# The evolution of business intelligence

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## Overview of current developments and future trends

Following introduction of business applications in the mid-eighties, reporting and analysis processes have further developed in a number of phases with different core themes. The arrival of the BI concept at the start of the 1990s initially gave rise to a phase of data centralisation, whereas today, optimisation is primarily focussed on data optimisation and process integration. In future, the scope of application areas and the importance of forward-looking analyses will further increase.

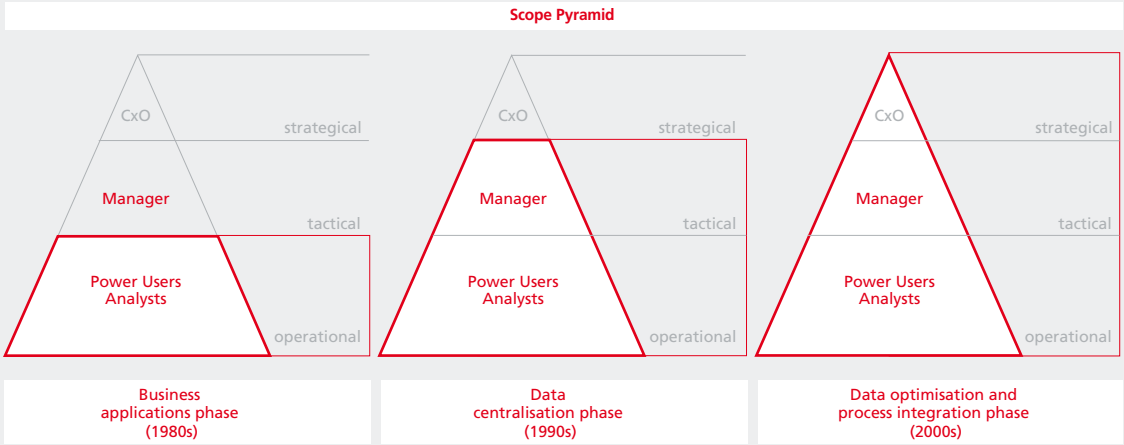
### Business applications phase

In the mid-1980s, the central task of IT departments was focussed on introducing new software solutions for specific business areas: ERP and PPS systems, along with centralised electronic accounting and order processing, whereby each system was equipped with its own data structures and a function capable of producing the notorious printouts on green and white lined continuous-feed paper.

Applications introduced in the various departments were mostly used by the relevantly responsible personnel and only delivered extremely limited and static evaluations due to the fact that adaptation was such a complicated task.

At that time, the challenge for the company management lay in creating a consolidated overview of the status and development of the company from the diverse data stores. This was achieved on the basis of statistical reports that, focussing on operative activities, presented an overall view of the respective business areas, such as sales, production, finances or personnel. Linking the individual areas was extremely long-winded and could only really be effected by highly experienced managers.

Company information generated in such a manner required considerable processing times and enormous manual effort in terms of preparing reports – a situation that still occurs in some companies today. Throughout the 1980s, this gave rise to the desire for a company-wide standard




Today, thanks to the evolution of business intelligence, company data is not only used at an operational or tactical level, but is also being increasingly employed for strategic decisions.

approach based on central parameters and company ratios: production and sales figures, costs, income and much more – which Howard Dresner referred to under the term 'business intelligence'.

## Data centralisation

Then, at the start of the 1990s, came the data centralisation phase. Comprehensive data warehouse and databank consolidation projects were introduced for the purpose of creating a so-called single point of truth within the company, a central point of access for all critical corporate data. In successful cases, analytical tools and management information systems suddenly became available that allowed company-wide access to central information. For the first time, decisions at a tactical level could now be taken on the basis of almost real-time data.

## Data optimisation and process integration

Today, in the decade of data optimisation, in addition to further technological development of the available tools, attention is primarily focussed on data quality and process integration. The enormous flow of data generated by modern companies to facilitate the operative processing of in-house functions needs to be qualitatively organised both prior to and after technical consolidation before it can be used in tactical and strategic decision processes.

The desire for increased process integration of business intelligence systems has also given rise to a new genre of BI tools, namely so-called Business Performance Management (BPM) or Enterprise Performance Management (EPM) systems. Behind this new generic term lies a necessity to expand the 'information highway' – which to date has only travelled in one direction, i.e. from the systems to the decision-makers – by a further possibility allowing the decisions made to be fed back into the BI systems. Filtering out the previous business year's sales figures from corresponding BI systems in order that they can be manually fed into other systems within the scope of planning the next calendar year generates a media break that can be prevented by ensuring appropriate integration.

These days all major BI software manufacturers offer commensurate components within their BI suites to facilitate integrated planning. Thus, through intelligent project implementation and corresponding know-how, the introduction of a BI solution can also cover the sections of planning and consolidation.

The significance of progressive analyses ('predictive business intelligence') will increase considerably in future. Moreover, this will not simply be a question of so-called data mining – in other words, the recognition of patterns in inventory data – but rather will involve support for the decision-making process and the extrapolation of conclusions, practically a further developed trend analysis. This is a process to which the BI providers will afford high priority in terms of research and development in the coming years.

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