

GAME DEVELOPERS CONFERENCE

SAN FRANCISCO, CA  
MARCH 25-29, 2013  
EXPO DATES: MARCH 27-29

2013



Raphaël Saint-Pierre, Tools Team Leader – Ubisoft

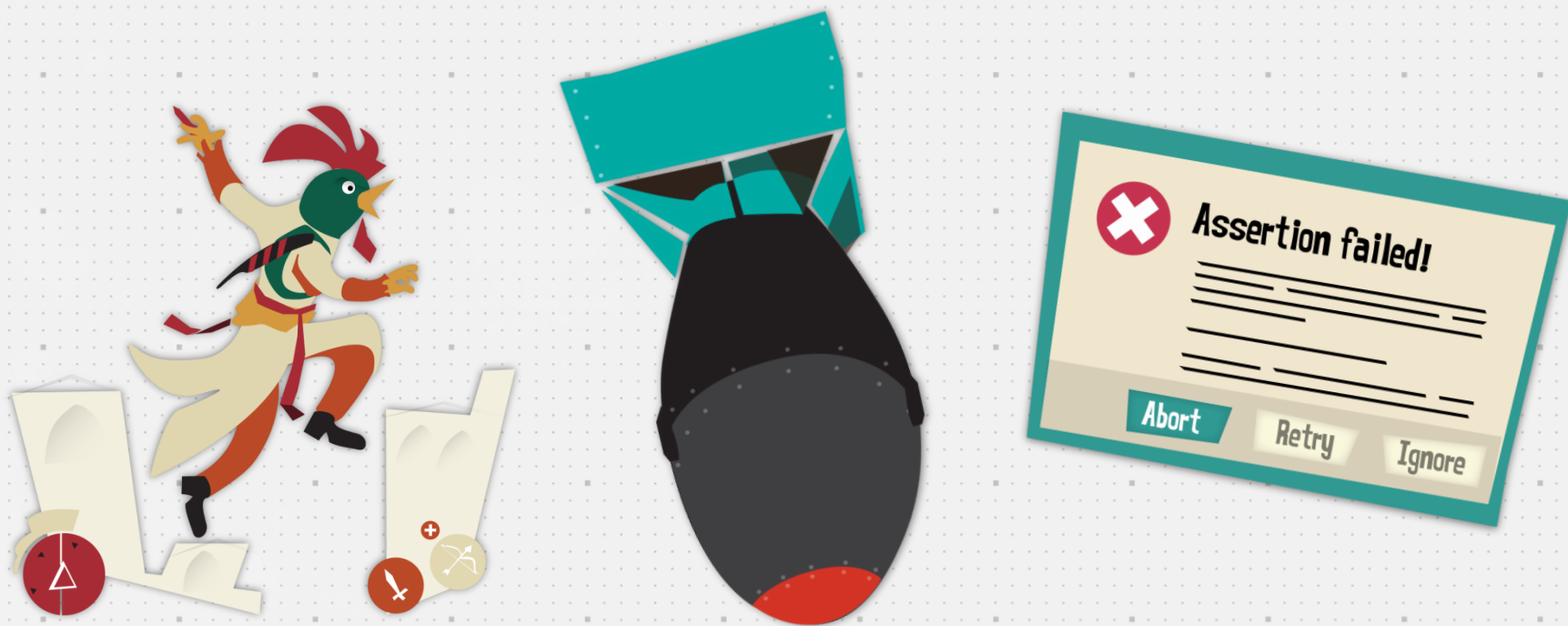
# FRICTION-FREE BUG REPORTING

SPEND TIME WHERE IT MATTERS

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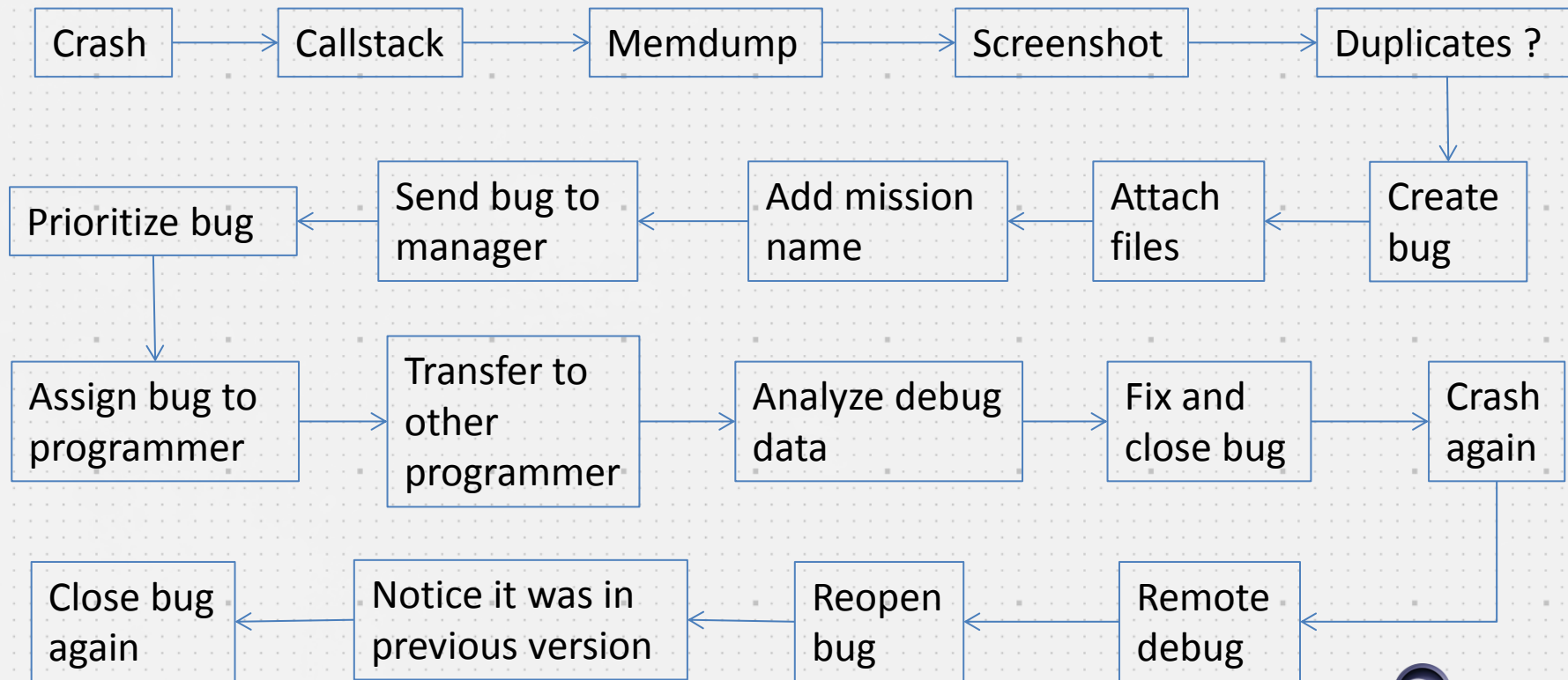
# GAME DEV → BUGS



