
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

SUS302-R

Optimizing architectures for sustainability

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Sustainability areas of focus

"Sustainable development meets the needs of the present **without compromising** the ability of future generations to meet their own needs."

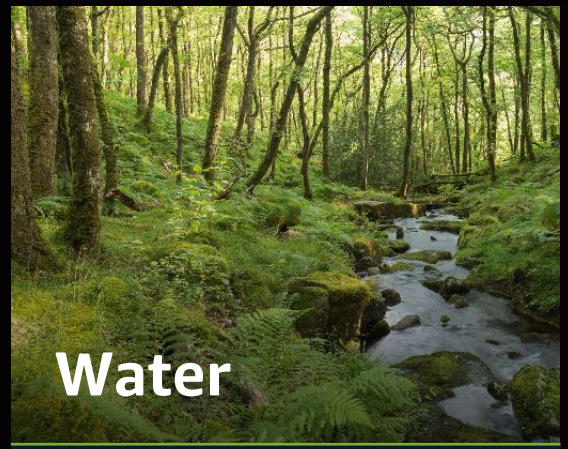
UN World Commission on Environment and Development



Decarbonize

Decarbonize the global economy

Limit the effects of the climate crisis



Water

Minimize water use

Keep it clean



Social responsibility

Responsible employment and supply chain practices



Circular economy

Zero landfill

Recycling

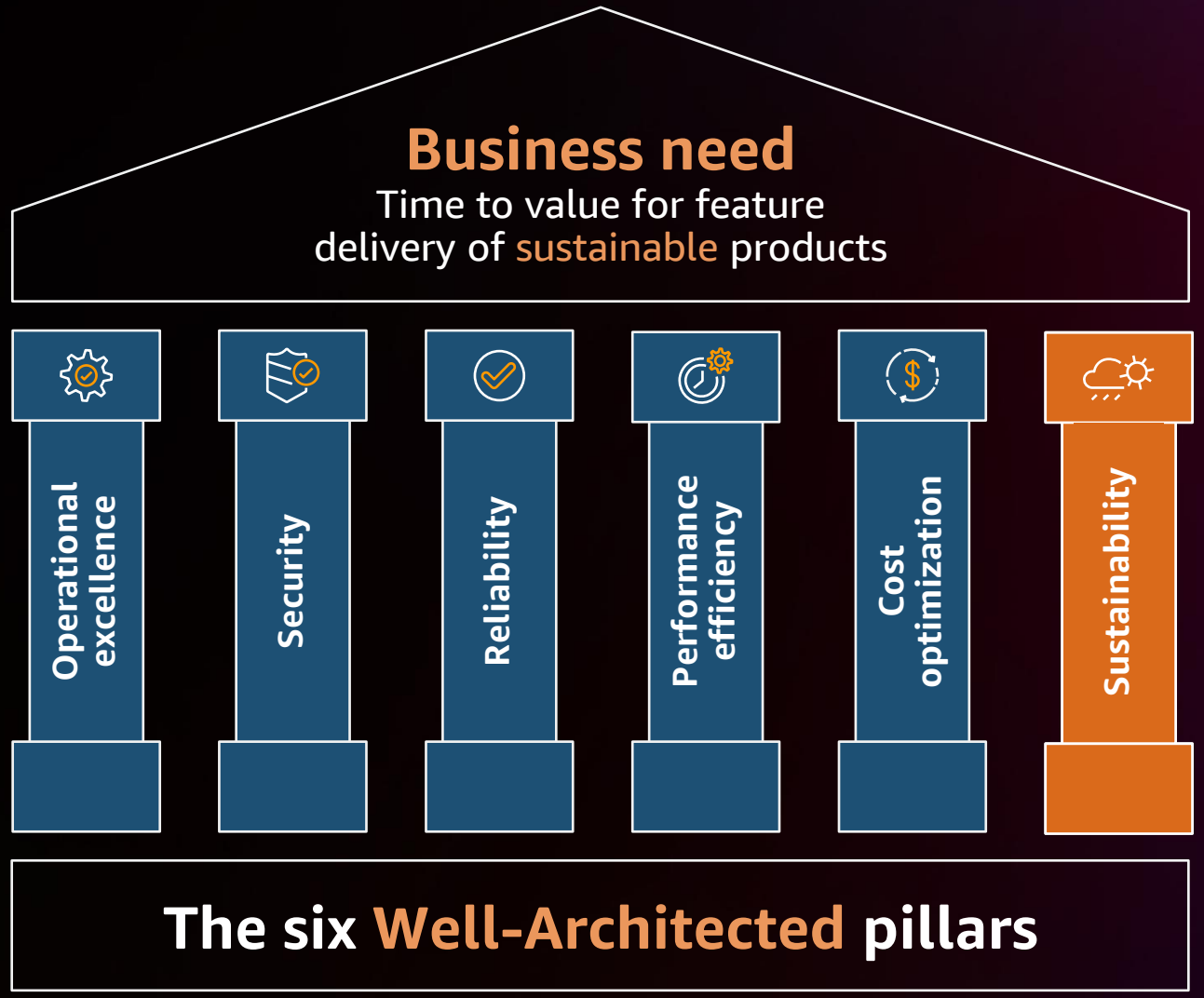
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Sustainability in the cloud is a continuous, focused effort on energy reduction and efficiency across all components of a workload

