

# What's on the BI management agenda?

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## Introduction

“How will companies create business benefits from business intelligence (BI) investments in the foreseeable future?” This was the central question in a research project conducted by Vlerick Management School, in association with SAS Institute and Enqio. By means of two separate focus group sessions, Vlerick researchers sounded out Chief Information Officers (CIOs) and BI Managers

Vlerick chose to conduct this piece of research by organising two **clinical focus groups**. This methodology offers the advantage to probe deeper into subjects which cannot be delineated crisply a-priori. The clinical focus group is a specific type of focus group. It aims to stimulate a self-sustaining interaction between the different participants. The facilitator is not part of the group. Rather, he observes and encourages the participants to contribute new themes to the group discussion.

Focus groups typically go through **six phases**: introduction, pre-focus, task orientation, focus, synthesis and debriefing. The facilitator presents himself during the introduction phase. He elaborates on his exact role during the session. The participants introduce themselves to each other and get some information on the general purpose of the research. During the pre-focus stage, participants are informed more specifically about the process of the session, the specific questions, and its goals. The task orientation phase kicks-off when the facilitator presents the group with some very specific questions. Throughout the focus stage, he will try to keep the discussion lively for each question. This is stage takes up most of the time available. The discussion rounds close with a synthesis phase in which each participant summarizes his/her own conclusions. The facilitator can choose to close the focus group session with an additional debriefing on the contribution of the session to the research.

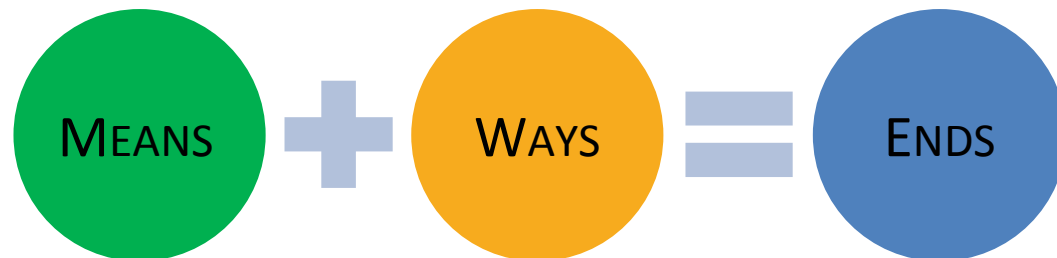
The approach and questions posed were the same for both focus group sessions. Each session lasted for about 90 minutes. All participants were practitioners. There were no participants present from professional service providers or software vendors.

from various industries about the future of value creation from BI. Box 1 provides more details on the method applied.

We approached the topic of benefits realisation from BI with a systems view consisting of three sub-themes: (1) the business objectives for BI, *the ends*; (2) the technical *means* of BI, (3) the *ways* to maximize value creation from BI investments (Ward & Peppard, 2004). Box 2

**Box 1 - The clinical focus group (Kehoe & Lindgren, 2003)** offers more detail on the content of each sub-theme. This article is structured according to this model to distinguish between the main conclusions for each part of the benefits realization chain.

The model used to structure our focus group research is based on Peppard and Ward (2004). It encompasses a **systems view on value realisation** from IT investments specifically geared towards uncovering how **the use of the IT investment** will lead to value creation. Like most systems views, the benefits realisation chain is built up of inputs (the technical means), a transformation (the ways of using the technology), and the outputs (the business objectives or ends). For an investment decisions, it is best practice to start with identifying the ends or the business ambition of an investment, rather than to start looking at solutions. By doing so, one can avoid the pitfall of looking at the investment as a technical investment rather than a business investment.



**THE ENDS:** These are the **business objectives** associated with the use of an IT investment. Why does the team, department or enterprise want to invest in introducing the use of IT into the organisation? What is the link with strategic objectives? And how are they cascaded downwards into tactical and operational business benefits?

**THE MEANS:** These are the **functional and non-functional requirements** of the IT required to realize the ends. Here it is important to distinguish the essential elements from the nice-to-have functionalities.

**THE WAYS:** This part of the chain is concerned with the **processes, organisation, management and work** that will enable the use of IT. What would the desired use of IT by the organization look like in operational terms? What organisation and management initiatives will be needed to support the desired use of IT?