# EXPECTED WORKFLOW



# REAL WORKFLOW



# CRUNCHY NUMBERS

20 000 unique crashes

200 000 occurrences

100 000 other bugs

300 people

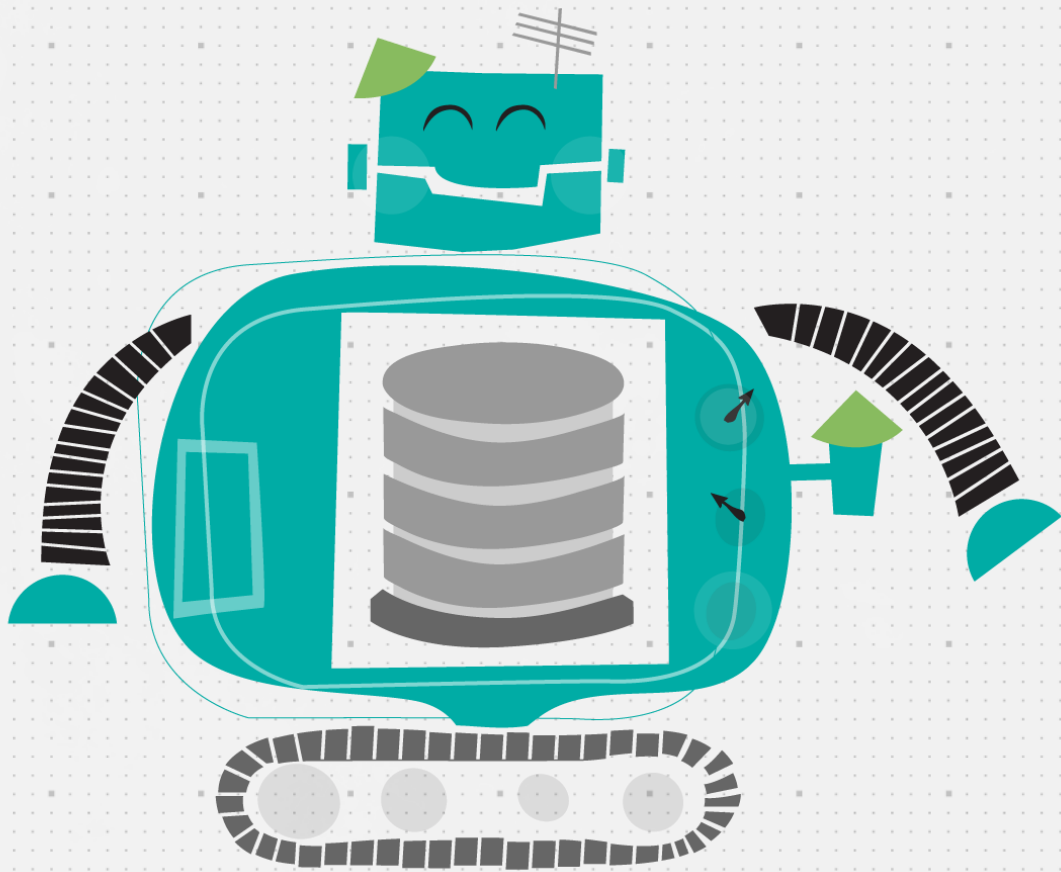
Somehow, ~~some~~ most bugs get fixed



and the game gets shipped.



Our secret ?



# Integrated reporting platform



# CUT THE MIDDLEMAN



# PREREQUISITES

Issue tracker

Processing and data storage

Debug info, symbols

Source control

# REWARD

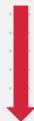
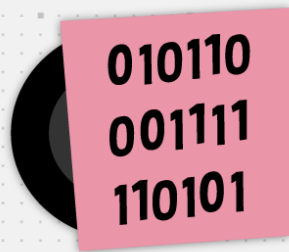


