Moving from Data to Insight to Action

Using Linkage Analysis to Make Your Data Work for You

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As a point of interest - Did you know that about 250 tons of ore must be mined to produce a single one-caret gem quality polished diamond?

Preface

The following graphic is the whole white paper (minus common words)! The size of each word represents the number of times it is used. Even if all the common words were included, we would sincerely doubt that any mortal would be able to turn this word cloud into the following white paper.

This is the same problem facing businesses like yours today – turning large amounts of data into actionable insight. And without the insight your decisions may be limited to your "gut feeling."

Effective use of information has become a critical business advantage and marketplace differentiator. Simon Thomas, IBM consulting leader for business analytics, estimates that analytics-focused organizations:

See a third more revenue and 12 times better performance than those who aren't.

This paper is intended for anyone struggling to take action with their current data sets to better leverage their data in making informed business decisions. It is especially useful for managers and executives in small and mid-sized businesses (SMBs) that may not yet be ready to implement full-featured enterprise software, but know they need a better way forward than what they are doing now. Thus, we will explore in detail:

- Many of the current and potential sources of your data and what benefits each source delivers.
- A methodology for linking customer data with internally generated operational metrics, so the business can see more clearly where it is headed and what actions need to be taken.
- The demonstrated benefits of going outside your traditional data analysis comfort zone to get to those "critical nuggets of information" and address the most important business issues. These are the ones that will return the most benefit.

This white paper will provide insight into how linkage analysis can help you use your data to make fact-based decisions that will fuel better business outcomes and help set your decision making on the right course.

We invite you to share this paper with your teams. We're confident that doing so will help achieve breakthrough results.

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"Data handling is now the bottleneck. It costs more to analyze a genome than to sequence a genome."

– David Haussler, American bioinformatician known for his work leading the team that assembled the first human genome sequence.

Introduction

One of the key challenges facing business executives in today's increasingly connected world is having the right information to make informed business decisions. The problem isn't lack of data. Most businesses track a myriad of data points ranging from basic financial information to CRM and ERP information and, more recently, information from social media.

The current state of affairs is that businesses of all sizes are drowning in data while, at the same time, searching for the insight (or information) essential for fact-based decision making. Additionally, since most of us are challenged by the immense effort it takes to keep up with and process the volume of data we encounter on a daily basis, we constantly find ourselves getting further and further behind.

This situation is so prevalent that there is now an acronym to describe it: **DRIP – Data Rich, Insight Poor**. (A recent result from a Google search for Data Rich Insight Poor – yielded 2,610,000 results.) This concept is important to get your arms around since data alone does not solve problems or grow a business. Growth comes from employing the insight that comes from analyzing data and using that insight to create and implement unique strategies. In short, you need to ask the right questions to get the actionable information from your data.

For organizations of all sizes, business analytics provides some relief from "DRIP." Business Intelligence software is very powerful, specialized analytics software designed to sift through (and combine) massive amounts of data, respond to human inputs, predict behavioral patterns and present precise relationships among variables selected by very smart people. It is called "Big Data" and is defined as datasets that grow so large that they become awkward to work with using standard database management tools. Some of their difficulties include capture, storage, search and analytics.

For SMBs, the solution does not have to be so complex, daunting and expensive. In fact, there are numerous manual, one-off techniques that can be implemented with a spreadsheet or with a reasonably priced software solution. In this white paper, we discuss the various types of data most businesses collect (or should be collecting), how to leverage them, and how to use them in developing a strong foundation of operational support to benefit you.

The need for in-depth data analysis is not always evident. For example, a good Net Promoter Score (the widely used customer loyalty metric) can obscure the fact that some key accounts (those who spend a lot of money with you or pay their bills on time) have needs that are not being met. Or, that a product that is performing at plan in terms of reliability is experiencing a problem with a less-used feature that is critical for some applications. However, these facts will never see the light of day without looking at the data in detail – and recognizing actionable information when it's staring right at you.

So as not to try to be all things to all people, we decided to concentrate our thinking in one area – how businesses can *grow by using customer feedback data and, where appropriate, combining it with other available operational and financial data to create actionable insight*. This will be our definition of analysis.

The primary reason we selected this area of focus is because we believe that improving the customer experience is critical to sustained revenue growth. In fact, many businesses lose sight of the fact that customers, not products or services, are the source of all revenue and profits. We are not the only ones who have noticed this. EMC has noted that a 2% increase in customer loyalty translates to a 1% increase in market share. Similar benefits have been noted across multiple industries in terms of cash flow, profitability, growth and shareholder value.

