BARCSCORE

Integrated Planning & Analytics (IP&A)

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Abstract

Planning is an important element of corporate management to align operational business with strategic corporate objectives. In recent years, not least due to the worldwide COVID-19 pandemic, the dynamics of markets and competition have increased rapidly and many companies are struggling to keep pace. In particular, corporate planning and forecasting are more essential than ever to cope with increasing dynamics. Well-founded decisions based on current forecasts and data analytics, the efficient evaluation of possible future developments in scenarios and simulations as well as the automation of processes and the relief of planners are becoming massively more important. However, successful corporate performance management (CPM) requires comprehensive planning and forecasting, analytics and business intelligence (BI) functionality.

This BARC Score focuses on the market for integrated planning and analytics (IP&A) products and portfolios. The combination of these two topics is of high importance for a growing number of companies. Based on countless data points from various BARC surveys and many analyst interactions, vendors are rated on a variety of criteria, ranging from portfolio capabilities and architecture to sales and marketing strategy, financial performance and customer feedback.

BARC

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Overview

Markets and competition today are highly dynamic and complex, and the future is characterized by uncertainty. Satisfying customer needs and securing solvency in volatile markets both require quick decisions and decisive action.

Increasing dynamics demand adjustments to corporate management – as well as planning and forecasting – to meet growing requirements. A dynamic environment requires flexible decision support and short-term updates of targets and forecasts. In order to meet these challenges, corporate planning and forecasting need to be carried out efficiently, in shorter cycles and must be updated quickly for well-founded decision-making. This cannot be achieved without sound software support.

Decision-makers need up-to-date and high-quality information to cope with increasing dynamics. The efficient provision of information as well as a high degree of adaptability to changing conditions and requirements are essential goals that companies are currently pursuing. In order to remain capable of making good decisions quickly, organizations must update their plans and forecasts frequently and integrate tightly.

In particular, the integration of CPM (above all planning) and CPM with analytics is becoming a decisive competitive factor for sound decision-making. The integration of corporate planning and its integration with analytics (IP&A) in common platforms is essential to optimally support modern and integrated corporate management. To avoid time-consuming and error-prone data transfer processes between software systems, an integrated database for actuals and plan data represented in a consistent data model forms the basis for integrated software solutions. The centrally harmonized master data provides a single, common data basis for planning and analytics as well as other CPM processes such as risk management and financial consolidation.

Today, the reality in many companies is that IP&A is an often proclaimed but seldom achieved goal. Reasons such as internal policies or difficulties with historically grown system landscapes could account for this. So Excel, as the lowest common denominator, is often the default first choice for integrating planning with analytics. However, the lack of coherence of data and functionality resulting from using multiple tools for planning and analytics, and using Excel instead of specialized software tools, are frequently cited reasons for user dissatisfaction, inconsistencies and error susceptibility with planning and analytics in companies today. BARC research studies continuously reveal that companies consider the improvement of the software they use to be an important investment for optimizing planning and forecasting.

The software market for IP&A products is highly competitive. Besides a few international software generalists offering their planning and analytics portfolios worldwide, there are many local specialists challenging the big vendors. This report analyzes the strengths and challenges of all the leading IP&A software vendors as well as many smaller vendors that often have less visibility, but equally offer outstanding value to their customers.

IP&A initiatives always include more than just the front-end products. The technical architecture also includes data warehouses and data marts (e.g., for planning), data integration and data quality components, dictionaries, repositories and many other technologies. Organizations should have a proper CPM and analytics strategy that goes well beyond an architecture blueprint to include non-technical requirements, alignment with corporate strategy, organizational models, outcome-based priority settings and a proper roadmap.

Still, when it comes to kicking off or expanding an IP&A program, the initial focus almost always lies on the required toolsets. While this may not be the ideal starting point, at some stage a platform, portfolio or product decision has to be made. This document will help with the selection process by evaluating the market leaders and most commonly used product sets for IP&A.

Inclusion Criteria

There are two separate categories of inclusion criteria for this BARC Score: the first is associated with a vendor's products and portfolios and the other is linked to the financial results relating to those products.

Functionality for planning (including write-back of planning data to a central database and other advanced planning features such as workflows, forecasting and simulation) is the "entrance ticket" to be evaluated in this BARC Score. Moreover, a vendor has to supply additional functionality for all four of the following analytics technologies in a solution not merely focused on one industry or use case:

- Formatted reporting
- Ad hoc query and reporting
- Analysis
- Dashboards

All steps of planning, budgeting and forecasting processes, such as the creation of a planning model and model provision, creation of planning masks and definition of planning processes (workflows) as well as user functionality for planning (e.g., plan data entry, comments, forecasting and simulation), reporting, analysis and dashboarding must be accessible and usable by business users. Seamless integration between all components is required.

In addition, a vendor has to generate a minimum of 20 million EUR in revenue per year (software revenue) with the evaluated product set in this BARC Score, spread across Europe and at least two additional geographies. Furthermore, the product set must have a significant number of implementations and license or subscription revenues worldwide across different geographies to be considered as global. We consider the following regions as individual geographies:

- Europe, Middle East and Africa
- North America
- Latin America
- Asia-Pacific

There is no differentiation between on-premises offerings and cloud-based product sets.

Evaluation Criteria

Every vendor is evaluated on two dimensions: Portfolio Capabilities and Market Execution. Each represents one axis on the Score. These two dimensions include the following sub-criteria.

Portfolio Capabilities

In general, Portfolio Capabilities reflect functional and architectural criteria. A special emphasis is placed on the integration of planning and analytics functionality within the vendors' product portfolios. An additional and important evaluation criterion is ease of use for business users.

The Portfolio Capabilities criteria selected to rank the vendors in this Score include the following technologies and their corresponding weightings (see Table 1).

Please note: Only vendor-distinct functionality is rated in our vendor portfolio ratings, not that of integrated OEM products or partner solutions.

Planning and forecasting

Planning and forecasting are indispensable for managing business in general and corporate performance in particular. By directly comparing actual and planned figures, companies can effectively monitor the progress and impact of their planned actions and adjust their goals accordingly.

An essential software requirement for planning is to write back planning data from planning masks in the front end to a planning data model in a central database. The planning model consists of planning structures (master data), key figures and planning logic, and combines different operational and financial plans. Both the planning masks and planning model are created using a planning solution. The coordination of the various planning activities and planners involved is handled by process control functionality (workflow). For plan data entry, specific planning functionality (e.g., data allocation, comments, forecasting and simulation) is provided. Increasing dynamics and complexity demand adjustments to corporate planning to meet growing requirements. Dynamic markets require flexible decision support, short-term updates of targets and forecasts and sophisticated scenario-based analyses. That is why advanced planning topics such as comprehensive integration, the automation of forecasts leveraging predictive algorithms and machine learning (ML) models and driver-based simulations are of such huge importance to many companies.

Ease of use for business users

Ease of use considers the general user-friendliness of an IP&A product for business users in areas such as model design, screen generation, content development and administration in business departments. Unified interfaces with a clear and modern design are required to attract business users. Good integration between all components and reliable performance are vital for productivity in content creation – from plans to reports and dashboards and beyond. In business-user-oriented tools, coding must be optional and navigation must be made easier through the use of wizards. This criterion is included because ease of use for business users is often a very important consideration in software selection processes.

Portfolio evaluation

Portfolio evaluation includes assessing each vendor's overall portfolio from a customer perspective. A state-of-the-art IP&A platform must have consistent user interfaces and provide integrated functionality for planning, budgeting and forecasting as well as reporting, analysis and dashboards. Consistency and seamless integration are important criteria for the optimal support of planning and analytics processes and corporate management. Planning is generally not possible without reporting (e.g., results reports or reports on intermediate results) or analysis functionality (e.g., analyses of planned and actual values). Having all planning and analytics functionality in one integrated product on one database is certainly preferable to an integration, for example, at database level between different products with the need for ETL processes to transfer data.

Moreover, the product's lifecycle and maturity are assessed. Customers often complain about reliability and stability in early product releases. Early versions are rarely as functionally rich as mature products so they usually do not meet all their customers' functional requirements. And sometimes vendors offer mature products that are no longer being enhanced with innovative, new features. As a consequence they may not fulfill new and emerging requirements.

Ad hoc query and reporting

In many cases, business users require greater interactivity than they can get from predefined (standard) reports and dashboards. Ad hoc query and reporting is geared to non-technical report developers from business departments and provides basic filtering and navigation features (e.g., drill down, ranking and conditional formatting). In the future, non-technical users will be increasingly supported with modern functions such as natural language query (NLQ) so they can type their questions into a search bar or even speak to the software in a more natural way instead of using query languages such as SQL or creating wizard-based data queries via drag-and-drop.

Analysis

Data analysis products differ from basic reporting tools in that they are able to probe much more deeply into operational data and generate new information that can be understood and actioned upon by the business. Further analyses can be carried out using mathematical methods. Traditional online analytical processing (OLAP) provides dimensional data views, which make it easy for users to drill down, drill across and pivot dimensions as well as apply sophisticated calculations without scripting. Certain analysis products also offer methods to support set-based, visual or discovery-oriented data analysis.

Data analysis and data discovery are major trends right now, bringing analytics and BI to a greater number of users, particularly power users from business departments. Furthermore, augmentation and guidance are gaining in importance to support non-technical users from business departments in report creation and analysis tasks. Therefore, most of the vendors in this area are currently working to provide users with more guidance.

Infrastructure evaluation

Infrastructure evaluation focuses on the overall architecture of each vendor's product portfolio and includes a broad range of technical criteria. Of particular interest here are the integration of the various components from the perspective of front end users as well as at infrastructure levels, including data access, models and metadata. Furthermore, a modern IP&A platform has to be open in the back end to integrate data from different data sources but also in the front end to integrate with widely used BI and analytics solutions such as Microsoft Power BI, Qlik and Tableau. Integration with the latter seems to be increasingly in demand in our experience. In addition, support for different platforms, scalability, performance optimization techniques and security settings are considered in this evaluation.

Dashboards

Dashboards are also referred to as cockpits, scorecards or analytic applications. They provide graphical views of key performance indicators combined with the ability to drill down to details. Some dashboards offer self-service functions so that end users can create their own layouts without any help from IT. More sophisticated BI and analytics applications with guided navigation typically require support from tech-savvy business users or IT staff. Scorecards often incorporate strategy maps and applications to manage improvement initiatives.

More and more vendors are now offering additional presentation formats for data such as stories and representations of the most important key performance indicators (KPIs) without the need to build a specific dashboard. With the increased use of mobile devices, modern IP&A platforms also offer better support for consuming mobile content and displaying information by, for example, supporting responsive design layouts.

Formatted reporting

Formatted standard reports are usually page-oriented reports run on regular schedules or triggered by alerts or user requests. These include static reports – which normally appeal to the widest audience in a company – and dynamic reports, which enable users to filter reports based on predefined parameters. Aside from pixel-perfect displays, which provide developers with precise control over how they place report objects and images on a screen, formatted reports also support rich printing options, dynamic page sizing (responsive design) and a WYSIWYG ("what you see is what you get") development interface.

