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Retention and deletion of  
company data

To keep or not to keep:  
Solutions for the data dilemma



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# Introduction

In an economy where cost pressures are soaring and the sheer volume of data being processed is growing exponentially, more and more companies are looking for ways to reduce their IT operating and maintenance costs.

One effective solution is to decommission outdated software programs, so-called legacy systems, that are no longer in use. Phasing out these systems helps cut technical operating costs for maintenance, data storage and service infrastructure.

Despite the huge cost-cutting potential, many companies are hesitant to take this step. But why? The main reason is the sheer complexity and ambiguity of the data within different systems. It is often unclear which data you can safely delete and which you have to retain for operational or legal reasons. These are precisely the kind of uncertainties that drive up data storage fees and pose compliance risks (especially with regard to GDPR).

It is vital for today's companies to have a data management system in place that is both efficient and effective, one that strikes the right balance between regulatory requirements, organizational needs and available IT solutions. In this Point of View,

we argue that you can find a long-term solution to this complexity by adopting a systematic approach that ensures transparency throughout the entire data life-cycle and provides the technical tools you need for compliant data management.

Of course, this is not only about legacy systems. We make a point of addressing other available applications in our PoV as well. After all, the growing volume of data is a challenge for any system. This inevitably leads to significant increases in costs, impacts performance and carries substantial regulatory risks.

# Soaring data volumes as a complexity driver

The volume of data generated worldwide in 2024 reached an unimaginable 149 zettabytes, about 59 quadrillion pages of text. According to forecasts, this figure is set to rise to 393.9 zettabytes by 2028—a 2.5-fold increase in just four years. Despite its much-touted advantages, the unprecedented inundation of data presents numerous challenges, including system performance issues, increased storage demands, and rising costs. Additionally, companies

face stricter compliance obligations such as GDPR, which require the prompt deletion of personal data. Additional challenges arise from the growing number of data processing regulations, especially as part of the EU data strategy.

At the same time, technological advances and structural changes lead to the accumulation of IT systems which are no longer needed for daily operations. This happens,

for example, when companies migrate to cloud-based infrastructure, but keep their legacy systems due to regulatory requirements or the need to access older data. There is huge potential here to make companies' IT landscape far more efficient. According to Gartner,<sup>1</sup> companies that introduce robust processes and technical solutions for decommissioning legacy applications can reduce their "infrastructure technical debt"<sup>2</sup> by 40 percent between



<sup>1</sup> <https://www.gartner.com/document-reader/document/code/803864?ref=dochist>, accessed on June 20, 2025.

<sup>2</sup> Broadly speaking, the term "infrastructure technical debt" refers to legacy issues in IT infrastructure. This could be higher maintenance costs, security risks or integration issues associated with outdated technologies and systems. Examples include outdated server/storage solutions, undocumented or proprietary interfaces and end-of-life systems that no longer receive support or updates.

now and 2028. However, while phasing out legacy IT infrastructure promises to lower costs significantly, companies are often uncertain how to handle the data stored in these systems or which data they are legally required to retain.

With this in mind, we recommend that companies take a serious look at their data retention and deletion policies. Adopting an efficient approach will not only ensure compliance with regulatory requirements but also deliver the cost savings mentioned above. Additionally, an optimized, rule-based data management improves the system performance in today's productive applications.

Most companies and IT departments are aware of the available options but struggle to put them into practice. The biggest

hurdle is conducting a detailed analysis of all data objects and processes across applications. Without this, it is impossible to draw reliable conclusions about relevant retention periods or identify technological or process-related dependencies within the business. While this is already a complex process for modern applications, it becomes even more complicated with legacy applications, as the necessary information or the experts may no longer be available.

Companies are often reluctant to address this issue, because deleting too little data can lead to violations of data protection regulations, while deleting too much may result in the loss of data which is needed later, whether for an audit, a legal dispute or due to upstream business processes that rely on it.

So, many companies find themselves asking: "To keep or not to keep?", when it comes to data deletion policies. It's an existential question reminiscent of Shakespeare's tragic anti-hero Hamlet.

