

# CONTINUOUS IMPROVEMENT

*What Can't You See?*



dsmAgile  
Des Moines, IA  
September 9, 2016

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# Improvement Today?

Retrospectives

Kaizen

Post-mortem





Your Experiences?



A Thought Experiment...



Big Data



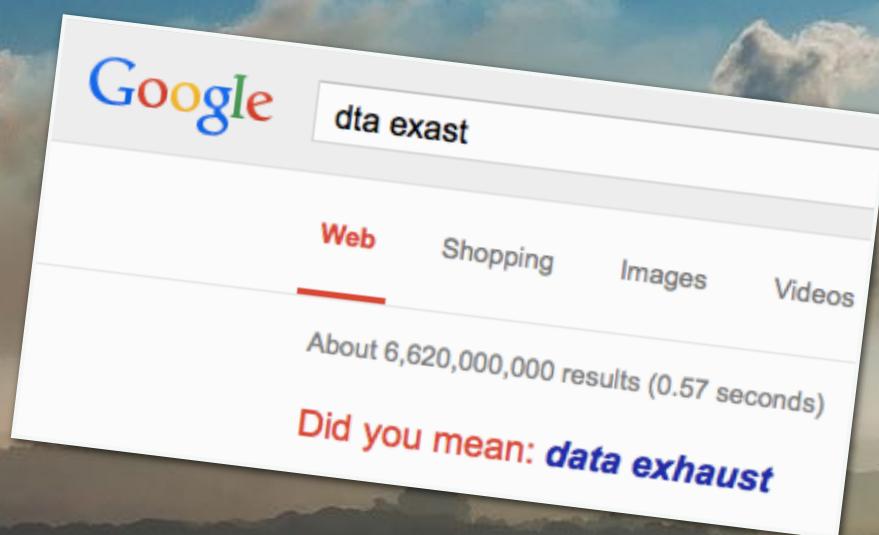
Big Data



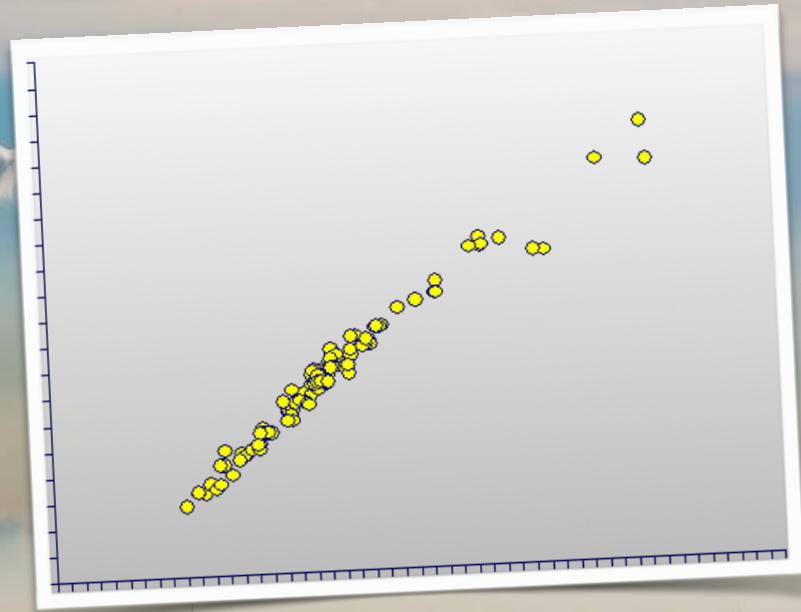
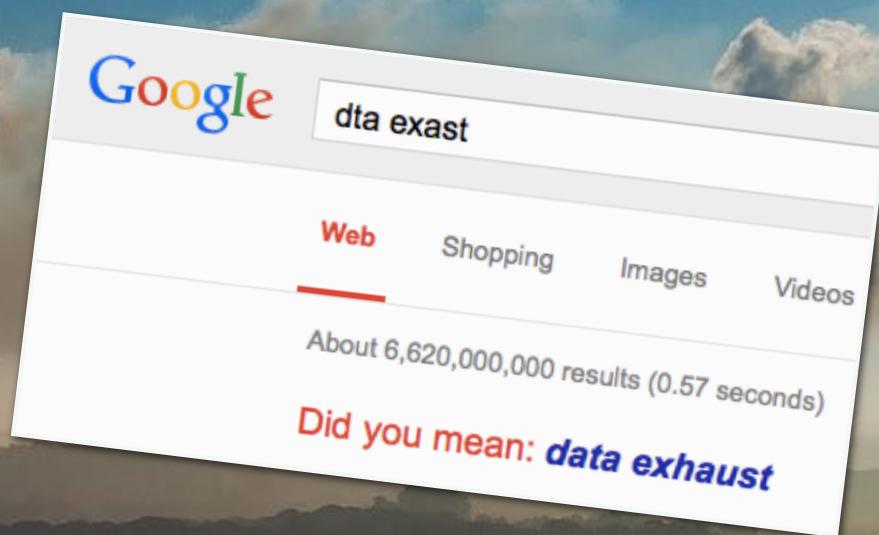
# Data Exhaust

A landscape photograph showing a hazy industrial area. In the foreground, dark silhouettes of trees are visible against a bright sky. In the middle ground, several tall, thin industrial smokestacks rise from a factory building, each emitting a thick, white plume of smoke that billows out into the air. The sky above is filled with various types of clouds, ranging from wispy cirrus to denser cumulus. The overall atmosphere is somewhat hazy and overcast.

