A CxO’s Guide to Successful Intelligent Data Management and Digital Transformation
To meet the data challenges of today, you need three things:

**Criticality of Data to the Business**
The value and business criticality of data continues to grow. Data is the key to understanding markets, optimizing business models, and ensuring IT continuity. Enterprises must provide complete data protection and effectively manage the surge in critical data.

**Hyper Growth of Data**
The sheer amount of data, and its rapid growth is a massive challenge. The size of the digital universe is doubling every two years. In addition to data creation growth, the change rate to existing data is also on the rise. As such, the costs of managing high volumes of data continues to rise, along with the consequences of not effectively protecting it.

**Hyper Sprawl of Data**
Data is everywhere. Today, apps and data may be located anywhere in the world — various clouds, SaaS applications, virtual and physical servers, and endpoint devices. This data is in disparate systems and locations, with a lack of centralized management. While everything produces data, it’s crucial that enterprises make use of such a valuable resource.

Veeam can uniquely help customers along the 5 stages of their journey to Intelligent Data Management with innovative, reliable, easy-to-use solutions that “just work” in any environment. Customers are never locked-in with Veeam because its solutions are agnostic to hardware, networking, storage, application, and cloud providers.
5 Stages of Intelligent Data Management

Stage 1
Backup
Backup is first because it is critical to ensure the security of data. You must secure, backup and recover all the various sets and types of data wherever they are protected, always. This stage is about ensuring that you can get your data backup if it’s lost or compromised — and that the business survives.

Stage 2
Aggregation
In multi-cloud environments, it becomes more challenging to ensure that data and applications are always available to all users and all devices, across all cloud types (private, public, and hybrid). Stage 2 is about the aggregation of data protection for physical, virtual, and cloud services. Connecting all these backup and data protection systems scattered across multiple clouds into one easily manageable system is crucial.

Stage 3
Visibility
As an executive responsible for your company’s Digital Life, you need meaningful monitoring and management capabilities for your entire IT environment. You need to know whether backup succeeded or failed, how much data was backed up, how much retained, and a lot more. This includes gaining the ability to test and deploy updates or new applications without disrupting your business.

Stage 4
Orchestration
Ensure that enterprise data is always on the right infrastructure, protected and ready to work. This requires orchestration capabilities that can easily move workloads from one infrastructure to another, always adhering to compliance, performance, and security standards.

Stage 5
Automation
In this stage, data must become intelligent, location aware, and self-managing. It must learn how to learn. How to make itself easier to access, backup, recover and use. Data must evolve from policy-driven to behavior-driven, with built-in machine learning and artificial intelligence to keep getting smarter about what actions to take. It’s about improving the responsiveness, security and business value of data while reducing the cost and time that humans spend on managing and storing data.

Veeam Availability Platform
Veeam Availability Platform is the most complete solution to help customers on their journey towards Intelligent Data Management. Let’s walk through the capabilities Veeam solutions offer through each stage of the journey. Learn about Veeam’s solutions for each stage and how they work together to provide Availability to your organization.
Backup all workloads and ensure they are always recoverable in the event of outages, attack, loss, or theft.

It is the job of CIOs to deliver the confidence to the business that all enterprise data is secure and instantly recoverable. And the confidence to users of the company’s services that their digital lives will proceed without interruption, without scattered Availability problems, and without poor excuses as to why their information wasn’t available when, where, and how they need it.

Backup is the first stage to Intelligent Data Management because it’s critical to ensure the security of data from a systemic perspective: i.e., to secure, back up, and recover all the various sets and kinds of data wherever they are so they are protected always against outages, attack, loss, or theft, and recoverable whenever there’s an issue. This stage is about ensuring that you can get your data back if it’s lost or compromised — and that the business survives.

Sounds simple? Unfortunately, this is a significant industry challenge. More than 4 out of 5 enterprises state that there is a gap between the service levels needed and what IT can deliver. Most organizations are struggling to meet SLAs, let alone ensure Availability.

Veeam enables you to easily improve your SLA performance and increasingly improve your backup and recovery metrics. Veeam is delivering Availability for ALL workloads — physical, virtual and cloud — through these products:

Veeam Backup & Replication™ (part of Veeam Availability Suite™), Veeam’s flagship product has been successful due to its reliability, ease-of-use, and flexibility, catapulting it to #1 in VM backup. With a single console, you can manage fast, flexible, and reliable backup, recovery, and replication of all your applications and data.

