

Mile-High Video Presentation:

How Prime Video Streams to millions whilst Optimising for Reliability, Quality and Cost

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1. INTRODUCTION



3




Subscriptions you might like


SHOWTIME



THE CHI

BLACK MONDAY

 Free trial

 Free trial





Ben Forman (He/Him)

Global Head of Live Channels Architecture,
Prime Video

1



2



My Channels



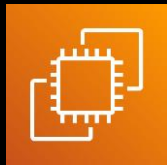
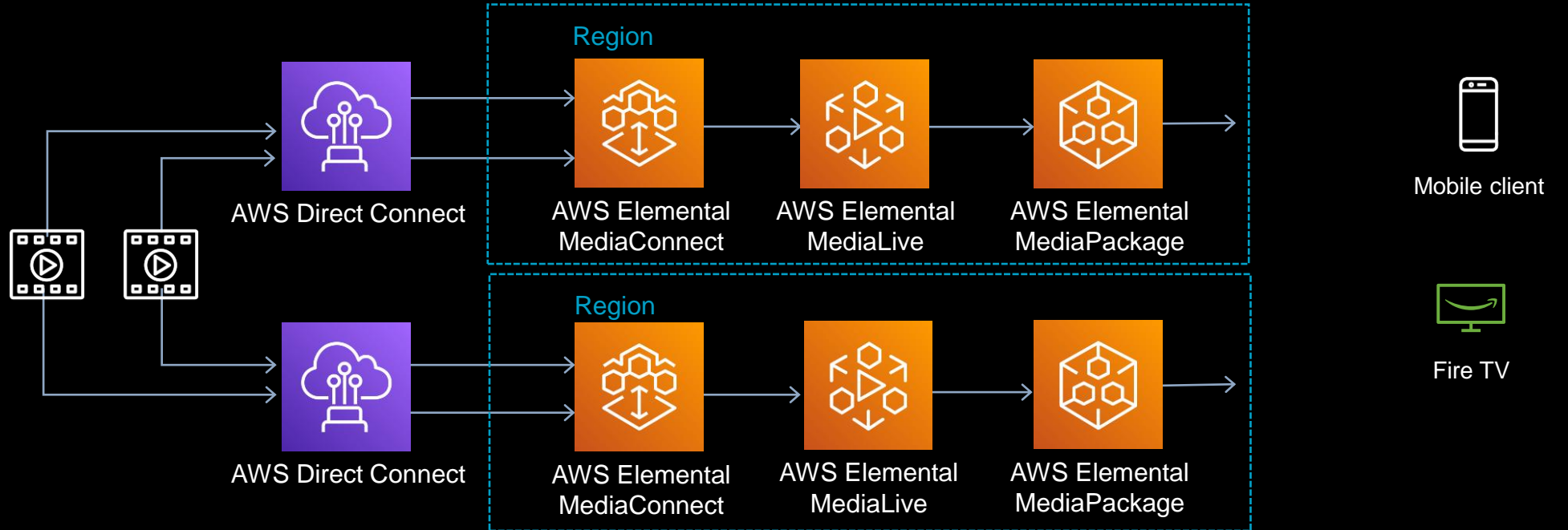
Amazon Originals and Exclusives



PRIME VIDEO



1. Introduction



Amazon Elastic Compute Cloud (Amazon EC2)



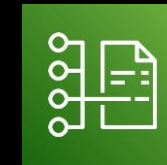
Amazon Simple Storage Service (Amazon S3)



Amazon CloudWatch

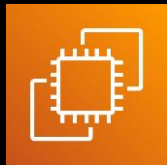
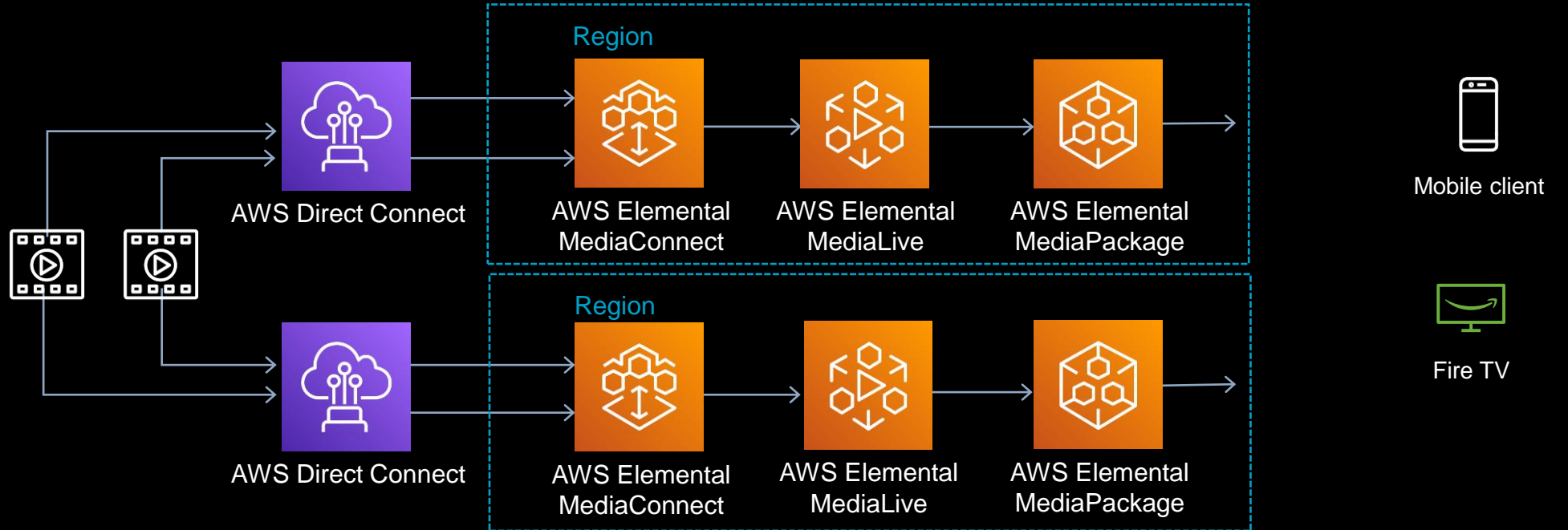