Virtually every analytics and BI product is able to provide some type of reports. The importance of page orientation, scheduling and other advanced reporting features, however, varies depending on the customer's requirements. Modern functions such as natural language generation (NLG) may help users with suggested narratives for report data.

Advanced and predictive analytics

Advanced and predictive analytics represents a non-directed, hypothesis-free form of data analysis. Various algorithms scan the database searching for patterns used for a segmentation, classification or association of data. Methods cover machine learning (ML), statistical data analysis, neural networks, decision trees, time series and many other algorithms. Users must be well trained in order to use these methods and to gain the expected insights. Advanced analytics often contains data integration and analysis process support functionality.

Besides data scientists and statisticians, power users from business departments are also demanding more statistical algorithms for data analysis. In contrast to data scientists, these users do not typically design/code algorithms but use predefined algorithms instead. For example, in the context of planning and forecasting, advanced and predictive analytics methods support forecasting processes by calculating suggestions for future planning data which can be used or overwritten by planners.

Table 1: Portfolio Capabilities – Weighting of Criteria

Criteria	Weighting
Planning and forecasting	High
Ease of use for business users	High
Portfolio evaluation	High
Ad hoc query and reporting	Medium
Analysis	Medium
Infrastructure evaluation	Medium
Dashboarding	Medium
Formatted reporting	Low
Advanced and predictive analytics	Low

Market Execution

On the Market Execution axis, we rate the IP&A vendors in this Score using the following criteria and corresponding weightings (see Table 2).

Product strategy

This is the most important of all the criteria. Vendors are rated on their product development track record, product roadmap and innovation, as well as the company portfolio's alignment with current market trends and demands.

Customer satisfaction

Here, we include the 'Customer satisfaction' KPIs from BARC's 'The Planning Survey' and 'The BI & Analytics Survey'. These take into account product satisfaction, vendor support, implementer support, recommendation and price-to-value ratings reported by customers. The ratings of vendors that provide

more than a single product are combined into a single rating. Vendors not included in 'The Planning Survey' or 'The BI & Analytics Survey' (e.g., due to a limited number of survey responses from their customers) receive an average rating. This average rating stands for "satisfied" and does not negatively affect the score.

Financials

This criterion covers the financial position of a vendor, from market capitalization, cash position and EBITDA to profitability, burn rate and investment rounds. For private companies or vendors that don't break out the numbers for individual product lines, estimated figures are used.

Geographical coverage

Vendors are evaluated on their global presence. We look at the various geographic regions and major countries in which the company conducts business with both a sales and marketing presence as well as development and support functions.

Ecosystem

In this category, we evaluate the extended ecosystem in which the vendor participates. This includes business partner networks, hardware or cloud infrastructure providers, consulting firms and systems integrators, and other technology alliances.

Sales strategy

To rate a vendor's sales strategy, we look at the various channels through which the company goes to market: with both direct and indirect sales teams, through distributors, value-added resellers (VARs), online channels and OEM relationships. We also evaluate the vendor's product pricing and sales models, such as perpetual licensing, support subscription, open source and freemium.

Organizational strength

Vendors are rated on their organizational stability, which is influenced by consistency of corporate strategy, continuity of executive leadership, but also staff turnover, reorganization and layoffs.

Marketing strategy

A vendor's marketing strategy is evaluated by rating its corporate and product messaging, the company's presence in printed media, advertising and social networks, as well as its ability to run events, such as conferences, seminars, roadshows and webinars.

Table 2: Market Execution – Weighting of Criteria

Criteria	Weighting
Product strategy	High
Customer satisfaction	High
Financials	Medium
Geographical coverage	Medium
Ecosystem	Medium

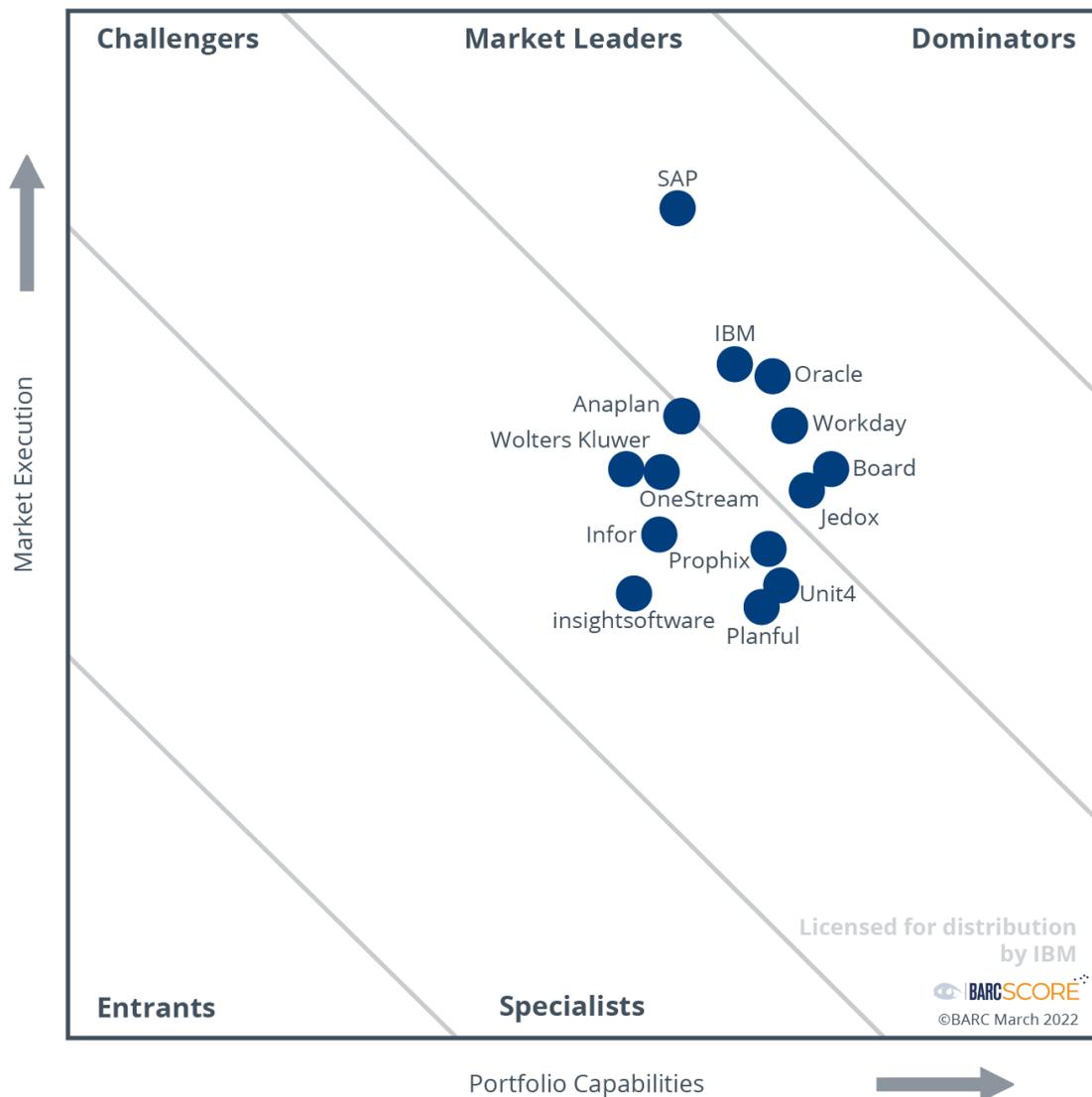|	
Sales strategy	Medium
Organizational strength	Medium
Marketing strategy	Low

Score

Calculating the individual ratings for all criteria and all vendors produces two scores per company: the Portfolio Capabilities score and the Market Execution score, each being plotted on the corresponding axis and thus resulting in the vendor's dot on the following BARC Score graphic.

Please note: Only vendor-distinct functionality is rated in our vendor portfolio ratings, not that of integrated OEM products or partner solutions.

Figure 1: BARC Score Integrated Planning & Analytics (IP&A)

Score Regions

Vendors can be positioned in one of five regions, depending on their total score on each of the two axes.

Dominators

Dominators are vendors that drive both technology and market adoption in a highly influential manner. They possess both a broad portfolio of market-leading and dominating products with a strong brand as well as a robust commercial prowess through best-in-class sales and marketing programs, an extensive ecosystem of business partners and alliances, and a rock-solid financial position. Dominators are considered a contender in virtually every planned implementation.

Market Leaders

Market Leaders are well established vendors that drive strong market adoption, supported by technology innovation and strategic acquisitions and by leveraging robust account management and a solid track record. Their portfolio enjoys high brand awareness in the market and covers an extensive range of technologies and services with only few gaps. Market Leaders typically have a large market share, making them a viable contender in almost all implementation scenarios.

Challengers

Challengers come in various shapes and sizes. They can be large vendors tapping into a new market by acquisition and pushing their way in with force, small innovative companies with a promising portfolio but limited sales and marketing resources, or vendors that attempt to disrupt a market with a new technology approach or different business model.

Specialists

Specialists are usually smaller vendors with a portfolio focused on a specific market segment. They can be either limited in their technical capabilities by concentrating on certain features and functions, or they may only focus on select geographic regions rather than the global marketplace.

Entrants

Entrants are usually startups with limited reach and visibility in the market. Their product capabilities are incomplete when compared to competitors, and their long-term market potential is still unproven.

Evaluated Products

The latest versions of the following products are evaluated in this BARC Score:

Vendor	Product(s)	
Anaplan	Anaplan	
Board International	Board	
IBM	IBM Planning Analytics with Watson IBM Cognos Analytics with Watson	
Infor	Infor d/EPM Birst	
insightsoftware	Bizview Certent IDL Logi Analytics Spreadsheet Server Viareport	Calumo CXO Software Jet Longview Tidemark
Jedox	Jedox	
OneStream Software	OneStream	
Oracle	Oracle Cloud EPM Oracle Hyperion EPM Oracle Analytics Cloud Oracle Analytics Server	
Planful	Planful	
Prophix	Prophix	
SAP	SAP Analytics Cloud SAP Business Planning and Consolidation SAP BusinessObjects BI	
Unit4	Unit4 FP&A	
Wolters Kluwer	CCH Tagetik	
Workday	Workday Adaptive Planning	

Vendor Evaluations

In the following section, we discuss each vendor and highlight their strengths and challenges based on customer surveys and market research by the authors.

Each vendor description includes vendor-related information, products covered in the BARC Score, and strengths and challenges.

Anaplan

San Francisco, CA, USA

www.anaplan.com

Anaplan (NYSE: PLAN) is a cloud-native enterprise software-as-a-service (SaaS) vendor headquartered in San Francisco, USA. The company currently employs more than 2,000 people worldwide. Several major investors have financed Anaplan's growth and global expansion.

The Anaplan platform began its development in 2006 and was officially released in 2008. The company's name is a combination of analytics and planning. The product represents a new generation of planning and performance management products developed with state-of-the-art technologies on a modern software architecture. Anaplan is a purely cloud-based platform using a proprietary in-memory database to store data (patented Hyperblock technology). The goal behind Anaplan's development was to create a new planning platform with the ease of use and flexibility of a spreadsheet and the scalability of an enterprise planning product in the cloud.

