
AWS
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STP213

Scaling global carbon footprint management

Michael Floyd
Head of Sustainability Solutions
AWS

Blake Blackwell
Lead Architect
Persefoni

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Agenda

- Sustainability at Amazon & AWS
- Introduction to Carbon Accounting
- AWS and Climate Tech Start-ups
- Introduction to Persefoni
- Pain Points
- Transition from Monolith to Microservices
- Enabling Global Carbon Management
- Roadmap
- Benefits of AWS Start-Up Partnership

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Further and faster, together

September 19, 2019

Amazon and Global Optimism announced The Climate Pledge, a commitment to meet the goals of the Paris Agreement 10 years early—and achieve net-zero carbon by 2040. Amazon is a co-founder and first signatory of The Climate Pledge.

THE CLIMATE PLEDGE

GLOBAL OPTIMISM

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Joining The Climate Pledge



The Pledge Commitments

01 **Regular Reporting**

Measure and publicly report greenhouse gas emissions on a regular basis across Scopes 1, 2, and 3.

02 **Carbon Elimination**

Implement decarbonization strategies through real business changes and innovations.

03 **Credible Offsets**

Take action to neutralize any remaining emissions with additional, quantifiable, real, permanent, and socially beneficial offsets to achieve net-zero annual carbon emissions by 2040.

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"To create lasting and systemic change on our planet, we are focused on driving change beyond Amazon, and in partnership with others. That's why we co-founded the Climate Pledge and created the Climate Pledge Fund. We cannot go this alone, nor would we want to."

Kara Hurst

VP of Amazon Sustainability

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With 375+ signatories
from around the world.
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JLL
CBRE
MAERSK
Infosys
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Iceland
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IBM
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McKinstry
For The Life Of Your Building
Alaska AIRLINES
CRANSWICK plc
Great British Taste
Telefónica
Lime
IPG
MACQUARIE
PEPSICO
BOOM
PHILIPS
Sainsbury's


With 375+ signatories from around the world.
PERSEFONI

Why is this important?

What gets measured gets managed.

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The evolving sustainability landscape

Global Goals & Principles

- Sustainable Development Goals
- Paris Climate Agreement
- UN Global Compact
- Greenhouse Gas Protocol
- PCAF (Partnership for Carbon Accounting Financials)
- PRI (Principles for Responsible Investment)

Reporting Frameworks

- CDP
- TCFD
- GRI
- Science Based Targets
- SASB
- CDSB
- Integrated Reporting

Regulations

- Corporate Sustainability Reporting Directive (CSDR)
- Mandatory climate risk reporting (e.g. TCFD)
- EU Taxonomy
- Sustainable Financial Disclosures Regulation (SFDR)

ESG Ratings & Indices

- Sustainalytics
- Ecovadis
- S&P Global
- Bloomberg
- oekom
- inrate
- RepRisk
- ethos
- CSRHub
- …

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Scope 1-3 Emissions (Greenhouse Gas Protocol)

3



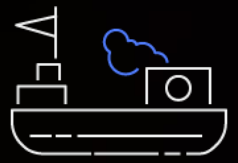
Purchased goods & services



Leased assets



Capital goods



Transportation & distribution

Upstream activities

1



Company facilities



Company vehicles

2



Purchased energy

3



Transportation & distribution



Leased assets



Use of sold products



Investments

Downstream activities

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The current state

81% omit some internal emissions

66% don’t report external emissions

30-40% average error

86% still use spreadsheets

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Boston Consulting Group (BCG), Oct. 2021