# Data Exhaust

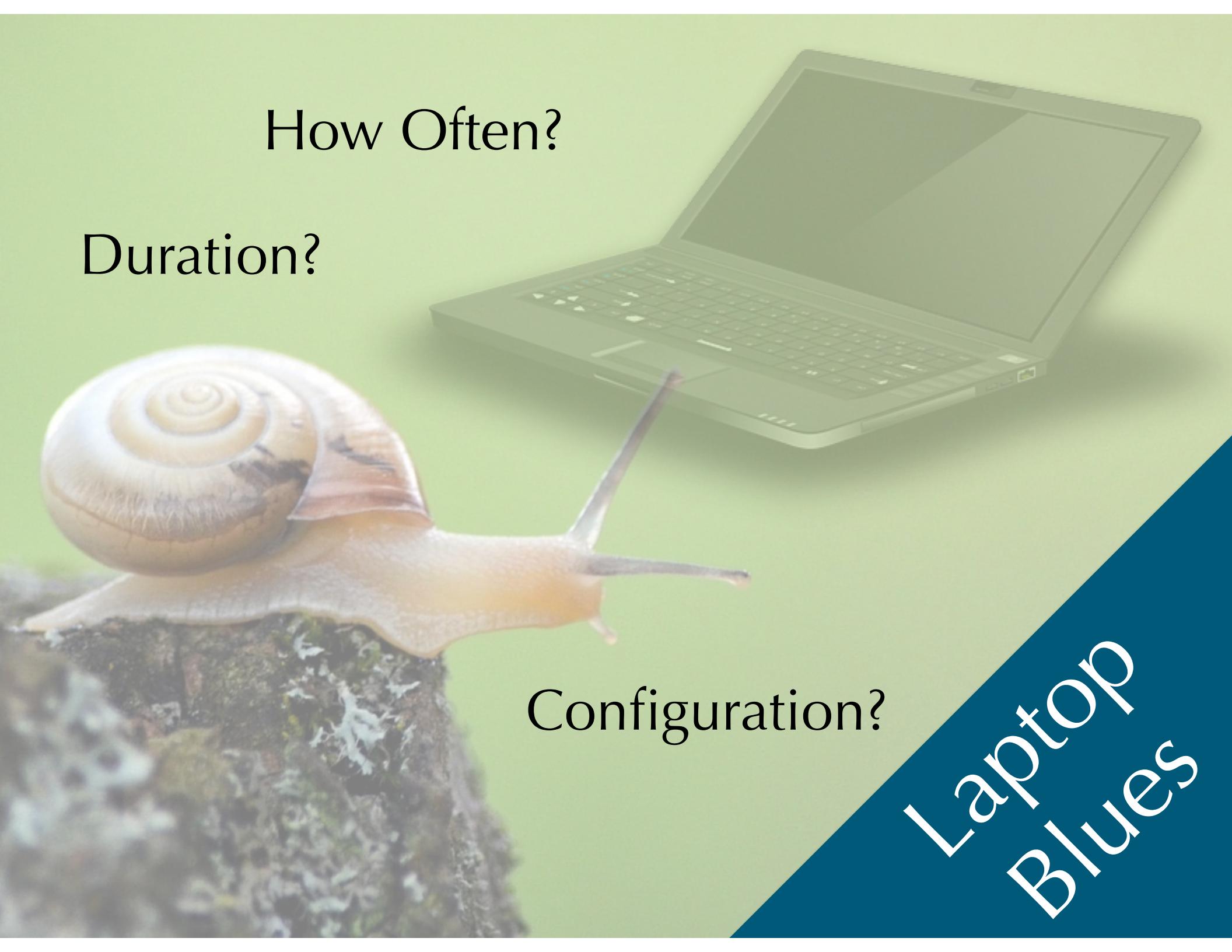


# Data Exhaust





Laptop  
Blues

A photograph of a snail crawling on a dark, textured rock. In the background, a laptop computer is open and positioned diagonally across the frame.

How Often?

Duration?

Configuration?

Laptop  
Blues

Results



Oops!  
I Forgot



Oops!  
I Forgot



Change History?

# Results



```
~/code/coeffient (master) $ git status
# On branch master
# Changes to be committed:
#   (use "git reset HEAD <file>..." to unstage)
#
#       modified:   coefficient-core/pom.xml
#       new file:   coefficient-core/src/main/java/com/example/RowMapper.java
#       new file:   coefficient-core/src/main/java/com/example/ThreadManager.java
#
# Recommendations:
#   - Other developers who changed 'coefficient-core/src/main/java/com/example/ThreadManager.java'
#     also changed 'coefficient-core/src/main/resources/thread-manager.properties'
#
~/code/coeffient (master) $
```

Where are the bugs?