Sources of Data

Everyone and every department has data that they use to perform specific tasks. For a support center, operational data might look like this (**Figure 1**) in terms of number of monthly incidents and their source. So while these numbers are on a magnitude that most of us can grasp, they are still not at the point where information would be actionable. Looking at the graph does not provide any guidance about how to address the problems and challenges faced by the support organization.

Figure 1: Exploding Incident Volumes

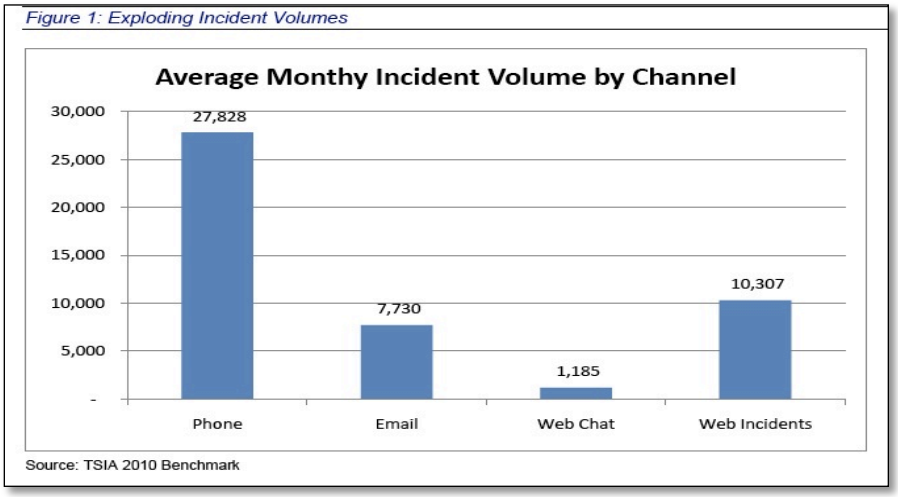


Figure 1 is from a 2010 TSIA study and shows incident volume by channel for member support centers. Think about what you might learn in looking at each channel separately, and also what is missing. What would you want to know? What questions would you ask to find out? Sources of organizational data typically fall into the following categories:

Customer data	**Operational data**
CRM system	Financial system
Survey results	Sales and marketing data
Warranty data	Manufacturing and quality systems
Social media	Print media
Voice of Customer forums	Video and slide presentations
E-mail	Business models

While these are most often viewed as discrete data sources or pieces of information, our experience indicates that the real gains come from creatively combining data from various sources into actionable insight that illuminates what is happening in your world.

Time sensitivity of data

It's important to understand that some types of data are much more time sensitive than others. For example, it is critical to act quickly regarding a groundswell of negative online feedback or a product safety issue, whereas you can be much more deliberate about basic operational metrics unless they indicate a situation that has a large and immediate impact on the business.

A couple of additional observations about data
Much of the data we work with on a daily basis is initially collected in an unstructured format such as a flat file of responses from a customer survey, or as customer comments. Thus, individual data points need to be organized into an intelligible format and structure in order to yield meaningful insights. We see this as we transform a flat file into an Excel table and from there into a simple bar chart such as the "Average Monthly Incident Volume by Channel" chart (**Figure 1**).

This is known as structured data sets, and effectively was our data world until just a few years ago. But unstructured data, such as speech and text, have become critical sources of customer feedback. It's no surprise that advances have taken place in text analytics and speech analytics to help simplify the process of culling actionable insight from a flood of unstructured data.

Text Analytics
Text analytics tools analyze unstructured customer text from social media, email, and other written content. Text analytics helps you understand the "why" behind the customer data. For example, many surveys furnish a numerical answer to a question but then either ask, or want to ask, WHY? Prior to text analytics, analysts simply had no time to read all the verbatim responses for surveys with tens of thousands of responses. Instead, they would draw a random sample of the responses, develop common categories of responses, categorize each response by type and the associated sentiment (either positive or negative) and track the frequency. Text analytics decreases the cost of coding high volumes of comments and increases the quality of that analysis.

You decide on the frequency and the volume of data to be analyzed. In addition to using text analytics as a data-scrubbing tool to cleanse the data, companies can use it to identify and root out problematic or duplicate customer data.