There are many reasons why the Bard's tragedy continues to fascinate us to this day. One of Hamlet's fatal flaws is his hesitation, his inability to make timely decisions, which leads to misfortune for

everyone in the course of the play. Our modern world also faces complex issues with no obvious or easy answers, and data retention and deletion is one such issue. Precious little has changed since Shakespeare's time: Failing to act or being indecisive is almost always worse than taking action quickly and, if needed, refining the solution over time.

If you fail to resolve the "To keep or not to keep" dilemma with your company data, you risk facing consequences as unfortunate as Hamlet's. Failure to act quickly and decisively at the company level may result in high costs, whether through fines or additional IT services, and could significantly impact your bottom line.

The good news is that excellent opportunities are available to CIOs, CFOs as well as system responsables and project managers right now to tackle this complex problem. This is particularly true for companies planning to migrate from a legacy SAP system to next-generation SAP S/4HANA or move from an on-premises system to a cloud-based solution as part of IT consolidation. In major transformation projects like these, we believe it is absolutely essential to include solutions for the many compliance requirements on the books, especially those related to data retention and deletion.



# Delete or retain?

The central issue in the data dilemma is the conflict between different regulations carrying heavy fines, but also—at least when you consider productive IT applications—within the procedural dependencies across the enterprise. Some of the prevailing regulations ask companies to delete (personal) data, while others demand they retain it (see Fig. 1).

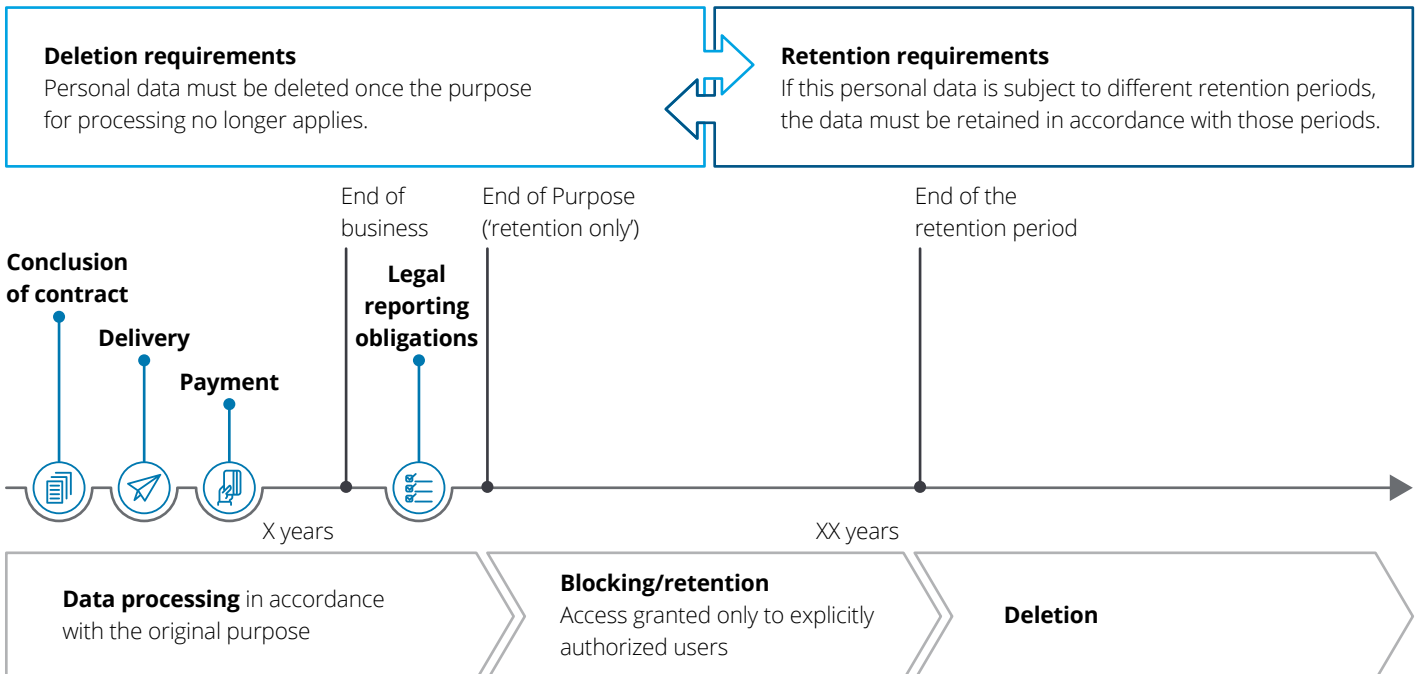
The provisions of the General Data Protection Regulation on personal data (GDPR, see info box) are particularly relevant here. Among other things, the GDPR regulates the handling of personal data throughout