Amazon QuickSight



AWS Cost & Usage Report

1. Introduction



Amazon Elastic Compute Cloud (Amazon EC2)



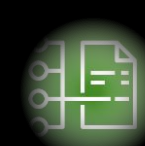
Amazon Simple Storage Service (Amazon S3)



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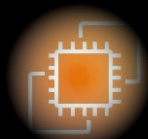
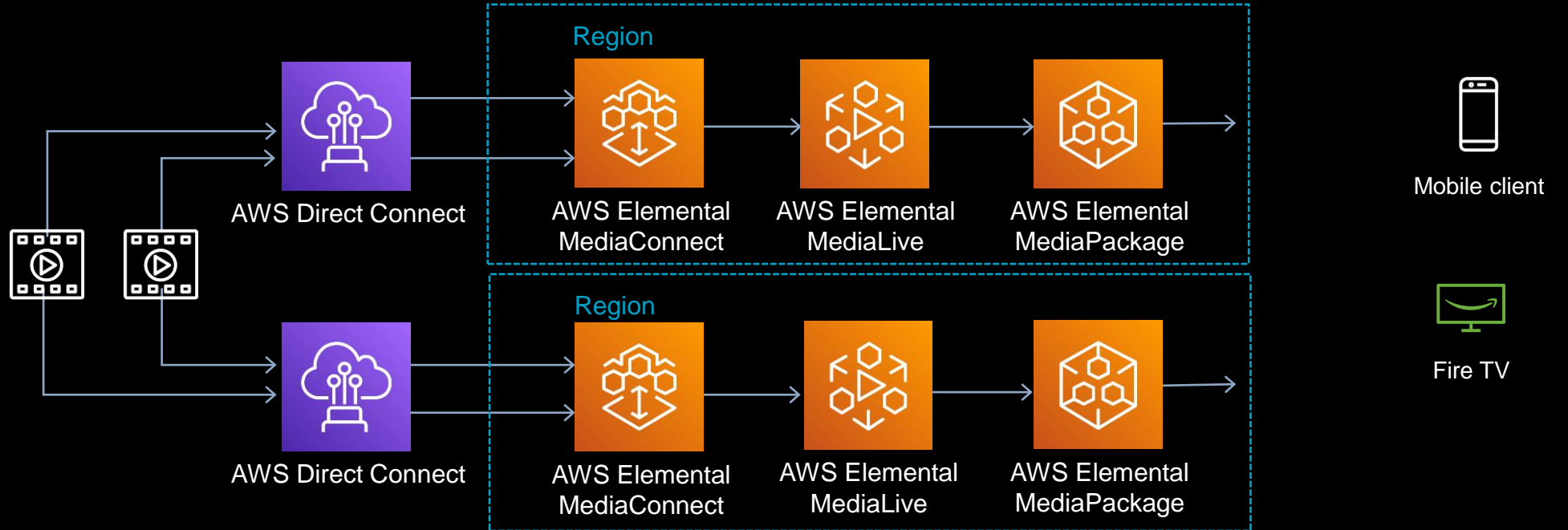


Amazon QuickSight



AWS Cost & Usage Report

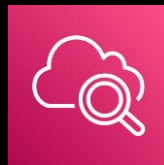
1. Introduction



Amazon Elastic Compute Cloud (Amazon EC2)



Amazon Simple Storage Service (Amazon S3)



