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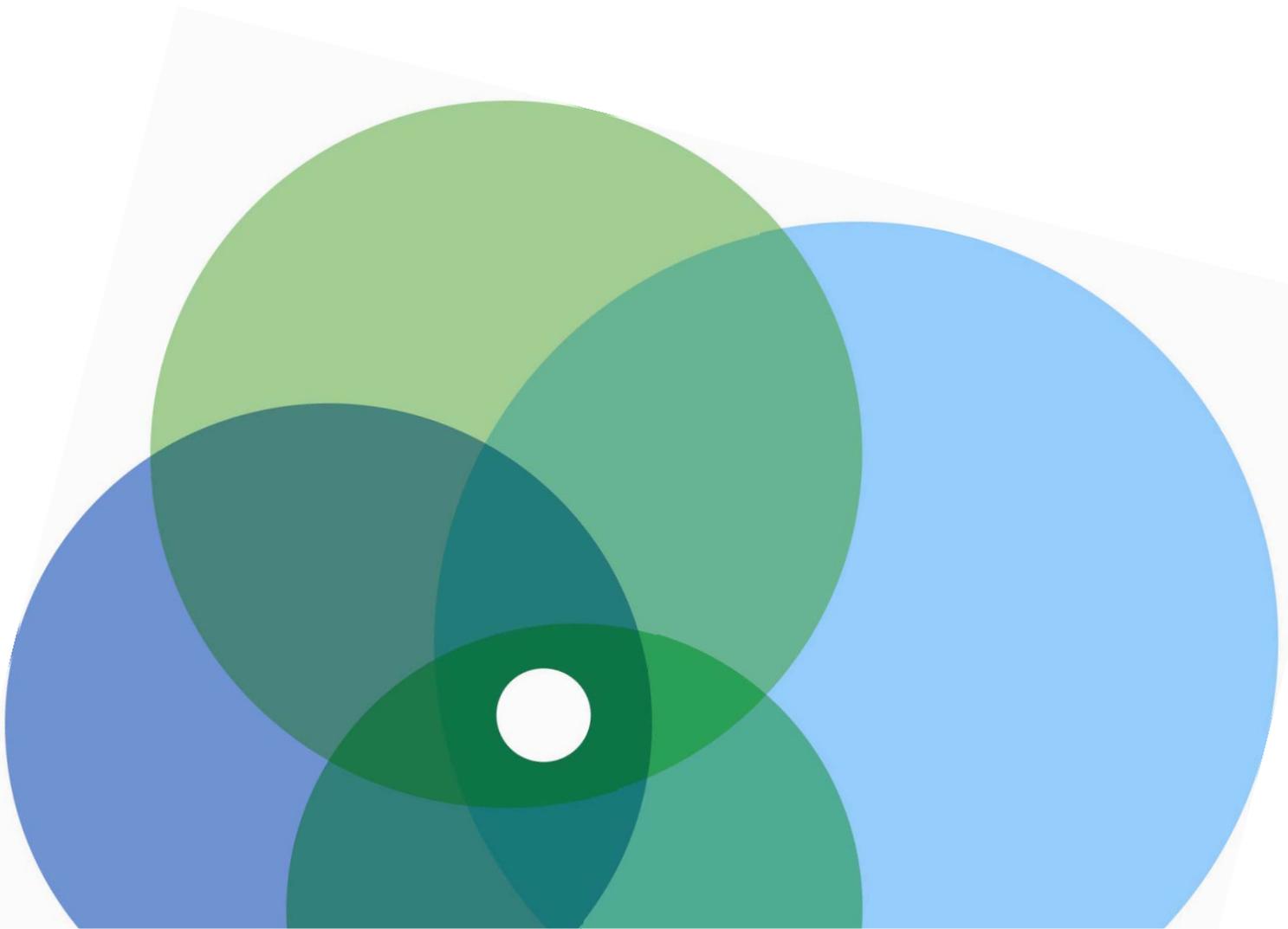
White Paper

