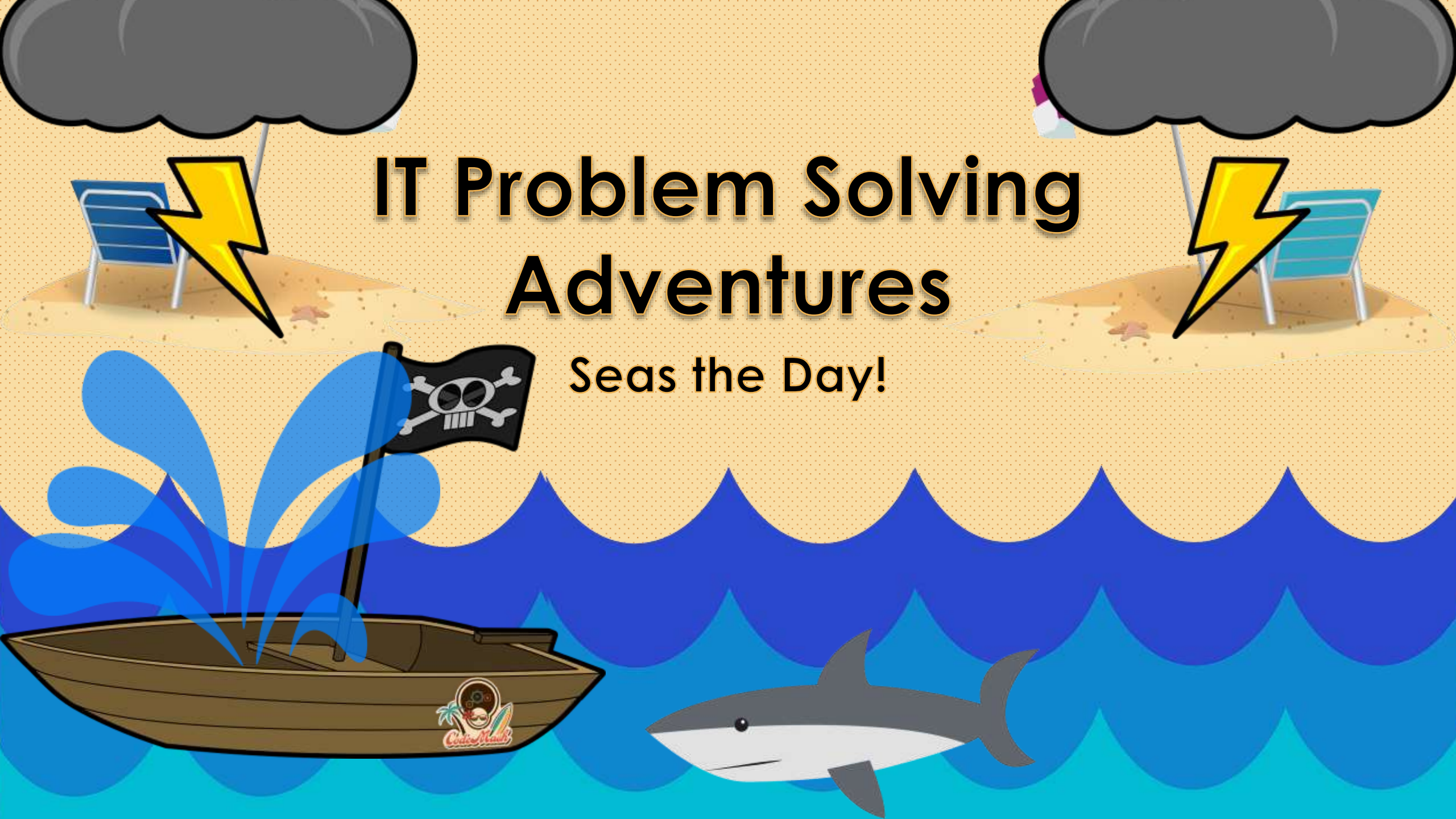
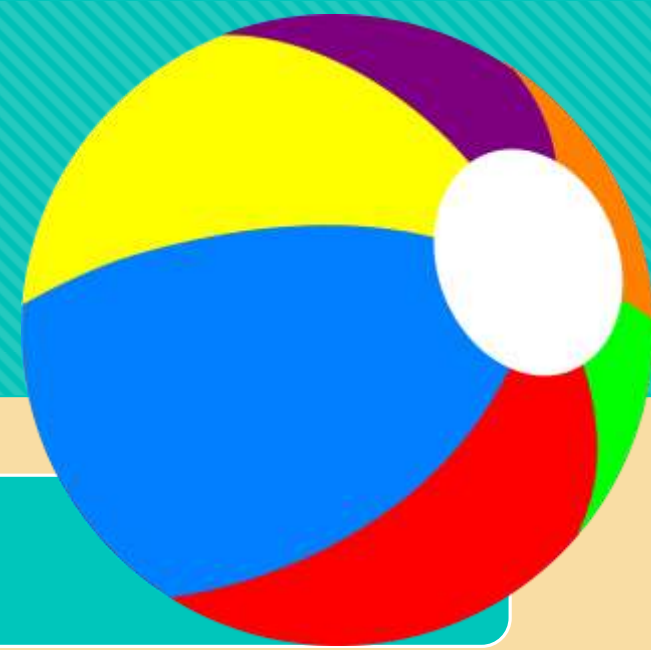


