

TEST

**A story we have *all*
heard before...**



<https://www.flickr.com/photos/thehenryford/6127192517/in/photostream/>



Green
Software
Foundation

Feeling the **squeeze**?

GreenOps offers a sustainable solution for busy engineering teams.

Sarah Hsu @ LeadDev Berlin 2024

Front-end devs

Back-end
devs

DevOps/
SRE

Infra devs



**How can stretched
engineering teams
integrate sustainability
into their workflow?**

Sarah Hsu

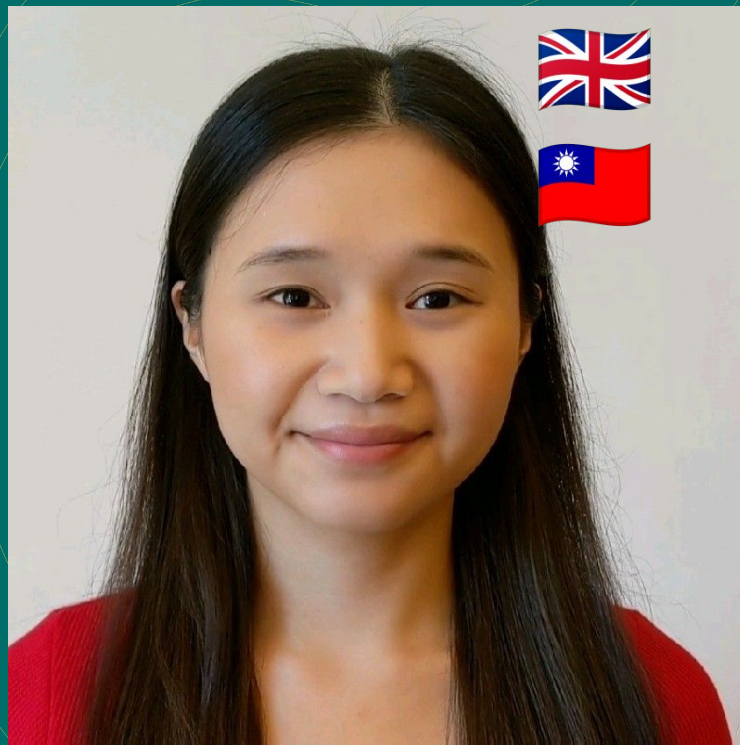


Site Reliability Engineer

Green Software Principles Project
Lead @ Green Software Foundation

Author of O'Reilly Book “Building
Green Software”

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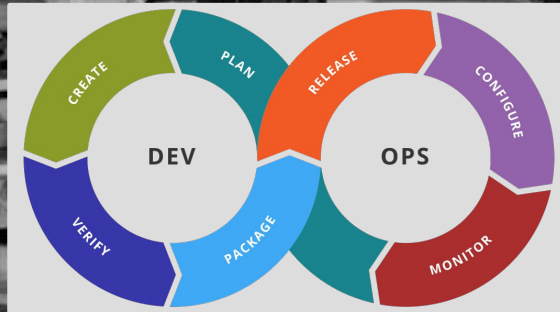


Front-end devs

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Home > Cloud Computing > Overprovisioning & Always-On Resources Lead to \$26.6 Billion in Public Cloud Waste Expected in 2021

Overprovisioning & Always-On Resources Lead to \$26.6 Billion in Public Cloud Waste Expected in 2021



Last updated January 21, 2021



Overprovisioning and leaving cloud resources on are two enormous sources of wasted spend.

Wasted spend drags down IT budgets – of particular importance as we enter 2021. The [Flexera 2021 State of Tech Spend report](#) found that the biggest change in key IT initiatives from 2020 to 2021 was in cost savings, with the percent of respondents ranking cost savings as a top initiative *tripling year-over-year*.