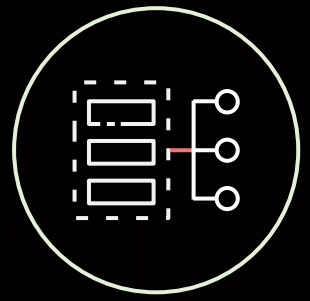
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Optimize: AWS Well-Architected for sustainability



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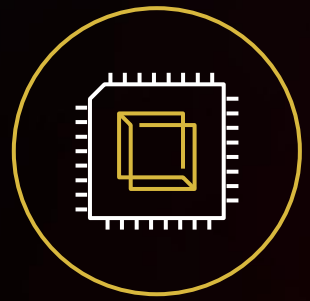
Best practices from the sustainability pillar



User behavior



Software and architecture



Hardware



Data



Development and deployment process

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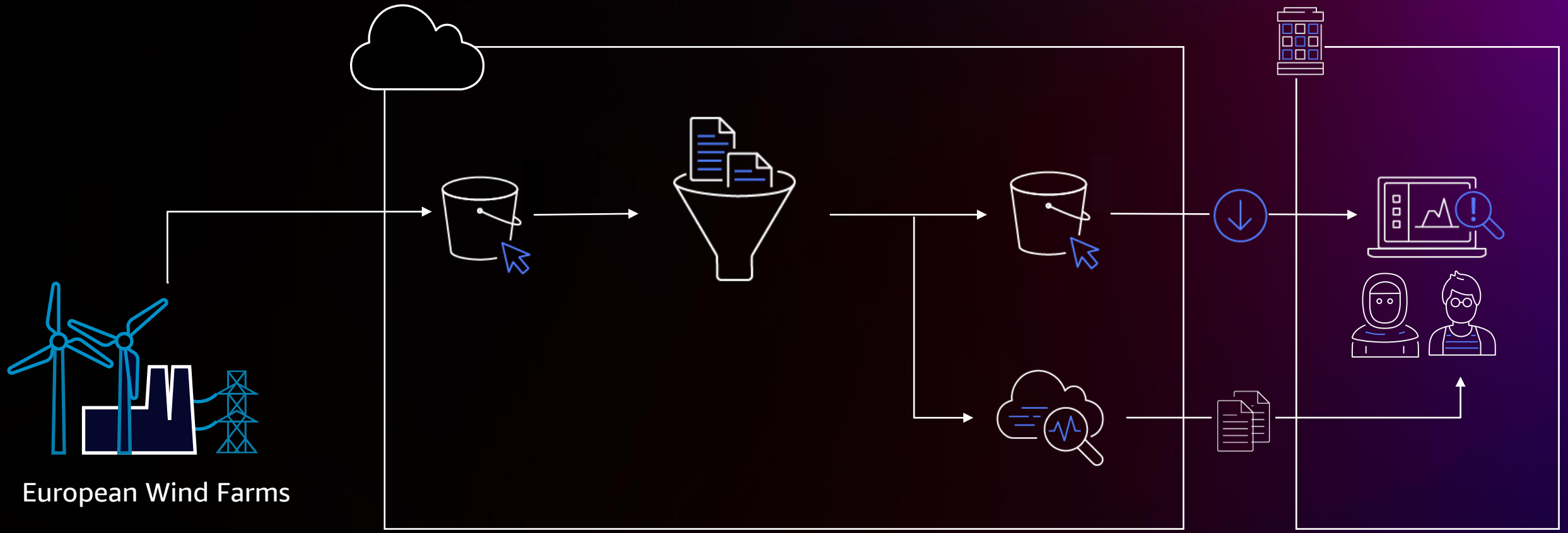
Sustainability KPIs