its entire lifecycle, paying special attention towards the end of it. Under the GDPR, companies are obliged to delete personal data once it is no longer needed for its original purpose and the associated business processes, or once the legal basis for its processing no longer applies.

This is in contrast to other regulations that require longer retention periods for certain data or under certain circumstances. These include compliance with other laws, such as product liability regulations, tax policies, obligations under the EU data strategy, data required for legal proceedings (“legal

hold”) or specific industry-related reporting requirements. In Germany, for example, entities are required to retain accounting documents and invoices as well as annual financial statement data for a period of ten years. By contrast, employers are only required to retain data relating to job applications for six months.

**Fig. 1 - Overview of the data lifecycle based on regulatory requirements**





### Highly regulated: Obligations under the EU GDPR

When the EU GDPR came into effect in May 2018, companies were subject to much stricter legal standards for processing personal data.

Among other things, the regulation stipulates that companies are only allowed to process personal data for specified, explicit (unambiguous) and legitimate purposes. Also, the processing of personal data is only permitted if the company has a legal basis to do so. Among the possible legal bases are the consent of the data subject, the processing needed for the performance of a contract or other legal obligations towards the data subject, and the legitimate interests pursued by the controller.

According to the provisions of the EU GDPR, companies are only allowed to process data for a specific purpose and only to the extent necessary for that purpose. This principle of data minimization applies across the board to every aspect of processing, from collection and processing to the storage of personal data. In line with these provisions, companies must delete this data immediately once the original purpose

for processing is no longer valid. The same is true if the legal basis for processing no longer applies, for example if the data subject revokes their consent to processing. The obligation to delete data immediately may conflict with the retention periods of other laws or provisions. In such cases, companies must block this data or restrict access in such a way that it is no longer accessible by unauthorized third parties. As it may cost an inordinate amount of money and effort to completely delete this data, anonymizing the data is considered a sufficient alternative to complete deletion, provided it is virtually impossible to trace the data back to a specific individual. Companies are obliged to document their data retention and deletion policies in a formal deletion concept. In addition to that, it is important to note that the EU GDPR grants data subjects the “right to be forgotten” (also known as the “right to erasure”).

Major software developers have not ignored the obligations under the GDPR, and a wide range of popular software products now offer the technical features needed to meet and/or support the above compliance obligations.

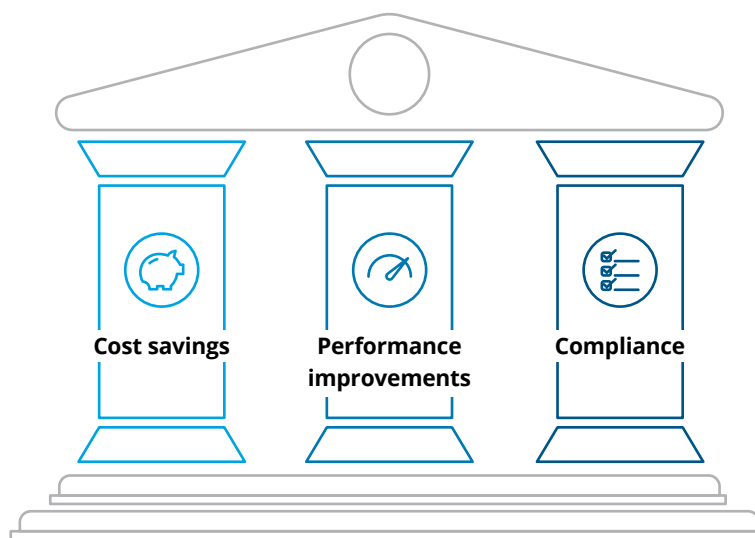
# Seize the opportunity

Taking a closer look at the IT roadmaps of many companies, we can identify a variety of current priorities which offer an ideal chance to implement an effective, sustainable data retention and deletion solution.