Transform your organisation into an information driven enterprise
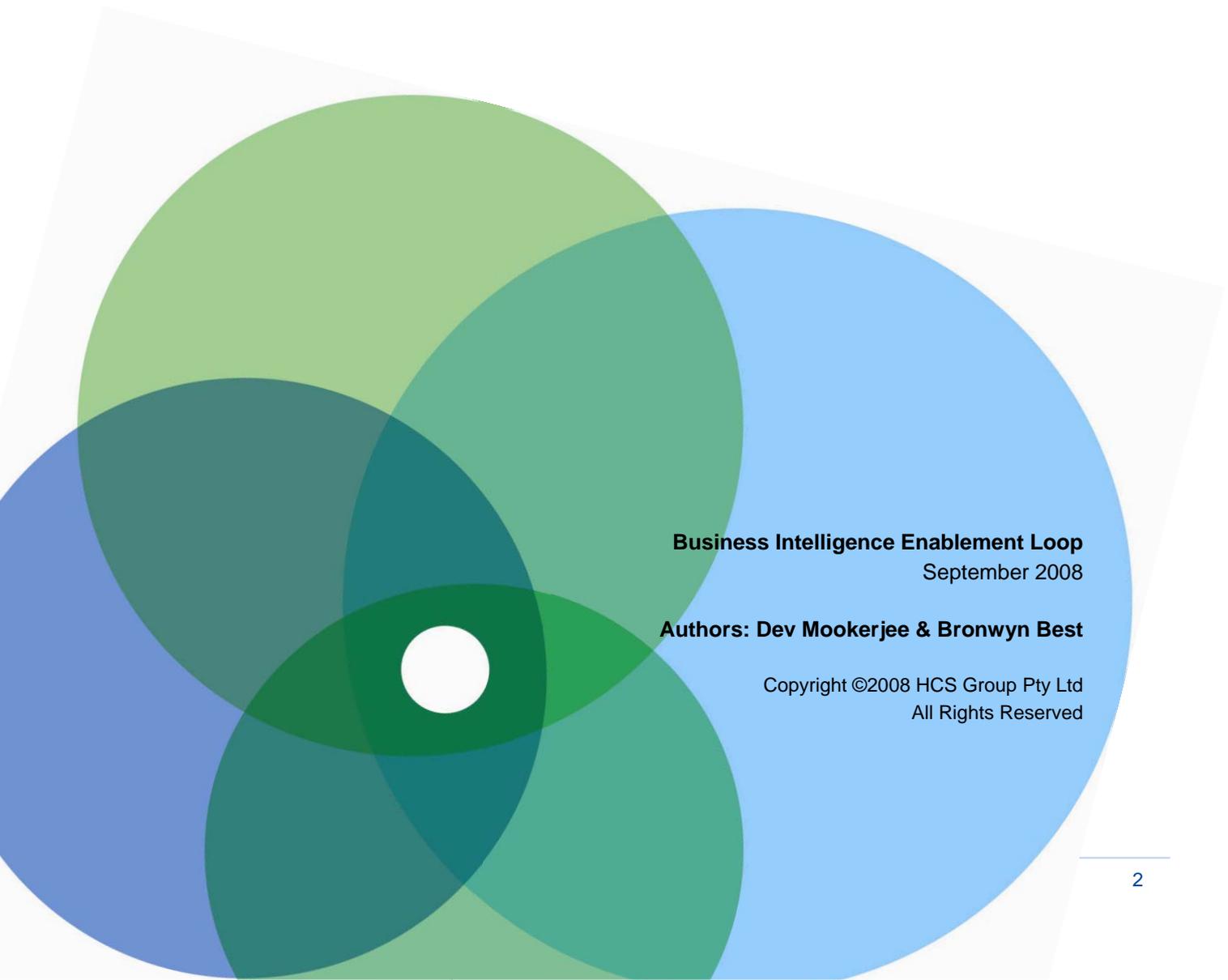
The Business Intelligence Enablement Loop

Abstract

With global information doubling every three years, we have more information available to us than ever before. Yet, it is a rare spectacle in efficacy when a stakeholder in an organisation can get the exact information required at a point of time. While the scale of information growth poses an enormous opportunity to organisations across the world, it is also an intimidating phenomenon for many key stakeholders within it.