Where are the bugs?

Comments?

Ticket Tracking?

Code History?



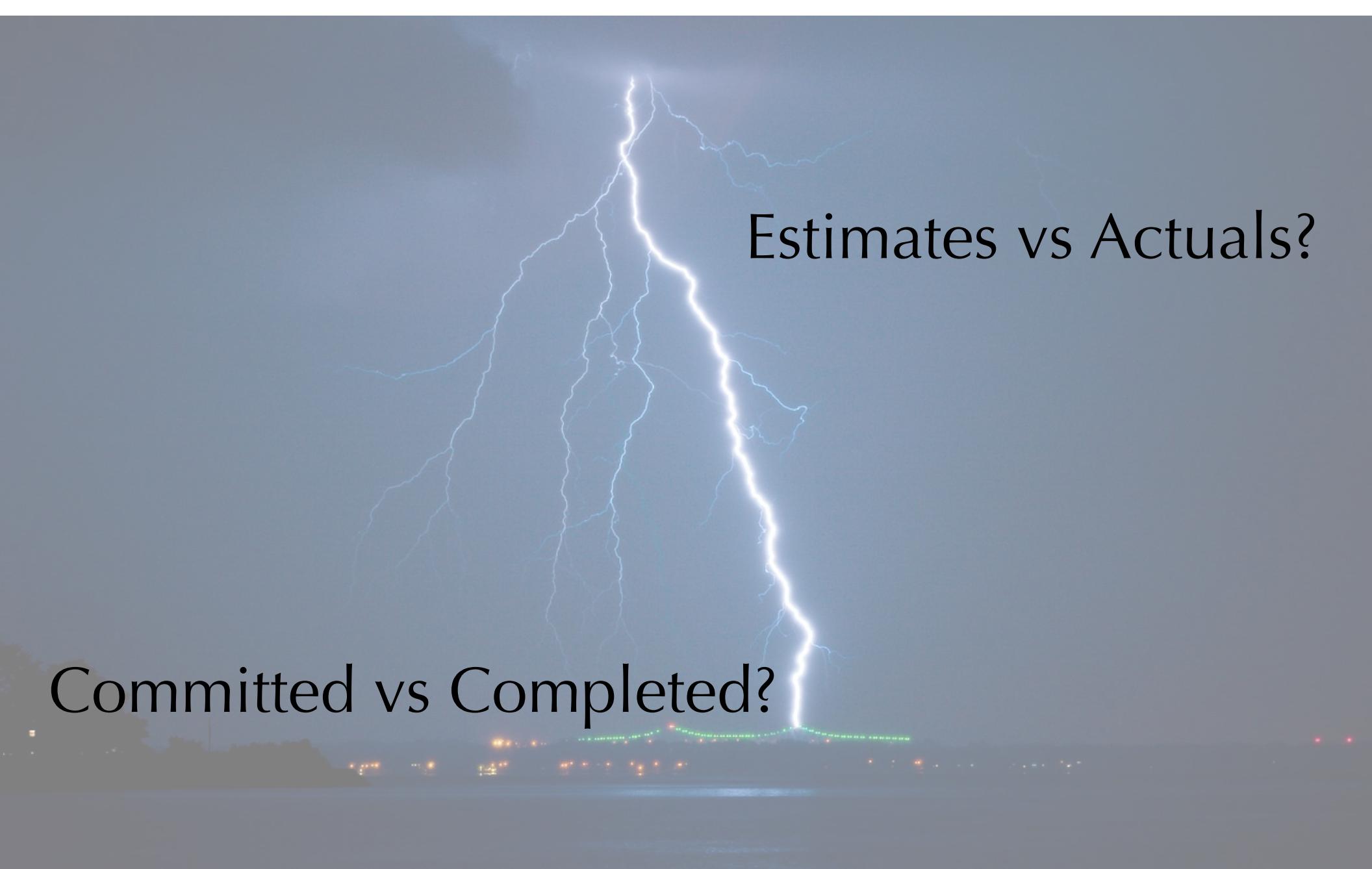
# Results

GitCommitLogFileParser.java  
InternalFileExtractor.java  
OrientDbBundle.java  
OrientDbManager.java  
RelatedStoryBuilder.java  
StoryDetail.java  
StoryStory.java





