



BLOG

02/11/2015

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Advanced Business Analytics will change how companies do business with IT and Data Analysts finally becoming true Business Catalysts in the Analytics space.

Intro: This Blog underscores the importance that Business Analytics will play on an Enterprise-wide level. The continuation of existing business practices will be increasingly difficult in a “winner takes it all” competitive environment that is powered by disruptive Business Analytics. This post will outline the key areas companies may want to look at as part of their Business Analytics innovation strategy.

Over the last 20 years we have been celebrating the arrival of new BI tools and advances in data warehousing capabilities. These innovations all promised to be easy solutions to three complex problems:

- 1) “Ease of use” of data by anyone in the enterprise, with no or minimal IT involvement required.
- 2) Combination of multiple data sources, without requiring a deep understanding of the underlying data dependencies.
- 3) Ability to finally leverage the Single Version of Truth (SVOT) at an Enterprise level - using one tool, one data source, and no duplication of databases or data sources.

But even with the advent of Advanced Analytics and its march from Google, Facebook and the likes to the mainstream enterprise, it appears that little progress has been made, when measured by adoption. Excel seems to be still the tool of choice for most analysts on “Main Street”, and significant IT involvement is still required to provide information on an enterprise scale. A Single Version of Truth can hardly be created even from a business perspective, let alone from an IT perspective. If we deal with diverse business entities, countries, and cultures most master data efforts could be considered a multi-million dollar failure. In the end, today we still find a duplication of data, requiring the enterprise to re-invent solutions all over the place

without “the left hand knowing what the right hand has already been doing.” The good news however, is that organizations are starting to realize the importance of the Network of Truth, a buffet type of flexible true data entities, in addition to the pre-defined Single Version of Truth.

The diagram below shows how a deployment with sole focus on Single Version of Truth might only provide an analytics adoption rate of 40%-50%; whereas the provision of a Network of Truth capabilities (think about a buffet where you can easily choose what you think you like and go for a second helping if you determine that you made the wrong choice), through real self-service analysis on top of Single Version of Truth, can help you get increase your analytics adoption rate to 50%-70% and thereby increase speed to market while reducing IT dependencies and costs. This shows us how the science of Advanced Analytics is evolving to Business Analytics on “Main Street”, in order to reach all of the different user groups in the organization, with relevant and capable reporting (this blog uses the term broadly to address analytics from dashboards to simple Excel based or lists) tools. When looking at this innovation closely that this also indicates the that enterprise analyst community will need to or is in process to evolve as well, and it appears that this may not be an easy transition for many as the next wave of analysts who were “born with smartphones in their hands” arrive at “Main Street”. It is our opinion that the new generation of analysts will be able to use data in ways current data analysts may fail to see today. Some may call this an evolution from “Analysis to Data Science”, but in our opinion this evolution is more a change in how to apply analysis skills using sophisticated tools coupled with the addition of Data Scientists who use advanced mathematical and data science skills that help enterprises to find the competitive advantage in their data assets. This blog also touches briefly on the technology that allows enterprises to leapfrog ahead at competitive costs.

Our core idea is “Data Hoarding” treating data as market share and stores all relevant enterprise information in a “data pool” or “data lake”. Having all internal and external data available for data scientists allows them to cross-functionally uncover truth that many never thought existed. They will eventually enable the creation of fully automated data mining solutions that function as a “radar” to identify opportunities ahead and help predict events that help enterprise to shape future business outcomes before they occur by taking advantage of analytical studies.

	Business Analytics Adoption %	Pre-defined, Canned solutions	Self-Service against Canned solutions	Self-service / Predictions against Data Lake
Target	100%			
	90%			
	80%			
	70%			
	60%			
Historical	50%			
	40%			
	30%			
	20%			
	10%			
	0%			

We agree that this all sounds all too good to be true, however if we ground ourselves in our experience of deploying BI alongside ERP platforms and implementations we believe that we can take advantage of Business Analytics by looking at combined organizational, process and governance approach.

Organization, both IT and Business, have been trying to get an ROI of BI solutions and tools through IT budget approaches and strict processes that are closely tight to their ERP governances and IT center of excellence structures that provide services to the enterprise. At the same time over the last few years, nimble approaches towards leveraging large amounts of data with new ideas to use information competitively have emerged with tremendously positive results albeit on a departmental level. We consider this innovation “Business Analytics” and we would like to offer an approach that could help companies scale the science of Advanced Analytics to Business Analytics on an enterprise level.

It is common knowledge that today organizations are struggling integrating institutional knowledge that resides in business departments and IT organizations. On one hand, we have nimble but disconnected departments that try to make sense of their data in order to get a competitive advantage and on the other hand, we have very structured IT-centric BI organizations that produce very good operational reports, guided analysis, and dashboards at a very high cost both in terms of time and dollars. From our perspective, Business Analytics requires that internal and external data becomes fully integrated information across all functions/processes of the enterprise, to achieve the vision of operational excellence and innovation at high speed but with reasonable costs. The foundation of our thinking is to create an enterprise “data lake” that stores all internal and external data relevant to the enterprise, and if possible, get

exclusivity of the data by treating it as market share using the motto: the more data the better; exclusiveness as competitive advantage. This approach is possible through cheap storage technologies such as a Hadoop infrastructure and advanced in-memory platforms like SAP HANA (including the underestimated SAP BW on HANA), coupled with strong visualization tools like Business Objects that provide capabilities that leverage the data in flexible use-case depended ways. This approach elevates an enterprise to mature from analysis to prediction, from graphs, lists, interactive dashboards, to storyboards and intuitive visualizations that truly enable trustworthy decision making at any time, from any place by using any device.