Startups building sustainability solutions on AWS

























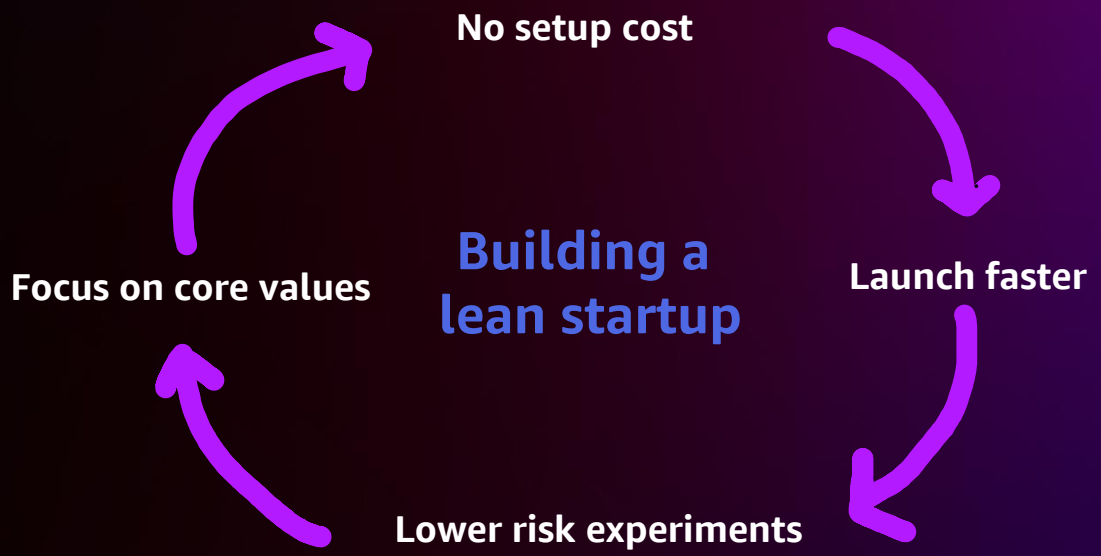


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Why startups on AWS?

1. Startups need to move fast
2. Startups need the right tool for the right job
3. Startups need to run lean
4. Startups need global infrastructure



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Sustainability Solutions on AWS

Impact = (solution) * (scale)

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Why Persefoni chose AWS

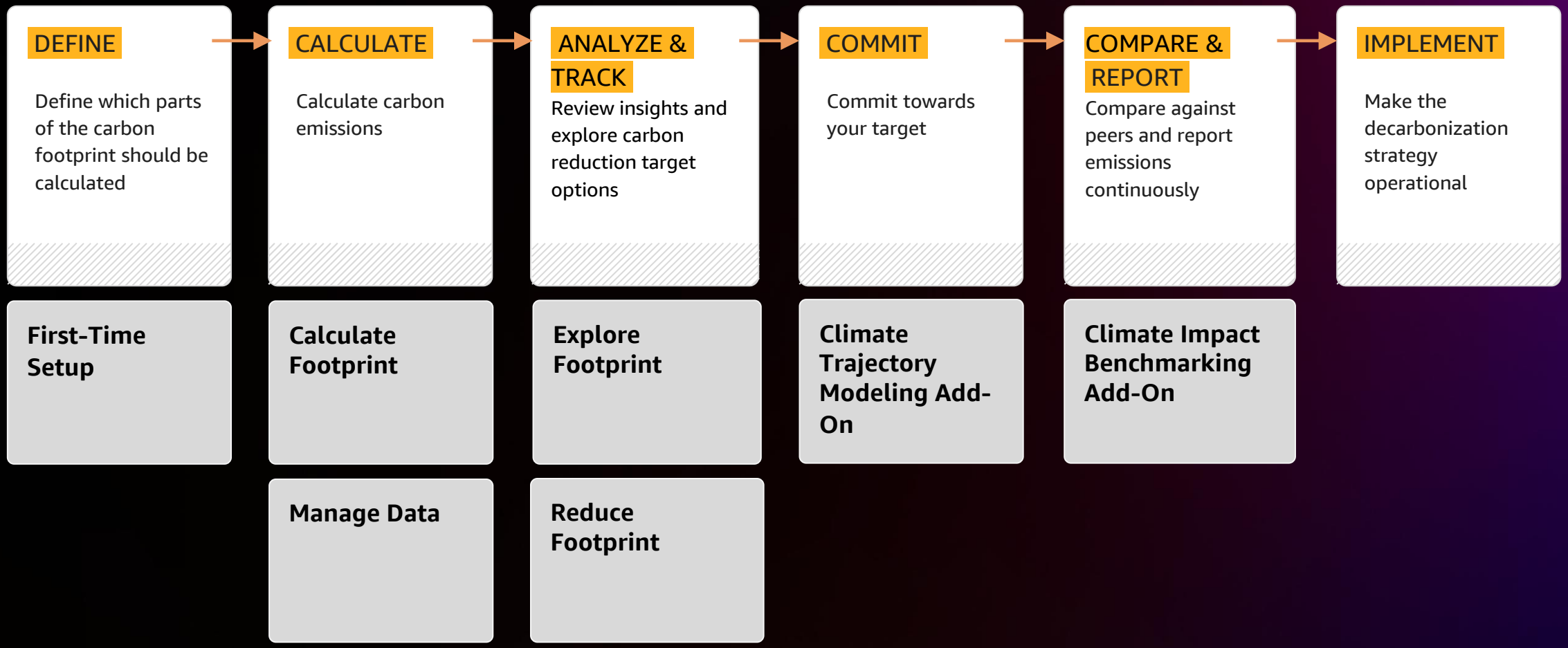
- Alignment in climate mission
- AWS commitment to Net Zero by 2040
- AWS enabling speed and scale
- Builders working with builders



