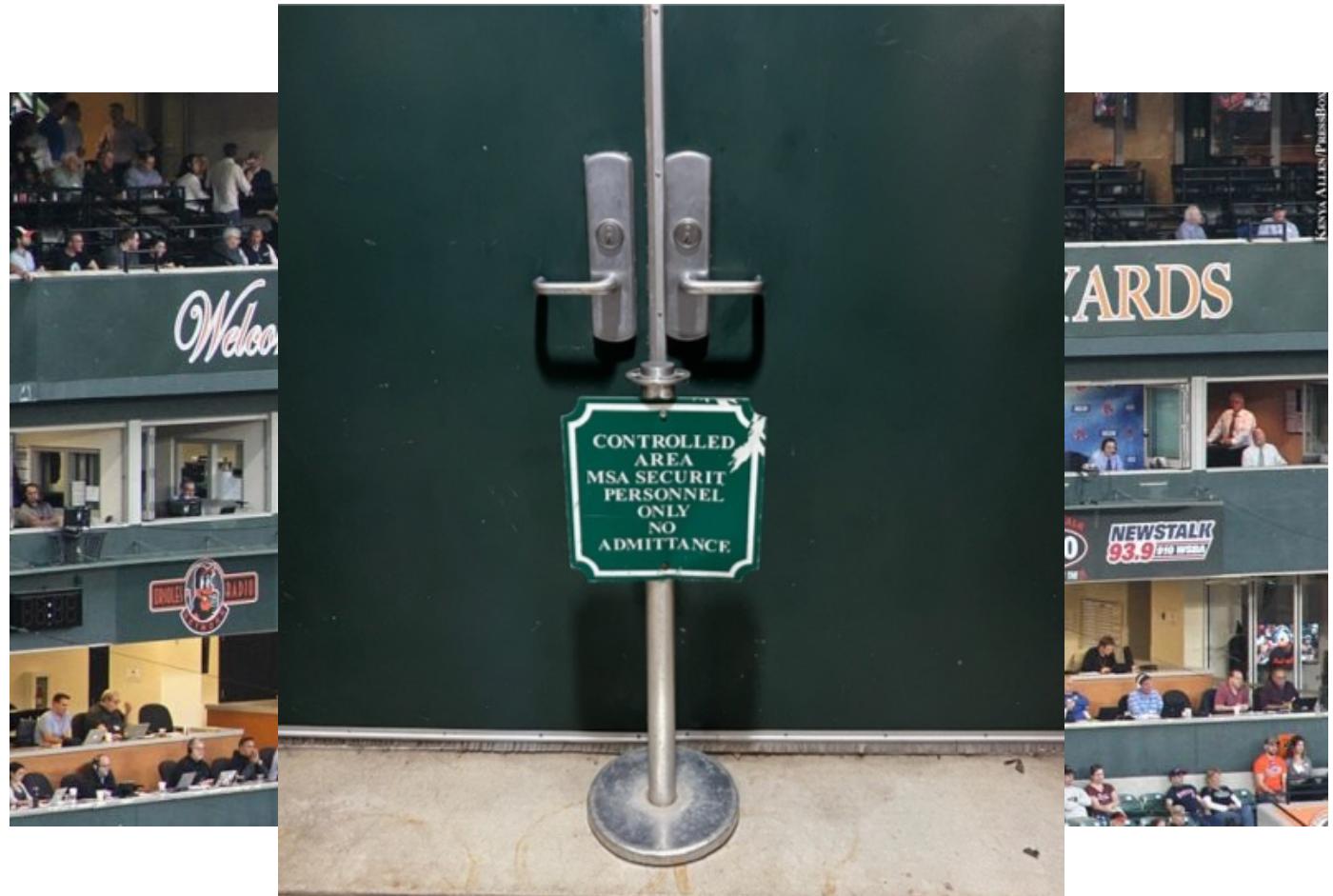


Photo from: <https://pressboxonline.com/2020/02/19/orioles-announce-2020-broadcast-team/>

# The Five Pillars of the Ballgame

- Your ticket
- Your ID

Identity



- What you bring in to the game

Devices



- Where you can go in the park

Networks



- Watching the game

Applications



- The Snacks

Data



## Zero Trust is a trip to the ball park

Who you are affects what you can access

Going to a game at a ball park or stadium can exemplify what it is like to try to navigate a corporate network.

Comparing and contrasting a professional game to high school or college game can be used to talk about how security has changed.



