



Assembling the Jigsaw - Realising the value of data

Executive Summary

As companies face ever mounting global competition, the ability to manage information is set to play an increasingly important role in competitive strategy. If companies are to avoid being drawn into commodity price-based competition, the ability to capture information on customer needs and marshal the resources of the firm to deliver solutions tailored accordingly will be critical.

However, when developing such information systems companies need to ensure that their design is clearly rooted in an underlying business strategy if they are to succeed in securing the business benefits they are seeking. In addition, an information enabled strategy can only be as good as the information upon which it is based. Consequently companies also need to ensure the quality and accuracy of the data entered on such systems if they are to provide a sound basis for subsequent decisions about the business.

Introduction

The ability to manage data is becoming increasingly key to a company's ability to compete effectively in today's ever more competitive business environment. The following paper begins by outlining some of the drivers for this and the strategic role enhanced data management can play. It then proceeds to examine how companies need to approach the design of their information systems if they are to succeed in achieving the business benefits they seek. Attention then turns to the importance of ensuring data quality before concluding with some guidelines on ensuring a company extracts the full value from the data it holds.

Knowledge is Power

The ability to manage information is playing an increasingly central role in competitive strategy. In most industries, companies can no longer achieve sustainable competitive differentiation simply on the basis of the performance characteristics of their products alone. The pace of technological development means that any product innovation a company makes today is likely to be quickly copied by competitors and become a standard feature tomorrow. Coupled with this, globalisation is exposing companies of all sizes to unprecedented levels of competition.

As a result companies are increasingly being forced to look at how they can increase the value they provide by tailoring their offer to customers' individual needs whether that is through customising the company's core product or adapting a range of supporting services (e.g. billing, shipping, customer support etc). Such an approach not only serves to provide a basis for short term differentiation, it also has longer term strategic benefits too.

The more a company learns more about a customer's individual needs and tailors its products and services accordingly, the greater the value the customer receives. Similarly, the greater the value the customer receives, the more important the company becomes to them. Progressively, the customer faces the prospect of ever greater disruption were they to consider switching to an alternative supplier owing to the time it would take any other company to acquire the same understanding of their needs and deliver a comparable tailored service.

Consequently, even though there may be other companies providing a comparable core product, such a strategy enables a company to develop strong relationships with its customers and an enduring hold over the revenue they generate. Indeed, in business-to-business markets, a company can find its relationship with key clients becoming so strong that it almost becomes an integral part of their businesses.

Learning about a customer's particular requirements and marshalling the resources of the company to deliver tailor-made solutions is increasingly the only way for companies to avoid being drawn into commoditised price-based competition. For more and more companies, the integration of the front and back office is thus becoming a strategic necessity with the ability to capture and manage information effectively a critical core competency.

