



INDEPENDENT SAP TRENDS, ANALYSES, STRATEGIES AND IN-DEPTH REPORTS FROM BUSINESS AND IT



# Agility versus Stability

Thomas Failer is the founder of Swiss SAP Partner Data Migration Services. He resolved the conflict of agility versus stability on the road towards Hana and S/4. Page 42

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**Thomas Failer,**  
founder of Data Migration  
Services.

On the road to S/4 and Hana, agility and stability have to be reconciled

# Algorithms and Data Structures

Who invented it? Swiss SAP partner Data Migration Services has realized the reasonable and efficient separation of agile data of a future S/4 implementation from a legally secure archiving of ERP/ECC 6.o.

**N**iklaus Wirth is a Swiss computer scientist. He developed the programming language Pascal and wrote the book "Algorithms + Data Structures". In 1976, his theory was revolutionary. Now, it is almost common sense: Every algorithm must be predated by an exact data definition, and processes and data have to be separated. SAP partner Data Migration Services is figuratively following in the footsteps of Wirth, and not only because they are both from Switzerland. The possibility of extracting data and functionalities of a SAP ERP system in turn opens up the possibility of the decommissioning of legacy systems, legally secure archiving, the further use of data, and an efficient and secure way towards Hana, S/4, and C/4.

Data Migration Services (DMS) has created a data structure platform for all data and processes of a decommissioned SAP system. "Customers can leverage the platform as a fixed part of their desired system landscape", DMS founder and CEO Thomas Failer explained to E-3 Editor-in-Chief Peter Färbing. "Data and documents not necessary in day-to-day operations in S/4 can regularly be transferred to the platform. Consequently, S/4 and Hana remain lean and agile in the long term. However, up until now, systems often had to be retrofitted to keep up the necessary speed and stability. And the volume of data will increase even more with the rise of the Internet of Things."

Finding a safe way to Hana and S/4 will remain a top priority for SAP customers until 2025. The goal is clear, but the road towards it is full of unexpected turns, dangerous, and unsafe. "Let's take a look at the scenario that SAP prefers: returning to the SAP standard and migrating data with its own conversion tool", Thomas Failer says as he is trying to explain typical pitfalls on the road towards S/4 Hana. "If you have a data volume of 5 terabyte, the system downtimes while migrating would take way too long and be way too expensive.

One weekend would not be nearly enough for the migration. That's why we think that only about 10 percent of customers will actually choose this way, because only 10 percent of them realistically can." What about the remaining 90 percent, then? Thomas Failer says, "They have to solve the problem of only partially migrating their data to S/4 and Hana and handle what's left intelligently." Right now, many SAP customers do not see any other way than continuing to operate their legacy systems while also running S/4. However, this means even more migration effort and operational costs.

DMS's concept also needs some effort, but the amount of necessary resources is way smaller. "There is some effort involved in separating operational and non-operational data and in optimizing data quality, yes", explains CEO Failer. "However, a substantial data reduction is achieved. This reduces the number of man-days necessary for migrating major SAP implementations from about 5,000 to 2,000 or 3,000. What's even better: this is not just a one-time benefit."

A win-win situation for SAP customers and Data Migration Services. "We are growing substantially right now. The most important thing, however, is that the migration to S/4 is creating awareness for the change necessary to successfully deal with legacy data and systems in the future", Thomas Failer describes the current situation for both his company and SAP customers. "This brings us to the topic of convergence. As great as our platform is, we cannot support the migration to S/4 and Hana of 50,000 SAP customers worldwide - what a number! - alone. That's why we are currently investing in building up and educating a partner network of our own which spreads the word of our approach more and more in the community."

Just like Data Migration Services, many SAP customers also rely on long-term part-

ners in their respective fields. "That's right", confirms Thomas Failer. "That's why, besides the development of our products, we chose to also heavily focus our efforts on expanding our partner network. This includes resellers, implementation partners including system integration as well as technology partners, for example manufacturers of ETL tools, and, last but not least, SAP itself. Because we have to be able to also dynamically manage future developments and changes in data structures with our tools, otherwise they wouldn't continue to provide the comprehensive benefits they do today." But, as most people know, SAP customers are not easily convinced. Thomas Failer says, "While that's true, it is not necessarily a bad thing. It just means that SAP customers think before they buy. They are, however, often skeptical about our products, just because they cannot believe how high our benefits are; like 80 percent less operational costs, data reduction by 75 percent, and 50 percent less migration effort. They simply cannot imagine how this would even be possible. Over the course of the last year, we actually learned a lot in that regard; about SAP customers and how we should approach them. We have to get through to customers before their migration, meaning early on in the planning process."

As a conclusion of this E-3 talk, here's a use case showcasing the benefits of the concept of algorithms and data structures. "Think about machine engineering", says CEO Thomas Failer as he tries to give an example for when and where DMS' platform could be of help. "Machine engineering entails some processes lasting years, even decades. It's neither useful nor reasonable to store old, almost ancient information in live systems. However, legacy information, like construction plans or maintenance reports, retain their relevancy until the machine in question has been removed or until legal retention periods expire."



