
AWS
re:Invent
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SUS212

Accelerating decarbonization and sustainability transformation

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Magna International

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Agenda

Sustainability and the industrial sector

Accelerating sustainability with AWS

Carbon emissions tracking and reporting

Energy and resource management

Magna International: A better world of mobility with AWS

How to get started

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Sustainability drivers

Customer demand

Government regulations

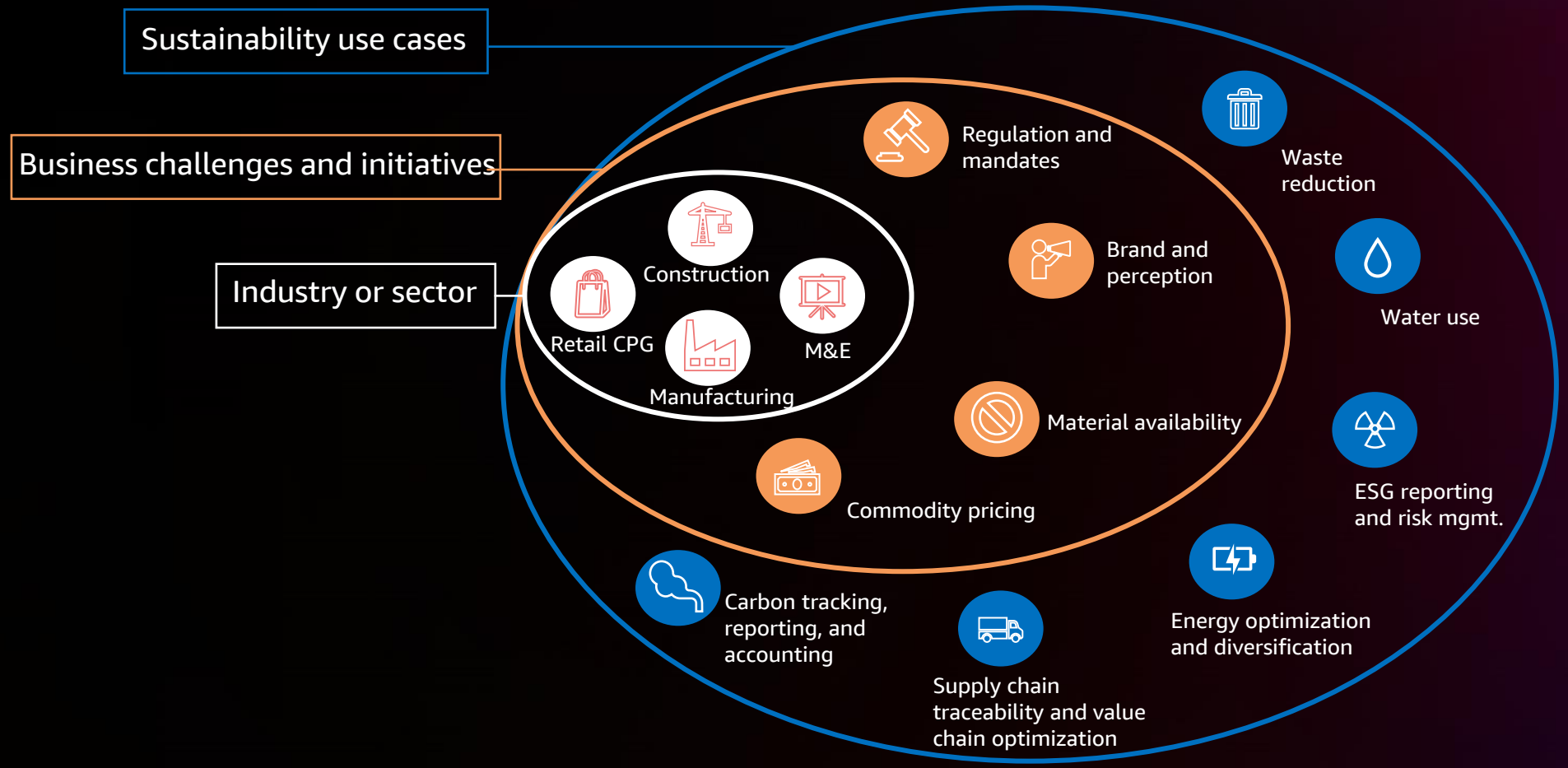
Employee demand

Impact investing

Sustainability as competitive positioning

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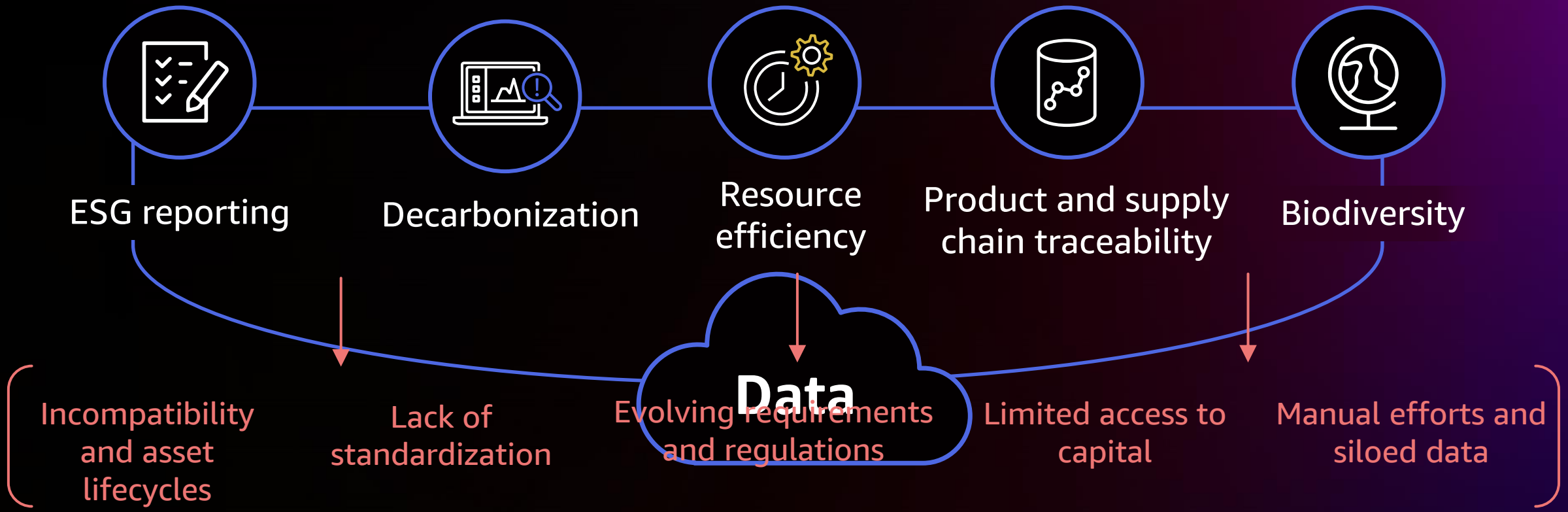
Sustainability is not independent of common business challenges



Lists are not fully exhaustive and may vary by country/region

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Sustainability trends continue to rise, challenges require a modernized approach



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“CO2 emissions from energy combustion and industrial process accounted for close to 89% of energy sector greenhouse gas emissions in 2021.”

