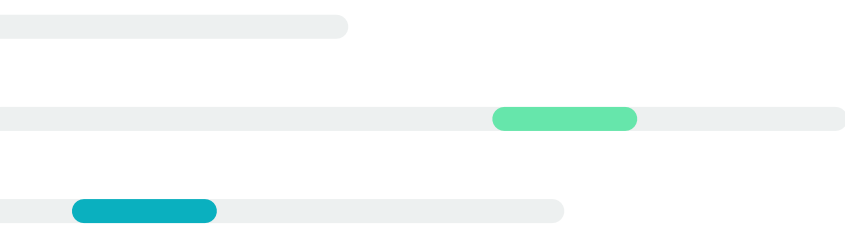


Winning Below the Glass

Make sure your website
doesn't crack under pressure





It may only be a couple of months out of twelve, but Black Friday through to Christmas can feel like a whole year's pressure wrapped into one. Commercially speaking, it often is.

In our first eBook, you learned about winning above the glass, by successfully capturing the attention of your audience on the most precious retail space on the planet—the screen. In our second eBook, you'll learn about winning below the glass, and how to get the most from your infrastructure and operations behind the scenes.

Come November, the pressure is on. Peak web traffic and record-breaking sales mean your infrastructure can't so much as creak.

We look below the glass to put customer satisfaction under the spotlight



The world below the glass

What customers experience on their screen, that precious 2mm retail space, is ultimately the result of great engineering. Some of the most sophisticated and engaging digital brand experiences are the combined work of exceptional marketers and product specialists and a culture of excellence in engineering teams. Leading brands closely sync these two superpowers so that an advertising drive is supported by feature releases and platform stability.

Creating positive customer experience relies on:

- Engineering teams that can proactively find and fix problems before consumers are impacted—so that the brand remains in control of customer experience.
- Architecting your software, infrastructure, and cloud investments for scale and efficiency—so when customer demands evolve, the brand can focus on creation and innovation.

Retail brands can achieve exceptional customer experience by focussing below the glass, on operational efficiency to ensure uptime, performance, and reliability.

Uptime, performance, and reliability

Plenty of case studies show that the websites of high-profile brands crash under the strain of Black Friday. But the causes of the crashes and the ability to prevent such disasters have drastically evolved in recent years.

Widespread adoption of the cloud has helped brands to scale quickly when they see an opportunity. In our first eBook, we referenced how M&S' use of cloud has helped accelerate its digital-first strategy. Today crashes relate to infrastructure decisions that could easily be managed within the business itself, but for a number of reasons, are not.

Often problems occur because IT engineering teams can't see the issue coming, or what will trigger it. But foresight is available long before the incident itself. The patterns of a summer trading period can help ensure metrics are in place to avoid disaster on Black Friday.

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Key brand behaviour

The first and foremost priority below the glass is to introduce platform stability. Without this baseline, any business—especially retail—is going to struggle in a digital environment. Brands need to create synergy between delivery and resilience so that change isn't the enemy of stability. Continuous delivery, or something close to it, is becoming the de facto standard for engineering teams.

Look out for these warning signs

If you can't understand and act on customer experience, your ability to influence commercial outcomes below the glass will be limited.

Many businesses still experience the siloed thinking that means engineering teams are stuck within their own production cycles, without insight into the customer-facing requirements of the business. Meanwhile, the demands that hit the engineering desk have no understanding of their delivery mode. This disconnect is still accepted as the norm.

But companies such as M&S, FARFETCH, BT Shop, and Talabat have managed to overcome these barriers, adopting an observability strategy to help empower their engineering teams and the business as a whole.

Here are some tell-tale signs that you might be stuck:

- It takes too long to resolve incidents because you don't see them coming, see them too long after the fact, or can't quickly diagnose the cause of the problem.
- Are you arm-wrestling complex operations that don't provide the quickest or best route to an outcome (and may frustrate your team)?
- Deployments often break things—irrespective of how diligent your developers have been.
- Too much time spent being reactive, rather than heading off problems based on early warnings and introducing new ideas based on good data.
- Have you got multiple tools that don't deliver their full value, and data silos that don't give the insight they ought to?