Speech Analytics
Speech analytics is a term used to describe automatic methods of analyzing speech to extract useful information from spoken content. One use of speech analytics is to spot keywords or phrases and their associated sentiment, either as real-time alerts on live audio or as a post-processing step on recorded speech.

Speech analytics in contact centers can be used to extract business insight that would otherwise be lost. By analyzing and categorizing recorded phone conversations between companies and their customers, useful information can be captured.

An example of how far this technology has progressed recently is two new tools from a company that specializes in Enterprise Feedback Management:

- **Automated emerging trend detection**: Exposes emerging trends by automatically identifying increases or decreases in certain terms and phrases mentioned in customer conversation, indicating potential changes in customer behavior – without the user ever having to know which terms to look for. For example, imagine how valuable it would be to identify that the phrase "new fees" has increased by 60% in the last week.
- **Call categorization & alerting**: Automatically categorizes calls correlated to key performance indicators, such as customer complaints, repeat calls, emotional calls, and then detects and alerts users if certain call types reach a set threshold.

Linkage: *the key to seeing meaningful relationships in discrete data*

Our first cut at identifying how we might combine numerous discrete data elements differently to gain maximum insight is to change from our internal focus and put the customer, as opposed to the company, at the center of the universe. (See **Figure 2** below)

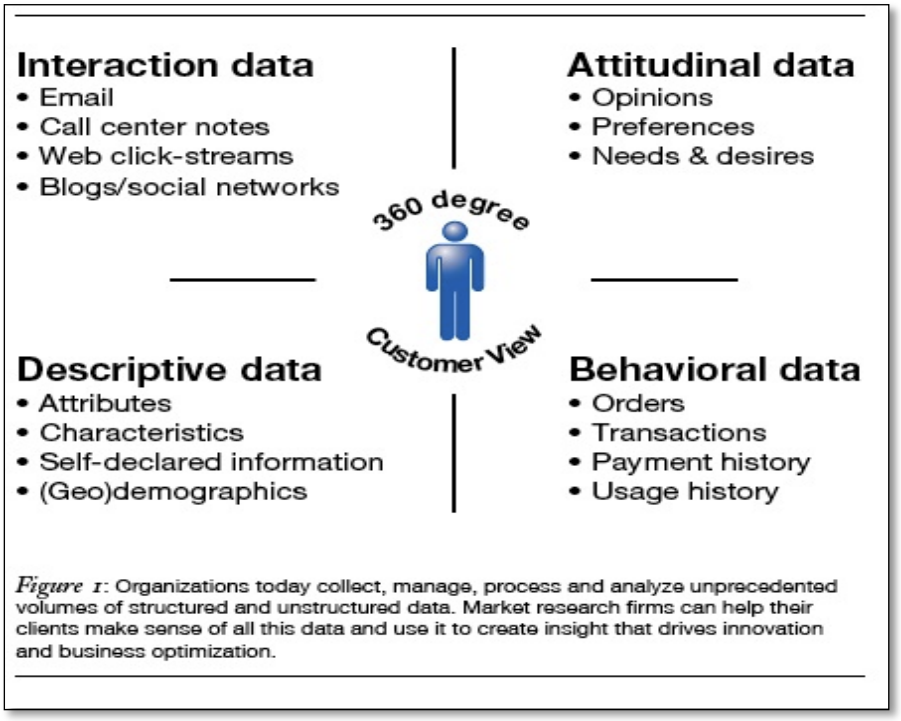


Figure 2: IBM re-orders this universe *(The Future of Market Research, 2011)*.

Two things stand out from this diagram:

1. You suddenly can visualize how internal processes might affect the customer in terms of motivators and behaviors.

2. You have a much more holistic view as internal departments or silos become relatively unimportant.

This notion of open association is one of the fundamental concepts behind linkage analysis, as the following sections describe.

Linkage: *the interconnectedness of data*

The next step is to think about how these data elements could possibly be interconnected; that there might be some valuable insights from looking at more than one data set in conjunction with other pieces of information.