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Persefoni Workflow

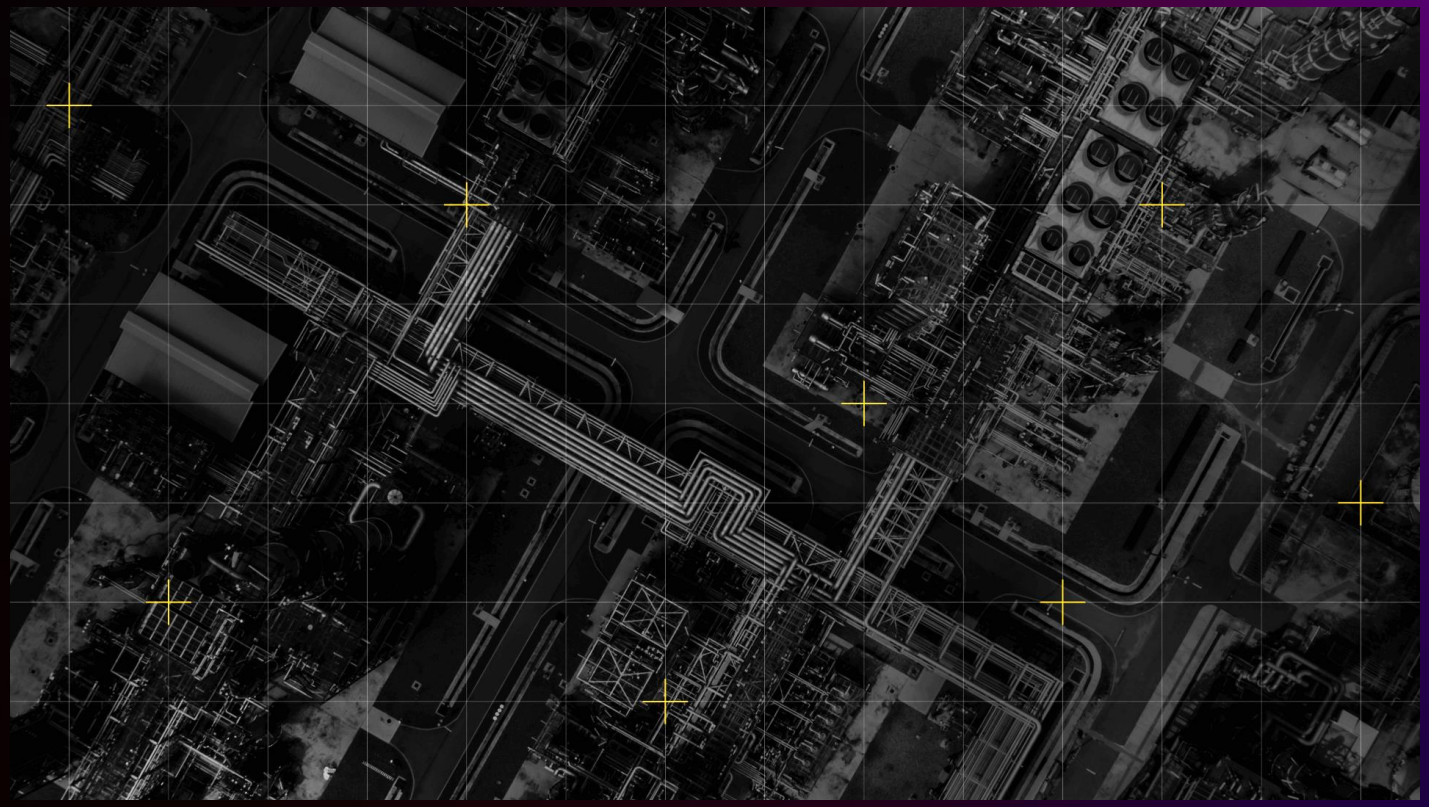
Persefoni built the CMAP modules and features to align with our customers typical decarbonization journey. The modules progress from understanding and calculating an emissions footprint to reporting and implementing a decarbonization strategy.