# IT Problem Solving Adventures

Seas the Day!



# Agenda



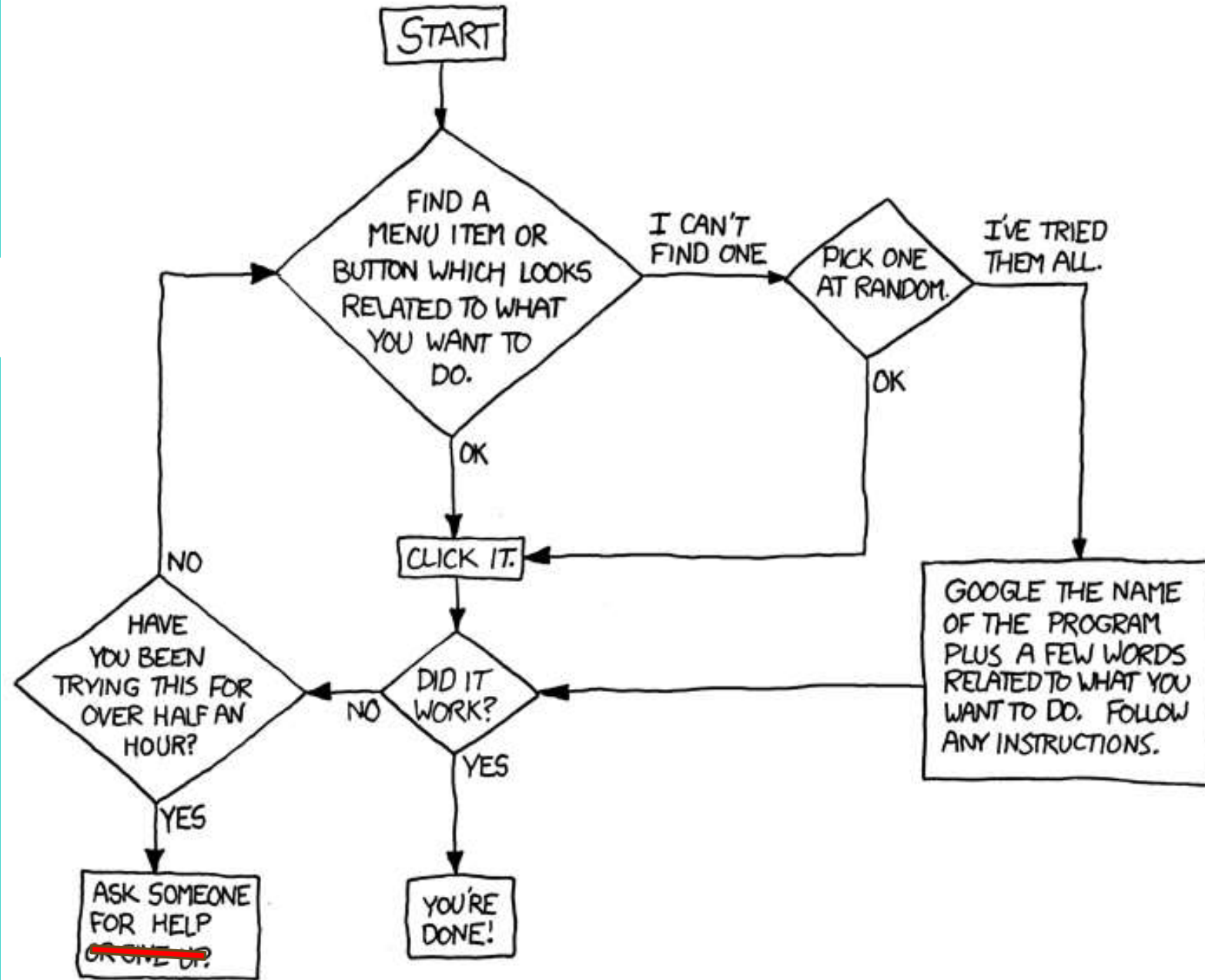
The Importance of Problem Solving

How to be an Awesome Solver of Problems

Choose Your Adventure Problem Solving

Make the World a Better Place

# The Importance of Problem Solving



## ○ en · gi · neer · ing

The practice of using natural science, mathematics, and the engineering design process to solve technical problems, increase efficiency and productivity, and improve systems.

- We are faced with problems constantly that need solved, that's the job. We need to have strategies to tackle them efficiently.
- You can apply these strategies regardless of the problem, the technology, or your expertise.