Photo from: <https://www.sportsfanisland.com/products/oriole-park-at-camden-yards-mlb-baltimore-orioles-brxlz-stadium-blocks-set>

# Zero Trust is a Fortress

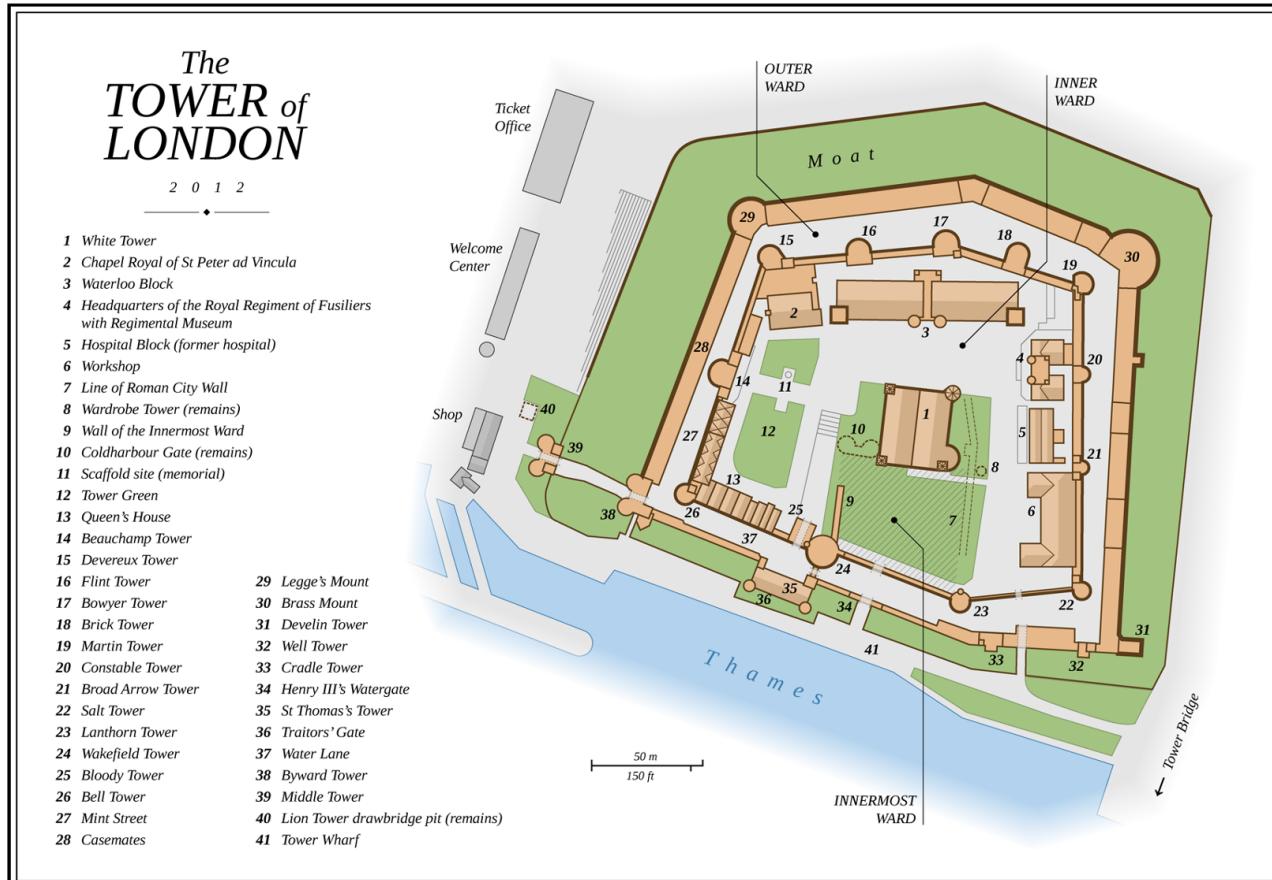


Image from: <https://toweroflondontour.com/the-map-of-the-tower-of-london.html>

# Entering the Tower

As a visitor to the Tower of London, you'll buy a ticket and cross over the moat to enter through the first set of walls.



Photo Credit: Alan Harding, 2023

## Or use another entrance

If you are a prisoner of the Tower, then you come in from the Thames River via the Traitor's Gate.



Photo Credit: Alan Harding, 2023

## The Tower has layers

Within the Tower, there are actually 21 towers along the walls, both for defense and for storing captives.

And some more segmentation within the walls.



# Guarding the Crown Jewels

Speaking of metaphors...

Visitors have the opportunity to view the assorted finery of the Crown.

There is bombproof glass surrounding them and lots of cameras



Photo Credit: Alan Harding, 2023

# Privileged Access

Every so often the Crown gets to come out.

The Lord Chamberlain is allowed to remove the jewels from the house.

Once a year the Crown Jeweller cleans the items in the Jewel House.



# The Five Pillars of the Tower of London

- Your ticket
- Stylish Uniforms

Identity



- Zoo Animals
- Audio Guide

Devices



- Layers of walls and towers

Networks



- So many uses – living space, prison, zoo, and mint

Applications



- The Crown Jewels
- The Mint
- Prisoners

Data



# Zero Trust is a Fortress

Castles had layered defenses, and didn't just rely on moats and drawbridges.