Strategy interview with Thomas Failer, founder of Data Migration Services

# Agility versus Stability

Data is the new gold. But how can data agility and legal stability be reconciled? Only a few IT companies have thought about this problem. Data Migration Services did not only think about it, but also found a nearly perfect solution.

*Thomas Failer talks to Peter M. Färbing*

**W**hen people talk about the treasure trove that is data, they are often quick to mention the term MDM, Master Data Management, or also MDG, Master Data Governance. However, these buzzwords and their corresponding range of functionalities are often not nearly enough for an ERP release change. What's more, if the ERP database has to be replaced too, like in the case of Hana and S/4 in 2025, then customers need a lot more than SAP's MDM and MDG. E-3 Editor-in-Chief, Peter M. Färbing, talks strategy in this interview with Thomas Failer, founder of Data Migration Services.

**Peter M. Färbing:** Mr. Failer, you and your company have been specializing in historization and migration of legacy data and documents for 20 years now, especially focusing on SAP customers. What has been the biggest change in the market in the past two decades?

**Thomas Failer:** Well, the biggest change is actually happening right now! The basic problem of how expensive and laborious it is to continue to operate legacy systems after changing to a new software generation has been bothering IT departments for a long time. However, this problem has never posed a greater challenge than today.

**Färbing:** Why is that?

**Failer:** The primary reason is that different developments are converging right now. The protection of intellectual property and of personal data is becoming more important than ever before. This is not only due to specific regulations, like the European General Data Protection Regulation (GDPR), but also because attacks by cybercriminals and spies are getting ever more vicious. At the same time, companies cannot simply lock away data behind strong concrete walls anymore, as connectivity along the entire supply chain is the order of the day.

**Färbing:** And by that you are hinting at the cloud, right?

**Failer:** It's more than just a hint. The cloud is changing everything. It's not just dictating

the when and where of IT, but also the how - meaning how IT is consumed. The cloud's flexibility, speed, simplicity, and availability of resources is a quantum leap for companies in terms of technology and innovation. However, at the same time, IT systems of companies are relentlessly pushed to keep up with the cloud. They have to be just as agile, flexible, and fast as major cloud providers. Furthermore, they have to provide the same comfort in use to customers.

**Färbing:** Is this also true for SAP customers?

**Failer:** Yes, of course - this is true for every one. SAP customers who are not on par with high cloud standards will not be able to tackle the challenge of digitalization. Customers and users will turn their back on them and leverage the services of public cloud providers. Worst case scenario: managers have to completely outsource IT.

**Färbing:** Are SAP customers aware of this development?

**Failer:** Of course they are. They are watching SAP's cloud strategy like a hawk. A lot of them are also hesitating to change to SAP's new software generation, and would like to make the move rather later than now. However, this does not mean that they are entirely sceptical of its strategy.

**Färbing:** What does it mean, then?

**Failer:** As I see it, their hesitation is not only an expression of profound consideration, but also of deep uncertainty. Because companies know how complex the migration will be. And their SAP landscapes are home to the heart of their entire organization. Of course, this is in part due to the data that resides there, the crown jewels, the intellectual property, like construction plans, patents, or formulas. However, SAP landscapes are also harboring highly specific processing knowledge in their software. SAP customers have acquired all of this knowledge over years and years of hard work, dedication, and, of course, spending a lot of money.

**Färbing:** So what you're saying is that users want to migrate all of this data to S/4 Hana?

**Failer:** At first, it may seem like it, and many people instinctively answer this question with a very strong yes. However, this question is also subject to heavy debate in the SAP community right now. Certainly, customization was, is, and will remain one of the top priorities of SAP customers. But they are also considering to make the most of this migration to S/4 and Hana and use it for redesigning their processes, as a lot of them have been telling me in personal discussions. At least 10 to 20 percent of SAP customers do actually have the willingness to fundamentally change their business processes to standard procedures. Of course, this is the minority, but it's still a lot.

**Färbing:** Doesn't opting for standard processes also mean having advantages when migrating?

**Failer:** Well, I would say that this is a little too general. Because regardless of the chosen approach - whether it is returning to the SAP standard, implementing S/4 including customizing using the greenfield approach, or simultaneously operating S/4 and Business Suite - all SAP customers are confronted by one and the same problem: Only a fraction of them know what they should do with data and other information in their systems when migrating. This is the reason for the uncertainty and the hesitation. A logical consequence is the small number of successful S/4 Hana implementations that we are seeing right now.

**Färbing:** But IT should always support business, right?

**Failer:** Yes, certainly. However, we have to think about how fast all of this is going. Even the term agility has only become popular in recent years. Companies have to react to changes in the market faster and faster. They are constantly acquiring and selling business units and subsidiaries. Consequently, they have to continuously adapt their business processes and are always restructuring. All of this is happening much

faster and much more often than before. This constant change has to be accompanied, supported, and often executed by IT systems. You could say that companies are almost like living, breathing organisms. IT has to be able to do that, too. This is especially true for organically grown and therefore complex SAP environments.

