“The bottleneck is never code or creativity; it’s lack of clarity”

Scott Berkun

audible
an amazon company

How to Go Fast and Not Get Buried in the Dust

Tanya Kravtsov

Hello my name is

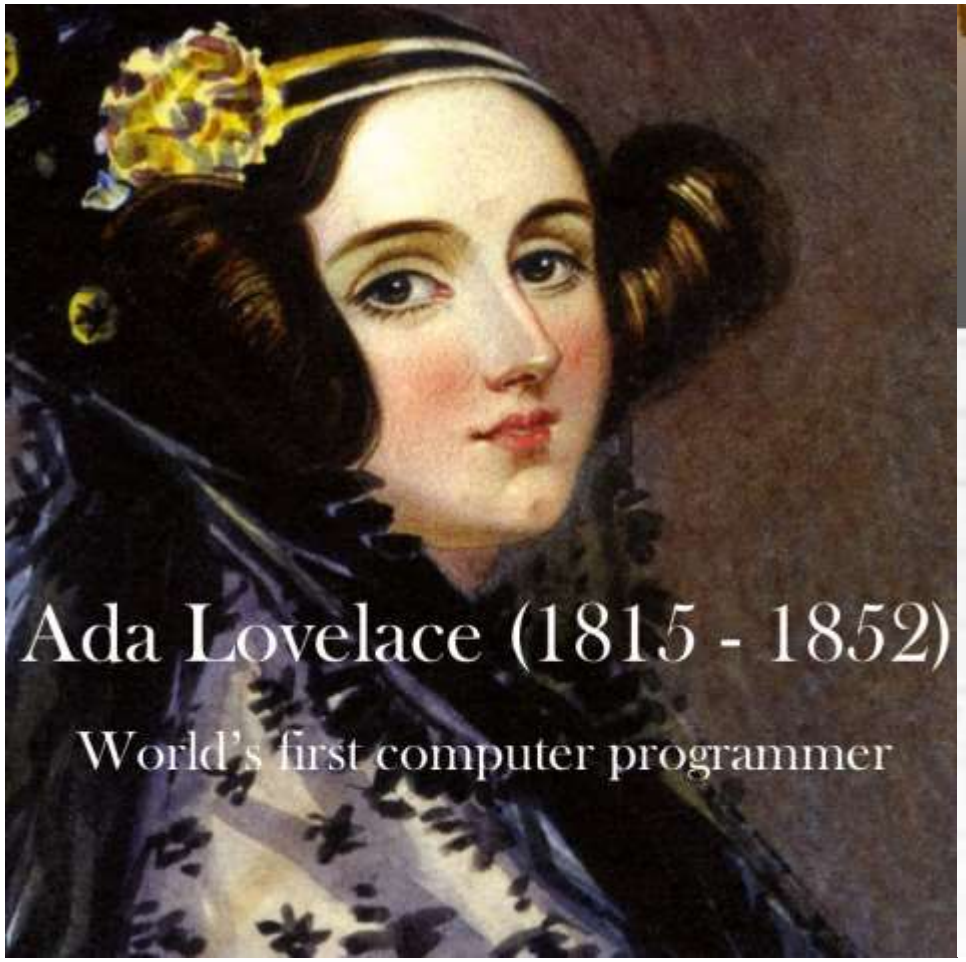
- Senior Director of QA at audible an amazon company
- Co-lead of WiT@ Audible
- Founder of DEVOPSQA NJ Meetup group
- Developer turned Tester

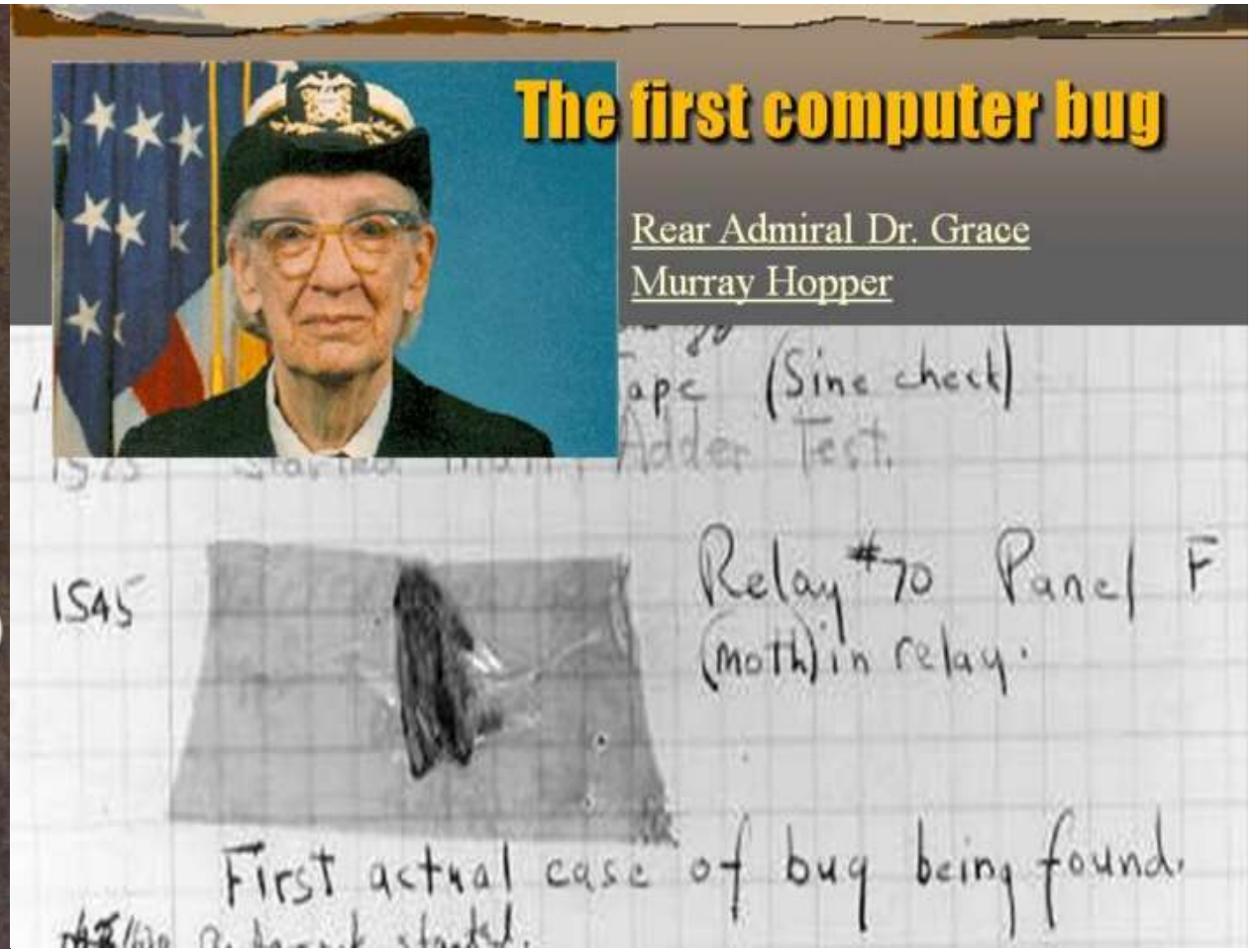
Tanya Kravtsov

@DevOpsQA

kravtst@audible.com

My Inspirations

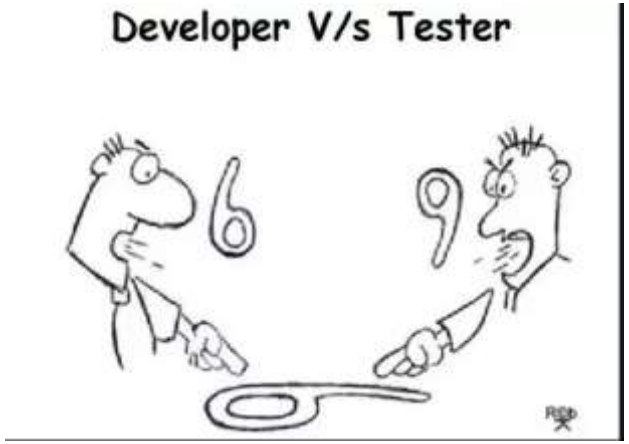


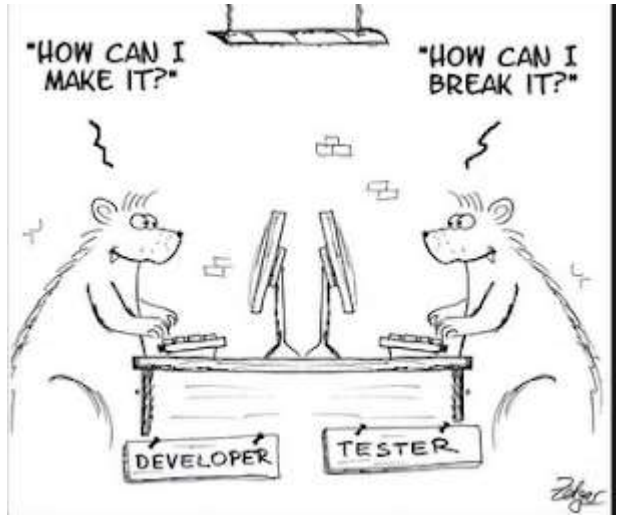


Agenda

- Identify Bottlenecks
- Culture of Shared Quality
- Automation
- Lean Delivery
- Continuous Improvement
- Shared Learnings