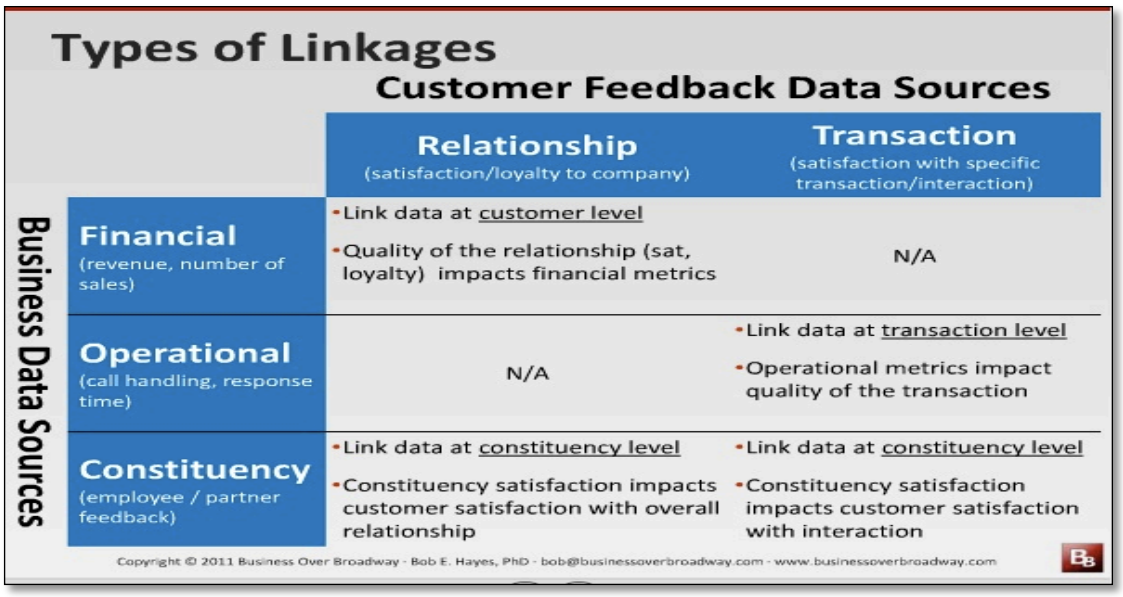


Figure 3 (above) is from *Linkage Analysis in Customer Feedback Programs*, by Bob Hayes PhD. (Dr. Hayes does business as Business over Broadway.) It shows how survey data can be combined with various types of operational data to produce actionable insight – the objective of data analysis.

Now that we have identified possible sources of information from the point of view of the customer and how these data elements might be combined to gather further insights, there is usually further work that must be done to extract the critical "nuggets of information."

As an example of how important this topic is to some businesses, here is a portion of a April 13, 2012 press release from Convergys:

Convergys Awarded Patent for Customer- Focused Linkage Analysis Method

Technique links IVR interactions with caller satisfaction to pinpoint navigation pain points.

Convergys has received a patent from the U.S. Patent and Trademark Office for an analytics technique that helps improve the customer experience within an interactive voice response (IVR) system by statistically linking IVR and caller satisfaction data.

The balance of this paper will explore some key data analysis techniques as well as provide examples of how such analysis leads to fact-based decision-making.

Analysis: *slicing and dicing the data to uncover all that can be learned*

Here is a review of some analysis techniques that can lead to deeper insights not immediately evident in high-level performance metrics, e.g., dashboards or balanced scorecard.

Segmentation

Businesses often use a one-size-fits-all approach with customers. Where this falls short is that it does not differentiate based on any important parameters such as products or services used, location size or even between a highly profitable customer with continuing buying potential and an *un*profitable customer who drains resources. Similarly, we find that companies do not differentiate how a customer values their products or services.

There are some common types of segmentation:

1. **Value based**, which facilitates implementing different levels of service for different value customers.
2. **Behavior based**, which enables the company to customize based upon what it knows about the customer.
3. **Insight based**, which is developed from customer information and transactional data. Again allows customization of approach and communication.
4. **Needs based**, which is predicated on knowing that different customers have different needs. This links product features and brand attributes to customer actions.

Filtering

Collaborative filtering (CF) is a widely used personalization tool. It allows companies to cross-sell and upsell only those products and services that people are most likely to buy. For instance, CDNow's Album Advisor recommends CDs you might like. First, visitors input information about their three favorite artists. The Album Advisor searches its database of registrants, compares their likes to those of other people like them, then says to the visitor, "all the other people who liked those three artists also purchased these CDs." Amazon uses a similar technique for every online look-up.