## BUG!

**OVER \$9,000  
DEAD OR ALIVE**

# REPORT





ADD DATA

# TRACK BUG



**Assert** Assert detected in ..\..\common\facade\gamefacade.cpp on line 150



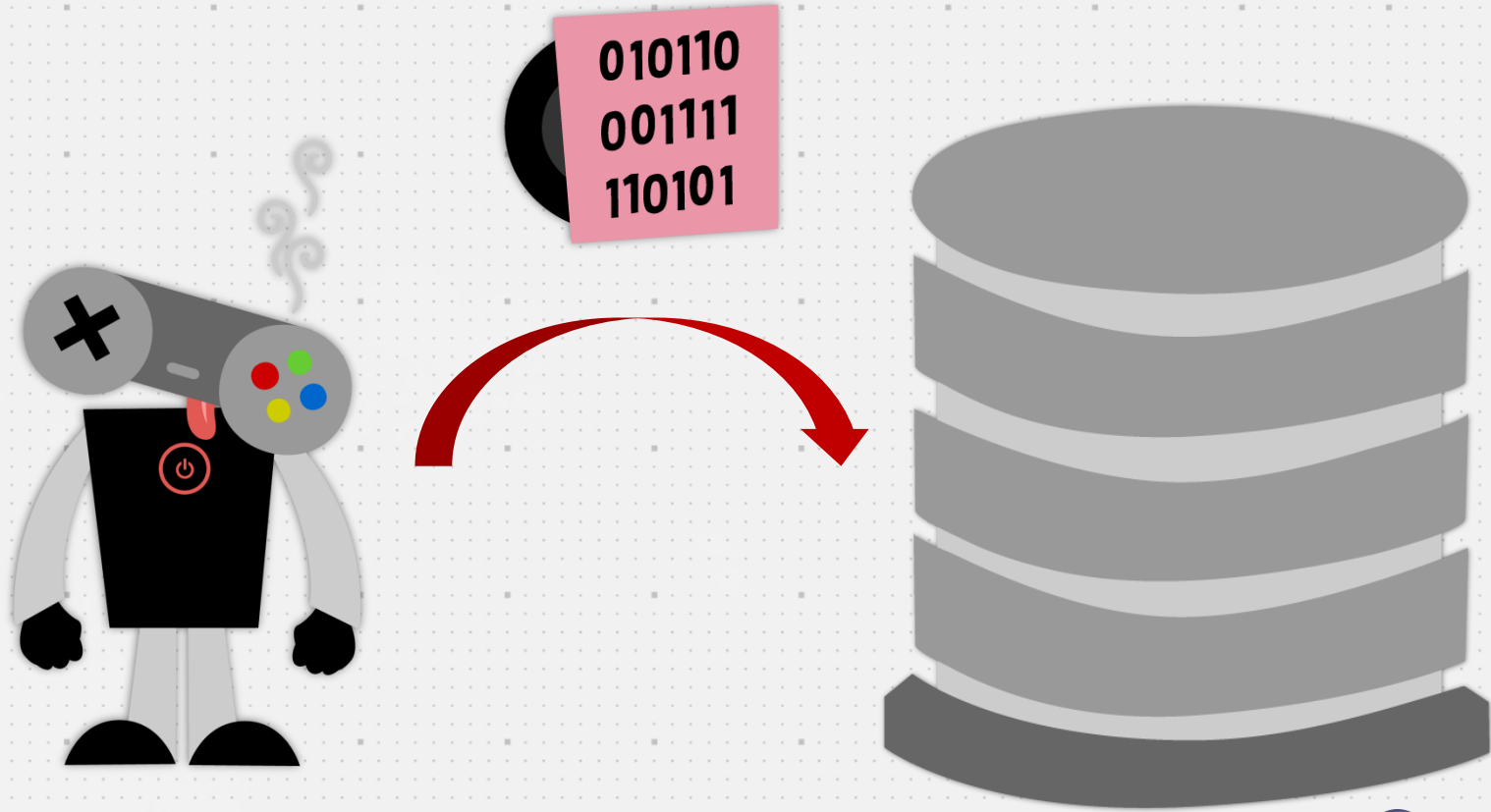
**Continue**

**Break**

**Kill**

Report sent to reporter at [mtl-wks-ag024.mtl.ubisoft.org:11235](mailto:mtl-wks-ag024.mtl.ubisoft.org:11235)