Word on the street...





www.livepencil.com

What is a Bottleneck? (official definition)

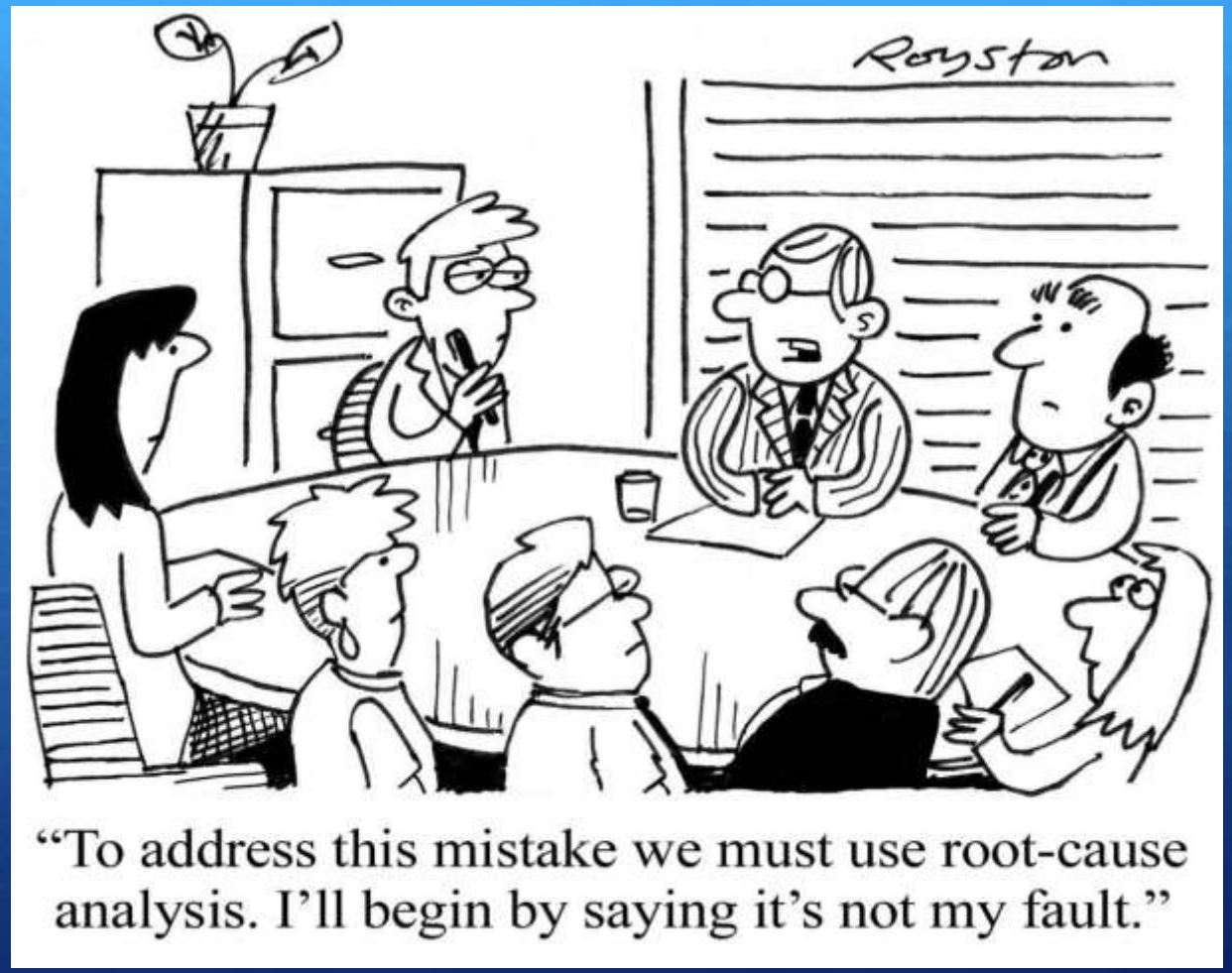
“A problem that delays progress”

Merriam-Webster Thesaurus

What is a Bottleneck? (unofficial definition)

“Any improvements made anywhere besides the bottleneck are an illusion”

“The Phoenix Project” by Gene Kim



- **Identify Bottlenecks**
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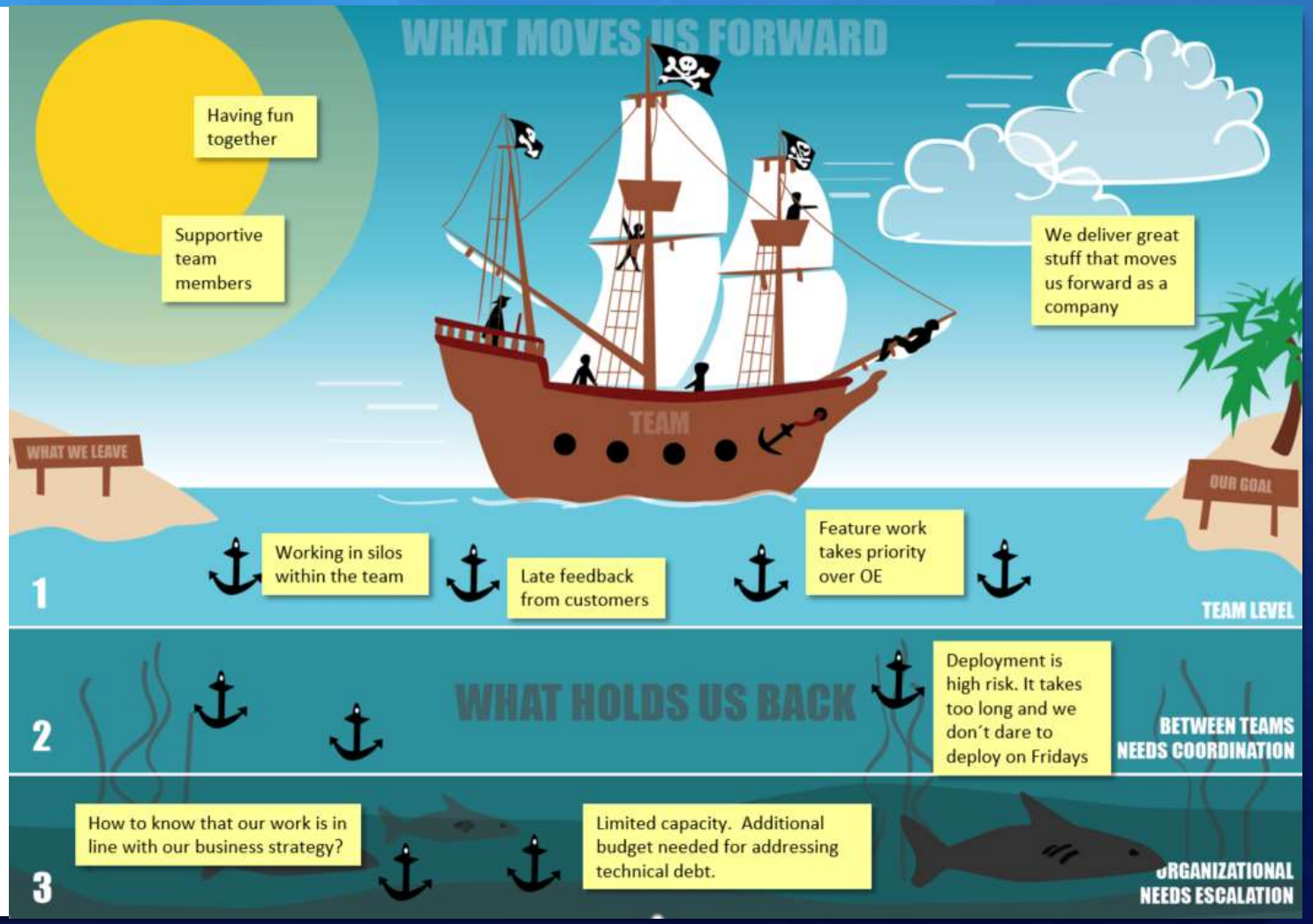
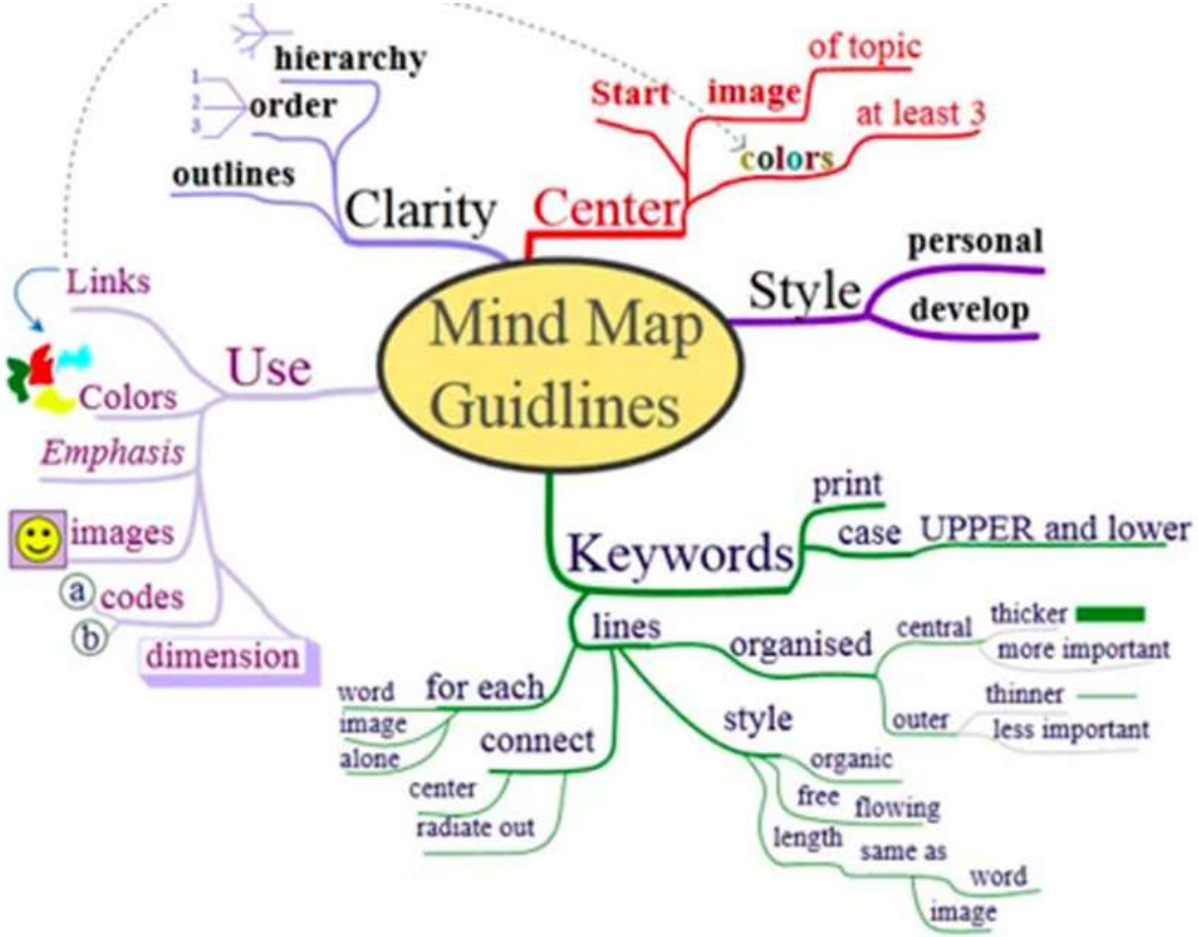
Speed Boat Game

