The Necessity of Business Intelligence Solutions for the Sales Controlling in a Company

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Abstract: Data are becoming bigger and bigger, and their sources are diverse. Business Intelligence solutions are becoming more and more important for controlling of a company. A good technical set up is the basis for all analytical activities. A controlling tool for the end-user needs needs to meet the expectations of different hierarchy levels, and it needs to be intuitive. The paper shows a concept for the integrated sales controlling of a company, using Business Intelligence solutions.

Keywords: Business Intelligence, Data Warehouse, OLAP, Data Mining, Scorecard Model

1 Introduction

With rapid advances in information technology and increasing pace of globalization, comparability of products is increasing, leading to decreasing customer loyalty and shortening product lifecycles. Challenges for sales are increasing, and so they do for the company's success. Whereas in the past the increase in productivity was mainly limited to the production sector, it is now considered at least as important to optimize sales as a primary element of market and customer communication. In addition to reducing distribution costs, more efficient use and increase in the success rate of sales plays an important role. Sales activities and the number of customer relationships are becoming the focus of attention. Greater alignment of the entire company and sales as the first point of contact with the market and the customer will be indispensable in the future. As changes in customer requirements and needs are constantly expanding, the tasks of sales are leading to growing importance of the sales organization [1]. Especially in competitive markets with high product transparency and high reaction speed on the market, consulting as a product-accompanying service often provides an advantage in favor of a supplier [2]. Sales and optimal customer service, as well as continuation and expansion of long-term customer relationships, therefore, play a key role in the economic success of the entire company [3].

However, an area-wide sales controlling system, as a means of sales management, has not yet prevailed in most companies. Companies continue to focus increasingly on sales, products and product groups. This is particularly critical because the customer should be more in the focus of the sales activities as a central point of the company's success than he has been until now [4]. The main problem is in the lack of future-oriented reporting and in the absence of the necessary consistent data and information supply. Most users use disjoint, complicated and incomplete source systems [5]. According to a study by the market research institute Vanson Bourne, each employee uses an average of 67 minutes a day to collect information [6]. The resulting annual costs are already in the range of millions in small and medium sized organizations. More than two-thirds of companies surveyed believe the problem could be solved by providing a cross-company solution with access to all the information. It is all the

more astonishing that only a few companies have developed a corresponding business intelligence solution.

2 Sales Controlling

Controllers design and accompany the management process of target determination, planning and control and thus bear joint responsibility for achieving their goals. Increasing cost pressure also increases efficiency requirements within the sales controlling and high data quality. Also, the acceptance and confidence of the decision makers in the gained information is of elementary importance [7]. In addition to ensuring day-to-day business, it is important for sales controlling to generate input of information and to identify future requirements for action at an early stage [3]. Due to the growing complexity and dynamics of the corporate world, sales as an interface between the company and the customer play a significant role in the economic success of the company. The fact that this success increasingly depends on efficient sales activities requires results-oriented planning and control of sales. The integration of controlling activities into sales, via sales controlling, takes this challenge into account. Sales controlling is thus far from merely checking what is happening [8]. Rather, the area has a central coordinating function and support function. The individual segments of a company can be prioritized. The feedback for planning is a constant target / actual comparison. In case of deviations, this allows the company to detect weaknesses directly. A failure to achieve the goals is thus indicated early and appropriate countermeasures can be initiated [9].

In general, sales controlling purposes can be summarized for as follows:

1. Intelligence gathering

2. Coordination and distribution

3. Control and decision support

The information strategy is at the beginning of the task chain of modern sales controlling and forms the working basis. It is important to certify, evaluate and make available the information obtained by the management. The information strategy is the basis and thus decisive for the success or failure of the entire functional area. The information requirement is determined inductively and deductively. In the inductive procedure, the sales person selects the information himself. So, employee needs are at the center of the analysis. In the case of deductive investigation, the sales process takes the center stage. The problem with this method can be found in acceptance if the determined requirements from the employee's point of view do not correspond with the actual requirements. In general, data can be differentiated according to actual and planning data, as well as master and additional data. Future-oriented planning data offer the possibility for the future to develop scenarios and to calculate the probabilities of occurrence of these scenarios. Master data are normally static data [10]. Of particular importance is the local and temporal availability [11]. It is, therefore, necessary for the information evaluation and processing to be flexible and individual. It must be compressed and tailored to the individual information request information representation guaranteed, because usually there is a gap between the information request and the availability of information [12]. This leads to a reduction of the sales productivity with high information costs. In addition, insufficient information reduces the graduation rate and, consequently, the company's turnover. Based on the information requirement and the supply, the sales controlling has the goal to better control endogenous factors and to better anticipate

exogenous factors. Efficient sales controlling supports the decision-making process in sales through higher information quality and better utilization of information [10].

