



The Cost Of Risk Management In Data Archiving

It's an old and obvious adage: "Don't spend a dollar to save a dime." It gets more complex, though, when that dime today could potentially be worth a fortune tomorrow.

That's the challenge when planning data protection and risk management across the span of decades; the value of the data that is likely to be changing—possibly drastically—over time. Scale matters too. A 50 PB archive can turn into a 300+ PBs in a few years. And as your archive scales-up, so do its costs and complexities.

Knowing the future value of your data is next to impossible. Will that data only have historical significance? Never to be looked at again? Or, as is increasingly the case, will it become valuable business intelligence in the emerging world of AI?

Sure, you can keep everything online if you know the data will have near-term business value. But looking to the future, some datasets are going to show value and some aren't. Without a crystal ball to guide you, how do you know you've struck the right balance?

The Basic Equation:

X = Potential future value of data

Y = Costs of maintaining data

If $X > Y$, congratulations, you're doing great! Your data has a positive contribution to the net value of your enterprise.

If $Y > X$, your data is a burden and hurts corporate finances. If, say $Y > 3X$, you've got serious problems.

The Gambler's Choice

Since we can't assign a value to "X" for data in the future, we have ONLY two options.

1. **Keep all the data forever**
2. **Get rid of data that doesn't have obvious value** (in the short or long-term).

Option Two may pay off if you're lucky, but runs the risk of missed opportunities. It's safe to assume that the competitive advantages of AI (as much as 30% by some estimates) will secure its role in the future of nearly every business you can imagine. In that environment, the potential value of data can't be underestimated.

Option One offers the maximum potential benefit to the business, as long as the archive can be at the lowest possible cost. And therein lies the biggest challenge: calculating the cost of keeping data safe and secure for the long-term.

The Uncertainty Principle

Even decades-old data can have huge value to the right customer. Understanding the value of data is even more complicated by not knowing what data you have, where it came from, who might need it, and what monetary value it might provide. These questions each present different considerations to fully understand data value. And yes, there's a strong possibility that these questions can't be answered. We can't be certain about the future value of *anything*, but if we're smart, we can tilt the tables in our favor.

A Thought Experiment In Risk Assessment

In general, risk assessments consider your vulnerabilities or exposures, the cost of those vulnerabilities being exploited, and the necessary costs of mitigating or avoiding them. The concepts of risk avoidance and risk mitigation can be best understood through an analogy:

Imagine a severe winter storm is hitting your hometown, yet you have to drive to work and you know the commute is going to be treacherous. If you choose to drive, you will be exposing yourself to the elements and to the risk of losing control of your vehicle and crashing into other drivers on the road. By choosing to drive to work, you've accepted the obvious risks.

Risk Mitigation

You have to get to work, so you install snow tires on your car and then hit the road. The snow tires have mitigated risk. Your control of the vehicle is more certain and less likely to become part of an accident. But you have NOT eliminated risk. Poor road conditions, other drivers, and falling trees are still threats.

Risk Avoidance

Continuing with the winter storm example, other choices can be made to avoid the inherent risks of the commute. One reasonable choice is to stay home and telecommute. By not driving, all those external risks and vulnerabilities have been avoided. And you still have a solution for your work day.

Risk And Technology Selection

Some technologies are like putting snow tires on your car — putting preventive protections around the data because it's inherently exposed. But is simply mitigating risk enough in a world of malware and malicious attacks? Staying on top of the constant barrage of threats can feel like installing a new set of snow tires on your car. *Every, single day.*

The National Institute of Standards and Technology (NIST) publishes guidelines on how to manage IT and data risks (NIST Managing Information Security Risk, 2011). The guideline states that an appropriate response for identified risk and risk avoidance is to maintain an "air gap" by archiving data offline. It's the only true risk avoidance in today's IT environment.

Tape Is Risk Avoidance

While optical storage provides an air gap, it doesn't scale or perform to today's needs. Modern digital tape (LTO or Enterprise) is the only solution that's appropriate for archiving critical data. It's the most reliable and safest, providing the necessary scale, performance, and price point to maintain and access critical data over long periods of time.

To get the most personalized estimate of the total cost of maintaining your data into the future, Total Cost of Ownership (TCO) calculators like this one: www.datastoragegetco.com can help you make better decisions. It may not be a crystal ball but it's as close as you can get for long-term data storage.