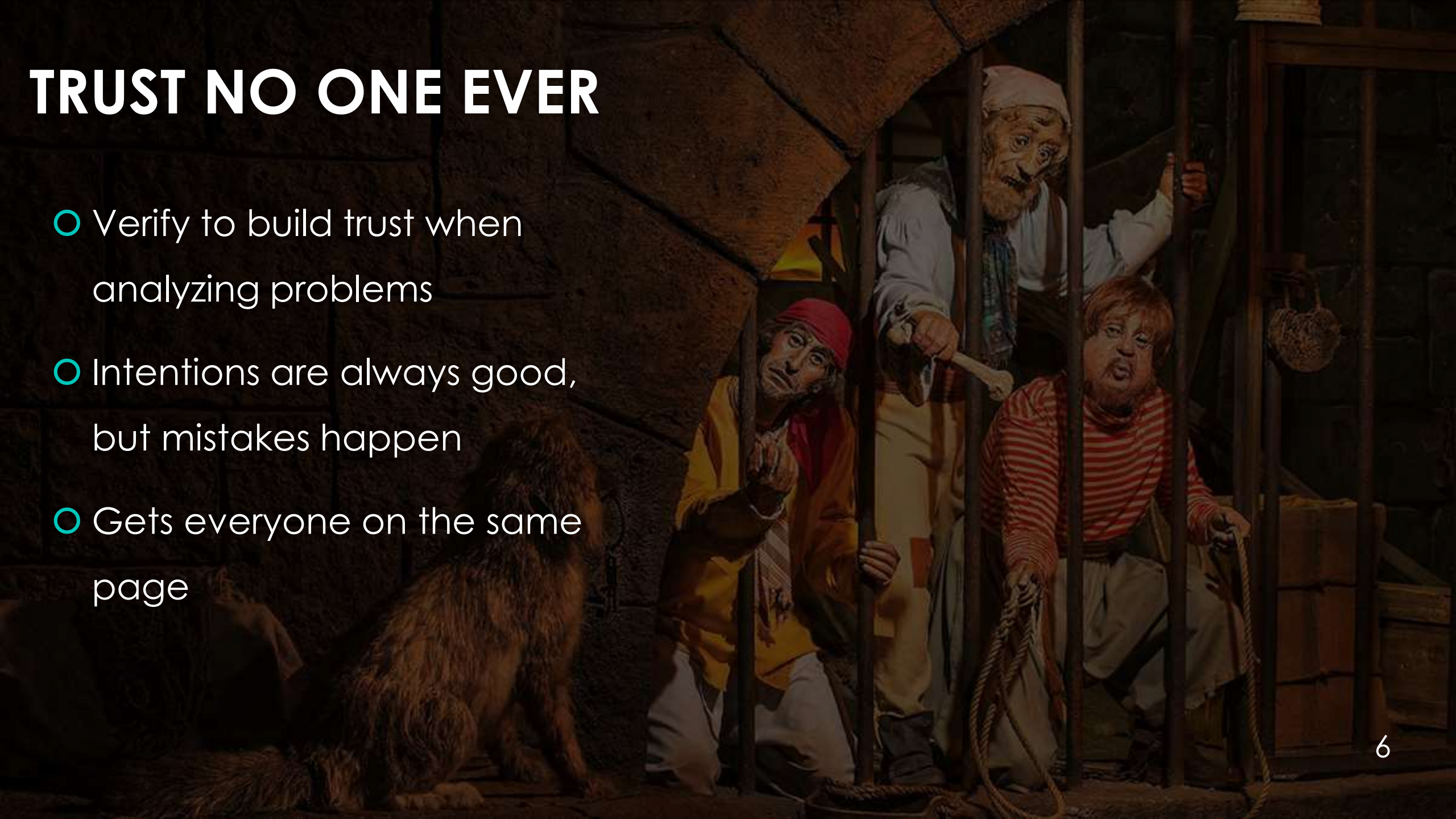


# How to be an Awesome Solver of Problems



# TRUST NO ONE EVER

- Verify to build trust when analyzing problems
- Intentions are always good, but mistakes happen
- Gets everyone on the same page



# Example

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www.glasbergen.com



We updated the configs for the database connection, but the application is still not connecting in the test environment!?!

Where did you update the configs?

Right here is the update, see everything is correct!

How does your application in your test environment read the file from your local?

It... well... I committed and usually another process recognizes that and synchs it to the test environment...

Did that happen? Can we see the updates in the environment?