An important factor for complete consideration of the sales controlling area is presentation of the operational as well as the strategic view. Especially in terms of objectives, the two components differ significantly.

3 Business Intelligence (BI)

In times of internationalization and globalization, almost all companies, regardless of the size and industry, are exposed to increasing global competition [13]. A well-functioning BI solution is an essential resource in this context for creating a strategic competitive advantage. To enable successful, strategic action, it is mandatory that those responsible have an in-depth understanding of the company's performance. The link to the corporate strategy is fundamental. The best BI solution is useless if it does not result in improved business decisions that support the business strategy. Successful BI solutions should, therefore, include measurable business goals, KPIs and actions based on business results. Implementation of a BI system offers the company the opportunity to question the strategic goals and uncover inefficiencies in the organization's decision-making process. A very important factor of success of such a system is the acceptance by potential users. Accordingly, from the beginning, it must be considered which employees should have access to the system and which goals should be linked to the use of the system [14].

The BI approach consists of four main components. These components are referred to as Data Warehouse, Data Marts based on it as analysis tools and for the user to run as a user interface. For a holistic view of the BI approach in a broader sense, the work below deals with the components used directly or indirectly for the decision support in more detail. The delineation of the individual BI subareas makes sense, since some concepts are used synonymously in practice, which are all components of BI, but based on completely different concepts. Overall, the BI approach can be seen as a value chain in which information is extracted from data at different stages, which information is captured by the users in the form of knowledge and ultimately leads to an action that improves the situation. The goal is more efficient management of resources and external and internal customer-supplier relationships [2].

3.1 Data sources

The first step is to identify the information needs of users and decision makers. It is thus necessary to clarify which data are required to obtain the relevant information. It needs to be evaluated if the data can be found internally or if additional sources of procurement need to be found for data that are not yet available [10]. The problem with obtaining data is a lack of consistency, a lack of up-to-dateness, a missing time reference, version problems and missing semantics. All this leads to performance losses and cost increases [7]. If possible, this step should be automated as much as possible; qualified employees should be more concerned about analysis than about preparation of the data and the data collection [15]. After determining the internal and external data requirement, automatism must first be created in the data acquisition and data transmission necessary for the operation of the system [16].

3.2 Data Warehouse (DWH)

Information is the fourth factor of production and also a decisive competitive factor in a company. The DWH meets the challenge of this task. It serves to create an information offer and forms the basis for the management of the production factor [2]. The goal is to develop a comprehensive database with the DWH to enable the analysis of complicated issues [17]. The idea for this is originally from the year 1990 and was conceived by INMON [18]. The term is used to describe a database isolated from operational data processing systems, which serves as a company-wide, consistent database of current and historical data as a management support system [19]. The difference between operational systems and the DWH is the following: in operational systems, the current data are stored. This can be changed by updates at any time. A DWH, on the other hand, contains a whole history of data. The time horizon of a DWH is about five to ten years, while that of the operational systems only 60 to 90 days. For the reason of space alone, the DWH should only contain data that are relevant to users [20].

