BBC

Architecting for scale with the cloud and serverless

A case study of BBC Online

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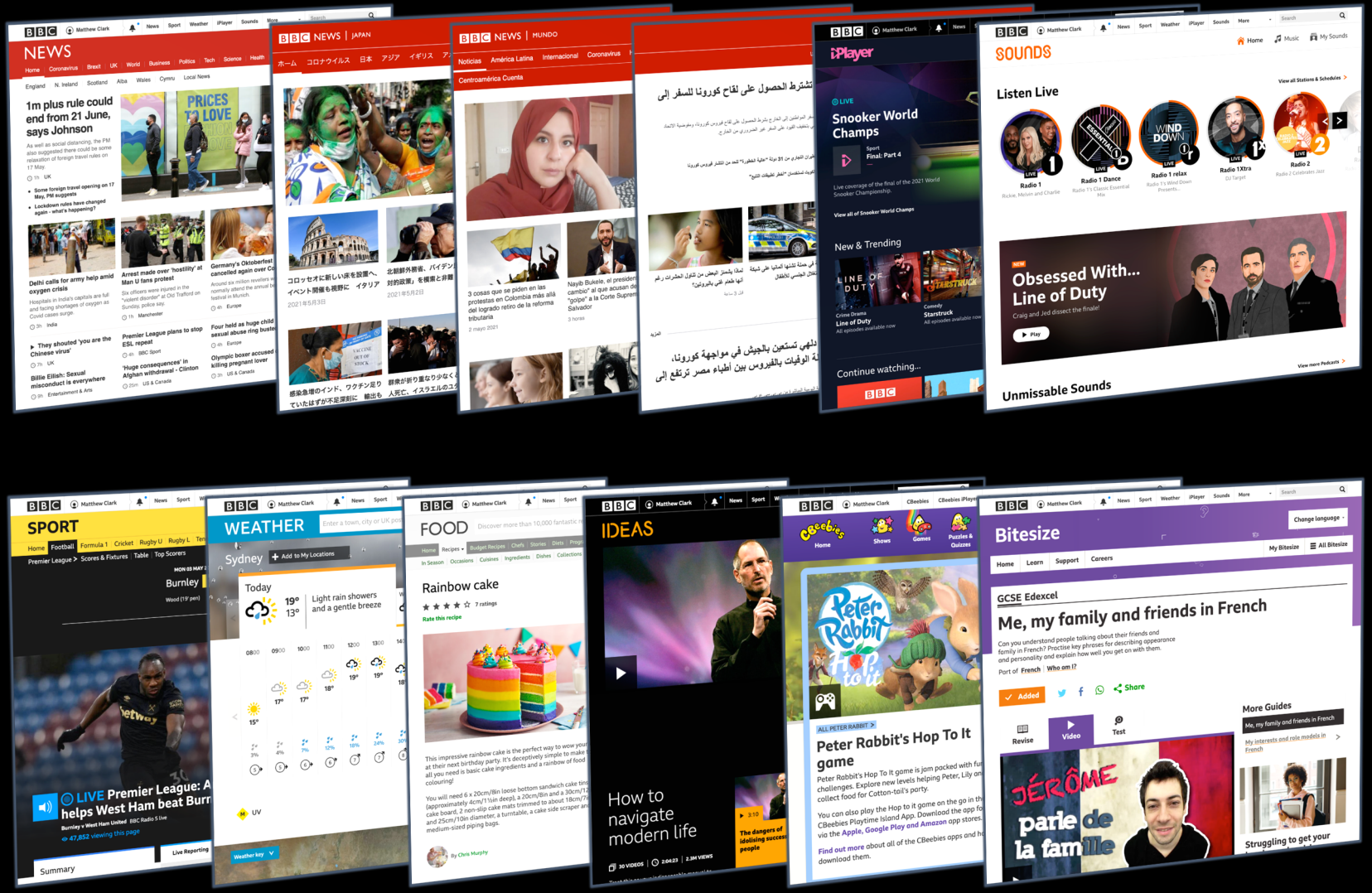

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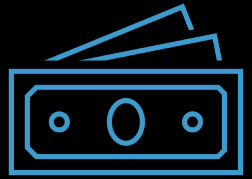
Our requirements