A well implemented Business Intelligence (BI) Technology Solution can help organisations gain access to relevant answers in real-time. This empowers key stakeholders to be able to make the right decisions, resulting in increased potential for revenue generation while reducing overall costs.

The BI Enablement Loop is a five stage iterative process that forms a framework

Business Intelligence Enablement Loop
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Background

It was in his 1970 book *Future Shock* that Alvin Toffler first coined the term "Information Overload"[i]. Almost four decades since the book was published, today we are in a world where the phrase has more meaning than ever before. We are inundated with information in various forms and it is supplied to us in more ways than Alvin Toffler perhaps would have possibly imagined.

Global Information grows at a rate of 30% annually. **This means the amount of information available to us doubles in just over three years!** [ii] While this statement borders on an oppressive threat to many manager's sense of calm, it is a fantastic opportunity for people and organisations that can collect the information and channel it in relevant and meaningful ways.

With information bombarding us from various channels, another modern symptom is *interruptions in the workplace.* Interruptions include incoming e-mail messages, RSS feed alerts, SMS', and instant messaging - all of which break mental focus, and redirect it to the source of the interruption. The person has to deal with the interruption, and then redirect their attention back to the original task. In 2007, research firm "Basex" calculated the cost of unnecessary interruptions and related recovery time at "$650 billion" per annum in the U.S. alone [iii].

With technology advancements enabling us to be increasingly connected, we are moving into a world of ever increasing interruptions. Perhaps the next generation of workers will consider it the norm to be "plugged-in" to the information overload at all times – however, the challenge remains to be able to achieve high levels of efficiency. Systems that provide us with information need to be able to support us in a way that allows us to deal with increasing interruptions.

The above discussion brings out the following key aspects of the current information management environment:

- Information is growing at an alarmingly high rate

- Businesses need to be able to store, consolidate and access the information in relevant ways

- Information needs to be accessed in a reliable and relevant manner to ensure minimal post analysis by individuals

We work with increasingly complex information systems. It is hard enough keeping track of all the information we create and document ourselves, let alone access the relevant information from everywhere else. **Systems need to be put into place that provide the most accurate, topical and current information to us when we need it.**

While the statement above is easily said, implementing it at an enterprise level in today's organisations can get rather complex. Apart from the myriad technologies creating, storing and supplying the information to us, the part that is often overlooked is the human factor of information management.

People are key providers in every step of the information management system. We create information, analyse information, consume information and make decisions based on information provided to us. This is across every step of the business. Human interaction also results in added complexity to information management. Modern issues like data stewardship and ownership, litigations against and for freedom of information, project management of large scale implementations (and delays in them), all bring about the fluid nature of the human aspects of business information.

Modern Business Intelligence (BI) solutions have been successfully used to help streamline this process of information management. The core idea of BI technologies is to consolidate all available data across a business into a reliable data warehouse, from which information can be accessed for query and reporting purposes to facilitate business decision making.

The *Business Intelligence Enablement Loop* is a practical approach to the use of BI Solutions in business that allows us to use relevant information in a sustainable and self-improving method to drive us to optimise our business processes everyday.

The BI enablement Loop

The father of modern quality management, Dr. W Edwards Demming, developed a four step cycle to maintain and improve process quality. This PDSA cycle (also known as the Shewhart cycle), is a continuous four step process of **P**lan, **D**o, **S**tudy, and **A**ct. While the conceptual roots of the PDSA goes way back to 1620 [iv], its use in modern management is undeniable.

The fundamental benefit behind the process is its iterative nature as this removes discrepancies and takes us closer to the goal of the perfect operation.