First of all, the content of the DWH is modeled. It is recommended to do a data transmission procedure. This can be done top-down, by deriving operational metrics from the business concept and critical success factors, or bottom-up, by identifying the metrics needed to control and assess quality, performance, and competitiveness from the operational metrics. An orientation framework for the data content of DWH is the so-called triangular model [2].
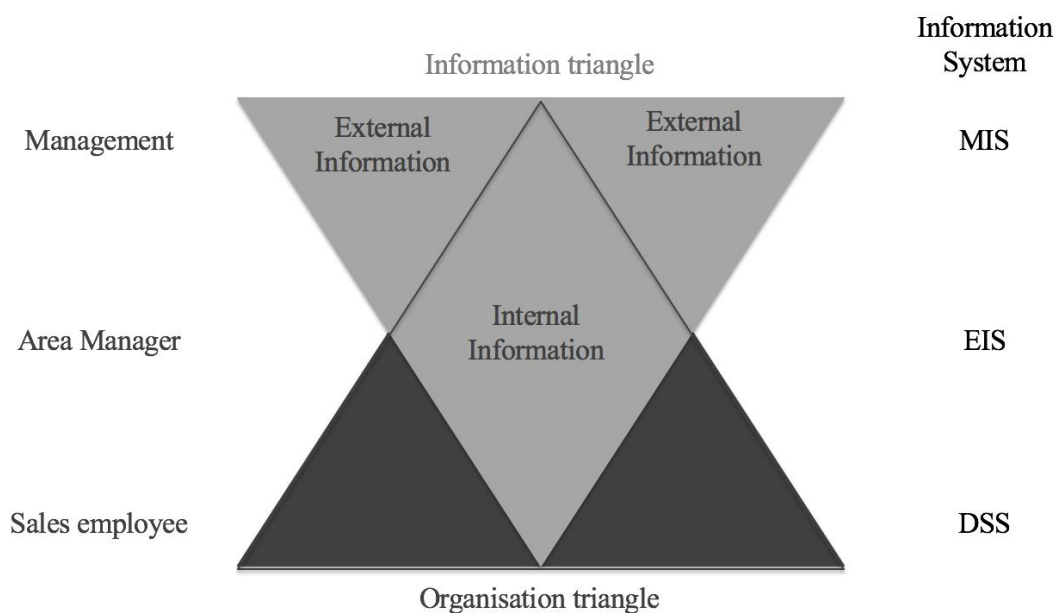

Fig. 1 *Triangular information model*

The organizational triangle symbolizes the company's internal information and its aggregation with increasing organizational height. In the case of distribution, this is mainly a result of the relationship with the markets [21]. The vertical stripes represent the area and function area related knowledge. With increasing height, this knowledge is becoming more and more integrated. The intersection of the organization and information triangle symbolizes the extent of information which flows in the company. Information used outside the organization triangle illustrates the external information that is often needed to make a decision, but often in a condensed form. Therefore, preparation and integration of these data

into the company's own database structuree play a decisive role. This often causes significant problems [2]. In essence, they can be grouped into three main fields of heterogeneity, distribution and autonomy. An almost always occurring question is the one of heterogeneity. The semantics are already different for different internal data sources, but if external sources are added, then the probability increases again. After obtaining and collecting the required data, the most important task is the syntactic and semantic consolidation and the correction of erroneous data sets [22]. An efficient DWH only supports sales controlling if it ensures the provision of higher data quality through a consistent, harmonized and historicized database [10].

However, it is necessary to consider the construction of subsets for individual functional areas and the use of analysis tools when designing the DWH. Nevertheless, conceptual separation of the structure of the DWH on one side and the use of analysis tools on the other side are advantageous since a change in the analysis in the front-end [23], which occurs due to the constantly advancing technology at regular intervals, only causes one conceptual revision of user access, but not the entire data structure. In addition, the different tools cause totally different demands of the data structure. Defining the DWH according to the requirements of all tools is, therefore, not easy. However, if a complete decoupling is achieved, even with emerging tool changes, it will be a one-time process that provides flexibility for development and change [24]. Setting up DWHs improves the internal and external reporting of a company significantly in terms of consistency and availability of data as well as flexibility of the department in the information retrieval. High standardization in development based on a DWH specific process model also reduces both development time and costs, as well as subsequent maintenance costs [22]. The DWH contains the finest data granularity. All derivations, aggregations, and domain related relationships are referred to as data marts. The advantage is that the DWH creates a common information base. Data marts can individually access DWH data and external data. All data are collected centrally in the DWH. From this consistent database, called hub, function-related data marts are created. The problematic of the heterogeneous data foundations described above influences not only the technical standardization but also the technical structure of the DWH [23].