High traffic

Global and highly variable

Broad range of content

Created by multiple teams



Good value

Quick to build, affordable to run

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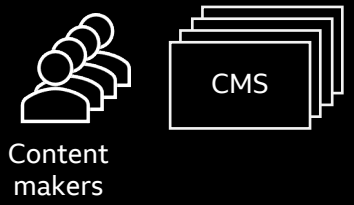
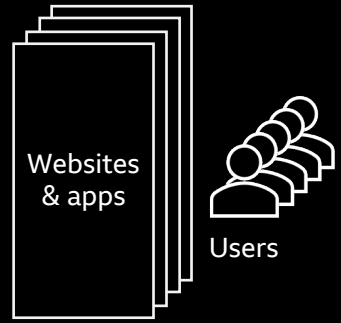
Architecture





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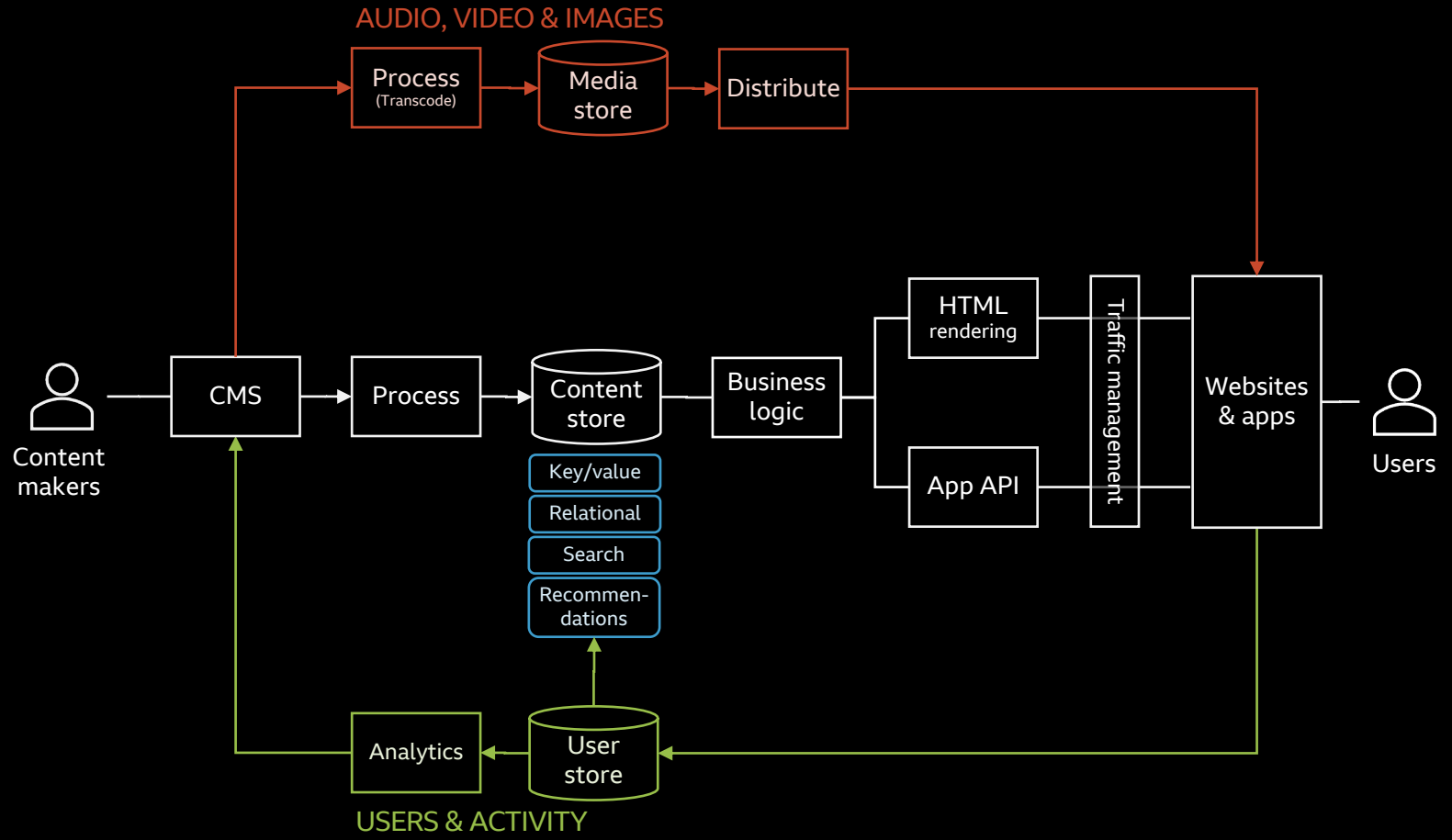
Architecture