**Färbinger: What can SAP customers do?**

**Failer:** They have to resolve the basic conflict that up until now has been inherent in application landscapes. For IT to be able to support business, it is necessary that applications and services are flexible, adaptable, and changeable. However, corresponding data and information do not like that at all. They need stability due to business-related as well as legal reasons. Data structures and contextual information cannot be changed. The basic conflict is therefore agility versus stability.

**Färbinger: And how can SAP customers resolve this conflict?**

**Failer:** The solution is to separate the applications layer from the data layer. This is the right approach to resolve this conflict. If applications and data can be managed separately from one another, IT departments can pursue both goals - ability and stability - simultaneously. Just as you would not solve the Gordian Knot; you'd cut it.

**Färbinger: Isn't that the concept of a service-oriented architecture?**

**Failer:** Yes, exactly. S/4 and Hana need this separation between applications and data even more than the Business Suite did. However, the root of the conflict between agility and stability is an entirely different problem. To address it, you have to make a separation also on the data layer itself.

**Färbinger: But why?**

**Failer:** Because S/4 brings with it completely new data structures. The number of tables of big implementations is reduced from more than 100,000 to maybe 20,000. However, the data generated in SAP systems and the corresponding business context have to be stored without changing anything so that companies can comply with legal requirements. Consequently, the long-term separation of applications and data only works if operational data is additionally separated from the data that isn't needed in day-to-day operations.

**Färbinger: How have SAP customers been dealing with this problem up until now?**

**Failer:** Generally speaking, SAP customers had to suspend their legacy systems after data migrations or transformations. This

means that they simply cut their connection to the outside world and reduced the resource consumption through, for example, virtualization. From a legal perspective, this approach is totally fine. But it prevents them from becoming completely agile.

**Färbinger: Why?**

**Failer:** Well, imagine an audit. A tax auditor wants to access all invoicing data and receipts six years after the system has been suspended. Can you guarantee that the machine will boot up without any problems? Or imagine that you are selling a business unit. The buyer needs all legacy data including business context. Can you reliably access this information in the suspended system, precisely remove it, and provide it to the buyer in a neutral format so that they do not have to rebuild the entire legacy system to be able to at least read it? Or imagine that a customer wants his data deleted in accordance with the European General Data Protection Regulation (EU-GDPR). Can you then identify each and every invoice that is older than ten years and can therefore be deleted? Can you guarantee that the other invoices of this specific customer are automatically deleted after their respective retention periods end? More often than not, the answer to all of these questions is the same: no.

**Färbinger: That sounds like there is no way out.**

**Failer:** There is one - and that's the reason why Data Migration Services even exists. We came up with the concept while overseeing migration projects from R/2 to R/3, and it has prevailed to this day. If all data including documents together with their business contexts are transferred in a neutral format to a modern platform, their entire lifecycle up until their eventual deletion can be managed independently of the legacy systems they were coming from. This is the foundation for everything that comes after: the transformation of data, its subsequent migration as well as the optimization of data quality and especially the decommissioning of legacy systems. Because it is neither economically nor technologically advisable to migrate all legacy data and documents to the new software generation. Not to mention that there aren't nearly enough migration experts to manage the transfer to S/4 and Hana until 2025, the deadline set by SAP itself.

**Färbinger: How is this platform different to suspended legacy systems?**

**Failer:** An independent platform for lifecycle management of legacy data and documents including business context provides legal certainty, because size and structure of information remain unchanged. Furthermore, the requirements of the EU-GDPR can be complied with, especially concerning the deletion of individual data sets. The platform also provides additional security as it is a living and breathing system that can be regularly maintained and patched. Moreover, its operational costs are a lot less than those of the continued operation of legacy systems - usually 80 percent less, sometimes even more.

**Färbinger: But so far, this has nothing to do with migration.**

**Failer:** Transferring and storing information including its business context - we call that historization, by the way - is a prerequisite for a technologically and economically reasonable migration. The platform



**Thomas Failer,**  
founder of Data Migration  
Services.



can be seen as a stepping stone from which companies can reach all their other goals as well.

**Färbinger:** You might have to explain that further.

**Failer:** Our customers were the first to notice it. If all information is stored legally watertight on this platform, only the data and information needed for daily operations must be transferred to the new system. This usually means a data reduction of 50 to 70 percent for customers. What's more, this percentage is even higher if the quality of the data that has to be migrated is higher as well. Before migrating, we can correct erroneous data sets, delete duplicates, and enrich data sets with information from other sources on the platform. This just goes to show that every system change opens up the possibility of even more data quality!

**Färbinger:** How do you do that?

**Failer:** We divide the overall process, ranging from the planning of a S/4 Hana migration to its operation together with our platform, into four key steps: Identify, Design, Execute, and Operate. Up until now, our products focused more on the third step, Execute, meaning the historization of information and the subsequent migration. However, we are currently working on tools to accompany the other three steps.

**Färbinger:** Can you explain the different steps in a little more detail?

**Failer:** Of course! Let's start with step one, Identify. Identify means to detect the format and scope of information which do not have to be transferred to S/4 Hana at the press of a button. This is an analysis of potential which additionally shows customers how the information which will remain on our platform will look visually. This creates trust, because customers are usually quick to realize that everything looks exactly like they are used to on their legacy systems. Potential and trust are the prerequisite for the decision if and how our approach for the road to S/4 is suitable for customers.