## Problem #1 Consumer Error

<https://bit.ly/ConsumerError>

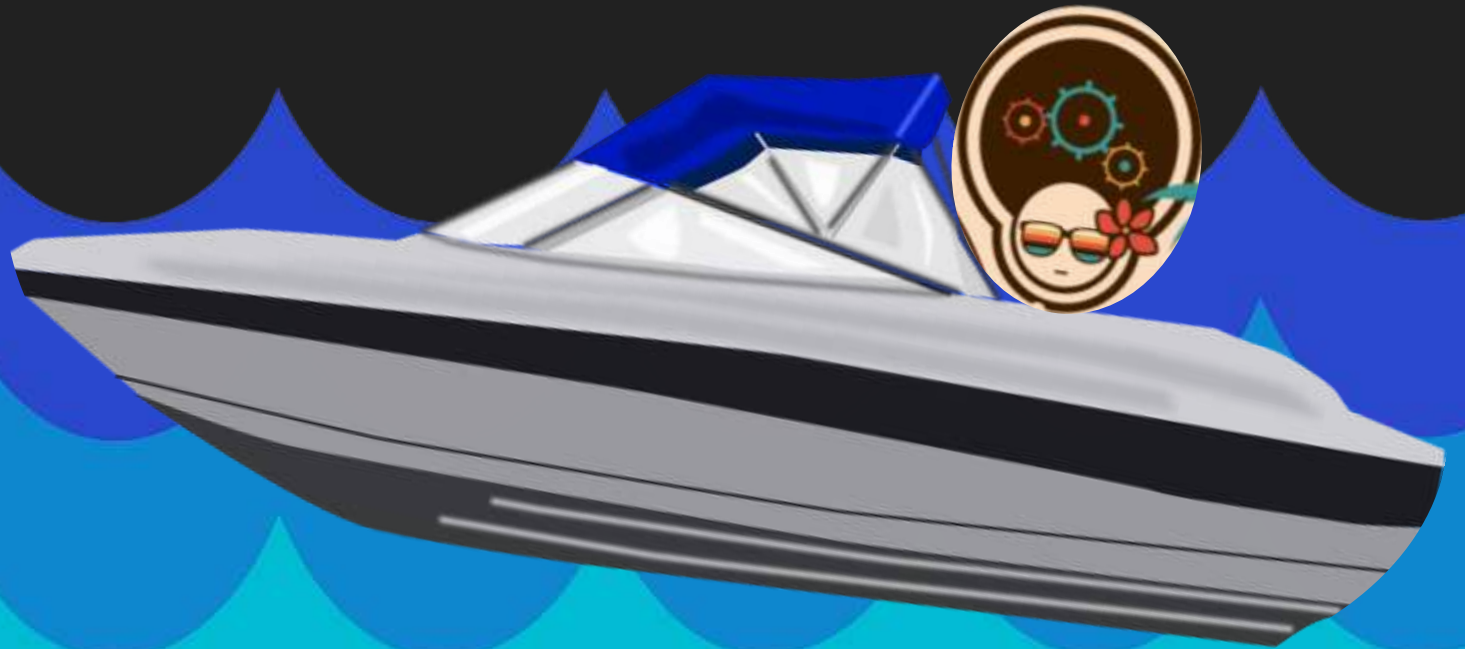


# Questions Assumptions

When something breaks, we need to make sure assumptions line up with reality.



# Example



# ASK QUESTIONS!



**Verbalize** with others your understanding of the problem and the context that creates it. This gets everyone in alignment.

Ask questions to work towards a common understanding. This eliminates assumptions clears the path to a solution.

## **Scenario**

You are an engineer on a line and a quality engineer says the app is down.

What are questions you would follow up with?



# SEEK TO UNDERSTAND



Pro Tip: Explain the problem back,  
this gains alignment from everyone.