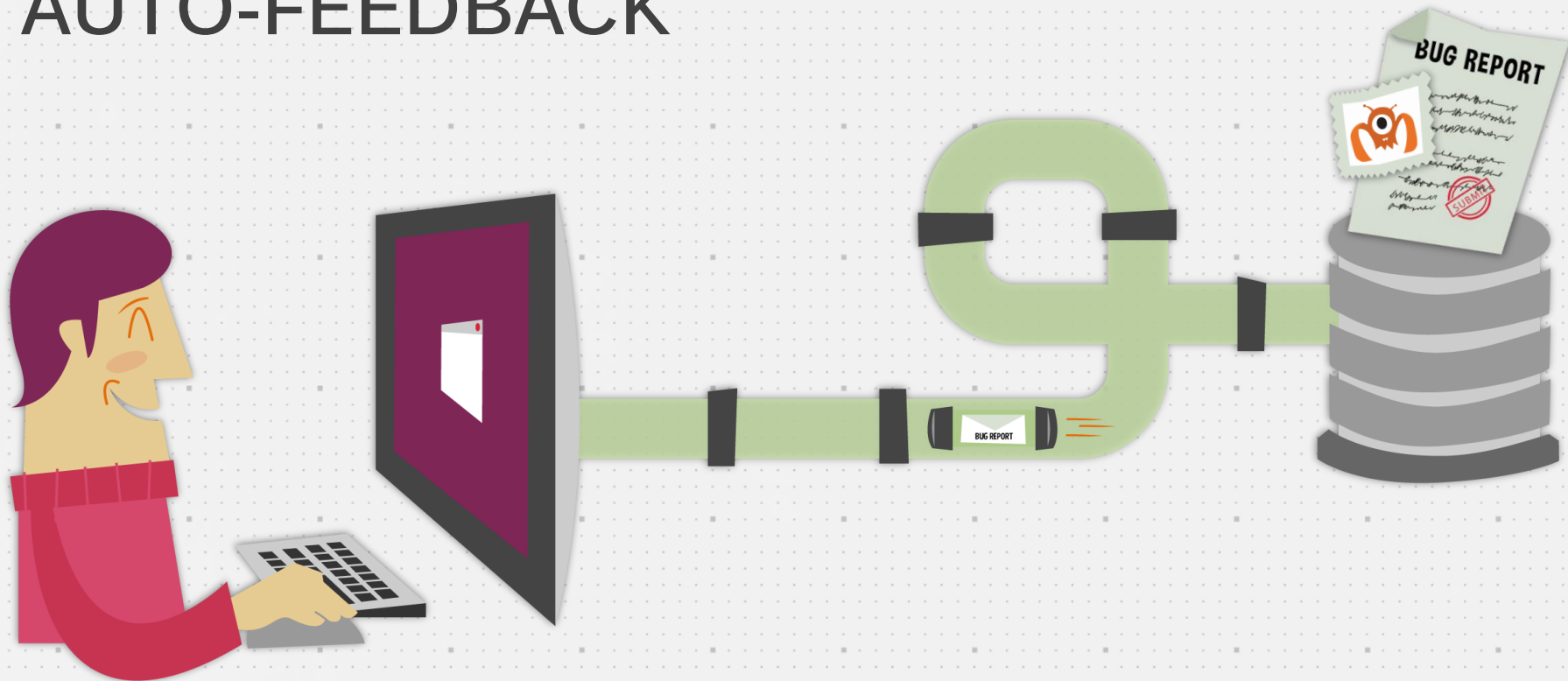
# WORKFLOW RECAP



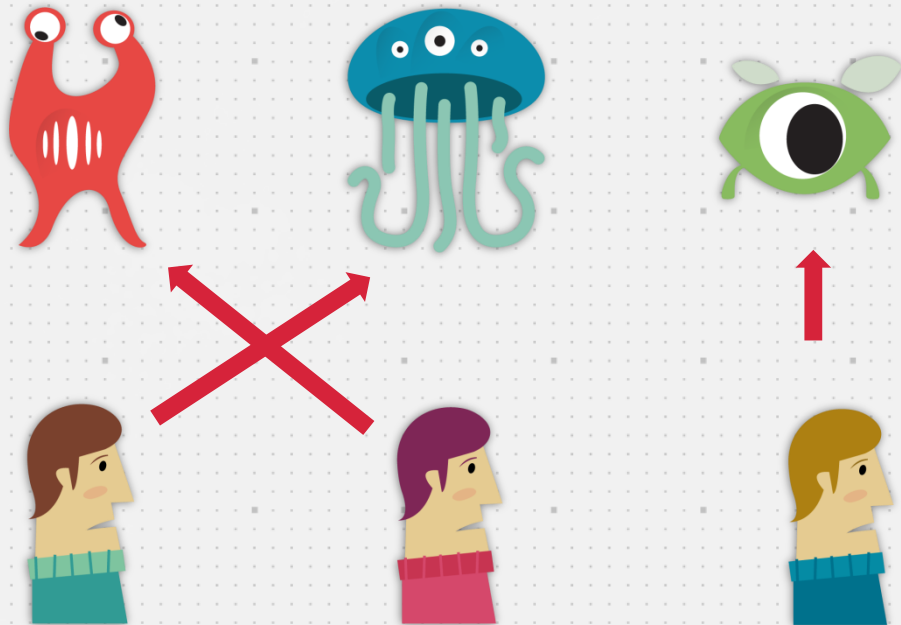


# INVESTIGATE

# AUTO-FEEDBACK



# AUTO-ASSIGN BUGS





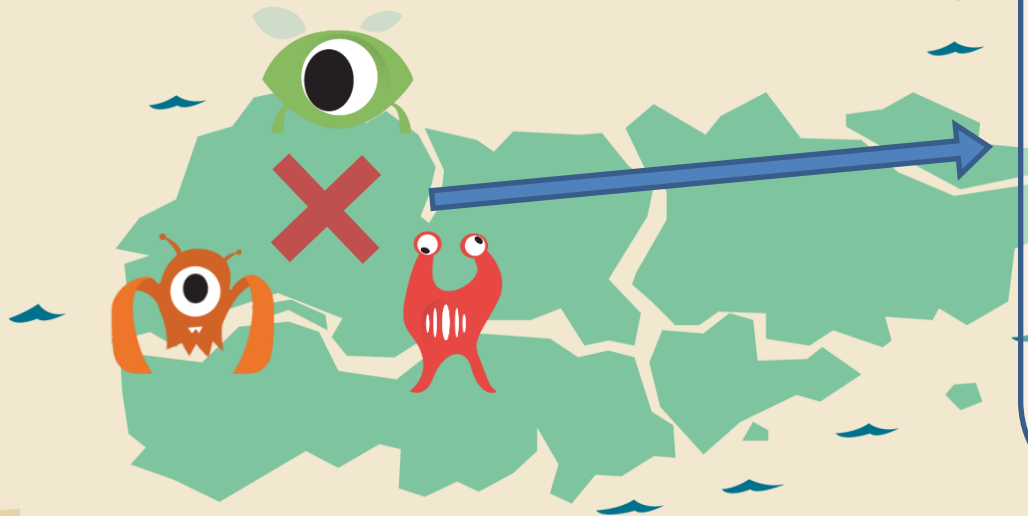
CEngine::Update()