Applying the PDSA cycle to modern management, the Business Intelligence (BI) Enablement loop is an iterative five stage organisational management process which addresses the use of BI technologies in our organisations to take us closer to a perfect business operation. It optimises the manner in which information is used within our organisations enabling us to be nimble in our day-to-day decision making while always remaining on track towards reaching our overall planned vision.

The five stages of the BI Enablement Loop are:

- Set Direction

- Set Strategy and Measures
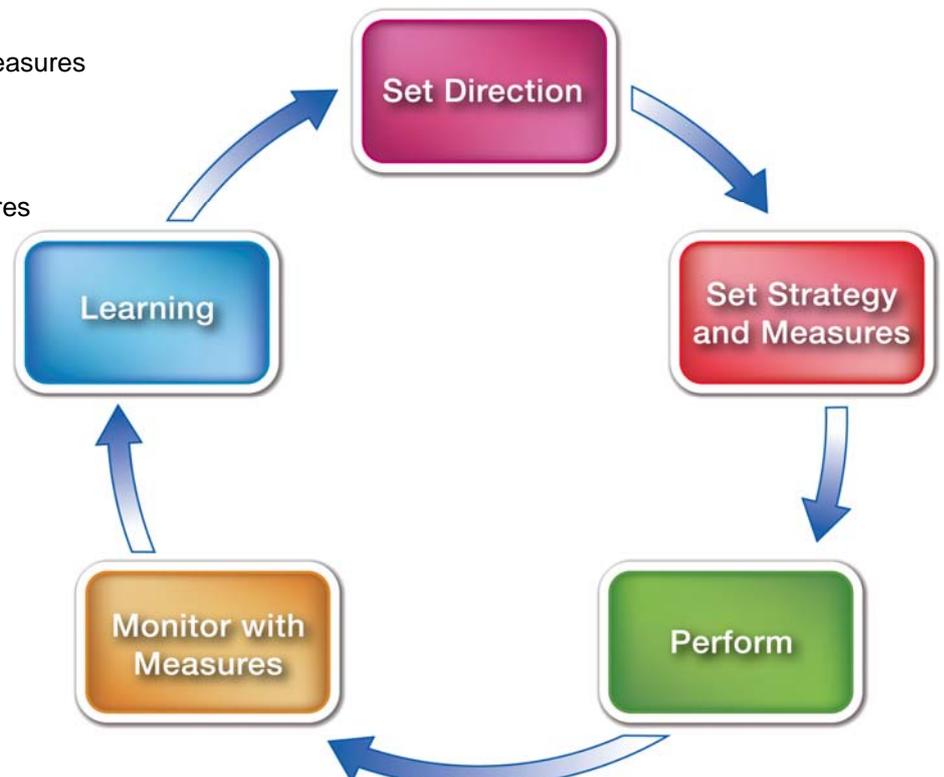
- Perform

- Monitor with Measures

- Learning

Figure 1: The BI Enablement Loop

Stage 1   Set Direction

Setting the Direction is the most important stage of the BI Enablement Loop. The directions set at this stage dictate the future of the business.

With the correct implementation of a BI system, managers can get a complete 360° view of the organisation. Internally, managers can access data beyond financial information to get a holistic view of the business performance.

In an HR context, ageing within the work population is a present challenge for many Australian companies. Beyond simply identifying an overall shortfall in staff, a BI system can identify projected shortages by occupational group, projected surpluses by occupational groups and perhaps forecast job role changes.

With access to a rich set of analytics, an organisation could accurately measure, monitor and predict the effect of an aging work force. Consider the following:

- Measurement of the financial impact of retirees and the cost of acquiring replacements.

- Accurately determine which level and at what salary open positions from retirees should be filled.

- Create acquisition, training and succession plans that take into account demographic realities and trends.