\$26.6 Billion Wasted in 2021

Where is that cloud spend coming from? ( or )

public cloud services end-user spending in 2021, as broken out in the table below. Their estimate for the proportion of that spent on Infrastructure as a Service (IaaS) is \$65.3 billion. While wasted spend can be found in any area of cloud spend, customers tend to see the largest amount in their budgets as well as finding it

Category	2020	2021	2022	2023
Cloud Application Infrastructure Services (PaaS)	37,512	43,823	55,466	66,964
Cloud Application Services (SaaS)	102,264	101,480	117,773	138,381
Cloud Management and Security Services	12,836	14,880	17,001	19,934
Cloud System Infrastructure Services (IaaS)	44,457	51,421	65,264	82,225
Desktop as a Service (DaaS)	616	1,204	1,945	2,542

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BUSINESS NEWS

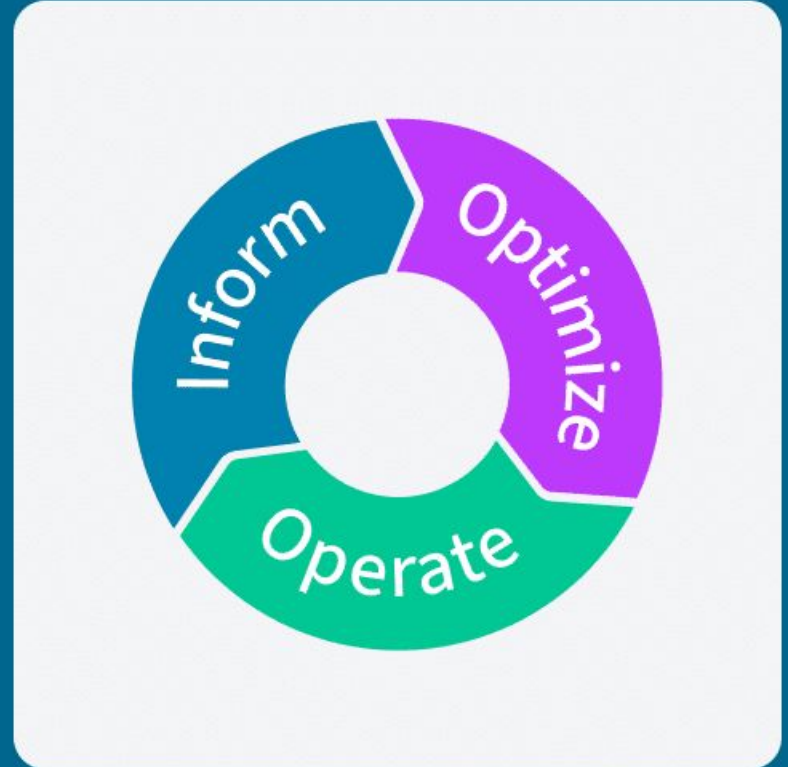
House Vote on Unprecedented FISA 702 Surveillance Bill Fails But The Fight Isn't Over

CRYPTO NEWS

FinOps Framework Phases



FinOps
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Front-end devs

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What?!
Another priority?