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Caching

Four reasons to cache:

Scale

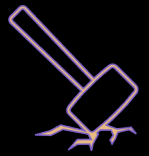
Handle more requests

Speed

Faster responses

Cost

Usually cheaper overall



Resilience

Serve stale on error

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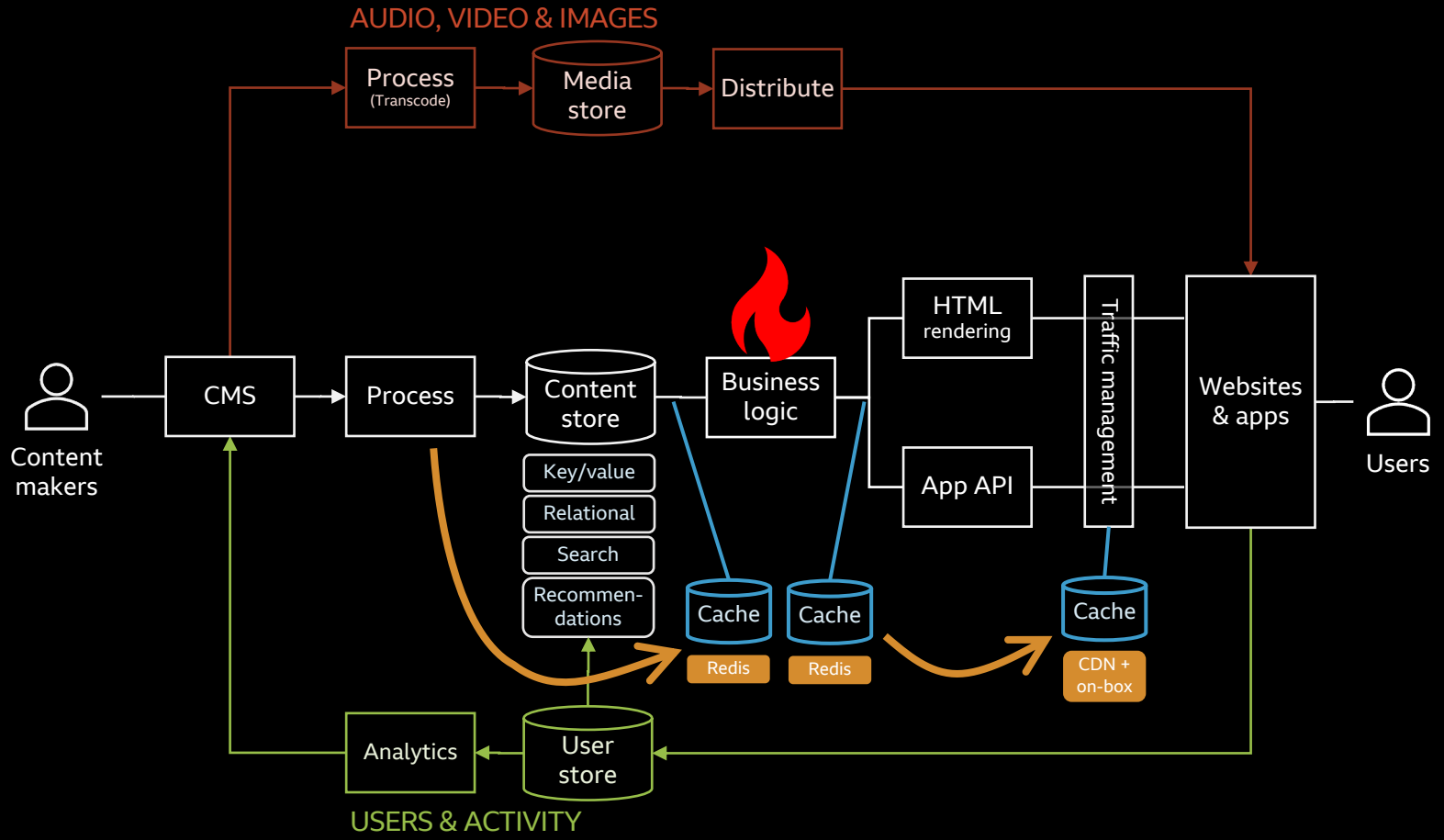
Architecture