$$\frac{\text{Resources}}{\text{Business metric}}$$

Normalize sustainability KPIs to make them comparable

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Today’s challenge: AnyCompany Renewables



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Today’s challenge

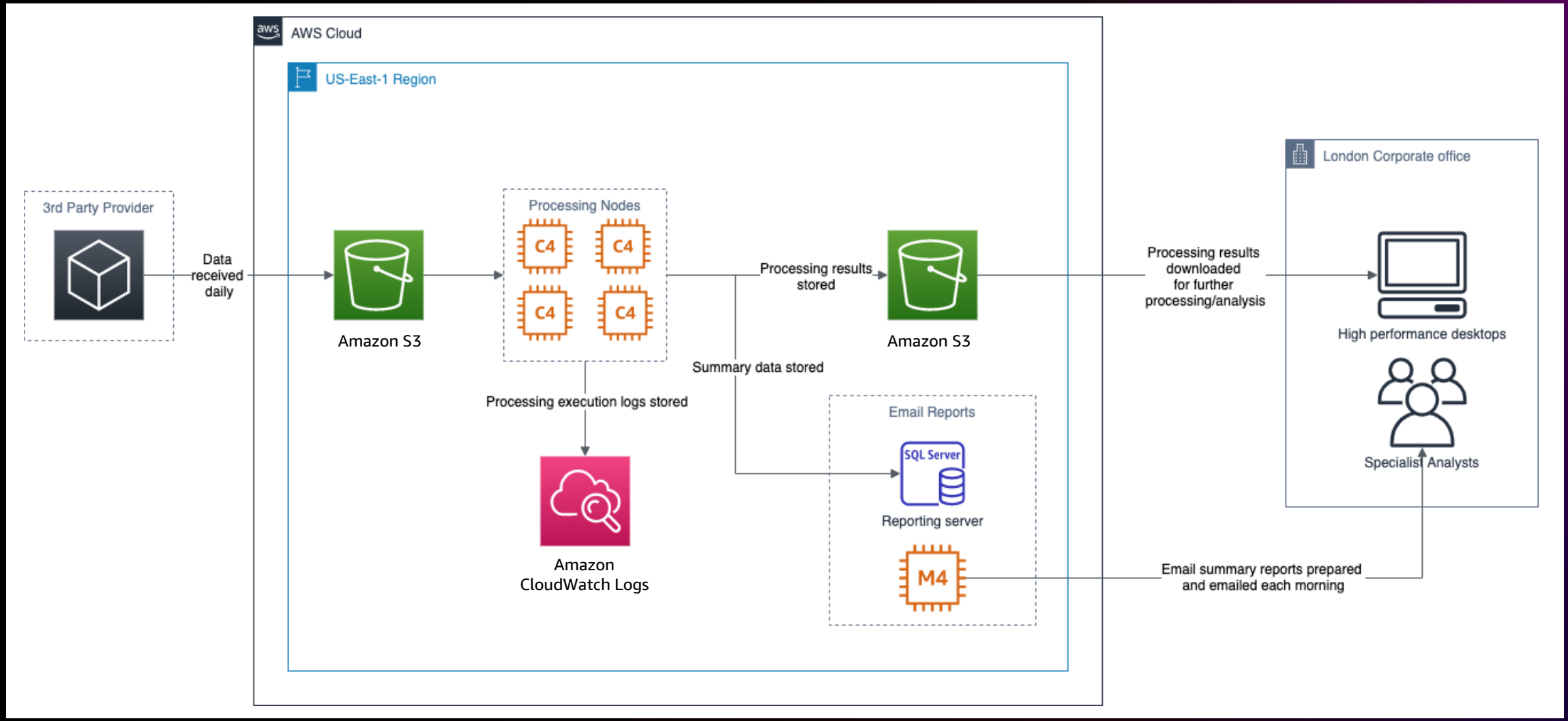