International Energy Agency

“Global Energy Review: CO2 Emissions in 2021,” Released 2022

https://www.iea.org/reports/global-energy-review-co2-emissions-in-2021-2

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AWS as your collaborator in sustainability





Migrate

Take advantage of the cloud and AWS efficiency



Optimize

Optimize your workloads with Well-Architected for sustainability

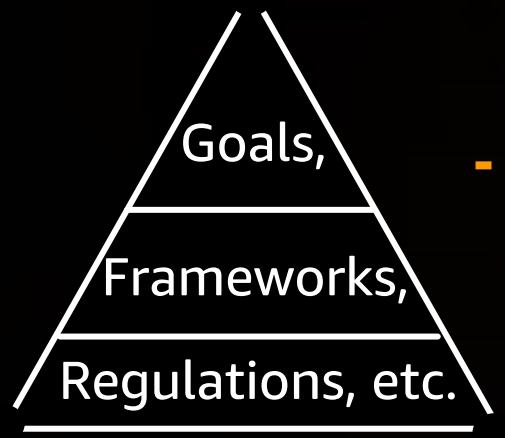


Transform

Leverage data, AWS professional services, and digital innovation

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AWS helps accelerate ESG goals via AWS technology solutions and through sustainability experts and partners



Sustainability strategists





AWS services

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Sustainability data: Open data and commercial data

Open Data Sponsorship Program

Amazon Sustainability Data Initiative

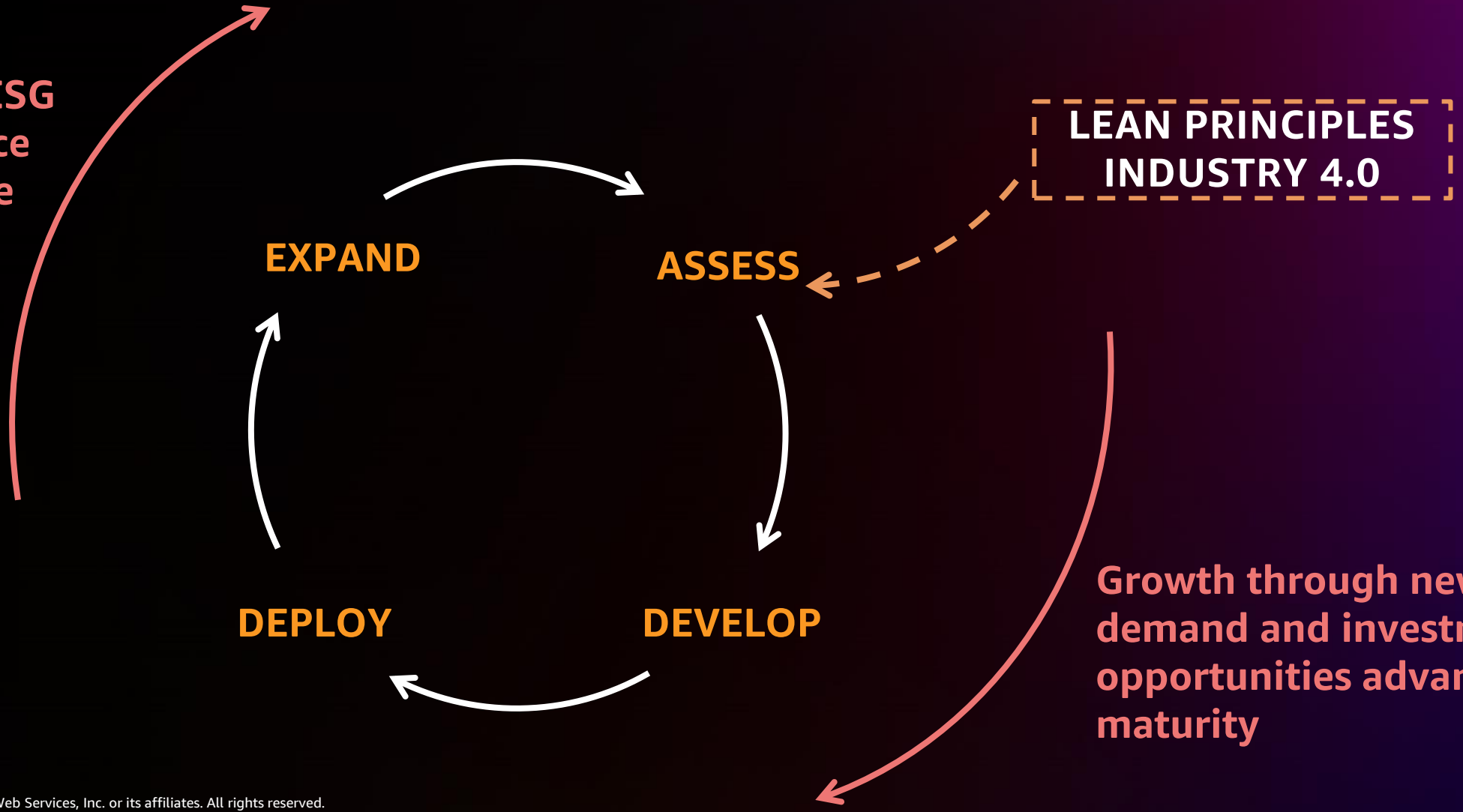
AWS Data Exchange

Data to address a wide range of sustainability challenges



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Sustainable transformation enablement with AWS



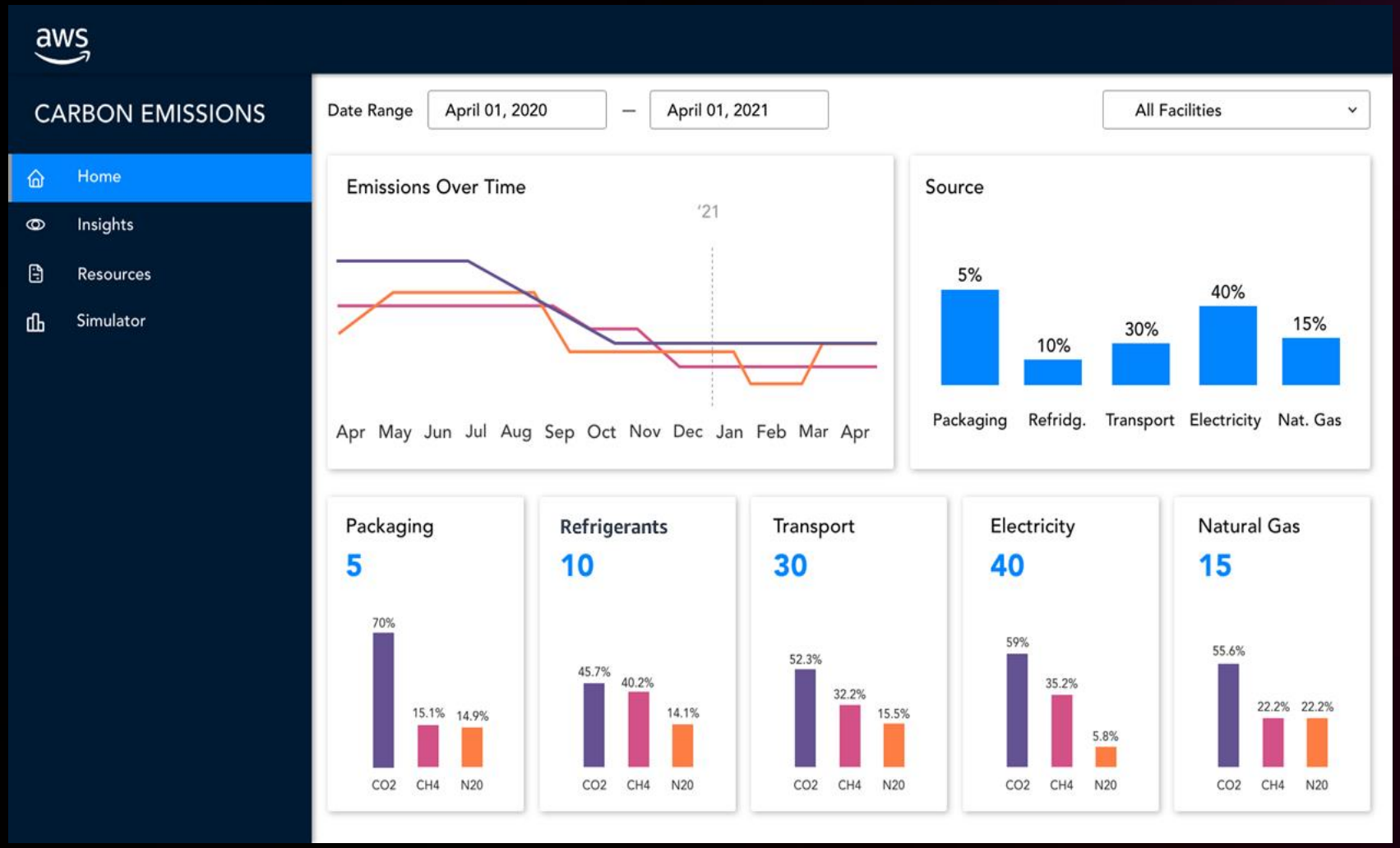
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Carbon tracking and monitoring with AWS

