



**FUELING FINANCE'S NEEDS
FOR INSIGHTS WITH**

SAP S/4HANA®

INTRODUCTION: PUTTING THE PIECES TOGETHER

We are in a decade of data-driven businesses and new business models such as the sharing economy. Organizations that excel at the data supply chain—that is, transforming raw data into insight-driven actions—are asking bigger and more complex questions to sustain innovation or create disruption in the marketplace.

As organizations search for better answers, trends such as data pattern detection, visualization and rapid prototyping have become the new norm. In parallel, developments in mobile and cloud technology are converging to create new opportunities for growth and business transformation. This is causing software companies such as SAP to rapidly deploy new capabilities or increase the breadth of their product portfolio through acquisition.

Now, many SAP customers are asking how to put the pieces together and how this affects their existing investments in SAP® software.

RECENT DATA TRENDS

During the past decade, many large companies have made significant investments in data warehouse and reporting consolidation and standardization projects. These systems were designed to draw together the various strands of transactional data within the organization into a centralized repository for reporting and analytical needs. It has served a compromise model when everyone agrees on the rationalization of source systems, data integration, business transformation rules, data latency, data retention, and whether or not the analytics schema should be developed on write or read mode. Even the validity of the source is called in question to create data quality and cardinality rules.

The need for a “single source of truth” remains. However, a wider range of business users demand pervasive access to data discovery capabilities that can process large amounts of complex data in real time, without the need for advanced technical and data science skills. Although Microsoft Excel continues to be widely used to satisfy some of these needs, its limitations in processing complex datasets and the need for stringent data security is painfully apparent when used on a broader scale.

In this paper we’ll explore how SAP analytics technologies can help organizations satisfy their governed reporting requirements and take advantage of digital innovations. We’ll also evaluate functional capabilities to address the need for speed and agility enabled through data exploration and rapid prototyping. First, we’ll look at the common financial analytics use cases and the emerging big data use cases where early adopters in the finance organization are finding value through analytics. Then, we’ll look at how embedded analytics within SAP S/4HANA® supports some of these use cases. Finally, we’ll explore the various options for how SAP BW/4HANA and SAP BusinessObjects™ can modernize an organization’s financial analytics capabilities as an evolutionary step to becoming an insight-driven organization.

FINANCIAL ANALYTICS MUST MEET BUSINESS NEEDS

COMMON USE CASES

Finance organizations have long used analytics to establish and monitor specific and measurable financial strategic goals that enable an organization to operate efficiently and effectively. With the rise of new analytical and cognitive technologies (process automation, machine learning, Internet of Things), more companies are beginning to see the value of analytics that transcends functional boundaries—for example, analytics projects to identify ways to optimize inventory levels and reduce carrying costs.

Should the finance organization be “in charge” when it comes to analytics? Since finance is an organization that is experienced at organization-wide collaboration, focusing on analytics-oriented services is a logical extension of the finance role. But who says what is worth measuring and what is not? In fact, business leaders must choose which problems need to be solved and how analytics are integrated into their operations. Business leaders are the ones with domain knowledge and who have to make decisions; therefore they play a central role in determining what to measure and what the results mean in their overall business strategy. Financial analytics only delivers ROI if it serves timely business needs.

The real challenge in defining a strategy for an enterprise data warehouse and analytics platform is determining the classes of use cases to ensure that the solution approach meets the service level expected to deliver trusted insights to the business users.

Some common analytics use cases for the office of finance includes:

PERFORMANCE MANAGEMENT:

Insights to understand and manage operations during execution (e.g., cash flow analysis, profitability reports). The data is embedded within the system of record.

FINANCIAL PLANNING: Planning models to test hypotheses and strengthen the decision-making process (e.g., how to increase working capital through changes in payment terms). The data required to model planning scenarios can be a combination of corporate historical data and external market data.

COMPLIANCE AND REGULATORY REPORTING: A snapshot view of how compliance and enforcement programs are performing. These reports use “frozen” data to evaluate adherence to policies at the end of a given reporting period. With the regulatory environment continually changing, compliance remains a moving target. That means a nimble solution is essential in helping companies stay on track in these programs.

REAL-TIME DASHBOARDS: Unified enterprise-wide view of daily operational finance decisions (e.g., What payables are due today, how close to completion are the financial close tasks across the business). The data for this use case is streaming as new transactions are posted.

RISK MONITORING AND DETECTION: Forward-looking models profiling past transactions to identify anomalies such as fraudulent financial activity (e.g., payments to vendors with new contact information). The data for this use case is based on historical data and streaming activity log data.

While the list above covers the majority of finance analytics scenarios, larger and more complex organizations will often have more use cases that are unique to their business. There are a number of techniques to identify the business needs that an analytics capability can solve for, but the bottom line is that insights will only deliver value if they are addressing a business need at the right time.