---

Steps to recreate issue

---

---

Context in which issue occurs

---

---

Recent changes applied

---

---

External impacts in play





<https://bit.ly/CMAppDown>

Focus on asking questions

Explain CVE and the  
process of Twistlock

## Problem #2

### App Down!

# STRATEGY



<https://sre.google/sre-book/effective-troubleshooting/>

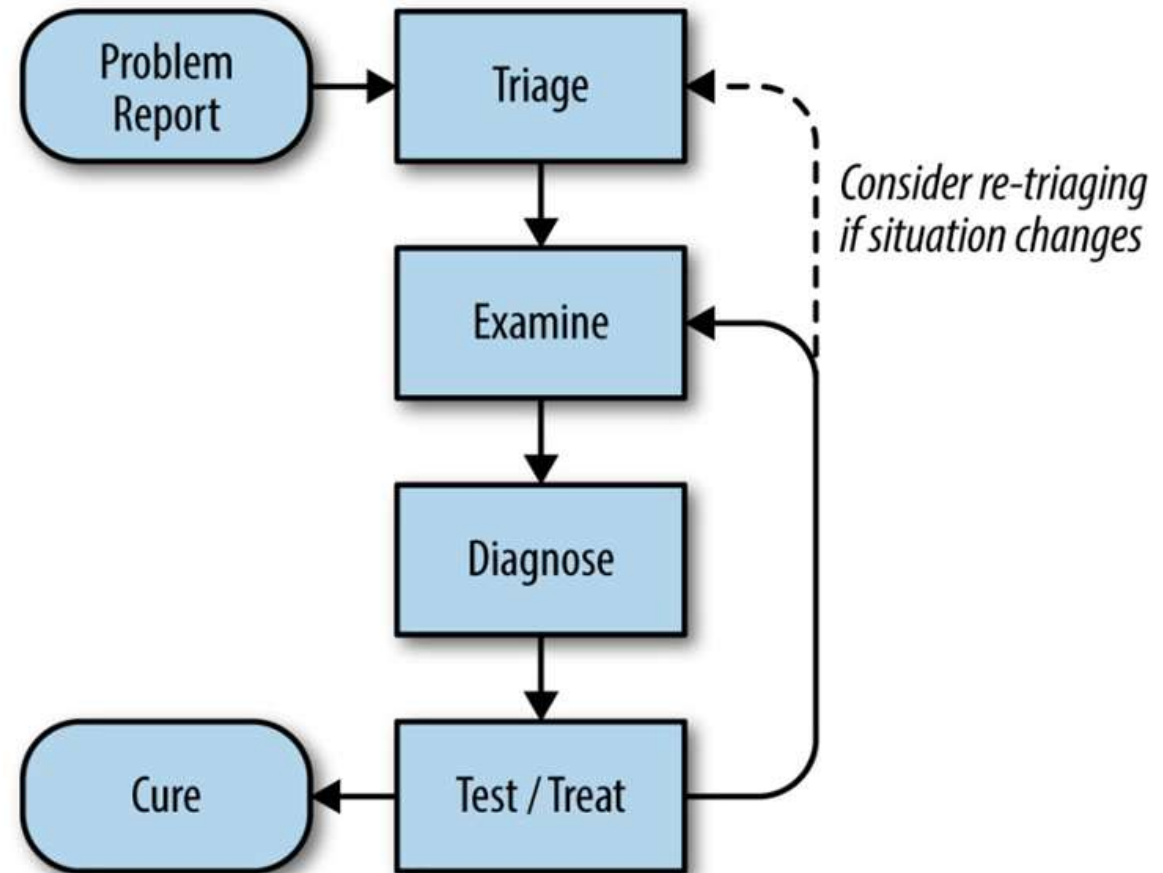


Figure 12-1. A process for troubleshooting

