



AWS Cloud Day Dublin

# How Engineering Can Bring Value to the CFO

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DCD - C4

# Cost Optimisation - How engineering can bring value to the CFO

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# About Sitecore

- Sitecore is a global leader of end-to-end **digital experience software**
- Our SaaS-enabled, **composable platform** empowers brands like L'Oréal, Microsoft, United Airlines, and PUMA to deliver unforgettable interactions across every touchpoint.
- Our solution provides the cutting-edge tools brands need to build stronger connections with customers
- Experience more at [sitecore.com](https://www.sitecore.com)

# Agenda

1. What is cost governance?
2. What are we trying to achieve with cost governance
3. Unit costs & efficiency metrics
4. Next steps

# What is cost governance

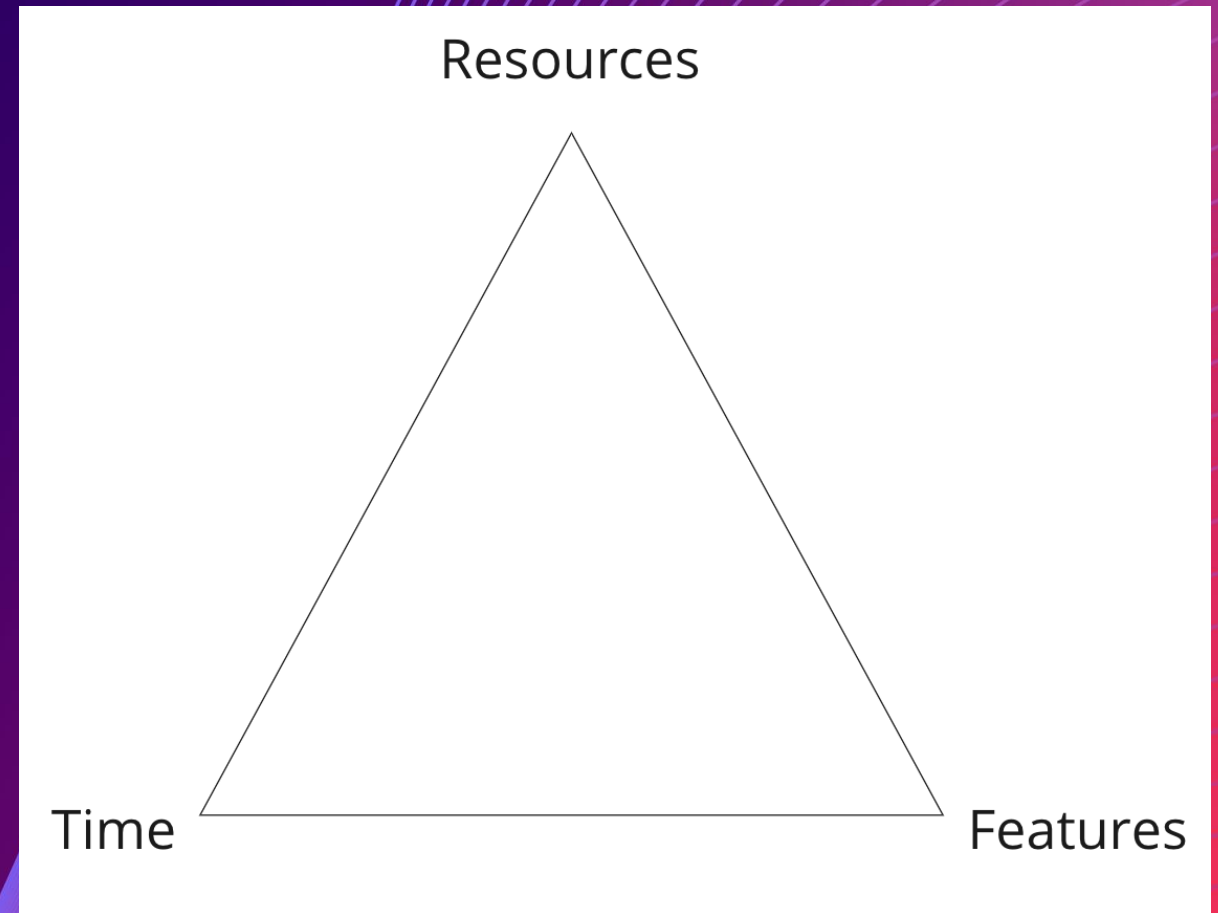


# What is cost governance

- Visibility and transparency into what you spend with AWS
- Primary goal, in my opinion, is not to save money
  - Compliance with budget constraints is a part of cost governance