EMBEDDED ANALYTICS WITHIN SAP S/4HANA

With the increasing power of in-memory technology and the various options for large storage solutions, SAP HANA® can process large amounts of data in real time. At the same time, it can record and store data in a structured form. With all of the SAP S/4HANA transaction data stored in the SAP HANA database, why duplicate it to another business intelligence (BI) tool when you can access it directly from the source?

This is the simplicity that embedded analytics brings. It provides a business user with a consistent user interface with little to no “design” effort. There is

zero latency between data creation and when it becomes ready for analysis. At a more advanced level, embedded analytics can become part of workflow automation so that certain actions are triggered automatically based on predefined parameters.

Embedded analytics is often associated with a single type of data (e.g., finance data). A good example of embedded analytics in a finance organization is a customer account balance report. However, getting to a single view of the customer account across the business depends on centralizing the financial data onto a single data platform.

Figure 1 shows how SAP S/4HANA embedded analytics addresses the finance analytics capabilities needed in three types of ERP system implementation scenarios. This evaluation is made with an assumption that SAP S/4HANA embedded analytics is implemented standalone without a complementary data warehouse solution.

We analyzed degree of fitness based on three factors:

DATA COVERAGE: Does it cover all the data elements required for the analytics need? For example, can it provide information about profitability by product for a given period?

DATA LATENCY: How often is the data set refreshed? For example, can it show the customer receivables as soon as the invoice is posted?

AGILITY: How nimble is the solution in responding to changes in the business? For example, if a government introduces a new regulation, how quickly can the solution integrate the new policy in compliance reports?

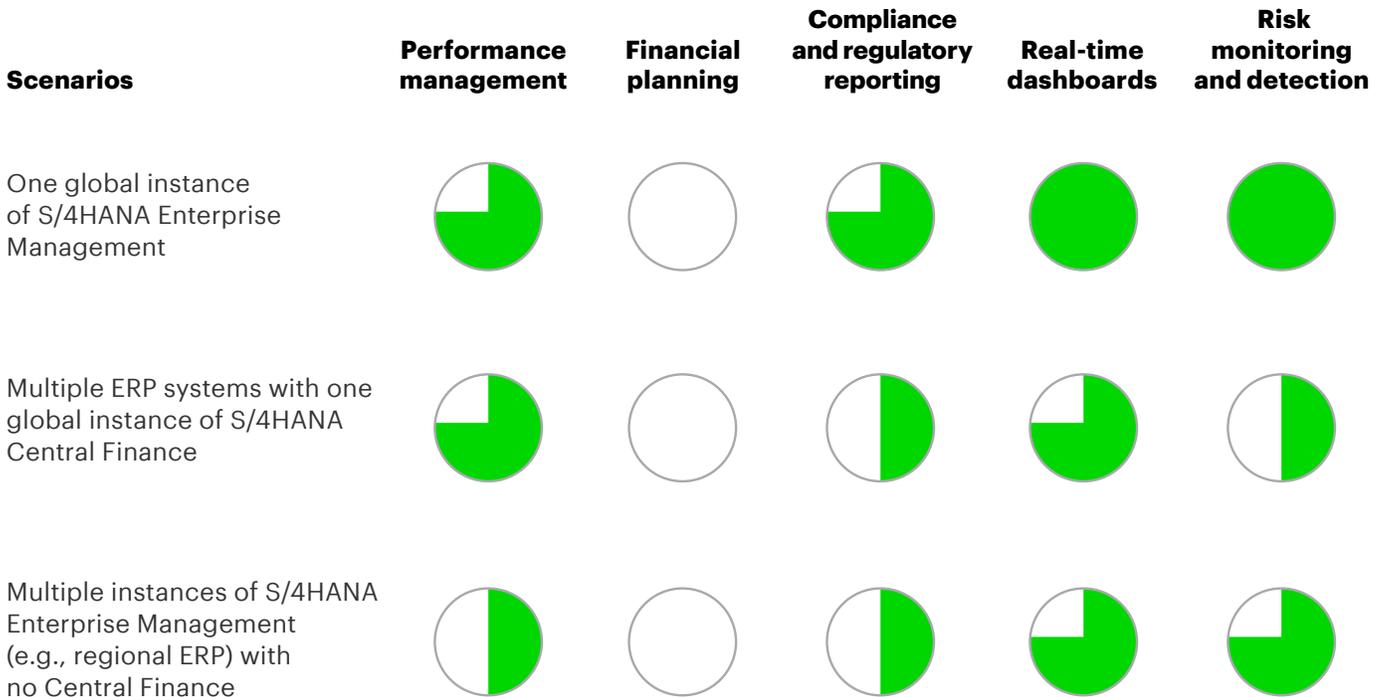


FIGURE 1: SAP S/4HANA embedded analytics capabilities in three ERP system implementation scenarios