**Färbinger:** What happens next?

**Failer:** We move on to step two, Design. Design means finetuning. It is here that we develop specific filtering criteria for data selection and transfer. Our approach to this is that we provide the exact filtering criteria and rules as XML files. This lets customers decide for themselves which migration and conversion tools they want to use for the transfer.

**Färbinger:** You already described briefly what the third step, Execute, is about. That leaves us with the fourth and final step, Operate.

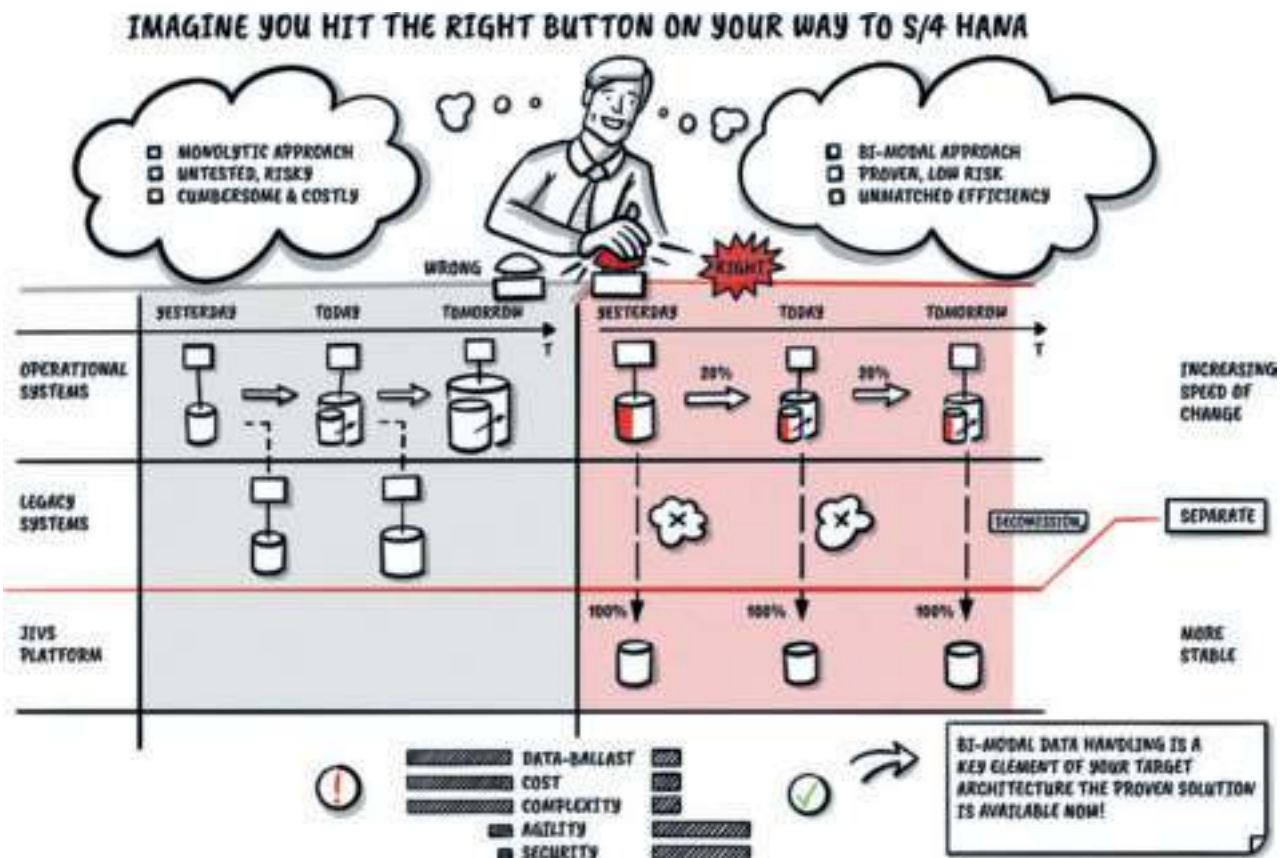
**Failer:** Basically, Operate is heavily connected to the topic of integration. For, we de-

velop integration solutions to Hana-based applications like S/4 and C/4 or to an interface like Fiori to be part of the application landscape. Customers don't always have to access legacy data that's not necessary in day-to-day operations - very rarely, even. However, if they have to access it because of business-related or legal reasons, it should be possible without leaving their familiar system environment. We believe in simplification - this means that accessing legacy data should be possible without endlessly searching for the necessary information or leaving the familiar application environment. This is the level of comfort that users and customers are used to now, in part because of the cloud and smartphones.

**Färbinger:** When will these tools be available?

**Failer:** The prototypes are created as we speak. We want to provide customers with finished packages for the highly automated migration to S/4 and C/4 until the fall of 2019. Our goal is to help our customers get more agile. This is having an impact on us as well. Therefore, because of our extended product roadmap, we changed our development processes to agile methods to become even faster without decreasing quality - quite on the contrary.