# What if we had no cost governance

- Resources can be people & hardware costs
- Time, features & people fixed
- Poor cost governance results in expensive solutions

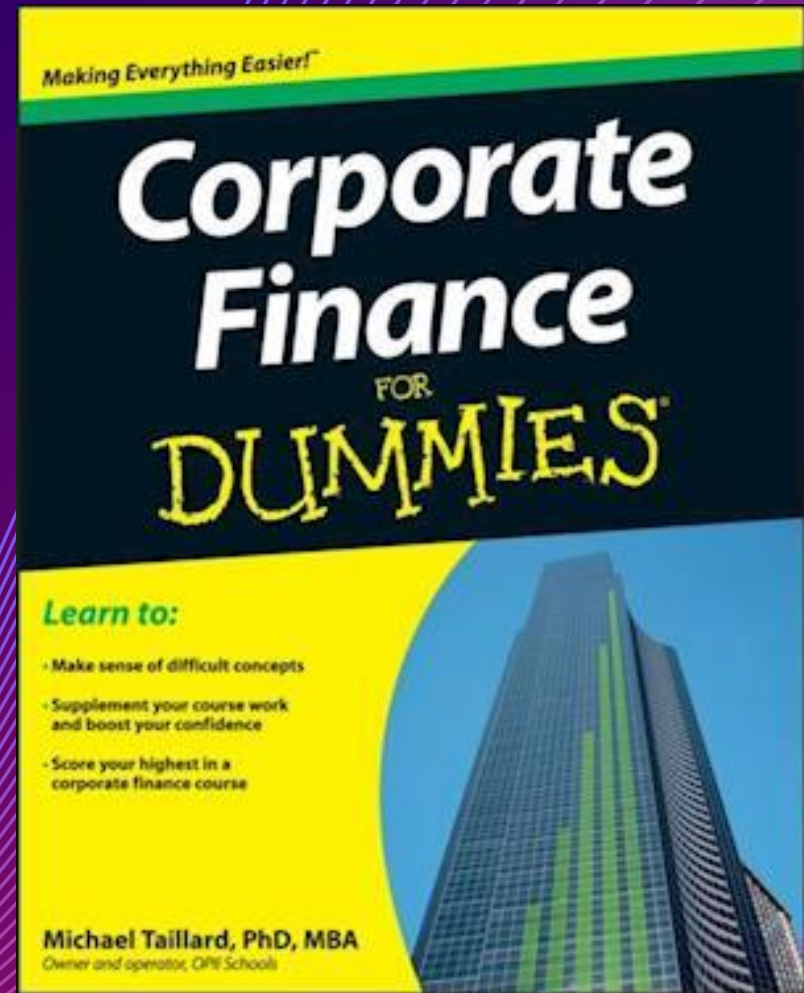


# What are we trying to achieve with cost governance



# Educate and enlighten

- Ensure financial literacy amongst R&D as well as finance
- Provide business leaders with a clear understanding of cost of running a product
- Provide data to drive sales discussions
- Ensure finance see beyond the invoice