SAP S/4HANA EMBEDDED ANALYTICS + SAP BW/4HANA

Given the advances in SAP S/4HANA embedded analytics capabilities, many SAP customers are questioning the future of SAP Business Warehouse (BW). SAP BW/4HANA is the next-generation logical data warehouse product from SAP. As illustrated in Figure 1, SAP S/4HANA embedded analytics does not solve all the analytics needs in the finance organization. In many cases, a data warehouse continues to play an important role in completing the finance analytics solution. SAP BW/4HANA complements SAP S/4HANA embedded analytics in the following finance scenarios:

GROUP CONSOLIDATION AND REPORTING: In a decentralized ERP scenario, SAP BW/4HANA can pull data—physical or virtual—from many sources and harmonize the information in a consistent format and measurement across all the business units.

TIME-DEPENDENT REPORTING: Changes to the business model or restructuring of the organization is to be expected in many companies. A data warehouse enables the business to look back at past performance based on the old structure.

COMPLIANCE AND REGULATORY REPORTING: These reports require an auditable solution which automates data aggregation and streamlines the integration process from any data source to deliver a seamless picture of all business units within a single entity. The solution delivers consistent (i.e. fixed data) reports. Most regulatory bodies require that this data be stored for more than a decade. For many companies with high-volume transactions, a data volume management solution with a central data warehouse may be the most pragmatic way to achieve this.

With significant investments made over the past decade in SAP BW, what is an organization to do with its existing SAP BW system when moving to SAP S/4HANA? There is no single answer, but when deploying SAP S/4HANA, it is possible to tailor an adoption roadmap to analytics that addresses the specific areas of growth opportunity in the current finance processes, data platform, and reporting systems. For example, an organization can choose to define its own adoption pace through phasing and prioritization of analytics use cases with profit-improvement objectives and minimal business disruption. Consider the following questions when deciding which use cases to convert to SAP S/4HANA embedded analytics.

Assessment criteria	SAP S/4HANA embedded analytics	SAP Business Warehouse
How frequently is the information accessed?	Multiple times a day	Periodically
How far do you need to look back at your historical data?	Short-term (e.g., a year)	Long-term (e.g., a decade)
Do you need time-dependent reporting (i.e., frozen snapshots of data at a given point in time)?	No	Yes
Do you need to mash and merge multiple data types from several source systems?	No	Yes
How complex is the calculation/mathematics used?	Basic	Advanced

DATA VISUALIZATION WITH SAP BUSINESSOBJECTS

The new user experience for SAP S/4HANA is built using SAP Fiori® technology. SAP Fiori analytics apps provide a visual overview of the current status of operations for monitoring or tracking purposes. As an example, the business user can see in the KPI tiles (see Figure 2) a summary of the total cost of operations and the detailed view shows the financial periods where costs are higher than average. Because analytics are embedded in the application, the user can go directly to the transaction screen to view a specific journal entry and take subsequent actions without having to exit the application. It is a seamless workflow.

So the question is: Does an organization still need a BI and/or data visualization tool? Generally speaking, the answer is yes. Standalone BI tools such as SAP BusinessObjects are built to create custom views of multiple sources and data types, enabling users to mash and merge data. In this way, they can get answers to complex

business questions, such as “Which marketing campaign had high costs but generated low sales?” These types of questions require access to at least two sources of data: CRM and financials.

Another good example has to do with the finance organization’s need for analytics with an integrated planning capability, which tools like SAP BusinessObjects Analysis Office are built for. It offers slice-and-dice capabilities, supports hierarchies (e.g., cost center hierarchy), and integrates with planning tools such as SAP Business Planning and Consolidation.

The resulting visualizations from any of the SAP BusinessObjects tools can then be embedded into SAP S/4HANA via a seamless integration with SAP Fiori Launchpad, which gives the business user a consistent look and feel to analytics. SAP BusinessObjects also provides an additional layer of security, which can be maintained at a report or folder level.