- Boat is our System/Process
- Anchors are what's holding it back
- The deeper the anchor, the higher the impact
- Limited # of anchors



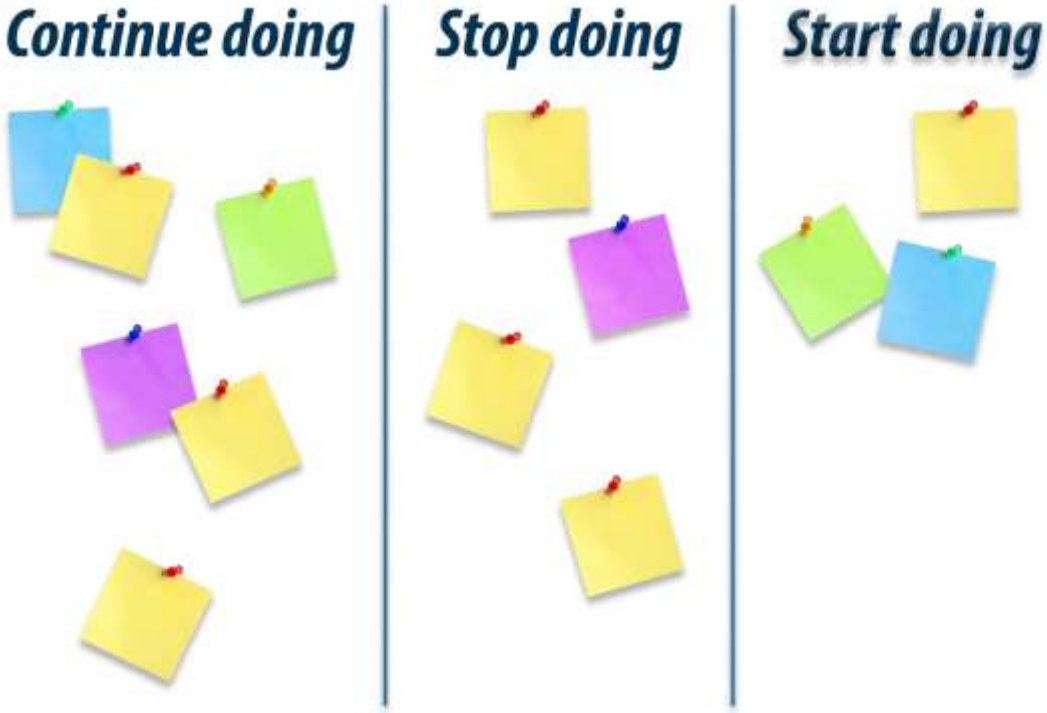
Mind Maps

- Create a Central Idea
- Add branches
- Add keywords
- Color code
- Add images



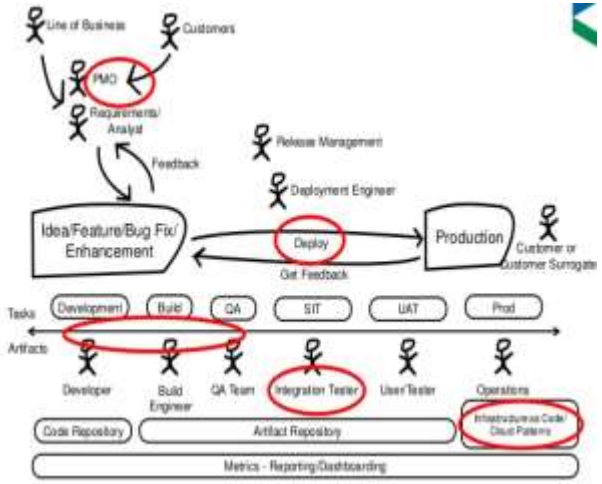
Run Retrospectives

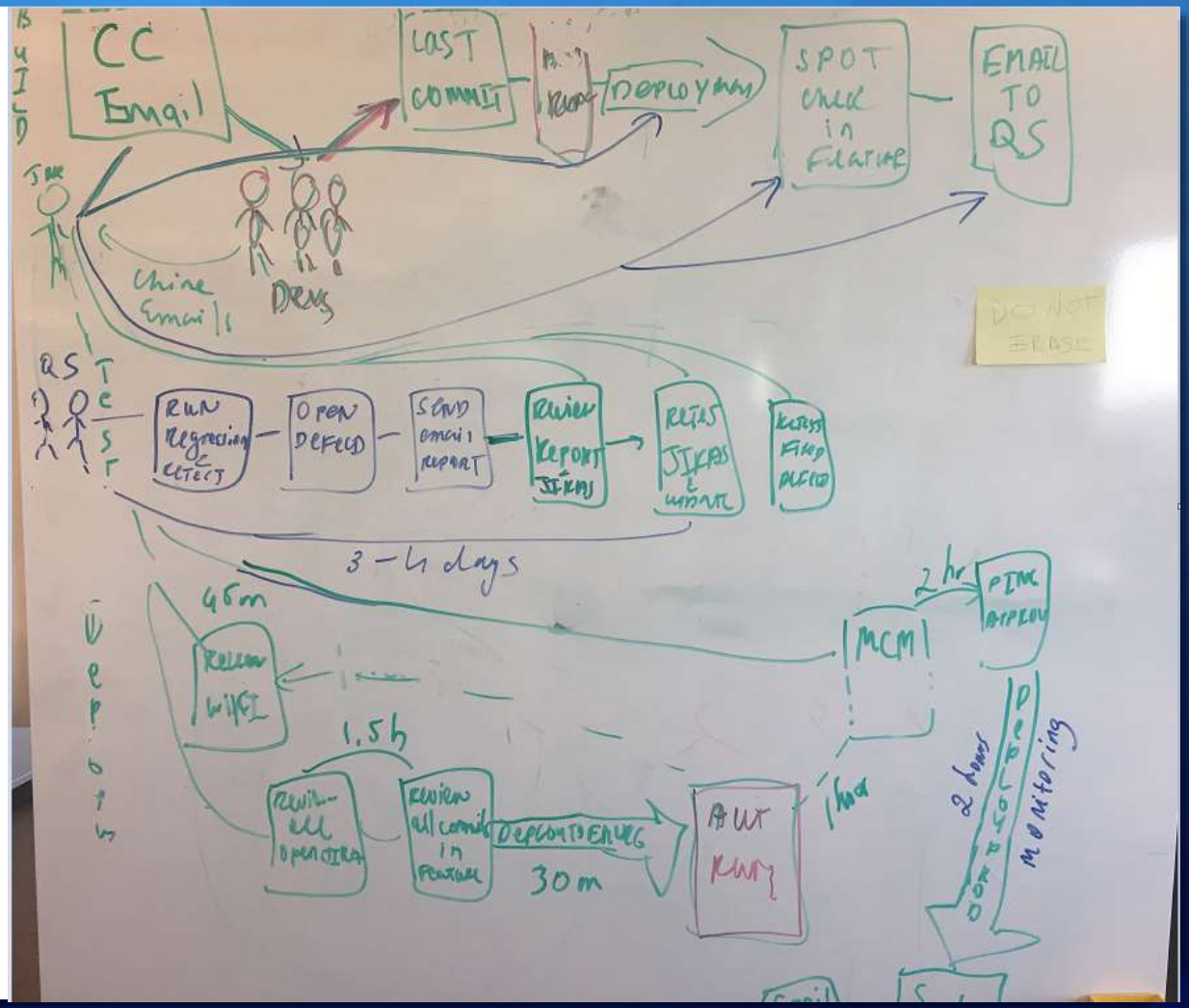
- **Start**
  - What can we do better?
- **Stop**
  - What doesn't work?
- **Continue**
  - What do we do well?