Amazon CloudWatch

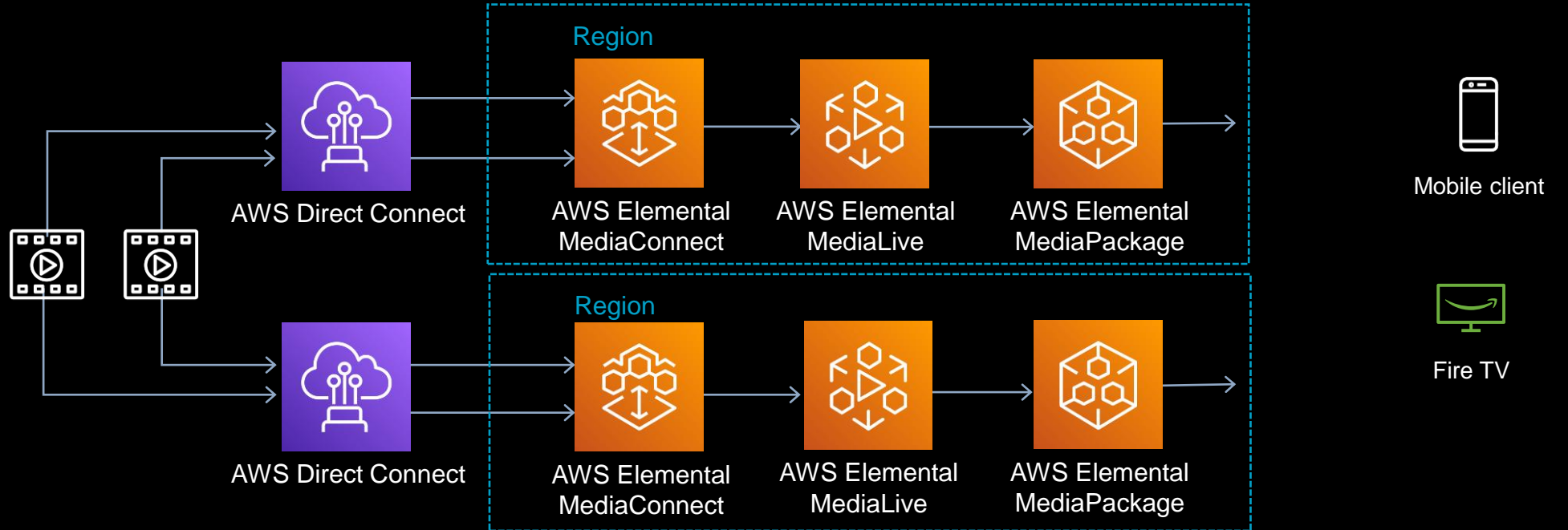


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1. Introduction



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AWS Cost & Usage Report

2. OBSERVABILITY



**“You can't manage
what you can't
measure.”**

Peter Drucker: Management consultant, educator and author (1909-2005)

Identify the metrics which are critical to your business

Identify the metrics which are critical to your business

Availability

Identify the metrics which are critical to your business

Availability

Performance

Identify the metrics which are critical to your business

Availability

Performance

Quality

Identify the metrics which are critical to your business

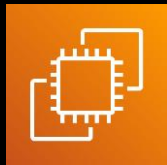
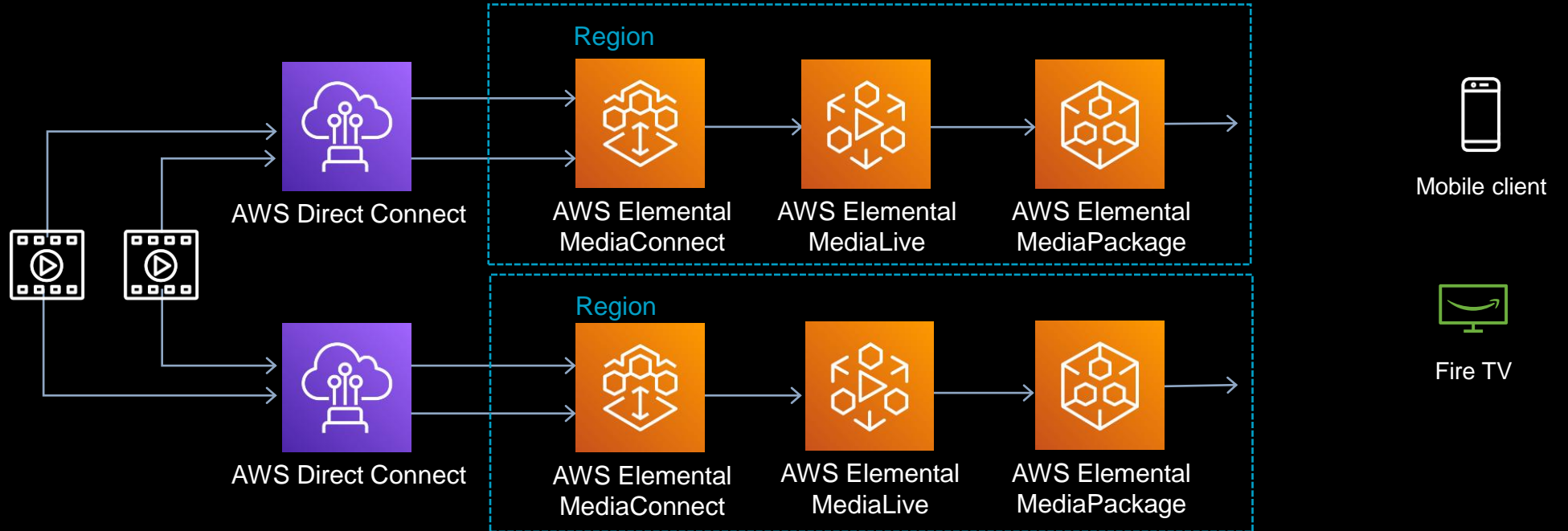
Availability

Performance

Quality

Cost

2. Observability



Amazon Elastic Compute Cloud (Amazon EC2)