# PRIORITIZE FOR IMPACT

## Customer Impacting (Production)

- **Immediate focus on restoring service**
- Monitoring & Analysis
- Apply fix
- Test & Observe

## Little to No Customer Impact (Non-Production)

- Monitoring & Analysis
- Apply Fix
- Test & Observe
- Restore service

# START SMALL & SIMPLE

Isolate things and verify that they work as expected independently

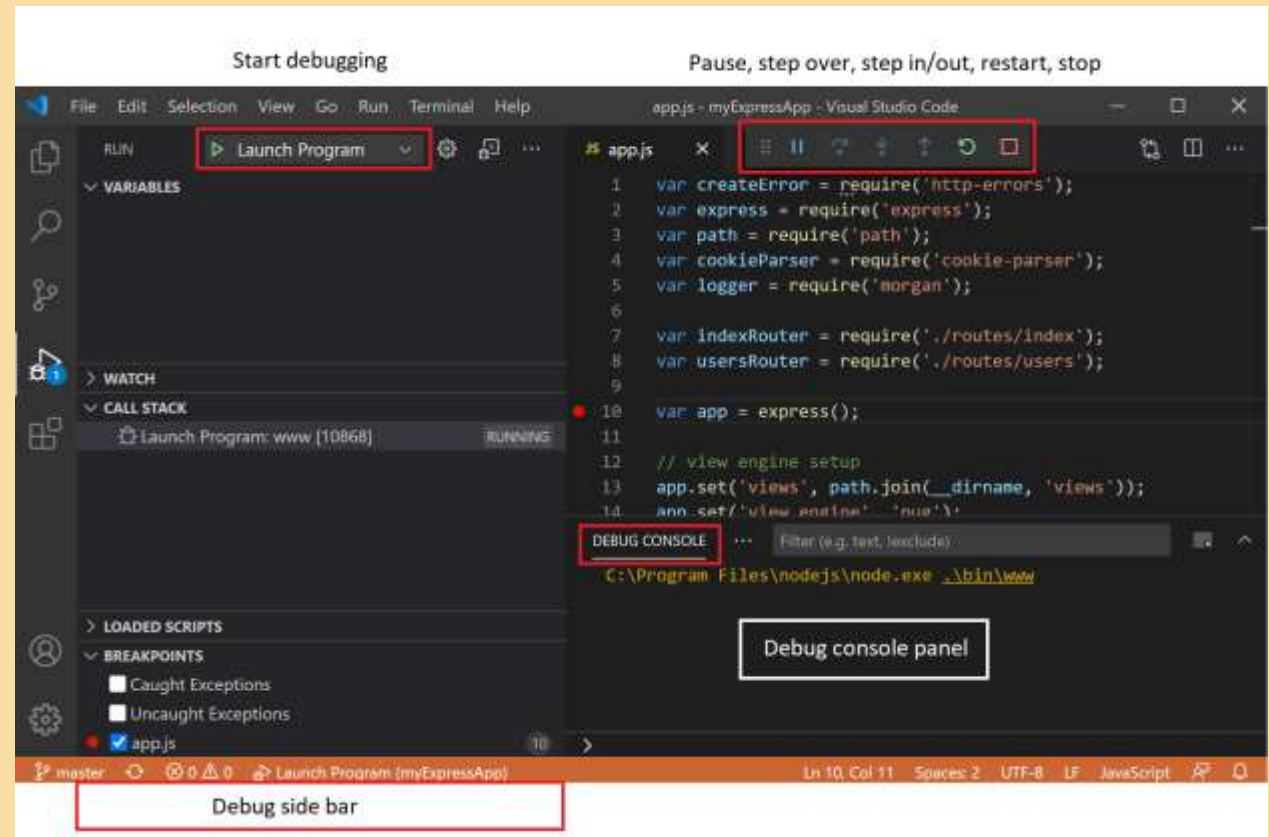
Integration testing of things together we verified independently