Carbon footprint framework

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Step 1: Measure and report



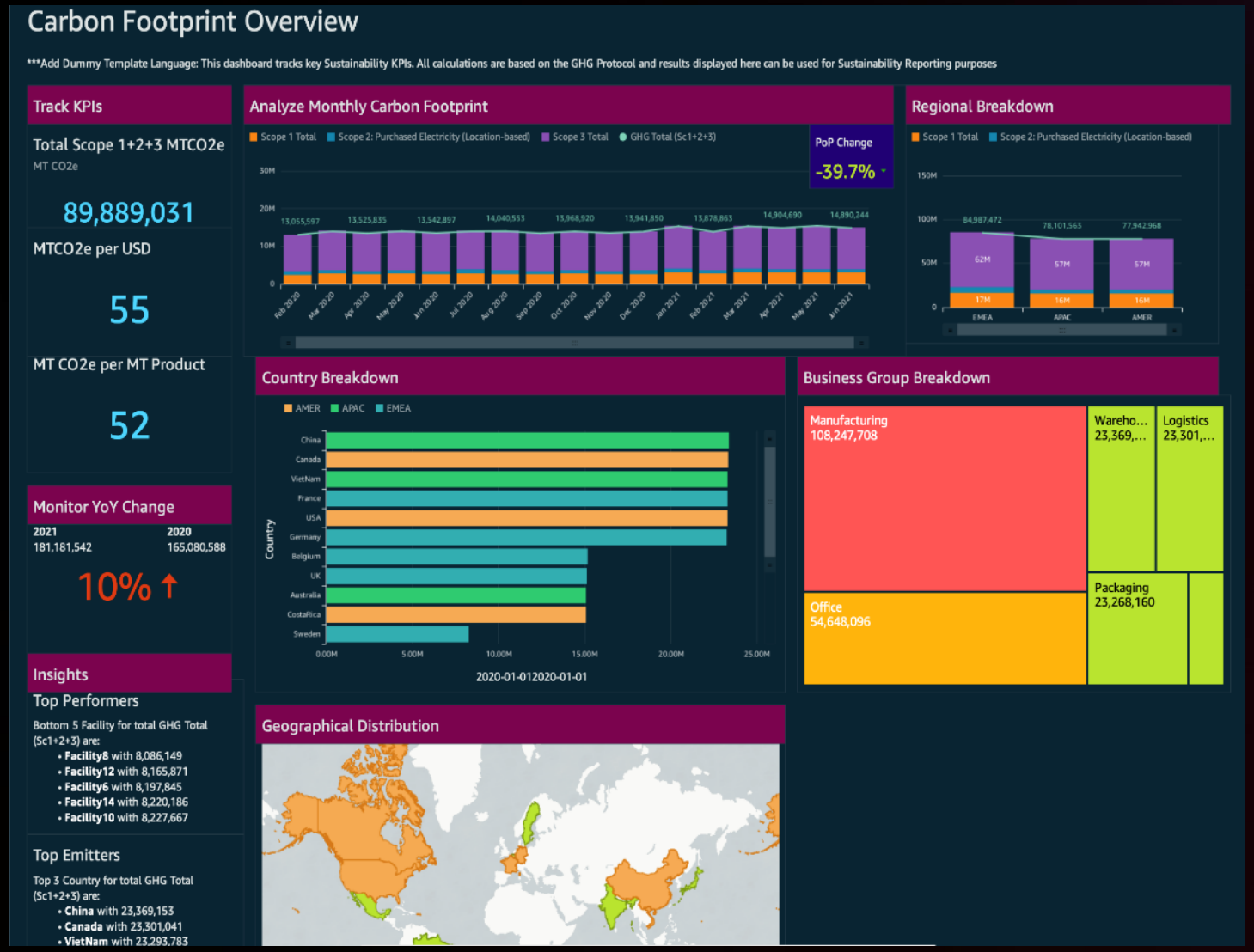
- Map
- Quantify
- Disclose

Baseline

ILLUSTRATIVE

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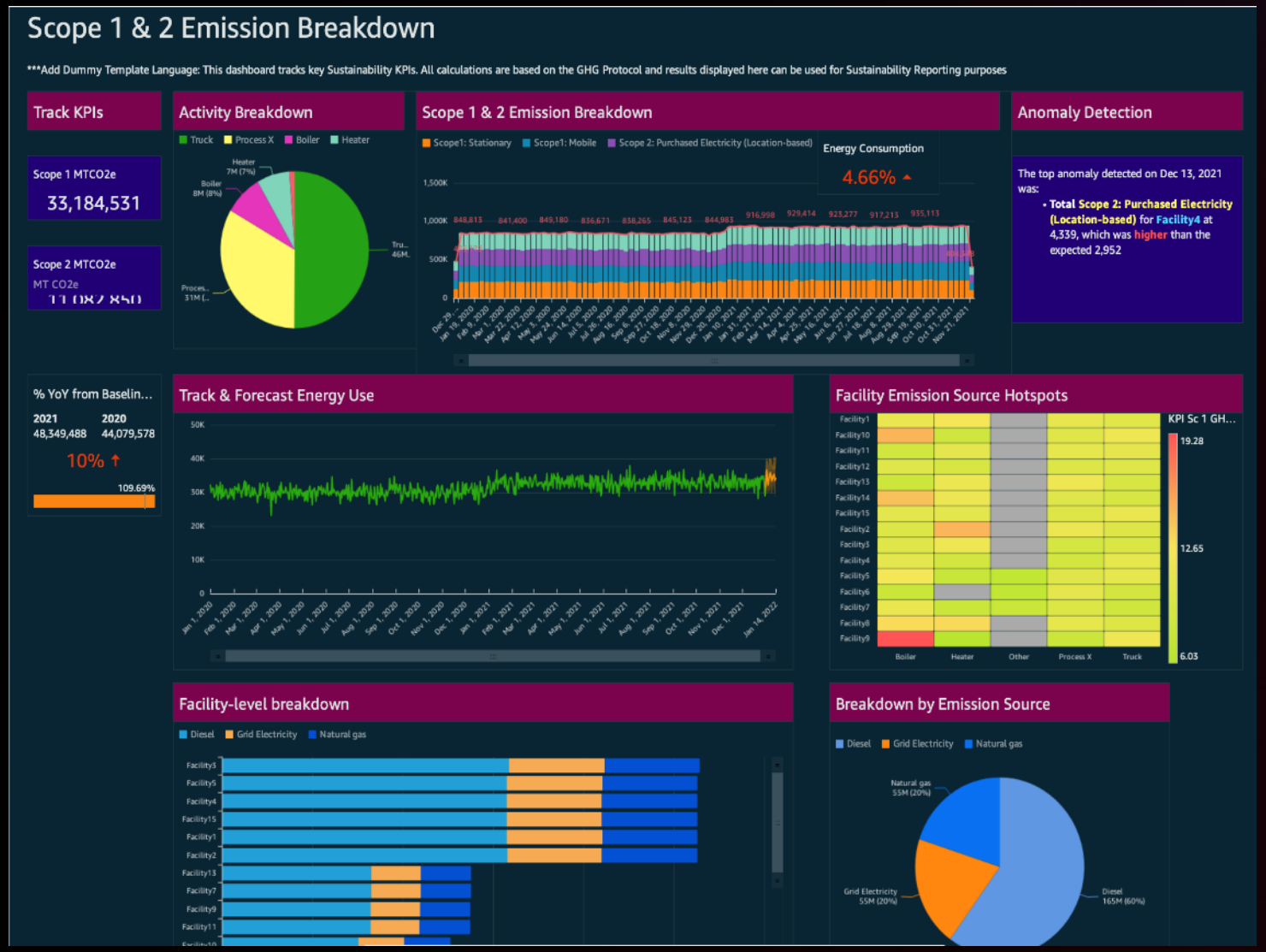
Step 2: Monitor and visualize