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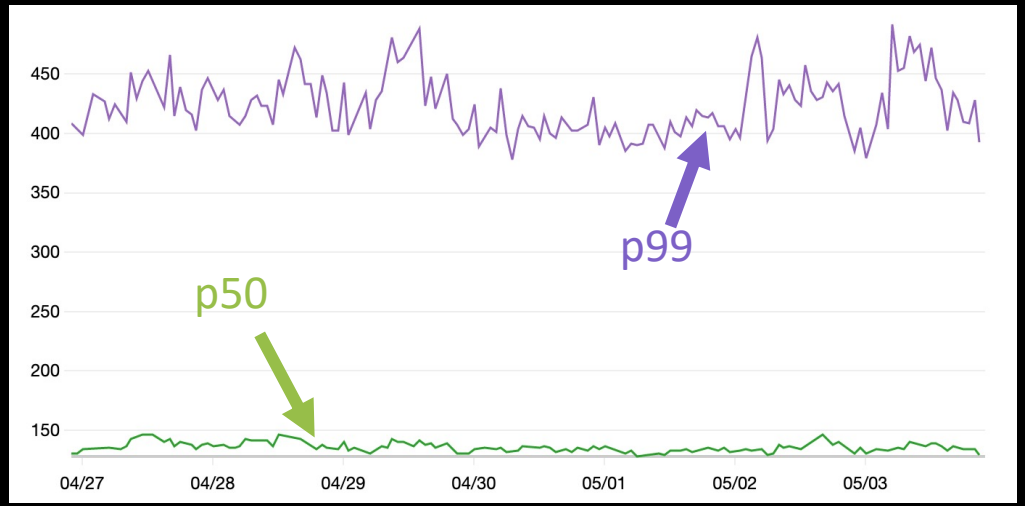
Serverless (compute & more)

P100 multiple seconds

The three arguments against serverless:

1. Slow
2. Restrictive
3. Expensive



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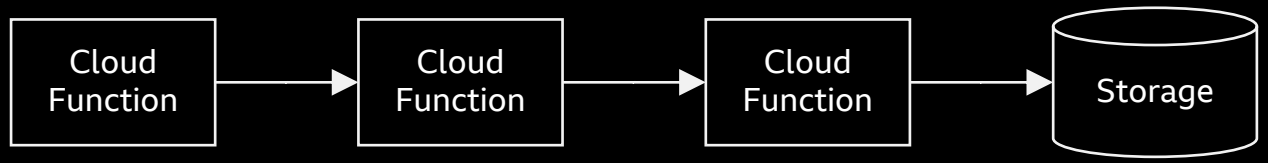
Idle function problem (aka function chaining)