Build things up until you find the problem, working towards the full “Onion”



# LOCAL RUNNING APP LOCALLY TO TROUBLESHOOT

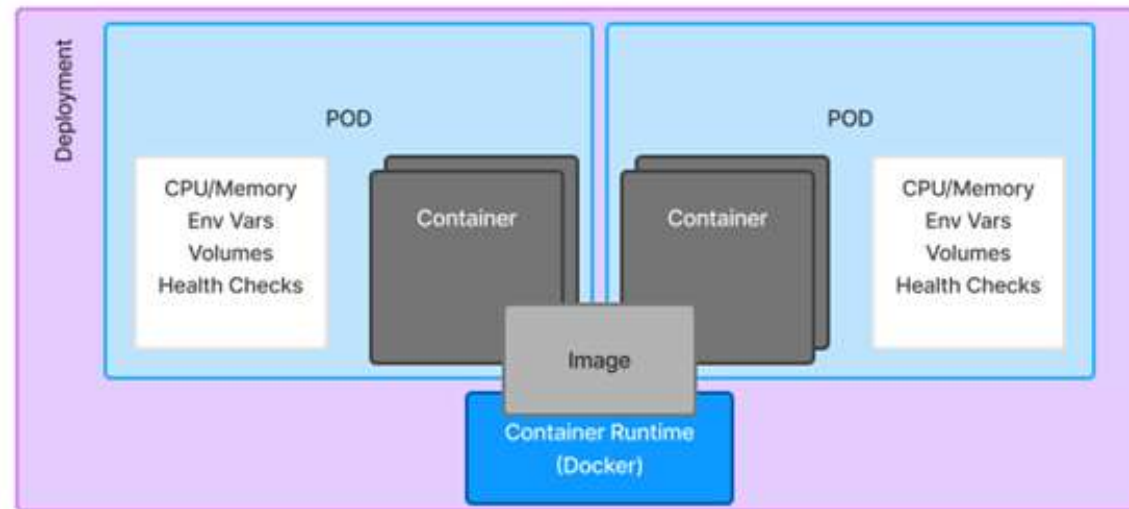
- Recreate and observe
- Environment parity is critical
- Greatest control here
  - Increase add logging
  - Debug and step through
  - Quick trial and error



# DEPLOYED

## APP DEPLOYED IN TEST ENVIRONMENT TROUBLESHOOTING

- Pods down?
  - Describe the pod and look at the events
- Pod up?
  - ssh into pod to review logs or check files
- Begin to validate each part of your deployment:



# EXTERNAL TO YOU

## CONSUMING A SERVICE/PROVIDER OF A SERVICE

- Dig before you call!
  - Gather relevant information before engaging another team
- You have reached the end of your control
  - Be certain you have validated everything on your end