Veeam Agents: Physical servers, cloud instances and endpoints are a significant part of an organization’s digital footprint. Veeam delivers #1 backup and recovery for Microsoft Windows and Linux. Now, we are extending our #1 Availability to UNIX workloads such as IBM AIX and Oracle Solaris.

### Why backup is not enough

Think of backup and replication as the foundation of your data management strategy. As you guide your organization through a successful Digital Transformation, you must look beyond traditional backup. Considering the rise and necessity of multi-cloud environments, the next logical step in your journey to Intelligent Data Management is aggregation.
Ensure protection and Availability of data across multi-cloud environments to drive digital services and ensure the aggregated view of SLA compliance. This requires complete data protection for ALL workloads.

Stage 2 is about the aggregation of data protection for physical, virtual, and cloud services. To become a true digital enterprise, you need to connect all these backup and data protection systems scattered across multiple clouds into one easily manageable system. This stage does not require the aggregation of either the data sources or the data targets. In fact, data sources often require different performance characteristics to address the different services, and data targets are often placed close to the data source to eliminate latency challenges. Instead, the aggregation stage ensures a consistent and comprehensive data protection solution across the disparate infrastructures required by the organization. Veeam delivers the following cloud aggregation solutions:

**Cloud Backup and DRaaS**
With Veeam you can leverage any public cloud provider, including AWS, Microsoft Azure, and IBM Cloud or a managed service provider to protect your data offsite. You can also leverage the cloud for disaster recovery by replicating your data to the cloud to meet your RTO and RPO requirements.

**SaaS Protection**
It’s your data and you own it, you can control it...and you need to protect it. Ensure your ability to self-manage your SaaS data and remain uninterrupted. Veeam Backup for Microsoft Office 365 eliminates the risk of losing access to your Exchange online email data and ensures Availability to your users.

**Private Cloud Data Protection**
Veeam works with more than 20,000 managed cloud providers to help you protect your data across any cloud.

**Cross-Cloud Data Protection**
For your “born-on-the-cloud” apps and data, replicate and migrate across cloud regions or data centers to get the most out of your cloud investments and maintain business continuity.

---

**What’s Next?**
Backup and replication is the foundation of your data management strategy. Aggregation enables you to extend complete data protection to your cloud environments. Yet, to successfully transform your enterprise, you need the insights and the visibility to understand how to address current impediments, solve for future scenarios, and accelerate the pace of innovation across your organization. None of this is possible without Stage 3, Visibility.
In Stage 3, data management begins to evolve from reactive to proactive, preventing any loss of data Availability through advanced monitoring, resource optimization, capacity planning, and built-in intelligence. This full operational insight into data is accompanied in Stage 3 by the ability to glean business insights from data to drive better business outcomes. Veeam delivers complete visibility through the following products and capabilities:

**Veeam ONE™** (part of Veeam Availability Suite) is a powerful monitoring, reporting, and capacity planning tool that includes support for virtual, physical and cloud-based environments, and enables administrators to deal with potential problems proactively, before operational impact. It is also useful in analyzing resource usage trends to help with capacity planning and forecasting.

**Veeam Availability Console** provides management capabilities often intended for service providers. In addition to giving service providers visibility into their customers’ environments (through real-time monitoring and reporting of virtual, physical, and cloud-based infrastructures), this product includes centralized management with resource tracking and automated billing, everything needed to run a service provider business.

**Veeam DataLabs™** takes the functionality of our virtual labs — enabling production-like copies of virtual environments on-demand — and expands on this with additional use cases and business value. These isolated “sandboxes” leverage existing data to accelerate innovation and reduce risk. Veeam DataLabs uplevel the core components of backup and replication from being a reactive insurance policy to a proactive value-added service for the enterprise.

**Ensure your data is in the right place at the right time**

As you continue to transition from outdated legacy tools to an Intelligent Data Management platform, it’s crucial that your organization can ensure that the data you’ve backed up, aggregated, and maintained visibility to, can now be used to solve for business problems, maintain compliance and deliver the right data at the right time. In other words, you require Orchestration.
Stage 4
Orchestration

Seamlessly move data to the best location across multi-cloud environments to ensure business continuity, compliance, security, and optimal use of resources for business operations.

Stage 4 on the journey to Intelligent Data Management is to ensure that enterprise data is always on the right infrastructure, always protected, always ready to do work. It’s important that it is always in the right place at the right time in the right way to drive the function required, whether it’s email data for a user, analytics for the business, or demonstration of compliance for an audit. To make this happen across multiple clouds and multiple sources of data requires orchestration capabilities beyond what has been available to date. What we’ve had instead are point solutions and isolated technologies scattered about, awaiting an engineer who knows how to put them together.