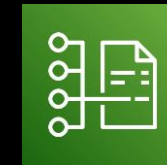
Amazon Simple Storage Service (Amazon S3)



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AWS Cost & Usage Report

2017



2021

La qualità delle dirette [#PrimeVideo](#) è veramente ottima! [#amazon](#) è entrata nel mondo dello [#sport](#) alla grande! Complimenti! [#calcio](#) [#SupercoppaEuropea](#) [#ChampionsLeague](#)

Translated from Italian by [Google](#)

The quality of the live broadcasts [#PrimeVideo](#) it is really good! [#amazon](#) entered the world of [#sport](#) great! Compliments! [#calcio](#) [#SupercoppaEuropea](#) [#ChampionsLeague](#)

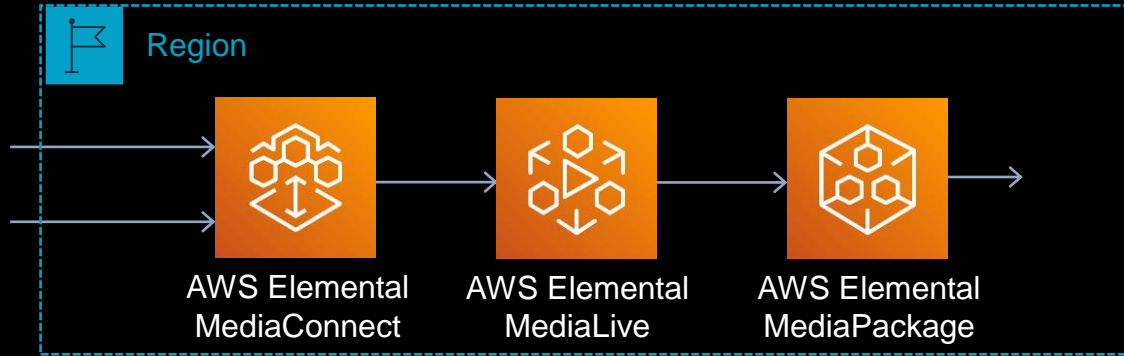
3. RELIABILITY



**“Everything fails, all
the time.”**

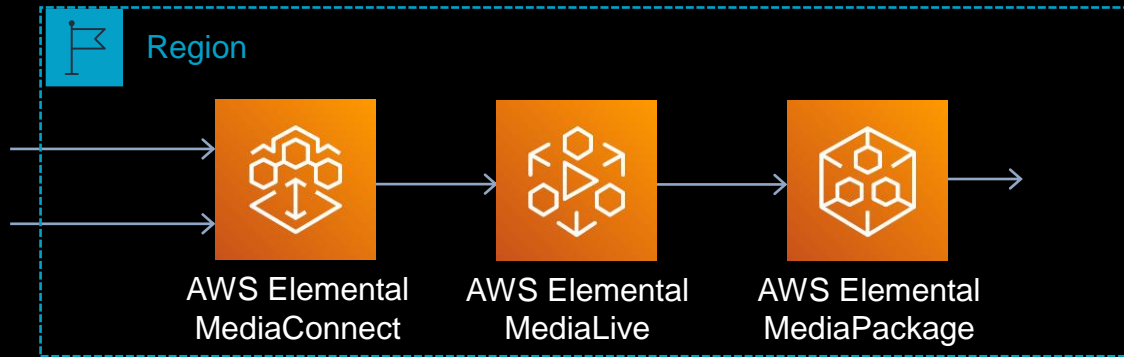
Werner Vogels, VP & CTO Amazon.com

Work backwards from your SLA



MediaConnect, MediaLive and MediaPackage each have an SLA of 99.9%

Work backwards from your SLA



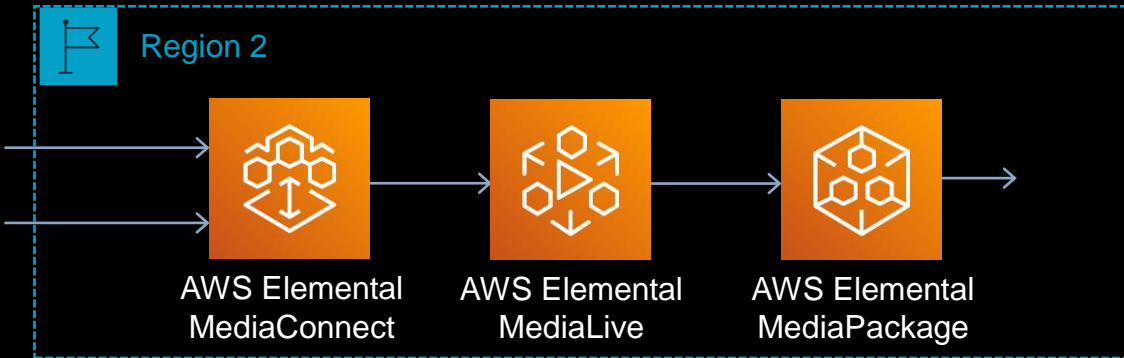
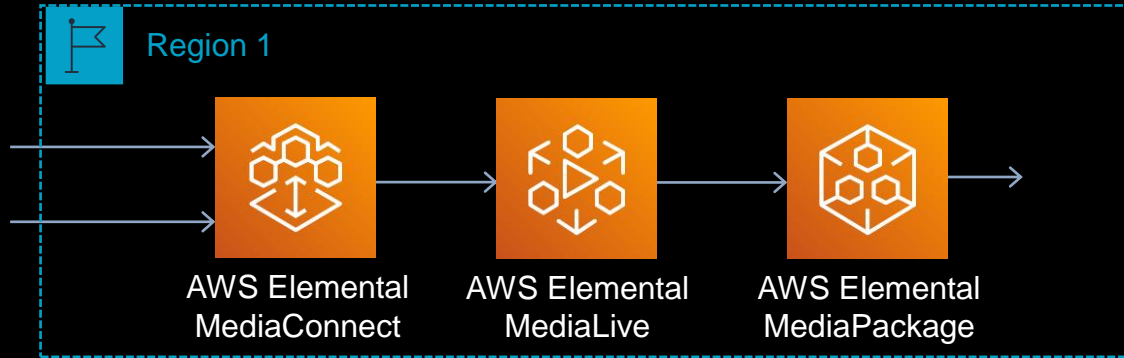
MediaConnect, MediaLive and MediaPackage each have an SLA of 99.9%