3.3 Analysis tools

Nowadays, business is done in a confusing world of data. Data overflow and a lack of information are not contradictory. Internal data originate from the operative business; external data can be procured by third parties. The challenge is to prepare the relevant data out of large data volumes in such a way that they can be further processed by using suitable tools. The first big hurdle is taken with construction of the architecture and regular updating of the database. However, the data alone are not an added value [2]. Therefore, the extensive data stored in the DWHs and Data Marts must be analyzed. This only makes sense if they are brought into a context, resulting in valuable information. The problem is thus to process the large amounts of data with suitable tools to obtain relevant information [24]. For this, it is necessary to know if and if so, which relationships exist between the data and how they can be evaluated. Within BI, there are numerous approaches to analyzing the data. In the following text, three possible tools are presented: data mining, online analytical processing (OLAP) and reporting, which essentially provide the basis for all systems used in practice. Their use is essential to implement customer orientation [26]. In all kinds of businesses, Microsoft Excel is a popular tool for processing information. Although it can not generally be defined as a BI instrument, it does represent a data source and a proven assisting tool [14].

a) Data Mining

The data mining process helps to identify and uncover new, previously unknown relationships and hidden patterns in large volumes of data before any concrete need for information or analysis exists [24]. The information gained serves as the basis for sales controlling and thus for strategic customer management. The basic techniques of data mining are multivariate statistical methods, such as regression, factor and cluster analysis or induction, neural networks and data visualization. In this way, algorithms and associations are found which help to discover classifications and to make corresponding groupings. With the help of the association rule, correlations between different products purchased by the customer can be demonstrated. In addition, it is possible to analyze the purchasing decisions of a customer over time to represent development of the buyer's habits. In combination with demographic data, a more specific customer profile can be created. Based on this, it is possible to adjust the sales process accordingly because the most effective way of sales is to provide the customer with a tailored selection of products. Especially in fund business, early detection of niches can generate significant market shares. In addition, knowledge about the customer always creates a competitive advantage [26]. In summary, the fields of application of data mining are often found in the areas of customer segmentation, detection of up- and cross-selling potentials and early detection of emigrants. Data Mining is, therefore, used to strategically manage sales as early as possible to align the long-term focus of the company with decision support [10].

Examples are known in which the use of data mining achieved a positive return on investment within just a few months and the sales quota increased significantly [26]. Nevertheless, only 18% of all deployed BI solutions currently have such an analysis tool. The early recognition of opposing developments is a measure that is of enormous importance for all users [23]. Data Mining is the precursor to OLAP analysis, identifying patterns and dependencies within the dimensions which are worth investigating.

b) Online Analytical Processing (OLAP)

Another tool for analytical data evaluation is the OLAP concept. This is a hypothesis-based analysis method. Either the multidimensional structures revealed by data mining or manually generated queries are checked. The established hypothesis is then confirmed or rejected by the analysis result [23]. It is important to present the knowledge gained in the system in such a way that the provider can simply process it further. Thus, the alignment of the data to the needs of the management takes place. Specific views on multi-dimensional but hierarchically condensed data are typical. The analysis allows the user to break down the data into layers and cubes to get an overview of the data from different perspectives, such as segments or regions. The target values are logically connected with each other via four dimensions: time, value, quantity and product. Access is thus suitable not only for the entire DWH but also for the area-related data marts. This, in turn, supports the ability to perform ad hoc queries in addition to predefined queries as faster responses are delivered through shorter re-times. OLAP is particularly suitable for analysis of data in time dependencies and for filtering out deviations and outliers [10]. Furthermore, it is possible to change the level of detail within a perspective and change to another record on one perspective, for example to compare different regions or different funds [27].

OLAP is a top-down analysis of data. Due to its ex-post nature, the area of application of the OLAP is in operational sales controlling [10]. Thus, in any company, the opportunity to increase productivity is to minimize the inconvenience of doing business. With the help of the

OLAP method, knowledge about the right target group can be supplied by the data aggregate of the DWH. Based on this, the sales employee can then derive his sales campaign and the right actions. An example of direct sales of insurance proves a 2.5-fold increase in productivity through the use of OLAP [26].

    c) Reporting

The fast pace and complexity of the markets has an impact on the planning and controlling processes. They are increasingly in need of optimized reports that allow rapid adjustment of sales activities. Furthermore, there is an increased need for well-founded information on the income and risk situations of institutions as the basis for decisions. In the past, this led to even more diverse, partially redundant and not user-friendly reports, which were very complex and, therefore, difficult to understand. The areas in which reports are generated can be divided into internal and external. Internal reporting includes the view on profitability, sales performance, risk, organization and processes. The external reporting system can be subdivided into supervisory law and accounting [27].