- Set targets and benchmarks
- Identify “hot spots”
- Dashboard
- Customize

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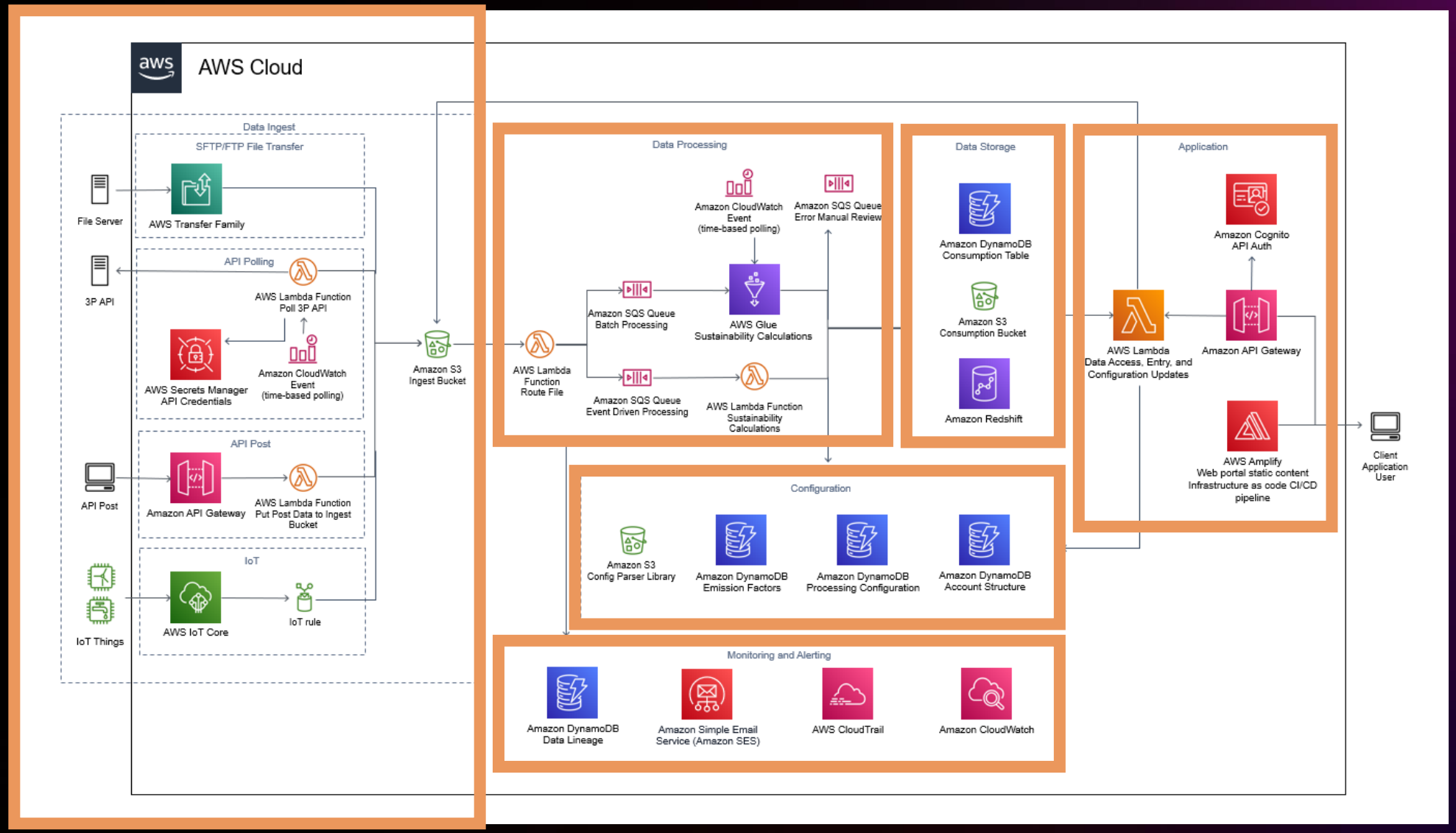
Step 3: Manage



- Drive decisions
- Forecast
- Detect anomalies
- Advanced analytics
- Ongoing insights

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Reference Architecture: Carbon Footprint Framework



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Customer use cases

LEVERAGING THE CLOUD TO MONITOR AND OPTIMIZE RESOURCE USE



Agriculture carbon intensity and supply chain



Large-scale venue management and reporting

Additional use cases

Chemical manufacturing Scope 3 emissions tracking and reporting

Oil & gas data centralization and decarbonization planning

Transportation emission reduction and customer interface

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Energy optimization and management with AWS

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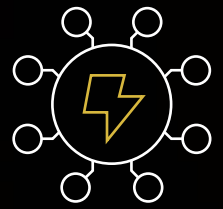
Energy optimization and management



Energy-consuming assets
HVAC, electrical, lighting, processing equipment, chillers, etc.