System migrations are at the top of that list. This could mean moving local, on-premises solutions to new cloud platforms or switching to a next-generation enterprise resource planning (ERP) system. Customers of the software developer SAP are currently undergoing the transition from SAP R/3 to SAP S/4HANA, or have recently completed it, due to the imminent end of support for the legacy generation. There are some common challenges for companies in migration projects like these: deciding which data to move over to the new system and identifying which compliance obligations will be relevant in the new environment. At the same time, there is a need to find a solution for the data within the legacy system, since it is still subject to the same compliance obligations.

Another key issue is how to handle the legacy systems as a whole. As mentioned above, many companies have accumulated various IT systems over the years, either through acquiring additional businesses or switching systems. Efforts are currently underway in many companies to consolidate these systems. Complicating matters further, many of the IT systems that are no longer in active use contain data that is subject to mandatory retention requirements. Although maintaining these

**Fig. 2 - Three reasons to establish regular data retention and deletion**



systems comes at a considerable cost, the data must remain accessible in the event of an audit, a legal dispute, a product liability case, etc.

M&A deals provide another obvious trigger for data retention and deletion initiatives. After all, mergers, carve-outs and other M&A transactions often require a detailed review of the methodologies used to manage data from various IT systems in order to consolidate or reconcile the data effectively.

The topics outlined above offer ideal starting points to introduce well-thought-out and practical models for managing

data subject to mandatory retention or deletion. The aim here is to view existing and upcoming changes in the IT landscape as an opportunity and to proactively and strategically address the issue of data archiving and deletion in the course of these innovations.

# Three good reasons

Taking a systematic approach to your data deletion and retention strategy is not without its challenges — but the benefits certainly outweigh the effort. There are three key reasons you should face this issue head-on and put a comprehensive solution in place.



## 1. Cost savings

Companies are reporting rapid growth in the volume of data they collect, process and store—and this trend is unlikely to change any time soon—with hundreds of thousands of documents and data tables stored in data centers. This comes at a considerable cost, which has also risen significantly in recent years. You can reduce your total cost of ownership (TCO) for stored data by efficiently deleting and moving data that falls under retention requirements to a more cost-effective archive. These benefits are achievable with both productive and legacy systems.



## 2. Performance improvements

As the volume of data to be processed and stored continues to grow, it can put a lot of strain on IT systems and degrade system performance for transactions, analytics or searches that run on the entire database or a large subset of it. This can lead to long loading and processing times, which can negatively impact the user experience. Improving data management therefore improves system response time and ultimately increases satisfaction among end users.



## 3. Compliance

Another important reason you need to take a systematic approach to data retention and deletion is to avoid sanctions and fines. The EU GDPR is particularly relevant here, as it imposes penalties of up to four percent of a company's global turnover for violating data deletion rules (see info box). There may also be severe penalties and financial consequences imposed for violating data retention requirements. The only effective way to manage the various compliance risks is through a standardized, systematic approach.

The key is to identify the data that is subject to retention requirements and separate it from the data that is not.



### When the data blessing becomes a curse: GDPR fines

Fines for violating the EU GDPR are a very real risk. Companies are frequently sanctioned with high fines. In addition to the direct financial losses, they face reputational damage given the public attention these cases usually attract.

Here are some specific examples of severe penalties that the EU has recently imposed on companies that fail to properly block or delete personal data:

- **€5m fine:**

In 2020, the EU sanctioned a tech company because it had failed to completely delete personal data and had processed the data for unlawful purposes.

- **€1m fine:**

In 2022, the EU fined a European financial services firm for failing to implement data deletion concepts and solutions in hundreds of IT systems.