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Pain Points

- Innovating at warp speed
- Ensuring security, scalability, stability, and global reach
- Rapidly onboarding customers
- Growing engineering staff



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From Monolith to Microservices

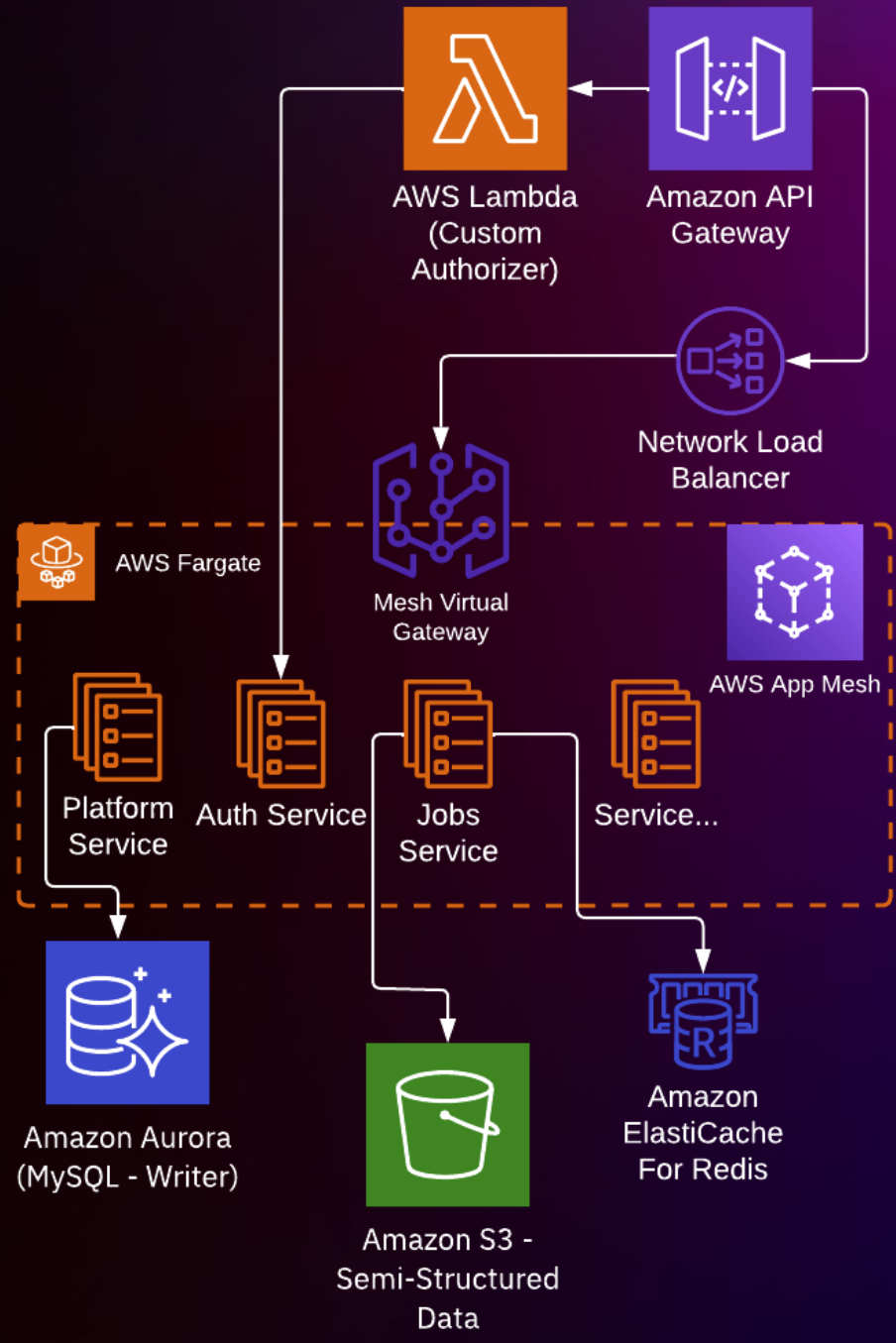
- Single service prevented scalability of critical processes
- Authentication services tightly coupled with monolith
- ML inference services required different deployment architecture
- Monolith prevented independent delivery