Energy efficiency metrics
Energy usage intensity



Methods to improve
AI/ML analysis for improved analytics

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AI/ML for energy management

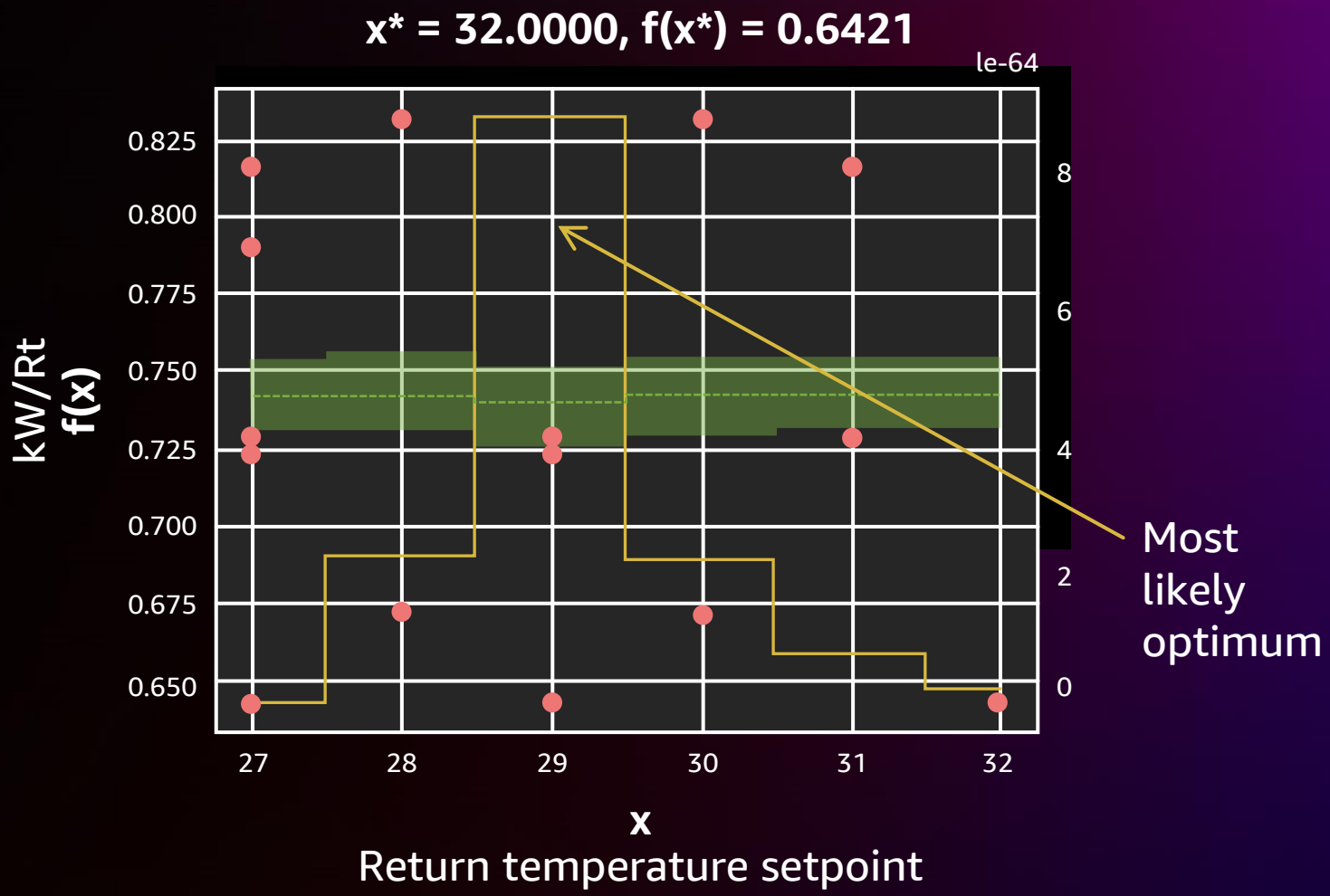
Business outcomes

Reduce cost and energy consumption by optimizing equipment efficiency

Solution

ML-based creation of digital twins

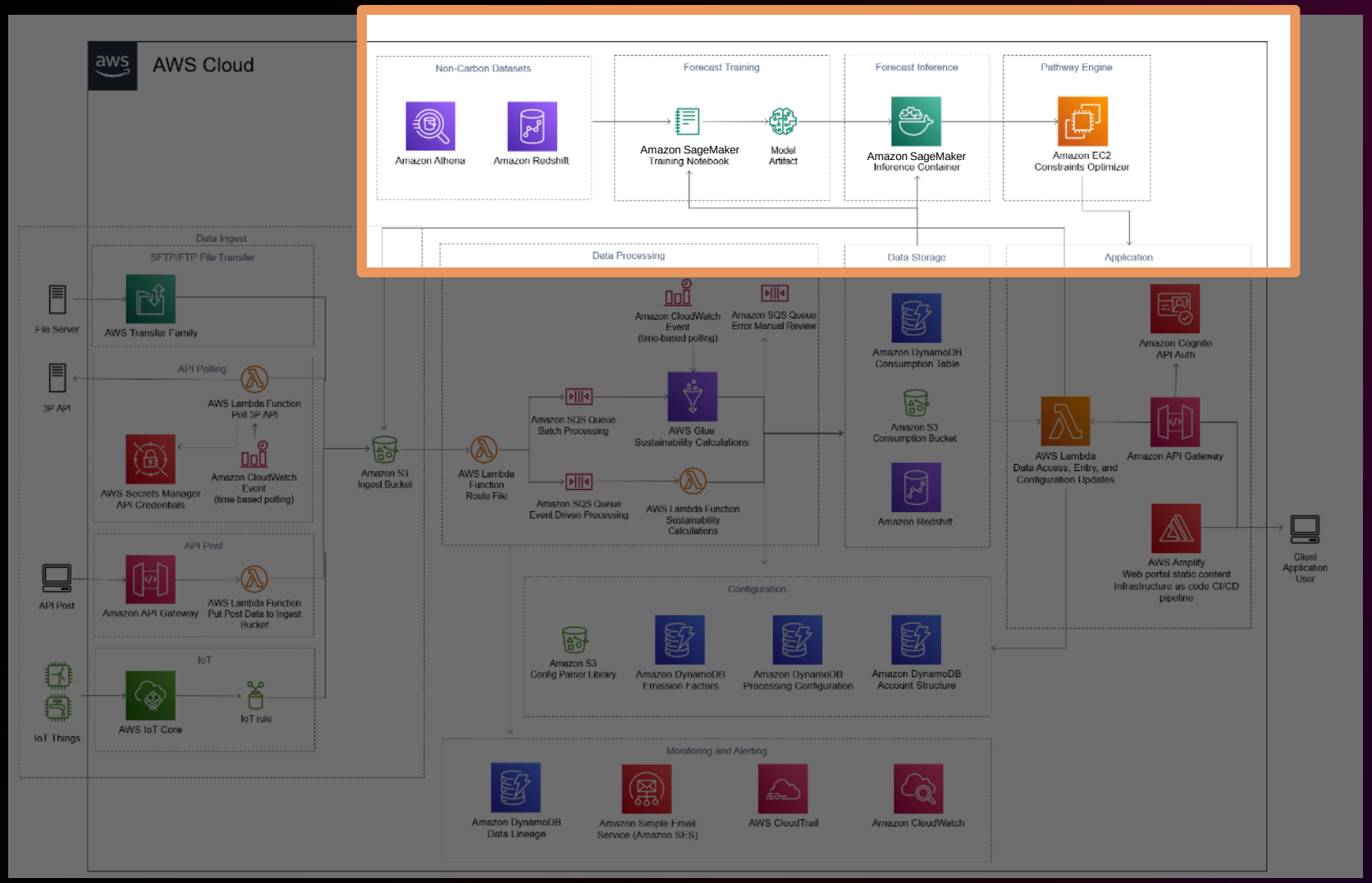
Prescribe optimal setpoints based on digital twin simulations



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Energy optimization & carbon planning/forecasting

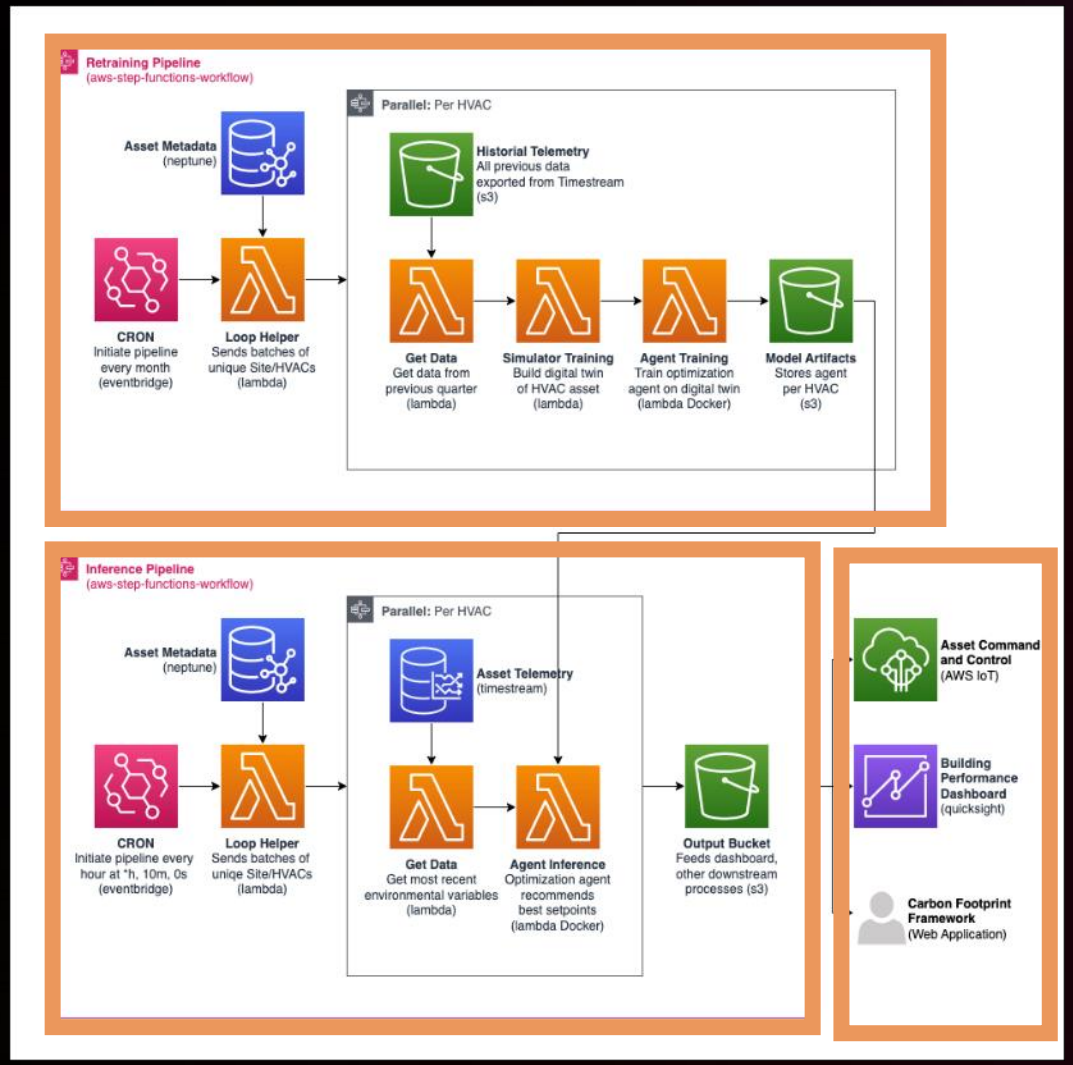
WITH CARBON FOOTPRINT FRAMEWORK



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Energy Optimization & Management for Consumption

(CARBON FOOTPRINT FRAMEWORK ENABLED INTEGRATION)



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Customer use cases

LEVERAGING THE CLOUD TO MONITOR AND OPTIMIZE RESOURCE USE

CARBON LIGHTHOUSE
PROFITABLE CLIMATE SOLUTIONS

Energy conservation and management



Route optimization with ML

Carrier

Cold chain logistics and management

enel

Energy consumption and anomaly detection

aws

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A better world of mobility

Sree Anandavally, Senior Director – Smart Factory Solutions

November 29, 2022

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MAGNA

By the numbers.