CEngine::MainLoop()
main()

# PREVENT DUPLICATES

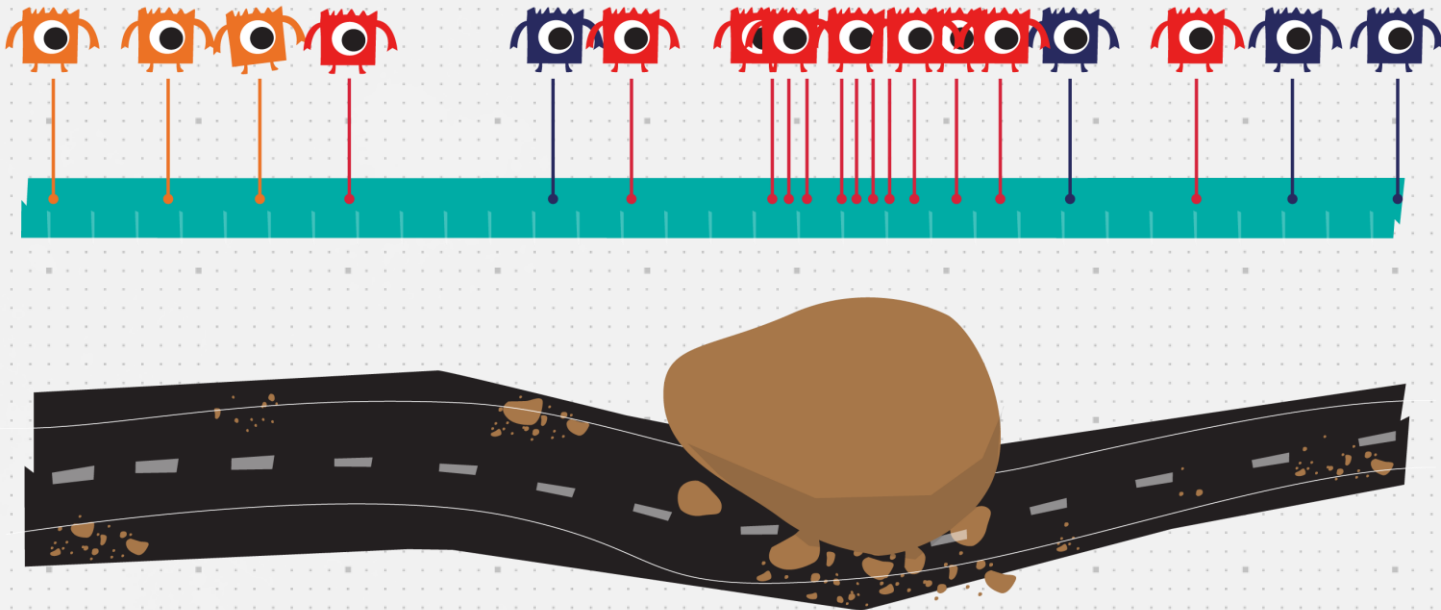
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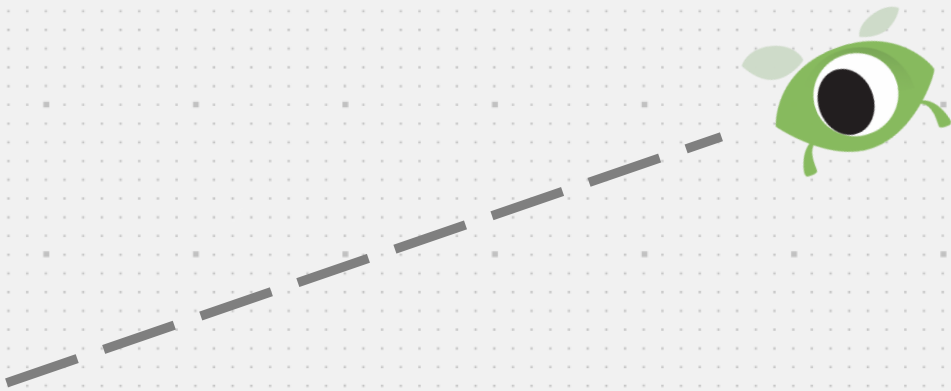
# PREVENT DUPLICATES