**Färbinger:** Thank you for the interview.



Five steps to S/4: Housekeeping, Identify, Design, Transform, Operate

# Platform for Information Management

The road to S/4 Hana seems hard and unmanageable. A massive mountain of accumulated data and documents including business context in legacy systems is the reason. Should you start mining and transfer the mountain to S/4 Hana, too?

By Tobias Eberle, CEO Data Migration Services

**S**hould you go around the mountain, never look back, and start over on a green field? Or should you mine the parts you want and take them with you? And how do you make sure that the mountain doesn't just collapse in on itself, making its precious ores and other contents unobtainable?

SAP customers know: the migration to S/4 and subsequent digitalization projects can only realize their full potential if the new software generation only operates with the most recent data and documents necessary in day-to-day operations. However, SAP customers often do not know how they can rid themselves of the mountain of legacy data and documents.

## Housekeeping

The right approach to this problem would be to manage legacy information independently of systems. Data

Migration Services has a solution to this problem which does just that: JiVS, a platform for information management. JiVS allows for the management of data and documents including their business contexts which are not necessary in day-to-day operations throughout their entire lifecycle, ranging from their transfer from operational systems all the way to legal retention and their eventual deletion.

More than 1,000 JiVS implementations worldwide have shown us that this concept of an information management platform independent of the underlying system works. The operational costs for

the JiVS platform are usually much more efficient, and up to 80 percent less than those of the continued operation of legacy systems. The information is not changed in any way when transferred from legacy systems, making it tamper-proof. Auditors will recognize its authenticity, and therefore the legal compliance regarding financial authorities is guaranteed. What is more, JiVS is a Java-based platform, making it independent of the systems it operates on. Consequently, there is no trouble concerning hardware - something especially legacy systems often deal with. As a living - meaning ever-changing - system, JiVS allows for regular security updates and checks, practically mitigating the risk cyber attacks and espionage pose

in the long-term. Once the information including corresponding business context is transferred to JiVS, the legacy systems can be completely shut down and decommissioned.

This finishes up housekeeping, or so to speak. The most important thing about these basic preparations leading up to the migration to S/4 is that the historicized information is always accessible. This way, companies can migrate only the part





of the data volume that they really need in day-to-day operations, for example unfinished orders. The experience of previous JiVS projects shows: that the data volume that has to be migrated can be reduced by 50 to 80 percent is not only possible, but also realistic! Even though customers have to invest some time for the analysis of the data and the selection of the information that has to be migrated, the overall effort of migration is actually reduced by up to 50 percent, sometimes even more.

However, whoever is historicizing and migrating is right in the middle of a pro-

ject, meaning that everything has already been planned, budgeted, analyzed, and decided. Before this execution phase can happen, however, there are still two steps to be taken in a S/4 project: Identify and Design. JiVS can handle them as well.

## Identify

Before SAP customers can reduce data volumes that have to be migrated, they have to first evaluate which data they need in S/4 Hana and which they don't. For this purpose, JiVS offers an analytics tool with numerous different possibilities for parameterization. For example, the information stored in the legacy systems allows for the selection of orders which are older than six months and therefore usually already completed, or company codes or subsidiaries which do not exist anymore. Of course, the analytics tool is subject to adaptation and improvement through more and more specific filter criteria.

This analysis of potential is not 100 percent accurate - but meticulous accuracy is not the primary focus of the Identify phase. The focus of this step is instead to give customers a solid foundation on which they can base their decision of whether or not to use JiVS for the migration to S/4 and Hana on.

Because of the vast number of already successfully completed SAP projects, JiVS is familiar with the data structures of different SAP releases, ranging from R/3 in the version 3.0 all the way to SAP ERP/ECC 6.0. The criteria for selection and filtering therefore do not have to be developed, but rather merely configured.

## Design

If the customer has made their decision, the next step is Design, the finetuning of data selection and migration. This step is not happening in the legacy environment anymore, but already on the JiVS platform. For this to happen, 100 percent of the existing infor-

mation is transferred to the platform. The selection or filter criteria we defined in step one are finetuned and tested again. This allows for the automated selection and filtering through software.

The Design phase has even more benefits, however. Customers can reconsider if the number of business objects in S/4 could maybe be reduced massively by changing processes or returning to the SAP standard - from the maximum of 180 to perhaps a mere 40 or 50. Furthermore, this step is the ideal opportunity in the course of the migration project to optimize the data quality. Over the years, erroneous, redundant, and incomplete data sets accumulate in legacy systems, making Master Data Management acutely necessary, but also very complex to do in the legacy systems themselves. Before migrating to S/4 Hana, these data sets can be cleaned up, gotten rid of, or be enriched by information from other sources, like address directories, on the JiVS platform. This is necessary because companies who want to successfully tackle digitalization need high data quality. Not to mention that highly automated processes based on erroneous data sets are a contradiction and lead to wrong or inadequate decisions as well as missed sales opportunities.