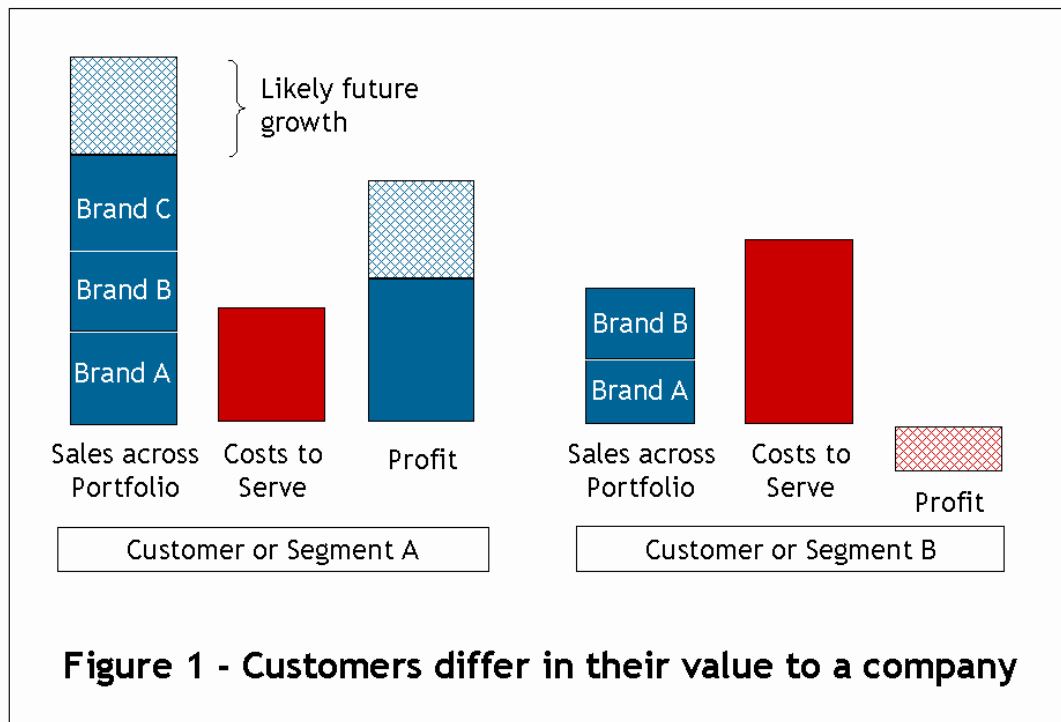
Knowing What You Know

When organisations come to examine how they can better exploit information in their business, they often find that they know more than they realised. However, like the parts of a jigsaw, this knowledge is often dispersed throughout the organisation. The chief problem such companies face is that they fail to bring these separate pieces of information together to reveal the bigger picture.

One of the great strengths of modern integrated application suites such as Sage 1000 is the ease with which data can be drawn together from across an organisation's operations to provide such a view. Moreover, as the following examples show, the insights companies can gain from doing so can lead to breakthroughs in performance.

Customers Are Not Created Equal

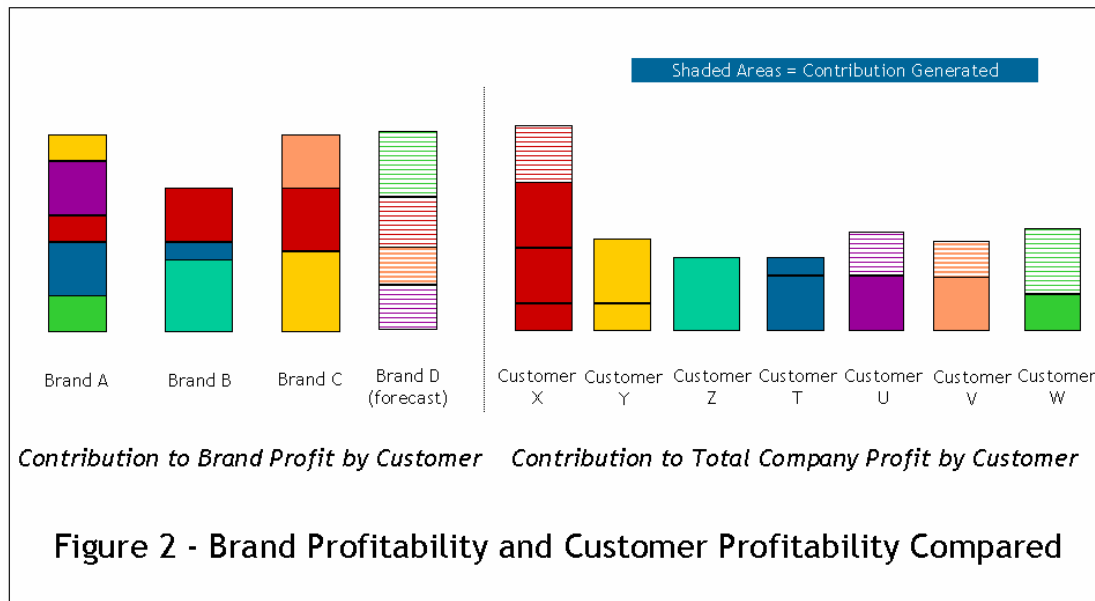
Customers differ in their value to an organisation. As illustrated in Figure 1 below some may generate extensive sales across a company's product portfolio, be poised for growth with immense potential for account penetration and generate a major profit for the company once one deducts the costs incurred in serving them.



In contrast, others may generate far fewer sales, have limited prospects for growth and produce far lower profits (or even a net loss) for the company in its dealings with them. Clearly a company will maximise shareholder value if it focuses its efforts on acquiring and retaining the most profitable customers in its markets whilst decreasing the costs it incurs in serving lower value ones.

However, many companies divide their businesses into separate standalone product profit and loss (P&L) accounts with each brand effectively run as a separate mini-business within the corporate parent with its own information systems, customer databases and so forth. Such an approach can systematically mask the full value that a customer represents and lead to potentially damaging decisions being taken within the business.

