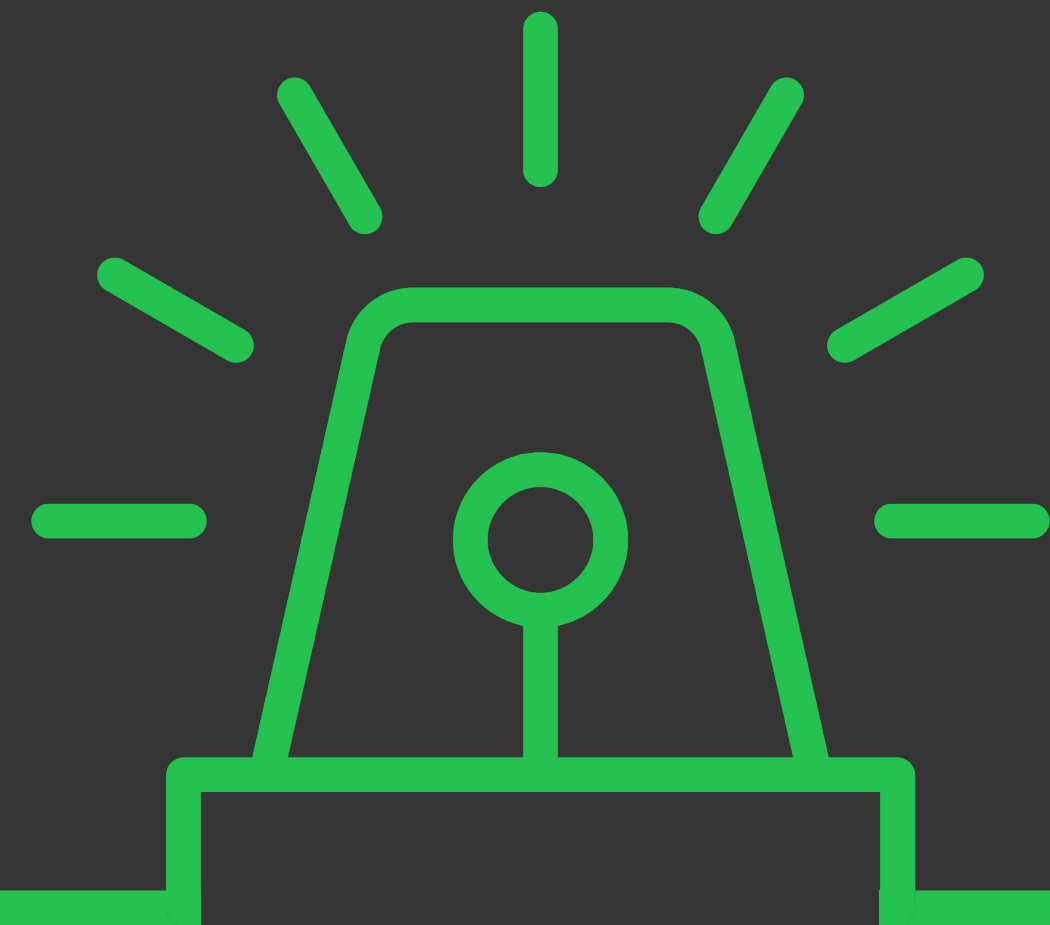


# The Lifecycle of a Service



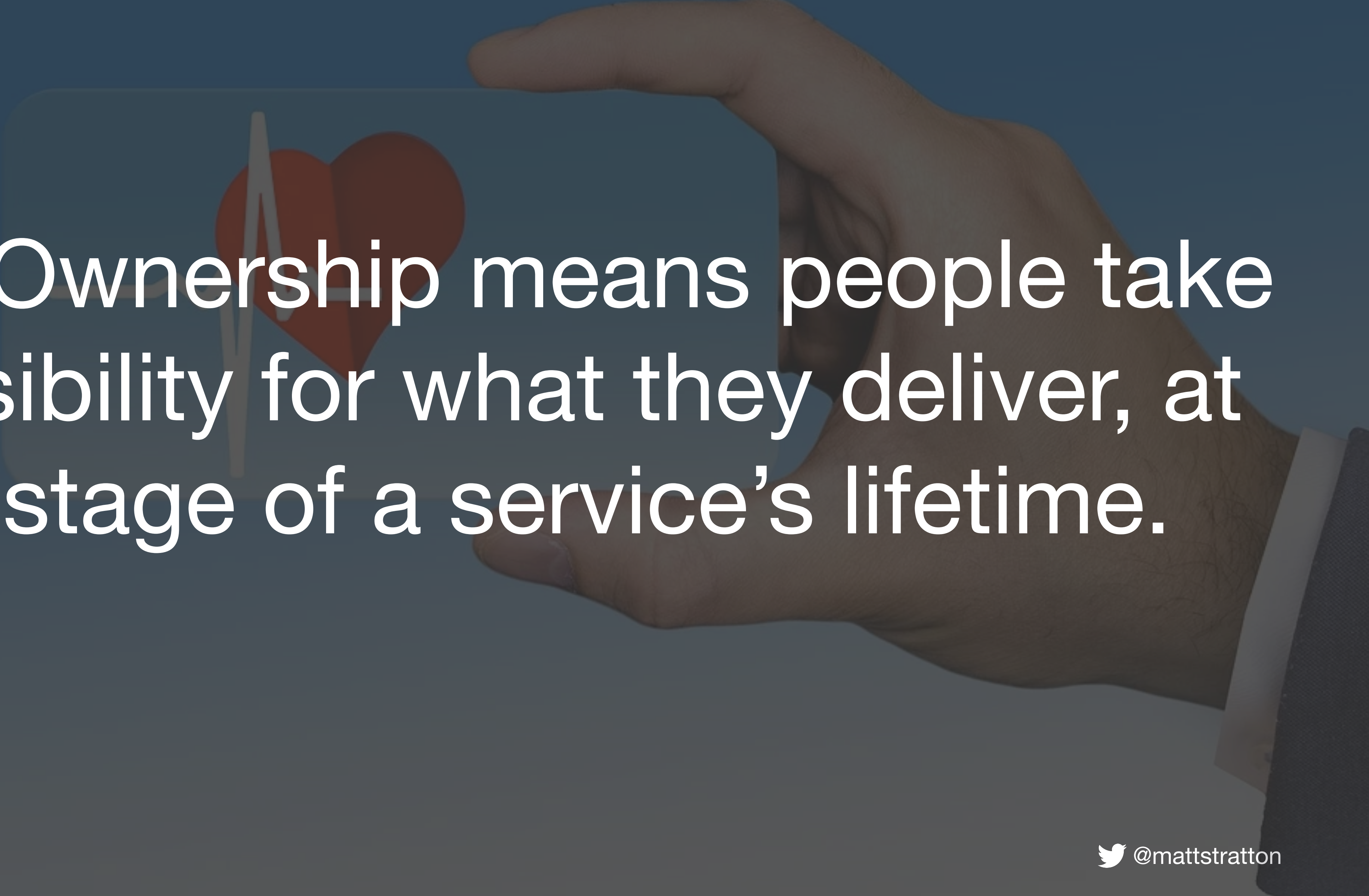
Matt Stratton  
DevOps Advocate & Thought Validator, [PagerDuty](#)









A hand in a dark suit sleeve holds a transparent rectangular card. On the card is a red heart with a white pulse line passing through it. The background is a solid dark blue-grey.

Service Ownership means people take responsibility for what they deliver, at every stage of a service's lifetime.





