Video editing in the cloud

An analysis of the true Total Cost of Ownership

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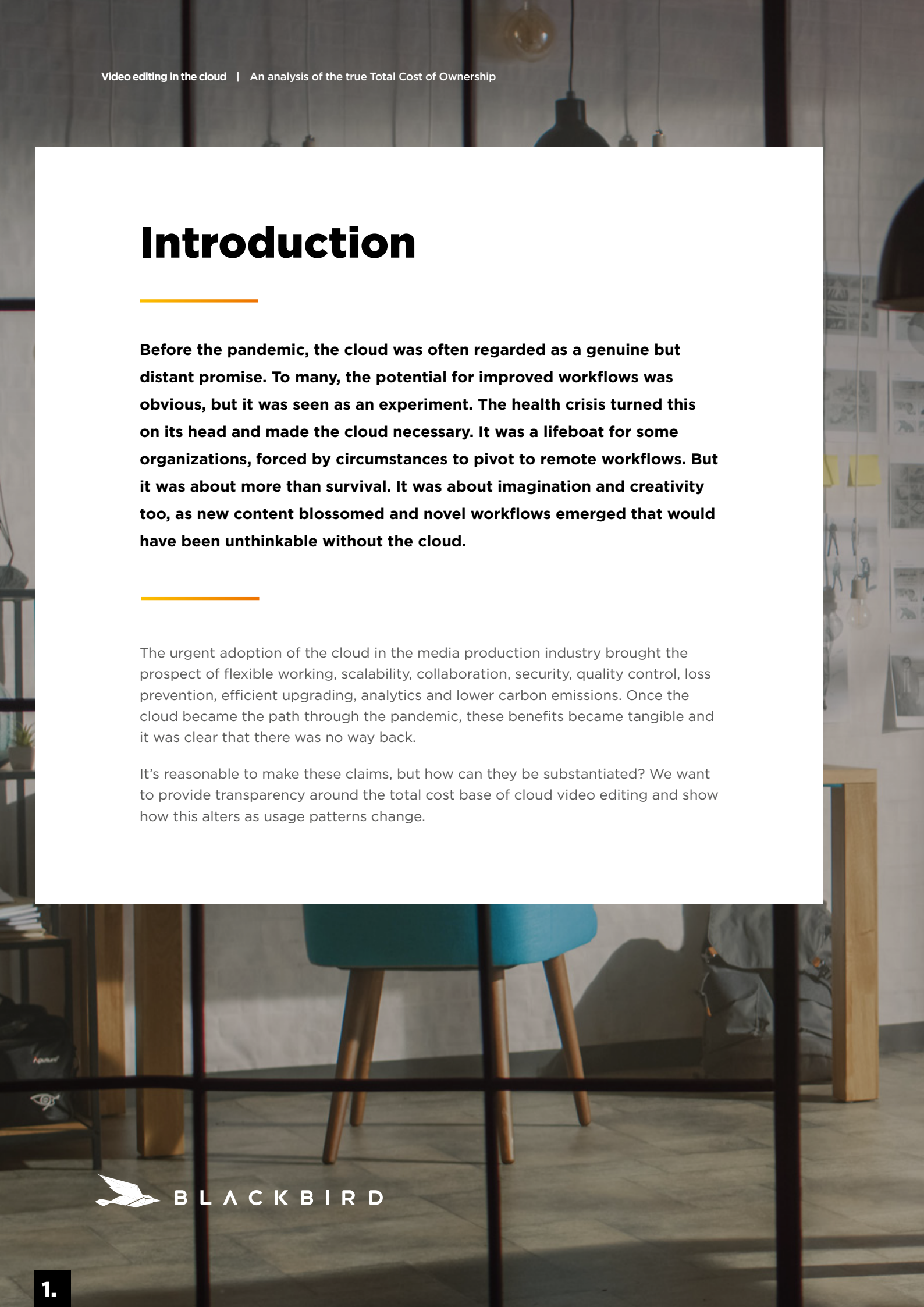
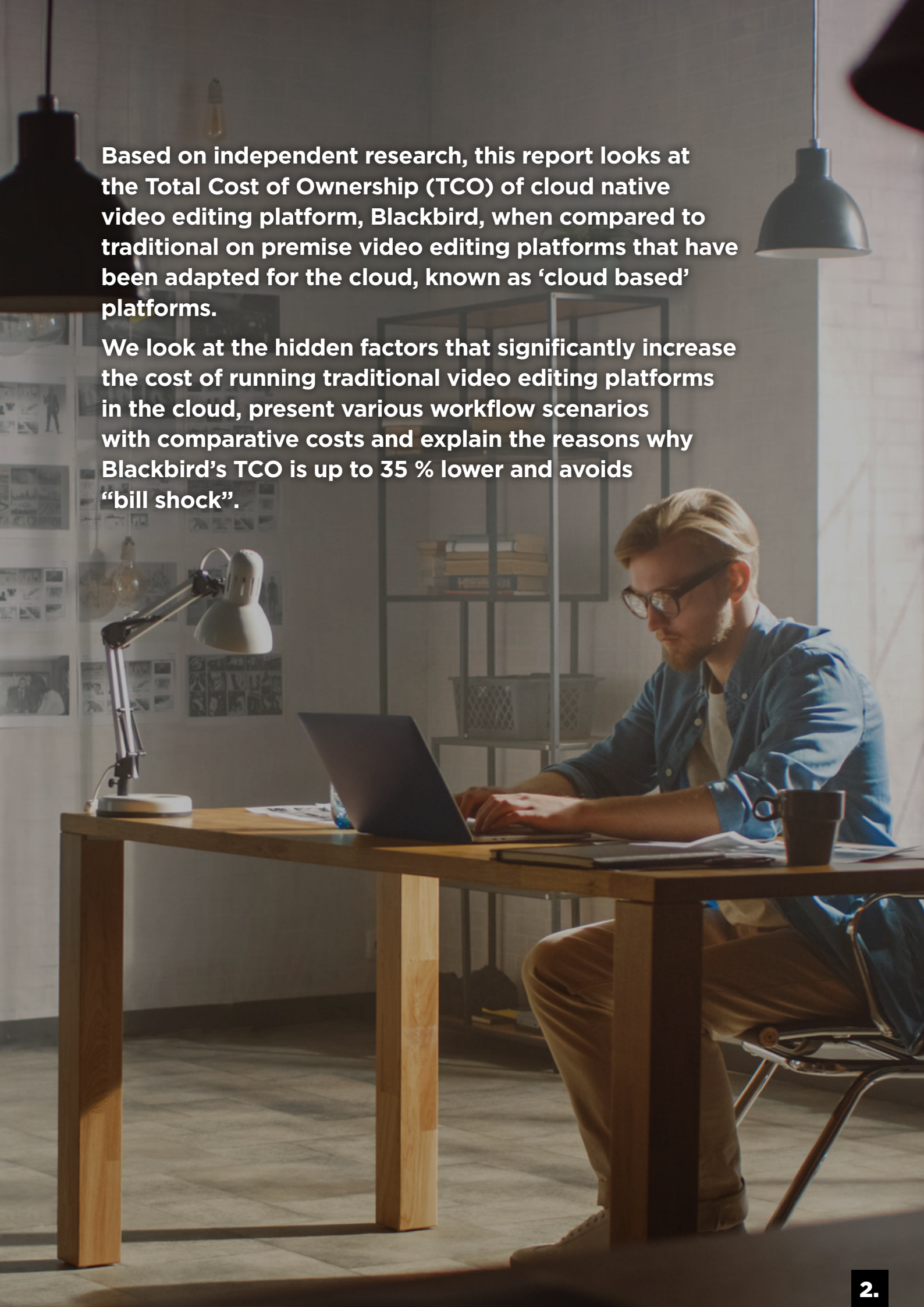
Introduction