For example, consider a company with four product ('A', 'B', 'C' and 'D'). From the perspective of brand A's P&L, customer X (represented in red in Figure 2) is its least important customer and as such might be given a low level of service. However, across the company's product portfolio as a whole, this customer is by far the organisation's most important. Were this second class service to result in customer X defecting to a competitor who offered them a premium service in all of the product categories they used, the effect on company profitability would be very serious indeed.



However, by bringing together information from across the organisation, a company can secure a single and complete view of each of its customers and of the full value they represent. Equipped with this knowledge, it can then identify its most valuable customers, ensure they receive the consistent management attention they merit and focus its efforts on those customers offering the greatest returns.

Managing Company Performance

The value a customer derives from a company arises from across its operations with different parts of the organisation meeting their assorted different needs. Thus a customer may have different needs across a company's product portfolio, specific requirements for billing and shipping, needs for particular supporting services and so on. Consequently, if a company is to focus on delivering solutions customised to the individual needs of particular customers, it has to be able to coordinate activity across the company to ensure that their various needs are met.

However, this can prove a problem for many organisations. Companies have traditionally managed themselves by dividing the business into a series of product or functional departments (or "silos") each tasked with achieving its own standalone objectives. Thus there may be separate silos for the management of different brands, silos for different management functions (e.g. manufacturing, distribution, finance, customer support) and so on.

Whilst each part of the business may have developed its own information systems to monitor its performance in achieving its own departmental objectives, there is typically a lack of any control system to track how well the company is performing overall in meeting the range of needs any given customer might have.

However, by bringing together such dispersed information on departmental activity into one place, a company can secure such a complete overview. Equipped with this knowledge, it can then readily monitor activity across the entire company, ensuring the diverse needs of customers are met and the value generated for them managed effectively.

Determining the Relevant Information to Collect

A word of caution should perhaps be introduced at this point. Simply integrating information from across the enterprise will not *by itself* lead to enhanced performance. Indeed in most companies today, managers already find themselves drowning in available data and just adding more to that mix is unlikely to help matters.

Whilst an integrated information system may be a powerful enabler of business strategy, it is not a substitute for having such a strategy in the first place. Before a company engages in designing such a system and specifying the data to collect, it first needs to address a series of prior questions to clarify the requirements of the business strategy this data is required to support.

First and foremost, a company needs to deal with the strategic question of how specifically it plans to achieve the increased financial performance it is seeking? In particular, what customer is the company targeting, what behaviour is it seeking from them (eg acquisition, retention, account penetration) and, critically, what will it offer to them to secure this behaviour?

Following on from this, the company then needs to consider how it will operationalise this strategy in practice. In particular, what processes will it need in place to communicate its offer to the customers it is targeting? How will it deliver its offer to these customers in practice? In addition, how will it monitor how satisfied these customers are with the offer to identify any changes required in the future?

Only at this stage should the company's attention turn to the design of its information system. Having determined the processes that need to be supported, the information that will be needed to enable their effective operation can then be identified. This in turn can then provide the basis for specifying the application functionality required and the specific data that needs to be collected.

The technical issues involved in the design of an information system thus lie at the end of an ordered sequence of other questions a company needs to address. Only once the company has clarified the particular business strategy it is seeking to implement, the particular processes required to operationalise it and the information needed to enable the effective operation of these processes, can it meaningfully turn to specifying the data that needs to be collected and distributed within its information system.

Failure to adopt this structured approach risks wasting immense effort on producing an information system that simply amasses data that is never used in the business and makes no contribution to bottom line results.

The Importance of Data Quality

An information enabled strategy can only be as good as the quality of the information involved. Although the acronym GIGO (Garbage In Garbage Out) has been in common use for years, companies continue to face serious problems with the quality of the data in their information systems. Moreover the costs of poor quality data can be manifold.

For example, decisions on marketing and customer strategy are increasingly based on the data held in company information systems. Consequently inaccuracies in the

data involved can lead to grave misjudgements being made and failures to identify potential business opportunities. However, the cost of such lost revenue is only the beginning.

Information systems also typically underpin the delivery of a company's offer to its customers and inaccurate data can thus lead to serious service failure. As well as damaging relationships with customers and undermining their confidence in the company as a supplier, immense harm can be done to the company's reputation in its markets with grossly diminished future sales as a result.

Finally, the investment companies make in their information systems is typically substantial. However, when such projects fail to deliver the returns originally anticipated due to the inaccuracy of the data involved, a company is left not only counting the cost of wasted effort and expenditure. Project failure can also significantly undermine staff confidence in IT projects generally, potentially generating immense future resistance to the adoption of any such initiatives in the future.

