

# The Four S's of Modern Data Backup and Recovery:

Scale, Simplicity,  
Security, and Speed

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# THE FOUR S's OF MODERN DATA BACKUP AND RECOVERY: SCALE, SIMPLICITY, SECURITY, AND SPEED

April 2023

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## Executive Summary

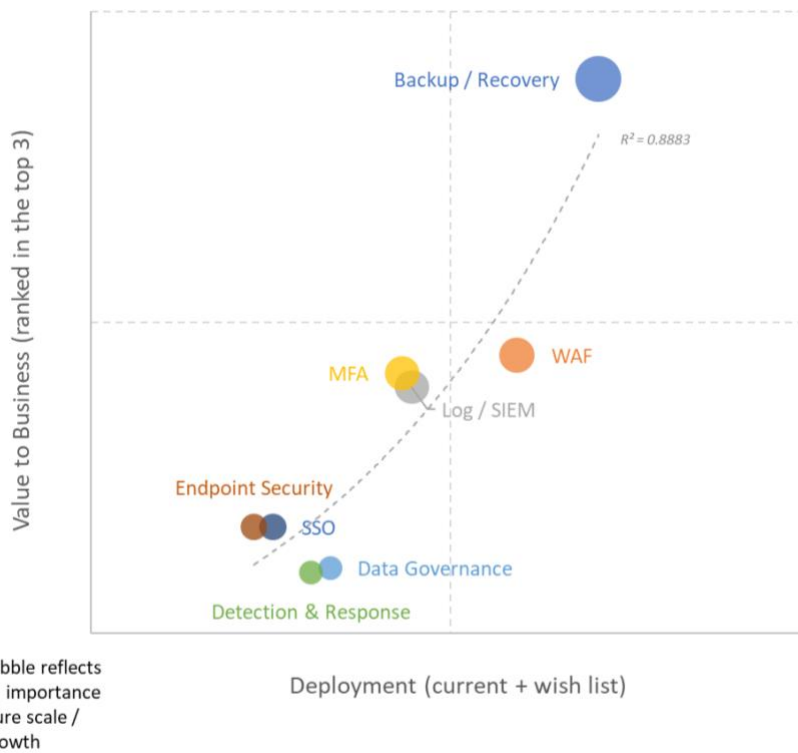
For modern, data-driven businesses the **productivity of users** and **profitability of online businesses** are at risk when their data is not available — e.g., as a result of *compromised credentials*, *ransomware*, *software-based corruption*, or *accidental deletions*. How your data gets backed up is always important, but how your data gets recovered is critical. Data backup is the means; data recovery is the end.

Modern **data backup and recovery solutions** are characterized by *scale*, *simplicity*, and *security* (the “what, and how” of effective data backup) — and also by *speed* (the “so what, and why” of effective data recovery).

### The Four S’s of Modern Data Backup and Recovery

Among a representative constellation of cybersecurity technologies, businesses recognize the high value of **data backup and recovery** solutions, both for today’s needs and for their future scale and growth (see Figure 1).

**Figure 1: How SMBs Perceive Selected Cybersecurity Technologies**



**Data backup and recovery** solutions occupy the coveted top-right corner of Figure 1, which shows how respondents in Aberdeen’s benchmark study perceive a selected portfolio of cybersecurity technologies:

- ▶ The x-axis represents the *degree to which each of these technologies have been deployed* (current, plus planned)
- ▶ The y-axis shows their *perceived value to the business*, based on respondent rankings
- ▶ The size of the bubble reflects their *perceived importance for future scale and growth*

Source: Aberdeen, April 2023

But not all data backup and data recovery solutions are created equal. In Aberdeen's view, modern data backup and recovery solutions are characterized by four key attributes (see Table 1):

- ▶ **Scale**
- ▶ **Simplicity**
- ▶ **Security / Compliance**
- ▶ **Speed of Recovery**

**Table 1: The 4 S's of Modern Data Backup and Data Recovery**

<b>Scale</b>	No matter <b>what type of data you have</b> (including <i>objects Amazon S3 buckets</i> ), and <b>how much data you have</b> (from <i>terabytes</i> , to <i>petabytes</i> , to <i>exabytes</i> ) — you need a data backup capability with the flexibility and scale to support your business needs. The other end of the scale spectrum is also important — many organizations have a high volume of small objects (e.g., $\leq 50\text{Kb}$ ), which can also impact the cost and complexity of data backup.
<b>Simplicity</b>	You need a data backup capability that's <b>simple to deploy</b> and <b>cost-effective to operate</b> in your dynamic data environment, so you can focus more on achieving your strategic business outcomes — which calls for <i>intelligent discovery</i> , <i>automated compliance</i> with your protection policies, and <i>continuous backup</i> .
<b>Security and Compliance</b>	Your cloud service providers are responsible for the availability and resilience of the computing infrastructure that hosts your data — but in a <b>shared responsibility model</b> , the <i>confidentiality</i> , <i>integrity</i> , <i>availability</i> , <i>compliance</i> , and <i>resilience</i> of your cloud-based data is still up to you. <b>Compromised credentials</b> , <b>ransomware</b> , <b>software-based corruption</b> , and <b>accidental deletions</b> are among the many drivers for having data backups that are <i>air-gapped</i> , <i>immutable</i> , <i>encrypted</i> , <i>strongly authenticated</i> , and <i>fully auditable</i> .
<b>Speed of Recovery</b>	The only reason to have data backups is because there will be times when you need <b>data recovery</b> to get your business back up and running, quickly and reliably. When it comes to unplanned downtime, <b>time is money</b> — whether from the <i>lost productivity</i> of your users, or from <i>reduced revenue</i> or <i>increased costs</i> associated with your business-critical systems during the time of disruption. Leading solution providers have leveraged multiple advanced techniques to optimize time-to-recovery, for order-of-magnitude improvements in speed of recovery.

