

# Better Data, Better Decisions:

## How a Clean CMDB Optimizes Enterprise ITSM and ITAM



# The Challenges of CMDB:

## What Is Clean Data and Why Is It Critical to IT?



# 70%

of IT teams seek to improve the quality of their CMDB data<sup>1</sup>

---

Today, both IT service and asset managers face high expectations in terms of productivity and stakeholder satisfaction. Accurate IT inventory data plays an integral role in both IT service management (ITSM) and IT asset management (ITAM) functions.

The configuration management database (CMDB) has traditionally been positioned as *the* single source of truth on IT data. If properly maintained and managed, the CMDB can provide IT teams with the insight they need to perform their jobs as efficiently as possible.

For IT service managers to perform their essential role of setting up an organization for success, the CMDB is especially crucial. Serving as the hub of information for all tickets that come into the help desk, the CMDB should provide visibility of the following for effective troubleshooting:

- **The software or hardware that is causing the issue**
- **Software and hardware attributes**
- **Any relevant dependencies**
- **License usage and availability**
- **Software support expiry dates**

The CMDB is often leveraged for other areas of IT operations, such as provisioning software, creating product and service catalogs, asset lifecycle management and even enabling broader strategic initiatives. But today's average enterprise sees thousands of changes per year to its IT environment. The sheer volume of changing data means having the right tools and approach is critical for effectively building and maintaining a clean CMDB.



# Data Quality: What Distinguishes Poor Data from Clean Data?

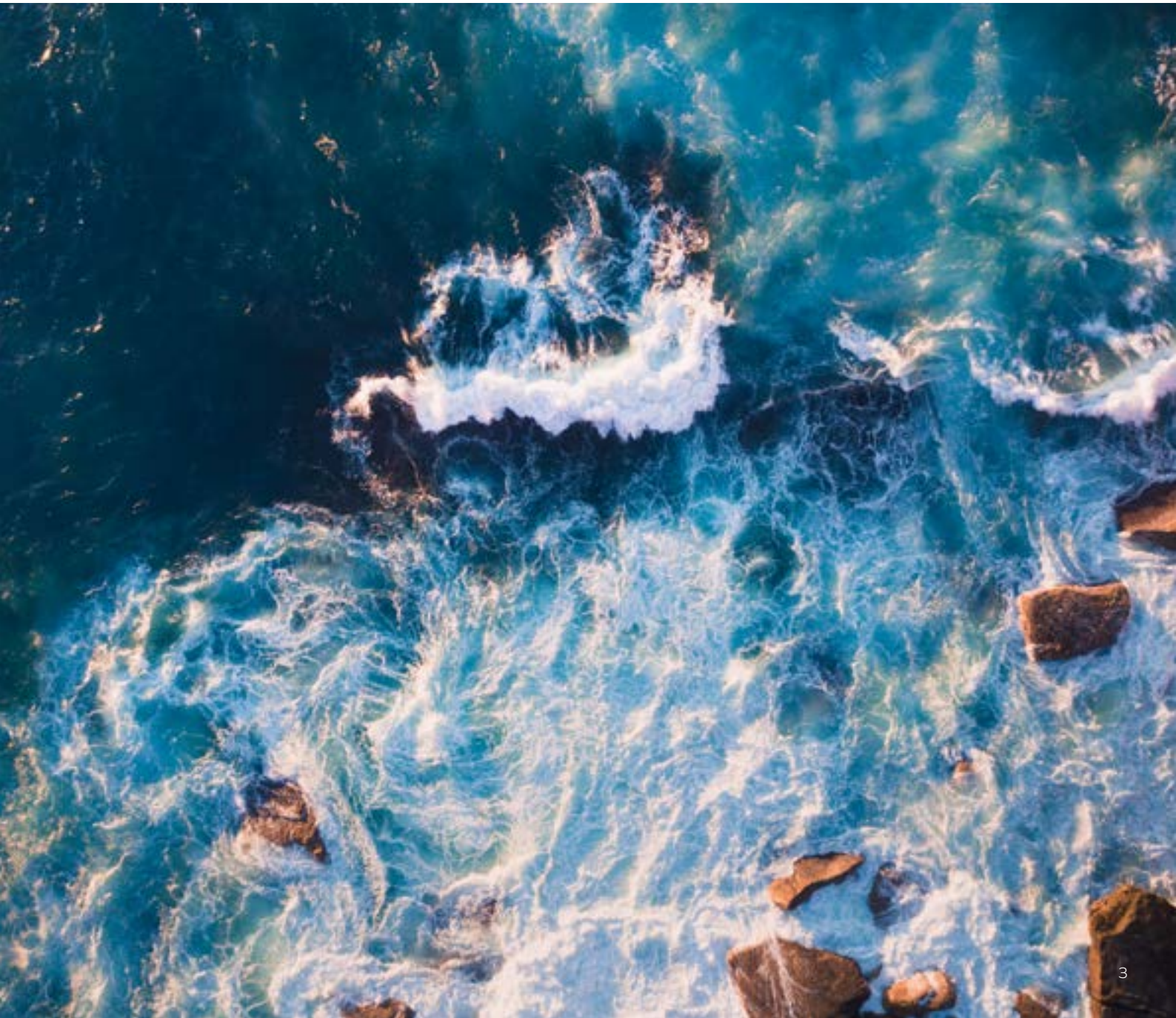
Many organizations recognize their CMDB isn't achieving its value contribution. But here are some of the primary signs of unclean data in the CMDB:

- **Data is not complete, lacking critical data points like software versions and release dates**
- **Data is not normalized, so multiple titles may exist for one piece of software**
- **Data is not relevant due to data that is no longer current (a particular concern in today's ever-changing IT environment)**
- **The CMDB doesn't integrate well with other systems, limiting both its accuracy and relevancy**

These negative qualities should give you a clearer sense of the inverse – what good, clean, quality CMDB data should look like. Clean data should be:

- **Correct to minimize errors**
- **Normalized to prevent inconsistencies and inaccuracies**
- **Enriched to include all the necessary asset information**
- **Up to date so that the information remains accurate**

In addition to enabling the ITSM team, clean data in the CMDB can be critical for IT operations management, IT system administration, security, automation, development and more.



# How Poor CMDB Data Impacts the Enterprise



## The Impacts on ITSM Operations

For the IT service desk, poor quality CMDB data means:

- **A longer mean time to resolution (MTTR) on IT tickets**
- **Excessive manual effort**
- **Dissatisfied helpdesk managers and end-users**

Consider this common service desk scenario— an end-user calls the IT helpdesk regarding an issue with their device. The helpdesk manager refers to the CMDB's data to troubleshoot the issue. However, if that data is inaccurate in any of the ways we have outlined, then the helpdesk will likely have to conduct inefficient manual research to resolve the issue. For example, they may need to check historical support tickets to identify trends, question the end-user on their device and software usage or even use search engines. This affects not only the helpdesk manager but the end-user and their IT manager, who both feel the impact of any delays and disruption to resolution. It also impacts the efficiency of the entire IT estate and the Chief Information Officer (CIO).

Overall, the impact to CIO and leadership metrics of an unclear CMDB are far-reaching:

- **Increased MTTR**
- **Exhausted helpdesk time and productivity**
- **Increased unplanned operational costs**
- **Low or poor morale amongst IT help desk personnel and the end-users they serve**
- **Higher cost of technologies that go unused during troubleshooting**

## The Impacts on ITAM Operations

ITAM teams, including the Software Asset Manager (SAM), have several key considerations:

- **Saving costs through efficient license and hardware utilization**
- **Maintaining employee productivity through effective provisioning and access management**
- **Supporting security by ensuring the software brought into the organization is safe**

However, ITAM teams often don't have the perspective they need to make the best decisions for their organizations. To truly minimize risk and improve efficiency, they need to operate with an accurate, up-to-date repository of asset data.

Take license reharvesting as an example; this is one part of the ITAM process that relies upon access to accurate asset information. Without license availability and usage data to leverage, it's difficult to identify the best opportunities for reharvesting.



## The Impacts on Strategic Initiatives

Poor CMDB data can also frustrate or delay an organization's large-scale strategic initiatives. Developing an IT roadmap for an organization requires knowing where you stand in terms of migration and the adoption of new technologies. But to achieve that, you need an accurate and complete view of your entire hardware and software estate and the dependencies between configuration items, including all software and hardware.

Consider an organization attempting to migrate from an automation technology coded on Java to a cloud-friendly code. The IT team must budget for the cost differences between the software; understand what and how other systems, processes or groups can be impacted when

adopting or deprecating software and navigate any organizational after-effects, such as implementing internal training. Initiatives to improve IT security also hinge on having visibility of what and how configuration items are used within an organization, including identifying any shadow IT software employees are using on their machines.

Poor quality CMDB data – whether its incomplete, unnormalized, irrelevant or unintegrated, makes each of these activities more difficult, inhibiting the visibility enterprises need to plan their IT transformation.



# Building the Full Perspective: Snow's Comprehensive Solution for Clean Data

By leveraging Snow's industry-leading software asset management solution, organizations can harness the quality CMDB data they need to take control of IT service and asset management. Snow provides the framework to make previously unstructured data useful and map it to the right fields in the ITSM, so teams don't have to figure out where to store and find it.

We will now break down how Snow's features interact to form one comprehensive, seamless solution for a clean CMDB.