- **€40m fine:**

In 2023, an EU member state imposed a substantial fine on an advertising firm for not fully complying with requests related to data subjects' rights, particularly with regard to the deletion of personal data.



# Many challenges — one holistic solution

Deloitte has developed an end-to-end standardized solution that provides companies with optimal support for effective, reliable data retention and deletion practices — a solution that has already proven successful for numerous clients.

Our systematic approach addresses every relevant issue, from developing an in-depth strategy to designing and deploying custom retention and deletion policies across the business. As part of this strategy, we work with you to draft an implementation plan, define roles and responsibilities, and outline the IT architecture and other parameters. The result is an audit-proof solution based on the policies we developed that is tailored to your needs and objectives.

There are a variety of technical solutions available to help you implement a successful data management system. Deloitte clients benefit from our best-practice experiences as we identify the best possible tools and implementation solutions for your IT system. The approach differs slightly between productive and legacy IT systems, though both usually rely on two core components:

1. Rule-based identification of data records subject to mandatory retention or deletion, and
2. Restrictions that explicitly block the deletion of certain data records.

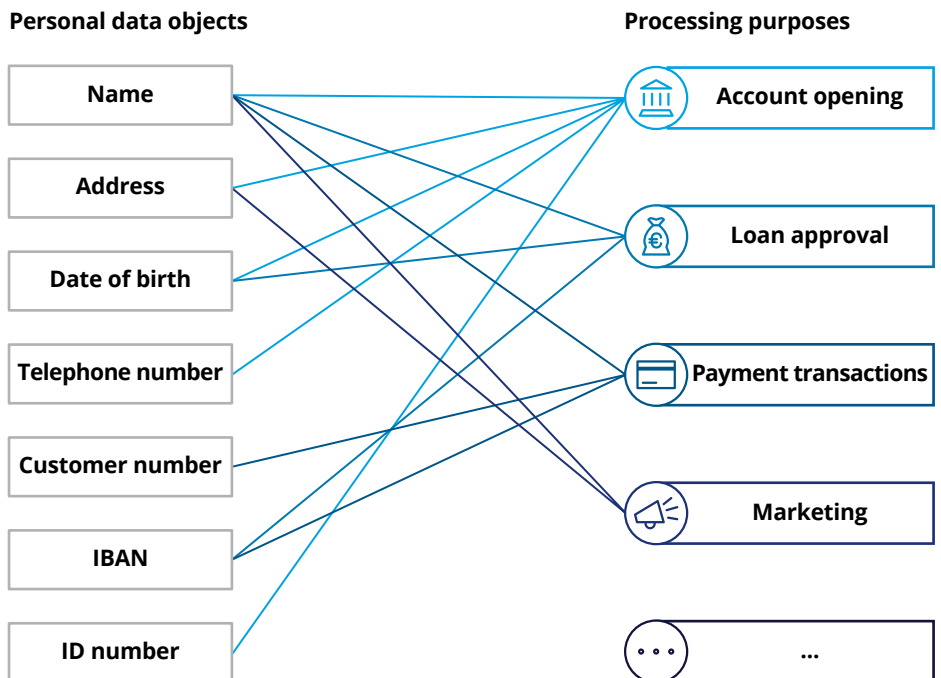
Some of today's more popular IT systems/platforms include standard data management features designed for data retention and deletion. In SAP systems, for example, clients can use the "SAP Information Lifecycle Management (ILM)" feature as an effective tool for managing complex ERP data structures.

With the Deloitte approach, you can rest assured that every critical challenge related to data retention and dele-

tion policies receives the attention it deserves. This is especially true for the following issues.

Companies often collect and process data for different purposes in various business processes and IT systems. For this so-called "Multi-purpose use of data" (see info box), there are different contexts and legal bases for processing data, which means there are also different requirements for data retention in each case.