For achieving personalization, collaborative filtering is just one piece of a broad set of models. Eventually, Bruce Kasanoff, CEO Accelerating 1to1 notes, "ATM machines will be able to say, 'would you like your normal $100 from checking or would you like to do something else?' You just hit yes, and bang. There's no reason to go through five different questions. There are a hundred situations like that that personalization will eventually affect."

Correlation and Cross Tabbing

Correlation is a statistical technique that can show whether and how strongly pairs of variables are related. Correlation analysis can lead to a greater understanding of your data.

Many survey researchers use correlations with rating scales because the results usually reflect the real world. The problem with correlation between satisfaction and other common loyalty metrics is in how the information is collected and analyzed. For example, Walker points out “that to isolate the effect of loyalty on the bottom line is a lot harder than to say there is a correlation between them.” Both loyalty and profitability, for example, could be the results of doing something else.

Here is an example of how two metrics can be linked to a third. A particular car brand has a high level of loyalty and is also very profitable. However, both are due to the excellent products and services that the car company delivers.

Thus, the business outcome drivers are product and service excellence; loyalty and profitability simply come along with the drivers. In other words, *never confuse correlation with causation!*

A cross tabulation analysis is useful for showing possible correlation between how respondents answered two or more questions. It allows us to see a distribution between specific variables.

We use it because it is easy to understand. Normally, the control group or independent variable is on the X-axis (such as age, gender, education, etc.) and the dependent variable or group under study is located on the Y Axis. In **Example Number 1** below, we show how this analysis led to specific actions.

Data Mining

Data mining lets you deep dive into large amounts of disparate data. This makes it possible to categorize the entire data set, since the work is automated. You can look at information in many ways; for example, identify low frequency events, pick up on very rare occurrences that would have been lost, avoid the errors of manually analysis, etc. Data mining can also be used with the results of text or voice analytics since both applications turn unstructured data (text or speech - verbalisms) into structured data. Data mining reduces the cost of analyzing large quantities data, and provides greater flexibility for adapting to changes in the data. Real-time analytics offers the speed and depth to provide more detail-oriented applications. Since data mining accommodates format differences among data sets, it enables apples-to oranges analyses, which is tremendously valuable for this feature alone.

Mitch Kramer, an analyst specializing in CRM and analytics at Patricia Seybold Group in Boston, agrees that data mining tools and algorithms are now more effectively applicable to marketing processing and call centers.

“In the past,” Kramer says, “customer reports were accessed only by using statistical algorithms against the data. But now companies have started to view the data by simply running a report named, ‘find your best customer’ for example. Suppliers have taken what have been arcane algorithms and made them easier to use," Kramer explains. "Instead of companies being given access to new technology, they're given access to the report that uses the technology, so you don't have to be a statistician to understand it."

Examples: *initial problem -> data -> analysis -> action*

The following examples illustrate how the right data elements, explored using the right analysis techniques, can lead to decisions not immediately evident from performance metrics alone. In each of these situations, something *seemingly unimportant* was having a major negative impact on a number of key customers. It was only when customer feedback was examined in conjunction with relevant operational data that the issue could be pinpointed and appropriate action taken.

Example Number 1 - ***Turning customer survey data into actionable insight, which was then used to create meaningful change.***

Company A, like the vast majority of businesses, collects large amounts of survey data from its customers. In this case the data comes from transactional surveys that are launched as soon as specific customer interactions are completed.

Company A provides onsite service to its customers. At the end of the service visit, the service management system is updated with the specifics of the event. The system then sends an email invitation to the customer’s representative and invites her to participate in a brief web survey. Traditionally, the results are handled in two ways:

1. Shared with those directly involved in the service to provide quick feedback to correct outstanding customer issues and improve the onsite person's process and
2. All results for a specific time period are combined and used to look at the overall process and, again, identify and implement improvements.

The limitation with this approach is there is no operational information about what should be improved. From transaction surveys, Company A find that customers are less than satisfied with the onsite service experience. However, they have no idea what specifically is causing the dissatisfaction. Because they did not use text analytics they could not easily ask follow-up questions such as...Why? How to proceed?

Here is how Company A can gain meaningful insight from the data collected:

Step 1 – Separate the data into two segments; those under a paid entitlement (warranty or contract) and those who operate on a pay-as-you-go scheme. Look at the CSAT results for each group and see if there is a significant difference. Proceed to step 2 for whichever group indicates a bigger problem.