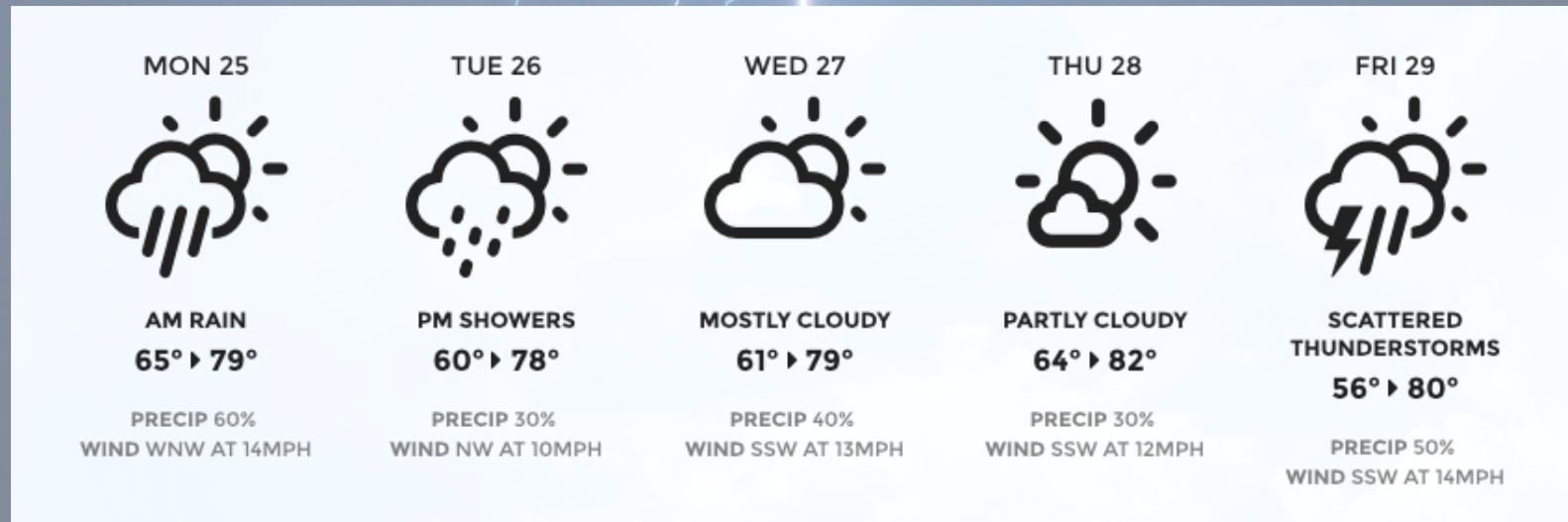
# Missing Commitments?

A photograph of a lightning strike over a dark, calm body of water. A single, bright yellow lightning bolt descends from the top center of the frame towards the horizon. The sky is a deep, dark blue. In the distance, across the water, a city skyline is visible with numerous lit-up buildings and streetlights.

Estimates vs Actuals?

Committed vs Completed?

Missing Commitments?