# IDENTIFY BLOCKERS



# REMOTE DEBUG

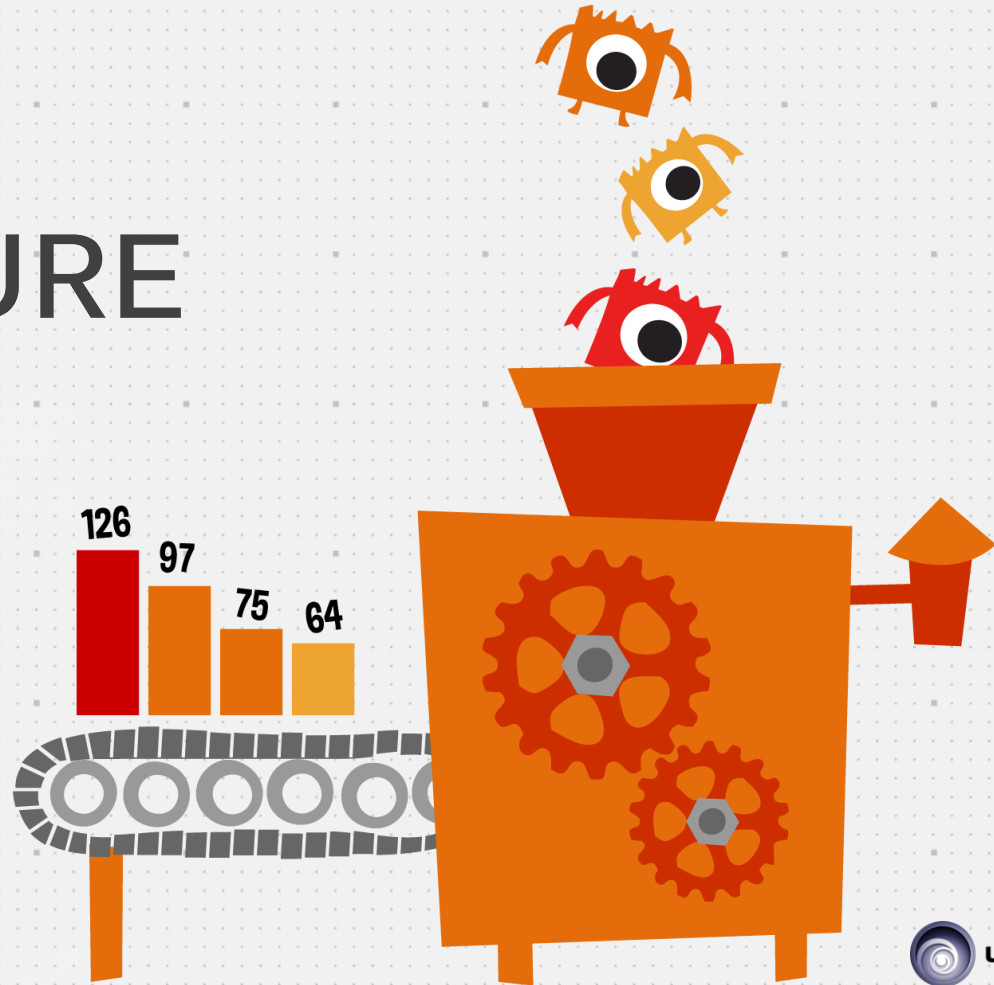




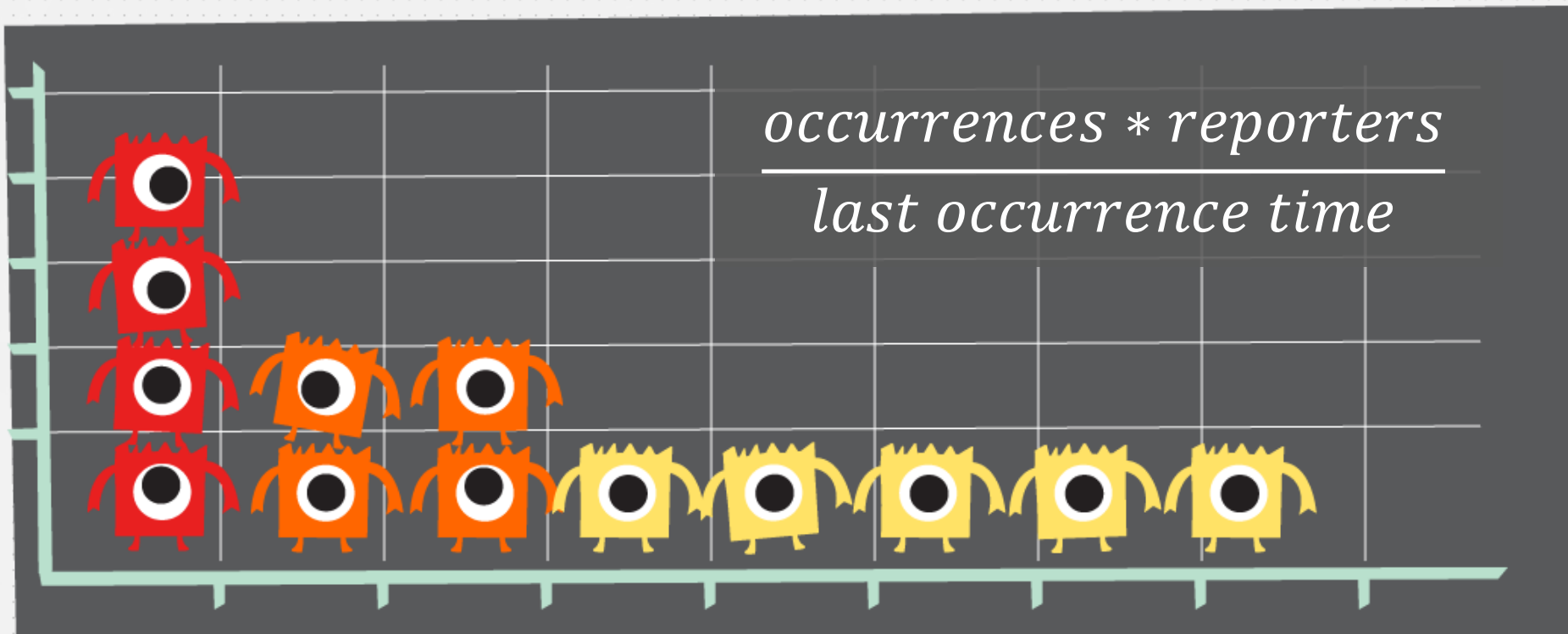
# TRACK REGRESSIONS



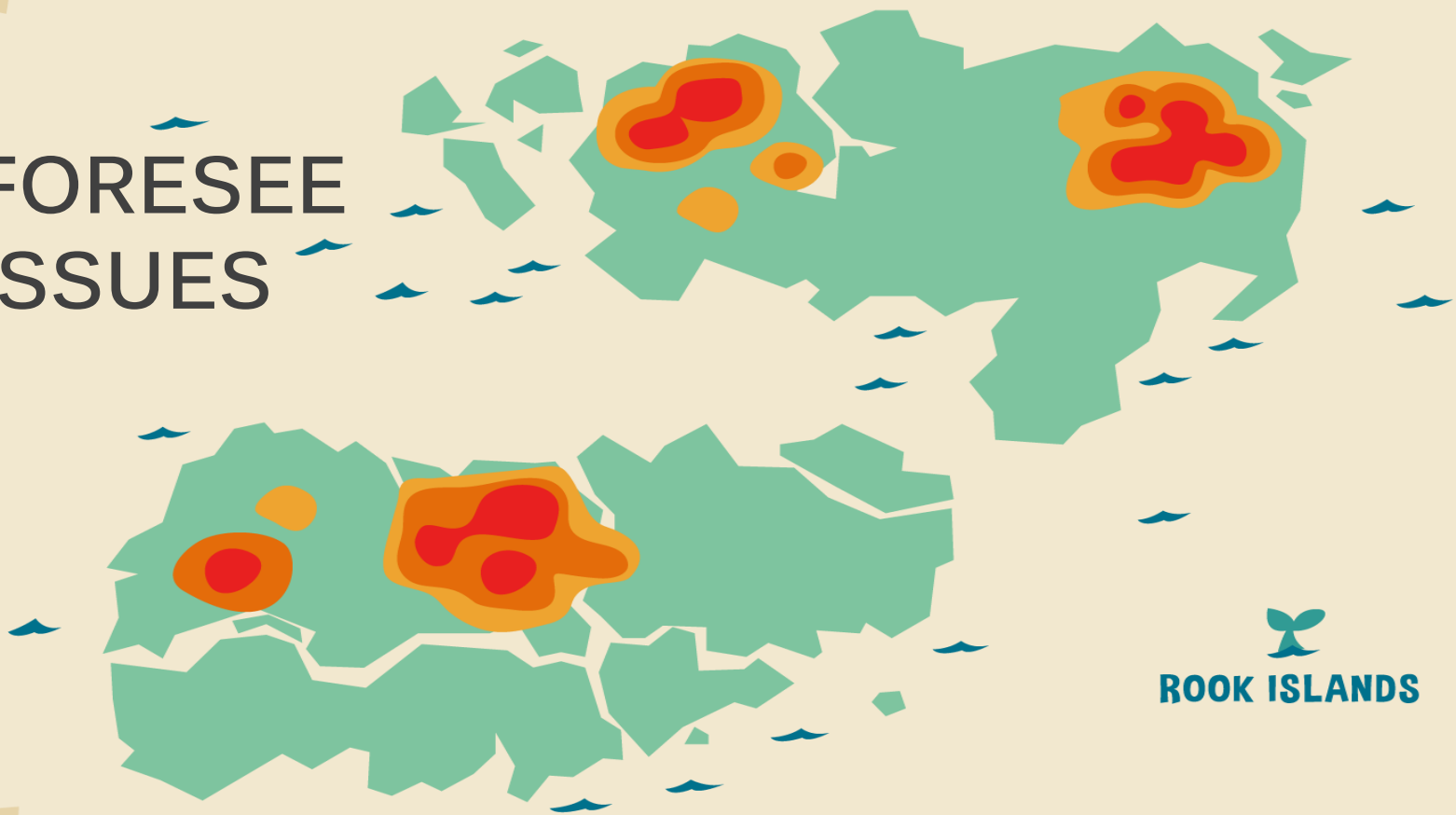
# GET THE BIG PICTURE



# PRIORITIZE

