Making the Unknown Manageable

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Head of Engineering @ Code Climate
About Me

Born and raised in Caracas, Venezuela

Over 10 years of technical experience

Co-founder

Head of Engineering
Data-driven insights for Engineering Managers
We need to increase performance, achieve business goals and, ultimately, deliver value to our customers.

In the next 90 days!
1. Acknowledge your feelings and emotions

2. Gather the data

3. Discuss your plan and iterate
1. Acknowledge your feelings and emotions
Acknowledge your feelings and emotions

I DON'T EVEN KNOW WHERE TO START
• Understand the cause of those emotions/feelings
• Identify areas of concern
• Properly communicate and support your team during uncertainty
Acknowledge your feelings and emotions

Resources:

![No Hard Feelings](image1)

**ISBN-13:** 978-0525533832

![Navigating Team Friction](image2)

Lara Hogan  @lara_hogan

WHEREWITHALL
Gather the data
Quantitative Data
Querying Velocity Metrics
Metrics
- Cycle time
- Pushes per day
- PR throughput

Filters
- Add filter

Group By
- Add grouping

Date Range
- May 1, 2018 → Nov 30, 2018
- By month

Run query
Clear
Quantitative Data

Cycle time: 26.7 hours (-3.8 hours, -13%)
PR throughput: 2,307 PRs (-802 PRs, -21%)
Pushes per day: 9.4 pushes (+0.8 pushes, +10%)

Graph showing trends over time from June 1, 2018 to November 1, 2018.
Create as report

Title
Cycle Time vs Throughput

Description

Visibility
- Public — Visible to everyone in the organization
- Private — Only visible to you

Create
Quantitative Data

Review cycles over time for a team
Per Dave's question
Cycle time from last 90 days by week
Cycle Time vs Throughput

FILTERS

Add filter

GROUP BY

Add grouping
Slicing the data
Quantitative Data

Teams | Contributors | Application | Repository | REWORK
---|---|---|---|---
Gryffindor | 7% |
Slytherin | 10% |
Ravenclaw | 17% |

Oct 01, 2018
Rework: 1%
Configure your metrics to get started

Add metrics now
<table>
<thead>
<tr>
<th>NAME</th>
<th>WEEKLY CODING DAYS</th>
<th>TIME TO OPEN</th>
<th>PR SIZE</th>
<th>TIME TO MERGE</th>
<th>CYCLE TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gryffindor 1 member</td>
<td>4.2</td>
<td>6.0 hours</td>
<td>61</td>
<td>14.4 hours</td>
<td>16.6 hours</td>
</tr>
<tr>
<td>Ravenclaw 0 members</td>
<td>3.7</td>
<td>13.0 hours</td>
<td>80</td>
<td>36.0 hours</td>
<td>48.6 hours</td>
</tr>
<tr>
<td>Slytherin 4 members</td>
<td>4.1</td>
<td>9.3 hours</td>
<td>69</td>
<td>21.4 hours</td>
<td>26.8 hours</td>
</tr>
</tbody>
</table>
Takeaways

- Leverage Velocity and other analytics tool to get better visibility
- Use metrics to understand changes over time
- Enhance your conversation by including objective data
Qualitative Data
Drive conversations using Data

### Coaching Summary

<table>
<thead>
<tr>
<th>Teams</th>
<th>Hogwartss</th>
<th>Gryffindor</th>
<th>Ravenclaw</th>
<th>Slytherin</th>
<th>Units</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Commit</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<td>—</td>
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<tr>
<td>Commit volume</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pushes per day</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Rework</td>
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<td>—</td>
<td>—</td>
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<tr>
<td>Innovation rate</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Submitter</td>
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<td>--------------------</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time to open</td>
<td>15.5 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR size</td>
<td>51 lines of code</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Review cycles</td>
<td>1.6 cycles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unreviewed PRs</td>
<td>7%</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Time to merge</td>
<td>17.8 hours</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PR success rate</td>
<td>96%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revert rate</td>
<td>1%</td>
<td></td>
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<tr>
<td>Reviewer</td>
<td></td>
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<tr>
<td>PRs reviewed</td>
<td>294 PRs</td>
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<tr>
<td>Review speed</td>
<td>9.0 hours</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Data in your retros

Cycle Time

- Trailing 7 Day Average
- Pull Requests
- Trend

Workflow

Hogwarts
All repositories

May 1, 2019 → Nov 30, 2018
A note on receiving feedback

• Practice active listening
• Keep in check your own assumptions
• Follow up to gather as much context as possible
Feedback from engineers

“Meetings are often way too long. There are too many participants and projects to keep track of."

“I don’t feel like I’m growing as much as I could."

“Features often need significant post release work. How can we be aware of new information/feedback sooner?”
Takeaways

• Leverage 1:1 conversations and retros
• Bring data into your conversation
• Make feedback a habit
• Practice active listening
Discuss and Execute the plan
Discuss and Execute the plan
Discuss and Execute the plan
Discuss and Execute the plan

- Discuss possible solutions with your team
- Get feedback from an outside perspective
- Commit to a plan and set goals
What’s the data telling us?

Team Structure + Iteration Process
need change
Using data to drive continuous improvement

Q3 - Decrease PR cycle time

Average cycle time per pull request

- Trailing week value
- Pull requests
- Goal
- Trend

TRAILING WEEK
8.9 hours
- 19% vs. previous three weeks

GOAL
10 hours

QCon SF 2019
Discuss and Execute the plan

New Target

Targets help you keep your team on track and hit your goals.

Type:
- Reduce review cycles

Title:
- Ravenclaw - Reduce review cycles

Description

Visibility
- Public — Visible to everyone in the organization
- Private — Only visible to you
- Limited — Only visible to you and to relevant contributors in the contributor portal

Target Values:

<table>
<thead>
<tr>
<th>Organization</th>
<th>cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hogwarts</td>
<td></td>
</tr>
<tr>
<td>Gryffindor</td>
<td></td>
</tr>
<tr>
<td>Ravenclaw</td>
<td>1 cycles</td>
</tr>
<tr>
<td>Slytherin</td>
<td></td>
</tr>
<tr>
<td>Hufflepuff</td>
<td></td>
</tr>
<tr>
<td>Ravenclaw</td>
<td></td>
</tr>
<tr>
<td>Hufflepuff</td>
<td></td>
</tr>
</tbody>
</table>

Start on:

QCon SF 2019

Twitter // @ale7714
Discuss and Execute the plan

Power-up your standup
Discussion and Execute the plan

**Snapshot**

Work in progress

- **WIP Pull Requests**: 5
- **Active Contributors**: 6
- **WIP / Contributor**: 0.8

Most active pull requests

![Total pushes chart](chart)
Takeaways

• Set targets and use metrics to track progress
• Proactively seek feedback
• Iterate on your plan as you receive new information
We did it!
We did it!
• **Acknowledge your feelings** and identify the areas/issues you’re most concerned about

• **Gather qualitative and quantitative data** to better prepare yourself

• **Communicate your plan and proactively iterate** on it as you learn new information
Questions?

Also find me at the Code Climate booth in the Street Level Exhibition area

Ale Paredes — @ale7714