Map your Delivery Pipeline

- Identify all players in the system
- Identify all handovers between the players
- Identify all supporting artifacts
- Record Time for each process/handover





Transformation Enablers

+CULTURE

+AUTOMATION

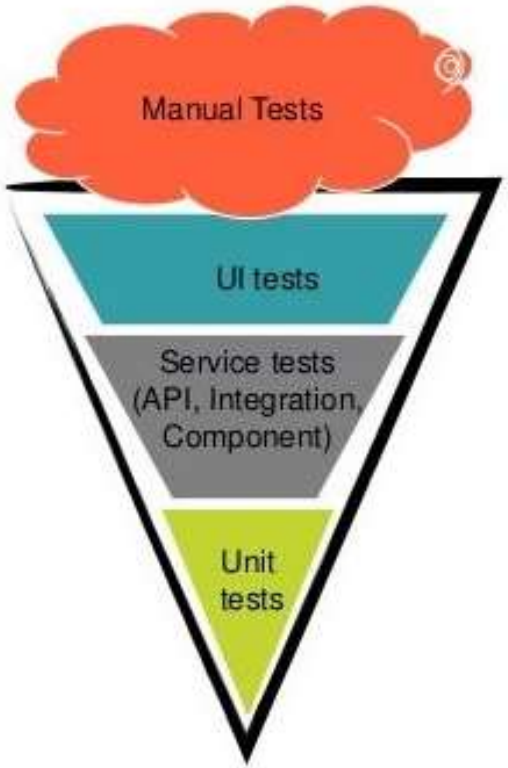
+LEAN

+MONITORING

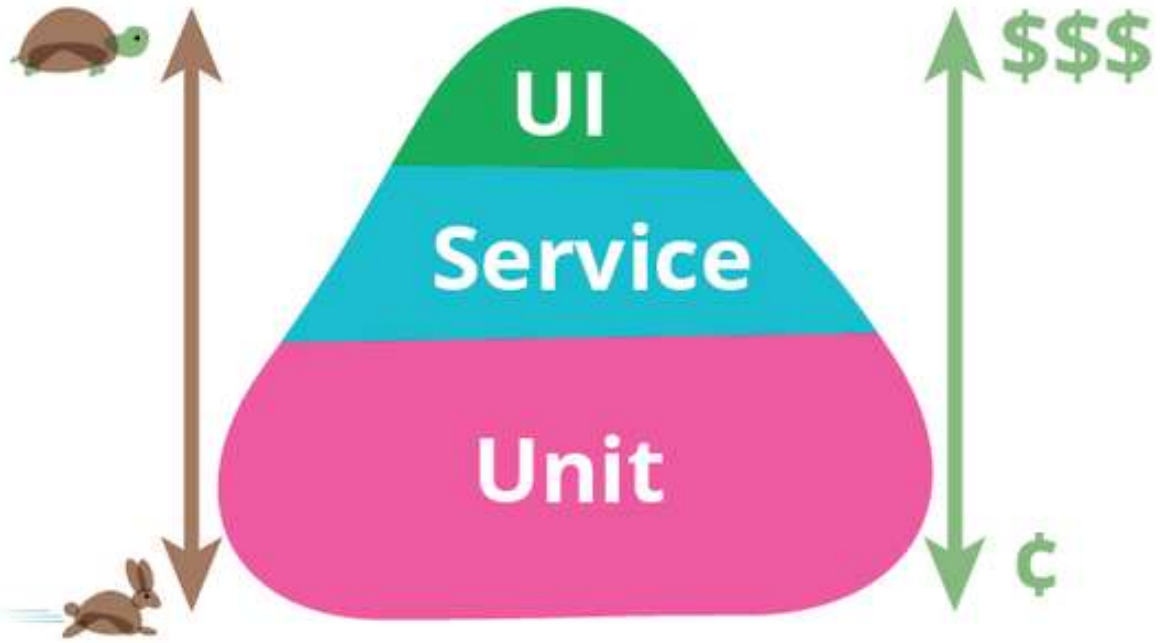
+SHARING

From Ice Cream Cone to an Iceberg

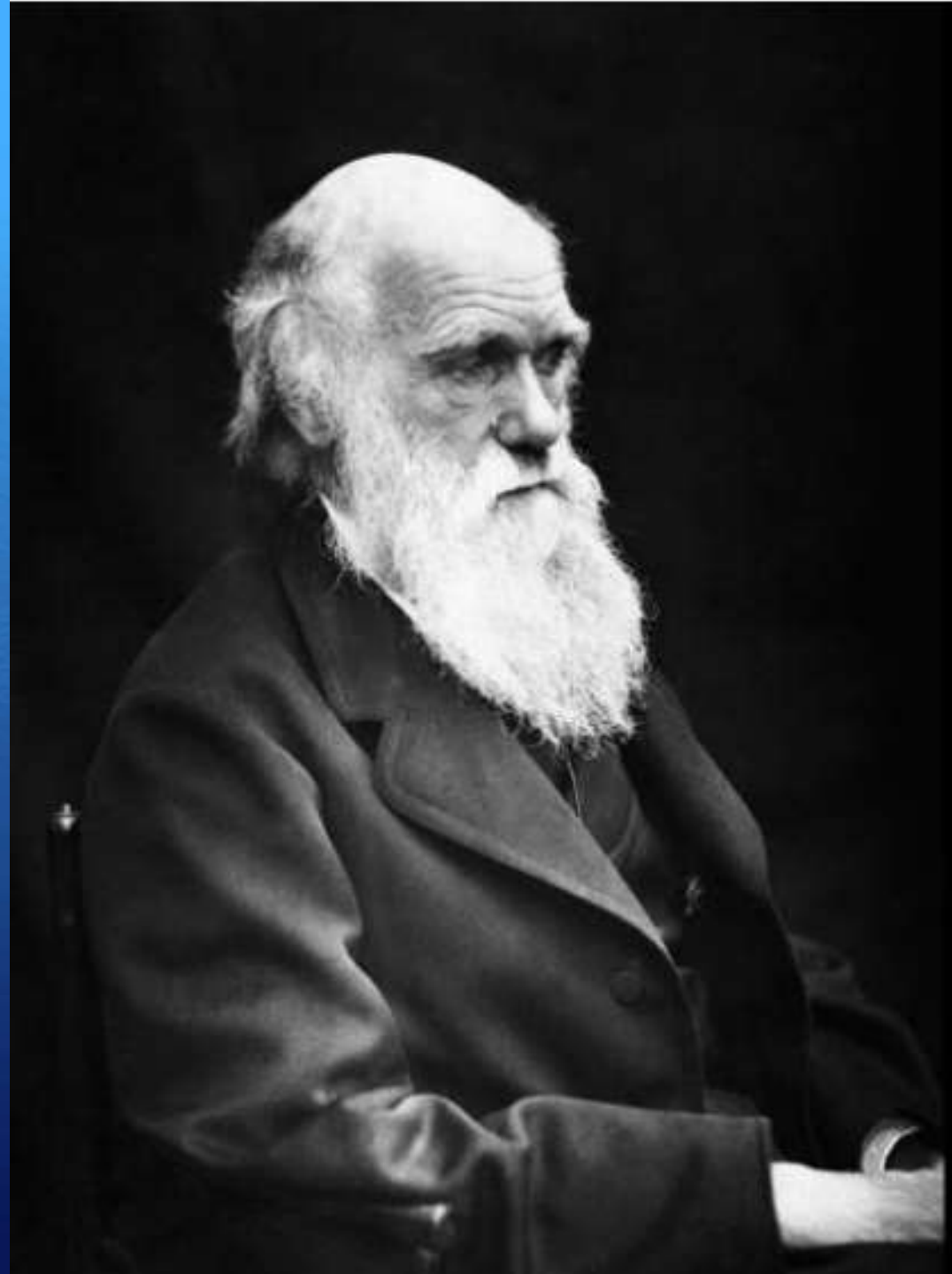
BEFORE



AFTER

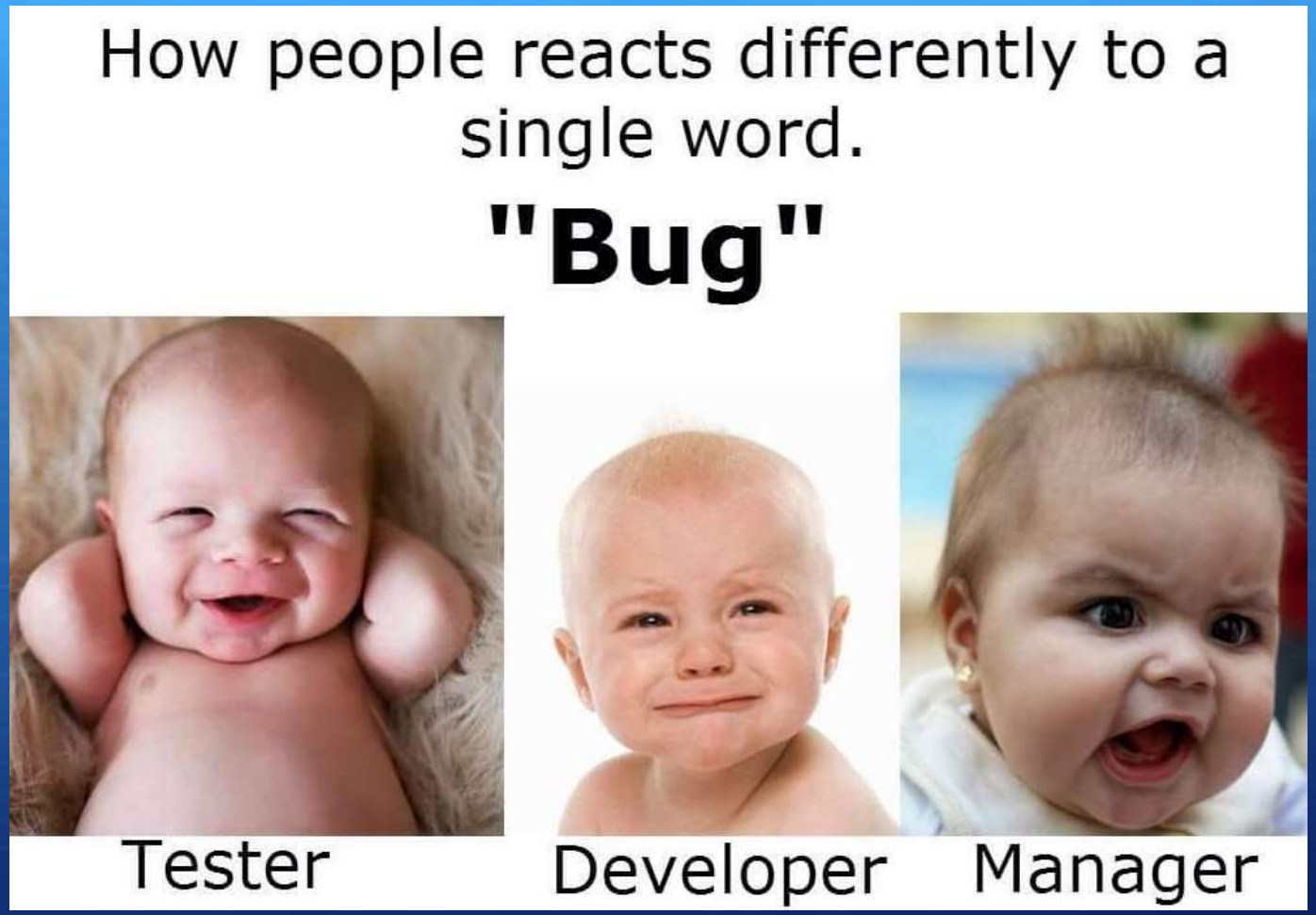


Inspirational Timeout



"It is not the strongest of the species that survive, nor the most intelligent, but the one most adaptable to change."

- Charles Darwin



+ Identify Bottlenecks
+ **Culture of Shared Quality**
+ Automation
+ Lean Delivery