Reporting should increase the quality of information for users. Therefore, the reports must be easily accessible and must contain information for the purpose of the user [29]. It is very important to pay attention to the level of detail [10]. While sales and management only need an overall view of the sales activities, the reports for sales representatives must include both global information, such as target percentage achievement, and detailed job and activity status information [3].

The individual reports must be linked together in the sense of a logical and technical top-down link in order to identify causes for market and process changes and to be able to derive and implement countermeasures faster [10]. The difficulty can be seen in the abundance of past-related data and the future-oriented strategy of deducing targeted actions. Furthermore, organizations, and especially sales, must be future oriented, this is why the importance of qualitative factors increases.

4 Sales Controlling Setup

How could the theoretical concept of sales controlling and BI end up in an overall sales controlling setup including both sides? The concrete interest in the findings of the sales controlling is on the side of the sales organization of a company. The benefit can be found in the creation of a competitive advantage over the competition. The idea is to combine the different theories in a so-called Sales Scorecard.

4.1 Sales Scorecard

The parameters and KPIs of the scorecard should be determined in such a way that they remain meaningful in the long run and can be used to compare performance and comparability with the performance of other business units. The concept claims to put the focus of the review on strategic success factors. This applies to criteria of efficiency as well as effectiveness. Importantly, the created metrics will meet these requirements and allow a company the relative comparability both internally and across the industry. Due to this complex task, the functionality and operation of the Sales Scorecard, which should combine these factors in the future, will be presented below [30].

The principle of the Sales Scorecard is based on the Balanced Score Card from KAPLAN AND NORTON from 1992, which has become a recognized tool for controlling corporate and business area strategies. A groundbreaking factor was the inclusion of four perspectives in the sense of a multi-criteria measurement system, beyond the consideration and overvaluation of financial results, to determine the strategic and operational success of the company's focus and strategy [8]. Originally, employees, processes, customers and finances were selected as perspectives, which, in the form of cause-and-effect relationships, also depend on each other in this order and ultimately all have a direct or indirect impact on the financial perspective [31]. There are special success drivers for each level. In order to achieve this, critical factors, the respective actual value, the critical limit for success, as well as the target values and measures for achieving the target, must be worked out with the responsible person. It is important that monetary and non-monetary metrics balance each other [32]. Only with the help of qualified and motivated employees is it possible to carry out the processes in such a way that they lead to a benefit for the customer and his satisfaction. This in turn has a direct impact on the success of the company [33].

Within the scope of the Sales Scorecard, the peculiarities of the fund business and the focus on sales performance, as well as the development of various products, will be met by modifying the four perspectives. The goals of the measurement of the operative sales performance and the achievement of the long-term strategic corporate success are defined in five perspectives. In addition to the four original perspectives of the BSC, a product view will be introduced because product development plays a major role in comparison of the general market development and the development of competing products on the market. The financial perspective reflects purely monetary success of distribution. The target can be the sales target from annual planning of the management. The process perspective provides information about the sales processes. The employee perspective enables individual performance tracking. On one hand, individual achievement of objectives of an employee can be measured; on the other hand, qualification measures, which are largely responsible for the success of the sales department, are also derived from this perspective. The customer perspective measures development of the customer relationship over the entire lifetime and puts a stronger focus on the gross profit per customer than on the pure sales development [30].

In order not to jeopardize the introduction of the Sales Scorecard, it is incontrovertible that both the management and the users are directly involved in its implementation within a company [31]. Implementation makes sense only if a clear strategy exists. Like the BSC, the Sales Scorecard should not contain more than 15-25 metrics that reflect goals as closely as possible [30]. The objectives must be defined and formulated as specifically as possible and, if achieved, lead to a sustainable competitive advantage. It is important that the goals are feasible and achievable in the available framework conditions [31].