Ensuring Data Quality

Given its importance, what steps can companies take to ensure the quality of the data on their information systems? One of the advantages of implementing a single integrated suite of applications such as Sage 1000 in a company is that data can be made available across the organisation without the need to enter it in multiple departmental systems. By avoiding the need to re-key the same information over and over again, a company can prevent the errors that inevitably otherwise seep into the data involved and also ensure that any information presented to managers is up to date in real time.

However, companies also need to take more steps to secure the quality of their data. One of the most important measures a company can take is to involve end-users in the actual design of the information systems concerned to ensure that the design of applications is tailored to their needs and situation. If systems fail to offer positive benefits to users or prove impractical to use, a company runs the very real risk that staff will simply ignore them in their daily work.

The effects of failing to base system design on an appreciation of end-user needs can be dramatic. For example, more than one company has sought to collect customer data from sales reps whilst constructing the respective applications without consulting them about the realities of 'life on the ground'. Finding the subsequent systems unwieldy and impractical in the field, the staff involved often simply resort to entering full stops whenever prompted for data, rendering the system largely worthless.

Again, much emphasis has been placed on providing sales staff with portable electronic devices in recent years to enable them to enter data on company systems after customer visits whilst it is still fresh in their minds without necessarily consulting them about the useability of such applications and their usefulness. After many millions of pounds worth of investment, one anonymised industry survey recently revealed that 45% of such staff only take the system with them into the field when accompanied by a supervisor. Moreover 50 % reported they did not enter details of the calls they had made until they got home in the evening with a further 20% leaving it more than two days later.

As well as ensuring that information systems genuinely provide value to users, systematic procedures to audit data quality are also advisable. Not only does this help signal to staff the importance attached to data accuracy, it also provides a means of highlighting any problems staff may be encountering in using the system. Coupled with this, incentivising the entry of quality information can make a major impact on the accuracy of the data in a company's systems too.

There are two sides to the incentivisation issue. Given the value that clean accurate data has, a company is well advised to positively reward staff for achieving a particular level of quality in the data they enter. However, equally importantly, a company needs to ensure that the performance metrics it has in place do not actually disincentivise the entry of quality data too.

For example, sales staff are often exhorted to take time during the day to enter extensive information about the customers they have visited into company systems. However, all too often these same staff are actually assessed simply on the daily call volumes they achieve effectively penalising them for any time spent entering data. As a result, unsurprisingly such staff will typically assign low importance to data entry and the quality of the data they do provide will generally be poor.

Extracting the Full Value from Data

As we have seen, bringing together the information held across an organisation has great value to a company operationally. By integrating front and back office functions, companies not only gain the ability to align activity across the business to deliver solutions tailored to customers' individual needs. Better coordination of activity between departments can remove duplication of effort, speed process times and increase efficiency leading to substantial cost reductions.

As previously discussed, if companies are to secure such benefits they need to be mindful that simply making data available to staff will not be enough. If staff are not simply to be overwhelmed by superfluous detail, the information with which they are presented needs to be filtered to ensure that it is relevant to their different roles and that the action to take in light of it is clear. In this respect, tools such as adapting system interfaces according to role based logins can be invaluable.

However, the data rich environment made possible by integrated systems can also be of immense value to organisations in other ways too. Such systems provide companies with the platform to leverage their accumulated past experience to inform current decision making within the business. Thus the observed outcomes of alternative courses of action in the past can be compared in order to determine the likely optimum approach to take in the future.

For example, observed customer responses to different combinations of marketing messages can be compared to identify those resulting in the greatest eventual sales to guide future campaign design. Similarly, the outcomes achieved by alternative approaches to customer service issues can be analysed to determine the most efficient means of resolving particular customer problems.

In this way, the company can continually learn from its past experience and avoid its staff ever having to make the same mistake twice. As a result, including such analytical as well as operational functionality within a company's information systems is typically an invaluable investment.

Conclusion

In the face of mounting global competition, integrating activity across the front and back office to maximise the value companies deliver to their customers is increasingly a strategic necessity. However, if companies are to achieve the breakthroughs in performance that stand to be made, the design of the information systems supporting such collaborative working need to be firmly rooted in a clear underlying business strategy that addresses how specifically the company plans to achieve the business benefits it is seeking.

Moreover, companies also need to pay particular attention to ensuring the quality of the data held on such systems. Building state of the art information systems will be an exercise in futility if the data they contain bears little resemblance to reality.

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