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Journey from Monolith to Microservices

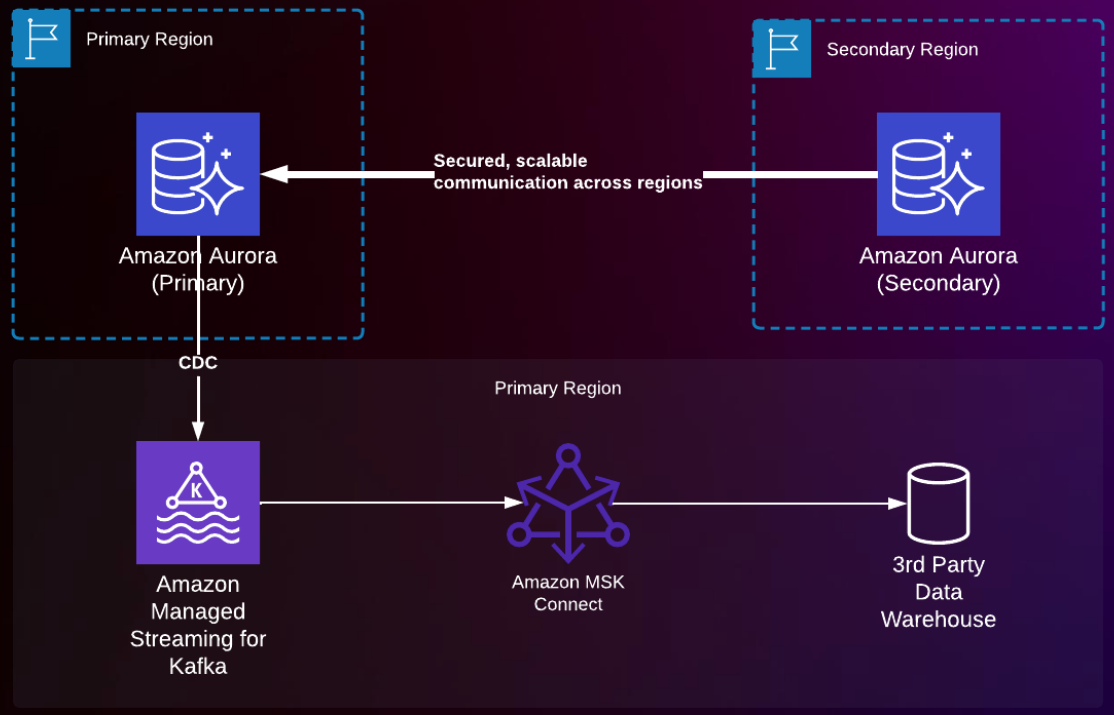
- Data processing and API services scale independently
- Separate authentication service
- ML inference services deployable as containerized microservices
- Enhanced security with mTLS leveraging AWS App Mesh