Source: Aberdeen, April 2023

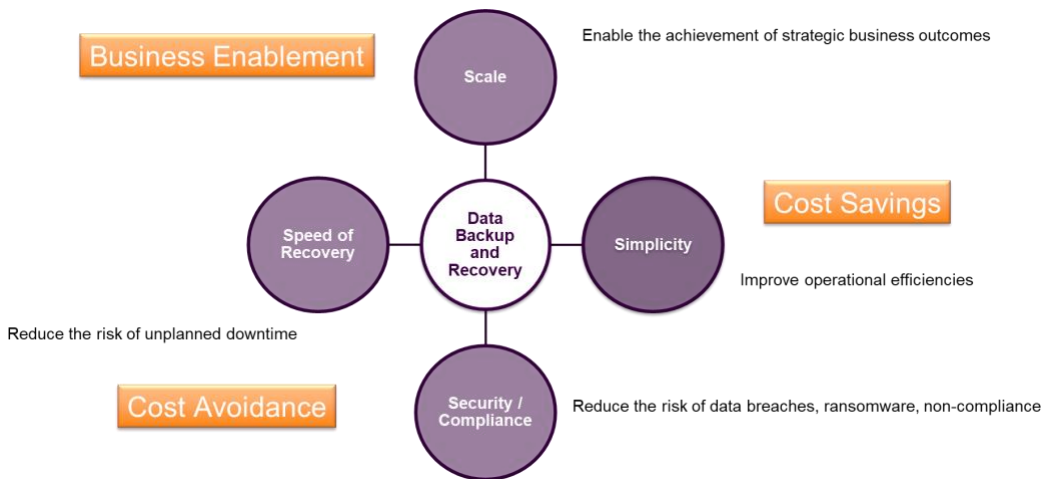
The always-important “what, and how” of effective data backup is built on the attributes of **scale**, **simplicity**, and **security / compliance** — these are the *means* by which organizations achieve the ultimate *end* of effective data recovery. The critical “so what, and why” of effective data recovery is built on the complementary attribute of **speed**.

Over many years, Aberdeen has consistently found that the business benefits realized from cybersecurity technologies fall into three high-level categories:

- ▶ **Reduction in risk**, which is ultimately about *cost avoidance*.
- ▶ **Operational efficiencies**, which are ultimately about *cost savings*.
- ▶ **Achievement of strategic business outcomes**, which is ultimately about *business enablement*.

The *scale, simplicity, security / compliance, and speed of recovery* offered by modern data backup and recovery solutions contribute directly to all three of these categories (see Figure 2).

**Figure 2: How Modern Data Backup / Recovery Drives Business Value**



Source: Aberdeen, April 2023

## Time is Money: Two Illustrations of How Speed of Recovery Can Reduce the Risk of Unplanned Downtime

Having established that the purpose of effective data backup is to facilitate effective data recovery, let's take a high-level look at two quantitative illustrations of how faster speed of recovery can dramatically reduce the risk of unplanned downtime:

- 1. Lost productivity of users** (e.g., from a successful ransomware event that affects multiple users)
  - ▶ Suppose your organization suffers a successful ransomware event, which idles N users with a median fully loaded cost of \$100K / user / year for 120 working hours (15 days) under the status quo capabilities for data recovery.
  - ▶ The total cost of lost productivity in this scenario is as high as (N users) x (\$7,500 / user) — e.g., **\$750K for every 100 users**.

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**Between 1Q2020-4Q2021, the average duration of downtime after a ransomware event ranged between 15-23 days (15 working days x 8 hours / day = 120 working hours).**

Source: [statista.com](https://www.statista.com)

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► To make a quick estimation using your own parameters, see Figure 3.

**2. Reduced revenue of business-critical systems** (e.g., from accidental deletions or internal threat actors that take a data lake offline, disrupting a revenue-generating line of business)

► Suppose your organization relies on a data lake to power a line of business that generates \$100M / year in revenue. Accidental deletions or internal threat actors take the data lake offline for 120 continuous hours (5 days) under the status quo capabilities for data recovery.