# Results

# Long Test Runs?

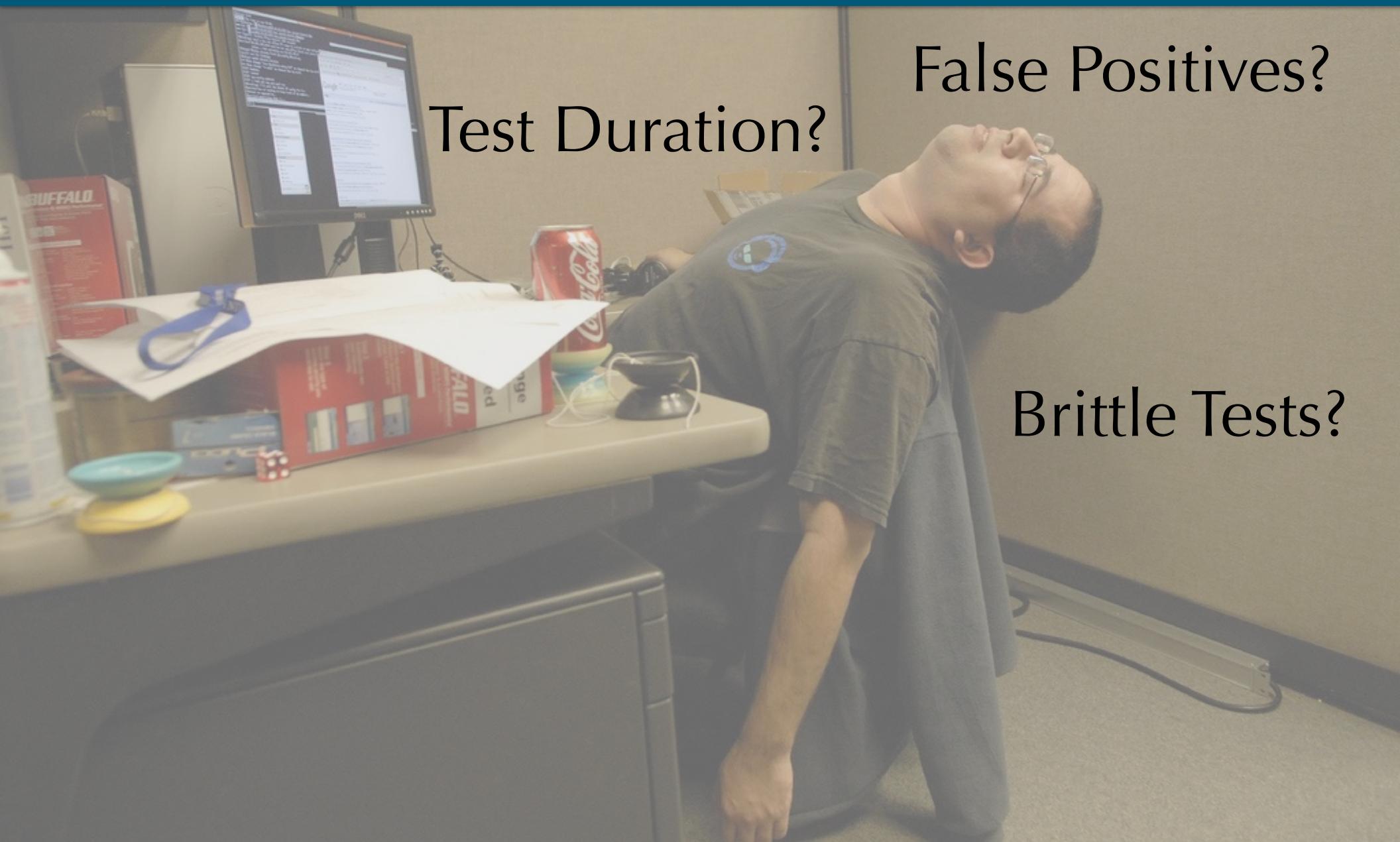


# Long Test Runs?

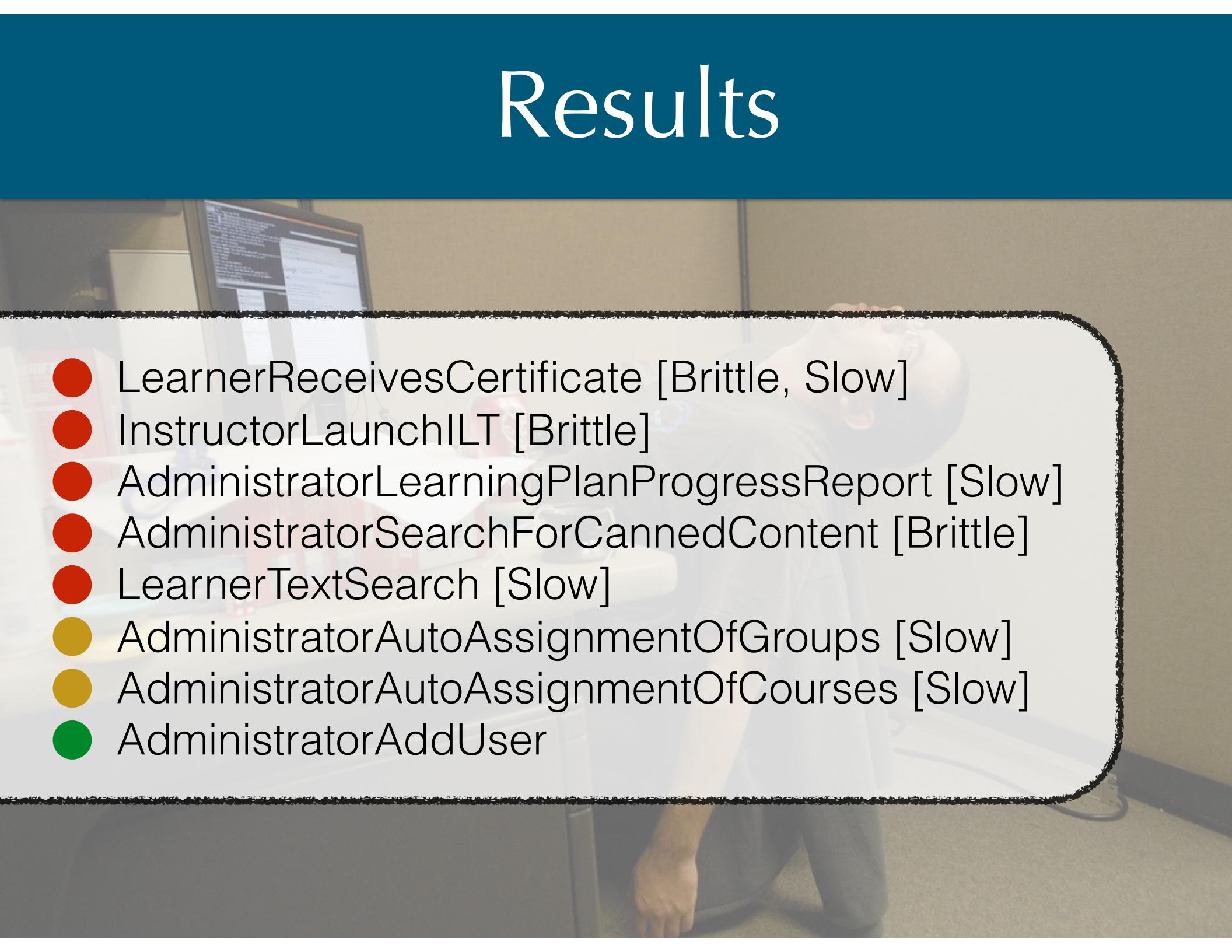
Test Duration?