*Availability = Availability of x * Availability of y*

$(A = A_x A_y)$ etc.

$99.9\% * 99.9\% * 99.9\% = 99.7\%$

Work backwards from your SLA



MediaConnect, MediaLive and MediaPackage each have an SLA of 99.9%

*Availability = Availability of x * Availability of y*

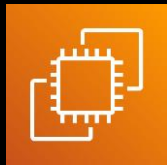
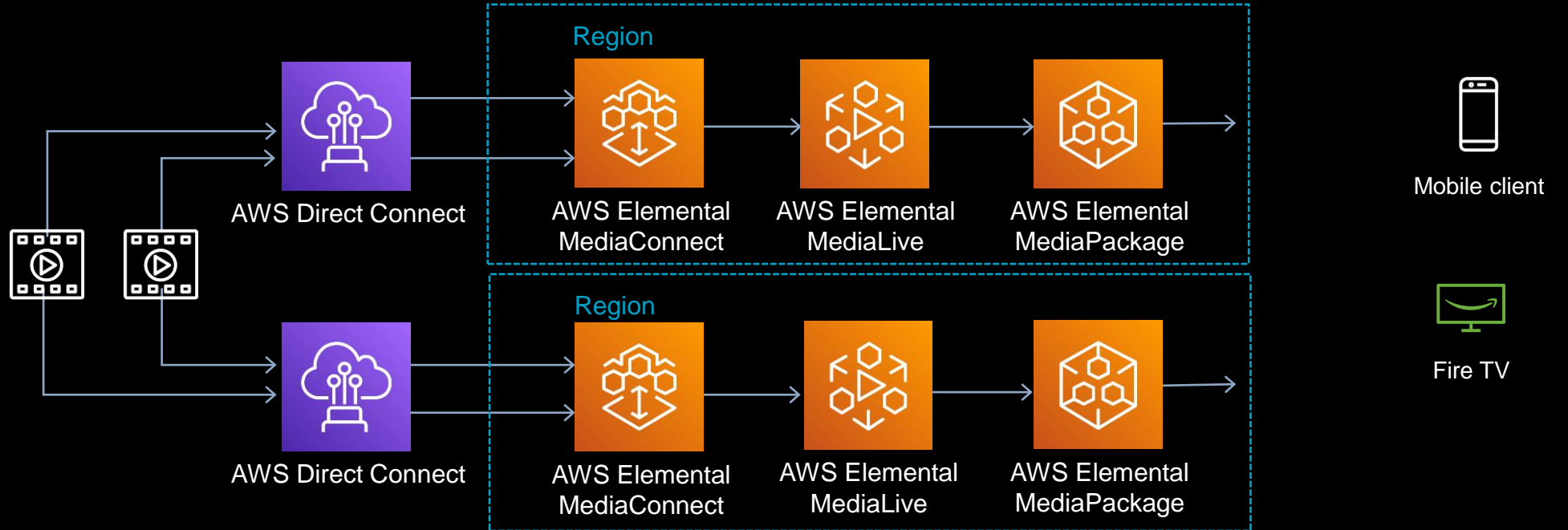
(A = A_xA_y) etc.