# What is a service?



# A service can be a lot of things

Microservice

Slice of a monolith

Piece of functionality

Internal tool

Component

Shared infrastructure

Feature



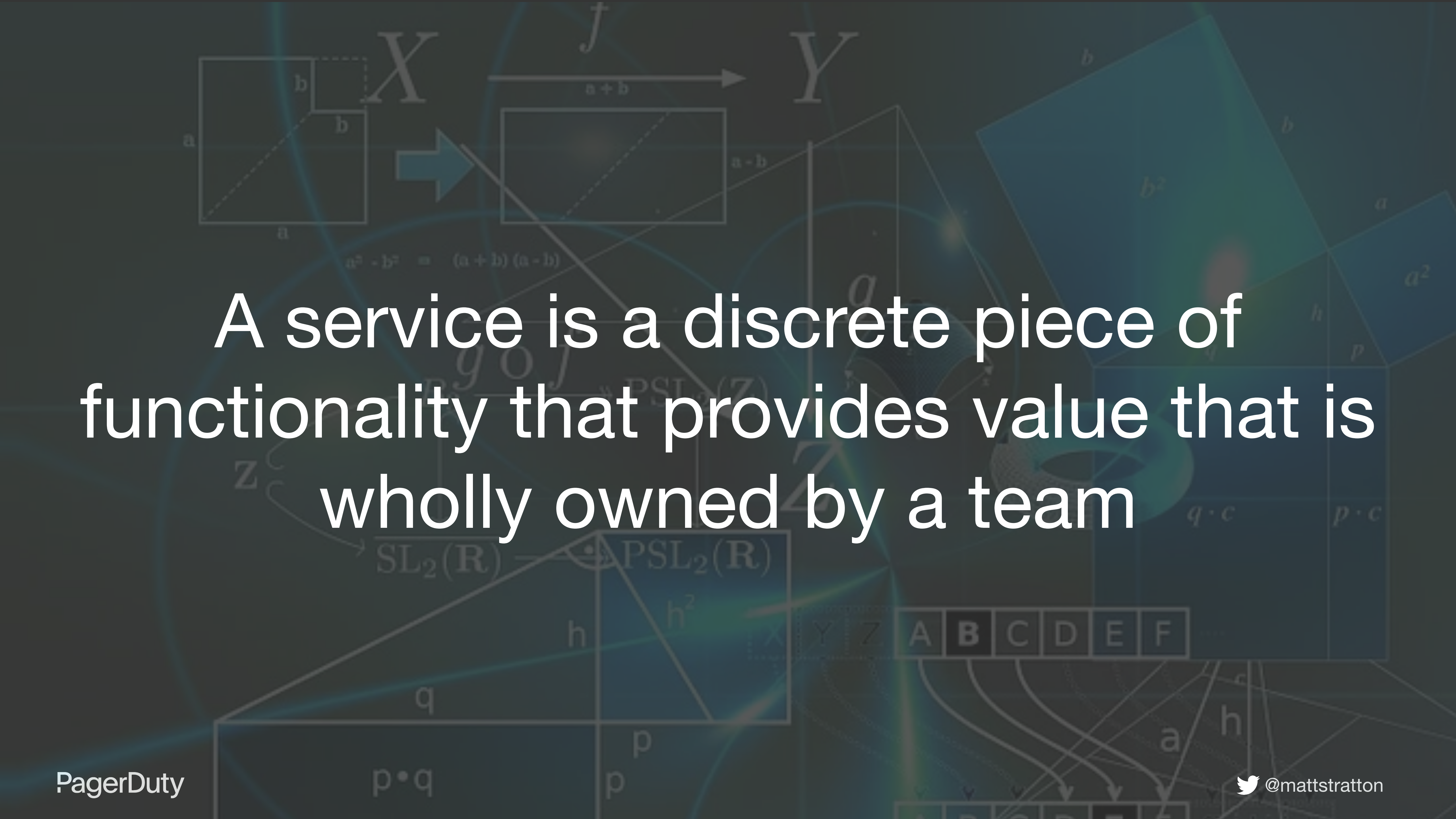
# A service can be a lot of things

If it provides value to other people, it's a service



Define what a “service” means to you





A service is a discrete piece of  
functionality that provides value that is  
wholly owned by a team



A woman with dark hair, wearing a light-colored patterned top, is sitting on a gravel path and looking at a large, grey stone sculpture of a dragon. The dragon is lying down, with its head on the left and its body extending towards the right. The sculpture has a textured, scale-like pattern on its body. The background is a dense green hedge. The text "Shared understanding" is overlaid in white on the dragon's body.

# Shared understanding



The background of the slide features a dark, moody sunset or sunrise scene. Two silhouetted figures, a man and a woman, are shown from the chest up, facing each other and holding hands. Their arms are extended towards the center of the frame. The sky is a gradient of dark brown and olive green, with a bright, hazy light source visible on the horizon. The overall mood is contemplative and collaborative.

# Who is responsible?



# “Service mitosis”



The background of the slide features a collection of interlocking puzzle pieces. Most of the pieces are a dark reddish-brown color, while one piece in the center is a contrasting dark blue-grey. The pieces are arranged in a way that suggests they are being assembled or have just been taken apart, symbolizing the process of problem resolution.