+ Continuous Improvement
+ Shared Learnings

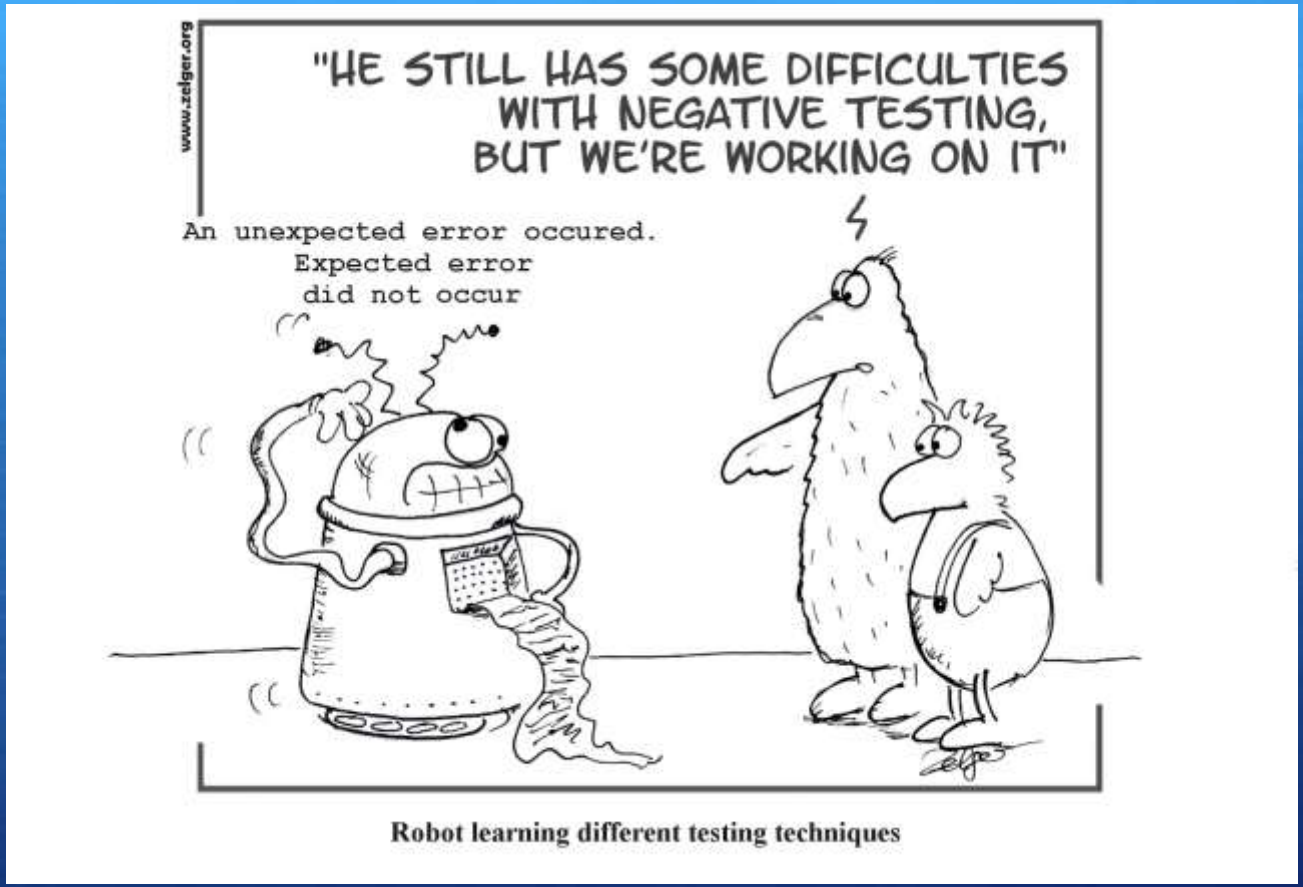
From "Over the Fence" to "Shared Quality"

BEFORE

- Quality Assurance
- Separate Planning
- Dev Epics and QA Epics
- DoD = Dev Complete
- Testing after Dev is done
- Automation next Sprint
- QA Signoff

AFTER

- Quality Engineering
- Joint Planning
- One Epic for Dev and QA
- DoD = Dev and Test Complete
- Testing embedded at every stage
- Automation in-sprint
- Launch Readiness Review



Robot learning different testing techniques

+ Identify Bottlenecks
+ Culture of Shared Quality
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Manual Processes

- Test Data Generation
- Web Services Testing
- UI Testing
- Metrics Instrumentation
- Release Notes
- Deployments