$36.2B	In sales
341	Manufacturing assembling facilities
161,000+	Entrepreneurial employees
#1	North America market position
#4	Global market position

AS OF Q2 2022

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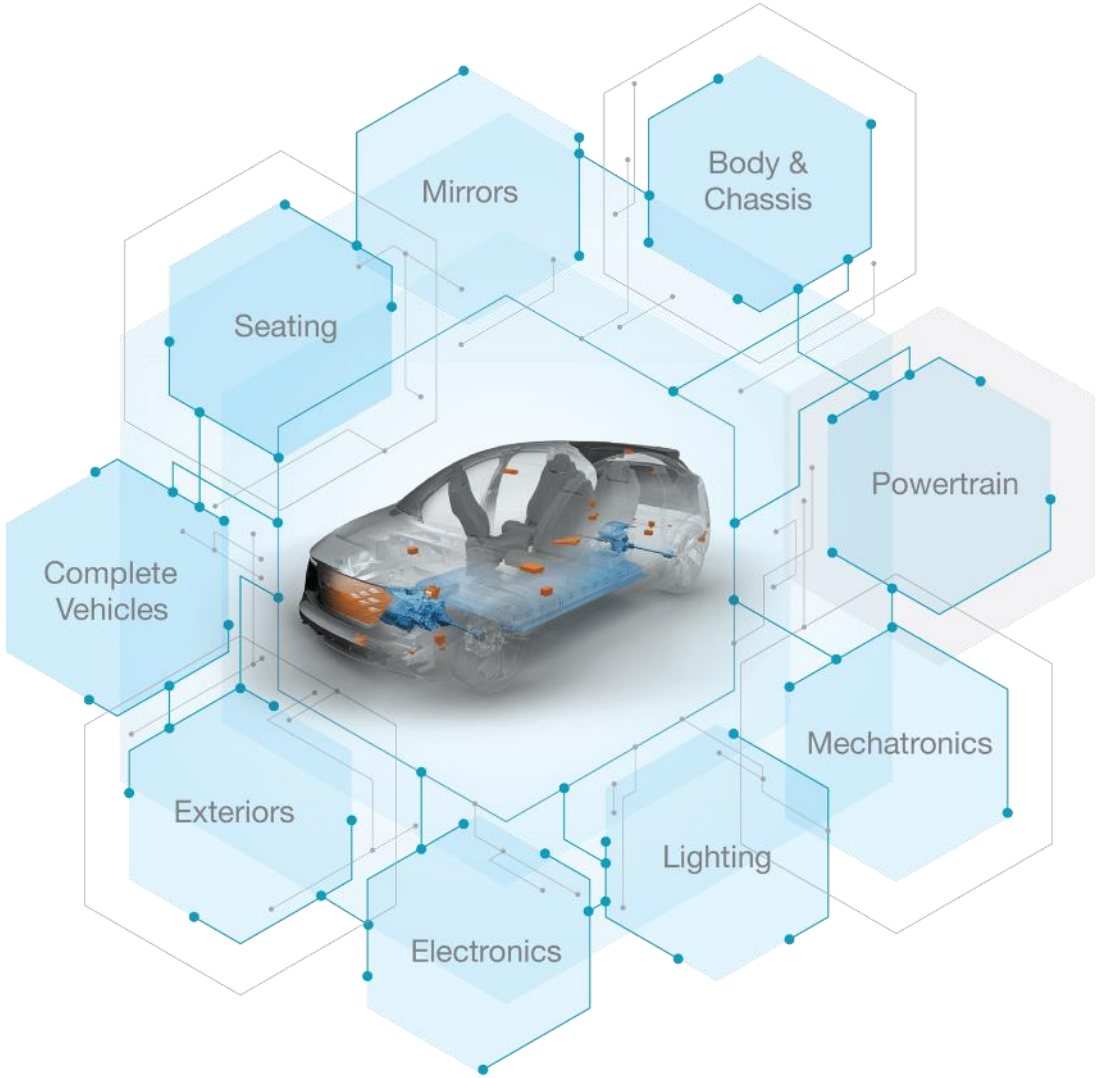
Our full-system approach is your competitive advantage in the new world of mobility.

The Power of Magna

Deep product expertise

Integrated systems level analysis and approach

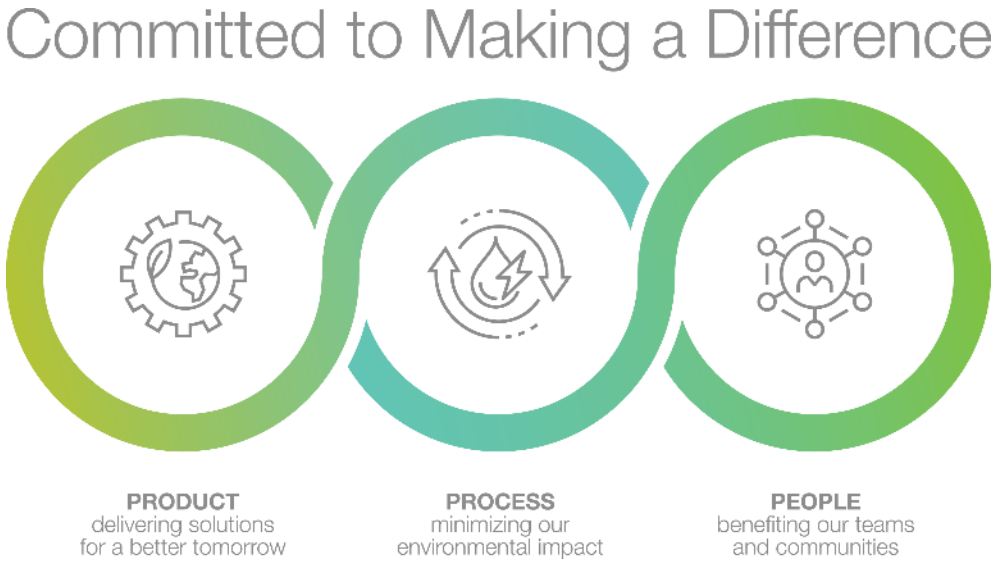
Complete vehicle engineering and manufacturing



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Our Sustainability Vision.



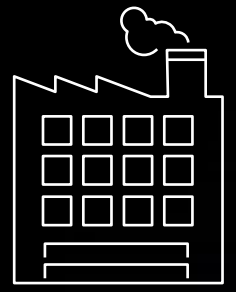
Creating a better world of mobility, responsibly

As we continue to move forward in our efforts to protect and preserve the planet, we are targeting carbon neutrality in our European operations by 2025 and global operations by 2030.

The technologies, systems, and concepts we are developing will continue to enable cleaner and safer mobility for everyone and everything.