How can we reduce the environmental impact of our application?

Suzy, AnyCompany CIO

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Architecture diagram



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Let’s optimize!

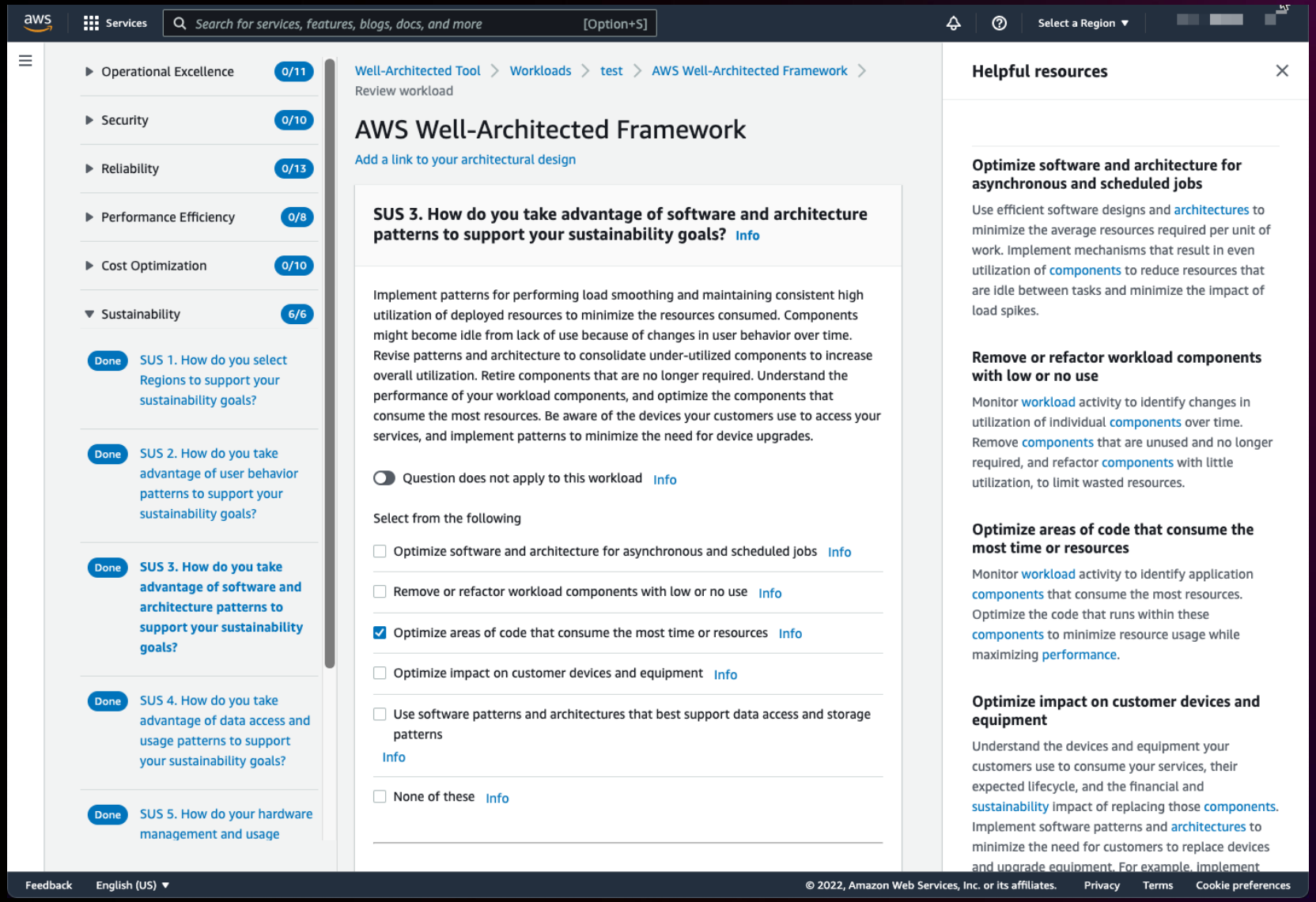
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Call to action