# Service definitions help with problem resolution





# What about a monolith?




The background of the slide features a dimly lit office environment. Two women are visible; one with long blonde hair is in the foreground, looking intently at a computer screen, while another woman with dark hair is slightly behind her, also focused on the work. The overall tone is professional and collaborative.

# Roles in service ownership



# Development Team





Your service should make sense to  
other people who will interact with it



# Naming



Be specific



# Names that are specific

- “User authenticator”
- “Payment processor”
- “Shopping cart”
- “Login”
- “Report generator”
- “Email tracking code”



# Less amazing names

- PacMan (unless you're actually building PAC-MAN, which I doubt)
- Apollo
- BurgunDB
- Artemis



# Descriptions



# Descriptions

- What is the intent of this service, component, this slice of functionality?
- How does this thing deliver value?
- What does it contribute to?
- How will this impact customers?



# API

- Versioning
- Clear documentation / examples



# Sustainability team



A row of several old, worn books standing upright. The books have various spine colors and textures, including brown leather, red velvet, and dark blue/black cloth. Some have handwritten labels in cursive script. The word "Runbooks" is overlaid in large white text in the center.

# Runbooks



A close-up photograph of two fluffy sloths, likely baby sloths, looking upwards. The sloth in the foreground is slightly out of focus, while the one behind it is more in focus. They have light brown and white fur. The background is a soft, out-of-focus green. The word "Alerting" is overlaid in white text on the right side of the image.

# Alerting



A red and grey diesel locomotive is shown on a railway track. The locomotive has the number '232 088-5' on its side and front. It is surrounded by a complex network of overhead power lines and support structures. The background shows some trees and a building.

# Robustness, Resilience and Reliability





# Program management



# Responsibilities of program management

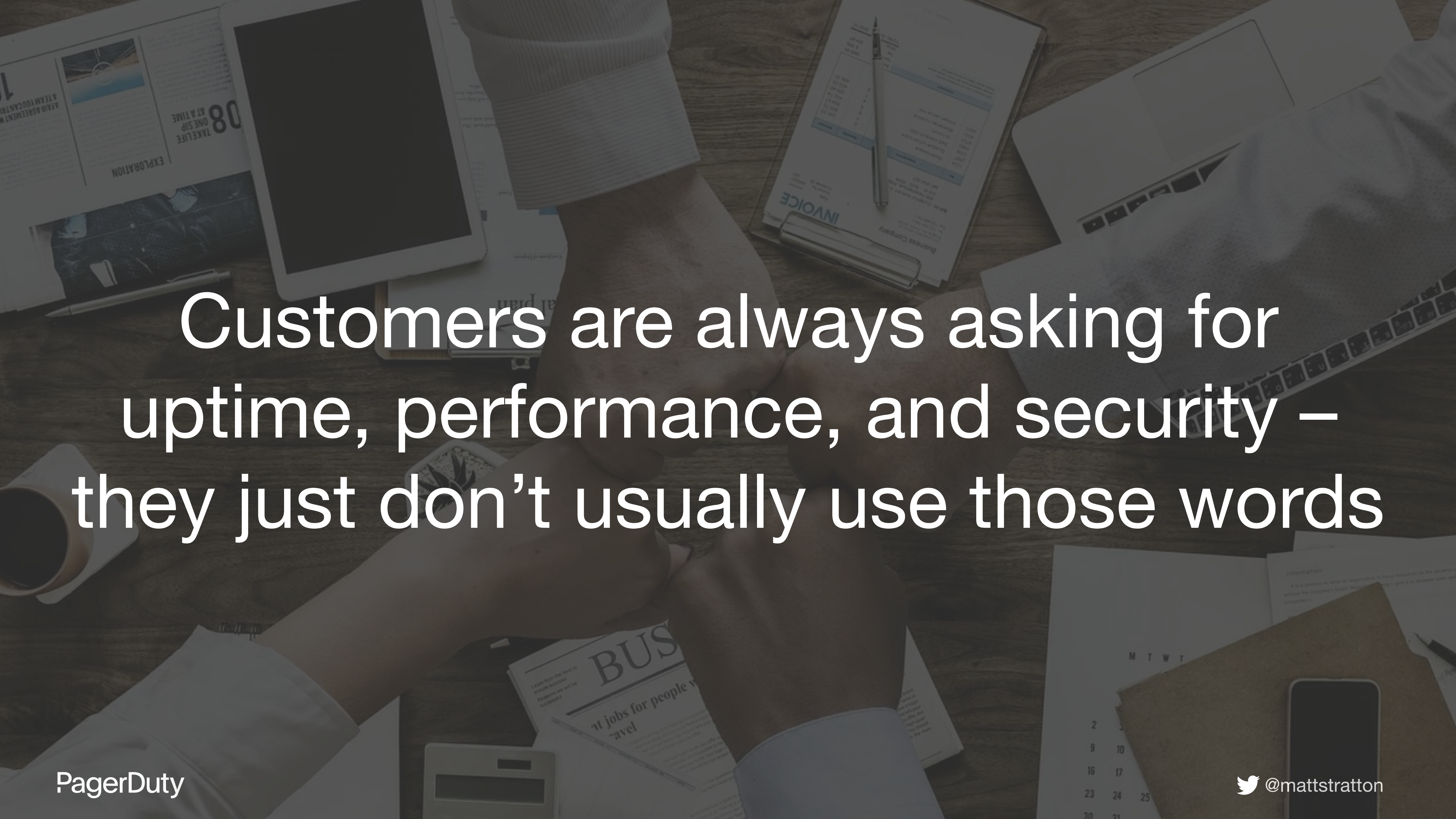
- Defining what 'done' is
- Emotional awareness of stress of the rest of the team
- Connective tissue work between different teams and features (help understand and mitigate dependencies)
- Awareness of what it means to pull people away from other projects to solve a problem