This overall approach to planning allows us to think beyond the immediate issues represented by purely financial metrics, and gives us an opportunity to base our plans on a sustainable holistic business approach.
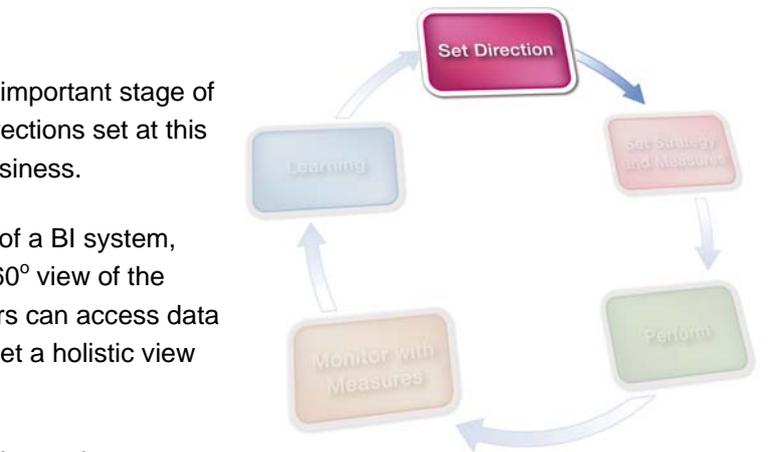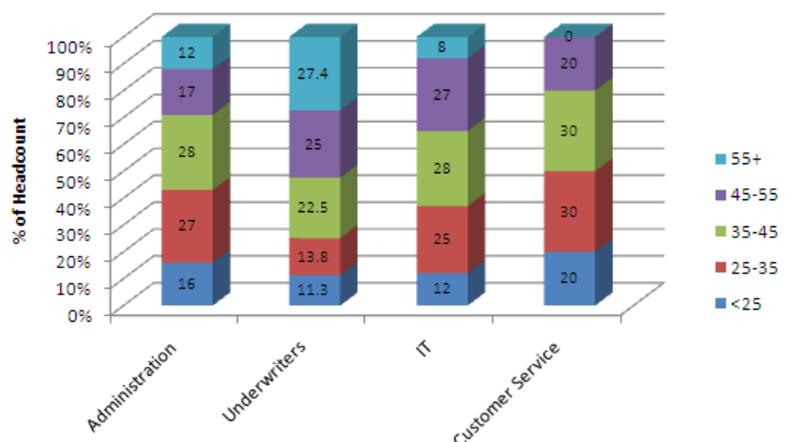

Figure 2: Example of typical information used in this early planning stage.

Along with the information available internally, BI Solutions can analyse external data including market information, government provided statistics and external financial information available. This takes our planning to a whole new level and allows us to pre-empt potential market opportunities and threats.

The use of a well implemented (and well used) BI system at a planning stage lowers the risks as we lock in the overall vision for the organisation.

Stage 2   Set Strategy and Measures

"If you don't know where you are going, any road will take you there"

Once we have our overall direction of the business, and where it wants to get to, setting the strategy and measures allows us to decide which road will take us there.

The old adage of: "You cannot manage what you do not measure" is often quoted and yet typically forgotten in management. Its spirit forms the backbone to the successful implementation of any good business performance management system. To allow us to keep the business on track and manage each aspect effectively, accurate measurement metrics need to be set up to ensure the right activities are being measured in the right way.
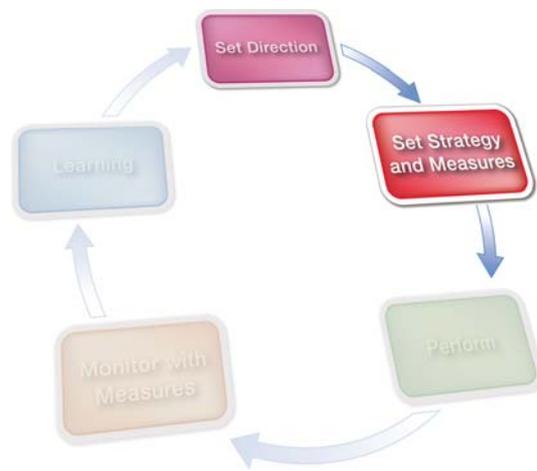
It is essential to the overall performance of any enterprise that performance measurements that are set are absolutely clear. Peter Druker's SMART (Specific, Measureable, Actionable, Reliable, Time Bound) [v] guideline for performance measures have become a rule of thumb for modern management performance measures. While SMART provides an excellent framework for setting the right Performance Indicators, BI Solutions completes the vision. The SMART-er the measures are, the easier it is for them to be reported on, communicated and followed.