300ms	300ms	300ms	300ms
1,200ms	900ms	600ms	

Total	900ms of compute
	2,700ms of cost

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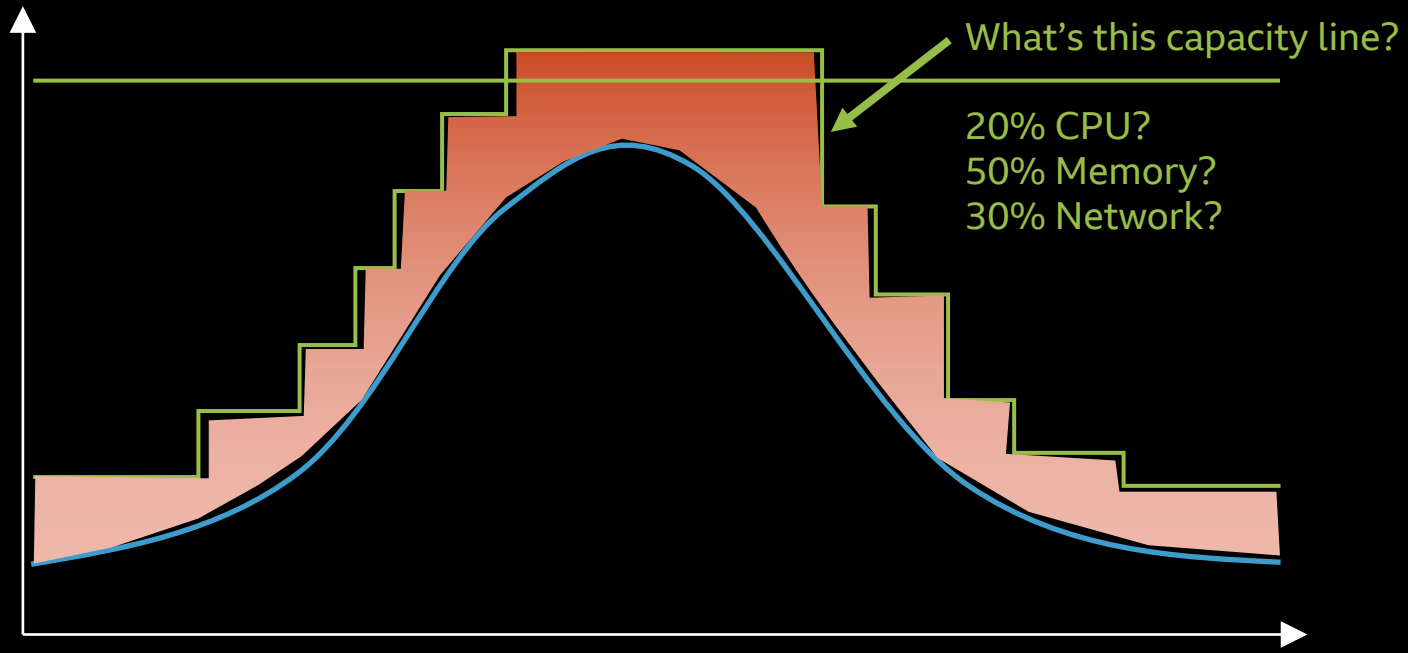
Autoscaling is, in effect, permanent overprovisioning