Step 2 – Select a manageable number of low scores and begin to look at the details of the transaction that triggered the survey invitation using internally generated data:

1. Knowing the transaction number, first look at the details of how the initial call was handled:
    - From the ACD (Automated Call Distributor) look at how long it took to answer the call, which agent was assigned and how long the call took.
    - From your call logging system (CRM or service management) see how long the agent spent on the phone and what steps were completed. How many calls? How long? When was a service engineer dispatched? Were parts sent?
    - Again from the service management system, when did the engineer contact the customer? How long a delay before a promised arrival? Parts discussed?
    - When did the engineer arrive? How close to the promised time? What transpired? Were parts required? Available from engineer's stock or from the depot? Solve problem?

2. Assuming parts were ordered from the depot – when were they shipped? Did they arrive when promised to the customer? When did the engineer arrive back on site? Were the parts correct and working?
    - How long did it take to solve the problem?

3. When the defective part(s) arrive in the repair depot, the technician should troubleshoot and repair and look into the internal history of the part to determine:
    - How many times has it been repaired?
    - What was its history during the manufacturing and test process?
    - Is the current failure part of a larger problem requiring engineering or quality investigation?

4. Close the loop with the customer – explain the investigation and results and, most importantly, what actions your company will take to prevent this type of problem in the future.

5. Examine the results of your investigations to see if you can determine the key driver of the dissatisfaction.
    - If one touch point stands out as being outside a window that you, as a customer, would find acceptable then look at all transactions associated with the question under consideration and create a **scatter diagram** (similar to the one in Figure 4) when the X-axis is internal performance and the Y-axis is CSAT.

- From this process, you get a good idea of the performance your customers expect and so you can implement process changes, with appropriate training, to ensure that customer expectations get met or, ideally, exceeded.

Here is an example. A Federal agency was trying to determine the time to close an inquiry received by phone and snail mail while achieving a specified level of customer satisfaction. They created a **scatter diagram** of time to close on the X-axis and CSAT on the Y-axis. They analyzed the results to determine the maximum time to close an inquiry that still allowed them to achieve their CSAT targets and set those numbers as their operational targets.

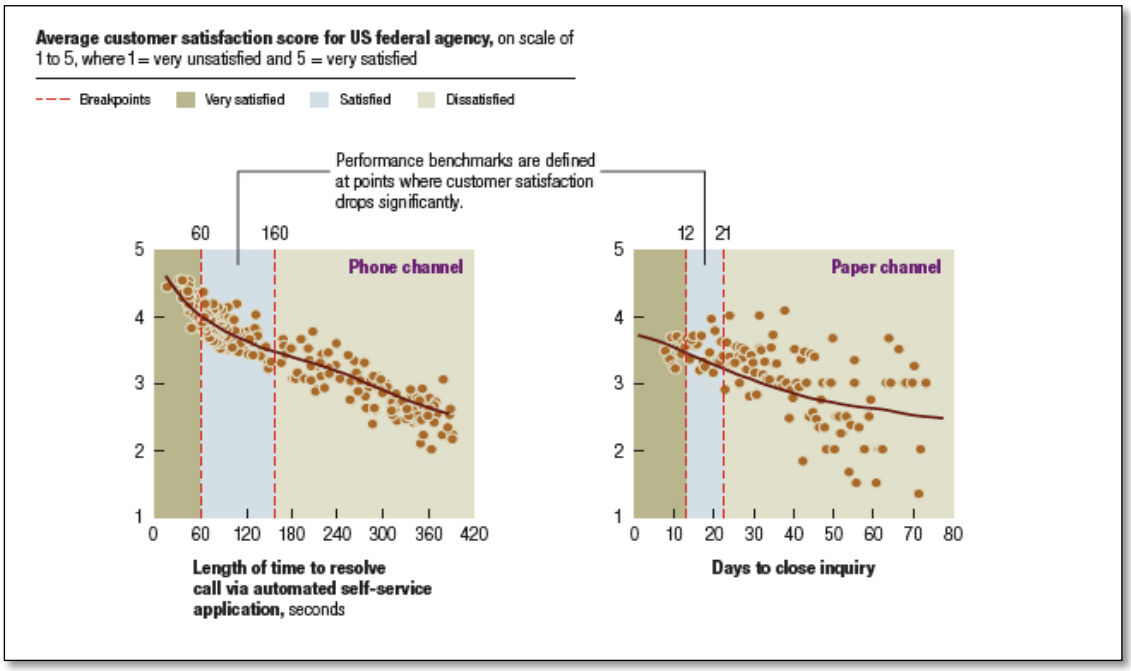


Figure 4 above, from *"When Citizens Are Your Customers"* by Sebastian Katch and Tim Morse in *McKinsey Quarterly* Aug., 2009