However to truly operationalize Business Analytics, enterprises may have to think about new organizational structures that finally deliver on the promise of “information at your fingertips”. We like to think about a three-layered organizational concept that each is “fit for purpose” and are governed by different yet connected rules to allow them to achieve their respective objectives to enable Business Analytics.

1. **The “Data Analyst and Innovation” layer.** This group has an open license to thrill (if we can use a sport analogy) - and attempts to make sense of information (find the “unknown known” in hidden institutional knowledge). They play around with information to find new approaches to problems, opportunities to innovate and conduct analytical studies. As a result they provide the specifications for new repeatable and automated BI solutions, disposable analytical applications, and identify area of business opportunities. The members of this organizational layer are a mix of business experts, data scientists, and innovation IT specialists who operate fast and nimble and are only bound by loose governance. The key point to consider is that this group should never be limited and shackled by requirements collection processes and project scope. We do appreciate the fact that there should be some level of governance (think Wikipedia), but we believe there is a point of diminishing return, where too much governance will limit the potential of pure play in Data Lakes. While we have huge respect for requirements collection processes, it is important to note that this process belongs to Single Version of Truth / pre-defined solutions, not Network of Truth solutions nor true ad hoc and self-service analysis. How often have we done requirements collection, followed by design and build, and then produce solutions months later, only to find the need has already changed? Almost by design, by the time the solution is built, users have a different need, as they have been exposed to even more data and additional ad hoc needs. Therefore, Single Version of Truth / pre-defined solutions that are based on quality user requirements should only address some of the organizational needs for operational excellence, as well as all regulatory and statutory needs. SVOT is not the driver here. These Data Lakes will also be the source for Automated Analytics – the automation of large scale analytical decision-making, as well as Predictive Analytics. We would charter the organization with the motto: **Speed over accuracy; fast insight over repeatability. Limited Governance.** Using the Healthcare industry as an example, this is where we see significant ad hoc efforts to relate a large number of fields to a patient ID. Predictive Analysis will

also happen in this layer.

2. **The “IT” layer** is the engine that leverages the specifications that are being provided by the “Data Analyst” organization and builds “industrial strength” analytical solutions that provide accurate, repeatable solutions for the day to day decision making process that is required to run the business with operational excellence. These analytical solutions are built for purpose and pertinent to specifically defined and repeatable users’ needs. The new approach is agile compared to most approached that are waterfall oriented and tied to ERP implementations. In the old waterfall approach designs were often based on legacy non data-centric business processes and required, in many cases, significant costly rework. Using the newly more agile approach that leverages the “Data Analyst & Innovation” organization requirements that are based on resolutions and are therefore immediately applicable. In addition, the new SAP HANA and BusinessObjects platforms allow for simplified development that can cost effectively be changed even in an extremely dynamic business and IT environment when used with our proposed organizational approach. Flexible or agile governance is required to ensure correctness and avoid redundancies. This group’s charter is: **Operational excellence over personalization; speed over complexity. Moderate Governance.**

3. **The “Consumer” layer** is the group of people that leverage the standard solutions available to them to operate their respective part of the enterprise. They also use the ideas of the “Data Analyst & Innovation” organizational layer and apply their innovative out-of-the-box findings to their individual business opportunities to assemble for their own use guided analytics that ensures correct interpretation of results. In addition the Consumer Organization layer will take advantage of self-service areas (one could call them also supervised playgrounds) where users may create ad-hoc analytics based on their particular business question or opportunity of the day, combining standard solutions, Data Analyst’s insight, analytical studies and their own data to draw insights and conclusions that were previously not apparent. In the process of doing so finding the “Unknown Known” and discovering the newly “Known Unknown” which in turn be cycled back to the Data Analyst and Innovation organizational layer to conduct analytical studies and/or define new analytical solution that can be deployed to increase operational excellence. This group’s charter is: **Consume information over re-creation of solution; Personalized insight vs. limitation due to over-standardization. Strong Governance.** Using the Healthcare industry as an example, this is where we see Meaningful Use reporting, or Hospital Billing, Length of Stay analysis occurring

We believe that while each company’s DNA is different, we feel confident that using our ideas for Business Analytics may provide a blueprint for scaling today’s departmental analytics solutions to the entire enterprise, and will help companies to gain an information driven competitive advantage in this “winner takes it all” business environment. The explosion of data leads to an eventual explosion of

information needs, therefore organizations must find ways to scale their abilities to meet these demands.

We realize that companies may have to “organizationally innovate” as they move into the new Business Analytics org-structures we propose. This may include reinventing employees, as roles will be re-defined. This is not an easy task but vital for taking full advantage of Business Analytics. At the same time, it may be difficult to detach new, more agile, Business Analytics governances from the tried and trusted ERP governances. Even so it may feel risky to introduce new Business Analytics governance models, in our mind we think that the opposite is true. You may in fact significantly reduce solution time-to-market at higher quality.

By applying the new governances and organizational framework you will be in the position to fully leverage the power of the new Advanced Analytics technology and thereby reduce the risk of merely having bought a new BI toy.