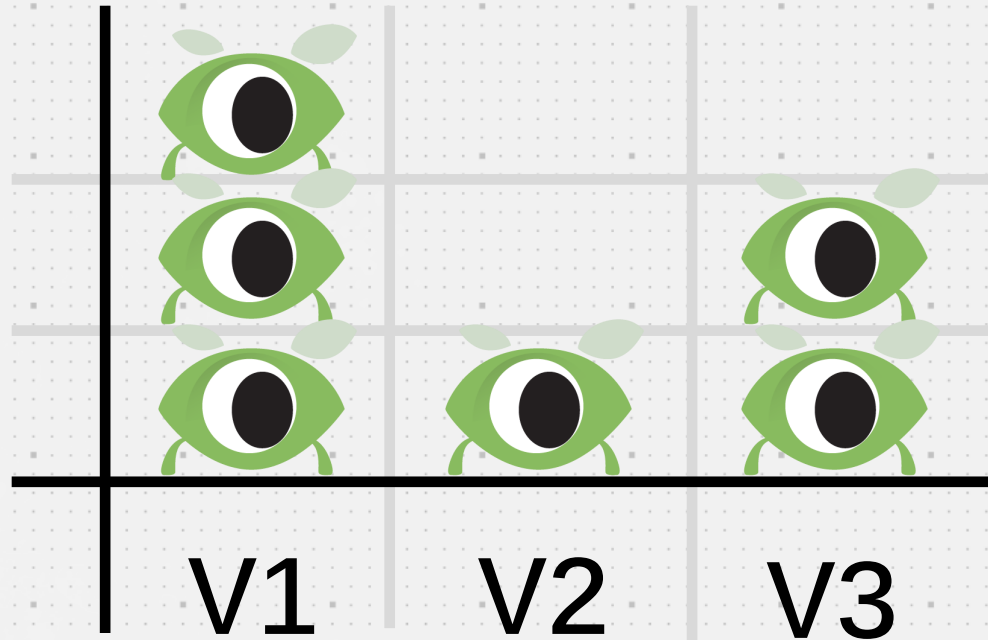


# FORESEE ISSUES

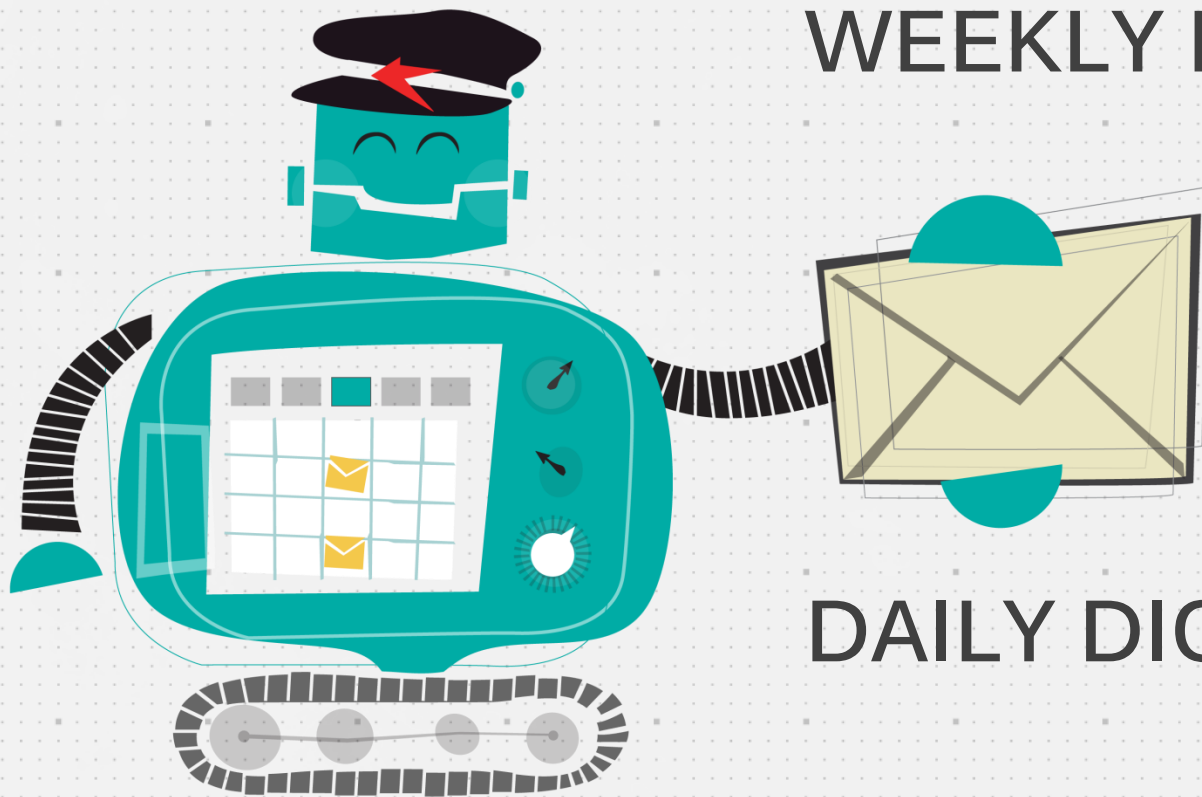


**ROOK ISLANDS**

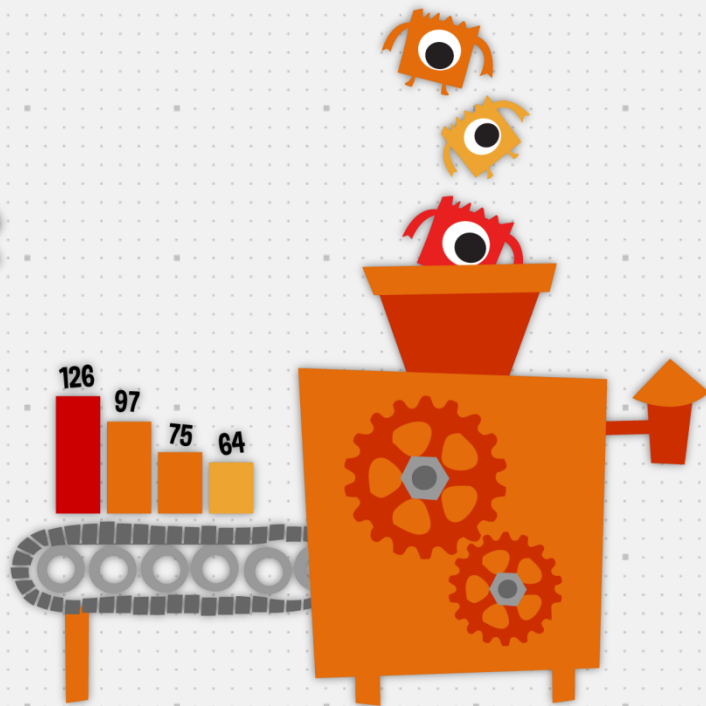
# TRACK VERSION STABILITY



# WEEKLY REPORTS !



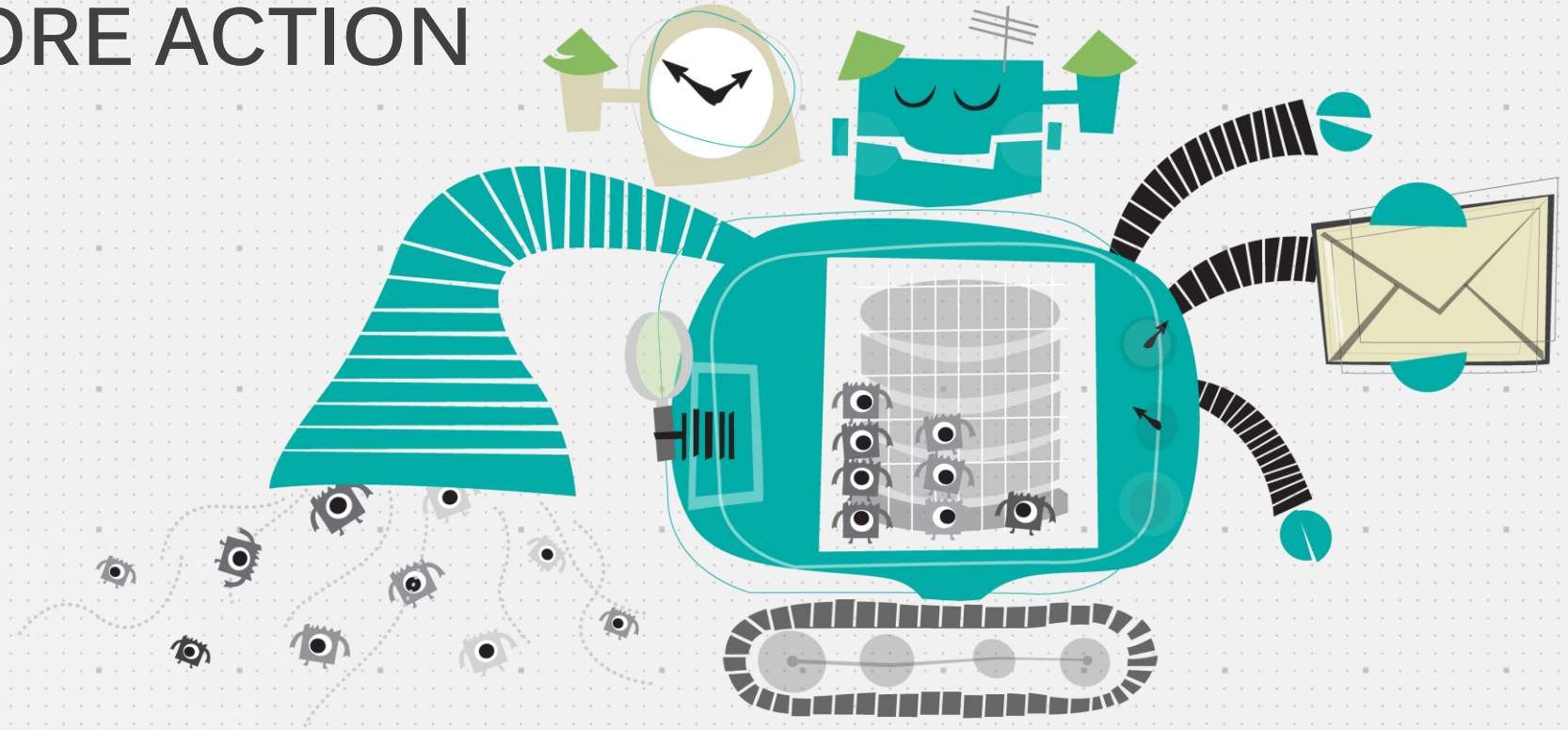