None of the above are uncommon problems, which is why observability proves such a revelation to many engineers.

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How to win

Harnessing observability and manageability isn't wizardry. The retail organisations New Relic has helped thrive through telemetry data focus their efforts on getting important basics right. This allows them to improve key processes that deliver smarter and faster operations.

To start making such changes, focus your efforts on reliability. Identify the business impact of issues, rapidly find the source of issues, and improve your resolution times.



Tips to thrive with telemetry data:

- Use telemetry data to ensure you understand how issues impact your business. You should immediately see the latest outage your organisation has suffered, and gauge the impact it has on customers, employees, and partners.
- Tie engineering and commercial problems together, ensuring the whole organisation's focus is on letting you do the best job you can.
- Understand how your organisation was alerted to the issue and refine your alerts and dashboards. Don't hear about problems from customers.
- Commit to a workflow approach to ensure you know how to resolve the issue, including how long it will take and how to keep improving in this area. The endpoint isn't fixing the issue. You have to track how it occurred, how you discovered it, and where the stack can be improved.

For retail businesses, this kind of end-to-end thinking must become the norm. Identifying potential problems before they start, or in real-time, is the start. Beyond that, it's about fixing it quickly, and continual improvement, so every incident leads to a net gain.



Key metrics to consider

Brands that get these metrics right see a wide range of benefits that make both engineers and accountants happy, including:

Customer metrics: high customer satisfaction, improved market perception, increased basket size, reduced time to checkout

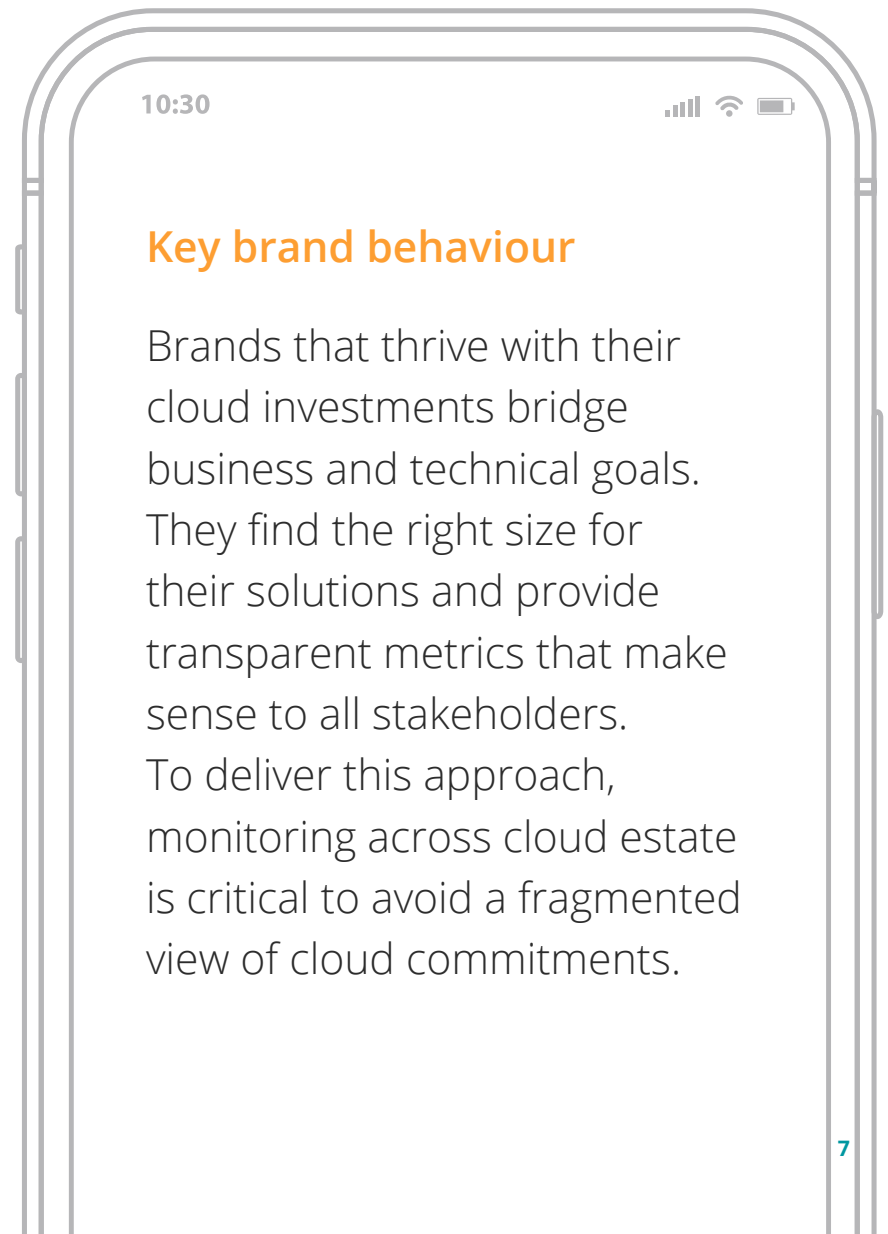
Business performance metrics: uptime, availability, MTTD/R, MTBF, staff retention, talent acquisition, cost to serve