Keeping our original *Direction* in mind, we need to implement performance measures across the organisation to help us monitor each strategic initiative. This formal performance management framework needs to incorporate all quantitative and abstract measures of true importance to the enterprise. Methodologies like the Balanced Scorecard [vi] are used in many organisations today to set the performance framework.

During this stage, managers need to input all the initiatives, measures and related details into the enterprise BI system. Once entered and set up, the information system will allow the managers to concentrate on regular operational decision making.

At this point it is important to recognise that a strategy is not a collection of KPIs. Often organisations are absorbed in the operational aspect of the business. Functional KPIs are easy to implement, yet if they are not aligned to the overall organisational direction, it becomes an overhead and potentially a distraction (however well-meaning).

To ensure alignment, the *Direction Phase* always comes before the *Strategy Phase*. Only when the direction is set, can functional strategic initiatives and measure be set.

Once set, we are now ready to perform our day to day activities at an optimal level, knowing well that we will always be able to rely on the reporting environment already set up to keep us from going off track.

Figure 3 & 4: Examples of Performance Status with Benchmarking
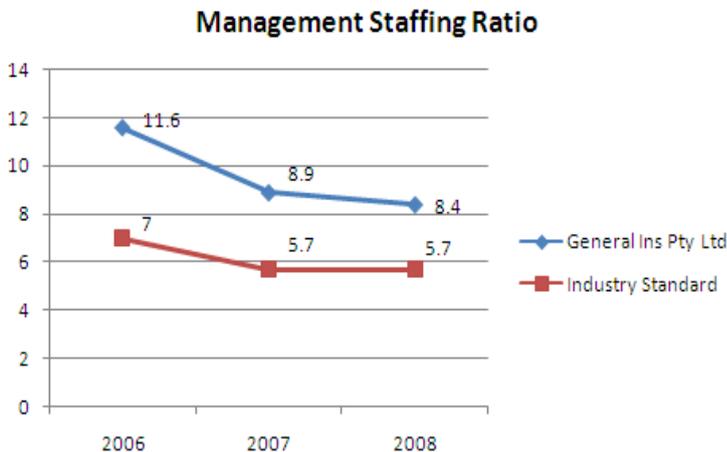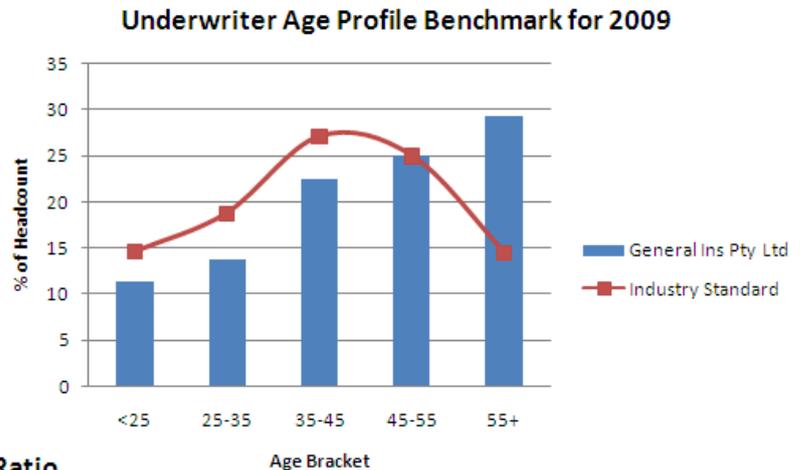
Stage 3   Perform