Anaplan targets corporate finance and operational business departments to connect financial and operational plans to support multiple use cases across finance, sales and marketing, HR and workforce and supply chain in large enterprises and groups worldwide. The goal is to support customers with a modern, integrated platform by joining people together with plans and data. In addition to horizontal use cases, the platform offers industry-specific solutions across a number of verticals such as consumer goods & retail, banking & insurance, telecoms and life sciences. Anaplan's partner ecosystem, which includes consulting and systems integration organizations, offers a number of such solutions built on the platform.

Anaplan has more than 1,800 customers in over 50 countries worldwide. Implementations range from double-digit to several thousand users per installation. To sell and particularly to implement Anaplan, the vendor has an expansive global partner ecosystem of more than 175 partners including technology partners with supplementary technical capabilities.

Anaplan provides flexible functionality for centralized top-down as well as decentralized bottom-up planning approaches. With its 'connected planning' platform approach, customers can create various planning models on different aggregation levels (strategic and operational planning) for an integrated enterprise planning approach (including financial planning). The vendor's in-memory database supports detailed planning models with data up to transactional level (articles, stores, employees, etc.). In addition to the 'Partner Solutions Showcase', Anaplan offers hundreds of prebuilt apps, solutions, templates and accelerators via the vendor's App Hub site (e.g., for financial planning, sales performance management and demand management).

Strengths

- Anaplan is technologically a modern cloud-based planning platform for use across financial and various operational business departments, with complementary analytics functionality, which is highly recommended by customers.

- Flexibility for a wide variety of planning approaches (centralized top-down, decentralized bottom-up) and planning topics (operational planning, financial planning, workforce planning, sales planning, etc.) and is industry agnostic.

- Anaplan Predictive Insights offers integrated predictive algorithms and advanced analytics functions leveraging ML, AI and optimization techniques. Furthermore, Anaplan PlanIQ delivers intelligent forecasting capabilities with integrated AI and ML as a managed service. With PlanIQ, customers can leverage multiple intelligence techniques such as native predictive capabilities based on internal and external data as well as integrations with third-party ML engines of choice (e.g., Amazon Forecast) to derive new insights and recommendations.

- Lots of predefined planning models and applications on Anaplan's App Hub site (e.g., for financial planning, operational planning, sales planning, supply planning, demand planning, etc.), created by Anaplan itself and partners.

Challenges

- Cloud-only – the product is purely cloud-based and not available on-premises. Web access is essential to use the product (except for offline planning in the Excel add-in).

- Anaplan provides its own data integration options at multiple levels, while third-party ETL tools are also used to connect to source systems (particularly when predefined data connections are required). Anaplan does offer connectors for industry-leading ETL/ESB tools, such as Informatica, Boomi, SnapLogic and MuleSoft, as well as its HyperConnect solution for Informatica Cloud. Additionally, platform capabilities can be extended using REST APIs, scripting and transactional APIs. However, customer feedback in BARC's 'The Planning Survey' shows that neither Anaplan's predefined data connectivity nor its data integration capabilities entirely satisfy customers.

- Anaplan is essentially a comprehensive planning platform rather than a BI and analytics tool, which is confirmed by customer feedback in BARC's 'The Planning Survey'. However, it does support functionality for OLAP analysis, screen-based, self-service dashboarding and now formatted, pixel-perfect reporting, which are all continuously being expanded. Its native mobile app enables access to insights on the go. Furthermore, this is supplemented by prebuilt third-party analytics integrations with, for example, Tableau, Microsoft Power BI and Workiva to connect Anaplan data and models with specialist BI and analytics tools.

- According to customer feedback in BARC's 'The Planning Survey', Anaplan is relatively expensive compared to its mid-market focused competitors.

Board International

Chiasso, Switzerland

www.board.com

Board was founded in 1994 and employs more than 500 people worldwide. Both its European head office and software development headquarters are located in Chiasso, Switzerland. A second regional US headquarters is located in Boston, Massachusetts. Board has 25 offices worldwide and a global partner network. More than 3,000 customers globally use Board to implement CPM and analytics projects. The company currently has a strong focus on internationalization, particularly by expanding its presence in the United States. The ownership of the company changed in 2019, when Nordic Capital acquired a majority share in Board to support the vendor's continued international expansion.

Board aims to provide an all-in-one decision-making platform which unifies CPM with BI and analytics capabilities. The vendor focuses on providing end-to-end support to key decision-making processes in mid-size to large enterprises by combining self-service capabilities with enterprise scalability and governance. The goal is to deliver an easy-to-use and coding-free toolkit for business power users to build tailored CPM and analytics applications in a technically homogeneous environment. Board does not focus on specific industries, but the primary industries across its customer base are retail, manufacturing, professional services, banking and finance.

Board provides a combined product consisting of a front end and a proprietary multidimensional in-memory data processing technology, which also allows for business-user-friendly data modeling. The product provides a consistent environment for administration, development and utilization. Due to its tightly integrated front and back ends, the proprietary Board data model allows only limited access for third-party front ends. Board is available in the cloud (leveraging Microsoft Azure) and, if required, on-premises.

At its core, Board is a flexible web-based development environment for creating dashboarding, reporting, analysis, planning and predictive and advanced analytics applications that can also be used for financial consolidation and strategy management. Particularly for planning, forecasting and simulation use cases, Board offers strong and comprehensive functionality. Users can create and tailor a broad range of applications specifically to their own needs bringing together financial and operational data. Moreover, Board and its partners offer prebuilt business content via the Board Marketplace. Applications such as financial consolidation, lease accounting, human resources management, integrated business planning and sales performance management are available from Board itself. Additionally, Board and its partners offer solutions for specific departments (e.g., finance, supply chain) and industries (e.g., retail, automotive, consumer packaged goods). These can be adapted to customers' individual needs.

Strengths

- Flexible, fully web-based CPM and analytics platform with tightly integrated system architecture of proprietary multidimensional in-memory database and front ends.

- Graphical and coding-free development environment for business power users to create tailored CPM and analytics applications.

- Comprehensive planning, budgeting and forecasting functionality for all kinds of planning approaches (top-down, bottom-up or combinations of both). Customers can address various workflow-based planning topics on one common platform with different aggregation levels (e.g., strategic as well as operational planning) for an integrated business planning approach (including financial planning).

- Comprehensive BI and analytics functionality for dashboards, reporting and analysis. Integrated predictive and advanced analytics capabilities (Board BEAM) as well as a native R connector

to exchange Board data with an R server to execute AI/ML algorithms and to run R scripts from Board procedures.

Challenges

- Limited access to the proprietary Board data model for third-party front ends.

- Board's future strategy strongly focuses on solutionizing the flexible platform. Prebuilt but adaptable applications such as financial consolidation, lease accounting, human resources management, integrated business planning and sales performance management are now available from Board itself. Additionally, the vendor and its partners offer solutions for specific departments and industries. However, Board still focuses on individually tailored solutions and, compared to the competition, the prebuilt business content available is still limited.

- The product's flexibility and comprehensive functionality can lead to quite complex handling for inexperienced users when implementing and building intricate applications.

- Prices for Board have increased in recent years. According to customer feedback from 'The Planning Survey' and 'The BI & Analytics Survey', many now consider the product to be costly.

IBM

Armonk, NY, USA

www.ibm.com

IBM is one of the world's largest vendors of IT hardware, software and services. The company has a global workforce of close to 350,000 employees and is active in over 170 countries.

IBM offers a comprehensive portfolio of on-premises and cloud analytics and performance management solutions (in particular, for planning and financial consolidation). The core offerings consist of IBM Cognos Analytics with Watson and IBM Planning Analytics with Watson. For financial consolidation and regulatory reporting, IBM Cognos Controller is part of the performance management portfolio.

IBM Planning Analytics – the vendor's strategic enterprise planning product – is a core element in IBM's performance management portfolio and has been on the market since the 1980s. Due to its rich functionality for planning and OLAP analysis, and its underlying in-memory TM1 technology, the product plays a strategic role for IBM. Planning Analytics is available in both classical on-premises and cloud versions. Essentially, Planning Analytics is a high-performance, multidimensional in-memory database for budgeting, planning and forecasting with Excel and web front ends. The product is targeted at business power users for building all kinds of applications (planning, analytics, strategy management). Therefore it has no dominant focus on any one particular topic (financials, sales, HR, etc.). In the latest versions of Planning Analytics, IBM has strengthened the product's web client user experience, charting options and visualizations, as well as workflow and predictive forecasting capabilities based on historical time-series data and a series of predefined algorithms.

IBM's enterprise BI and analytics solution Cognos Analytics provides functionality for dashboards, pixel-perfect reporting, stories, data modeling and analysis in a web-based, integrated user experience. Included in Cognos Analytics' wide range of analytics capabilities are smarts focused on enabling ease of use for new users as well as customization and governance features for administrators. The solution offers search-based analysis (NLQ) with encapsulated cognitive capabilities aimed at business users. IBM has also extended Cognos Analytics in the area of advanced analytics. For instance, Jupyter Notebooks has been incorporated in the user interface to provide greater flexibility in data preparation and statistical analysis. The product can scale to larger scenarios supporting the needs of many concurrent users as well as large data volumes.

Strengths

- IBM Planning Analytics offers flexibility for business power users to create budgeting, planning and forecasting as well as analytics applications based on a high-performance in-memory database.

- Comprehensive Excel-based functionality for preparing individual applications in IBM Planning Analytics (modeling, custom planning forms, etc.) and publishing them to the web.

- With Cognos Analytics, IBM offers a well-integrated end-to-end platform for governed analytics for business users that spans data preparation and modeling to analysis, reports and dashboards.

- Well established and expansive partner community with global product support and knowledge.

Challenges

- Planning Analytics is essentially a development environment for budgeting, planning and forecasting as well as analytics. Compared to competitors, only limited prebuilt business content is currently available with Planning Analytics. However, predefined business content is available from partners and IBM is also starting to offer business content with its IBM Accelerator Catalog.

- Planning Analytics itself offers limited reporting capabilities compared to market leading CPM products (e.g., formatting and layouting for page-based print reporting). However, an integration that uses IBM's enterprise BI and analytics suite for advanced reporting with Cognos Analytics is in place.

- While using different performance management, BI and analytics products, users will face different UIs. However, dashboards from Cognos Analytics can be embedded in the Planning Analytics Workspace for example to overcome this issue.

- Comparatively expensive planning and analytics products, although the cloud versions of Cognos Analytics and Planning Analytics offer alternatives for cost savings and faster time to value.

Infor

New York, NY, USA

www.infor.com

Infor is a global US-based vendor of industry-focused business software solutions. The company was founded in 2002, has 140 locations worldwide and employs over 17,000 people. It supports over 65,000 customers directly or through its network of more than 2,000 partners (resellers and OEMs). Infor is privately held by Koch Industries.