Before the pandemic, the cloud was often regarded as a genuine but distant promise. To many, the potential for improved workflows was obvious, but it was seen as an experiment. The health crisis turned this on its head and made the cloud necessary. It was a lifeboat for some organizations, forced by circumstances to pivot to remote workflows. But it was about more than survival. It was about imagination and creativity too, as new content blossomed and novel workflows emerged that would have been unthinkable without the cloud.

The urgent adoption of the cloud in the media production industry brought the prospect of flexible working, scalability, collaboration, security, quality control, loss prevention, efficient upgrading, analytics and lower carbon emissions. Once the cloud became the path through the pandemic, these benefits became tangible and it was clear that there was no way back.

It's reasonable to make these claims, but how can they be substantiated? We want to provide transparency around the total cost base of cloud video editing and show how this alters as usage patterns change.





Based on independent research, this report looks at the Total Cost of Ownership (TCO) of cloud native video editing platform, Blackbird, when compared to traditional on premise video editing platforms that have been adapted for the cloud, known as ‘cloud based’ platforms.

We look at the hidden factors that significantly increase the cost of running traditional video editing platforms in the cloud, present various workflow scenarios with comparative costs and explain the reasons why Blackbird’s TCO is up to 35 % lower and avoids “bill shock”.

The hidden costs of traditional video editing platforms adapted for the cloud

It is possible to find the market costs of traditional video editing platforms that have been adapted for the cloud. However there are multiple hidden costs associated with these platforms that are not immediately apparent and must be factored into purchasing decisions:

- moving desktop applications to the cloud means virtualizing the systems they run on to provide remote access to that machine for remote users
- virtual machines need access to media, and traditional applications cannot read from some cloud storage - they require the media to sit on more expensive locally available storage
- moving media and content to the cloud is expensive and time consuming - the same applies to moving content between different types of storage and between regions within the cloud
- virtualized systems accessed through virtual desktops require high bandwidth for acceptable video performance
- virtualized systems require expensive high-end workstation infrastructure with significant GPU resources
- replicating traditional application workflows in the cloud needs significant infrastructure and regionalisation for every user
- compute costs can be identified relatively easily but the various hidden storage, connectivity and egress costs can be hard to determine
- spiralling costs when scaling up for additional users
- lengthy content upload / download times produce dead time for editors

These hidden costs make it difficult for purchasers to understand their true financial commitment which leads to 'bill shock' and uncontrolled expenditure.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Total Cost of Ownership comparison:

Cloud native Blackbird v cloud based traditional video editing platforms

Scenario 1

Full cloud workflow for a live sports rights holder with OTT platform

15 users

40 live games and 1 live stream per match

Live clips and highlights in multiple brand identities to OTT, digital and social

Features: remote distributed teams, collaborative editing, speed to market, simple graphics, promo ads

TCO comparison

Blackbird with Edge on premise delivers 12% lower TCO than remote into on premise NLE workflow

Blackbird with Edge in public cloud delivers

28%

lower TCO than full on premise NLE in public cloud workflow

Scenario 2

Full cloud workflow for global news or sports enterprise level business

150 users

Up to 20 simultaneous live streams and large volume of archive content

Live and file clips and highlights to OTT, digital and social

Features: remote and large globally distributed teams, live and file workflows, global access, collaborative editing, multiple workflows and end points, scalability, rich editing features needed

TCO comparison

Blackbird with Edge on premise delivers 25% lower TCO than remote into on premise NLE workflow

Blackbird with Edge in public cloud delivers

31%

lower TCO than full on premise NLE in public cloud workflow

Scenario 3

Remote to on premise workflow for 24/7 news broadcaster

35 users

5 live streams and file-based content

Live clips and highlights to OTT, digital and social

Features: remote distributed teams, collaborative editing, speed to market, simple graphics, subtitles, blur, multi-language support

TCO comparison

Blackbird with Edge on premise delivers 24% lower TCO than remote into on premise NLE workflow

Blackbird with Edge in public cloud delivers

35%

lower TCO than full on premise NLE in public cloud workflow

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TCO savings are per annum

Why is Blackbird's Total Cost of Ownership significantly lower?

- patented cloud native ultra-efficient codec enables professional editing in a browser – from anywhere
- requires just 2Mb/s bandwidth to operate
- runs on any laptop with no GPU requirements
- no remote connectivity into other systems required
- no need to move content from or to other storage
- no virtual machine infrastructure needed - minimising egress costs
- no dead time waiting for download / upload of content
- less administration and IT overhead costs as infrastructure enables the platform to provide services equivalent to multiple suppliers using other NLEs


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Files
Upload
Recycle
Recovery
AAF
YouTube
Thumbnail
Closed Captions
H264 Edge Publish
Twitter
Facebook Page
Web
Shortcuts
Layouts
Analytics
Help
Chat
14:54:15:19
01:00:55:18
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Blackbird Solution Overview

Blackbird is the only professional cloud native video editing and publishing platform.