# DAILY DIGESTS !

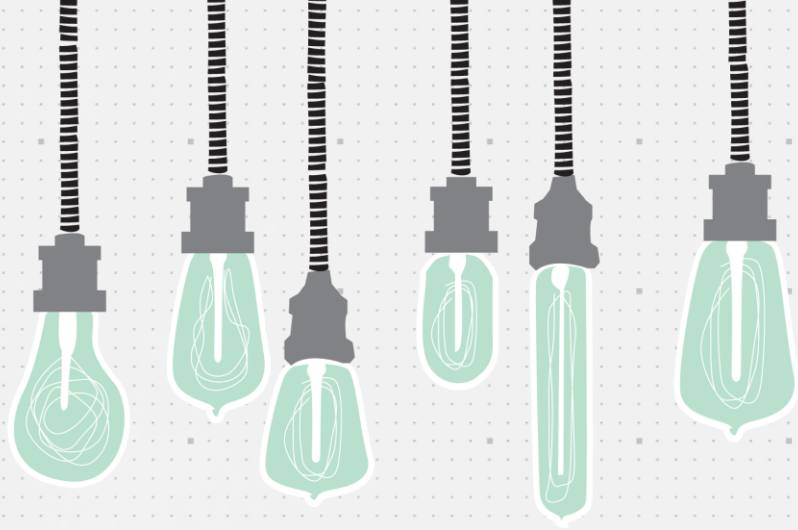


# **Crash reporting workflow**



# LESS FRICTION, MORE ACTION





# MORE IDEAS ?

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