When implementing the Sales Scorecard, it must be ensured that only the critical success factors are mapped when identifying the goals. At best, these are already known internally. They must be formulated precisely, like that different opinions are not possible with regard to the strategic orientation [34]. As with the development of the BSC, in the case of the Sales Scorecard, it is also necessary to link the goals of the strategic success factors via interdependent cause-and-effect relationships, bottom-up, towards the financial perspective. In order to avoid confusing and complex presentation, it is important to show only the most important relationships. Following this, the actual value must be determined for the respective goals [30].

After that, the critical limits have to be determined. This is mathematically possible by quantifying the previously determined qualitatively recorded cause-effect relationships [33]. The alternative is the in-house coordination and the use of benchmarks, such as industry-wide average values. A shortfall of the values is then a warning signal to pay special attention to this area in the subsequent period. To clarify the situation, it is advisable to use a traffic light system to identify reactive or proactive measures for the areas at risk, depending on the indicator. Finally, in addition to the critical limits, the target values have to be determined. It is important to ensure a balance between credibility, accessibility, motivation and ambition. It is recommendable to check and adjust the values on a yearly basis. In the course of the identification of dangers, a distinction can be made between the indicators of early and late detection with medium to long-term lead times for the target values [30]. To enable initiation of the appropriate countermeasures, it is important that the sources of the deviations are displayed and that the development of the indices over time is monitored, since only then can trends be foreseen at an early stage [35].

The Sales Scorecard is a tool with which the central success factors of the sales activity on different levels are monitored. This requires a link with the corporate strategy as this also has a direct impact on the direction of the sales department. However, it is not a tool for holistic corporate management [36]. In order to ensure acceptance and success of the mission, it is, nonetheless, of crucial importance to integrate all stakeholders directly in the development. Especially vertical conflicts can be prevented by optimizing the content. For example, company-wide sales targets can be broken down to sales units, sales channels or even to individual customers. In order to increase acceptance on the level of the users, it is important to involve the works council early in the conception. In order to ensure the acceptance and the success not to endanger and on the other hand the coworkers themselves must be integrated with development of the characteristic numbers, since they work with the tool on a daily basis and can determine important parameters in the best way. In addition, it becomes clear that it is primarily about further optimizing of the sales performance and thus the success of each individual rather than controlling of the activity [34].

The expectation of the sales controlling system ranges from long-term customer orientation in line with the current market changes, to operational implementation and strategic control, including the definition of applicable control variables, the development of early warning indicators and a deviation analysis [10].

4.2 Back End

The DWH architecture is created according to the requirements of the implementing company. It is based on the key figures or the data needed to calculate them. The structure is important for future evaluations and relevant to the smooth migration of historical, current and future data. When building the solution, it makes sense to integrate as many components as possible into the back end from the technical side as changes in the structure are easier to implement there than at the front end [24].

It does make sense to outsource the Back End to a DWH server, which is hosted by an external provider. This leads to cost reduction through improved use of the hardware. Another advantage usually is increase in performance as the server structure of professional providers usually allows access to a variety of data sources. For the files of most different formats, there are extensive possibilities of transformation. The metadata are centrally managed and used throughout the company. This allows all users to access the same information without

requiring synchronization. There is a high reuse in the platform based on user permissions and data descriptions. The data must, therefore, be kept relational and multidimensional so that a parallel read in different aggregations is possible. The centralization of the metadata thus has an impact on all areas of the concept. Subsequently, the historical data must be migrated into the new DWH structure [23].