*99.9% * 99.9% * 99.9% = 99.7%*

$$A = 1 - ((1 - A_x)(1 - A_y))$$

$$A = 1 - (1 - 99.7\%)^2 = 99.9991\%$$

3. Reliability



Amazon Elastic Compute Cloud (Amazon EC2)



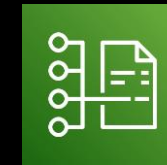
Amazon Simple Storage Service (Amazon S3)



Amazon CloudWatch



Amazon QuickSight



AWS Cost & Usage Report

4. COST OPTIMISATION



**“Customers tell us
that they’re not cost –
cutting as much as cost-
optimizing”**

Andy Jassy, CEO, Amazon.com

Identify the metrics which are critical to your business

Identify the metrics which are critical to your business

Develop or Identify a Metric

Identify the metrics which are critical to your business

Develop or Identify a Metric Measure

Identify the metrics which are critical to your business

Develop or Identify a Metric
Measure
Identify the Levers

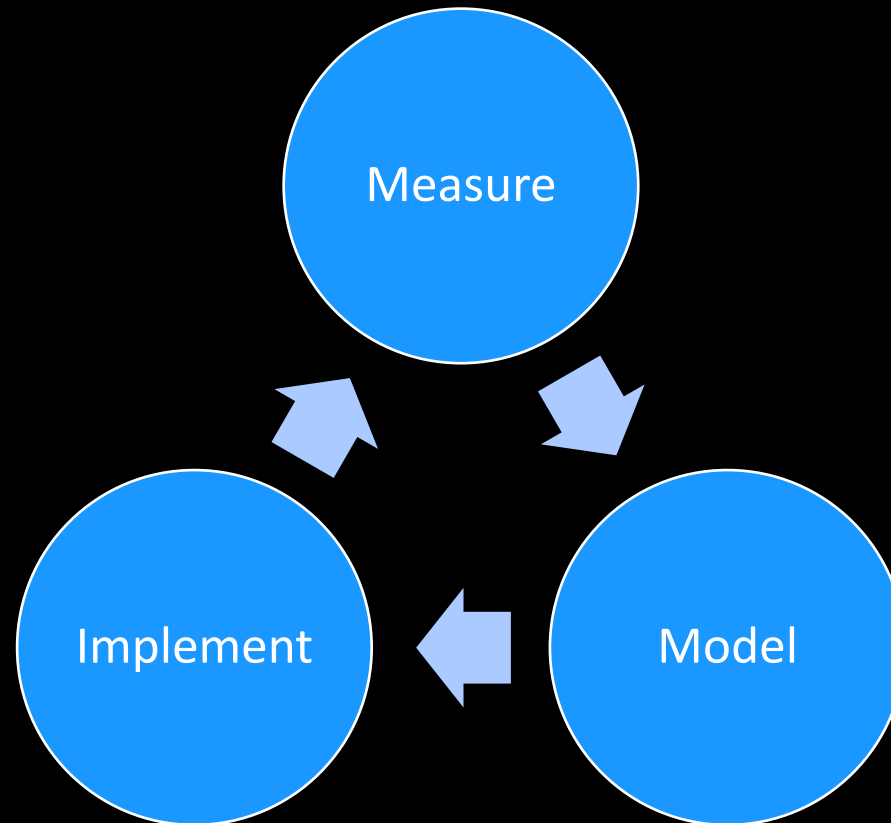
Identify the metrics which are critical to your business

Develop or Identify a Metric
Measure
Identify the Levers
Model changes

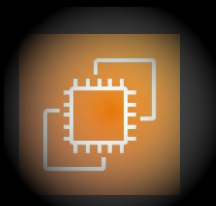
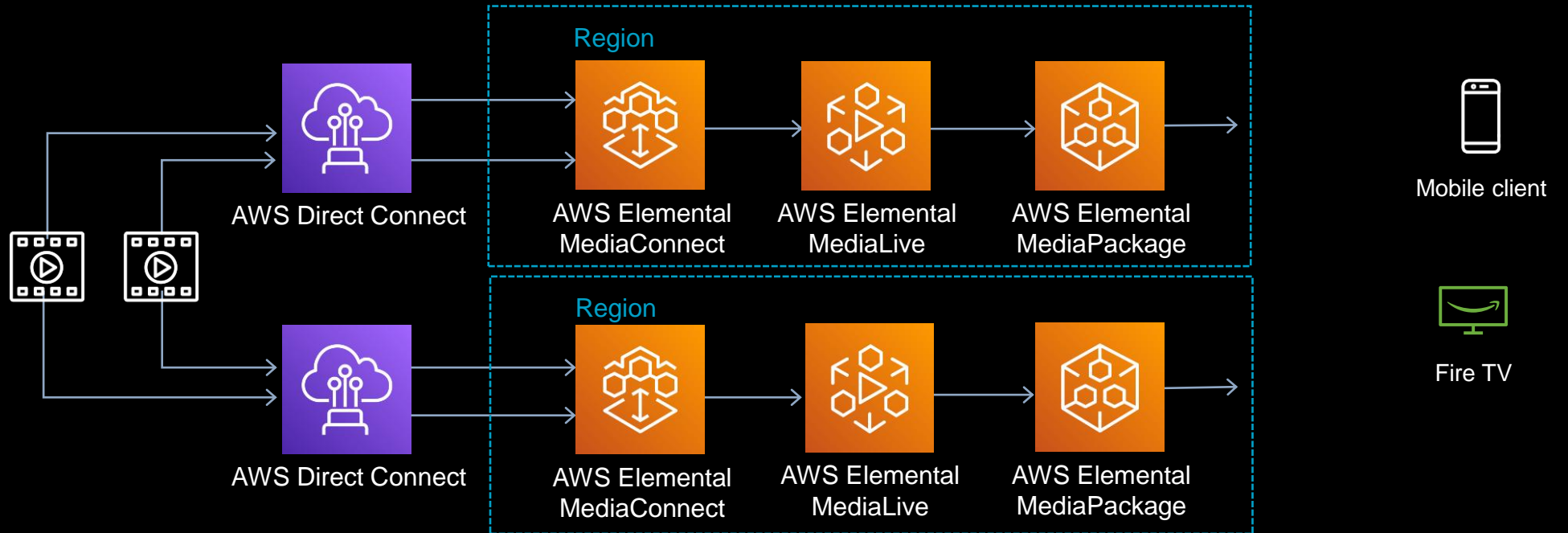
Identify the metrics which are critical to your business