<u>Example Number 2</u> – *Solving a feature problem in a mature product.*

Another example of how we might use data from different sources to fix an operational problem that was not initially evident can be seen in a infrequently used feature in a mature printer product. Nothing appeared amiss in the financial data in terms of cost per print, nor in reliability numbers. Both were at plan, and stable.

CSAT scores were also stable, although perhaps a minor glitch downward in recent months. However, there was some recent highly negative online feedback concerning the paper handling of this printer, and information from the CRM systems appeared to indicate the same thing. It was clearly time for a deeper look, especially when a customer insisted on a different product mix in a large order of new equipment.

Text analysis of CRM and online feedback pinpointed a number of clues to the problem. First in the line of comments was "&%*$#%!!!" more an indicator of how annoying the problem was, than a clue to its source. However, comments like "second side" and "paper jam" were a lot more helpful.

More digging led to an analysis of subsystem codes for "duplex," and also to analysis of parts usage. Interestingly, what also surfaced was that this problem appeared exclusively on newly installed machines, and there was an uptick in usage of duplex tray components.

An online meeting between customer engineers, product engineers and vendors led to the discovery that the vendor had recently sourced a new circuit board component from a new supplier. While it had the same rating as the prior board, it was more sensitive to variations of paper speed and would occasionally cause false jams, i.e., still operate correctly but send a signal indicating a paper jam condition, but in duplex mode only. So not all the time, and not a commonly used feature, but extremely frustrating when it happened.

The solution proved to be an easy one: wider software timing tolerances, which was an easy programming fix. The final step was identifying the affected equipment and performing the programming adjustment, either via a scheduled onsite visit or via a remote engineer for networked equipment. This was completed within a few days of identifying the problem, and all was well.

Example Number 3 – ***Global clients have unique support requirements***

Our third example involves a company that provides software services within the global telecom industry. Their initial foray into the world of transactional surveys indicated that they needed more seamless 24/7 support as clients in various time zones were not always satisfied with the support they received from programmers who were assisting them "in the middle of the night." Their initial actions to hire front line customer contact personnel were very well received, and the company was justifiably proud of the improvement in Net Promoter Score from 41% to 49%.

Hiring three virtual support personnel was also a financial savings in terms of labor costs as this function had been previously provided by senior software developers.

However, a blistering email from the CEO of a key client in Asia indicated that a further look might be needed. This came as a shock, especially since this company was one of the top users of their software services. A look at prior CSAT scores indicated that this company had not been satisfied with the support they had received but this feedback had been ignored.

One of the owners of the software company assumed the responsibility of exploring this issue. Wondering if the issues were unique to this particular customer, the executive graphed the "Overall Sat" scores received over the past three months. While most scores were in the 8-10 range, there was a handful in the 4-6 ranges, clearly not satisfied with something about the support they were receiving or the product in general.

Further examination of these low scores showed a number of common characteristics; all were from a common geographic region and, most occurred during the graveyard shift (US time zone). This region was also the area of highest potential revenue growth for the firm, so a lot was at stake.

Text analysis of emails/web chat received from these customers revealed a number of odd things. First of all, there appeared to be language issues on both sides, so there were difficulties in expressing and responding to support

questions. There also appeared to be questions about government telecom regulations, and what could be done to support these.

The executive did two more things to help with this analysis. He initiated conversations with executives of these accounts to get their perspective on what could be done better. He also scheduled a meeting with the software developers and support personnel to get their input on what could be done differently.

The solution to the broader issue of the gap in support was multi-faceted:

1. The person staffing the graveyard shift worked from home and lived in another region of the country. So an important factor was to better integrate him into the company. Among other things, he was asked to participate in team meetings via Skype. He was also brought into the main headquarters for a week of "meet the team" and for additional training. Finally, he began training in a second language to better communicate with customers in the high growth country.
2. A number of technical problems and fixes specific to these customers were documented. This improved the overall "first time fix" rate. Previously, these problems had been individually escalated to engineering.
3. A more robust shift handoff process was implemented to ensure that engineering fully understood the issue..
4. Specific software fixes were identified to ensure compliance to telecom regulations in this region.
5. Finally, these changes were communicated to all customers, with specific feedback solicited as to the impact to those customers who had previously not been satisfied.