4.3 Dashboard as Front End

For optimal communication with the internal and external customer, visualization of the information must be done with web-based dashboards [2]. This can maximize the benefits of a BI system and minimize or, at best, eliminate the risks, including time and cost issues. Regardless of the structure of sales, employees in a store, on-site, at the customer's home, or on-the-go, according to their roles and rights, can view all the information they need at any time as long as they have an Internet connection. Applications for laptops and smartphones also enhance this service. In addition, DWH data are always up-to-date as changes and entries in the system lead to an immediate update. These framework conditions are the basis for the realization of targeted and cause-appropriate decisions. In a web-based BI system, all the BI functionalities that are required are contained in the form of a total solution. This includes reporting, dashboarding, analytics, self-service, process integration, and upstream data integration. The service starts from a historical perspective and allows you to query historical events and results. Furthermore, the visualization as well as forecasts and developments for the future can be derived from the current business process. Root cause analysis minimizes risk by greatly reducing the time it takes to find irregularities and abnormalities. Each user has an individual dashboard, which in turn consists of predefined elements according to his roles and rights. For the tools, it is important to have a common, consistent operating philosophy that makes the job easier for the user. This creates a high level of acceptance at all hierarchy levels [10].
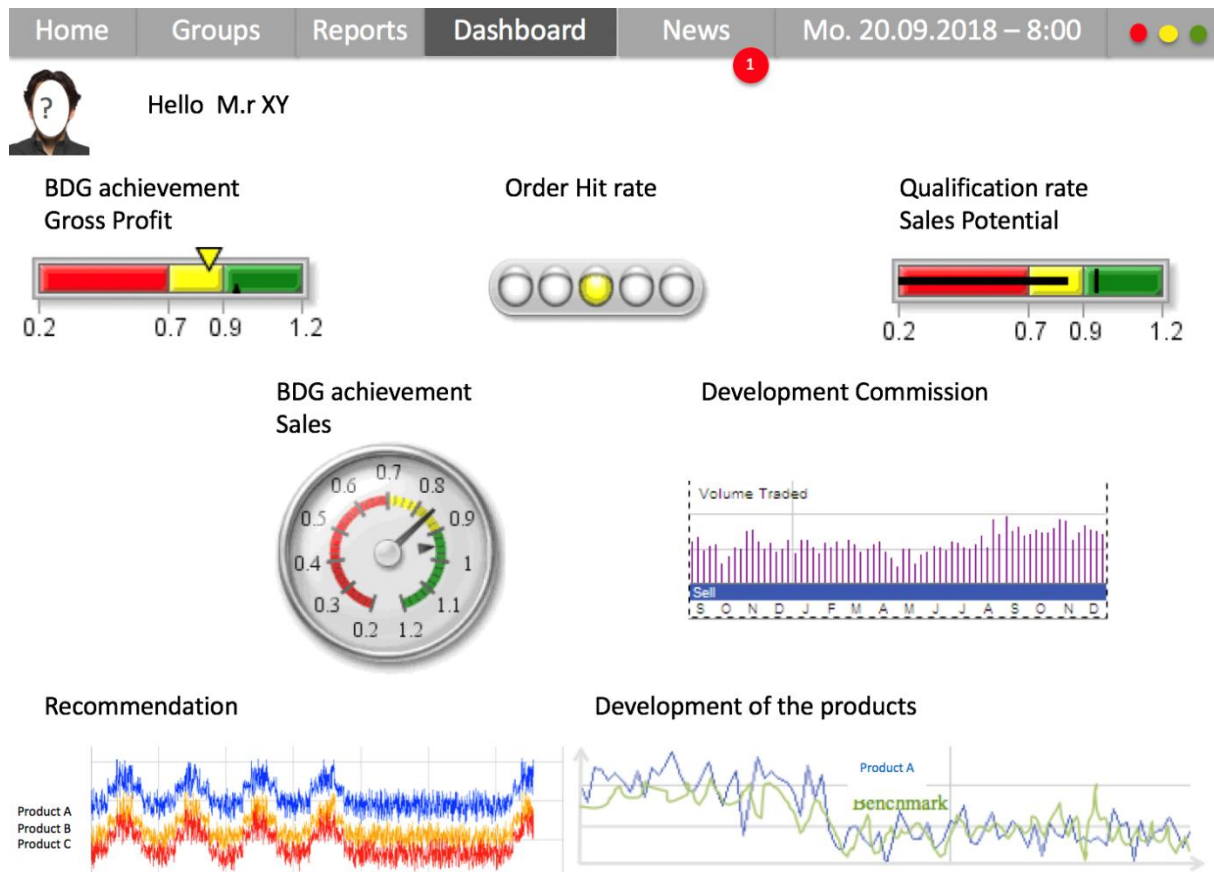
Fig. 2 *Strucutre of the Dashboard*

The data provided will be of benefit to the company only if they are also utilized by the use of tools [37]. In addition to the predefined key figures per level, it is possible to make individual adjustments. The output is in the context of result tables and graphics. They tell you what value each of these metrics currently has, how far away they are from the next critical value, and what size would be the optimal value. They illustrate the current situation. On the central entry page, the individually defined, top strategic targets are presented graphically. The number of parameters should be limited to about five. The user can access the underlying detailed information via a drill-down function from the highest hierarchical level of the various control and business areas. For example, if misconduct of a key figure becomes clear when opening the entry page, the decision maker can go directly to the next lower level by selecting the key figure and receive more detailed information there [38]. Presenting the most important data not only in the tabular form but also graphically provides the opportunity to give a quick overview of the degree of achievement of the tasks to be fulfilled. This results in a high degree of acceptance among the respective process owners as they are supported in their task fulfillment and direct activities can even be initiated from a predefined set of measures [10].