Develop or Identify a Metric
Measure
Identify the Levers
Model changes
Implement the Changes

Identify the metrics which are critical to your business



4. Cost optimisation



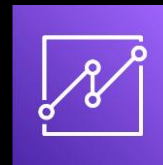
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Amazon Simple Storage Service (Amazon S3)



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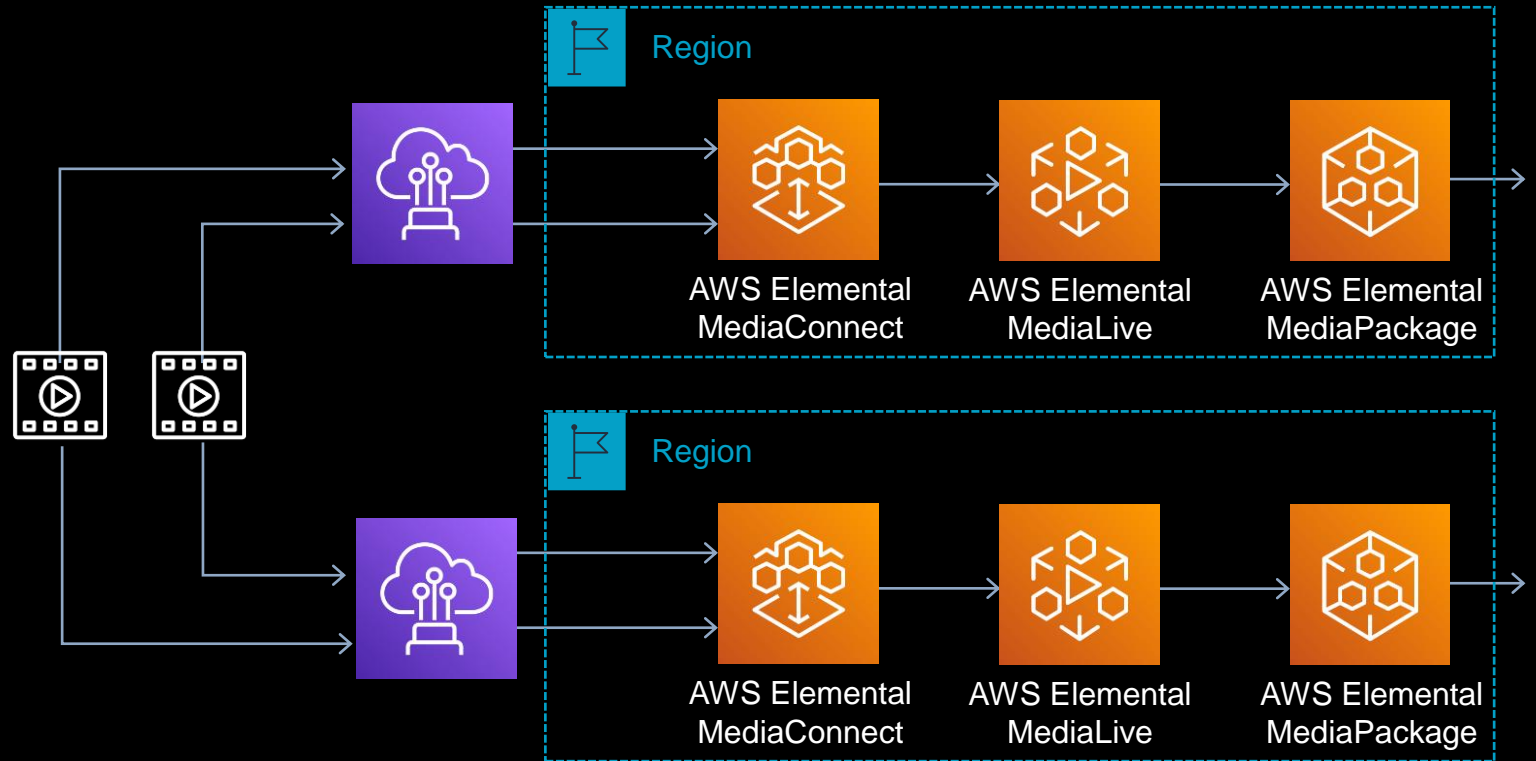