## Transform

After completing step two, JiVS will provide customers with exact, precise, and evaluated filter criteria as XML file. Therefore, customers are free to choose if they want to use the JiVS tool for extraction, transformation, and (down-)loading (ETL) for selected data in S/4 Hana, or if they'd rather use solutions from third parties, for example SAP's own conversion tool. To keep customers' options open, JiVS can provide third-party conversion tool providers with the complete data set in XML format. If the conversion of data to the new S/4 Hana data structures happens through JiVS ETL, the data can be automatically integrated into the new environment using SAP's migration cockpit. Regardless of whether or not SAP customers return to the SAP standard in the course of their migration, downtimes should then not be longer than a typical weekend - even if working with huge SAP landscapes.

## Operate

After the migration is over, when S/4 has already been booted up successfully and legacy systems have been decommissi-



**Tobias Eberle,**  
CEO of Data  
Migration Services.



oned, one question arises: which role does JiVS play in day-to-day operations, or in our fourth step, Operate? For, the platform can only realize its full potential when it is used for more than just accessing data, when it is treated like something other than an archive. Many problems usually typical for SAP environments can be avoided in the new world of S/4 Hana with JiVS right from the start. This includes the continuously increasing resource requirements. Data and documents that are not necessary in daily operations anymore can be regularly historicized using JiVS. S/4 remains lean and agile, which reduces operational costs in the long-term.

Furthermore, the information on the JiVS platform is not only valuable because of legal, but also because of economic reasons. It is correct that the number of times non-operational information is accessed is limited, but this only answers the question of frequency, not of value. Quite on the contrary, actually: if industries have longer runtimes for orders and projects, users have to access older information more frequently. Furthermore, companies only gain a holistic view of their customers if they know which information has already been stored on their servers. But they don't want to switch between different environments; this is now frowned upon in the cloud era.

This is precisely the reason why Data Migration Services also focuses on integration, so that JiVS does not merely play the role of an archive that users only access when they absolutely have to. Regardless of the interface - whether it is SAP Fiori, S/4, or C/4 - the SAP users should be able to access information. Furthermore, they should also be able to navigate without ever leaving the SAP interface. This is not only beneficial for the users' productivity, but also their satisfaction with JiVS.

Besides these frontend integrations, Data Migration Services also focuses on important integrations in the backend. This is important because data structures will still be subject to constant change in S/4 or C/4 systems. For the data transfer to S/4 or C/4 from less structured non-SAP systems to happen automatically, the mapping rules in JiVS have to be dynamically adapted. For this purpose, the changes of the data structures per interfaces have to automatically be transferred to the platform.

What is more, JiVS works perfectly well with the numerous different cloud and big data strategies of existing SAP customers. For, the platform can be implemented in the data center of companies as well as on all relevant, major cloud platforms like Amazon Web Services, Google Cloud Platform, or Microsoft Azure. The

information stored on JiVS can also always be easily incorporated into the big data scenarios of SAP customers. For this purpose, they can be accessed directly through the application layer of the JiVS platform, or they can alternatively be exported as proper data set and then processed in big data systems - giving customers once again the freedom of choice.