Box 2 – Benefits realisation chain (Ward & Peppard, 2004)

## The Ends on the BI Agenda

All participants, both the CIOs and BI managers, confirmed that the demand side of BI (e.g. people in marketing, finance, strategy, or operations) was still very enthused about the promise of using BI to improve their performance. Of course, the specific needs of the participants varied across industries.

The participants from the financial services, telecom, and pharmaceutical industries remained confident about using profiling techniques to address customers for cross-selling, up-selling and churn management. They still aimed to further refine the granularity of their insight into individual customers' preferences. Furthermore, CIOs and BI managers from the public sector and financial industries showed a lot of interest in further applying advanced analytical techniques to counter fraudulent and other criminal behaviour.

Many participants were also considering the use of analytics to optimize business processes while they are running. A CIO from the aerospace industry stated: "We are constantly trying to tighten our prediction horizons to really steer different processes and decisions." Interestingly though, some participants were rather apprehensive that too much of an operational focus might risk worsening divisional discrepancies in metrics, data sources, semantics, and the like.

In essence, these participants feared ending up with a collection of locally optimized deployments of the organisation's information resources. Rather, they strongly believed that any growth in BI investments should tie into an overall enterprise-wide vision of steering the business processes in alignment with the organisation's goals and vision, i.e. good enterprise management (Viaene & Willems, 2004). Some CIOs even went quite far in convictions about the need for integrated, interoperable BI capabilities. They believed it might even alleviate the information asymmetries between departments, organisations and governments which led to the crisis of the past years.

### Key ambitions

- The ability to approach customers as individuals
- Increase deployment of analytics for anti-fraud
- Operationalisation of BI to optimize business processes "in vivo"
- Integration of BI efforts with enterprise management
- Alleviation of inter-organisational and inter-governmental information asymmetries

## The Means on the BI Agenda

The participants were asked to consider the impact of their ambitions on future technical priorities. Quite quickly it became clear that data quality and integration issues elicited most of the discussion. Large parts of the data needed to fulfil decision makers' information needs was still spread across databases and operational systems. Our participants confirmed that, in the past years, a lot of effort had already been put into reducing data related concerns. Nonetheless, in the current situation they were not overconfident about whether their current levels of maturity are enough to realise the high-aimed objectives mentioned earlier. Is it then finally time to "make the final big push" in data-integration?

Apparently, there are still many hurdles to be taken in the coming years. The main problem appears to be convincing the demand side business people of the value of data integration initiatives. Some participants voiced their frustration with finding somebody willing to pay for the initiatives. It is very hard to make an ROI for such a programme. Our participants were considering ways of bypassing this issue.

First, the erstwhile Walhalla picture of the single data warehouse is rapidly losing its charm. Our participants were considering technologies that could allow them to incrementally build a single version of the truth, or let them exploit a federated system of data stores. Second, they were looking into analytical applications that could provide good enough results without requiring to high levels of data integration.

Aside from these data-related issues, our participants were also continuously on the lookout for simplifying the other layers of the BI technology stack, e.g. the analytical tools and the front-end platforms. The key word here was adjusting the complexity of the environment to the degree of sophistication of the information needs. By cutting out the fat in commodity BI, they hoped for more room to take investments in advanced analytical capabilities seriously.

### Key technical agenda

- Federated data integration
- BI solutions requiring lower grade data integration and data quality
- Harmonized commodity BI offering making room for experimentation with more advanced analytics

## The Ways of Realizing the BI Agenda

Having discussed the ambitions and technological agenda for BI management, the participants were finally asked to consider how they were actually going to make it happen. How were they going to constructively engage their demand side to help them realize all this? *BI governance*, i.e. agreeing on a division of roles and responsibilities to ensure sustainable value creation from the BI investments, became the hot topic during both group sessions.

It was noted many times that BI governance, like all governance, required a careful balancing act. On the one hand, the supply side wanted to be forthcoming and proactive in fulfilling the individual or functional wishes of the demand side. On the other hand, to come even close to realizing their ambitious BI agendas, they would need to engage the demand side into a tight partnership to act as *co-keepers of the enterprise*, rather than functional optimizers.