Veeam Availability Orchestrator delivers orchestration of Veeam replicas to a defined disaster recovery plan, with non-disruptive testing and automated documentation, updating and reporting so that you can not only seamlessly failover to another site, but also more easily maintain compliance. This isn’t just about moving bits, rather it’s about understanding the data dependencies, the proper sequencing of steps and automating critical tasks, such as networking, that all have to be perfectly sequenced in order to provide the desired outcome.

Organizations that have achieved Stage 4 are already differentiating themselves in the marketplace through their ability to gain insights and innovate based on the data they’ve leveraged to solve previously unsolvable problems.

But what’s next?

Innovation accelerates at such a rapid pace that the lifespan of leading organizations continues to shrink. Modern enterprises must strive to quickly adopt new technologies and best practices designed to achieve the highest level of efficiency and profitability. How? Through the automation and self-management of your data.
We’ve moved through four stages of the journey to Intelligent Data Management. We mastered backup and recovery. We aggregated distributed data into manageable form. We gained visibility across the distributed enterprise.

We can now orchestrate and enable workload mobility. The goal of this final stage is to build on all of the previous stages to bring new levels of automation to data management. This is achieved via a combination of data analysis, pattern recognition and artificial intelligence and machine learning.

In Stage 5, data must become intelligent, location-aware and self-managing. It must learn, how to make itself easier to access, backup, recover and use. It must also learn how to best interact with and optimize the infrastructure on which it resides, and through which it moves, in order to meet its obligations to the business, to security regulators and to the customers of the company’s services. And, most importantly, it must learn how to react automatically to anomalous behavior in the system.

As Veeam ventures into this cutting-edge phase, we focus on delivering solutions and use cases to deliver a platform for the future of Intelligent Data Management.
The financial benefits of Intelligent Data Management

Data growth, criticality and sprawl continue to rise while budgets remain inelastic.

The rising cost of downtime

Downtime happens, and it costs the average enterprise $21.8 million each year, with a 36% cost increase year-over-year. This means you cannot afford to remain stagnant when addressing unplanned downtime. The consequences aren’t just financial — an interruption of your digital services can drive negative publicity, reduce employee confidence and trigger non-compliance penalties. From an executive’s perspective, your goal is to minimize risk and maximize profit margins while innovating, to ensure the long-term success of your organization. Here’s a few other reasons why that’s easier with Veeam as your primary Intelligent Data Management solution:

Replacing legacy backup tools with Veeam saves money

Many legacy backup companies demand restrictive licensing terms, outrageously high prices that limit your choices when scaling your environment for the demands of data growth. Veeam delivers competitive pricing for all of its solutions, while avoiding placing your organization into “vendor-lock.” Many other legacy companies make scaling difficult with inflexible pricing. Veeam ensures that you pay exactly what you need, down to the socket, server, cloud instance, and workstation. No more painful pre-buying, confusion on what you actually deploy versus what you buy, or irritating compliance audits.

Improve performance without spending more

Organizations that switched to Veeam experienced 3x faster recoveries from downtime, 2.5x less system failures, and a 77% improvement in restore time. All of this was achieved while 90% obtained their SLAs, resulting in setting and obtaining even more rigorous goals — again! With the management capabilities and ease of use of the Veeam Available Platform, organizations can use their data to proactively improve operational efficiencies and maximize storage and server resources, all while minimizing the administrative time and effort that is required.

Veeam ensures service providers maximize their delivery and pricing

As a service provider, ensuring the best possible resource allocation for your client’s need is a requirement. You’d also need to ensure you’re adequately billing your clients and doing so through a platform that automates the entire process. With Veeam’s service provider capabilities for backup, aggregation, visibility, and orchestration, you’re equipped to deliver Availability while maximizing your resources and planning for your future demands.
Your customers expect to access critical data from any location, at any time. Your business requires digital transformation and greater agility to keep up with the demands of tomorrow. Your data requires uninterrupted Availability, from an easy-to-use, comprehensive and extensible platform. Your journey towards Intelligent Data Management must start today to gain greater agility to respond to any business need, achieve multi-fold improvement in efficiencies, and to deliver new digital services.

Take the next step in your Intelligent Data Management journey, contact Veeam today.

Visit www.veeam.com/contacts