Infor's CPM, BI and analytics portfolio comprises two main solutions: Infor Dynamic Enterprise Performance Management (d/EPM) and Infor Birst. Infor d/EPM is the vendor's original analytics and CPM product and was initially developed by MIS long before 2002. Infor d/EPM includes components for dashboards, reporting, OLAP analysis, planning and financial consolidation. Since the acquisition of Birst in 2017, Infor has changed its go-to-market and product positioning strategy significantly, splitting its portfolio into CPM and analytics products, which are integrated with each other. Infor d/EPM is now positioned to serve CPM usage scenarios (including planning and financial consolidation) and Birst to serve analytics use cases. Infor d/EPM and Birst are marketed to mid-sized companies and large corporations in all industry sectors. Both products can generally be used with Infor's existing ERP, CRM and SCM applications via predefined connectors but also standalone with third-party data sources (e.g., SAP, Salesforce, etc.). However, when selling the products, Infor has a strong focus on its own customer base and upselling analytics in addition to operational applications.

Infor d/EPM is a flexible CPM product combined with prebuilt business content. The platform provides a multifaceted development environment for tech-savvy business power users to build custom CPM and analytics applications. Predefined CPM applications are available for various business functions and industries, including strategy management, budgeting, planning, financial consolidation, workforce planning and budgeting and others. The current version of the product is a completely rebuilt new generation of Infor d/EPM, which fully supports the vendor's 'cloud first' strategy. Based on a state-of-the-art services architecture, the product offers improved scalability and performance, modeling, administration and ease of use.

Birst is Infor's cloud-based flagship analytics and BI platform. In addition to providing formatted and ad hoc reporting, dashboarding, self-service data discovery and advanced analytics, Birst offers a full-stack solution that includes ETL and data preparation, data warehousing, mobile access and ML integration. Birst connects to Infor's business applications, to Infor d/EPM's underlying in-memory OLAP database as well as to non-Infor systems (e.g., SAP, Salesforce). Besides connecting to data live, Birst leverages an Amazon S3-based data lake to store data from any source to feed analytics for business users and data scientists. Third-party tools can directly access Birst's data models.

Strengths

- Infor d/EPM as an integrated application suite for dashboards, reporting, analysis, planning and forecasting as well as financial consolidation with proprietary multidimensional data storage.

- Multifaceted development environment for tech-savvy business power users to build tailored CPM and analytics applications (Infor d/EPM). Predefined CPM applications for various business functions and industries are available.

- Strong functionality for ad hoc analysis and planning integrated in Infor d/EPM's Microsoft Excel add-in.

- Birst as an integrated cloud-based analytics and BI platform for formatted and ad hoc reporting, dashboarding and analysis with a modern semantic layer concept to provide both governance and consistency as well as data discovery to support agile development for business users.

Challenges

- Unlike most of its competitors, Infor splits its portfolio into CPM (Infor d/EPM) and analytics products (Birst) – however, d/EPM also has its own analytics functionality. Integration between on-premises versions takes place at data level with the capability to display visualizations from both systems in a single view dashboard in either system or on the Infor Ming.le collaboration platform. In the cloud, d/EPM and Birst use the same data source – Data Lake, including drill-through capabilities for both directions.

- Infor d/EPM is essentially a flexible development environment. Creating content with the product requires tech-savvy business power users and flexibility can lead to complex handling when implementing/building intricate applications. In recent years, Infor has invested in d/EPM's UI and UX and has replaced a number of the technical development modules with user-friendly features in areas such as data modeling, data integration and administration.

- Infor d/EPM is generally available on-premises and in the cloud (leveraging Amazon Web Services). However, some services such as Infor Coleman AI are available in the cloud version only as they leverage cloud-based services like Amazon building blocks for AI. However, for on-premises customers, AI and ML alternatives such as the integration of R libraries are available.

- According to BARC's 'The Planning Survey' and 'The BI & Analytics Survey', many customers express negative feedback, particularly regarding legacy versions of Infor d/EPM and especially in relation to the business value Infor d/EPM provides, customer satisfaction, lack of functionality, poor sales experience and lack of innovation. For new customers using Infor d/EPM's current version with its rebuilt architecture and features, the vendor expects improved customer feedback for product functionality and experience in the future.

insightsoftware

Raleigh, NC, USA

www.insightsoftware.com

insightsoftware is a US-based global provider of solutions for the office of the CFO backed by private equity investors Hg, TA Associates and Genstar Capital. The company employs more than 2,000 people in over 40 locations worldwide and serves 30,000 customers with 500,000 active users. insightsoftware was formed in 2018 out of a merger of Hubble by insightsoftware.com and Global Software, Inc. The vendor's rapid growth in recent years has been largely inorganic and driven by the acquisition of vendors such as Magnitude, Calumo, Logi Analytics, CXO Software, Certent, IDL, Longview, Bizview, Jet Global and Viareport. This strategy has resulted in a broad portfolio of more than 70 finance software solutions.

insightsoftware's product portfolio includes solutions for the key processes of today's finance organizations: financial reporting, operational reporting, data analytics and visualization, budgeting and planning, consolidation and close, tax reporting and disclosure management. These solutions can be used independently or in combination and are offered on the basis of customer requirements and strategic direction (e.g., global or local orientation of an organization, company size, connectivity to source systems, etc.). The overall objective is to enable the office of the CFO to connect to and make sense of existing enterprise data to drive greater financial intelligence across their organization.

insightsoftware's future product strategy circles around investing in its high growth products while continuously optimizing the portfolio and adding new products in desirable segments. The vendor's platform vision pursues the unification of its product portfolio through a consistent user experience and shared capabilities. With a common branding and UI, insightsoftware is working towards creating a comprehensive platform sharing key data and connectivity to source systems.

Strengths

- Comprehensive solution portfolio for the key processes of finance organizations including financial reporting, operational reporting, data analytics and visualization, budgeting and planning, consolidation and close, tax reporting and disclosure management.

- Strong individual solutions with comprehensive functionality for supporting finance processes that can be used independently or in combination, processing data from various source systems.

- Depending on customer requirements and their strategic direction, insightsoftware's portfolio offers suitable solutions for individual finance use cases in different industries.

Challenges

- Significant functional overlaps in insightsoftware's product portfolio (especially for reporting, planning and budgeting, and financial consolidation and close) with the challenge to reasonably position these products for potential customers.

- The breadth of the product portfolio means continuous further development, integration and unification of the different portfolio components towards a comprehensive platform is a major challenge for insightsoftware.

- While many of insightsoftware's products have a long history and existing customer base, the vendor is relatively new to the market, only launching in 2018. Today, insightsoftware and its products are a long way from achieving the same market presence and global visibility of rival finance software solutions vendors.

- A number of solutions in the portfolio currently have a rather local market spread and customer base. Enterprise customers with global implementation requirements should evaluate similar references for the use of insightsoftware's individual products.

Jedox

Freiburg, Germany

www.jedox.com

Established in 2002, Jedox has grown into a team of 340 employees. The vendor serves 2,500 clients worldwide through its headquarters in Freiburg, Germany, its international offices, and a network of more than 250 partners and global alliances. Besides implementers, the vendor has a technology partner network including Salesforce and Tableau, Microsoft (Azure, Office, Power BI, Dynamics, etc.) and Qlik. In 2021, Jedox received $100+ million in investment from global venture capital and private equity firm Insight Partners alongside existing investments from Iris Capital, eCAPITAL and Wecken & Cie, to accelerate customer growth and increase its global footprint while enhancing its CPM platform.

The company's flagship product is Jedox, a flexible CPM and analytics platform with planning, budgeting and forecasting, reporting, analysis and financial consolidation capabilities. The solution offers both an Excel client and web interface as front ends. The Excel add-in is a classic spreadsheet interface combining well-known Excel functions with additional Jedox features. The web client has a browser-based spreadsheet interface – a type of Excel on the web – with additional functions. The underlying philosophy of Jedox is to extend the familiar Excel environment with specific analytics functionality. The software is available in the cloud (leveraging Microsoft Azure or other cloud infrastructure providers), in private cloud environments and also on-premises.

The product is aimed at business power users who create individual CPM and analytics applications. With the product's own in-memory database, users have the advantage of a flexible multidimensional experience while staying in their familiar spreadsheet environment. Jedox Integrator, a web-based ETL tool, enables customers to integrate data into Jedox OLAP Server. Moreover, additional connectors and integration solutions are available to access live Jedox data and reports from third-party systems via an OData interface (e.g., Salesforce CRM, Microsoft Power BI, Qlik). Trained business users can take on responsibility for the administration and further development of Jedox applications. These applications can be published to large groups of users through Jedox Web and Jedox Mobile. Both centralized top-down and decentralized bottom-up planning scenarios can be implemented with Jedox. Furthermore, Jedox provides prebuilt content for different topics and industries created itself or by partners (e.g., for integrated business planning, financial planning and analysis, sales performance management). This content is built on best practices and is available in Jedox's own integrated marketplace.

Besides CPM functionality, Jedox offers reporting and analysis capabilities for business users. Reporting generally takes place in Excel using Excel's own functionality, or in Jedox Web, which offers additional options for responsive content compilation in dashboards, dynamic reporting, data visualization and content distribution. Users can create reports, analyses and dashboards on the web from a spreadsheet interface closely resembling the functionality, look and feel of Excel. Both clients offer standard Excel charts for visualizing information as well as IBCS-compliant charts. Since Jedox is an open CPM platform, it also integrates with existing BI and analytics infrastructures and ecosystems and can extend these with the planning, budgeting and forecasting capabilities of Jedox (e.g., Microsoft Power BI, Qlik and Tableau).

AI and predictive analytics are strategic initiatives for Jedox. The vendor is continuously introducing AI features for automating data preparation, time series and driver-based predictions and scenarios as well as smart insights. Jedox AIsissted™ Planning is a wizard-based web service that is integrated in Jedox to support users with tasks such as predictive forecasting and offers insights into business drivers, data and connections.

Strengths

- Flexible and user-friendly CPM and analytics platform for planning, budgeting and forecasting, reporting, analysis and financial consolidation designed for business users, available in the cloud (public and private) and on-premises.

- Uses native Excel interface and spreadsheet-like web client as user interfaces with good integration between Excel, web clients and mobile access to Jedox content. Additional connectors and integration solutions for accessing live Jedox data and reports from third-party systems via OData interface.

- Development environment for creating custom planning and analytics models, primarily via Excel formulas, with supplementary marketplace for predefined but flexibly adaptable solutions.

- BARC's 'The Planning Survey' revealed a high level of customer satisfaction with the business value Jedox provides as well as its data integration, planning, forecasting and reporting/analysis functionality, flexibility and ease of use.

Challenges

- Jedox's flexibility as a development environment for CPM and analytics can lead to complex handling when implementing/building intricate applications.

- Flexibly applicable functional building blocks can be combined to create workflows in Jedox. Custom workflows can either be built using the freely available wizard-based building blocks in Jedox's marketplace or as a consulting service and part of the implementation project. Besides, many Jedox marketplace models already include predefined "end-to-end" workflow processes (leveraging predefined building blocks such as approval processes and status monitoring).