# Product owner



A person's hands are shown working at a desk. The left hand is holding a pen over a document, while the right hand is resting on a laptop. The desk is cluttered with various items: a tablet, a newspaper with the headline 'EXPLORATION TAKE LIFE ONE SIP AT A TIME', a clipboard with an 'INVOICE' form, a laptop, a smartphone, a calculator, and several other papers. The background is a wooden desk surface.

Customers are always asking for  
uptime, performance, and security –  
they just don't usually use those words



# Senior leadership



# Responsibilities of senior leadership

- Make room in the roadmap for investing in tech debt
- Encourage a culture of cooperation and sharing
- Set goals that balance business priorities with achievable engineering goals



# Going deeper



A person is shown from the chest up, holding binoculars to their eyes. They are wearing a dark-colored shirt. The background is a warm, orange-hued sunset or sunrise over a body of water. The entire image has a semi-transparent dark overlay.

# What are you observing about this service?





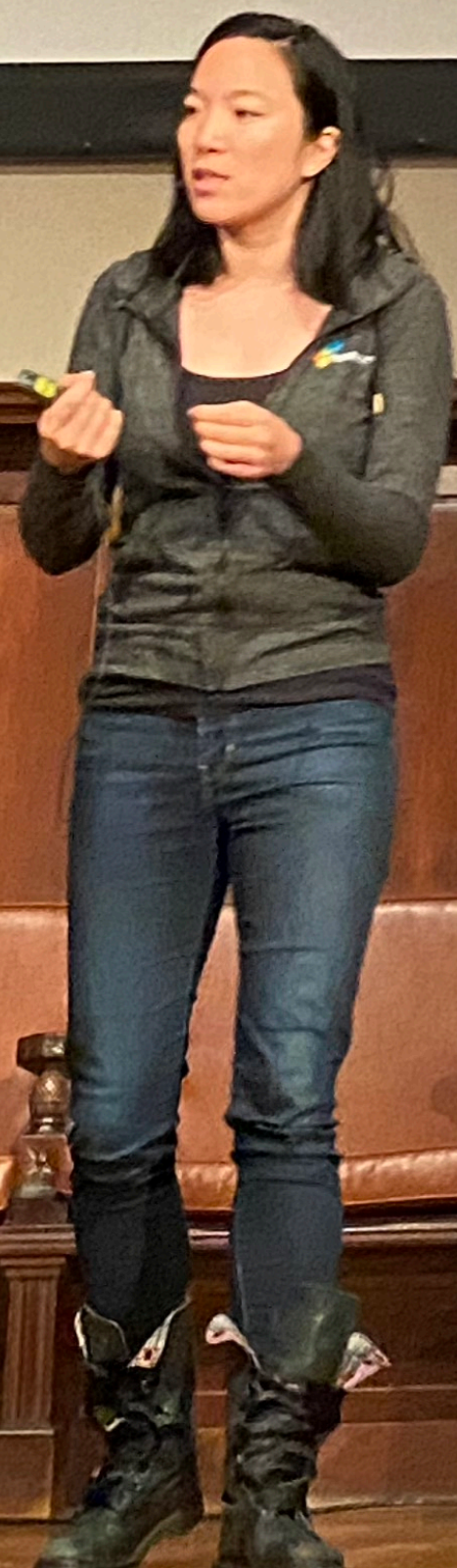
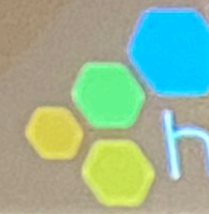
# Observability vs monitoring