AWS Cost & Usage Report

5. SECURITY



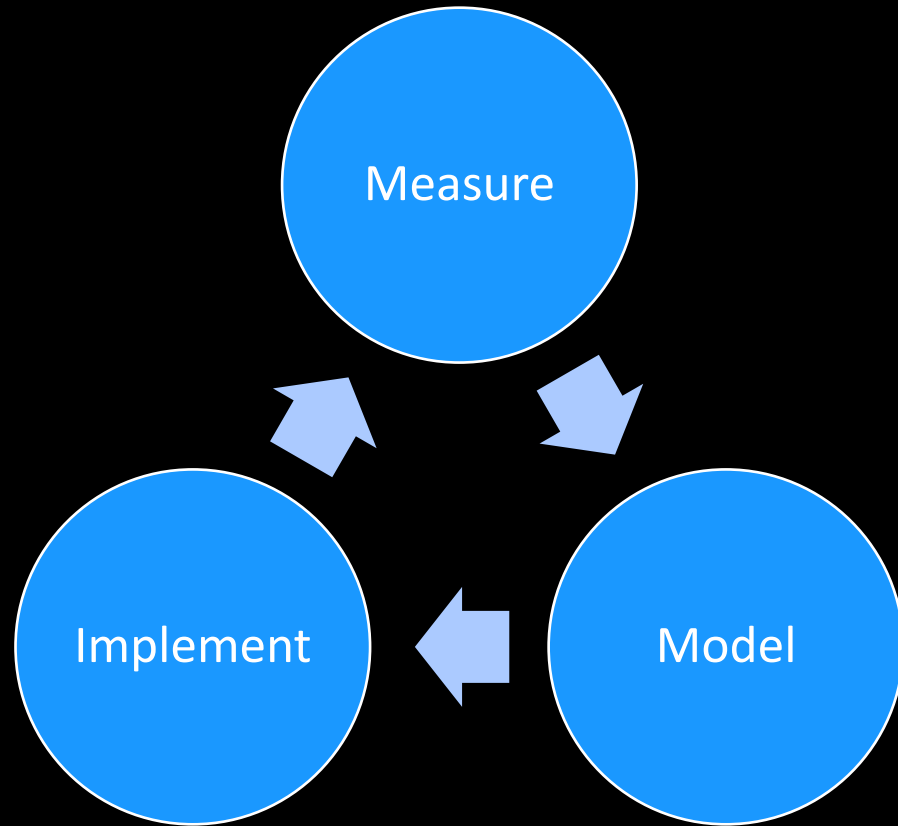
Network Transport Content



6. SUSTAINABILITY

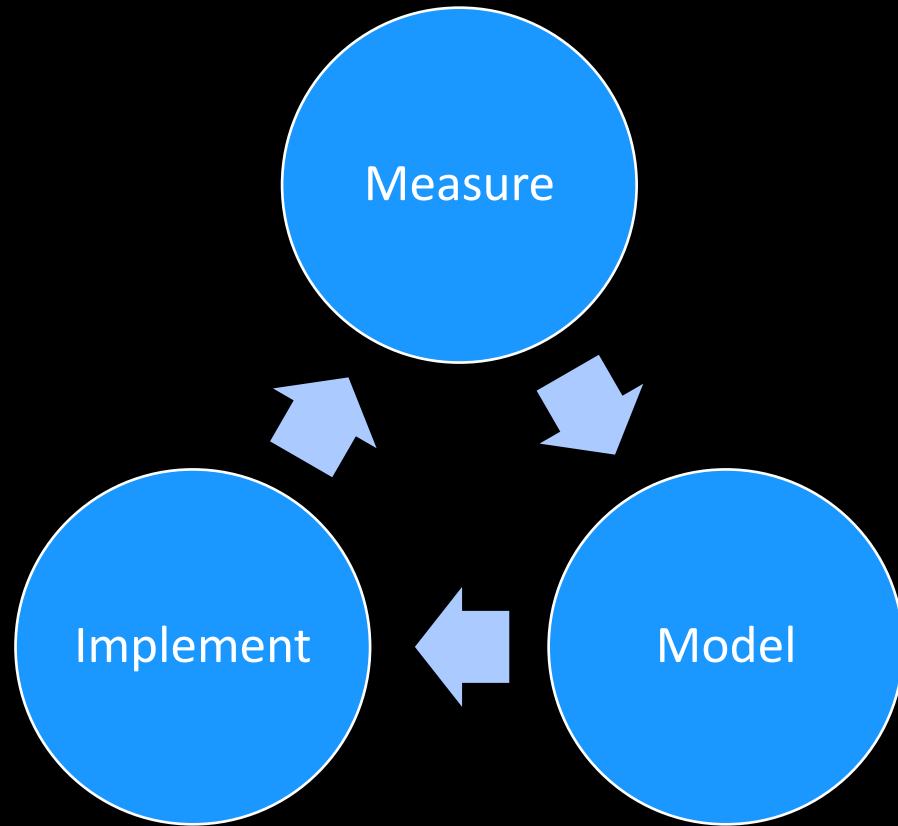


Amazon is on path to reach 100% renewable energy by 2025 – five years ahead of its original 2030 commitment.



AWS Well Architected
Review for Sustainability

AWS Customer Carbon
Footprint Tool



99.2% lower
MTCO₂e since
December 2021

7. CONCLUSION

**Watching TV should just be
just like watching TV**

Optimization doesn't have to mean trading-off

We can improve reliability, and quality whilst reducing cost

**“You can't manage
what you can't
measure.”**

Peter Drucker: Management consultant, educator and author (1909-2005)



**THANK
YOU**