- Limited functionality for formatted print-oriented reporting within the Excel client and web client.

- Jedox is typically used in departmental or small and midsize scenarios. However, implementation projects have been growing in terms of numbers of users and data volumes in recent years. Large enterprise customers should evaluate similar references.

OneStream Software

Rochester, MI, USA

www.onestreamsoftware.com

OneStream Software is an independent US-based CPM software company backed by private equity investors KKR, D1 Capital Partners, Tiger Global and IGSB. The vendor started developing and building the platform in 2008 as an R&D company before transforming into an operational company in 2012. OneStream is headquartered in Rochester, Michigan, USA and currently has eleven offices in the United States, Europe and APAC with more than 1,000 employees globally.

OneStream was developed with the intention of creating a single platform which enables a unified approach to support all the various CPM processes and information streams in organizations. The platform integrates financial consolidation and close, planning, budgeting and forecasting, reporting, analysis and financial data quality management in one single application. In addition to the platform's standard functionality, the OneStream MarketPlace provides productivity and business solutions that allow customers to extend the platform with additional capabilities, such as predictive analytics, account reconciliations, transaction matching and specialty planning solutions. All OneStream-developed MarketPlace solutions are fully supported and available free of charge to active customers. OneStream is available for deployment in the Microsoft Azure cloud.

OneStream's solution is ideally suited to mid-sized to large enterprises across all industries who require a unified, robust and complete CPM solution. The vendor employs a direct sales model alongside its partner network to support customers with implementation services. According to the vendor, 900 customers currently use OneStream and the company is in a period of strong growth.

OneStream is a financial consolidation and planning platform with built-in financial data quality functionality that focuses on supporting the full range of corporate performance management. The product provides a proprietary in-memory financial analytic engine with built-in financial intelligence (e.g., supporting complex financial consolidations) that uses ROLAP storage in Microsoft SQL Server. Company-wide consolidated financial results statements and plans at subsidiary or group level can be created using OneStream. In addition, OneStream invented Extensible Dimensionality®, which provides the ability to extend the account and other dimension structures to support both corporate and line-of-business financial and operational planning and reporting in one single solution. Moreover, OneStream provides fully supported operational planning solutions in its MarketPlace that feed into the financial model including workforce, capex, cash, sales and project planning. For predictive modeling and advanced analytics, OneStream offers several options including its Predictive Analytics 123 solution that offers built-in predictive models and forecast methods that can be leveraged within financial and operational planning and forecasting scenarios. Additional AI-enabled MarketPlace solutions and integration with leading data science engines are both in the pipeline.

In addition to its financial consolidation and planning capabilities, OneStream also integrates functionality for BI and analytics. For individual, flexible (ad hoc) reporting and analysis, the product includes a reporting studio, spreadsheet interface or Excel add-in. Interactive dashboards can bring key financial and operational metrics together by combining tables, charts, graphs and other visualizations. Furthermore, OneStream offers Analytic Blend, including a relational column store engine that blends detailed operational data with financial data. Financial analytics, detailed operational analysis or a "blended" view of both can be presented within the same dashboard.

Strengths

- Integrated CPM platform for financial consolidation and close, planning, budgeting and forecasting, reporting and analytics with built-in financial intelligence and financial data quality capabilities, available in the Microsoft Azure cloud.

- Integrated BI and analytics functionality for (print-oriented) production reporting, financial reporting (disclosure management) with self-service dashboards and visualizations, and ad hoc analysis via Microsoft Excel add-in.

- MarketPlace with more than 50 predefined business and productivity solutions. OneStream has a development team and roadmap specifically dedicated to the MarketPlace. All OneStream-developed MarketPlace solutions are fully supported and available free of charge to active customers.

- Excellent customer feedback in recent years for many important KPIs in BARC's 'The Planning Survey' including project success, price-to-value, vendor support, product satisfaction, functionality and sales experience. Many companies benefit from using the platform and recommend using it to other organizations.

Challenges

- OneStream's standard financial model (18 dimensions) may not address all operational planning use cases. However, flexibility for operational planning scenarios is enhanced by OneStream's Extensible Dimensionality® and predefined specialty solutions in its MarketPlace for several types of operational planning that feed into the financial model. This design enables customers with a balance of out-of-the box financial intelligence and governance required for financial planning as well as the modeling capabilities and flexibility required for granular operational planning use cases.

- OneStream's recommended client solution providing access to all functionality is a native Windows App that is deployed using Microsoft ClickOnce technology. Additionally, a browser-based interface (HTML5) is available, which supports desktop/mobile browsers and is aimed at data consumption on mobile devices. Functionality is restricted to viewing reports and simple dashboards. Administration, modeling and content creation capabilities are available in the Windows App only.

- According to user and use case demographics in BARC's 'The Planning Survey', based on customer requirements, OneStream implementations are often large and complex, which can mean they take longer than average to complete. Implementation times will vary based on customer use cases and unique requirements.

- Lacks the market presence and global visibility of its main competitors Oracle and SAP today. However, OneStream is a fast-growing vendor globally and is constantly improving its market visibility. When organizations do decide to evaluate OneStream, the vendor has a high competitive win rate against its rivals.

Oracle

Austin, TX, USA

www.oracle.com

Oracle is a global provider of enterprise cloud computing, offering software, platform, infrastructure and data as a service. The company employs more than 132,000 people worldwide and serves 430,000 customers in 175 countries.

Oracle's portfolio includes a comprehensive stack of cloud applications, platform services and engineered systems. The vendor's cloud enterprise performance management (EPM) and analytics portfolio contains a comprehensive set of offerings, which are packaged as Oracle Cloud EPM and Oracle Analytics Cloud. However, the company's widely used on-premises solutions (e.g., the well-known Oracle Hyperion EPM portfolio) continue to be developed and fully supported. A variety of other cloud and on-premises offerings and applications complete Oracle's broad product portfolio.

Oracle's comprehensive EPM portfolio includes various products and applications covering all relevant EPM processes (e.g., planning and budgeting, profitability and cost management, financial consolidation and close, account reconciliation, tax reporting, narrative reporting and enterprise data management). The vendor's entire EPM portfolio is available in the cloud. All Oracle Cloud EPM solutions are based on a consistent technical architecture and can be deployed in a modular fashion according to customer needs and priority. For data integration from on-premises or cloud data sources, Oracle Cloud EPM provides native, wizard-based features including predefined connectors to Oracle operational systems (e.g., ERPs). For customers who prefer to manage EPM applications on-premises, Oracle's Hyperion EPM portfolio is still available (e.g., Oracle Hyperion Planning for planning, budgeting and forecasting; Oracle Hyperion Financial Management for financial consolidation and close; and Oracle Enterprise Data Management for financial master data management).

In terms of planning, budgeting and forecasting, Oracle Cloud EPM offers a broad range of capabilities for enterprise-wide integrated business planning processes – including connected operational, financial and strategic planning as well as scenario simulations. Prebuilt modules and frameworks expand the reach of Oracle's planning solution beyond finance into sales, HR, IT, marketing and supply chain operations. To support users with tasks such as predictions, simulations and to offer (automated) insights into signals, anomalies and root causes, Intelligent Performance Management (IPM) is a major area of continued investment for Oracle. A Digital Assistant for EPM and several statistical and ML features are embedded in Oracle Cloud EPM including support for integrating third-party ML models and ML engines. In addition, Oracle's own data science platforms and ML algorithms embedded in Oracle databases can be leveraged.

Oracle's flagship product for analytics, Oracle Analytics Cloud incorporates business-user-oriented capabilities for the complete analytics cycle. It offers modules for developing and deploying formatted reports, interactive dashboards and mobile analytical applications and provides functionality for data preparation as well as data visualization. Oracle Analytics Server, the on-premises version of Oracle Analytics Cloud, brings all the capabilities of the cloud platform to organizations requiring on-premises deployment options.

Strengths

- Oracle's comprehensive Cloud EPM portfolio includes a full suite of products and configurable applications covering all relevant EPM processes. All products are connected, based on a consistent technical architecture and can be deployed in a modular fashion.

- Oracle Cloud EPM Planning offers a good range of capabilities for enterprise-wide planning, budgeting and forecasting processes as well as scenario simulations. Broad functionality is available for web-based, integrated business planning – including connected operational, financial and strategic planning – in top-down and bottom-up planning scenarios. Prebuilt modules

and frameworks expand the reach of Oracle's planning solution beyond finance into sales, HR, IT, marketing and supply chain operations.

- BARC's 'The Planning Survey 21' revealed a high level of customer satisfaction with the business benefits Oracle Cloud EPM provides as well as its planning and forecasting functionality and the enablement of self-service use in business departments.

- Oracle Analytics Cloud is a comprehensive cloud and web-based platform for formatted and ad hoc reporting, analysis, visualization, data preparation and dashboards – all in one suite.

Challenges

- The integration between product lines such as Oracle Cloud EPM and Oracle Analytics Cloud is at data level leveraging data models and structures but not at report/visualization level. In contrast to most other vendors, Oracle's strategy sees EPM and analytics as separate product lines.

- Oracle's on-premises planning product, Hyperion Planning, is not well suited to a self-service approach in business departments. Due to its comprehensive functionality and setting options, the back end requires tech-savvy power users for administration tasks and to set up individual planning applications. In contrast, back end complexity is much reduced with Oracle Cloud EPM as the vendor takes care of the technical operation of the system. Furthermore, packaged application content based on best practices and wizard-based configuration enables faster deployment in the cloud.

- The pricing of Oracle's EPM and analytics products is transparent but comparatively expensive. The cloud versions offer cost-effective editions for smaller organizations as well as alternatives for cost shifting to future periods and faster time to value. Also, Oracle's suite-based Cloud EPM pricing offers cost advantages for customers implementing across multiple application areas (such as planning, financial close and account reconciliations).

Planful

Redwood City, CA, USA

www.planful.com

Planful is a US-based financial planning and analysis cloud platform provider. The company was founded in 2001 as Host Analytics and rebranded to Planful in 2020. The vendor is headquartered in Redwood City, California, USA and currently has five offices and 350 employees globally. Planful is backed by private equity investor Vector Capital.

The Planful platform helps organizations of any size and industry combine financial consolidations and close, financial and operational planning, reporting and analytics in one single solution. As a cloud-based platform, Planful is accessed via any web browser, including on mobile devices, and Microsoft Office plug-ins for Excel, Word and PowerPoint (called Spotlight). The product is sold and implemented either by Planful itself or through a global partner network of 40 resellers and solution implementers. According to the vendor, Planful is currently used by more than 900 customers in 24 countries world-wide.

Planful's solution is technically based on Microsoft technology, combining relational (for planning and consolidations), multidimensional (for reporting, modeling and analysis) and NoSQL databases. For data integration, Planful uses its own data load wizard and Boomi as a third-party ETL tool (OEM), providing more than 200 prebuilt bi-directional connectors to integrate with ERP, HCM, CRM, data ware-houses, spreadsheets and other sources, whether on-premises or cloud-based.