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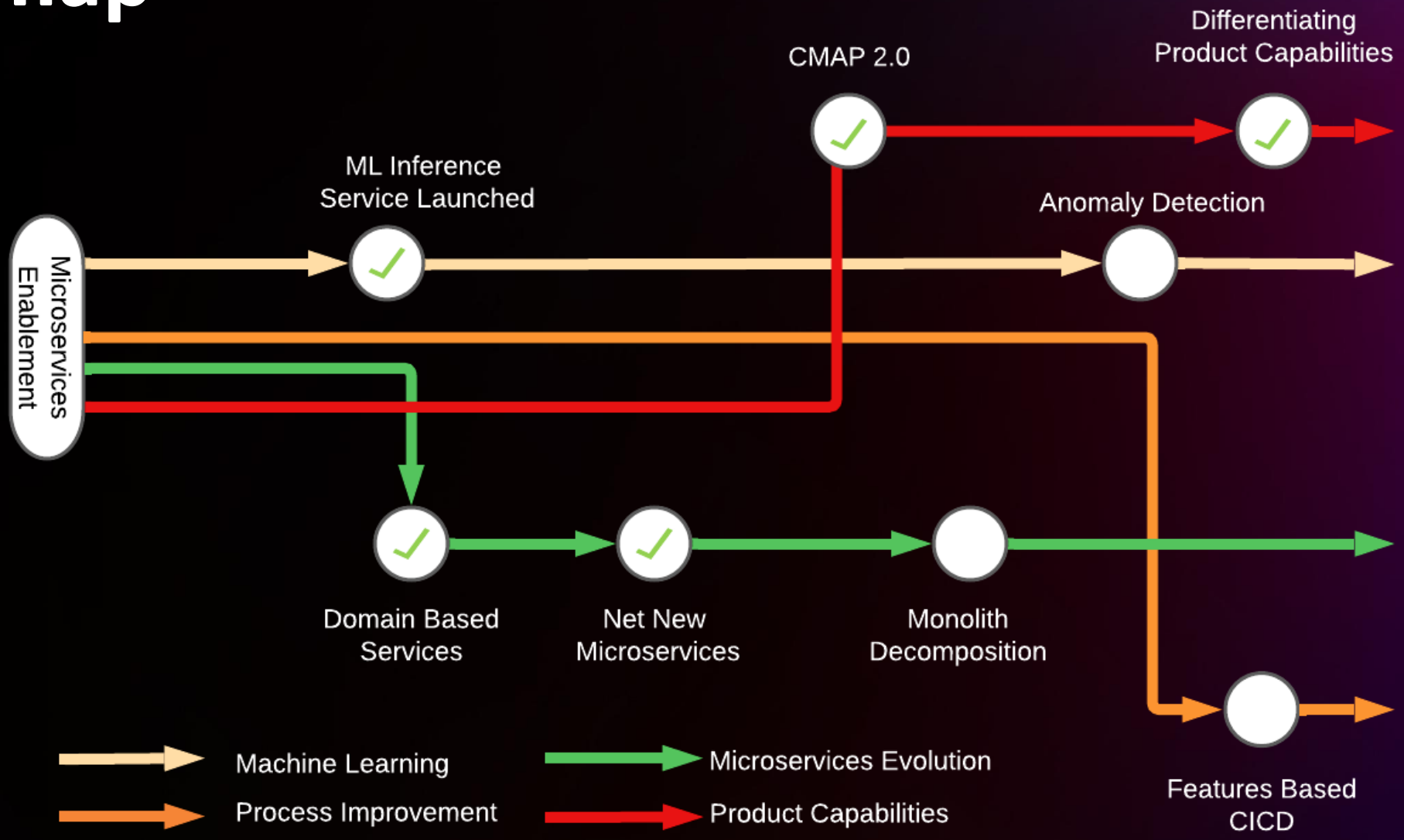
Growing Carbon Management with Aurora Global Databases

- Support our customers in Europe, Asia, and North America
- Simplify operational management of globally distributed architecture with AWS Aurora Global Databases
- Leverage AWS MSK for our faster insights