Providing rapid access to video content for the easy creation of clips, highlights and long form content for publishing to everywhere, Blackbird allows enterprises to scale quickly, significantly improve productivity and meet carbon reduction targets - all due to the platform's highly efficient cloud native architecture.

- Fully-featured professional editor for all skill levels
- Log in from any browser anywhere - even on low bandwidth
- Access content instantly
- Create simple clips, sequenced edits, compilations and crafted highlights
- Publish content instantly to everyone, everywhere
- Enables unprecedented scale and collaboration
- Dramatically reduce the cost and time to create and publish content
- Consolidate workflows and boost productivity
- A transparent pricing model where costs are known upfront

Conclusion

Limited bandwidth is the ever-present bottleneck in the cloud. With resolutions, bit depths, frame rates and hence file sizes increasing all the time, you can't just rely on technology's tendency to speed up to solve the problem. Instead, you have to design a system that doesn't have the problem in the first place.

This is how Blackbird is built. It's a cloud native video editing system that doesn't need to move a single large video file, ever.

With our patented codec technology, frame accurate editing is always available. And because the Blackbird codec is so efficient, you don't need heavy duty workstations: any recent computer will work. Nor do you need monolithic software applications, because Blackbird gives full editing in a browser.

And now, precisely because of the way it works, we are able to show that TCO is up to 35% lower with Blackbird than with traditional NLEs. This makes it the best choice for:

Efficiency | Mobility | Speed | Sustainability | TCO

Contact commercial@blackbird.video to discover your TCO saving with Blackbird.

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“With Blackbird we don’t move large media files, so we avoid the drawbacks of editing in the cloud. Blackbird isn’t a technology where efficiency is “bolted on”. It’s intrinsic. We designed it that way.

It’s an end to end editing ecosystem that’s quicker and more mobile than any other solution. Sports, news, entertainment and government organizations have chosen Blackbird because it gets their work done faster and better. It’s road-tested. We know it’s a technology that works. Our customers see the results daily, in the harshest production environments, where time and cost are of the essence.

We have engineered Blackbird so that efficiency, sustainability and low TCO go hand in hand. With our system, you can’t have one without the others. We think it’s an unbeatable proposition. It’s a virtuous circle that’s good for speed of production, good for sustainability and good for your budget too.”

Ian McDonough, Chief Executive Officer, Blackbird


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Assumptions

The comparative Total Cost of Ownership analysis illustrated in this report is based on independent research. The consultant who authored this work made the following assumptions:

To demonstrate the cost of setting up the infrastructure to produce and edit all the following required content:

- to feed social platforms with snippets
- to create highlights / news packages for TV and OTT audiences
- to reversion content / sports games for rebroadcast on broadcast and OTT channels

It is assumed that there is some existing on premise infrastructure such as storage, and edit seats, but this is already used at max capacity. The infrastructure exists to get the video signal, to record and to store the switched feeds of all these games live (including the pre- and post-game interviews) onto the existing enterprise storage (this could be on on premise NAS/Archive or, as object storage in the cloud).

Costs of granular items are included:

- IT equipment (workstations, servers, storage), either on premise or in the cloud
- IT overhead costs (such as support costs, or OPEX costs to manage the IT, excluding networking, egress etc)
- individual software costs (such as Blackbird software or MAM/PAM software) with their associated support costs

These individual costs were aggregated to model the total cost of running and operating editing workstations. These include all hardware, software, and support needed.

Then in a further layer, these editing workstations are combined into editing workgroups, adding the cost of shared storage, IT equipment and software to run an editing workgroup in high resolution or proxy, either on premise or in the cloud.

All prices and costs are based on public pricing or estimated average pricings as of September 2020.

In order to model the cost of the possible cloud components of the workflows, we have used Amazon Web Services (AWS) as a base. For comparisons, all costs have been modelled at the month level. In case of Capex investments, they are amortized over 36 months (3 years). Cost of Capex IT does not include power and real-estate costs.

Qualitative value add-on arguments

In addition to quantifiable aspects mentioned above, a number of qualitative comments have been made. They cannot be included in the quantitative TCO analysis but can be mentioned in a qualitative way.

Here is the list of these extra points mentioned, usable in qualitative, but not quantitative ways:

- multisite workflows: breaking the silos of multiple source storage pools that can all be accessed ubiquitously
- giving a second life to archive content
- quantifying speed of access to growing source content

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