## The Clean CMDB Playbook: [Discovery](#), [Inventory](#), [Normalization](#), [Automation](#), [Optimization](#)

- 1 **Software and hardware inventory is discovered using [Snow Adoption Tracker](#)**
- 2 **Snow's Data Intelligence Service (DIS) pulls in data across the enterprise's end-user devices and installed software, then normalizes it**
- 3 **The cleansed data is passed into the enterprise's service desk platform via Snow [ITSM Enhancer](#)**

## The Starting Point: Discovering and Establishing the IT Inventory

Snow's DIS is the largest software recognition and normalization database in existence, including 700,000+ software titles produced by 100,000 publishers.

However, sometimes software is only part of the story. Snow facilitates the most comprehensive view of your assets by connecting data from multiple sources. This enables organizations to discover and then provide a complete inventory of both their software and hardware.





## Making Data Actionable Through Normalization

The raw data in a CMDB can add confusion rather than clarity to IT decision-making. To be truly actionable across IT service and asset management processes, your data needs to be cleansed and normalized.

Snow's standardized approach to naming and asset identification enables data normalization, establishing a source of reliable, consistent information businesses desire from the CMDB.

For example, let's say a piece of software has been titled Snow Software v.1.2.2.1. Normalization could translate the version to Snow Software 2021 Jan release, providing a clearer view of the software's recency and relevancy. It also establishes a parent-child hierarchy to offer structure to software titles. Snow Software, for example, will be demarcated as the 'parent' to Adoption Tracker. The DIS pulls in end-of-life and end-of-support details, making it easier to identify unsupported software.

## Connecting Snow and Your ITSM

The last step to cleaning up your CMDB is connecting the cleansed and normalized data to your ITSM tools. Snow's **ITSM Enhancer** is certified for use with leading ITSM platforms and tools including:

- [BMC](#)
- [Ivanti/Cherwell](#)
- [ServiceNow](#)
- [TOPdesk](#)

The main function of ITSM Enhancer is to augment ITSM tools by providing quicker, more comprehensive visibility via the DIS. Data that the helpdesk may have previously had to exit the ITSM platform to find can be displayed through ITSM Enhancer. This can include various valuable datasets, such as end-of-life, end-of-support, and licensing data (e.g., entitlements, availability, utilization).

## Improving Data Quality Through Agent-based Discovery

Snow significantly enhances overall data quality by delivering agent-based data via ITSM Enhancer. One weakness of many existing ITSM tools and platforms is that they are agentless. To find the information needed per device for troubleshooting or incident resolution, the service desk relies on network scanning and/or questioning the end-user.

However, with agent-based discovery the CMDB includes:

- **A detailed inventory of both the software on the device and the device's hardware specifications**
- **Detailed usage statistics to uncover how often software on the device is being used, where it is being used in the organization, when it was purchased and any other relevant history**

For the service desk, agent-based discovery unlocks a wealth of software information located on the end-user's device that agentless tools cannot access, enabling incidents to be resolved with less manual effort. Elsewhere, it enables key decisions to be made around data. For example, if usage statistics show that the finance department needs to run all Salesforce reports on a Monday morning, IT could restrict other users from running reports on SFDC at that time to control the data load on the internal systems.





## Bringing the CMDB Up to Date with SaaS and Public Cloud Data

Agent-based discovery also provides the service desk and CMDB with SaaS (Software as a Service) and public cloud data. Snow's DIS tracks over 27,000 SaaS programs and Snow captures a range of data from Amazon Web Services (AWS), Google Cloud Platform (GCP) and Microsoft Azure, including hostnames, instances, public DNS names and IP addresses.

Having SaaS and public cloud data is a significant step up from traditional ITSM capabilities and is vital to bringing the CMDB up to date with the current IT landscape.

## Keeping Data Clean: Continuous Maintenance and Visibility Through Automation

The final piece of the CMDB clean-up process is to ensure the data stays up to date as technology evolves and the number of devices and information streams within an organization expand. This is where automation for continuous cleansing can help.

Once Snow and the ITSM platform have been connected, the CMDB data is automatically populated with the most up-to-date software and hardware information. ITSM Enhancer continuously and automatically builds and maintains the CMDB, so that IT service and asset managers always have actionable data to do their jobs efficiently.

## Putting It All Together: A Comprehensive Solution for a Clean CMDB

With Snow's complete solution, organizations get complete insight into their IT estate across hardware, software and public cloud. The resulting CMDB is populated with:

- [Normalized software titles](#)
- [Agent-based data for detailed hardware and software information \(including usage statistics\)](#)
- [SaaS and public cloud data](#)
- [Licensing and entitlement data](#)
- [Up-to-date, accurate information via automation](#)





# How Clean Data Empowers Your ITSM and Asset Management Decisions

With a clean CMDB at the center of the IT landscape, organizations can achieve ongoing visibility of all IT data. This enables better decision-making across IT teams and reduces fail points by allowing the number of systems that store and handle data to be minimized.