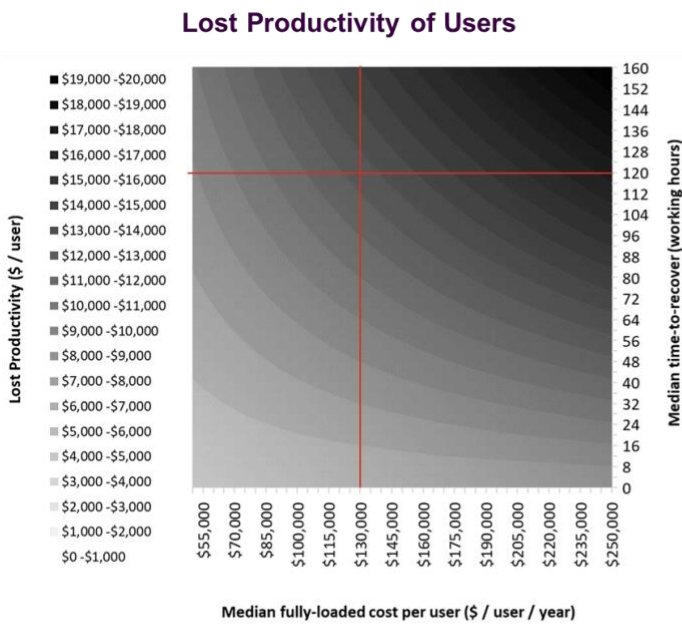
► The cost of lost revenue during the time of disruption in this scenario is as high as (\$11.K / hour) x (120 hours) = **\$1.4M**.

► To make a quick estimation using your own parameters, see Figure 4.

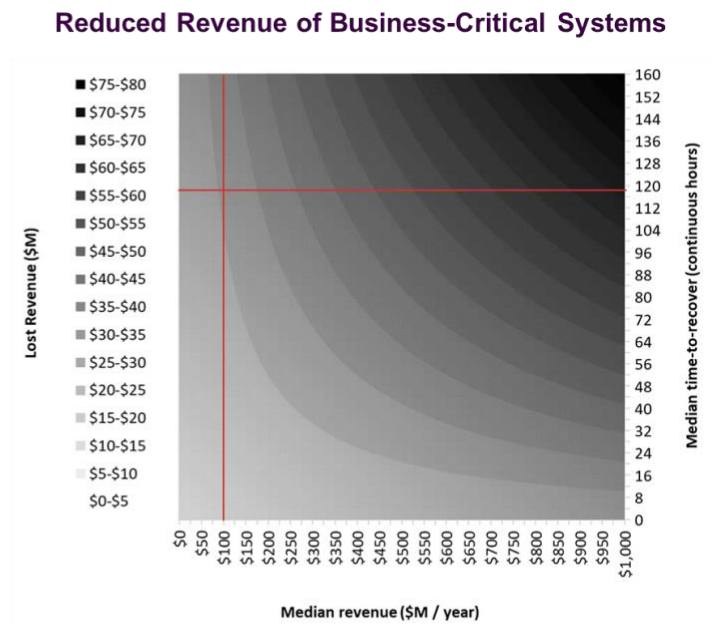
In both of these illustrations, faster speed of recovery from a modern data backup and recovery solution can dramatically reduce the risk of unplanned downtime.

**Faster speed of recovery from a modern data backup and recovery solution can dramatically reduce the risk of unplanned downtime.**

**Figures 3 and 4: Time is Money — Two Illustrations of How Speed of Recovery Can Reduce the Risk of Unplanned Downtime**



**(\$130K / user / year) x (120 working hours) = \$7.5K / user**



**(\$100M / year) x (120 continuous hours) = \$1.4M**

Source: Aberdeen, April 2023

## Summary and Key Takeaways

- ▶ Aberdeen’s research shows that businesses recognize the high value of **data backup and recovery** solutions, both for today’s needs and for their future scale and growth.
- ▶ But not all data backup and data recovery solutions are created equal. In Aberdeen’s view, modern data backup and recovery solutions are characterized by four key attributes: **Scale, Simplicity, Security / Compliance, and Speed of Recovery**.
- ▶ *Scale, simplicity, and security / compliance* are the always-important “what, and how” of effective **data backup** — while *speed* is the critical “so what, and why” of effective **data recovery**. Data backup is the means; data recovery is the end.
- ▶ Using two high-level scenarios — the **lost productivity of users** (e.g., from a successful ransomware event), and the **reduced revenue of business-critical systems** (e.g., from accidental deletions or internal threat actors that take a data lake offline, disrupting a revenue-generating line of business) — Aberdeen illustrates how faster speed of recovery from a modern data backup and recovery solution can dramatically reduce the risk of unplanned downtime.
- ▶ Given the importance of data backup and recovery and the significant impact of disruptions, organizations whose current data backup and recovery capabilities fall short in any of these four key areas should evaluate the best of breed in modern, cloud-native solutions.

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**Organizations whose current data backup and recovery capabilities fall short in any of these four key areas should evaluate the best of breed in modern, cloud-native solutions.**

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## About Aberdeen Strategy & Research

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Aberdeen Strategy & Research (a division of Spiceworks Ziff Davis), with over three decades of experience in independent, credible market research, helps **illuminate** market realities and inform business strategies. Our fact-based, unbiased, and outcome-centric research approach provides insights on technology, customer management, and business operations, to **inspire** critical thinking and **ignite** data-driven business actions.

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