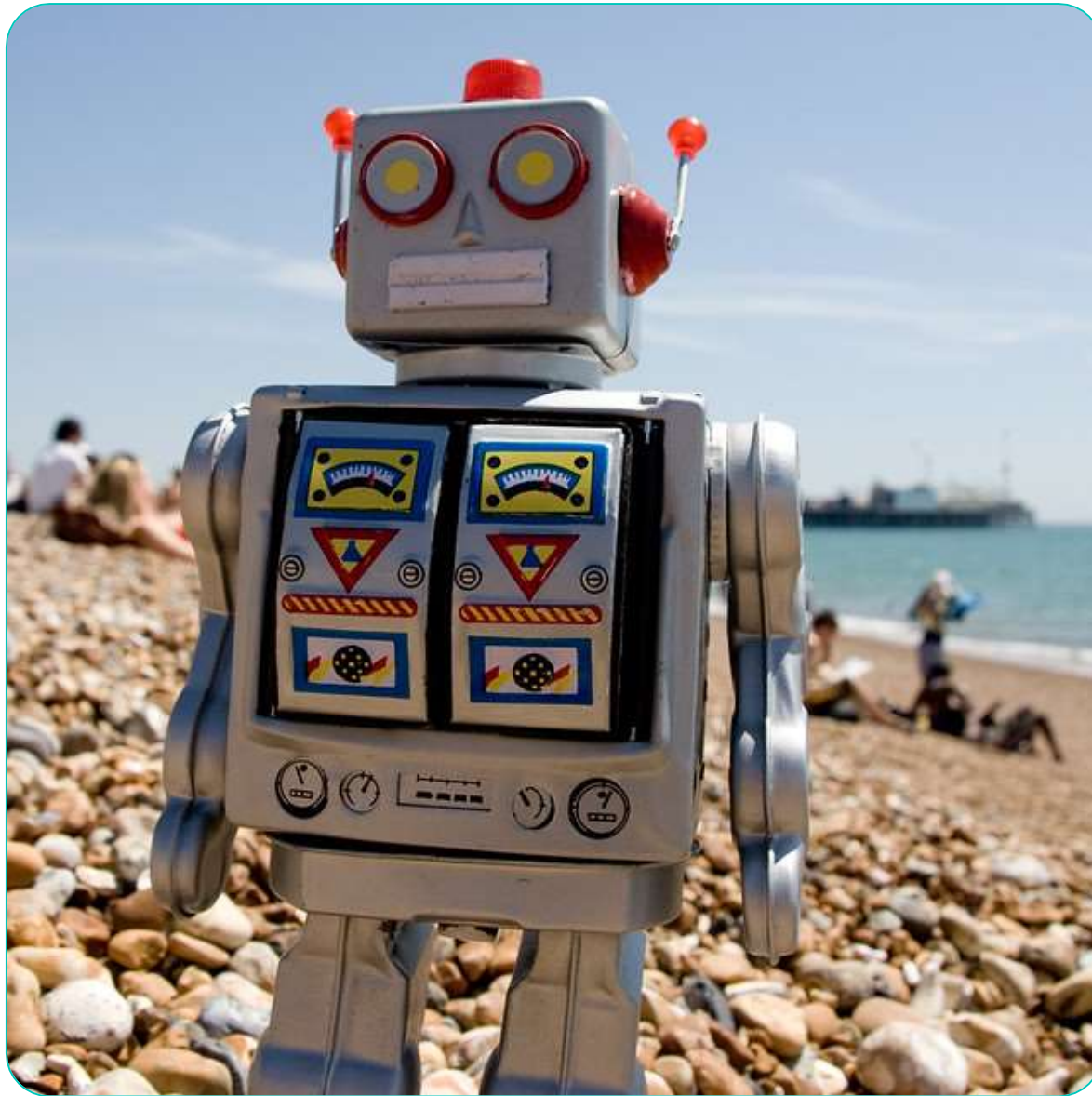
Disclaimer: not applicable when digging in the ground



**Kabloom!  
Nothing  
Works!**

<https://bit.ly/CMKabloom>





# EMBRACE THE ROBOT OVERLORDS

- “Google” things that are not company specific
- Understand how to use Gen AI to help
- Search internal repos such as GitHub, SharePoint, and Custom Sites
- Search communication platforms (RocketChat, Teams, Outlook, etc.)

# PARTING THOUGHTS

*“Be warned that being an expert is more than understanding how a system is supposed to work. Expertise is gained by investigating why a system doesn't work.”*

Brian Redman



# THANK YOU!