Planful provides a single solution for both standardized financial planning and dynamic operational planning. The platform offers a combination of prebuilt but adaptable models and a flexible engine to create custom models for specific businesses. Industry and topical planning templates are available for areas such as workforce planning, headcount planning, P&L planning, balance sheet planning, capital planning and others. Planning, budgeting and forecasting processes are supported by comprehensive collaboration capabilities (including commentary, threaded conversations and chats) and workflow functionality (e.g., task management and due dates, status monitoring, approval, email notifications, etc.). Once plan data is entered and plans are submitted, they are validated through prebuilt data validation rules along with Planful Signals, the vendor's embedded AI and ML anomaly technology. In addition, Planful Projections enables customers to forecast trends utilizing AI functionality.

Fully integrated with the platform's other capabilities, comprehensive financial consolidation and close functionality supports statutory and management consolidation processes. Planful includes workflow-based consolidation functionality and financial intelligence, journal entries and reclassifications, currency conversions, intercompany eliminations, and financial and regulatory reporting.

Besides planning, Planful also includes capabilities for BI and analytics. For standard reporting, the platform enables the creation of formatted reports and board books including advanced formatting and distribution of report packages. Standard reports are generated directly from the relational database, so there is no need to process a reporting cube to synchronize data for reports. Furthermore, dynamic ad hoc query and analysis functionality is available based on dimensional data allowing business users to drill up and down hierarchies and through to transactional detail. This functionality can be used in both the web browser or Spotlight in Microsoft Excel. Finally, visual and interactive dashboards can display financial and non-financial data in charts, graphs, data grids, dials, and a vast array of visuals.

Strengths

- Cloud-based, business-user-oriented platform with integrated functionality for financial consolidation and close, planning, budgeting and forecasting, reporting, analysis and dashboarding.

- Flexibility for a wide variety of planning approaches (centralized top-down, decentralized bottom-up) and planning topics (including financial and operational planning) aimed at companies

of all sizes and industries. Supplementing prebuilt but adaptable models for specific industries and topics.

- Comprehensive workflow functionality to enable flexible control over tasks and planning, budgeting and forecasting processes. Moreover, collaboration capabilities support conversations and decision-making processes through commentary, threaded conversations, chats and more.

- Fully integrated financial consolidation and close functionality to support statutory and management consolidation processes and reporting.

Challenges

- Cloud-only – Planful is purely cloud-based and not available on-premises. Web access is essential to use the product (except for offline planning using Excel templates).

- Data integration is very reliant on third-party technology. Planful provides its own data load capabilities and open APIs, while Boomi is used as a third-party ETL tool (OEM) to load data. More than 200 prebuilt bi-directional connectors are provided to integrate with source systems.

- Compared to the competition, Planful has limited capabilities for advanced and predictive analytics. However, with recent product releases, native finance-specific functionality for AI/ML-driven anomaly detection has been enhanced with the promise of more to come in upcoming versions (e.g., for predictive forecasting).

- Lacks the market presence and global visibility of its main competitors today. Most of Planful's business is still in North America. However, according to the vendor, its international customer count and revenues are rapidly expanding. Prospects outside North America should evaluate the vendor's and partners' local consulting and support capabilities.

Prophix

Mississauga, Ontario, Canada

www.prophix.com

Founded in Canada in 1987, Prophix began as a software distributor implementing financial applications. In the year 2000, Prophix released its own CPM software, also called Prophix, recognizing the market's need for innovative planning and reporting systems. In January 2021, Prophix received significant investment from Hg, a leading global software investor, to accelerate and scale the vendor's growth and fund further development of its product capabilities. As the first instance of inorganic growth in the company's corporate history, in October 2021, Prophix began accelerating and scaling its growth through the acquisition of Sigma Conso, a Belgian financial performance management (FPM) specialist with a strength in financial consolidation and close. Prophix now has more than 450 employees worldwide and over 2,500 active customers in more than 110 countries around the globe, covering all company sizes and industries. In addition to its market presence and continuous growth in North America, Prophix is increasingly winning customers outside its core market, for example in Europe.

Prophix is a unified corporate performance management (CPM) solution that delivers insights into and automates finance, operations and business performance processes with a focus on business user experience and ease of use to streamline model and process management. The product covers planning, budgeting and forecasting, reporting and analytics. Data and metadata in Prophix is stored in Microsoft SQL Server as well as in Analysis Services, the database's multidimensional component. Sigma Conso has its strengths in FPM, offering software for financial consolidation and close, management reporting, intercompany reconciliation as well as specialty solutions for IFRS 16 and iXBRL.

Prophix places an emphasis on serving business departments (e.g., finance) in midsize companies across all industries with typically 50-100 users per implementation. However, there are some much larger implementations as well. Prophix is available in the cloud leveraging Amazon Web Services (AWS). As a cloud-native product, Sigma Conso ties in well with Prophix's future cloud strategy.

The software is a flexible development environment which does not confine itself to any one single planning topic (financials, sales, HR etc.). The product can be used to create individual planning applications with capabilities for top-down and bottom-up planning including workflow functions to control planning processes. It contains little predefined business content (e.g., for specific industry verticals). However, partners do offer prebuilt content for certain topics and industries (e.g., construction).

Besides planning, Prophix also provides capabilities for BI and analytics. Standard reporting in a formatted and (if required) print-oriented way is supported, as are ad hoc queries based on OLAP methodologies (drill functionality, slice and dice, pivoting, etc.). For visualizing data (e.g., in management cockpits or dashboards), standard business graphics as well as more advanced chart types are available. For more advanced dashboarding, data visualization, BI and analytics, data sets from Prophix can be integrated and used in Microsoft Power BI.

Planning templates, like reports, are created in a user-friendly, Excel-like environment in Prophix. An HTML5 web client and Excel add-ins are available as front ends to enter plan data or to work with reports, analyses and dashboards. Reports, plans, budgets and forecasts can also be pushed to PDF through a scheduled process or on demand. The software can be embedded within PowerPoint allowing analysis of live data in presentations.

With recent product enhancements such as a virtual financial assistant, Prophix continues to simplify and automate the use of its solution for business users by leveraging AI, ML and natural language processing techniques. Major use cases today are anomaly detection (e.g., for fraud prevention), insights (e.g., contribution analysis, trend analysis, variance explanations) and task assistance (e.g., automation of routine processes) with more to follow in the future.

Strengths

- Prophix is an integrated, flexible and business-user-oriented CPM solution with a focus on mid-sized companies based on Microsoft technologies and available in the Amazon cloud (AWS).

- Comprehensive planning, budgeting and forecasting functions for top-down and bottom-up planning with strong workflow capabilities to control planning processes. Prophix can be used to create individual planning applications on different aggregation levels (strategic and operational planning) for an integrated enterprise planning approach (including financial planning).

- Supplementary integrated functions for standard reporting (also formatted and print-oriented, if required), ad hoc query, OLAP analyses (drill operations, slice and dice, pivoting, etc.) and dashboarding. Moreover, comprehensive functionality for financial consolidation and close as well as other FPM use cases is available in Sigma Conso.

- BARC's 'The Planning Survey' reveals a high level of satisfaction with Prophix, particularly with its functional capabilities and self-service usage in business departments.

Challenges

- For new customers, the product is available in the cloud only. Sales of Prophix's on-premises version stopped at the end of 2020 (support is continued until 2023).

- 71 percent of the Prophix users who responded to BARC's 'The Planning Survey 21' were planning users – above the survey average of 66 percent – reflecting the fact that Prophix is essentially an integrated planning and CPM tool rather than a BI and analytics tool.

- Prophix is a development environment for CPM and, compared to its competition, not much predefined business content is currently available from the vendor itself. However, Prophix has developed a prebuilt model for construction WIP reporting and has plans to build more in the future. Moreover, partners offer prebuilt content for specific topics and industries.

- Shortly after the acquisition, the integration of Prophix and Sigma Conso is still limited. A key challenge will be technology: While Prophix in the cloud leverages Amazon Web Services (AWS), Sigma Conso is currently only available in Microsoft Azure. We expect initial integration to be at the process level before deeper technical integration and alignment of user interfaces and functionality follows.

- Canada-based Prophix is predominantly used in North America. It has a smaller footprint in geographies outside the United States and Canada and is typically used in departmental or small and medium-scale scenarios. However, in recent years, the customer count outside North America has increased and implementation projects have been growing in terms of numbers of users and data volumes. Enterprise customers and companies with a planned global roll-out should evaluate similar references.

SAP

Walldorf, Germany

www.sap.com

SAP was founded in 1972 as a business applications company. Today, the vendor has a turnover of €27.34 billion, employs more than 100,000 people, and is one of the largest business software vendors in the world.

SAP's analytics portfolio encompasses cloud and on-premises solutions for BI, analytics and enterprise planning. From a strategy perspective, SAP is investing heavily in innovation in the cloud while still supporting and developing its on-premises solutions. SAP's analytics and EPM solutions are spread across different product lines. For planning and budgeting, SAP Analytics Cloud (SAC) and the on-premises solution SAP Business Planning and Consolidation (BPC) are the core offerings. Both are supplemented by SAP S/4HANA Finance for Group Reporting for financial consolidation and close. Together with SAP BusinessObjects BI (on-premises), SAP Analytics Cloud also plays a central role in the company's BI and analytics portfolio. Advanced analytics functionality is also available in SAP Analytics Cloud.

SAP Analytics Cloud, SAP's strategic cloud offering and analytics platform, brings together capabilities such as BI and data visualization, planning and augmented analytics for different user roles into one integrated platform. With a large and growing development team, SAP Analytics Cloud is becoming richer in features such as application design, planning and predictive functionality as well as being enhanced with more than 80 prebuilt business content packages (e.g., solutions for finance, sales and marketing, HR and various industries). The product is fully web-based with an HTML5 web client and a Microsoft Office 365 Excel add-in. SAP Analytics Cloud has a modern and user-friendly UI and offers functionality for all individual planning activities including strategic, operational, functional and financial planning. It integrates with all major SAP enterprise applications (e.g., SAP S/4HANA, SAP HANA and SAP Data Warehouse Cloud). In addition to using it with its own data models, SAP Analytics Cloud can also be used as a front end for other SAP data sources in hybrid cloud scenarios (e.g., with SAP HANA, SAP BW/4HANA, etc.) without moving, caching or persisting the data into the cloud.

SAP BPC is SAP's recommended product for those requiring an integrated on-premises planning and financial consolidation solution. As an additional front end option, SAP BPC customers can combine SAP Analytics Cloud with the product's planning engine. SAP Analytics Cloud can access SAP BPC's planning model (data and structures) using a 'BPC Live Connection' without replicating data, thus providing write-back options for planning data directly into SAP BPC's planning model in BW through write-back enabled queries.

Strengths

- Integrated business-user-friendly functionality for planning and analytics with embedded capabilities for augmented analytics and application design in SAP Analytics Cloud. Comprehensive capabilities for implementing custom planning applications with supporting workflow and collaboration functionality.

- Augmented analytics features that leverage predefined ML algorithms help users to predict and dig deep into data sets quickly by surfacing trends and outliers (e.g., 'Smart Predict', 'Search to Insight', 'Smart Insights', 'Smart Discovery').