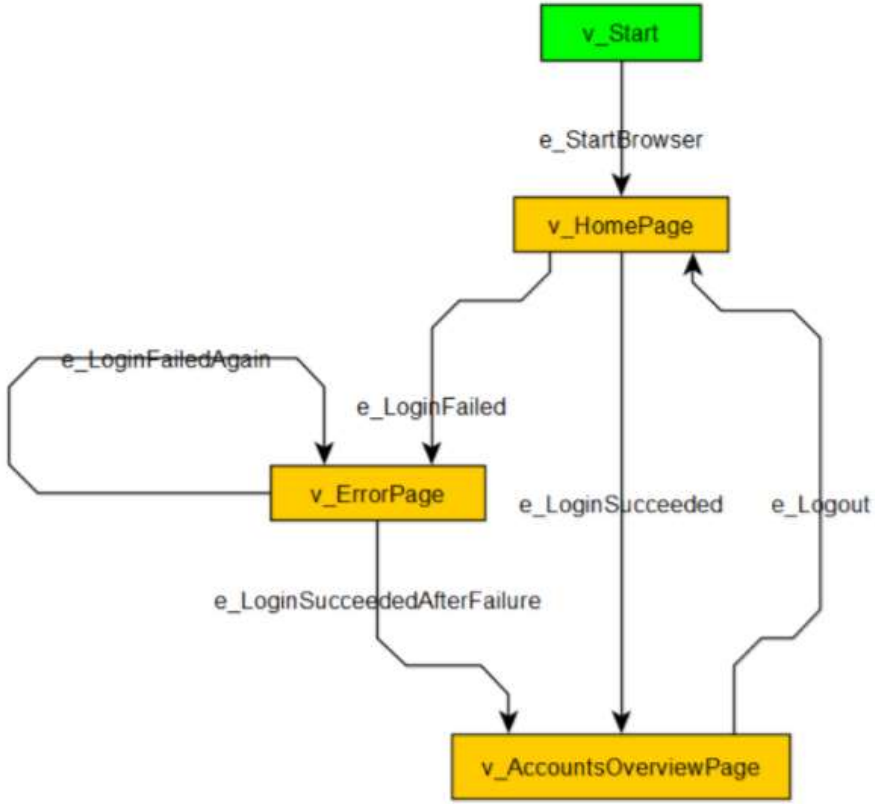
Testing Smart

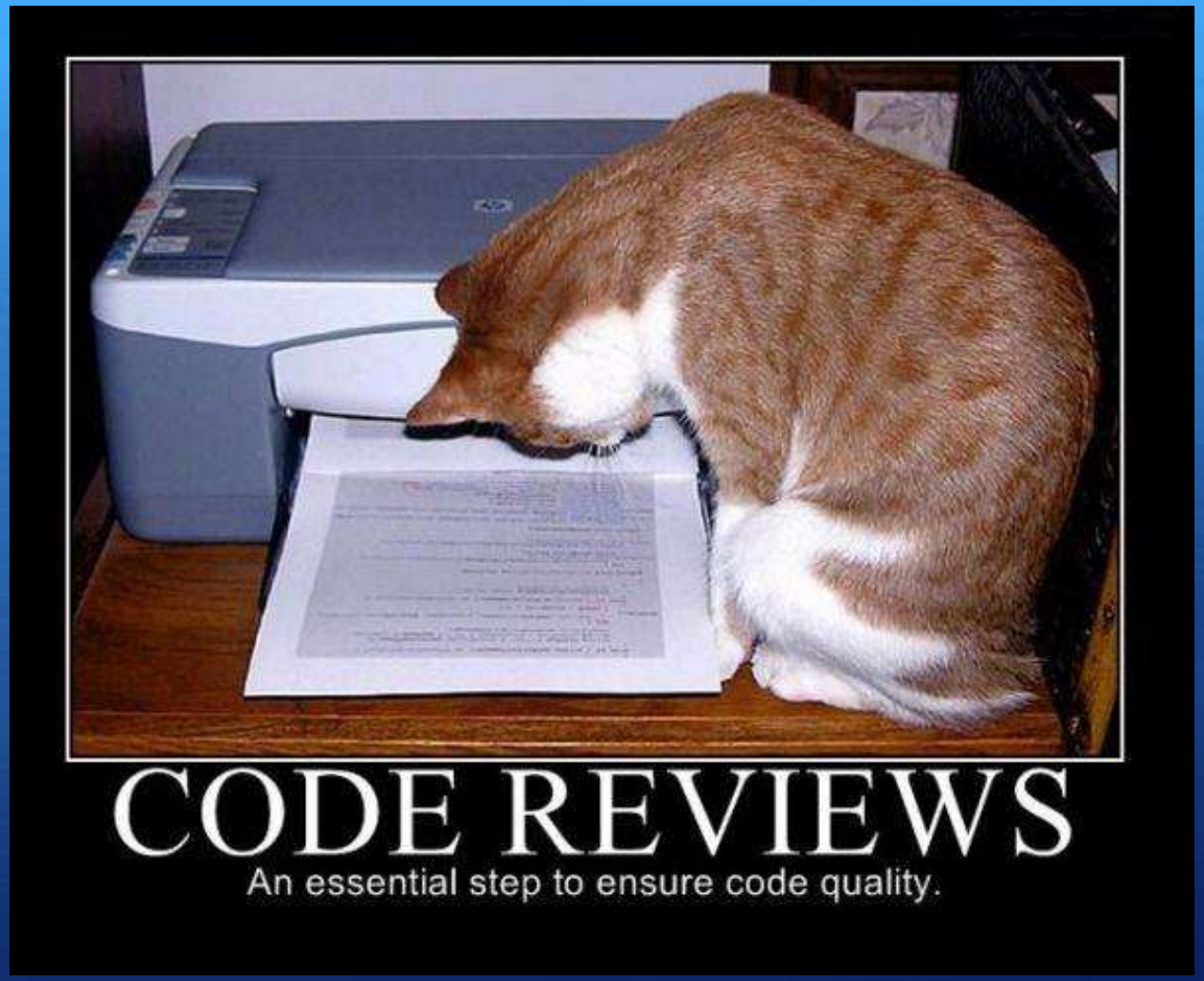
- Targeted testing
- Release notes based
- Packages mapped to Features to Test Cases
- Manual and Automated
- Automation Prioritization mechanism
- Self-learning

CC
4th Quarter
LIONS
00:04
BEARS
STOP COUNTING - THERE A

Exploratory Testing

- You miss things you are not looking for
- Discover Known and Unknown Unknown
- Each step is based on the answer to the previous questions
- Model-Based Testing

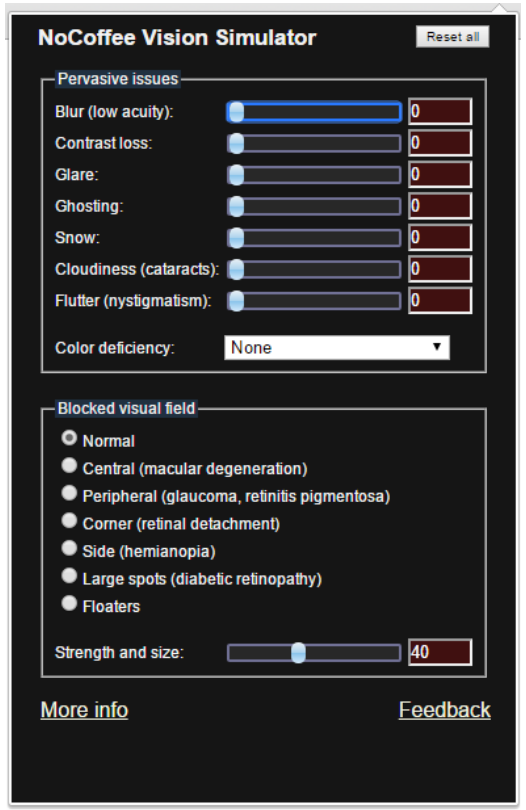




+ Identify Bottlenecks
+ Culture of Shared Quality
+ Automation
+ **Lean – Test Early and Often**
+ Continuous Improvement
+ Shared Learnings

Static Analysis

+ Code Coverage
+ Memory Leaks
+ Security vulnerabilities
+ Accessibility evaluation
+ SEO analysis