# What is finance getting for its money?

Top down view



AWS Cost Explorer

Bottom-up view



Amazon EC2 Instance with CloudWatch



Amazon RDS

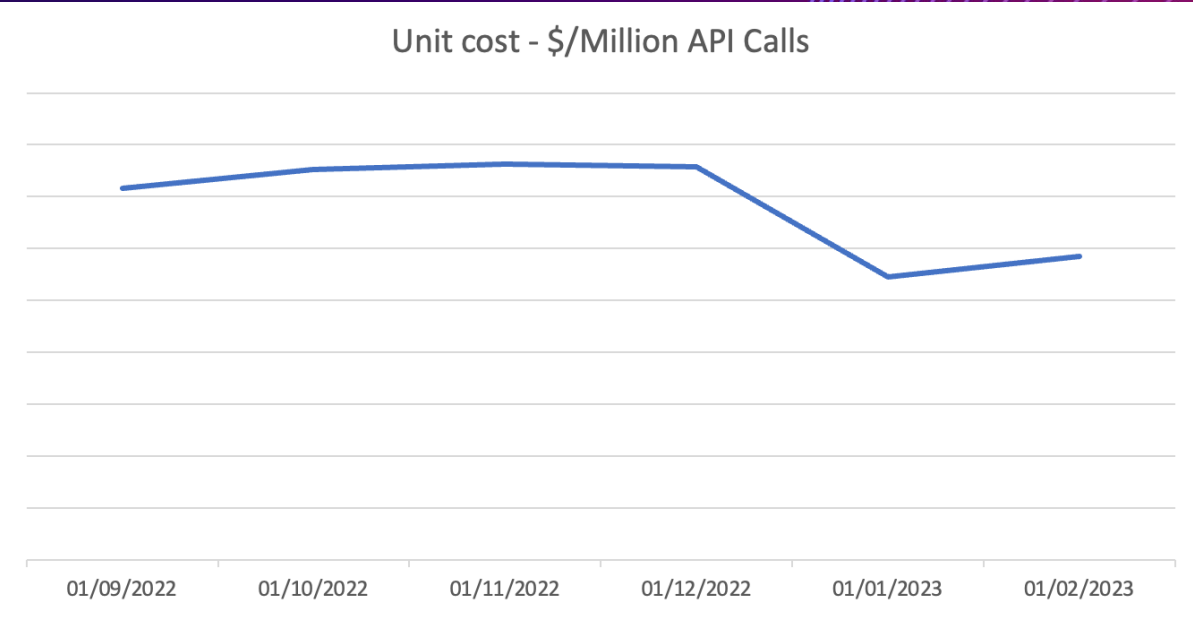
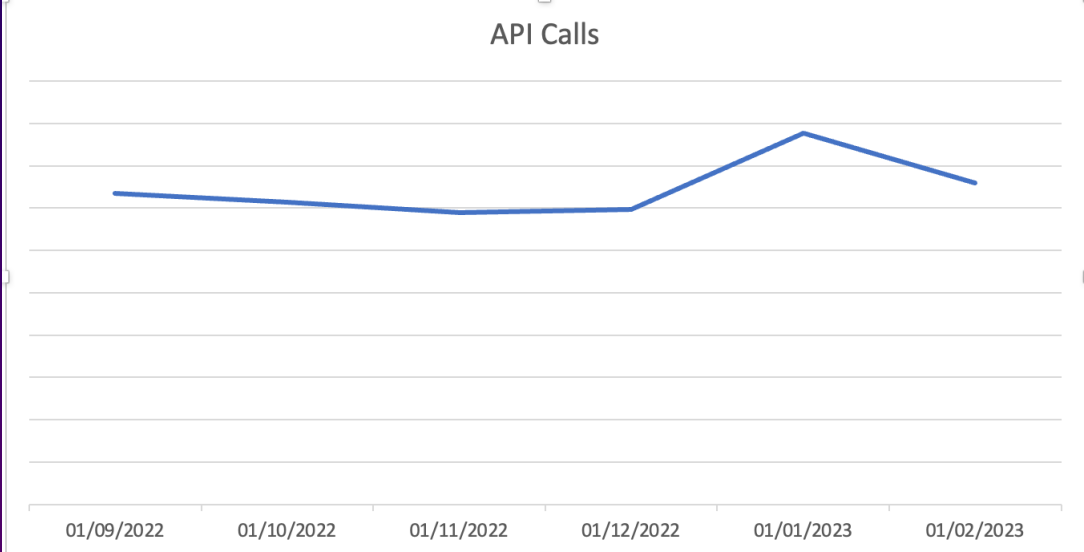
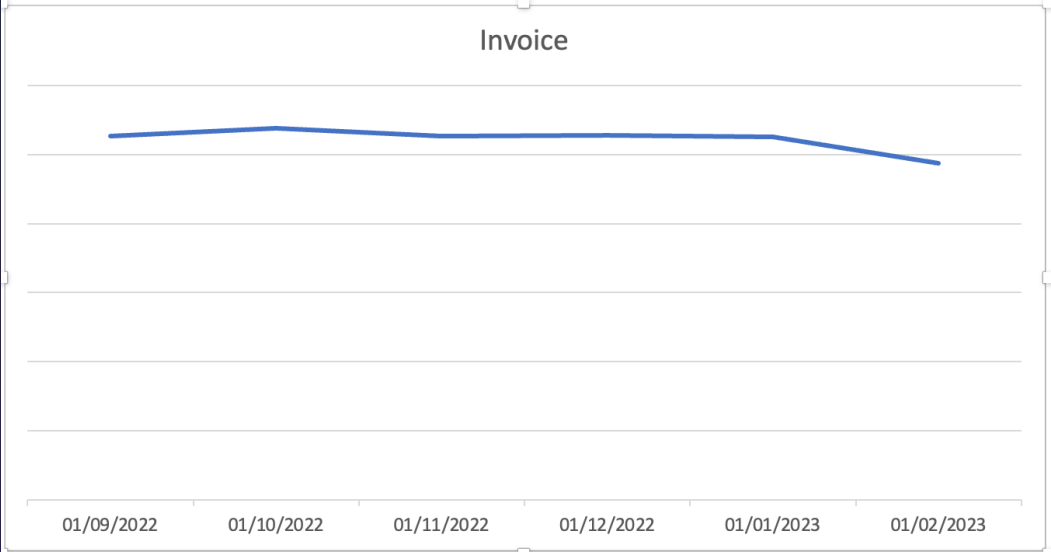