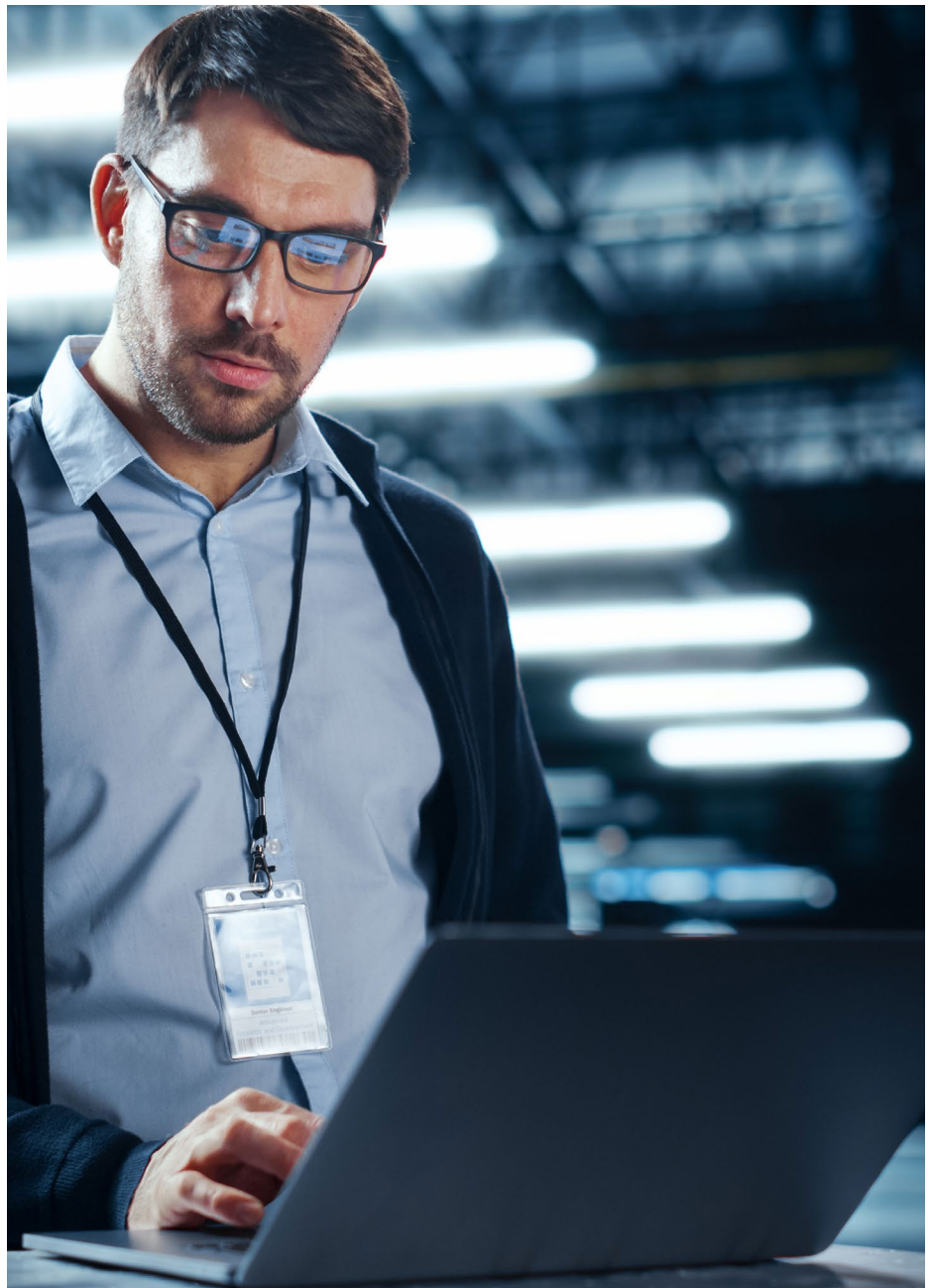
**Fig. 3 - Complexity due to the multi-purpose use of data**



Managing all these different legal requirements can be challenging, particularly if your IT systems are used in many different countries or jurisdictions. There may also be conflicts between different regulatory requirements, the needs of business departments and your internal processes/workflows in their current configuration. Identifying and resolving these conflicts is essential before you can build a consistent and compliant solution.