One CIO from the public sector gave the following example: “We realized that by delivering reports and analyses based on bad or incomplete data we were only hurting our own reputation. We don’t stand for this anymore. Nowadays, I tell my people to refuse executing certain requests if they cannot guarantee the appropriate quality and enterprise-wide reuse. Once the demand side understands the limits of the existing infrastructure, they will find the money to pay for improving it, or they lower their expectations. Of course I expect my people to not simply say no but to actively find ways out. Otherwise we would have a major risk with the demand side then going into shadow mode”.

Indeed, *shadow BI systems* were mentioned as the most common negative consequence of having unbalanced BI governance. These were BI systems beyond the reach of the central supply side’s sight or jurisdiction, being created exclusively by the demand side, often with help from external suppliers. Such systems came into existence when poor engagement between the demand and supply side had given rise to a lack of knowledge at the demand side about the BI capabilities centrally available to them, and/or a low esteem for the central supply side’s competencies due to past experiences with BI initiatives.

Many risks associated with shadow systems were mentioned. The systems might be fed with poor quality data, thus potentially leading to ill-informed decision making. Also, cases were mentioned of shadow systems that drew data from locally stored data on servers under their desks, on external USB-hard drives, or even being transferred by DVDs. It was clear to all how such situations might have potentially disastrous outcomes in terms of security and privacy of company and customer information.

An important step in improving the engagement patterns between the demand and supply side of BI, according to many of the participating CIOs and BI managers, was to refrain from treating all

requests for BI in the same way. Many of them were investigating how they could set up a form of *triage* which might help them separate different kinds of BI requests at the very beginning of BI requests life. For example, one might distinguish between the commodity BI requests, the infrastructure-heavy BI requests, and the more innovative BI requests. Such a system could help the supply side cut away costs by standardising the commodity BI infrastructure and moving to self-service models for certain basic requests.

This triage could also impact the kind of project management requirements applied to a particular request. Some participants mentioned limiting the application of heavily scrutinized project management approaches only to requests with a high infrastructure impact. The freed up resources will then allow the more innovative BI requests to get the resources and management attention they require.

As a last point on the “ways”-agenda, many participants underscored that benefits realization from BI can only come out of the use of the technology in the system. At that point in the discussions, the idea of business process management (BPM) came up as a possible common language between the demand and supply side. BPM refers to a collection of management philosophies and techniques that business managers adopt to visualize, organise, control and steer how value is created throughout the enterprise (Harmon, 2003).

By tying BI requests into the realm of BPM, the question of use of the information product can come under consideration quite early in the project lifecycle. Also, process changes or improvements could provide a good basis for evaluating and configuring the value that can be derived from a particular information product after project delivery.

### Key engagement points

- BI governance is a balancing act between being forthcoming and being keeper of the enterprise.
- Shadow systems are a symptom not a problem.
- Are BI project delivery approaches too heavy?
- Do all BI requests need to be treated in the same way?
- Investigate whether BPM can help to maximize benefits realization.

## Conclusion

In this article we have synthesized what our participating CIOs and BI managers had on their minds when considering the future of value creation from BI. Continuing BI investments is still high on the agenda of the demand and supply side. However, our CIOs and BI managers had to admit that this would require overcoming considerable hurdles in areas such as data quality and data integration. Nevertheless, regardless of all high analytical ambitions and technical challenges, it was the main conclusion from the focus groups that the main pitfalls will lay in the ways of incorporating the use of BI into the enterprise-wide processes of the organisation.

Once the enterprise level comes into play, any investment in technical or human BI capabilities will have to be met with an appropriate effort in fine-tuning BI governance. Demand and supply side of BI will have to find ways of working together as both opportunists and innovators, but also as co-

keepers of the enterprise. Key ways of getting there have been suggested to be situational project management and connecting the BI portfolio to other enterprise management efforts, such as BPM.

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## References

Harmon, P. (2003). Business process change. A manager's guide to improving, redesigning, and automating processes. *Morgan Kaufmann Publishers*.

Kehoe, W.J. & Lindgren, J.H.Jr. (2003). Focus groups in global marketing: Concept, methodology and implications. *Marketing Management Journal*.

Peppard, J. & Ward, J. (2004). Beyond strategic IS: Towards an IS capability. *Journal of Strategic Information Systems*, 13(2), 167-194.

Viaene, S. & Willems, J. (2006). Corporate Performance Management: Meer dan dashboards en scorecards. *Accountancy en Bedrijfskunde Maandschrift*. 26 (5), 24 -35.