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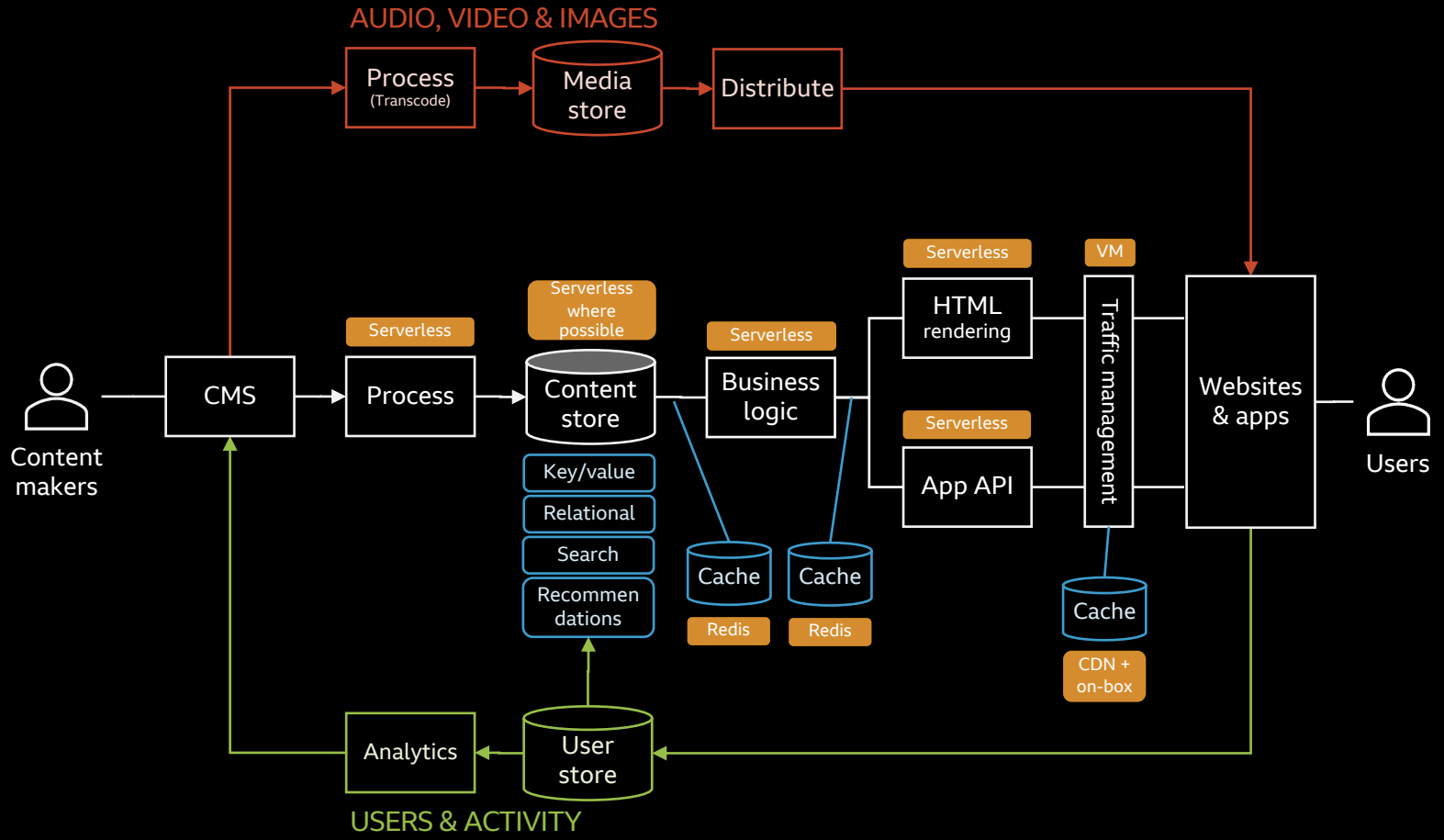
Serverless compute may cost more, but you need less

Architecture



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Have clear ownership

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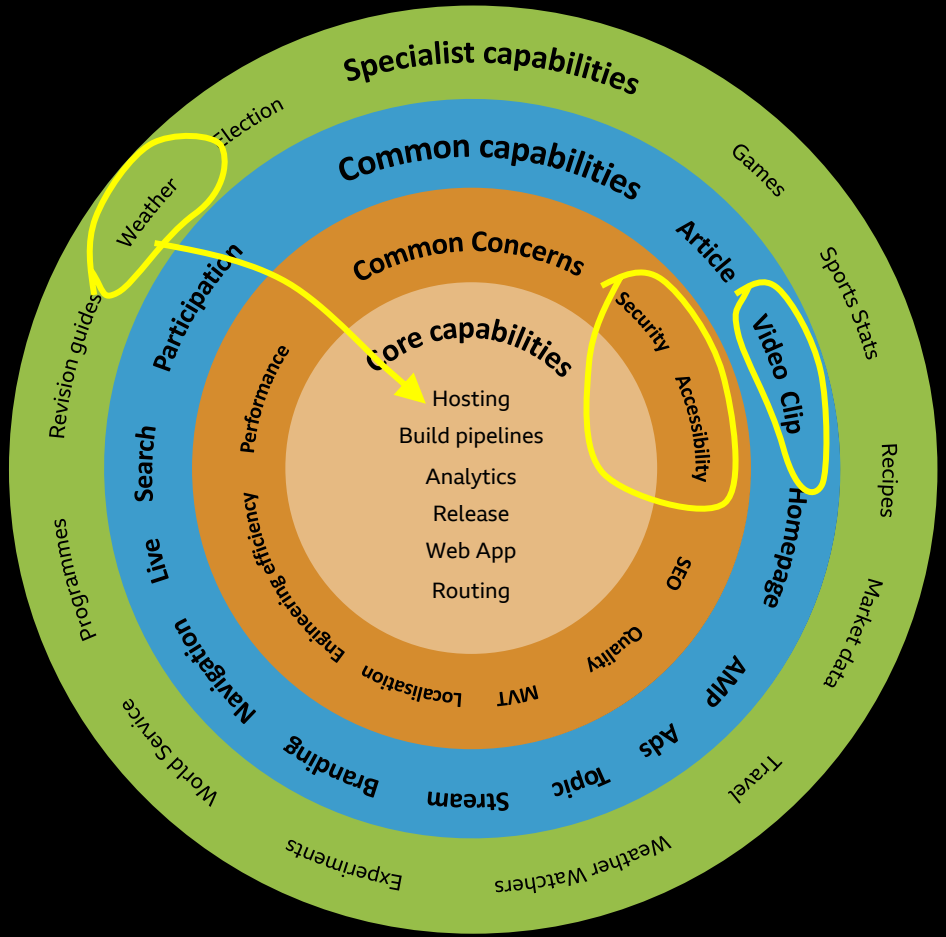
Have clear ownership