Front-end devs

Back-end
devs

DevOps/
SRE

Infra devs

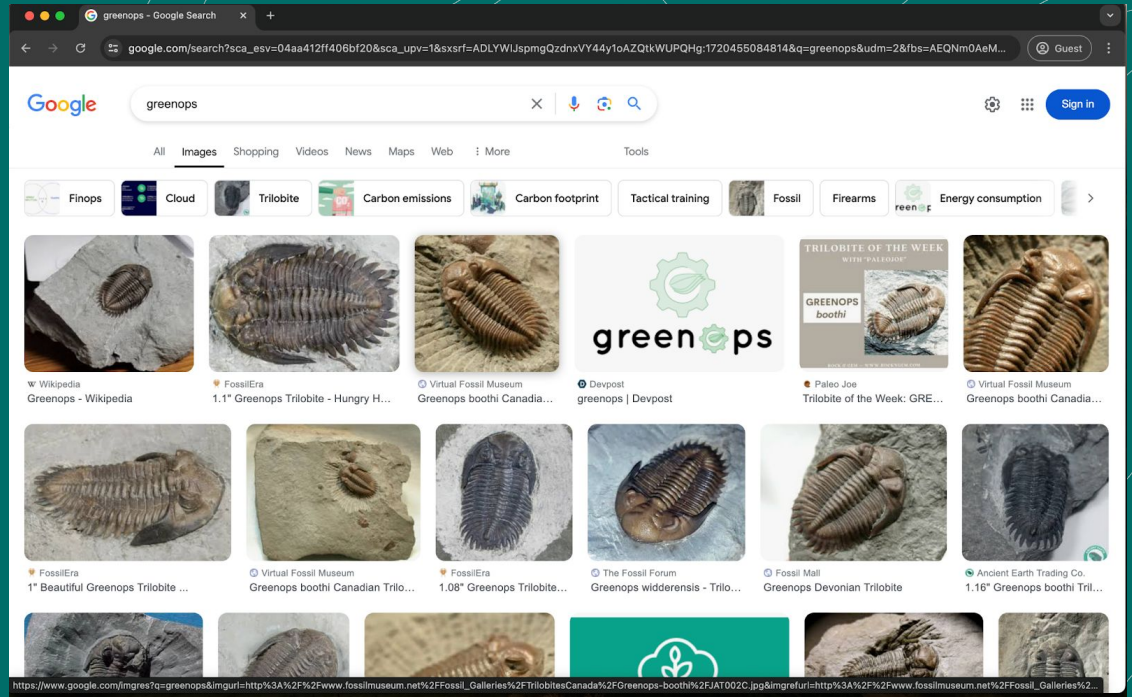


**How can busy
engineering teams make
sustainability a priority?**



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What is GreenOps?





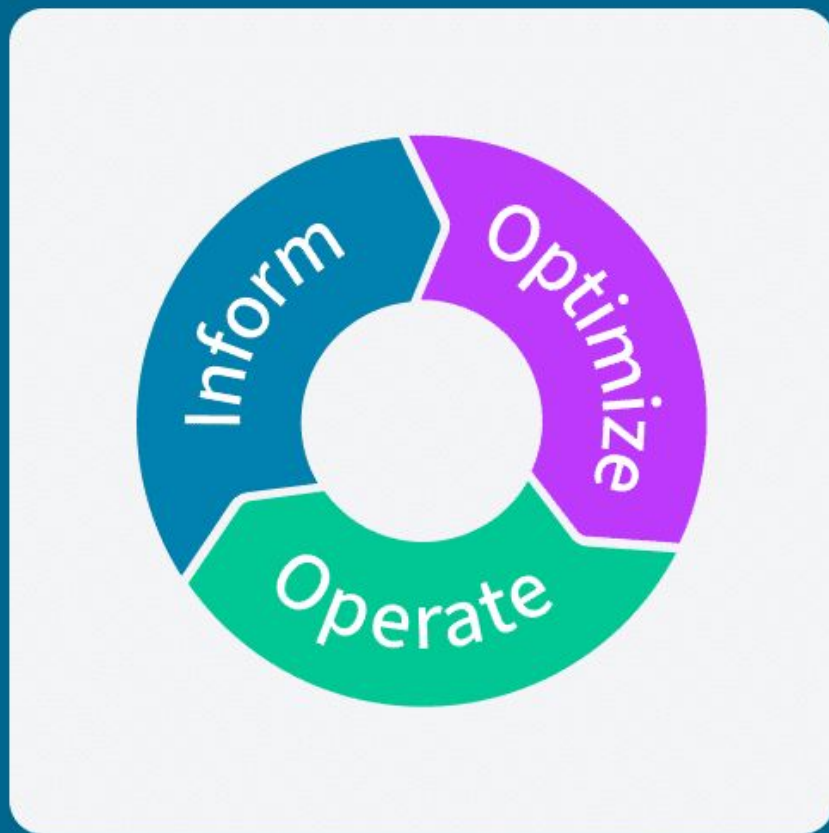
Green
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GreenOps =
Green DevOps