A clean CMDB also benefits the business functions of IT Operations. We've outlined these benefits below.

## The Key to Successful ITSM

Snow empowers the IT service desk with the visibility to do their job efficiently. The clean CMDB allows the service desk manager to view asset data within the support ticket for fast, accurate incident resolution. Visibility of end-of-life and end-of-support dates makes it easier to manage upgrades and conversions proactively. Enriched data can also be used to streamline service management through the provision of standardized software versions. Time isn't wasted on manually identifying and interpreting information.

These improved processes lead to increased customer satisfaction and decreased operational costs, maximizing the ROI of the service desk.

## New Levels of Operational Efficiency

The modern business IT environment is characterized by a rapid rate of change and an expanding landscape that includes SaaS, virtual and cloud infrastructures. The automatic population of CMDB data between Snow and the ITSM enables dependent teams to operate at the pace of the business with greater service uptime, continuous productivity and lowered MTTR. Clean, augmented data is updated daily, providing ongoing visibility to the IT service desk while removing the need for extra manual effort.

## Improved Product and Service Catalogs

Dynamically populating product and service catalogs with clean, normalized data enables organizations to enhance their IT self-service options. With accurate, up-to-date data always on hand, you can reduce the cost and manual effort traditionally associated with updating catalogs. Organizations can also rest assured that services which rely on product and service catalogs are supported with the data they need to stay valuable. This serves not just IT, but all departments that depend on catalogs, from Human Resources to Facilities Management.

Approved, accurate product and service catalogs also support the streamlined provisioning of software access for new employees and the deprovisioning of access for leavers (a key concern from a security viewpoint).

## License Availability Integrated to Software Requests

When the CMDB is populated with full license availability and usage, Asset Managers can identify reharvesting opportunities and eliminate unnecessary license spend. Snow's solution also offers software metering, allowing IT to reduce spend by identifying and responding to software inactivity. Plus, Snow facilitates self-service license requests and shortens the time to provision software through automation.

The IT service desk can also use cleansed, normalized license data to identify whether software unavailability is caused by a missing or expired license.

## Increased Insight for Improved Security

The visibility gained with quality CMDB data results in a clearer picture of how your organization's IT environment is secured and where improvements could be made to minimize risk. Cleansed, enriched data can highlight the types of applications that are likely to hold Personally Identifiable Information (PII) and/or instances of shadow IT within your organization. Normalizing software version information helps organizations identify unsupported software, or software that needs upgrading for bug fixes and vulnerabilities.

## Realize Significant Cost Savings

The combination of labor savings and optimized decision-making that a clean CMDB enables has a tangible impact on the bottom line. Take the example of one Snow customer, a \$1.5bn multinational computer software technology corporation with 8,000 employees. This organization was able to save 36% on their operational costs through a Snow solution integrated to ITSM. The solution's fast implementation and intuitive design also accelerated its ROI.

## Strategy Informed by Perspective

By enabling a clear view of the entire IT hardware and software estate, Snow facilitates wider strategic decision-making within an organization. Equipped with a clean and automatically populated CMDB, today's organizations can clear the path to transformation and growth by making decisions informed by a complete view of the existing estate.





# Conclusion

Every area of your organization's IT environment will ultimately benefit once the CMDB becomes a reliable source of truth:

- **The Service Desk can run as efficiently as possible with increased productivity and user satisfaction**
- **Decisions around asset management can be made confidently with continuously up-to-date insights**
- **Strategic initiatives for savings, security and even digital transformation can be implemented faster than ever**

A CMDB that is automatically populated with cleansed, normalized data unlocks the comprehensive visibility needed to enable effective decision-making across departments. With this visibility, Snow's ITAM and ITSM solution allows your organization to achieve greater productivity, security and speed so you can deliver on your business goals.

1. Service Desk Institute, A View From the Frontline Report



Discover the benefits for yourself

## Contact Snow

[www.snowsoftware.com](http://www.snowsoftware.com)

[info@snowsoftware.com](mailto:info@snowsoftware.com)

## Follow Snow



snow 

## About Snow Software

Snow Software is changing the way organizations understand and manage their technology consumption. Our technology intelligence platform provides comprehensive visibility and contextual insight across software, SaaS, hardware and cloud. With Snow, IT leaders can effectively optimize resources, enhance performance and enable operational agility in a hybrid world. To learn more, visit [www.snowsoftware.com](http://www.snowsoftware.com).

Copyright 2021 Snow Software AB. All Rights Reserved.