False Positives?

Brittle Tests?



# Results

- 
- A person is sitting at a desk in an office environment, facing a computer monitor. The monitor displays a terminal window with multiple lines of text. The person is wearing a light-colored shirt and dark trousers. A black rectangular callout box with a white background and a black border is overlaid on the bottom right of the slide. It contains a list of items, each preceded by a colored circle: red for most items and yellow/gold for the last two.
- LearnerReceivesCertificate [Brittle, Slow]
  - InstructorLaunchILT [Brittle]
  - AdministratorLearningPlanProgressReport [Slow]
  - AdministratorSearchForCannedContent [Brittle]
  - LearnerTextSearch [Slow]
  - AdministratorAutoAssignmentOfGroups [Slow]
  - AdministratorAutoAssignmentOfCourses [Slow]
  - AdministratorAddUser



# Can We Increase Velocity?

# Personal Capacity?



Meetings?

Interruptions?

# Can We Increase Velocity?



# Results

# Regression Testing?



# Regression Testing?

Defect  
Density?

History?



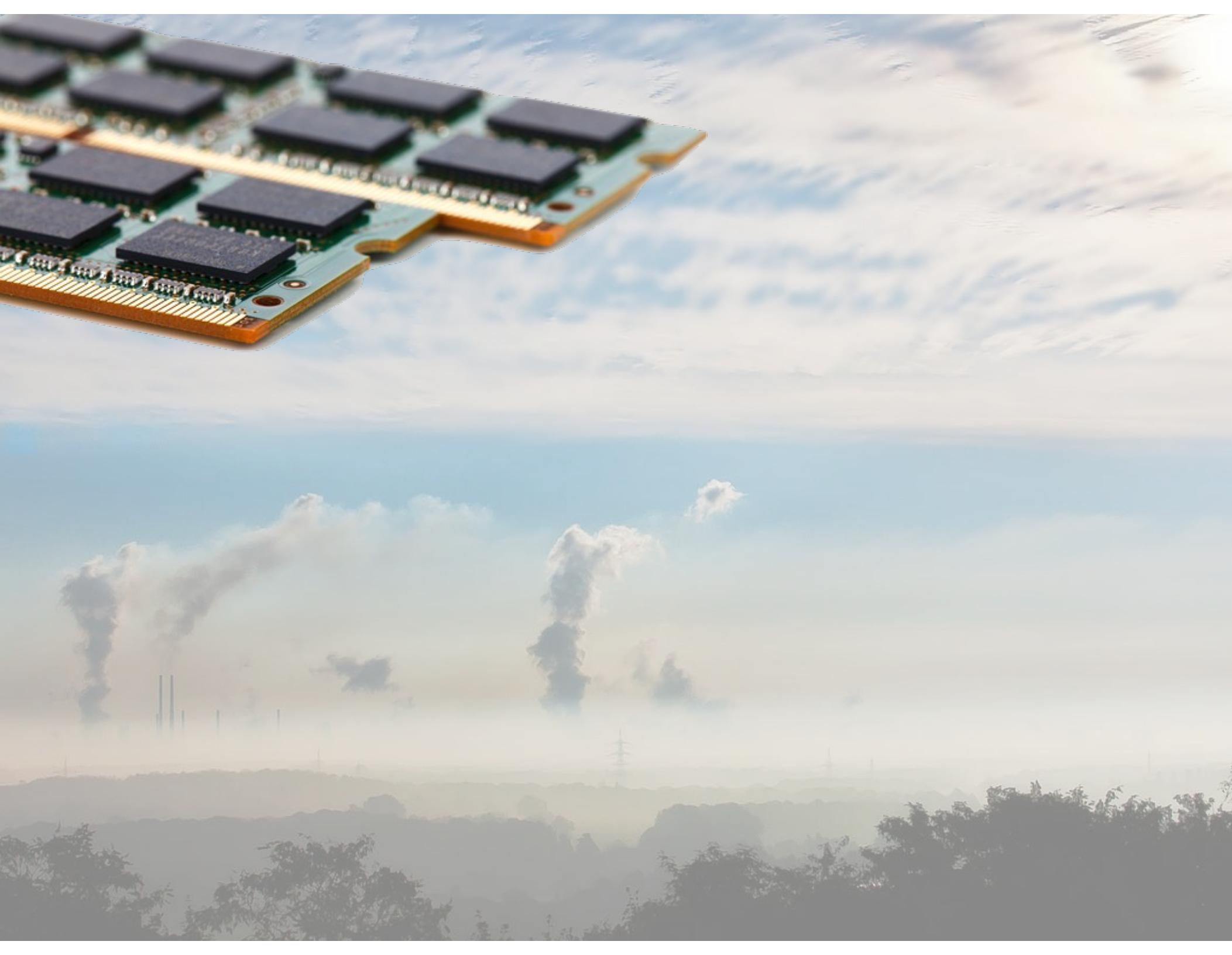
QUALITY CONTROL

CONTROL  
QUALITY  
CONTROL

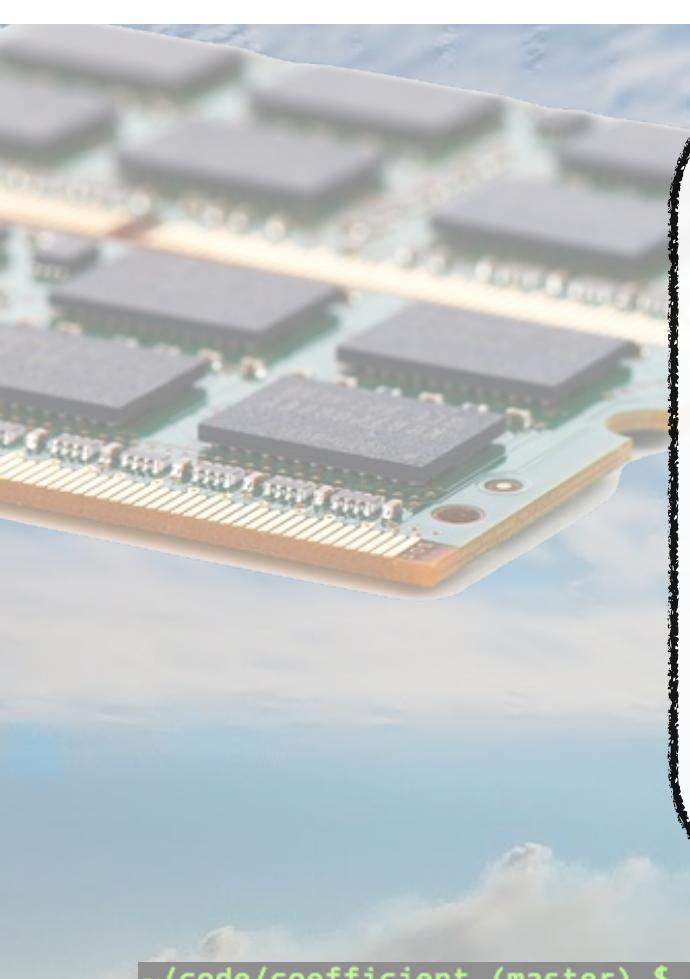