1. Treat sustainability as a non-functional requirement for your workload
2. Define sustainability KPIs for your workload
3. Optimize sustainability KPIs using the AWS Well-Architected Sustainability Pillar

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Get started with the AWS Well-Architected Tool



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Thank you!

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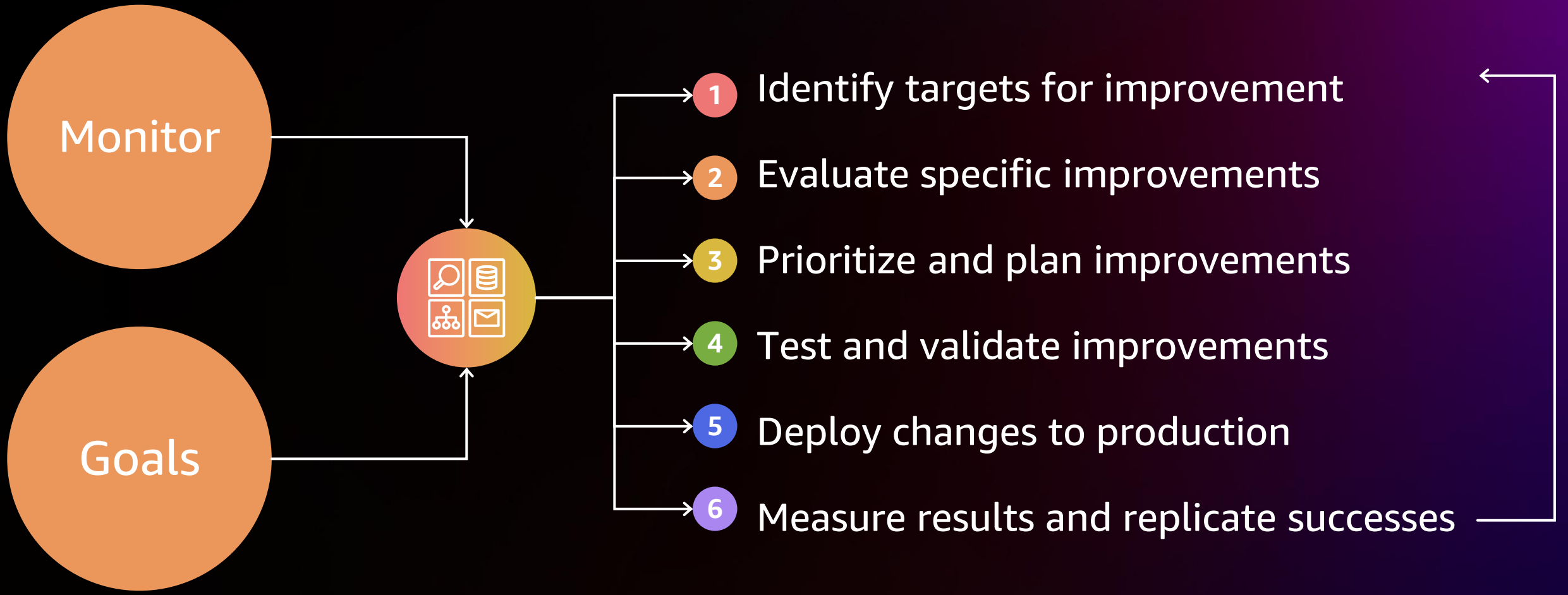
Establish fine-grained, frequent KPIs at team level



