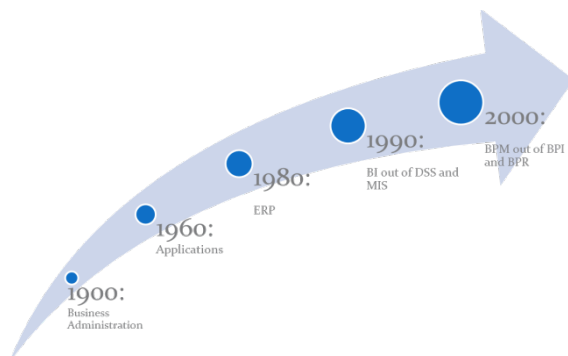


Why integrating process and data seamlessly can give businesses a competitive advantage

As a result of the economic crisis started in the United States in 2008 with the mortgage banks Fannie Mae and Freddy Mac, the financial markets incurred heavy losses in a relatively short time. Soon after hitting the financial markets the crisis was transferred to the real-estate and the automotive world. In a matter of months the whole economy was suffering from a deep economic recession and hasn't recovered fully since.

Although the governments were prepared to help many companies, they announced a lot of sharp rules and compliance procedures to prevent this crisis happening in the future. Companies will be confronted with compliance issues more and more and the board of directors won't be allowed to admit that they didn't know what was happening in detail and that they weren't informed.

Instead they have to be "In control" constantly and be able to make the right decisions at the right moment based on accurate information. This was promised by management gurus from the



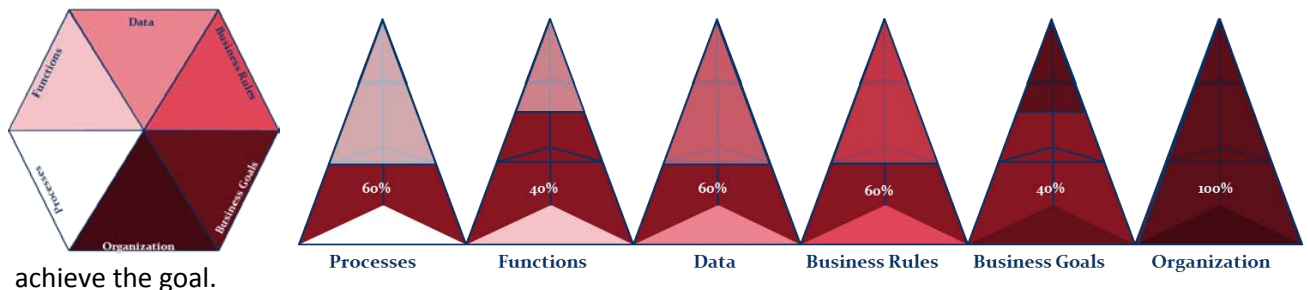
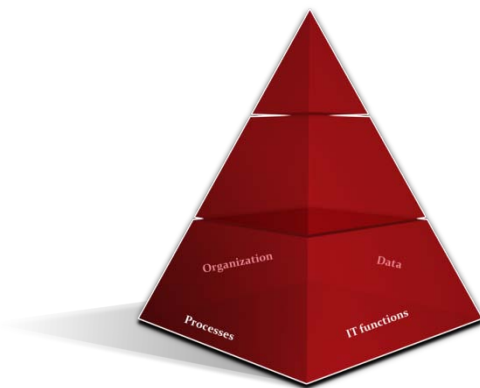
beginning of the 20th century when the Industrialisation began. With the invention of computers more and more powerful, applications were developed that took over the recording of data. Enterprise Resourcing Planning systems made it possible to support a process and record data based on a business process flow. ERP would not easily allow management to have an

understanding of the business performance and sometimes will not contain all data needed for the analysis. Business Intelligence instead is creating information based on data recorded in different source applications, but does not have the focus on the process. Business Process Management is looking at the processes, but hasn't got the BI knowledge to look at the data as well. A lot of the BPM tooling like QPR, ARIS and CaseWise are linking to transactional systems to create a data view in the processes diagrams, but without making use of the BI knowledge available. It seems that the two worlds are living completely separate from each other and both not able to help the business in being "in control".

By modelling all aspects of an organisation in a central environment and arranging the change management process around it, the company will be able to centralise the Business Administration, integrating all Business Process Management and Business Intelligence aspects in a single view. A business change can be analysed up front and all aspects involved will be known in advance. The business stakeholders can initiate changes, and the results for applications, BPM and BI will be initiated as a result of. In this way the business will be in control at all times and the BPM, BI and Application experts will implement changes as a result of their decisions.

Companies look at this central modelling as an enormous challenge, but at this moment a lot of effort is put in modelling, but done in different environments, with different tools, without being able to relate the different models to each other. If all this efforts could be performed in an integrated fashion, companies should be able to achieve this central blueprint of the organisation in no-time. But they should realise it isn't an IT issue, but an objective of business as a whole.