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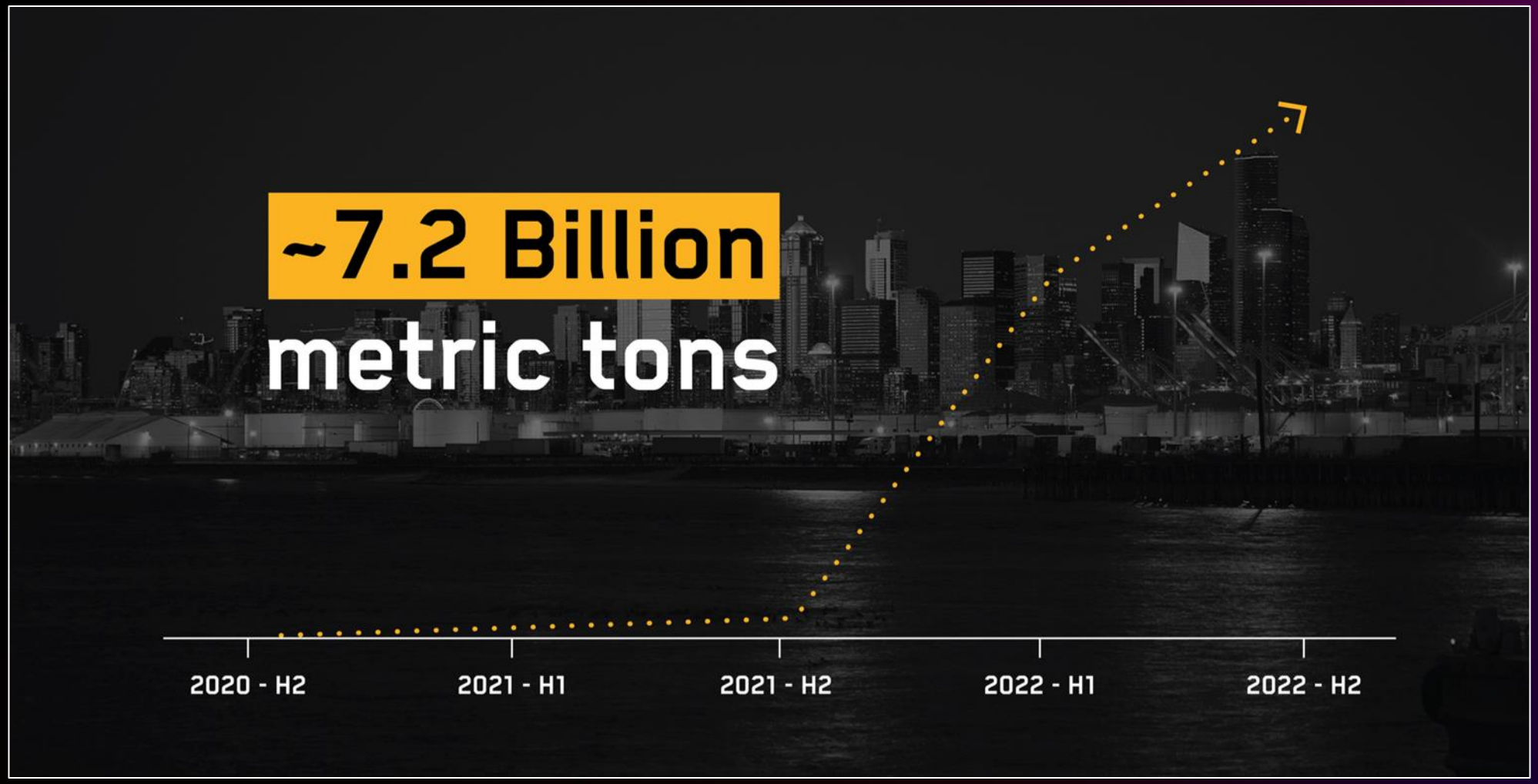
Roadmap