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Sustainable value creation



Process and product quality



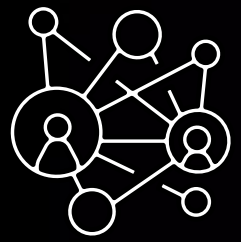
Energy use and efficiency



Supply Chain Alignment



Roadmap to 100% renewable energy



Community Engagement



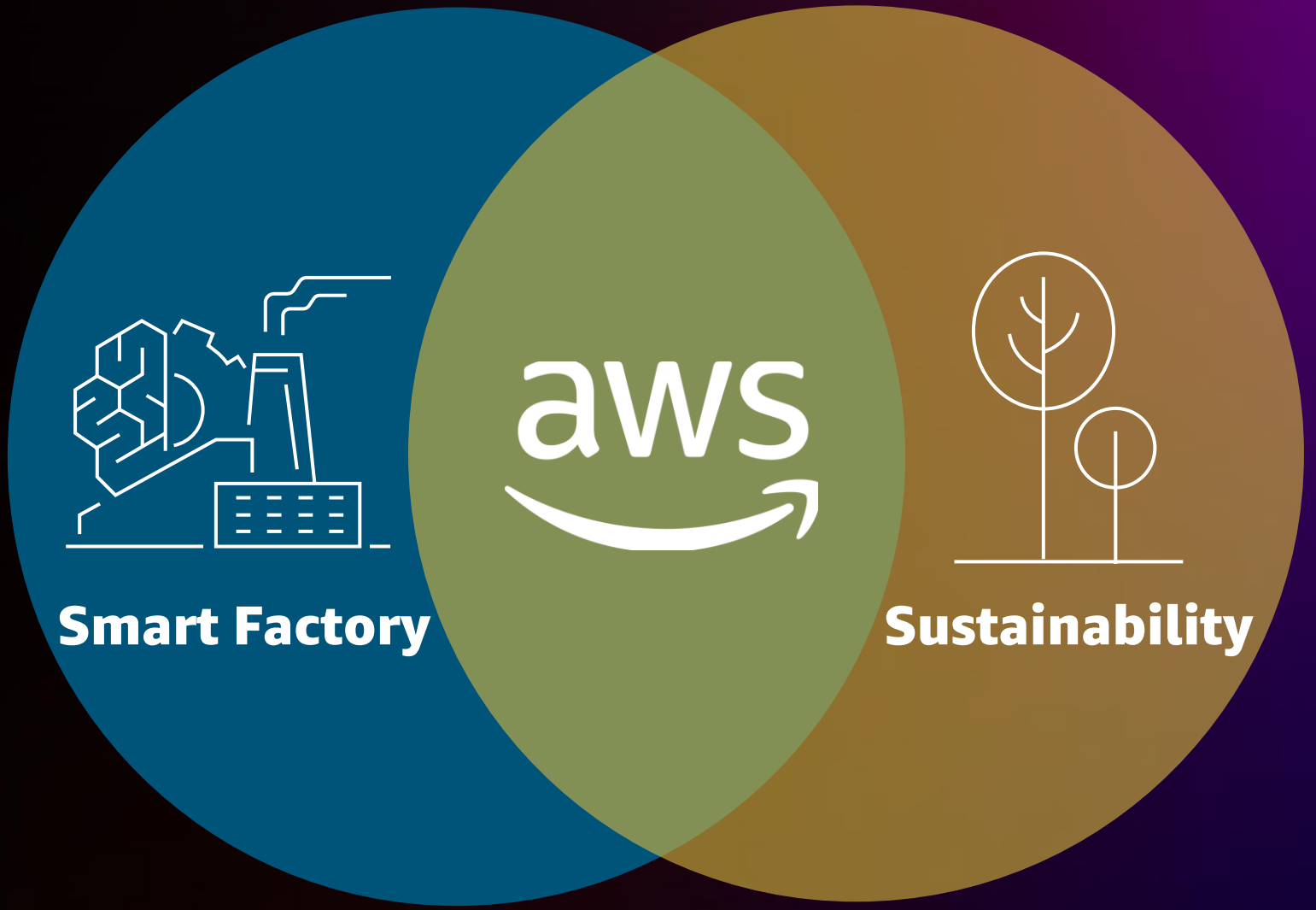
Employee well-being

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Our engagement with AWS

We needed a partner who understands our approach and would work with us to quickly develop a scalable solution



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Connecting Magna facilities with AWS

Key resource management & optimization

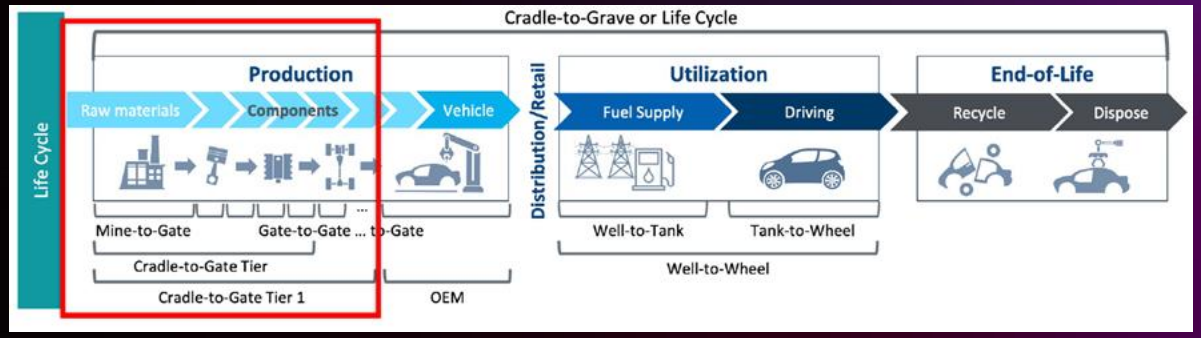


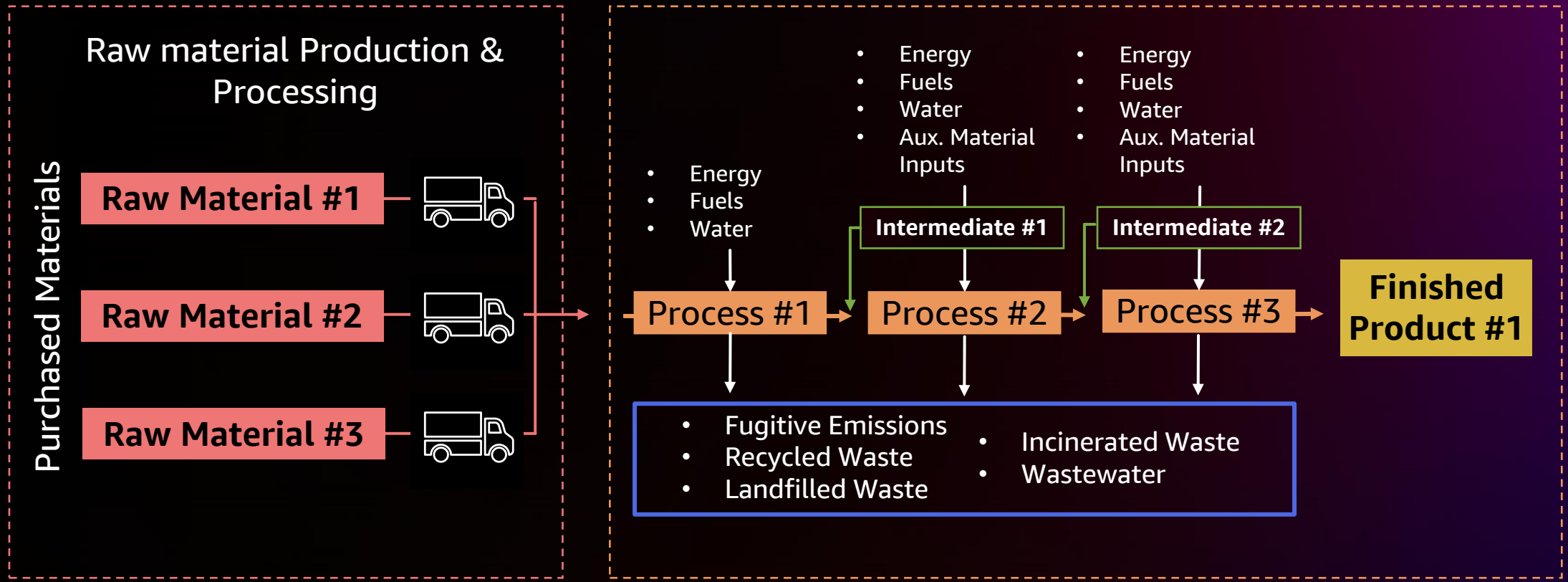
Electricity Water Natural Gas Argon Compressed Air