We are now set to enter the operational business world. With the directions defined, strategic initiatives budgeted and planned for and corresponding measures all in alignment with the overall direction, the business is ready to perform. It is now that the BI solution's effectiveness is truly tested. With all the data consolidations set up and relationships to the underlying data to the business views defined, the BI system can serve up regular performance results in business friendly views to the targeted end users.
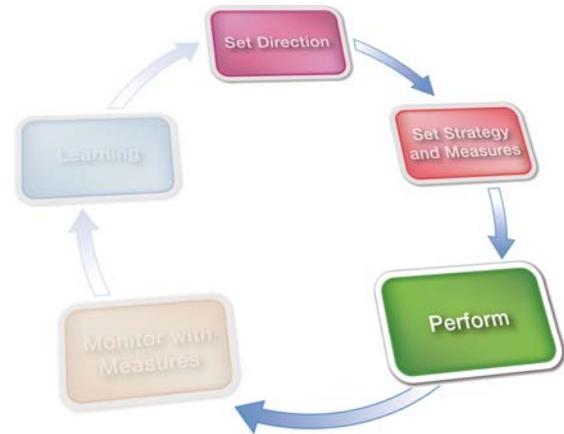
Specific security measures should be set up to ensure that various levels of the organisation see information relevant to them. This is again done to avoid information overload and unnecessary distractions. The relevant information is crucial.

While a whole discussion on what is considered "relevant" is outside the scope of this paper, nevertheless, it needs a little attention. Relevance of information can be tested by three different aspects:

Accuracy: The information should be accurate, and sourced directly from operational sources. There should be no manual mid-way processing to compromise the reliability of the information. Also, to ensure transparency of information, the end user needs to be able to easily drill down to detailed data from the summarised view.

Topical: The information is relevant when it is topical to a particular question. If the HR Manager needs to get to the bottom of issues impacting retention rates in a critical research and development division, he does not need to know the retention rate for all divisions - just the division that is critical.

Currency: A key factor that defines relevancy of information is how current the information is. One of the biggest bottlenecks faced by today's managers is lag time to get to information. By the time the requested information gets to a manager, it could already be too late. One way of mitigating this is setting up personalised alerts to signal to a manager when he *needs to know* certain information in a push environment as opposed to relying purely on a pull option.

Some BI solutions can be set up push information in the form of an email alert to an end user as that person *needs to know* of an event.

Business Dashboards are an excellent medium for operational information dissemination. The idea of a dashboard has been inspired by the dashboard you see in your family car everyday. It is the one spot that shows you all the operational information of your car including alerts like low engine oil, or low fuel levels. A Business Dashboard is a single place where all the key measures of a stakeholder are displayed in real-time. This is customised to the stakeholder viewing the information.

As an example, a divisional HR Manager sees his current performance to team-based measures, whereas the Global HR Manager sees consolidated results of all teams, and even performance to national standards.

This should be deployed in a secure web environment, which automatically delivers the relevant information to the right people. Being on the web also makes use of interfaces that non-technical staff are comfortable with.

Another key aspect to the deployment of dashboards is the ability to "drill-down" from the performance measures to the underlying detail data. This ensures full transparency of information across the business.

When a business is enabled with a centralised BI system, with all the regular operational reports automated, and with simple to new reports from a reliable and current data source, it frees up resources to concentrate on value add activities.

Managers are provided with information when they need them (push), and when they want them (pull). IT staff are freed up from manual report creation to now focus on IT environment maintenance, data management and security. Business Analysts are freed up to analyse information, as opposed to creating and consolidating them.

With resources now available, the business can do what it was supposed to - focus on the agreed business direction, and let the BI Solution be the guidance system to keep them on track.

Stage 4   Monitor with Measures

Monitoring the performance of the business using the right measures is a regular activity. Be it the CEO sitting at his personalised dashboard and seeing how the overall business is working or be it the Sales Manager at the weekly sales meeting discussing individual sales cycles with team members.

The focus on correct monitoring and measurements ensures that the business remains on track, and all departments of the business remain aligned to the overall goal of the business.

A well implemented BI system unshackles the business from manual reporting bottlenecks and allows the business to be focussed on their overall direction. With relevant information accessible at the fingertips, the business can be a nimble organism ready to respond to market challenges and opportunities.