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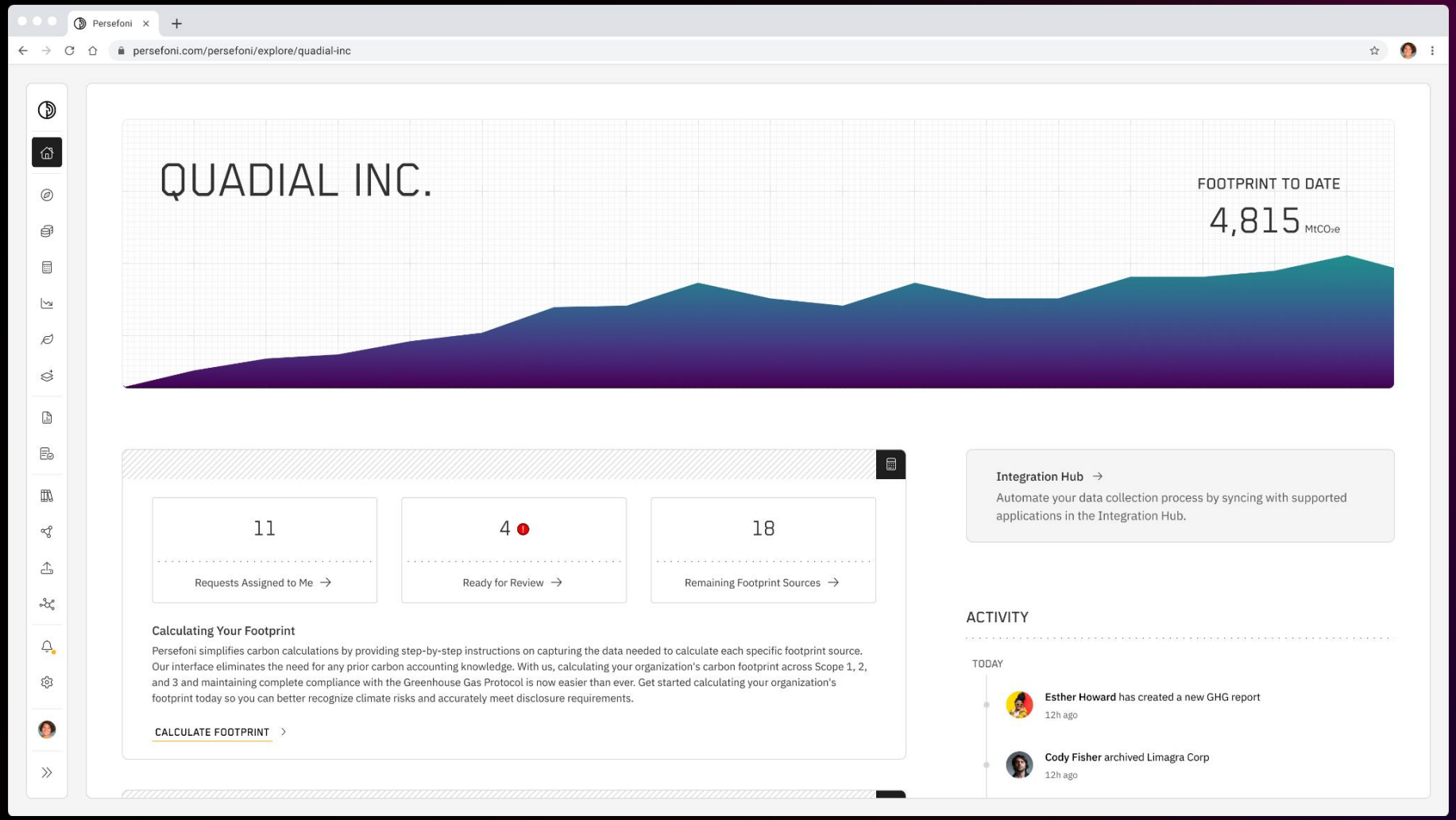
Carbon under Persefoni management:

CARBON ACTIVITIES CAPTURED IN PLATFORM OVER TIME



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PERSEFONI + aws = CLIMATE IMPACT



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Thank you!

Michael Floyd
mchfloy@amazon.com

Blake Blackwell
blake.blackwell@persefoni.com



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