Technical metrics: service level attainment, incident count/duration, incident engagement, utilisation

Operational efficiency

Many organisations are migrating traditional workloads to the cloud to improve time to market, increase their ability to scale and understand fluctuating consumer demand. Now, retail engineering teams have to build for scale to capitalise on their cloud investments. But in a competitive commercial landscape, this must be done in parallel with reducing costs.

While the decision to move to the cloud typically is driven by good commercial and strategic sense, the ability to back up that decision with the right processes is often less clear. Inefficiencies can creep in due to a lack of visibility and a failure to align technical solutions to the business need.





Look out for these warning signs

The cloud offers an array of advances when applied to the right business case—but simply buying the licenses won't solve the problem. You need to be strategically and culturally invested across every line of business.

How many of the following apply to you?

- We're inefficient in how we use our infrastructure and cloud resource—but we can't transparently reflect this in our monitoring, or quantify the issue.
- Migration to the cloud has taken and continues to take too long so we lose some of the scale benefits.
- We suffer from tool sprawl and redundant sources of data.
- Too many people are needed within a process to resolve problems, so our ability to be nimble is reduced, and the autonomy of engineering teams is lost.
- We know that observability will help us make sense of these problems, but we feel trapped by the need for specialist knowledge to make it possible.

These are some common problems retail businesses face: wanting to maximise the value of the cloud but getting stuck in no man's land.



How to win

Winning below the glass means a wide array of benefits for your organisation and customers. The steps to uncover improvements in performance and value don't have to be complex. But they do require a mindset shift. Observability is a powerful driver that can make this possible.

In operational efficiency terms, these behavioural shifts will include:

1. Understand your full cloud commitment and map it against both technical and business objectives. For example, New Relic helps many organisations gain a complete view of their AWS ecosystem, EC2, EKS, and the complete range including CloudFront, DynamoDB, and ElastiCache.
2. Commit to giving both technical and business stakeholders a clear set of metrics that determine progress in any infrastructure and cloud migrations. Be transparent if you're encountering obstacles.
3. Ensure your cloud investments remain targeted, relevant, and cost-effective by tracking key performance indicators. These will help monitor utilisation and can show value against the business objectives you're trying to achieve.
4. Develop an established approach to cloud governance and report against it.

Key metrics to consider

Getting cloud visibility right means many advantages, such as faster and more predictable migrations, optimised infrastructure and cloud costs, and improved budget predictability. Here are some metrics to mark for success.

Business performance metrics: resource efficiency, customer support cost, service estate coverage, cost to serve

Technical metrics: time to instrument, time to provision, service availability, on-call events, incident volume

Whether you're preparing for the Black Friday deluge or simply getting your house in order, observability forms a core part of any drive towards operational efficiency, platform reliability, and cloud optimisation. The more clearly you see your infrastructure—through the eyes of your customer—the more effective your engineering efforts below the glass.

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