

SAP S4/HANA in Insurance

Using HANA as a Data Asset

Summary

SAP HANA adoption in the insurance industry has been slow and positive business cases for upgrades are difficult to calculate. Rather than taking a traditional view of looking at potential process improvements with new functionality, we propose assessing how data, data analytics and AI can add value to your business – and how SAP HANA can be the foundation for this.

Low S4/HANA adoption in insurance

SAP HANA adoption in the insurance industry has been slow. Insurance companies struggle to identify and realize true benefits from HANA migration. While they know that, sooner or later, they will have to upgrade (be it only because SAP will stop maintenance on non-HANA platforms), many postpone either to save money today or because they hope a larger business event will trigger a migration tomorrow (e.g. merger, change of business model).

We propose a paradigm shift: don't look at process improvements or limiting your transition costs. Don't evaluate brown- vs green-field. Rather, think about how data, data analytics and AI can add value to your business – and how SAP HANA can be the foundation for this. If you don't see this value,

reduce your migration efforts by focusing on a technical upgrade with marginal and stepwise improvements.

Viewing S4/HANA as a data asset can change your perception on how to add value to your business

Like all financial service providers, the insurance industry is data intensive and has traditionally struggled to fully utilise the copious amounts of information held in various systems. Technical insurance data is notoriously difficult to collect. Global insurance companies typically have different policy and claims systems in each operating country. And even if the systems themselves run on the same software, the setup is often different. In countries where the insurers presence is vast, there are often multiple policy and claims (amongst other) systems, representing different insurance products, service lines or distribution channels. Additionally, due to past acquisitions, businesses may have similar systems which have never been merged. System landscapes can resemble multiple spider webs tangled together.

In the last few decades, many insurers have used SAP to harmonise and rationalise financial accounting data using global or regional solutions. While this has provided benefits in the form of simplified, harmonised financial system landscapes with improved financial reporting processes, the data being captured, and the information being provided, represents the tip of an iceberg. Technical (i.e. non-financial, insurance) accounting data is frequently left behind based upon rational arguments such as the financial accounting system not having the bandwidth to support huge volumes of raw data found in insurance source systems.

The power and speed of HANA allows for the capture of technical insurance data

This has made it very difficult to collectively capture, analyse and effectively use available data to create valuable information. However, the technological advances and data storage capabilities of systems like SAP HANA have the potential to change this reality.

So, why is it important to capture this data? Data analysis is critical if insurance companies want business strategies that benefit both themselves and their customers and want to grow in a manner consistent with the way the world is changing. The ability to holistically understand this data can change the services offered, allow claims to be more thoroughly and quickly analysed, and manage profitability at a lower level of granularity.

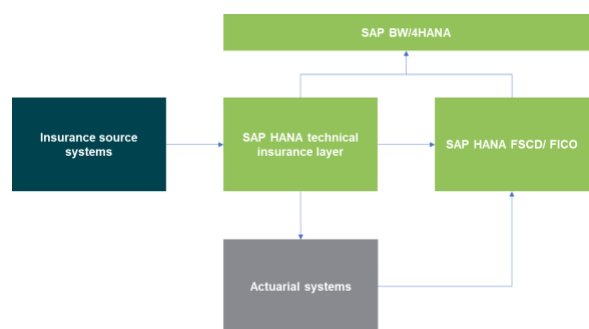
In the past few years, we have begun to see how big data and AI are used in conjunction to quickly analyse and more easily detect fraudulent claims. Claims fraud accounts for 5 – 10% of all claims in the U.S and Canada, and for one-third of insurers, represents as much 20% of claims costs ⁱ. In 2017, across the UK, fraudulent claims were valued at £1.3 billion ⁱⁱ. Using AI to detect anomalies

improves fraud detection rates and speed. Anadola Sigorta, Turkey’s largest insurer, implemented an AI-based fraud detection system and saw a 210% ROI in the first year alone ⁱⁱⁱ.

But this is still only one part of the insurance story. Not only are there claims, but premiums, brokers, agents, reinsurance, coinsurance, etc. All these aspects of the insurance business serve to create data. Often, data is duplicated out of necessity to ensure that everyone within the business has the data they need in the required format. Having multiple data sources leads to lack of uniformity, resulting in misunderstandings and reconciliation issues. It can add time, and thus cost, to the financial reporting and auditing processes, not to mention upstream business processes.

Ideally, insurance companies would collect all data in one location, directly from each source system, in a consistent manner, in a tool which becomes the single source of truth for all subsequent processing. SAP HANA can be used to drive this vision forward by acting as the conduit through which all insurance data flows.

Below is a high-level landscape diagram we will employ to explain a possible approach in using SAP HANA to manage an insurance business.



In this example, all insurance source systems feed raw insurance data into an SAP HANA layer, thus providing a single source for all insurance information. The data input into this layer should be very clearly defined, aligning data from disparate sources based on well-constructed definitions for each field. It is vital that the data coming into this layer be consistently held to ensure that

downstream processes and reporting can be rationalised globally.