- Highly scalable on-premises planning and financial consolidation capabilities for web and workflow-based scenarios in SAP BPC based on SAP BW/4HANA.

- Exclusive connectivity (e.g., live access and direct write-back) and prebuilt content available for SAP's own data sources and applications (e.g., SAP Analytics Cloud with SAP S/4HANA, SAP BPC with SAP BW/4HANA).

- On-premises platform for formatted and ad hoc reporting, analysis, dashboarding and custom application design, suitable for medium and large deployments in SAP BusinessObjects BI.

Challenges

- Strong focus on cloud products such as SAP Analytics Cloud is leading to less innovation and fewer updates for the rest of the analytics and planning product portfolio (e.g., SAP BPC and SAP BusinessObjects BI).

- Besides using SAP Analytics Cloud with its own data models in the cloud, it can also be used as a front end for other SAP data sources ('live data connection'). However, for live access only, a limited set of functionality is available (e.g., not all 'smart' functions).

- SAP Analytics Cloud is essentially a planning and analytics product with comprehensive visualizations. Today, there is limited support for enterprise reporting scenarios (especially bursting) as, for example, advanced formatting options as well as more options to distribute content to users are missing. However, there have been a number of formatted reporting enhancements in the areas of pagination, table features and precise formatting/positioning in recent releases.

- Customer feedback in BARC's 'The Planning Survey' and 'The BI & Analytics Survey' as well as BARC's experience from customer projects confirms that SAP Analytics Cloud is still young compared to SAP's mature products (e.g., SAP BPC and SAP BusinessObjects BI) and other market-leading solutions (e.g., in its lack of detailed features) but it is evolving rapidly.

Unit4

Utrecht, The Netherlands

www.unit4.com

Unit4 is a global provider of cloud-based enterprise software for financials, HCM and FP&A. To strengthen its offerings for CPM and analytics, Unit4 acquired the German vendor Prevero in 2016. Prevero originally delivered CPM software to support planning, budgeting and forecasting, analytics and reporting processes and has now been fully integrated into Unit4's ERP application ecosystem to provide Financial Planning & Analysis (FP&A) solutions. While Unit4 FP&A historically attracted a strong customer base in the DACH and EMEA region, its appeal has subsequently broadened to mid-market and enterprise-level customers worldwide, particularly in North America.

Unit4 FP&A solutions focus on people-centric industries, namely professional services, the public sector, not-for-profit organizations and higher education, but they also have a strong customer base in the utilities, manufacturing and retail industries. These sectors are supported with prebuilt business applications for financial planning, sales & operations planning, people planning & analytics, reporting & analytics, financial consolidation and IFRS 16. Unit4 FP&A solutions are available as standalone applications or integrated into Unit4's ERP suite. They deliver CPM technology with native integration to Unit4's enterprise solutions.

Built on a highly flexible platform, Unit4 FP&A applications are adaptable to various CPM and analytics use cases. The solutions give business users the platform and tools they need to configure their planning, budgeting and forecasting, analytics, reporting and financial consolidation applications to meet individual requirements, without having to have a technical background. For data storage and navigation, Unit4 FP&A uses a ROLAP approach and offers typical OLAP navigation capabilities in its clients.

For planning, budgeting and forecasting, Unit4 FP&A provides comprehensive capabilities to support top-down, bottom-up and mixed planning processes. The product's flexible development environment allows customers to address various planning topics on one common platform, with different aggregation levels (e.g., strategic as well as operational planning) for an integrated corporate planning approach (including financial planning). Planners can enter budget data in the FP&A Designer, HTML5 web client or Excel add-in. In addition to Unit4 FP&A's planning functionality, it also offers complementary analytics functionality (e.g., reporting and report creation with a tabular grid that closely resembles Excel in the FP&A Designer).

For financial consolidation purposes, Unit4 FP&A offers a prebuilt application that includes legal consolidation covering several consolidation standards as well as reporting capabilities and predefined disclosure statements.

Strengths

- Integrated and feature-rich CPM and analytics platform for planning, reporting, analysis, dashboarding and financial consolidation available on-premises and in the Microsoft Azure cloud.

- Flexible, coding-free development environment aimed at business power users for building tailored CPM and analytics applications, created in an Excel-like tabular grid in the FP&A Designer.

- Comprehensive planning and forecasting functionality for all kinds of planning approaches (top-down, bottom-up or combinations of both), planning topics and aggregation levels (e.g., strategic as well as operational planning including financial planning).

- Predefined business applications and content with dedicated support and release management (topical and industry-focused applications) allow for quick project implementation.

Challenges

- Currently, the functionality of the HTML5 web client is limited compared to the FP&A Designer (e.g., no administration, no modeling).

- Besides its incorporated AI functionality using neural networks, Unit4 FP&A today has limited functionality for advanced analysis and predictive analytics. However, open libraries such as R and Python can be integrated using REST APIs. Unit4's general future development strategy focuses on smart technological support and automations leveraging ML techniques.

- According to BARC's 'The Planning Survey', performance is an issue for some customers. In environments with large amounts of data and concurrent users, organizations should evaluate Unit4 FP&A's performance.

- Unit4 FP&A's future go-to-market strategy strongly focuses on cross-selling with the ERP suite to new customers and upselling to existing ERP customers. Indirect sales to non-Unit4 ERP customers are addressed via the company's partner network. In the future, BARC expects the product's visibility to decrease on the open market.

Wolters Kluwer

Alphen aan den Rijn, the Netherlands

www.wolterskluwer.com

Wolters Kluwer (WKL) offers enterprise-scale financial performance management (FPM) software solutions for the office of the CFO through its CCH® Tagetik expert solutions. The company is a global leader in professional information, software solutions and services for the following sectors: finance, tax and accounting; legal and regulatory; governance, risk and compliance; and healthcare. Wolters Kluwer helps customers make decisions by providing expert solutions that combine domain knowledge with specialized technologies and services. It reported annual revenues of €4.6 billion in 2020.

The CCH Tagetik expert solution provides a unified web-based platform for financial corporate management (financial consolidation and close; budgeting, planning and forecasting; integrated business planning including S&OP and supply chain planning; profitability analysis; cash flow management; financial reporting and analytics), compliance regulatory reporting and disclosure management. Used by organizations of all sizes, CCH Tagetik is particularly appealing to mid-sized and large companies (or groups of affiliated companies) with many users involved in corporate planning and/or financial consolidation processes. The comprehensive platform also extends into areas such as ESG & sustainability, IFRS 16, IFRS 17 and LDTI, solvency II, account reconciliation and iXBRL. In addition, the CCH Tagetik application marketplace includes predefined starter kits, pre-packages and tech solutions developed by partners as well as CCH Tagetik itself.

From a planning perspective, CCH Tagetik is focused on integrated financial and operational planning and budgeting, with top-down, bottom-up and mixed approaches all supported. CCH Tagetik contains a predefined model for integrated financial planning (balance sheet, P&L, cash flow) that can be used by individual subsidiaries or at group level. Consolidation of plans is possible thanks to integrated functionality for financial consolidation and close. Comprehensive workflow and governance functionality (especially for bottom-up approaches) is available to control planning and consolidation processes involving lots of users. The CCH Tagetik platform, powered by the Analytic Information Hub, was built with an open and extendable architecture based on a relational data model that supports implementations in Microsoft SQL Server, Oracle, PostgreSQL and SAP HANA.

Additionally, the Analytic Information Hub connects granular financial and operational data with more flexible and scalable possibilities in the context of open data modeling, FPM (e.g., regulatory reporting), operational planning and analytics. Customers leverage the Analytic Information Hub today in many different ways (e.g., for driver-based planning, detailed profitability analysis and integrated business planning and reporting). From a technical perspective, the Analytic Information Hub is – like CCH Tagetik's financial core – based on a relational data model (e.g., in Microsoft SQL Server or SAP HANA), which can be administered in business departments using a single user interface and modeling tools. CCH Tagetik also offers out-of-the-box or customized embedded predictive models and trainable ML capabilities based on Python that can be leveraged to predict future outcomes, identify key variables or extend financial close and regulatory solutions.

In 2021, to extend CCH Tagetik's capabilities in the area of sales and operations planning, including supply chain planning, Wolters Kluwer acquired Vanguard Software, a provider of cloud-based integrated business planning (IBP) solutions. CCH Tagetik Supply Chain Planning offers functionality for balanced demand and supply planning, production planning, sales and operations planning. Integration with the CCH Tagetik platform offers opportunities for better connecting finance and operations planning across the organization.

In terms of analytics and reporting, CCH Tagetik pursues a two-fold strategy. The product's integrated functionality is geared to end-user self-service with on-screen display of reports and dashboards. Furthermore, CCH Tagetik's new web-based tool SmartInsight, which is embedded in the platform, enables dynamic self-service ad hoc reporting and analytics. These capabilities can be supplemented by third-

party analytics products (OEM) such as Microsoft, SAP and Qlik using CCH Tagetik as the central data source to allow customers to use their BI and analytics tool of choice.

Strengths

- Integrated web-based platform for financial corporate management (financial consolidation and close; budgeting, planning and forecasting; profitability analysis; cash flow management; financial reporting and analytics), compliance regulatory reporting and disclosure management that can be used by individual subsidiaries or at group level.

- Comprehensive, workflow-based planning and forecasting capabilities supplemented by additional CPM functionality (financial consolidation, reporting and analytics) targeted at mid-sized and large companies. The offering is expanded by the Analytic Information Hub, making the processing of mass financial and operational data available at a granular level.

- Comprehensive predefined set of business rules for financial corporate management (financial planning and financial consolidation). Supplementary solutions for financial and regulatory use cases as well as selected operational plans.

- According to feedback in BARC's 'The Planning Survey', customers are very satisfied with their CCH Tagetik projects, the business benefits it provides, price-to-value, planning and financial consolidation functionality, planning content, workflow and sales experience.

Challenges

- The flexibility of CCH Tagetik's standard financial data model is limited with a predefined set of dimensions. However, flexibility for more granular financial and operational data is enhanced by the Analytic Information Hub, which has no limits to dimensionality. If used, data in individual operational plans in Analytic Information Hub has to be mapped and transferred into CCH Tagetik's financial model (condensation for data aggregation and detailing for drill down / drill through operations). CCH Tagetik allows integrated business planning with detailed operational planning in the same solution as summary level planning.

- For BI and analytics, CCH Tagetik itself offers on-screen-based reporting and dashboarding, ad hoc reporting and analysis in CCH Tagetik SmartInsight, Microsoft Word add-in-based disclosure management and a Microsoft PowerPoint add-in. This is supplemented by third-party analytics products (OEM) such as SAP, Microsoft and Qlik using CCH Tagetik as the central data source to allow customers to use their BI tool of choice, taking advantage of their open architecture and APIs.

- CCH Tagetik's architecture has more extensive hardware requirements than other tools to ensure performance. In complex environments with large amounts of data and concurrent users, organizations should evaluate the most appropriate configuration to meet their performance needs. Amongst other choices, CCH Tagetik is certified to run natively on SAP's in-memory HANA database, providing a powerful option for complex implementations.