# Unit costs & efficiency metrics

# Unit costs

- Unit cost relates spend on cloud resources with usage
- Allows the business to understand spend in different dimensions
  - How much does it cost us to do a unit of work?
  - How much does it cost to provide a particular service or product?
- A flat invoice month to month may hide a huge jump in traffic
- Examples
  - \$ / Million API calls
  - \$ / GB data served
  - \$ / <thing that our product does>

# Unit costs



# Efficiency metrics

- If unit costs are a top-down view on the system, efficiency metrics could be seen as the bottom up view
- Track how well you are using your AWS resources
  - Mean or median CPU usage of EC2 instances
  - Mean or median CPU or disk usage of RDS databases
- CFOs likely would prefer a summary of this technical data
  - Traffic light system on agreed thresholds
  - CPU usage of EC2 VMs is yellow this month



# Next steps



# Fundamentals

- Implement a tagging strategy
  - Start with what questions the business (CFO/COO etc) want to answer
  - What insight do you want to provide
- Enable CUR report export from cost explorer
  - Export as Parquet and enable athena access
  - Include all details
- Configure athena query access to billing data
  - Search "athena cur query"
  - <https://docs.aws.amazon.com/cur/latest/userguide/cur-query-athena.html>

# Unit costs & efficiency

- Athena can be used to combine finance data with operational data
  - CUR export provides finance data
  - Operational data depends on your product and environment
    - For example, you could get request count from ALB or api gateway logs in athena
- Cloudwatch can create dashboards on operational metrics aggregated by tag
  - Search “cloudwatch monitor tag dashboard”
  - <https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/CloudWatch-Metrics-Explorer.html>

# Visualizing

- Start with exporting athena results to CSV and providing to finance
  - Accountants love excel
  - Allows everyone to understand where data is coming from
- Quicksight can be used to visualize data extracted from athena
  - Search "well architected labs CUR"
  - [https://wellarchitectedlabs.com/cost/300\\_labs/300\\_cur\\_queries/](https://wellarchitectedlabs.com/cost/300_labs/300_cur_queries/)

# One last thing....

- What about Reserved Instances and Savings Plans!
- I see RIs and Savings Plans as the icing on the cake
- Making reservations too early might mean baking in inefficiency

# Thank you!

Speaker Name

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