A BI system with its targeted reports and personalised dashboards takes organisational communication to a higher level. Every staff member can see how they are performing continuously, which sets up a regular feedback mechanism lacking in many large organisations.

A BI solution is a tool for modern management and when used correctly allows stakeholders to:

- focus on core competencies while freeing up valuable time which would otherwise be spent on consolidating and creating information,

- be aligned to organisational goals at every level of the organisation,

- communicate top-down and bottom-up with internal and external stakeholders,

- be armed with the right information, continuously to react quickly to every emerging opportunity and

- keep their fingers on the pulse of the business – and make sure it remains on track always.

Stage 5 Learning

By now we have become quite the informed and agile enterprise. We have planned our overall direction, set our strategic initiatives and measures, and used them on a continuous basis to get us there.

With a well implemented BI system and healthy management practices, we may have even exceeded the original goals. Congratulations!

Now what?   Now, comes the second most important part of the BI Enablement Loop (after the Planning phase) - **Learning**.

By definition, "learning" is the modification of behaviour through practice, training, or experience.

As we move through the BI Enablement Loop, we learn continuously. We make tactical changes to compensate for changes in the business and market environment. Once we have gone through the BI Enablement Loop once, we need to step back and evaluate where we have reached in comparison to where we intended to go. Once we have studied all aspects of our overall performance, we need to reinvest this wisdom back into the organisation. We set our direction and strategy for the next iteration with the learned wisdom of the previous – this change in behaviour is our learning.

Every iteration of the BI Enablement loop fine-tunes the business processes by removing discrepancies. In theory, we suggest that every iteration of the BI Enablement Loop takes the business process one step closer to perfection. *This is the same philosophy of most quality control mechanisms.*
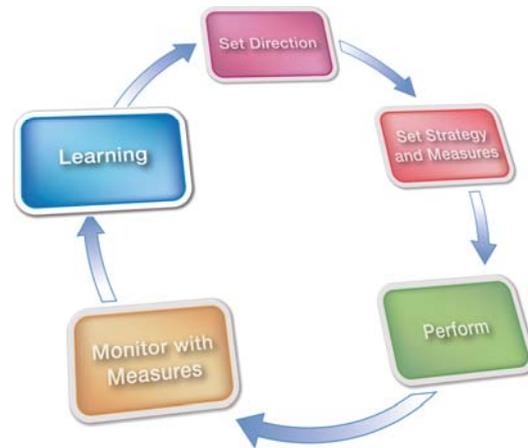
Summary

The BI Enablement Loop is a set of five stages that puts a structure to using BI technologies in any business process. It brings together proven scientific techniques with modern performance management thinking – powered by the efficiencies that a BI solution brings.

While the BI Enablement Loop is inspired by scientific models like the Shewhart Cycle, it is still a business management tool. Its usage is not an exact science.

BI Solutions allow the various stakeholders of an organisation to focus on their core responsibilities as they travel through the BI enablement loop. This maximises the efficiencies in the overall organisational processes.

As an end-note, we should mention that the five stages of the BI Enablement Loop can also be used by organisations with no formal BI solution in place. In fact, many companies have been doing this the painful way for many years. The overheads that are formed in doing this manually are one of the main bottlenecks that BI solutions eradicate. Today, we can harness all the information available to us using a BI Solution, and follow the stages of the BI Enablement Loop to transform us into an information driven enterprise – in Five stages.

References

i.   Toffler A 1970, Future Shock, Random House

ii. How Much Information? 2003, University of California, viewed 29 December 2007, <http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/execsum.htm>

iii. Why You Can't Get Any Work Done, BusinessWeek, viewed 29 December 2007, <http://www.businessweek.com/careers/content/jul2007/ca20070719_880333.htm>

iv. Bacon F, 1620, Novum Organum

v.   Drucker, P 1954, The practice of Management, Harper & Row.

vi. Kaplan R S and Norton D P, 1992 "The balanced scorecard: measures that drive performance", Harvard Business Review

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