***“FinOps and GreenOps
are like sisters from
another mother.” -
Sarah Hsu***

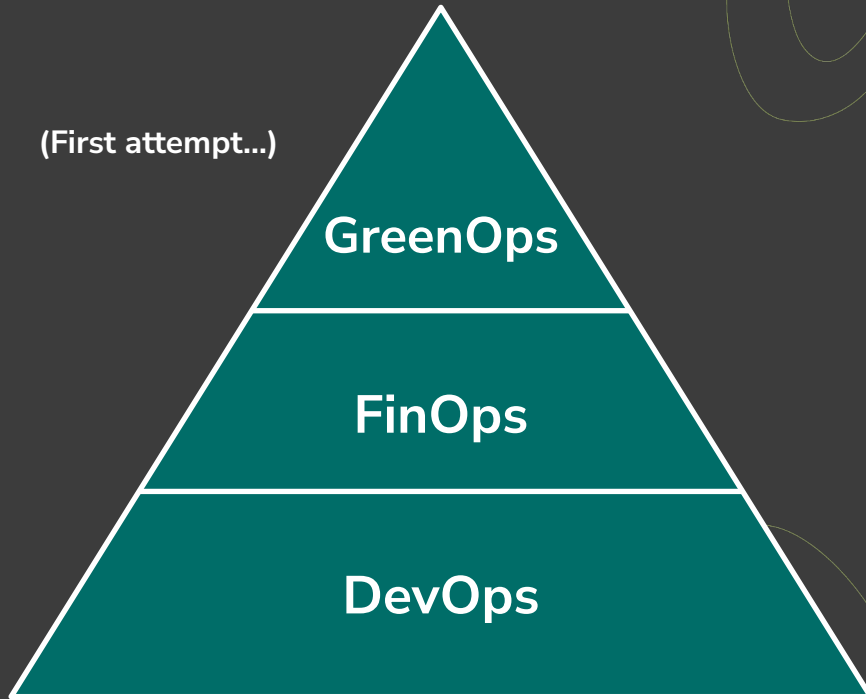
GreenOps Borrowed Practices

- **Measure and monitor resource consumption**
- **Auto-scale and dynamically manage resources**
- **Utilise microservices or serverless architectures**