# Results







```
~/code/efficient (master) $ git status
# On branch master
# Changes to be committed:
#   (use "git reset HEAD <file>..." to unstage)
#
#       modified:   coefficient-core/pom.xml
#       new file:   coefficient-core/src/main/java/com/example/RowMapper.java
#       new file:   coefficient-core/src/main/java/com/example/ThreadManager.java
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# Recommendations:
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#     also changed 'coefficient-core/src/main/resources/thread-manager.properties'
#
~/code/efficient (master) $
```



# GitCommitLogFileParser.java

Author.java AuthorOptics.java CommitLogFileParser.java  
CommitProcessor.java

InternalFileExtractor.java JacksonCsvProvider.java LoadCommitsResource.java  
OrientDbBundle.java OrientDbConfiguration.java

OrientDbManager.java RelatedStoriesResource.java RelatedStory.java

RelatedStoryBuilder.java SchemaInitializer.java Story.java

StoryDetail.java StoryOptics.java

StoryStory.java

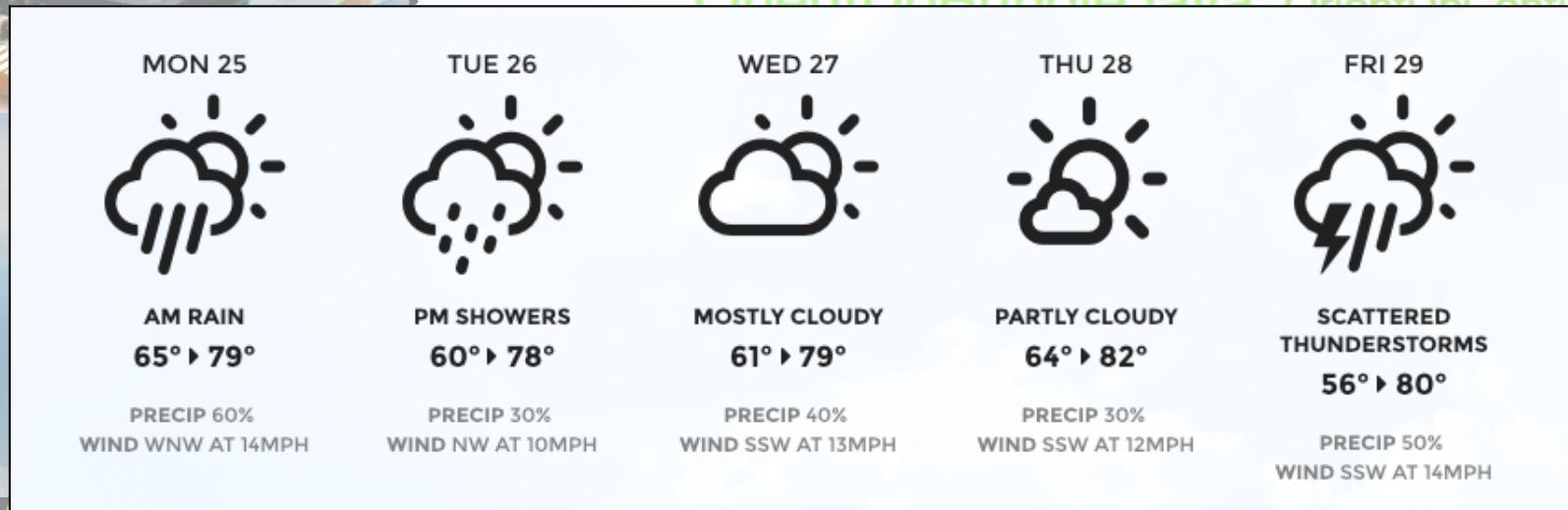
```
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#
~/code/coefficient (master) $
```