- According to user and use case demographics in BARC's 'The Planning Survey', based on customer requirements, CCH Tagetik implementations are often large and complex with phases for multiple solutions. For this reason, they can take longer than average to complete. Implementation times will vary based on customer use cases and unique requirements.

Workday

Pleasanton, CA, USA

www.workday.com

Workday is a cloud-based enterprise software and ERP vendor with a particular focus on human capital management, financial management and enterprise planning. The company has a turnover of $4.32 billion and employs 14,200 people worldwide. In 2018, Workday acquired Adaptive Insights, a planning and CPM software vendor headquartered in Palo Alto, California, to extend its performance management offerings. Workday Adaptive Planning is used by more than 5,800 customers of various sizes from a wide range of industries in over 50 countries worldwide.

Workday Adaptive Planning is a business-user-oriented CPM platform with functionality for various performance management processes. As a flexible and scalable solution, it supports planning, budgeting and forecasting processes including modeling, scenario planning, monitoring, reporting and analysis. In addition, financial consolidation and close are also supported. The creation of models is business-user-friendly and mainly done by drag-and-drop or point-and-click so does not require technical coding. The flexible and scalable planning platform enables continuous, active planning across the organization – from enterprise-wide financial planning and analysis to detailed planning for specific functions such as HR, sales, marketing and operations. Workday Adaptive Planning offers built-in financial intelligence with a native understanding of account types such as assets, liabilities, revenues and expenses.

Workday Adaptive Planning can be used together with the Workday suite of applications or with non-Workday solutions. Workday's marketing and sales strategy positions it as a standalone product as well as offering it as a part of the suite to Workday HCM and Workday Financial Management customers. In particular, positioning the product within its existing customer base is a strategic future direction for Workday. Customers who deploy Workday Adaptive Planning with Workday HCM and/or Workday Financial Management leverage a unified security and user experience, as well as native data management with the ability to drill back to data and master data in the ERP system or publish plans back to Workday core transactional systems.

Workday Adaptive Planning is a purely cloud-based CPM platform that can leverage Amazon Web Services (AWS) or Microsoft Azure as its hosting provider. The product is used via a fully web-based application (HTML5), which is compatible with popular browsers and can also be run on browsers on mobile devices. Supplementary Microsoft Office add-ins are available. Workday Adaptive Planning is based on a multidimensional in-memory modeling engine (Elastic Hypercube Technology), whereby data is stored in a relational database in the back end. All calculations and aggregations are performed in-memory. Data integration capabilities and prebuilt adapters to source systems are available within Workday Adaptive Planning. Alternatively, third-party solutions such as Boomi and Informatica can be used.

Workday Adaptive Planning offers ML-based capabilities for advanced analytics called Intelligent Planning. Intelligent Planning consists of a meta learning algorithm (generates time series forecasts e.g., for demand forecasting) and an optimizer. The embedded ML functions surface insights to business users that are incorporated in the planning process. Available capabilities include anomaly detection and outlier reporting.

Strengths

- Cloud-based, business-user-oriented CPM solution with integrated functionality for planning, reporting, dashboarding, analysis and financial consolidation.

- Flexibility for a wide variety of planning approaches (centralized top-down, decentralized bottom-up) and planning topics (including operational planning and financial planning) aimed at companies of all sizes and industries.

- Built-in financial intelligence with a native understanding of account types such as assets, liabilities, revenues and expenses. Integrated financial consolidation capabilities are also available.

- The acquisition by Workday enables access to larger organizations and greater international reach (Workday has locations in all important geographies worldwide).

- According to feedback in BARC's 'The Planning Survey', customers are very satisfied with Workday Adaptive Planning, its price to value and its planning and workflow functionality. The product comes highly recommended by customers.

Challenges

- Workday Adaptive Planning is purely cloud-based and not available on-premises. Web access is essential to use the product (except for offline planning using Excel templates).

- Focused on on-screen or Microsoft Office-based reporting and dashboarding. No automated report distribution (scheduling). However, a link to any report or dashboard can be sent manually by email. Users can also schedule the sending of a link to a dashboard snapshot for recurring delivery.

- Workday Adaptive Planning provides its own data integration framework and open APIs, while third-party ETL tools can also be used to load data. Additionally, prebuilt adapters to selected source systems are available. However, customer feedback in BARC's 'The Planning Survey' shows that not all customers are satisfied with Workday Adaptive Planning's predefined data connectivity and data integration capabilities.

- Most of Workday Adaptive Planning's business is still in the United States. However, the international customer count and revenues have increased since the acquisition by Workday. Prospects outside North America should evaluate the vendor's and partners' local consulting and support capabilities.

Other Vendors

There are many other established software vendors that provide mature and very useful technology, which may be ideal for organizations looking for a planning and analytics solution. However, due to the inclusion criteria applied in this report, those vendors are not evaluated in detail. To complete the market overview, here is a selection of those providers (this does not claim to be a complete list).

Bissantz

Nuremberg, Germany

www.bissantz.com

Flexible, integrated BI and analytics product for dashboards, ad hoc reporting, advanced analysis (including statistical and data mining methods) and operational planning featuring patented visualization capabilities.

Centage

Natick, MA USA

www.centage.com

Cloud-native planning and analytics platform with capabilities for budgeting, forecasting, reporting and analysis focused on small and midsize businesses.

CoPlanner

Graz, Austria

www.coplanner.com

Flexible CPM development environment for creating individual planning applications based on Microsoft SQL Server with integrated functionality for reporting, analysis and financial consolidation.

Corporate Planning

Hamburg, Germany

www.corporate-planning.com

Integrated, business-user-oriented suite for operational management, integrated financial controlling, financial consolidation and risk management. Available on-premises and in the Microsoft Azure cloud.

Cubeware

München, Germany

www.cubeware.com

Integrated, business-user-oriented platform for data management, modeling, dashboards, ad hoc reporting, OLAP analysis and operational planning based on multidimensional databases.

evidanza

Salching, Germany

www.evidanza.de

Product portfolio that includes tools for BI and analytics, planning and middleware solutions. The core product – evidanza – is a flexible platform with capabilities for building individual planning and analytics applications.

macs Software

Zimmern, Germany

www.macscontrolling.com

Modular software product family for accounting and controlling with integrated planning functionality. Flexible combination of different software modules is possible.

Kepion

Seattle, WA, USA

www.kepion.com

Integrated planning and analytics platform based on Microsoft technologies that supports both financial and operational planning processes, providing dashboards as well as reporting and analytics.

Serviceware

Idstein, Germany

www.serviceware-se.com

Serviceware Performance PM provides an integrated platform for CPM, analytics, project portfolio management and strategy implementation with an Excel-like user interface and web functionality. Suitable for business users.

Solver

Los Angeles, CA, USA

www.solverglobal.com

CPM suite based on the Microsoft platform that supports planning, reporting, dashboards, analysis and data warehousing. It can be deployed either in the cloud or on-premises.

Syntellis (formerly Kaufman Hall Software)

Skokie, IL, USA

www.syntellis.com

Cloud-based solution that supports budgeting and forecasting; financial and capital planning; and reporting and analytics with a dedicated focus on the healthcare, financial and higher education sectors.

Valsight

Potsdam, Germany

www.valsight.com

Innovative platform for interactive, driver-based simulation and corporate management based on operational and strategic drivers. Scenario simulation of action alternatives and measures considering uncertainties and risk simulations (Monte-Carlo).

Vena Solutions

Toronto, Canada

www.venasolutions.com

Cloud-based solution that supports planning and budgeting; forecasting; reporting and analytics based on Microsoft Excel (desktop and Office 365) as its user interface.

Related Research Documents

The following BARC documents complement this BARC Score report:

BARC Access

https://barc-research.com/research/business-intelligence/

Access to BARC's complete research portfolio, including product reviews with detailed insights into more than 40 BI and analytics solutions, covering all the major players in the market.

BARC Scores

https://barc-research.com/barc-score/

BARC Score Financial Performance Management: This BARC Score focuses on the market for financial performance management (FPM) products and portfolios. It is available in a global and a DACH-focused version.

BARC Score Enterprise BI & Analytics Platforms: This BARC Score provides a clear overview of the global BI and analytics products market based on a combination of detailed end-user feedback and thorough analysis of products and vendors.

BARC Score Analytics for Business Users: The lowdown on the global market for governed self-service analytics platforms. We evaluate business user support for the entire analytical cycle: from data and its preparation to presentation and collaborative content editing.

BARC Software Surveys

https://bi-survey.com/

The Planning Survey: The Planning Survey offers an in-depth comparison of up-to-date planning solutions to decision-makers looking for new planning software. Based on feedback from more than 1,400 users, the latest edition evaluates over twenty leading planning products.

The BI & Analytics Survey: BARC's major annual report on the global BI and analytics software market. It is based on the world's largest survey of BI users, with a sample of 2,500 survey responses – that is why so many companies trust the results of The BI & Analytics Survey and base their software purchasing decisions upon it.

The Data Management Survey: The voice of the data management community: The Data Management Survey is BARC's annual report on the data management software market. This BARC survey examines data management products in terms of their functionality, application areas and usability based on feedback from more than 1,100 users.

Other BARC Research

Free to download at: https://barc-research.com/research/bi-trend-monitor/

BARC Data, BI & Analytics Trend Monitor: BARC's Data, BI & Analytics Trend Monitor study gives 2,400 practitioners a platform to have their say on the trends currently shaping the BI, analytics and data management market, supplemented by additional commentary and analysis from BARC analysts.

BARC – Making Digital Leaders

BARC (Business Application Research Center) is one of Europe's leading analyst firms for business software, focusing on the areas of data, business intelligence (BI) and analytics, corporate performance management (CPM), enterprise content management (ECM), customer relationship management (CRM) and enterprise resource planning (ERP).

Our passion is to help organizations become digital companies of tomorrow. We do this by using technology to rethink the world, trusting data-based decisions and optimizing and digitalizing processes. It's about finding the right tools and using them in a way that gives your company the best possible advantage.

This unique blend of knowledge, exchange of information and independence distinguishes our services in the areas of research, events and consulting.

Research

Our BARC studies are based on internal market research, software tests and analyst comments, giving you the security to make the right decisions. Our independent research brings market developments into clear focus, puts software and vendors through their paces and gives users a place to express their opinions.

Events

Decision-makers and IT industry leaders come together at BARC events. BARC seminars in small groups, online webinars and conferences with more than 1,000 participants annually all offer inspiration and interactivity. Through exchange with peers and an overview of current trends and market developments, you will receive new impetus to drive your business forward.

Consulting

In confidential expert workshops, coaching and in-house consultations, we transform the needs of your company into future-proof decisions. We provide you with successful, holistic concepts that enable you to use the right information correctly. Our project support covers all stages of the successful use of software.

BARC has many years of experience in helping organizations to choose the right BI, analytics and CPM software to meet their business requirements. Hire us to support your tool selection project and guide you through each step of the process.

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