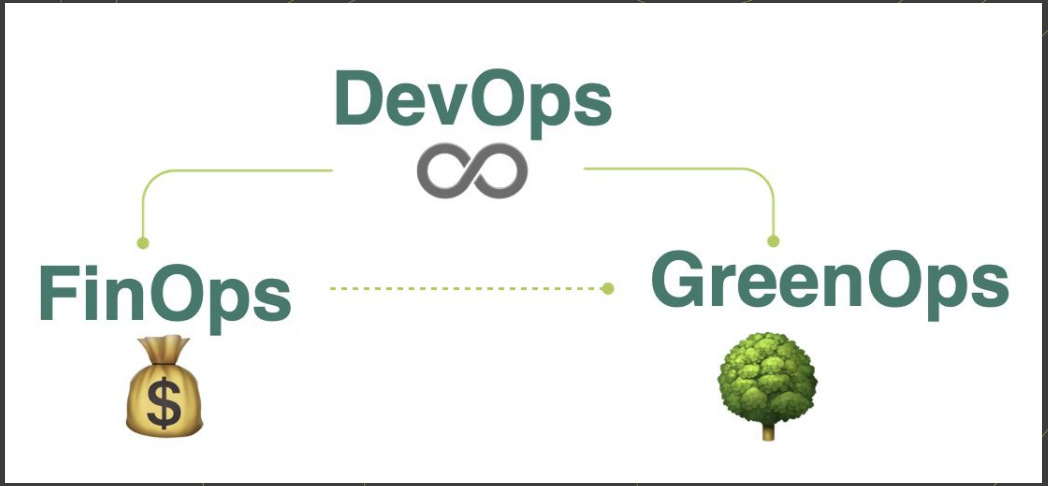
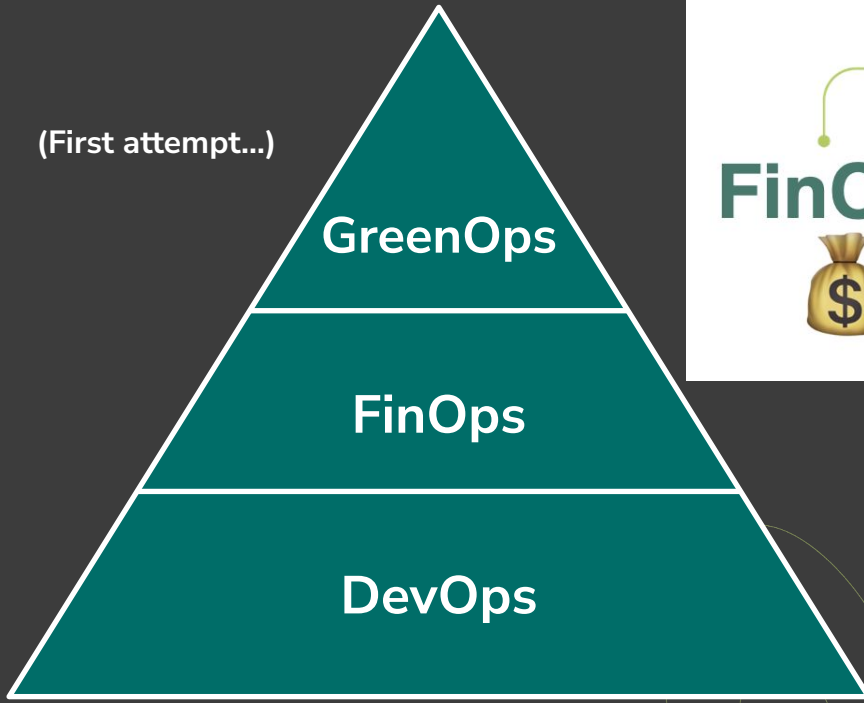


<https://www.finops.org/framework/phases/>

(First attempt...)



(First attempt...)



(Second attempt...)

So What's Next?

Join US @Green Software Foundation

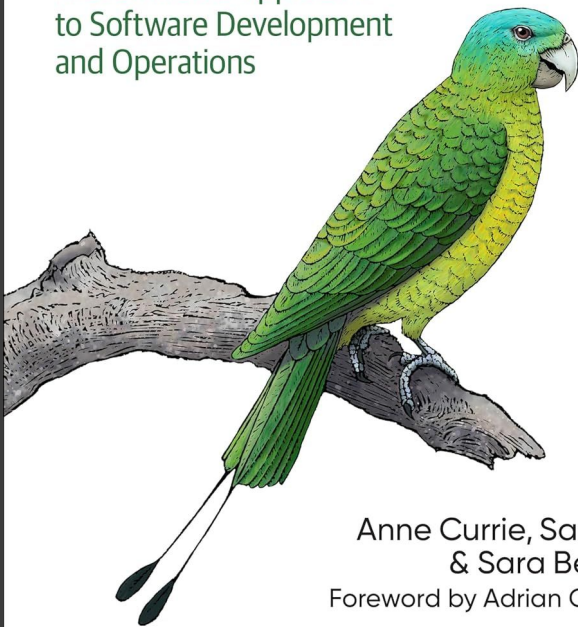
So What's Next?

**Join US @Green Software Foundation
AND
Read “Building Green Software”**

O'REILLY®

Building Green Software

A Sustainable Approach
to Software Development
and Operations



Anne Currie, Sarah Hsu
& Sara Bergman
Foreword by Adrian Cockcroft

Book Club



**“Sustainability as a
motivator and
differentiator for Software
Engineering Problems”**

Thank you!