Make a list of everything that needs to happen.

Then organise around it.

Ensure each item is clearly owned end-to-end by a team.

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Make the common things easy and the specialist things possible

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Make the common things easy and the specialist things possible

80% of services take **the golden path**

- Consistent technology choices
- Shared tooling
- Maximise reuse

20% of services have **specialist requirements**

- Different technologies
- Different tooling
- Limited reuse

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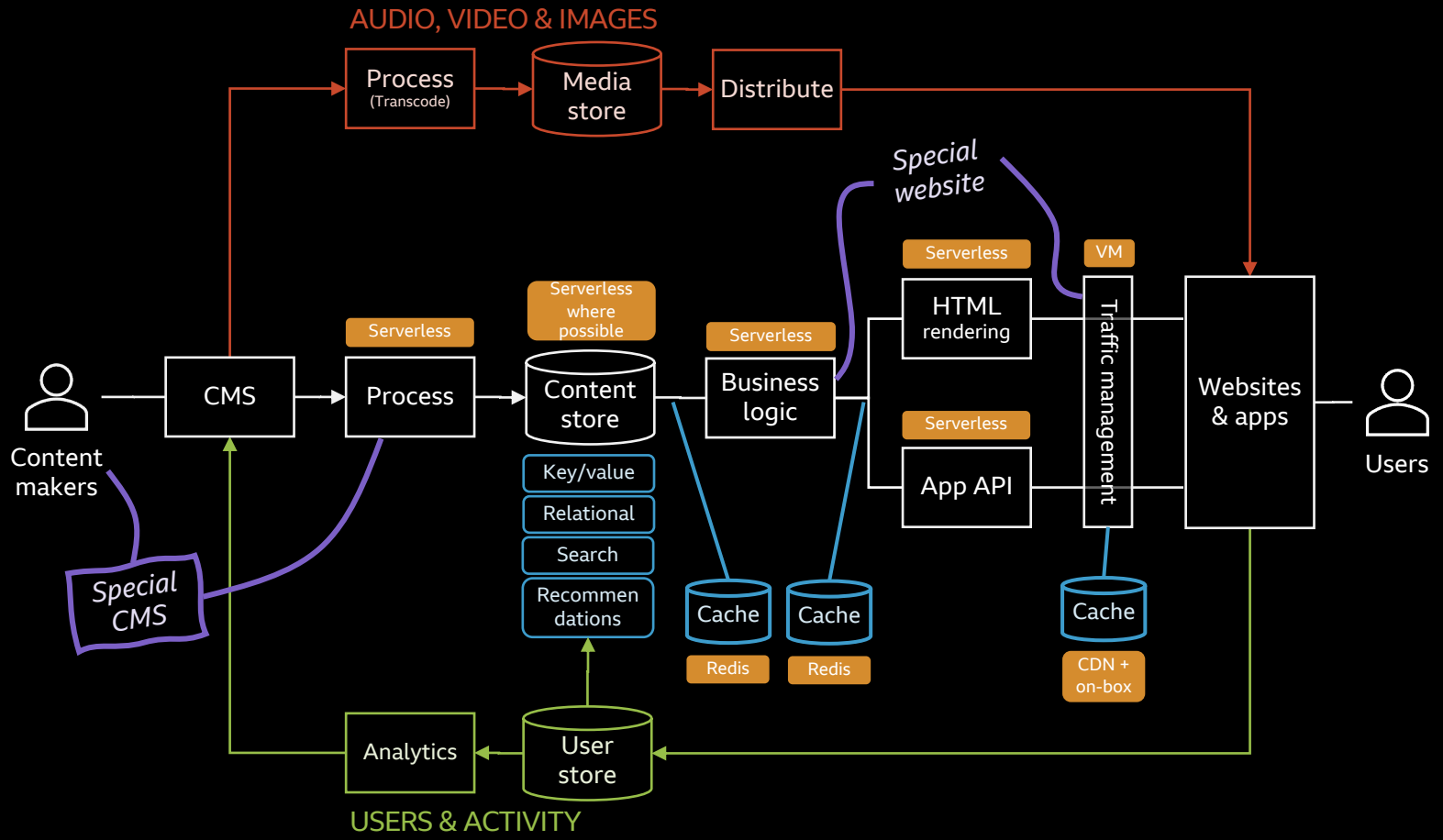
Architecture