The Tower of London is almost a millennium old, and contains layers upon layers of security features to keep people in and out.

The display of the Crown Jewels is an excellent example of giving people the right level of access at the right time.

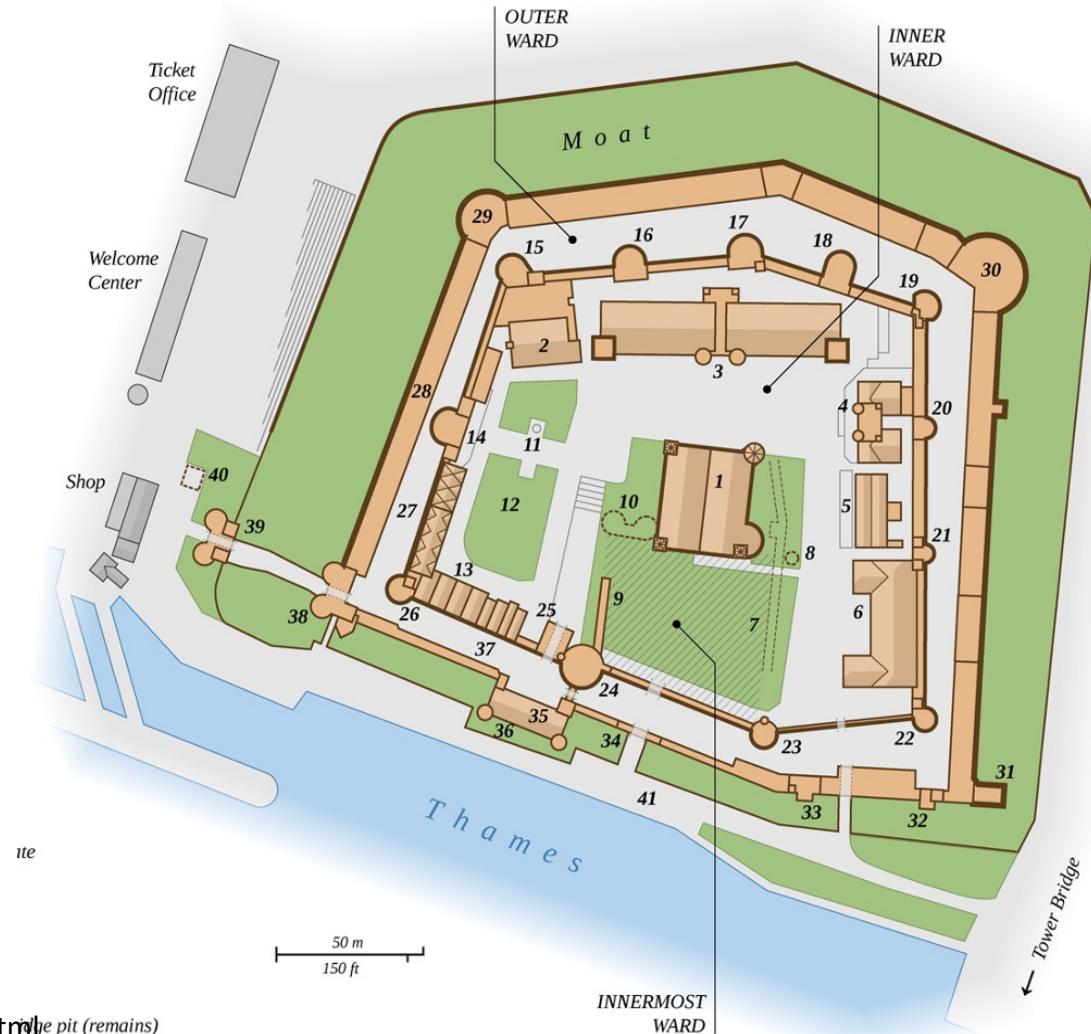


Image from: <https://toweroflondontour.com/the-map-of-the-tower-of-london.html>

## Try using a metaphor!

- Who do you need to communicate to?
- What are you trying to communicate?
- Are there cultural commonalities you can use?

# Working for the US Government is cool

- Scholarship for Service
  - Pays for up to 2 years of college
- US Digital Corps for very early career
  - <2 years out of school
  - <https://digitalcorps.gsa.gov/>
- US Digital Service
  - for more senior folks
  - <https://www.usds.gov/>
- DHS/CISA is always hiring
  - <https://dhscs.usajobs.gov/Apply>
- But every agency is trying to improve their zero trust maturity, so keep an eye on USA Jobs
  - <https://www.usajobs.gov/>



# THANK YOU



[https://github.com/  
eschwein-usds/decks](https://github.com/eschwein-usds/decks)



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bethschweinsberg](https://www.linkedin.com/in/bethschweinsberg)



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