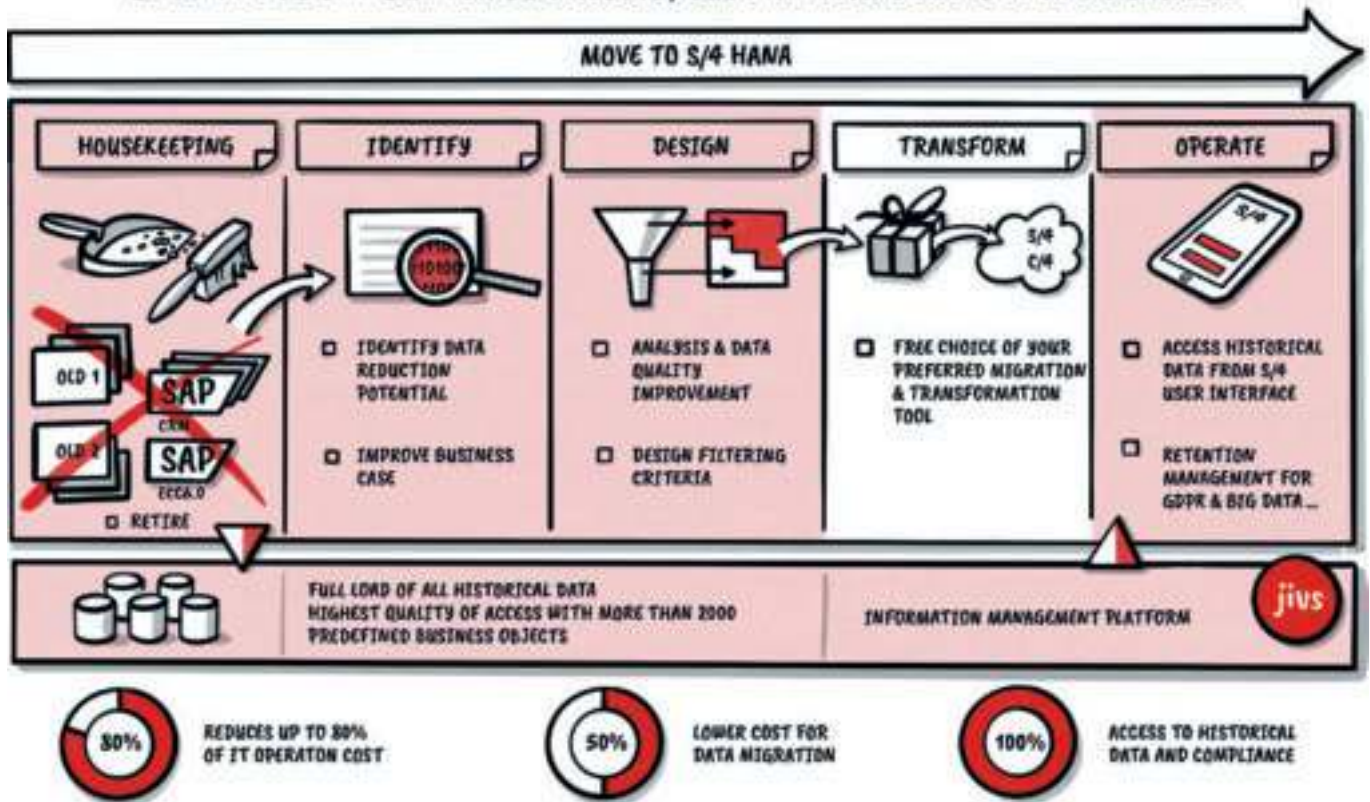
### JiVS editions S/4 and C/4

Existing tools and new developments planned for late 2019 will be combined to special JiVS editions. On the one hand, there is the S/4 edition for ERP migration, and on the other hand, there is the C/4 edition for CRM migration. Both editions are optimized through AI algorithms and are supposed to hit the market in fall 2019. Data Migration Services will showcase demo versions of both editions first at SAP NOW, 3rd and 4th of April in Basel, Switzerland, and then at Sapphire, 7th to 9th of May in Orlando, Florida.

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

**DATA**  
MIGRATION  
SERVICES

## ONCE THE RIGHT BUTTON IS PRESSED, SUBSTANTIAL BENEFITS ARE REALIZED





Formula for decommissioning legacy systems

# How to be global, heterogeneous, and compliant

140 years of success - the global brand Henkel is famous for its innovation and agility. These attributes also characterize its IT department. It developed a formula for decommissioning legacy systems - and consequently paves the way towards S/4 Hana.

By Marcus Ehrenwirth, Data Migration Services

**H**eterogeneous IT environments, different releases, globally dispersed systems and applications - IT administrators in international companies have to deal with diverse challenges when implementing worldwide reliable standards. "For this exact reason, we decided to launch our project Horizon in 2010. We wanted to reduce the number of our different ERP systems - then three - to one", explains Sven Schweden, Head of Information Lifecycle, who is responsible for the decommissioning of legacy systems at Henkel. "This project raised the question: what should we do with the 70 terabytes of data stored in our legacy systems?"

Legacy systems need regular security updates and patches to avoid security leaks and breaches. Furthermore, there is also the problem of spare parts for the hardware. IT departments consequently cannot guarantee that tax-related data and documents are stored tamper-proof for at least ten years and can be accessed at will. This makes legal certainty concerning tax audits or law suits almost impossible - a significant risk for companies that has to be gotten rid of.

## Legacy systems pose a major risk

"To transfer all of the data stored in our legacy systems to our new central solution would have been neither sustainable nor useful. However, continuing to operate our legacy systems at the lowest operating capacity did not make sense to us either", explains Sven Schweden. "Because even when systems operate at minimum power, even when all access to normal users is denied, even when all interfaces to third-party applications are cut, legacy systems still have to be maintained regularly." Consequently, the company had to think about a radically different approach, one that would guarantee legal certainty but also

offer the possibility of decommissioning legacy systems.

In 2013 and 2014, Henkel evaluated alternative solutions. For this purpose, the IT team mobilized all other business departments at least partly involved, like finances and law, and invited them to join the discussion. Together, they came up with selection criteria and specifications in workshops. They had to think about how to reconcile legal requirements with business interests - meaning that legacy data and documents have to be stored tamper-proof, but at the same time be accessible to users.

## Convincing Swiss pilot project

Considering external partners like global IT service provider T-Systems or auditing firm KPMG, Henkel considered various scenarios and solutions. In the end, JiVS, a platform developed by the Swiss company Data Migration Services, turned out to be the best fit, both financially and functionality-wise. As Java-based and therefore system-independent platform, JiVS is certified by auditors in Germany, Austria, and Switzerland. For, it stores legacy data and documents legally secure together with their corresponding business context. This guarantees legal compliance in the long term. Furthermore, the information is still accessible at will and is displayed just like it was in the familiar legacy system environment. What is more, JiVS allows for the management of the entire lifecycle of information as well as the deletion of individual data sets and documents. This way, companies can also comply with legal requirements, chief among them the European General Data Protection Regulation (EU-GDPR). Moreover, the platform also has substantial economical benefits. "The operational costs of JiVS are typically only ten percent of the continued operation of legacy sys-

tems. Even if the systems are completely downsized, there are still operational cost savings of 65 to 70 percent when using JiVS instead", explains Sven Schweden. "These numbers just convinced us."