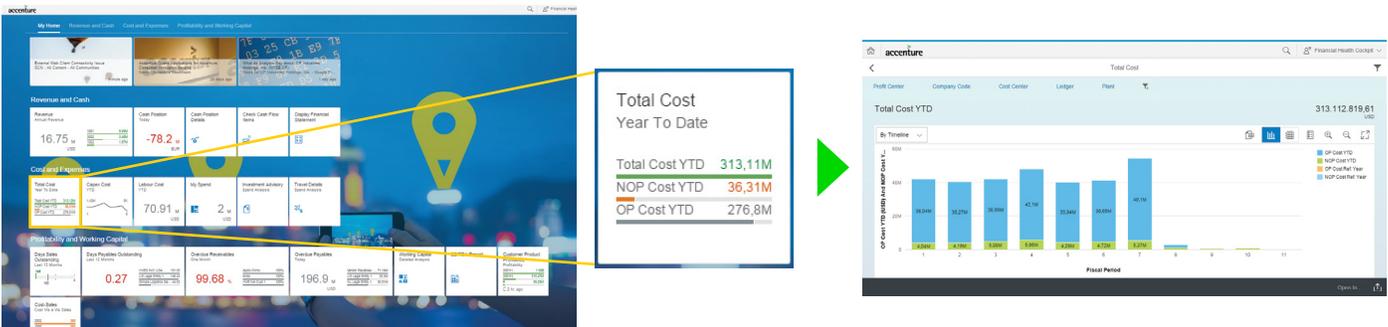


FIGURE 2: KPI summary and detailed views using SAP Fiori analytics apps

OTHER CONSIDERATIONS IN DEFINING YOUR DATA AND ANALYTICS PLATFORM STRATEGY

When defining your data and analytics platform strategy, the following are important things to consider.

DATA GOVERNANCE: The quality of information used for analytics and decision-making is a result of how well the data is managed and maintained in the lifecycle. Common goals of data governance are to improve data quality; remediate its inconsistencies; share it broadly; leverage its aggregate for competitive advantage; manage change relative to data usage; and comply with internal and external regulations and standards for data usage. In a nutshell, data governance is an organizational structure that oversees the broad use and usability of data as an enterprise asset.

DATA VOLUME MANAGEMENT: Many organizations collect a vast amount of data, but how much of that is actionable or frequently accessed? Maintaining a lean data platform for high-value information and separating data for archiving is essential in controlling the cost of storage in SAP HANA. It is also important to make archived data accessible to users when they need it, regardless of where the data is stored.

SELF-SERVICE ANALYTICS: The BI evolution is trending toward increased autonomy. Business users across industry-leading, data-driven enterprises are seeking BI capabilities that empower them to independently and quickly explore, create and analyze content to produce and share meaningful analytics insights.

Therefore, a well-defined data and analytics platform strategy should include a self-service analytics governance framework. Such a framework describes (1) the roles that business and IT play in report authoring; (2) the processes, tools, and training to enable the business users; and (3) the guiding principles to maintain trust and integrity with enterprise information.

DEPLOYMENT OPTIONS (ON-PREMISE VS CLOUD): When it comes to the differences between on-premise and SaaS platforms, organizations need to evaluate several things about their specific needs. A great deal of emphasis is placed on the cost and the management of the software, but hardware and security also need to be considered. It doesn't have to be a question of using on-premise versus cloud-based analytic tools. Leveraging both cloud and on-premise analytics software is more than just possible. It may actually be the better option for most companies.

CONCLUSION: FINANCIAL ANALYTICS ON YOUR SAP S/4HANA JOURNEY

As your organization embarks on your SAP S/4HANA transformation journey, data and analytics should not be an afterthought. The demand for real-time, contextualized insights in the enterprise will continue to rise as organizations adapt to an influx of data and as they realize that unlocking the secrets held in data is integral to driving innovation and to undertaking a digital transformation.

SAP S/4HANA embedded analytics offers great potential to improve performance management processes, as well as risk monitoring and detection capabilities. However, it is not the solution for all finance analytics needs. SAP BW/4HANA complements SAP S/4HANA embedded analytics in many use cases that can only be handled in a rich-functionality enterprise data warehouse. Use cases include cost center hierarchies, time-dependent analyses and complex data harmonization for group reporting.

Having both SAP BW/4HANA and S/4HANA gives you the benefit of enabling the finance business users with more actionable, real-time, operational information while meeting the demands of compliance reporting that requires more complex calculations and a longer data history.

Embedded analytics provides a seamless interactive experience to a business user and relevancy with real-time data access. Standalone BI tools such as SAP BusinessObjects provide answers to more complex questions that transcend functional boundaries. These tools also provide more advanced data visualization options than what is currently available in SAP S/4HANA and Fiori Analytical Apps. SAP BusinessObjects BI tools enable the financial analytics capabilities discussed in this paper and can be integrated with SAP S/4HANA Fiori Launchpad to provide a consistent look and feel to the business user.

With a comprehensive data and analytics platform strategy, you can set your pace on how to take advantage of SAP S/4HANA functionality as your organization readies itself over time to take on more and more, with thoughtful consideration of your existing SAP analytics investments. As you are scaling up analytics modernization in your organization, don't forget about change management. Communicate plans across business domains. Start by embedding analytics in existing processes, make small incremental changes, and make sure to provide plenty of training. Developing a data-driven culture is a critical part of becoming an insight-driven organization.

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