

## **Virtuous Cycle(s) of Velocity** What I Learned About Going Fast at eBay and Google

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## Background

## **CTO** at **KIXEYE**

• Making awesome games awesomer (and scalabler and reliabler)

## **Director of Engineering for Google App Engine**

- World's largest Platform-as-a-Service
- **Chief Engineer at eBay** 
  - Multiple generations of eBay's real-time search infrastructure



## **Lessons to Learn**

People

Technology

Culture



# **People: Hire and Retain the Best**

### **Hire 'A' Players**

- Difference between top and bottom performers is not 1.5x; it's 10x (!)
- (+) Google hiring process

## **Virtuous Cycle**

- A players bring A players
- B players bring C players
- Constantly raise the bar



# **People: Respect People**

Most valuable and irreplaceable asset People are not cogs, not fungible

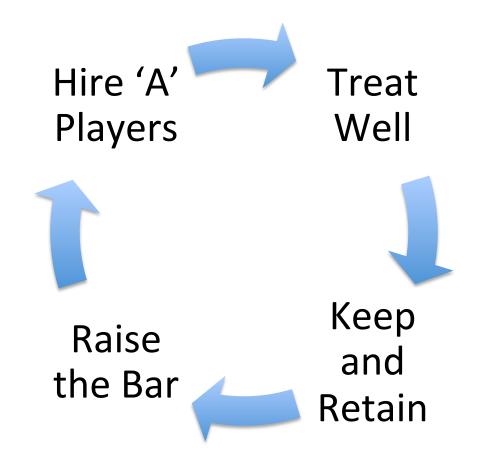
- (-) eBay "Train seats"
  - Destroyed incentives, personal pride, long-term
    ownership
- People are an asset, not a cost center

**Environment should treat people as valued** 

• (+) Google workplace



## **Virtuous Cycle of People**





# **Technology: Services**

- Small team
- Well-defined interface
- Completely independent
- Autonomy and responsibility



# **Technology: Quality Discipline**

#### Tests help you go faster

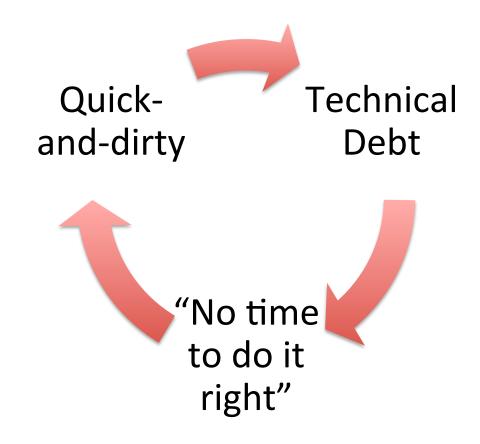
- Tests have your back
- Confidence to break things, refactor mercilessly
- Catch bugs earlier, fail faster

#### "Don't have time to do it right"?

• WRONG – Don't have time to do it twice (!)



## **Vicious Cycle of Technical Debt**





# **Technology: Quality Automation**

## **Quality Tooling**

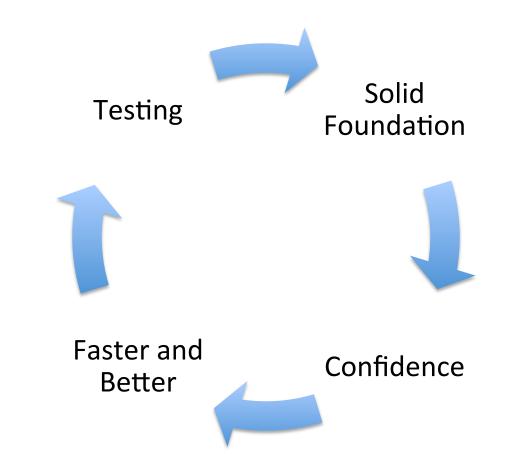
- Make it easy to do the right thing
- Mocking / testing frameworks
- Monitoring
- Canarying

## Quality cannot be an afterthought

- Quality (reliability, scaling) is a Priority-0 feature
- Google (+) vs. old eBay (-)



# **Virtuous Cycle of Quality**





# **Culture: Accountability and Ownership**

**Give people and teams autonomy** 

Hold them accountable for their success

#### **Keep commitments**

• Say what you are going to do, then do it



# **Culture: Collaboration**

One team across engineering, product, operations

- Otherwise, playing strategy instead of solving the problem
- Otherwise, CYA and hiding the ball
- (+) Google co-location

**Solve problems instead of pointing fingers** 



# **Culture: Quality over Quantity**

#### Less is more

- More wood, fewer arrows
- Solve 100% of one problem rather than 50% of two
- Release one great feature instead of two iffy ones

#### Whole user / player experience

- Think holistically about the <u>full</u> end-to-end experience of the user
- UX, functionality, performance, bugs, etc.



# **Culture: Experimentation**

#### \*Engineer\* successes

- Launch is only the <u>first</u> step
- (+) KIXEYE game development

## Many small experiments sum to big wins

• (+) eBay site speed + machine-learned ranking



# **Culture: Failure Tolerance**

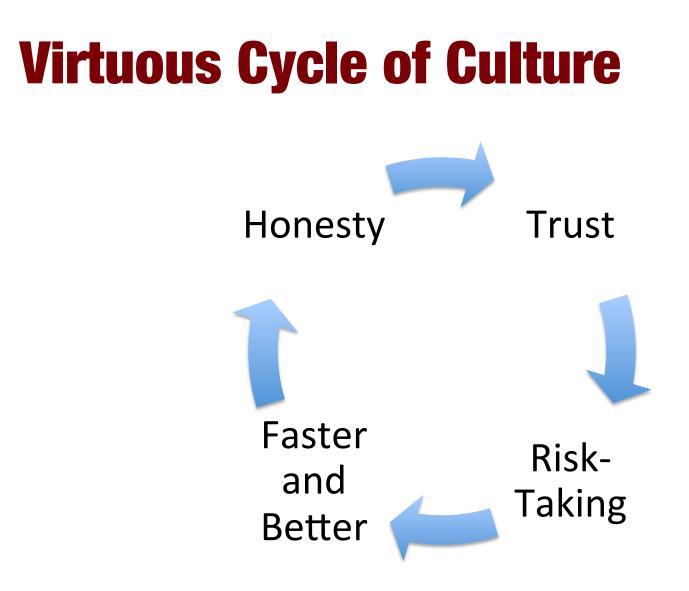
### Learn from mistakes and improve

- What did you do -> What did you learn
  - Take emotion and personalization out
- (+) Google blame-free post-mortems

#### **Encourage iteration and velocity**

• *"Failure is not falling down but refusing to get back up" – Theodore Roosevelt* 









#### KIXEYE is hiring ...