There is a cost advantage to this solution. As mentioned previously, insurance companies have volumes of disparate source systems with varying setups. The cost of harmonising and rationalising those systems would be prohibitive for most companies. The amount of time it would take to do that is tremendous. Years would be wasted. So, bringing the data into a centralised location allows local countries to update policy management, policy, claims, CRM, etc. systems as and when needed, while still being able to take advantage of data harmonisation activities.

There is a flip side to this argument, however, that should be addressed. Some insurance companies have incredibly old source systems. People capable of updating these systems may no longer be employed and finding necessary skills in the market can be virtually impossible. Therefore, changing the data extractors from these systems may be risky due to a lack of resources who can successfully do this. Old systems which cannot be properly maintained are inherently risky. There may be no recovery options should they fail, and you may lose many of the benefits of newer IT.

Reconciliation between the source systems and the technical layer is required to support downstream processes. This is the biggest reconciliation challenge in a landscape such as this. RPA and AI can be used to support efforts here, where extensive build is deemed to be value-added. But once this reconciliation is complete, the SAP HANA technical insurance layer then becomes the single source for all other downstream systems and processes. This provides a system landscape where other reconciliations are not quite as challenging and can be more easily automated, especially with RPA.

Now, we will look at each of the downstream activities from this technical layer to understand the impacts and potential benefits.

Financial reporting system

The technical layer sends data to FICO, the financial reporting system. As the data coming into the technical insurance layer is raw, it does not have the double-sided bookkeeping entries required for reporting. For this reason, the technical layer contains mapping rules which serve to create double-sided bookkeeping entries. This data is interfaced to the accounting platform, along with indicative data required for financial reporting. There is no need to capture extraneous data other than that which is truly required for external reporting purposes. All data needed for internal reporting and analysis is held outside the accounting system.

Oftentimes, source systems contain a slim general ledger which has traditionally been used to populate the financial reporting solution. The source system general ledgers often do not contain all the information required to meet legal reporting requirements. This has been noted recently with the advent of IFRS 17. Thus, interfaces, FI manual adjustments or FI allocation cycles are designed to derive this information. This can result in challenges when reconciling back to technical information in the source system.

We often see significant effort put into ensuring the financial accounting system is correct. An advantage of having raw technical data in an SAP technical insurance layer is that automatic reconciliation can be established to financial accounting. Data from the technical insurance layer should lead to technical insurance financial postings being captured correctly and not touched afterwards. Traditionally, there are teams of accountants reviewing, reconciling and correcting this data. These accountants can be directed away from this type of work towards more value-added activities, supporting the technical insurance teams with useful information. In fact, reconciliations between different SAP platforms is relatively easy to automate with the RPA solutions available today. This can lead to data reconciliation, once received into the financial accounting system via the technical insurance layer, being nothing more than a report generated and logged for audit purposes, proving data from the

technical insurance layer has posted correct financial information.

Financial postings representing technical transactions should be fully automated and require little to no intervention or adjustments by the financial accounting team. By reducing reconciliation efforts, accountants are freed up for value-added activities, such as technical accounting and in-depth data analysis.

The FICO platform is also used for non-technical postings. Procurement processes, payroll, etc. can be managed directly in the FICO platform by teams specialising in such activities.

S4/HANA brings together all data and provides a single, uniform place on which to build downstream processes

Actuarial system

As mentioned previously, source systems often contain a slim general ledger used to feed financial accounting platforms. Actuarial systems, on the other hand, must use extensive technical information in their models. Actuarial systems need raw data. Thus, the data sourced for actuarial activities often comes from a different part of an insurance system. This can lead to mismatches between accounting postings and the actuarial postings to FICO. These mismatches can result from timing differences when data is taken into the actuarial system early, mistakes in the slim general ledger used by the source system, or incorrect derivation of financial data in FICO due to lack of indicative information in the slim general ledger.

Using the technical insurance layer to feed actuarial systems helps ensure alignment between the baseline data being used in actuarial models and the financial data being posted to FICO as there is only one data source. This leads to posted value

consistency and can eliminate variances due to timing differences.

Collections and Disbursements

Source systems often do not speak to each other or fully share data when required. Policy and claim systems need to communicate with each other and be aligned with respect to customers. In one insurance company where we have done business, a single unit has been found to have paid significant amounts in one year for claims on policies which have lapsed. The lack of alignment between collections and disbursements can lead to situations like this.

Thus, we recommend not using disbursement and collection functionality in disparate source systems, as data alignment here is critical. We suggest feeding from the technical insurance layer to FS-CD, SAPs insurance industry collection and disbursement solution. FS-CD can be in a stand-alone system or integrated into the FICO platform. But importantly, it should be used to holistically manage collections and disbursements for customers in a single, integrated platform.