sonarqube

Find Bugs

FORTIFY

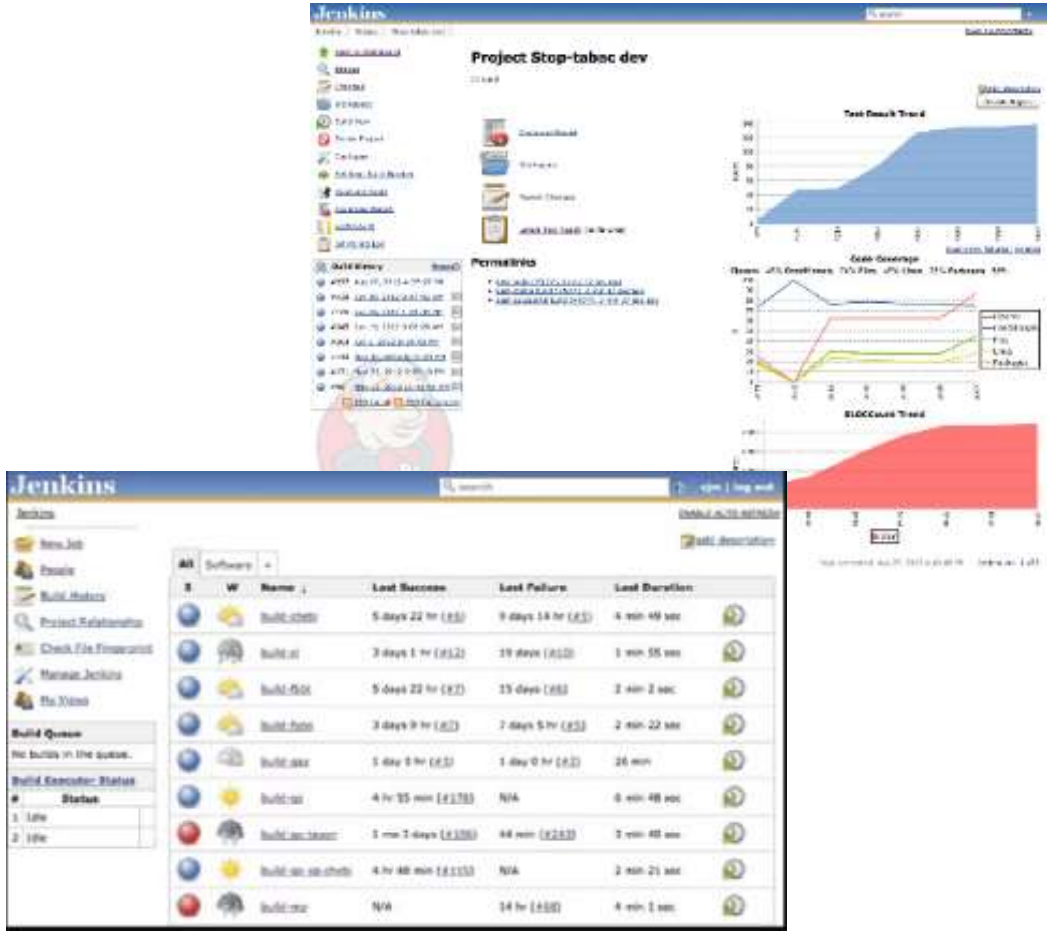
Powered by JACOCO Java Code Coverage

Crucible

WAVE web accessibility evaluation tool

Automated Pipelines Best Practices

+ Code review verification
+ Static Code analysis
+ SonarQube
+ Onebox and Onebox Monitors
+ Unit Test Coverage
+ Integration Test Coverage
+ Load tests



+ Identify Bottlenecks
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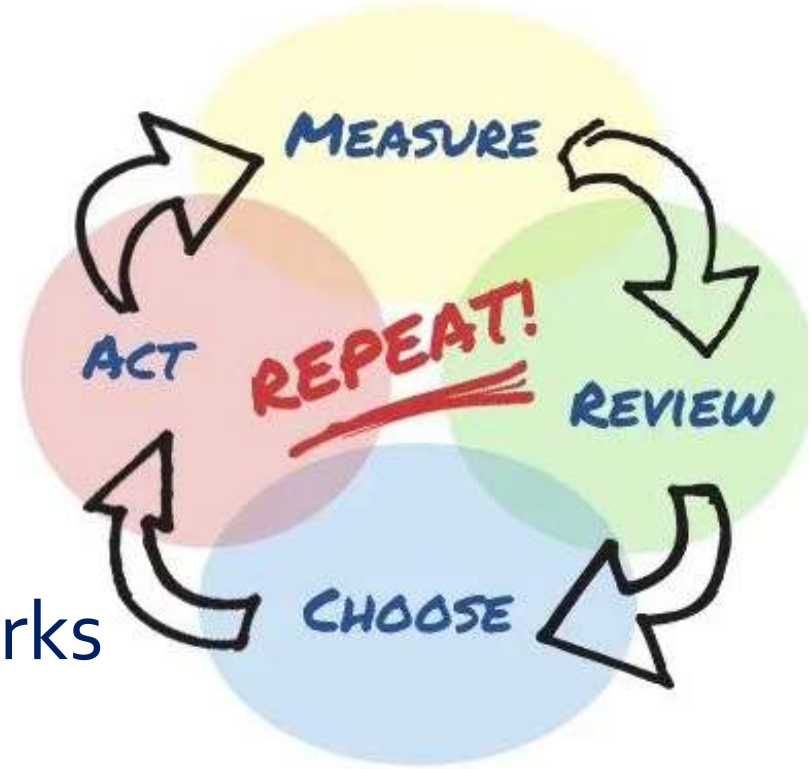
+ Lean – Test Early and Often
+ **Continuous Improvement**
+ Shared Learnings

Feedback Loop

Feedback Loop

- Post-Mortem for Production Issues
- Team/Org OE Meetings
- Retrospectives
- Quality Forum
- User reported issues for Tools/Frameworks

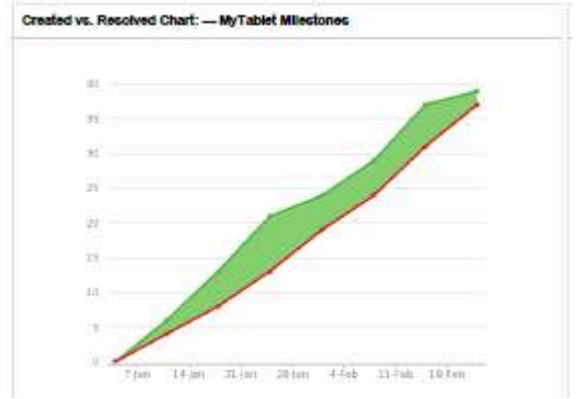


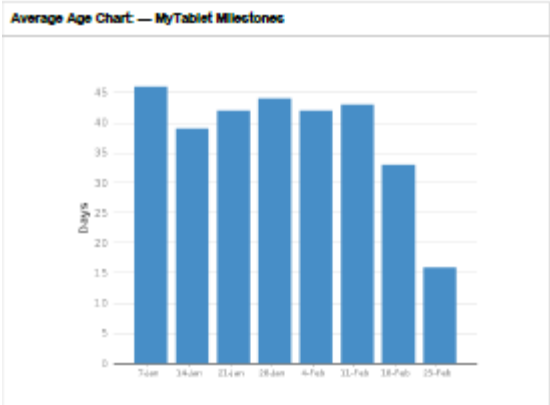
Continuous Monitoring

- Test Coverage
- Automation Stability
- Frequent failures
- Execution Times
- Infrastructure
- Performance

Continuous Delivery KPIs

- Opened vs. Resolved & Defect Aging
- Customer issues volume
- Mean time to recovery (MTTR)
- Speed to deployment vs. Bugs missed





+ Identify Bottlenecks
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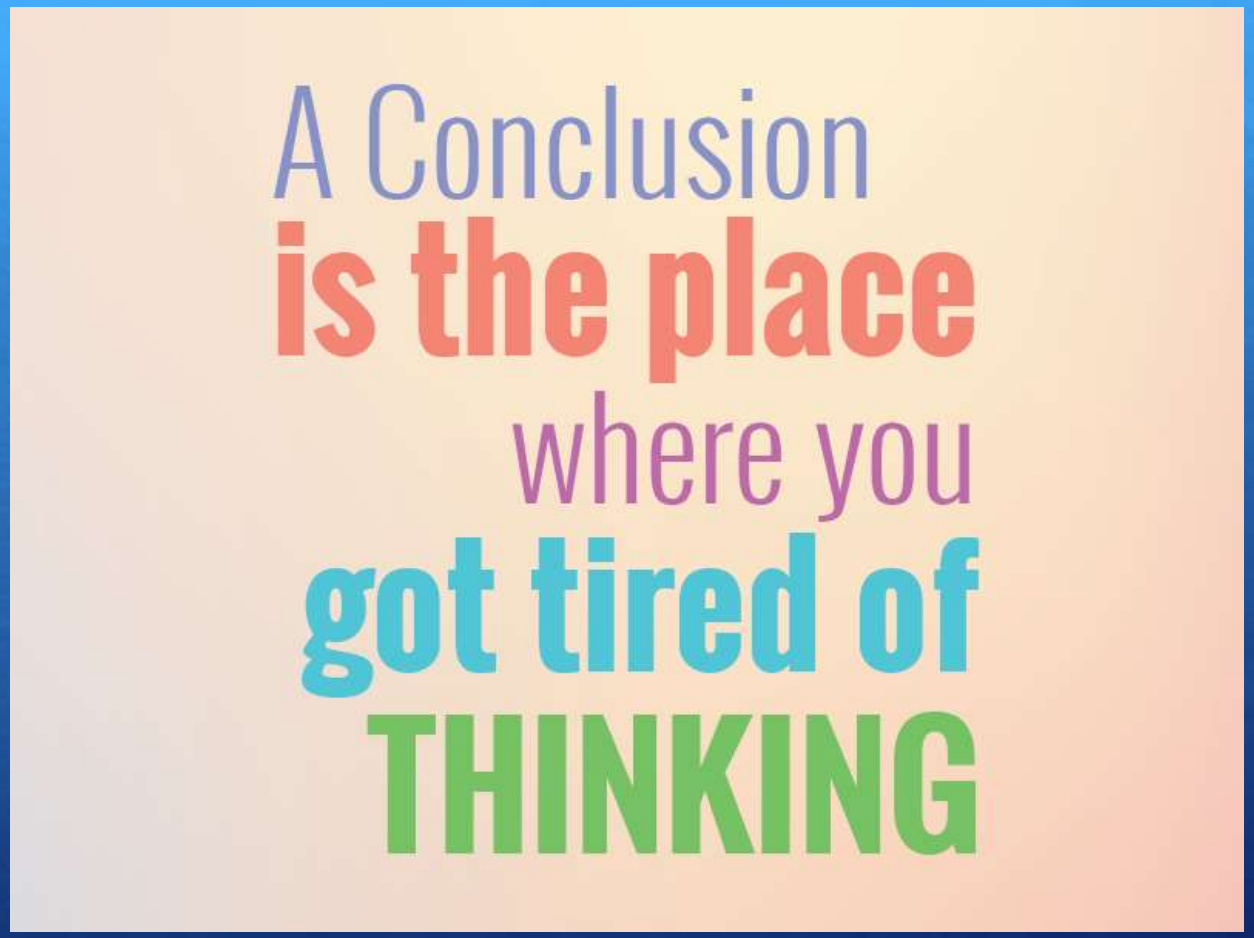
+ Continuous Improvement
+ **Shared Learnings**

Share Learnings

- Team Demos/Huddles/Lunch n' Learns
- Workshops/Broadcasts/Conferences
- Learning Hubs
- Newsletters
- Quality theme Happy Hours



+ Identify Bottlenecks
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+ Lean – Test Early and Often
+ Continuous Improvement
+ Shared Learnings
+ **In Conclusion**

Inspirational Timeout

Great leaders don't blame the tools they are given. Great leaders work to sharpen them.