Business metrics

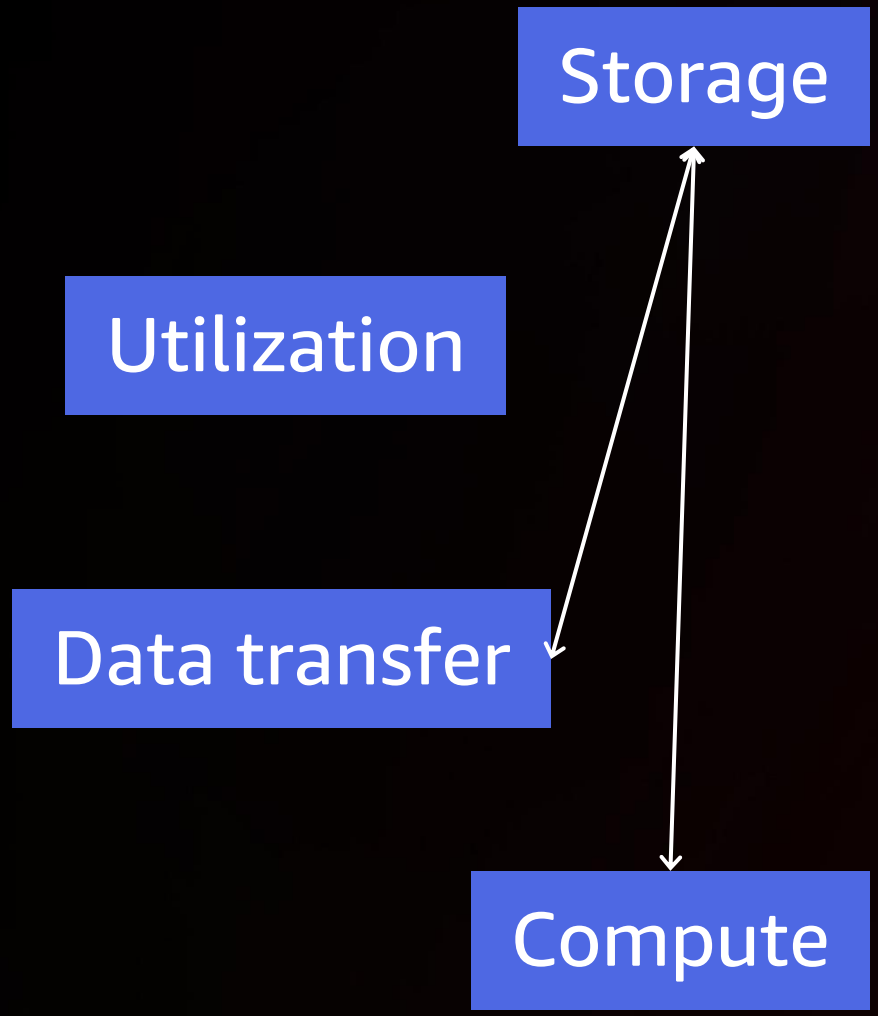
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Improvement process