To achieve this requires effort. Master data in FS-CD must be properly managed at a country, or even global, level. Data consistency in FS-CD, correctly derived by the technical insurance layer, ensures collections and disbursements are managed appropriately at a customer level in a single location, rather than across multiple systems.

Data from FS-CD posts at an aggregated level in the financial accounting system. Detailed technical information is, again, not required for financial reporting.

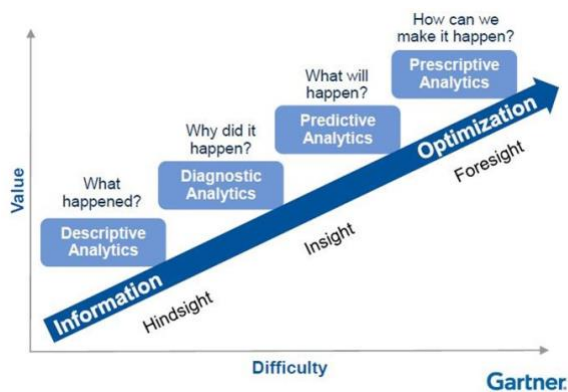
Data previously held in disparate systems can now be utilised in a consolidated manner

Business Warehouse

SAP BW/4HANA is used to tie detailed data from the technical insurance layer, FS-CD and the financial reporting system together. It can even be used for actuarial data if deemed appropriate and value-added. BPC functionality in BW/4HANA can be used to perform consolidation for financial month, quarter and year ends.

As this is where all data comes together, BW becomes a powerful reporting and analysis tool with vast quantities of detailed technical and financial data. This brings us back to the topic that we discussed in the opening section of this paper – using AI tools in data analysis.

Gartner describes data analytics in a four-stage progression model.



By collecting granular data in SAP BW/4HANA, and applying reporting and/ or

Conclusion

Many global insurers have implemented template accounting solutions using SAP. These implementations, given the technology available at the time, had the potential to add value. Technology and our ability to apply it have moved beyond that now. We need to change the way we have traditionally thought about SAP implementations in the insurance industry.

AI capabilities, we can start to understand things like:

- What happened: which lines of business are most profitable, and which are struggling
- Why did it happen: look at past events and find patterns to help detect fraudulent claims activity
- What will happen: what insurance products will be required in the future
- How can we make it happen: where should we drive the insurance market in the future

Alignment of data allows value-adding RPA and AI services to be more effective

It is important to bring amalgamated raw data into a common platform and use this as the single source of the truth for downstream processes, so all data can be shared and consistently understood. Master data must be aligned so multiple systems can be compared and utilising functionality like that in FS-CD to ensure alignment of related processes.

Knowledge available to mankind is doubling in ever shorter time with cycles having reduced from a few years to few hours only in the last decade iv.

Limiting implementations to financial accounting harmonisation or adding subledgers and new functionality such as Insurance Analyser or CRM, will not allow us to take greatest advantage of a powerful system like HANA. We must think of HANA as a data asset which will help organise and consolidate data company-wide, bringing the value of SAP to a wider cross-section of users in insurance companies.

Insurance is an information business. The amount of information available in the world is growing exponentially. Insurance companies who have organised the information they have internally, and who are able to combine it with data and knowledge from other sources, will be able to take advantage of AI and begin to predict and adapt for the future. Those who cannot do this may very well be left behind. By organising and structuring data earlier in business processes, insurance companies will find they are more likely to be future-proofed against regulatory and other changes, as necessary data to meet these requirements may already be available.

To stay ahead of the curve, insurance companies should immediately review and refine data strategies to understand what information is required now and, in the future, to support business strategies. Start by clearly defining holistic, cross-functional data requirements and definitions which support these strategies. Do not bring all possible data in resulting in information overload but focus on data which is truly useful in gaining and keeping customers. Use this information when blueprinting an S/4 HANA solution to align data held in disparate systems in a consistent manner. Simultaneously, start to define an RPA and AI strategy that will integrate into this work to support the various data analysis stages. It is vital to take the time up front to get the information requirements correct and agreed before starting any build. This ensures the least amount of rework and allows you to make the most of your efforts.

About the Author

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Elaine is a partner with elevron with more than 20 years' experience designing, implementing and managing global SAP implementations. She is outstanding at understanding client business requirements and challenges and designing solutions that work to meet needs and solve issues. Her industry experience includes financial services, CPG, pharmaceutical and manufacturing.

About elevron

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i Source: <https://www.insurancefraud.org/statistics.htm>

ii Source: <https://www.abi.org.uk/news/news-articles/2018/08/one-scam-every-minute/>

iii Source: <https://emerj.com/ai-sector-overviews/artificial-intelligence-fraud-detection-insurance/#>

iv Critical Path, R. Buckminster Fuller (1982) and <http://www.industrytap.com/knowledge-doubling-every-12-months-soon-to-be-every-12-hours/3950>

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