DEV OPS

"Works on my  
machine"

"The only good  
diff is a red diff"







**Liz Fong-Jones (方禮真)** ✓

@lizthegrey



Monitoring is your bank telling you you're overdrawn.

Observability is the ability to tell you're running out of money because you're spending too much money on chocolates, cakes and sweets because you've recorded data on what you spent your money on throughout the month.



A person is sitting on a windowsill, looking out at a dramatic, stormy sky with dark, heavy clouds. The person is in silhouette, wearing a long-sleeved shirt and pants. The scene is dimly lit, with light coming from the window, creating a contemplative and somber mood.

# Empathy-driven alerting



A 3D rendering of two bolts, a washer, and a nut on a dark wooden surface. The bolts are positioned diagonally across the frame, with one in the foreground and one in the background. The washer is in the foreground, and the nut is in the background. The text "A brief overview of SLA / SLO / SLI" is overlaid in the center.

# A brief overview of SLA / SLO / SLI



# Service Level Indicators (SLI)

- Latency
- Throughput
- Availability



# Service Level Objectives

- Made up of SLIs
- Measured over time
- Not contractually set



# Service Level Agreements

- Composed of SLOs
- Contractually/legally binding
- Basically, this is where you owe your customer money



A man and a woman are sitting on a wooden bench, smiling and holding mugs. A dog is lying between them. The image is dimmed to serve as a background for the text.

# The “hadness” point





# Alert on SLOs



A woman in a police uniform is shown from the chest up. She is holding a white mobile phone in her right hand and a large megaphone in her left hand. The megaphone has the brand name 'adastra' visible on its side. The background is slightly blurred, showing other people in uniform. The entire image has a dark, semi-transparent overlay.

# How does a team respond to this service?



# Tuning your service





# Investigate patterns





What alerts do you *actually* need?



# Suppression of non-actionable alerts



A group of five business professionals (three women and two men) are gathered around a table in a meeting. One woman is shaking hands with a man, while others are looking at a laptop. The image is dimmed to serve as a background for the text.

# Understand business impact



# Lifecycle steps



# Designing a new service



# Design phase

- Understand the customers (product is a key role here)
- Load testing / staging
- Ensure SRE / sustainability teams are involved early
- Define SLI/SLO/SLA
- Identify alerting requirements
- Documentation (API, runbook, functional service registry if applicable)
- Perform all security checks



A top-down view of a hand using a wooden stick to mix paint in a palette. The palette is surrounded by numerous open paint containers of various colors including yellow, blue, red, black, and white. The background is a textured surface, possibly a table or floor.

# Maintaining and iterating



# Maintenance and iteration

- Version the service API
- Communicate to consumers
- Proactive maintenance
- Address tech debt consistently
- Testing and deploying/releasing the service (CI/CD, testing in prod, etc)



# Retiring a service



# Retiring and sunseting

- Identify consumers
- Determine business impact of retiring
- Communicate / offboard consumers





Service ownership includes  
communication, compromise, and  
commitment.