One of the systems that was to be decommissioned was located in Switzerland, and was therefore the perfect fit for Henkel's JiVS pilot project. This local ERP solution supported the entire processing landscape also typical for the bigger ERP systems in North America or Asia. Furthermore, the overall volume of stored data was only 500 gigabytes. With the help of T-Systems Switzerland, the project was realized in just two months. And the business users were completely satisfied with the result.

"The results of the pilot project weren't only satisfactory, but also allowed us to see for ourselves and show our colleagues that we could reach one of our most important goals by transferring almost all legacy data to JiVS. By only transferring unfinished processes no older than three to six months to the new central SAP system, we really only had a few gigabytes of data to migrate", says Sven Schweden.

Because of the positive results of the pilot project, T-Systems was asked to decommission eight more legacy systems. Because these systems were bigger than the one in Switzerland, new challenges arose. On the one hand, JiVS had to be connected to the already existing document management systems, because Henkel had stored 150 million PDF files, or an overall total of 25 terabytes, there. This connection ensured that Henkel could still access these PDF files after decommissioning the systems.

On the other hand, the JiVS platform had to be adapted to specific regulations of different countries. These adaptations included, for example, the possibility to support currency data up until the fifth decimal and Asian fonts. This was especially important for Henkel's subsidiaries in Asia,

where systems had to be decommissioned in more than 30 countries.

### Formula for decommissioning

By 2018, Henkel had decommissioned an overall total of 14 legacy systems, five of them with more than 30 terabytes of data stored in them. In 2019, Henkel is planning to decommission two more major legacy systems. “Based on our experiences last year, we came up with kind of a formula with which we can guarantee the decommissioning of any legacy system in a maximum of twelve months”, said Sven Schweden. “This formula is going way beyond the simple ERP systems that were the primary focus of our first project Horizon in 2010. We are currently also evaluating the decommissioning of two CRM systems. Furthermore, every department that has systems that it wants to shut down can hand in a request.”

The formula always follows the same steps, and it always results in a successful migration project. The first ingredient of the formula is a standardized questionnaire. With this questionnaire, the IT department can evaluate if the request in question calls for a JiVS project or not. If Sven Schweden and his colleagues decide to use JiVS, they start by isolating the legacy system from third-party applications and deleting all user access data so that the data within cannot be changed anymore, complying with legal requirements. At the same time, they check if the information is complete. Sometimes, some SAP documents may have to be printed out, because after the data has migrated to JiVS, this is not possible anymore. Therefore, the documents must be complete before the migra-

### 140 years of innovation and agility

Henkel leverages its worldwide leading innovation, brands, and technologies in three key business areas: adhesive technologies, beauty care, and laundry and home care. Henkel was founded in 1876 and has 140 years of success under its belt. Worldwide, Henkel has a diverse team comprised of 53,000 employees which are connected by strong corporate culture, a joint corporate purpose, and values. Henkel's preferred shares are listed in the DAX.

tion starts so they can be transferred to the platform after employees have made sure that all important documents have been printed out. All of this takes up to three months.

In the next step, JiVS experts extract all information from the legacy systems. At the same time, they adapt the platform, if it should be necessary. In the third step, the new environment is tested. In a fourth and final step, operation starts on the new platform. If everything works according to plan, the legacy system can be decommissioned.

With the concept of a formula also came the idea of a Center of Excellence for JiVS. “Experience shows that users have to access legacy data usually only twice a year. Even though we restricted the number of users to two per department and to a maximum of 50 per major decommissioned ERP systems, there were no bottlenecks. However, if users don't work with a certain software regularly, they easily forget how it works or how to navigate its interface. As a consequence, we saw a rise in support requests. Until the end of 2019, we therefore want to build a central team of JiVS users managing and executing all access requests”, says Sven Schweden.

The JiVS formula and the corresponding structures and processes are trusted and tried and tested by now. Henkel consequently expects to not only decommission the bigger ERP system until the end of 2020, like originally planned, but also the other ten local ERP solutions.

### The right approach for the future

“As we see it, the biggest benefit of JiVS is yet to come, however. Like every SAP customer, we are currently working on our strategy for the migration to S/4 Hana, in our case from our central SAP Business Suite to the new software generation. But unlike most SAP customers, we can focus most of our energy on if we want to keep our customized developments and adaptations also in the new

SAP world, or if we want to return to the SAP standard”, explains Sven Schweden the challenges that lie ahead. “For, we have already answered the question of what to do with legacy data and documents thanks to JiVS. This makes us more agile than ever before. Furthermore, the pressure that always surrounds migration projects has been mostly relieved - we don't have to rush to S/4 Hana, but can take our time. This is a significant burden to be lifted off the shoulders of a company's IT department and management.”



Sven Schweden, Head of SAP Information Lifecycle, Business Integrated Solutions, Henkel