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Looking ahead

MANAGING & OPTIMIZING AT SCALE





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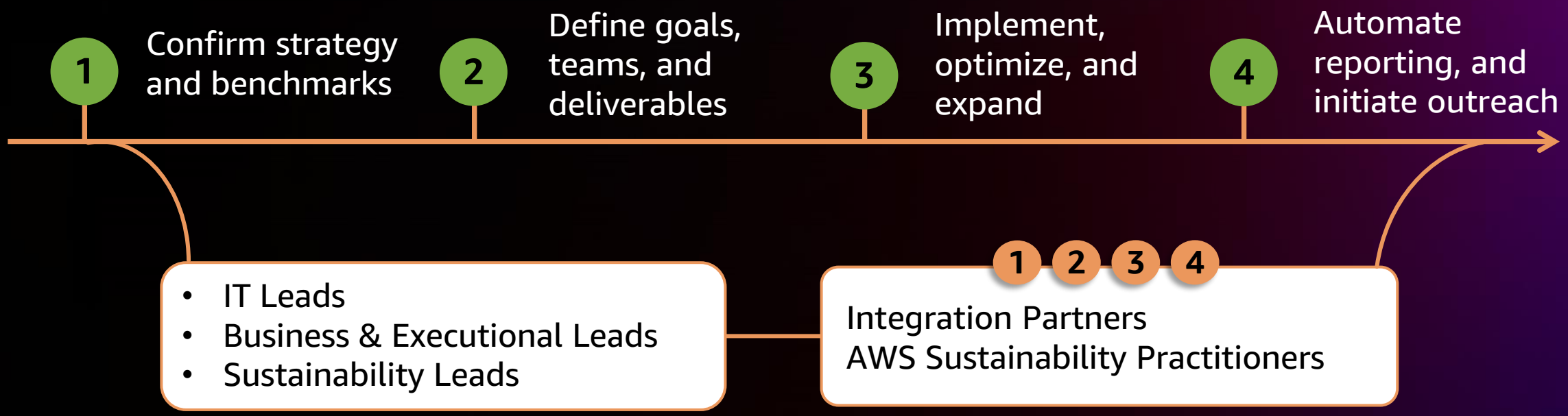

MAGNA
Forward. For all.

Your sustainability journey and AWS

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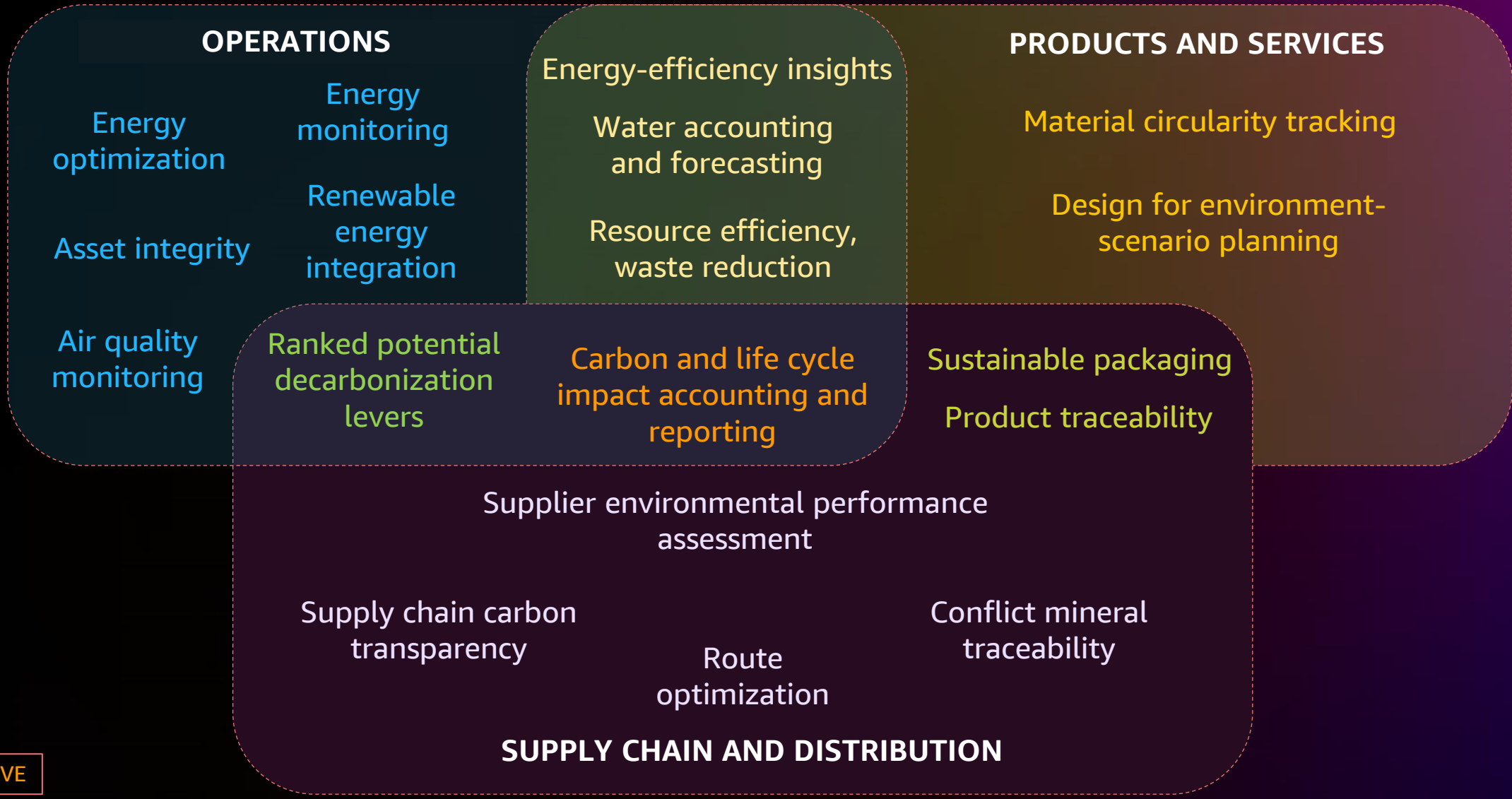
How we get started

Sustainability strategy and transformation planning



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Accelerate your agenda on AWS



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Benefits of building sustainability solutions on AWS

Security and data sovereignty
Encrypt highly sensitive data; enable controls for data access, governance, and lineage

Transparency and auditability
No black-box approach – traceable calculation models, data sources, and results

Scalability
Scalable on demand, faster innovation cycles

Real-time actionable insights on centralized platform to track and optimize performance



Flexibility
Modular, fully customizable, 100% ownership

Sustainability expertise
Advisors to support customer's sustainability strategies

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Call to action!

- Ask questions and internally align on your organization’s business case for sustainability
- Assess and prioritize specific use cases to support your sustainable strategy
- Commit and collaborate by working with your AWS account team member
- Learn how to accelerate your organization’s sustainability goals with AWS and by leveraging the cloud



AWS Sustainability
Review case studies and customer use cases, and access sustainability resources
https://aws.amazon.com/sustainability/



Amazon Data Exchange
Find, subscribe, and access third party datasets
https://go.aws/3GmLkGZ



Amazon Sustainability Data Initiative (ASDI)
Learn more on how Amazon is making sustainability data accessible to everyone
https://bit.ly/3OgPS3B

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Sustainability breakout sessions

SUS204: Sustainability in AWS global infrastructure

SUS205: Architecting sustainably and reducing your AWS carbon footprint

SUS206: Sustainability and AWS Silicon

SUS208: Utilizing sustainability data at scale

SUS210: Modeling climate change impacts and risks at scale

SUS211: Water stewardship and renewable energy at scale

SUS301: Sustainable machine learning for protecting natural resources

SUS303: Delivering sustainable, high-performing architectures

SUS312: How innovators are driving more sustainable manufacturing

STP213: Scaling global carbon footprint management

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Sustainability workshops and chalk talks

SUS201: Detecting deforestation with geospatial images and Amazon SageMaker

SUS202: Using Amazon SageMaker, AutoGluon, and ASDI to predict air quality

SUS203: Carbon emissions reporting using modern data architecture on AWS

SUS207: Patterns for obtaining insights from sustainability data

SUS302: Optimizing architectures for sustainability

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Thank you!



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