# GitCommitLogFileParser.java

InternalFileExtractor.java

JacksonCsvProvider.java LoadCommitsResource.java

OrientDbBundle.java OrientDbConfiguration.java



```
~/code/...  
# On branch master  
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~/code/coefficient (master) $
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CommitLogFileParser.java  
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MON 25

TUE 26

WED 27

THU 28

FRI 29

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- AdministratorAddUser

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#  
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# also changed 'coefficient-core/src/main/resources/thread-manager.properties'
- ~/code/coefficient (master) \$
- 
- The background of the slide features a collage of various weather-related icons and snippets of Java code. The weather icons include AM RAIN, PM SHOWERS, MOSTLY CLOUDY, PARTLY CLOUDY, SCATTERED THUNDERSTORMS, and a lightning bolt. Overlaid on these are several code snippets in different colors (red, green, blue), which appear to be from a Java application or library, including 'ry.java', 'Optics.java', and 'y.java'. A large, semi-transparent white box covers the central portion of the slide, containing the main list of tasks.



Learn To Spot &  
Leverage Data  
Exhaust

# Questions?

# Want something useful to take back to the office?

Presentations these days are full of pictures and not any words. That's great for when you're at the conference taking in the information in person, but they just don't translate when you come back and explain it to your team.

That's why we've created a shareable version of this presentation, it contains all of the content from the live presentation, but in a more digestible format for taking offline and reviewing and sharing with your colleagues. All you've got to do is go to e-mail us at [presentation@leantechiques.co](mailto:presentation@leantechiques.co). Once we've received your e-mail, you'll receive the sharable version and any updates we make to the presentation moving forward.

Thanks for attending and let us know how you've leveraged data exhaust to improve your overall software delivery performance.

Thanks!  
Brandon



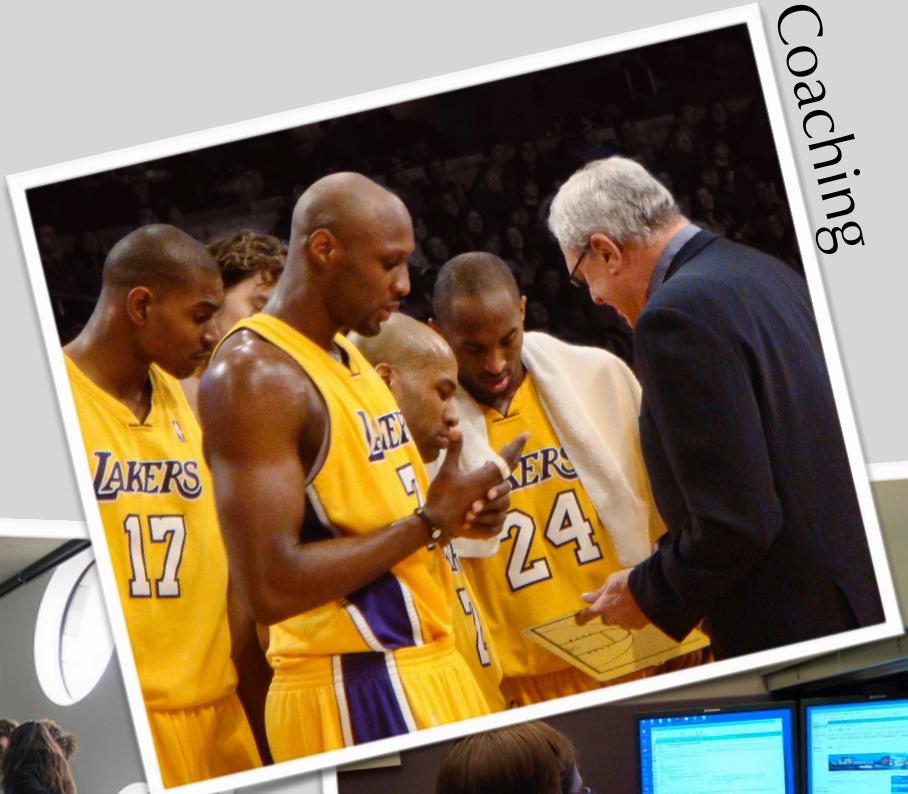
Product Development



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