Simon Sinek

PERIODIC TABLE OF DEVOPS TOOLS (V2)

EMBED DOWNLOAD ADD

Os Open Source	SCM	Database Mgmt	Build
Fr Free	CI	Repo Mgmt	Testing
Fm Freemium	Deployment	Config / Provisioning	Containerization
Pd Paid	Cloud / IaaS / PaaS	Release Mgmt	Collaboration
En Enterprise	BI / Monitoring	Logging	Security

1 Fm Gh Github																	2 Fm Aws AmazonWeb Services
3 Os Gt Git	4 Pd Dm DBmaestro											5 En Ch Chef	6 En Pu Puppet	7 Os An Ansible	8 En Sl Salt	9 Os Dk Docker	10 Pd Az Azure
11 Fm Bb Bitbucket	12 Os Lb Liquibase											13 Os Ot Otto	14 En Bl BladeLogic	15 Os Va Vagrant	16 Fr Tf Terraform	17 Os Rk rkt	18 En Gc Google Cloud Platform
19 Os Gl GitLab	20 En Rg Redgate	21 Os Mv Maven	22 Os Gr Gradle	23 Os At ANT	24 Os Fn FitNesse	25 Fr Se Selenium	26 Os Ga Gatling	27 Fr Dh Docker Hub	28 Os Jn Jenkins	29 Pd Ba Bamboo	30 Os Tr Travis CI	31 Pd Gd Deployment Manager	32 Os Sf SmartFrog	33 Os Cn Consul	34 Os Bc Bcfg2	35 Os Mo Mesos	36 En Rs Rackspace
37 Os Sv Subversion	38 En Dt Datical	39 Os Gt Grunt	40 Os Gp Gulp	41 Os Br Broccoli	42 Fr Cu Cucumber	43 Os Cj Cucumber.js	44 Fr Qu Gunit	45 Os Npm npm	46 Fm Cs Codeship	47 Pd Vs Visual Studio	48 Fm Cr CircleCI	49 Fr Cp Capistrano	50 Fr Ju JuJu	51 Os Rd Rundeck	52 Os Cf CFEngine	53 Fr Ds Swarm	54 Os Op OpenStack
55 Os Hg Hercurial	56 En Dp Delphix	57 Fr Sb sbt	58 Os Mk Make	59 Os Ck CMake	60 Fr Ju JUnit	61 Fr Jm JMeter	62 Fr Tn TestNG	63 Os Ay Artifactory	64 Fm Tc TeamCity	65 Fm Sh Shippable	66 Os Cc CruiseControl	67 En Ry RapidDeploy	68 Fm Cy CodeDeploy	69 En Oc Octopus Deploy	70 En No CA Nolio	71 Os Kb Kubernetes	72 Fm Hr Heroku
73 En Cw ISPW	74 En Id Idera	75 Os Msb MSBuild	76 Os Rk Rake	77 Fr Pk Packer	78 Os Mc Mocha	79 En Xltv XL TestView	80 Os Jm Jasmine	81 Os Nx Nexus	82 Os Co Continuum	83 Fm Ca Continua CI	84 Pd So Solano CI	85 En Xld XL Deploy	86 En EB ElectricBox	87 Fm Dp Deploybot	88 En Ud UrbanCode Deploy	89 Os Nm Nomad	90 En Os OpenShift

XebiaLabs
Deliver Faster

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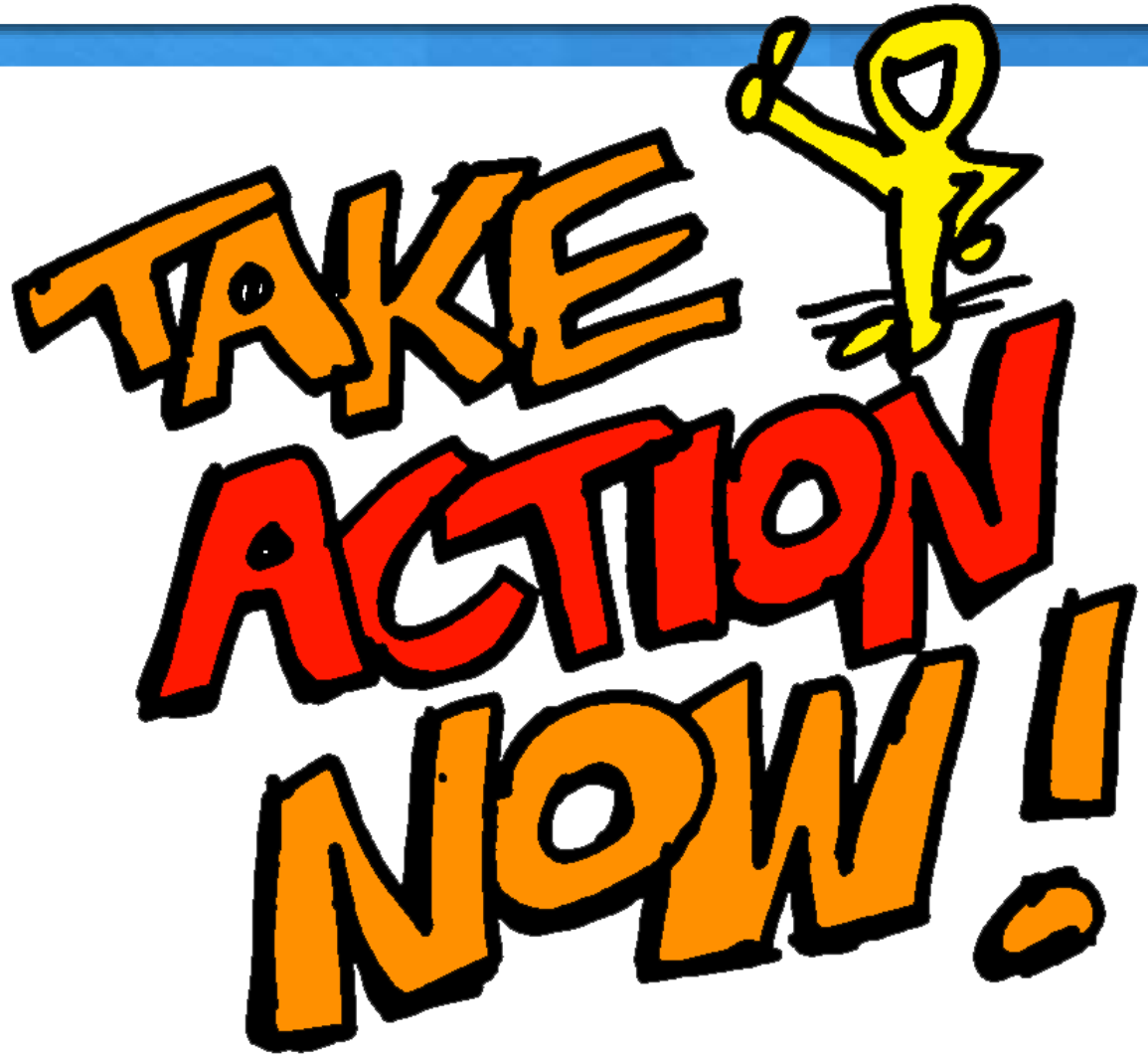
91 En Xlr XL Release	92 En Ur UrbanCode Release	93 En Bm BMC Release Process	94 En Hp HP Codar	95 En Au Automic	96 En Pl Plutora Release	97 En Sr Serena Release	98 Pd Tfs Team Foundation	99 Fm Tr Trello	10 Pd Jr Jira	101 Fm Rf HipChat	102 Fm Sl Slack	103 Fm Fd Flowdock	104 Pd Pv Pivotal Tracker	105 En Sn ServiceNow			
106 Os Ki Kibana	107 Fm Nr New Relic	108 Os Ni Nagios	109 Os Zb Zabbix	110 En Dd Datadog	111 Os El Elasticsearch	112 Os Ss StackState	113 En Sp Splunk	114 Fm Le Logentries	115 Fm Sl Sumo Logic	116 Os Ls Logstash	117 Os Gr Graylog	118 Os Sn Snort	119 Os Tr Tripwire	120 En Ff Fortify			

What's Next?



Inspirational Timeout

Fall in love
with the problem
not the solution.

Uri Levine, co-founder of Waze

@DevOpsQA

kravtst@audible.com

Thank you

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