The following is a list of the main advantages of the Dashboard:

Tab. 1 *Added Value through Dashboard*

Performance increase
Constant self-reflection and self-control leads to significant performance improvements and ultimately to a competitive advantage over the competition.
Recognition of correlation and situations as well as their connection.
Mobile access
Access anywhere, anytime via laptop and smartphone.
Time saving
Drill-Down-Function,
No more explicit use of spreadsheets required.

The front-end of the sales controlling system should be designed in such a way that the individually predefined reports appear on the first menu level and access to ad hoc analysis tools is possible after a few menu levels as far as possible. At the forefront is the information about the product as well as the presentation and reporting of the sales success [39].

5 Conclusions

The markets are more and more saturated. The acquisition of new customers is mostly possible in the context of cut competition. Existing customer relationships must be maintained and expanded through individual service. Products must be tailored to the individual needs of each customer, which requires a target group-specific approach. New trends can be detected and included in the product range. Unprofitable customer relationships are not maintained or even deliberately terminated, while profitable contract contacts are promoted and expanded. Offers or refusals of offers by companies are based on specific life situations. By an even more targeted approach and thanks to comprehensive data analysis, the extent of the data load can be reduced. On the way from the product provider to the solution provider, the implementation of a sales controlling system is only the first step [40].

Especially in case of groups that are able to offer their customers all-in-one solutions, a customer-oriented and effective sales organization leads only through professional CRM systems to process all relevant information. This creates a possibility of customer transfer from one product to another. Both the customer data and the product data are stored centrally in the DWH and employees from different sales departments have access to it, which enables an improved customer approach by co-working across the different product lines [35].

In addition, more and more innovative approaches, such as microgeography, can be integrated. Qualification of home addresses, living environment data, socio-demographic data, lifestyle data and regional and communication data for the definition of retail valuations, post-purchase affinity and consumer focus are delightful approaches towards making more effective use of distribution resources. The task of the IT is integrating the data into the DWH, and building more meaningful analysis results represents a huge challenge for the future. It is important to keep an eye on these issues as the quality of the results given by the analysis tools increases many times as the amount of available information increases [35].

The course of customer discussions can be better controlled by a high degree of up-to-date customer, product and market information. Furthermore, customer satisfaction is enhanced by the increasing quality of advice. Thanks to the improved customer approach, it is possible to significantly reduce process throughput times and reduce process costs. In addition, up- and cross-selling activities will be improved and customer churn will be reduced. The introduced sales controlling system ensures a competitive advantage in the market through its consistency as the entire sales area is geared towards the customer. The software is thus a dynamic uni-que-selling proposition of the company [20]. Through data processing that reflects reality, not only proactive sales management but also early risk identification is possible. This is important because risks in the market are not always and inevitably associated with opportunities. A sales controlling system, therefore, also offers the option of integrating a risk management system [35].

The half-life in IT is relatively low compared to other technologies. What still represents the state of the art today may not be up-to-date tomorrow. In addition, not everything that is technically feasible also makes economic sense. But there is no doubt that the BI approach offers companies a great opportunity to use their resources and potential more effectively and to increase their efficiency. However, individual distinguishing features are in the service from the customer's point of view. It is, therefore, advisable to carry out such a project with a partner who, in addition to the business administration knowledge, has the necessary IT know-how. It is important to understand that support can make a difference to successful implementation of such a project. Industries in which industrialization has already progressed have been aware of this fact for some time. The focus is, therefore, increasingly on product development, customer satisfaction and improved quality in the processes. In order to gain the trust of potential customers, it only helps to face them transparently, to explain them the problem but also to deal with their problems in a very special way. Only then can a solution in the desired quality and to the satisfaction of all be available [8].

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