By showing the company as a pyramid, each side will represent a key aspect of the business. Each company has to determine which aspects they think are relevant for their specific business. Looking at TOGAF9, for example we have four segments: Business, Data, Applications and Technology. Within those segments other aspects like process, business goals and organisation are found. Within one side the aspect can be modelled in a hierarchy, from aggregated level at the top to more detailed view to the bottom of the pyramid. Looking from above the pyramid, we can see how the aspects are related to each other. These aspects and their relations will be designed in a Meta model. For each aspect will be determined to which detail this aspect should be modelled, to



For example a company wants to achieve a turnover growth of 10% based on the sales results of last year. To be able to measure this they create the Key Performance Indicator Turnover with the formula: $\sum price * amount$, based on the attributes of the entity Order in their Sales application. The results should be measured against the Sector and the Business Unit of the organisation. For each aspect it is possible to determine until what detail level they should be modelled to achieve the goals set.

The data aspect in particular is a subject that is underestimated by the Business Process Modellers. Therefore the Business Intelligence experts should step in. In the last fifteen years they have been analysing this aspect within businesses. By extracting data from transactional source systems, harmonising the data so it can be compared, applying business rules, so the data becomes information, recognisable by the business owners. Linking this data to the processes will establish the right information at the right process, so process and data aspects will become integrated and available for business people.

Four major items keep companies away from this integrated scenario.

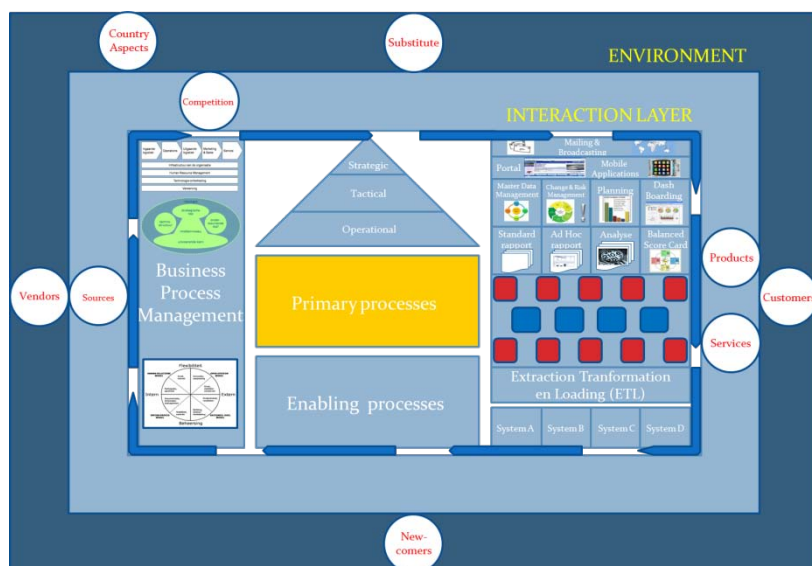
First of all companies are not aware that they are putting a lot of effort in modelling different aspects, in different tooling, consequently relating these aspects will be impossible. This unawareness is one thing, changing this is the second major step.

The whole idea of having a centralised blueprint of an organisation is only possible if the change management process is built around this blueprint. So all changes will be modelled in the blueprint first thus all relevant aspects can be analysed up front. The change can be tested even before actual implementing of the change. In this way all aspects can be initiated to implement the change in a controlled way.

The third major item is the currently available tooling. No tooling that is currently available is capable to allow companies to model all aspects within a centralised blueprint. Especially the data aspect is an underestimated area. BPM and BI should work together to integrate this aspect, thus the major progress can be made by the tooling vendors. By using all the newest technology it will become possible that all the aspects will be automatically implemented whilst creating new models.

When all these major items have been overcome by companies, they still need a framework to control all these aspects. TOGAF9 provides such a platform and is implemented by a lot of companies at this very moment. But the framework should be able to store all aspects in an effective way. This will enable the business to work in the same way that they are used to, but with lots of extra capabilities compared with what they are used to now.

A possible framework to address those issues is in the graphic below.



In this framework the environment is also included as the main goal of most businesses should be to priorities their customers. The blue arrows indicate the change management process around the area that can be controlled by the company itself. In the middle we see the processes of the organisation, primary, enabling processes and guidance processes. Operational: directly guidance

over the processes. Tactical: establish the organisation needed for the organisational goals. Strategic: where should the organisation aim for in the next five years and how do we keep on track. With Business Process Management we should enable all views needed by the business to work on all aspects that are important to keep the organisation transparent and under control. With Business Intelligence the whole information feed of the company should be established.

In summary an integrated approach to process and data is beneficial to companies as it allows for simultaneous modelling and performance and process monitoring however to date there are no supporting tools capable of mapping all aspects. Companies that are though leaders can build competitive advantage is they can direct their efforts in the right direction and at least integrate their BI, BPM and ERP initiatives.