Interfaces to other IT systems can make the challenge even more complex. Today's often heterogeneous IT landscapes are characterized by the deep integration of various solutions. When performing data retention or deletion tasks within your systems environment, it is important to take the resulting data flows between these systems into account to avoid issues with data integrity and consistency across system boundaries.

Mastering these complexities requires a structured approach that cultivates transparency and clarity regarding interdependencies. With this transparency, companies can then harmonize their various data retention and deletion requirements and implement an effective, reliable IT solution to comply with them.





## Case study: Retention and deletion in SAP systems

Companies across the globe are currently in the process of migrating their SAP systems to the next-generation SAP S/4HANA environment or have recently completed the transition. As part of large-scale projects like these, companies may question the data management practices in their existing systems or, depending on their particular transformation strategy, may be forced to face complex issues in this context.

### Data retention in the productive SAP system with SAP ILM

In an SAP transformation project, companies may opt for a brownfield migration, which involves migrating the existing system and its entire database to S/4HANA. We generally recommend that our clients archive or delete any unnecessary data in advance, as this significantly reduces the effort and error rate of the migration. Transformation projects and the implementation of new systems are ideal opportunities to establish regular data management routines.

SAP has provided the SAP Information Lifecycle Management (ILM) feature for precisely this purpose, expanding the data archiving functions previously available in SAP. Put simply, ILM enables rule-based management of the entire lifecycle of data objects in SAP. That means you can set up so-called residence rules to specify when data should be archived and retention rules to specify how long the data should be stored in the archive before it is deleted, all in an automated process controlled by ILM.

The ILM ruleset automates the selection of data records to be archived and deleted based on predefined time references and residence/retention periods. At the same time, it performs various automated checks to ensure that the system maintains all technical dependencies.

SAP ILM offers advanced authorization control options that meet GDPR requirements for blocking access to personal data. ILM also provides options to fulfill the above-described requirements described for legal hold or for blocking data required for legal proceedings using the Legal Case Management feature.

### Decommissioning SAP systems

Another option for an SAP S/4HANA transformation is a greenfield migration, which involves creating a completely new system on S/4HANA and migrating only certain data, such as active business transactions, from the legacy system to the new one. This scenario may also be an option when rolling out any other new IT system that replaces the existing one. Of course, the (regulatory) data retention requirements for the legacy system still apply.

Depending on the data retention policies and access requirements of each department, companies must determine the best approach for handling legacy system data during migration. A data retention warehouse provides a cost-effective solution that supports the regulatory reporting requirements of each department, without the need to maintain the data in the legacy system. The data from the old system is transferred to a new database system, where it can be stored/archived long-term on a more cost-effective infrastructure and can usually be accessed via a simple web interface. These solutions can in some cases be integrated with the new S/4HANA environment to allow access to the legacy data directly from the new system. That way, you can then fully decommission and dismantle the legacy system.

There are usually also features within the retention warehouse solution that will perform scheduled deletions from the database in accordance with compliance regulations.

Another advantage of retention warehouses is that they operate independently of the type of the legacy systems. In other words, once you implement the warehouse solution, you can archive data from a wide variety of legacy systems and take an important step toward consolidating your IT system for the long term.

# Efficient implementation of data retention and deletion solutions

Improved system performance, lower IT costs and regulatory compliance — plenty of good reasons to take a systematic approach to your data retention and deletion strategy.

Deloitte recently developed an effective, end-to-end model that brings an interdisciplinary perspective to this task. We take a comprehensive approach addressing business management issues, IT and technology solutions, and regulatory compliance. As part of our support, we work with you to map out all the steps required to get the job done, from conceptual design and analysis to technical implementation. Our holistic approach complete with the associated Data Lifecycle Framework allows us to analyze the status of your data, set up relevant deletion rules and roll out a custom archival system.

The result is a robust, compliant and effective data management strategy that meets your financial and technical goals, giving your business the tools it needs to optimize the value and control of your data.

With this, you will finally have a systematic and sustainable solution to the agonizing dilemma: “to keep or not to keep”. A solution that even the indecisive Hamlet might have appreciated ...



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