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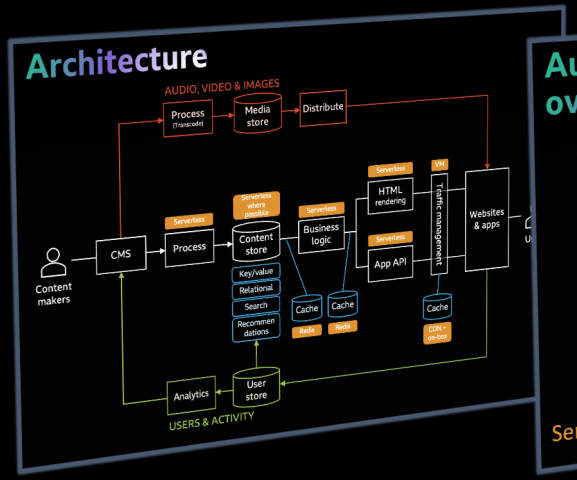
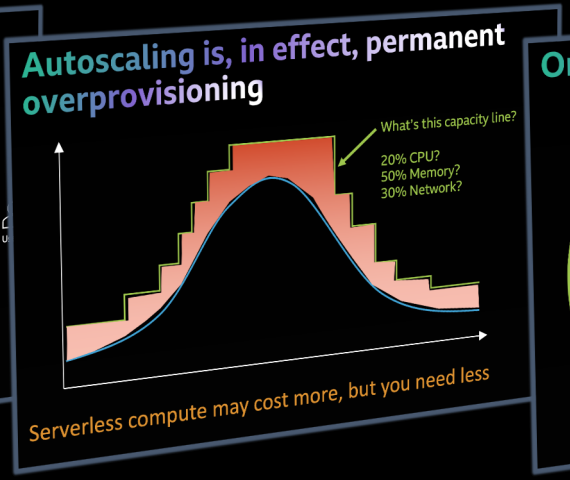
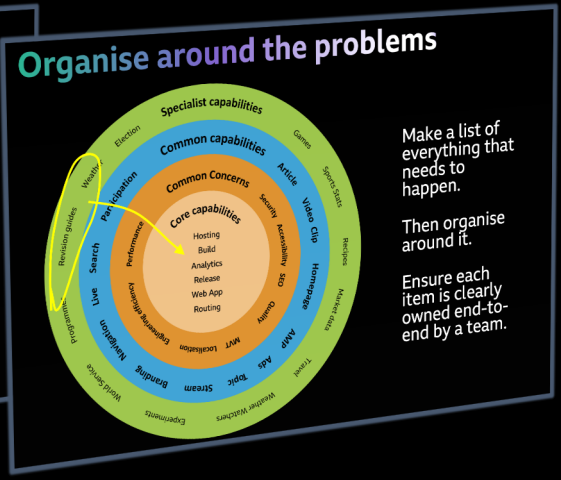
Summary







Thanks for watching

Thoughts most welcome, on Twitter, LinkedIn, or matthew.clark@bbc.co.uk

We're hiring too (in the UK) ☺

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