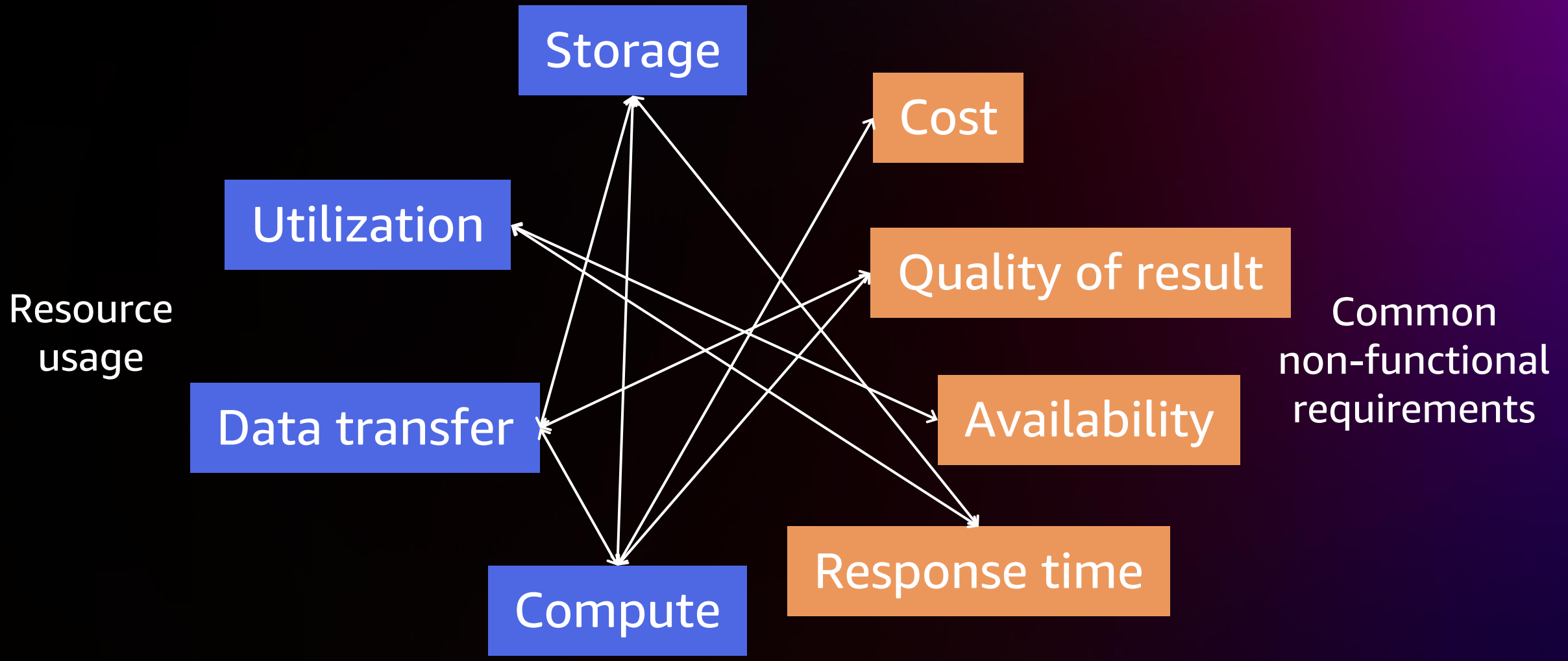
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Understand your impact through metrics



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Sustainability is a non-functional requirement



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How to continue?



Dive deeper into the AWS Well-Architected Sustainability Whitepaper



Conduct your own Well-Architected Review by using the AWS Well-Architected Tool



Check out additional guidance and blog posts around Architecting for Sustainability

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