# Acknowledgements

Lilia Gutnik - @superlilia

Julian Dunn - @julian\_dunn

Charity Majors - @mipsytipsey

Liz Fong-Jones - @lizthegrey

Images provided by  
**pixabay**



If you enjoyed this talk, here's more about me

[arresteddevops.com](http://arresteddevops.com)

[devopsdayschi.org](http://devopsdayschi.org)

[twitter.com/mattstratton](https://twitter.com/mattstratton)

[speaking.mattstratton.com](http://speaking.mattstratton.com)





# PagerDuty Connect NYC

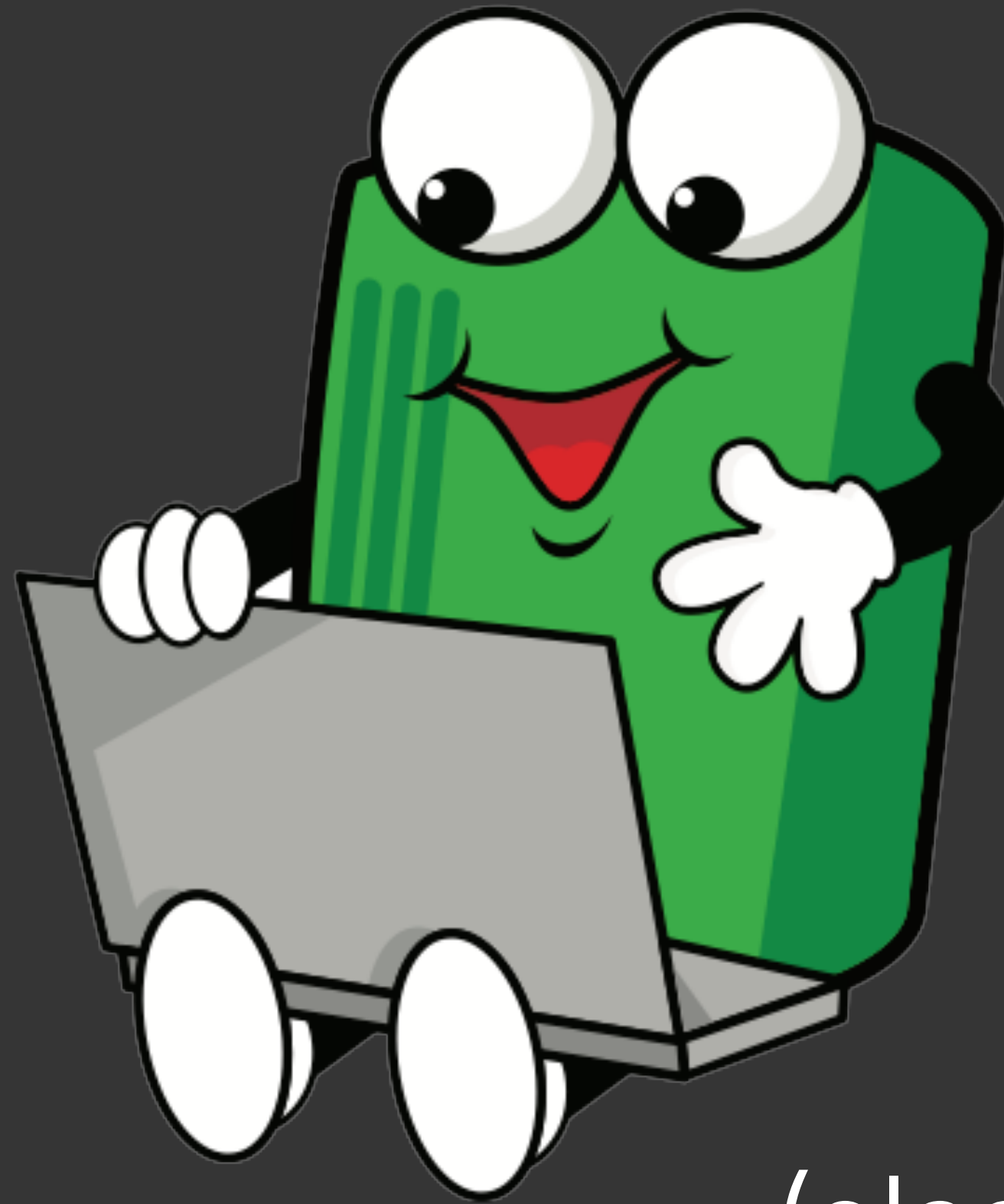
## March 26



[meet.pagerduty.com/connectnyc20](https://meet.pagerduty.com/connectnyc20)



# pduty.me/work-with-pagey



(also [pagerduty.com/careers](https://pagerduty.com/careers))