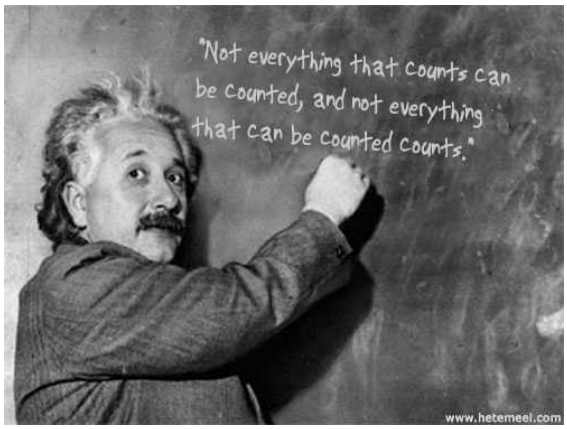
An odd thing happened as the result of this work. The company realized that they had been too solution/software focused, and not enough on the broader needs of their customers. This was critical to achieve the sustained growth they were seeking. This culture change affected everyone in the company, and led to the first-time hiring of a chief customer officer.

A final observation

Earlier, we talked about the timeliness of information, and how it affects the whole life cycle of this process. Our view is that operational data is like the tortoise - it seldom exhibits any urgency. Customer feedback data is like the hare - if you don't collect and act on it within a very short time it becomes valueless. Some customer feedback must be acted upon instantly (see this video about United Airline's http://www.youtube.com/watch?v=5YGc4zOqozo) and some will stay valuable for days or weeks. By the way – the day the "United Breaks Guitars" video went viral on YouTube UAL stock lost 10% of its market value!

This means that when you decide you need to link feedback with customer data, you must be sensitive to how long the analysis will take, and, more importantly, how long it will take to decide on and implement an action plan that will make a real difference with your customers. The various data analysis tools and approaches described here give you many approaches to do this.

Summary



All of us in some way deal with an avalanche of information in our daily lives, and all of us cope somewhat differently with the constant onslaught of data. However, most people do not have a framework for organizing and making sense of what we encounter. Without a methodology for analyzing our data we cannot take advantage of the primary reason to maintain data – extracting information to make *informed business decisions*. As we saw in the previous examples, business people can make great decisions when they know the facts.

So, remember Sgt. Joe Friday's (Dragnet TV show) famous quote: ***All we want are the facts, ma'am.***

We know that it's much easier to take action when the problems and underlying causes are crystal clear, as opposed to when we have a vague idea that something is amiss.

One of our basic beliefs is that business intelligence (BI) tools make the drill down easier. However, in the absence of a framework of how to select what is important to look at, what questions to ask and then how to interpret what we see, BI adds to, rather than reduces the confusion. No technology can replace an understanding about your products, processes, and customers.

So again, what do we do? Below are some guidelines we've covered in this report.

1. Certainly, one place to start is performance metrics. However, we believe that they alone can be deceptive. So we need to look at the important drivers of our business, especially in terms of key customers who are paying the bills and keeping the lights on. This means ensuring that we understand and deliver against what is most important to this critical group of stakeholders.

2. Secondly, we need to organize this glut of data into something we can wrap our brains around. Otherwise, it's extremely difficult to get a picture of what is important to our customers. Traditionally, this has been spreadsheets and charts. However, with text and speech analytics, we now have new and powerful ways of understanding what is important to our customers.

3. We need to use Linkage Analysis to combine discrete data elements from various sources in order to see the full picture. It is this approach that links what the customer is experiencing to what is going on within your organization.

4. We need to organize and analyze data in a way that patterns and the critical "nuggets of information" emerge. This is what gets you from what the customer is experiencing to the action you need to take. Typically, this comes from combining several data elements to shed light on what is happening and why.

5. At this point, we need to engage stakeholders (employees, and often customers) in working through the solution. They are the experts who can point to the fixes, and also test solutions prior to implementation.

6. Customers are the source of revenue – not products or services. The customer is the ultimate judge of whether the solution works. They are the end users of the product and services, and both have to meet their needs, not the other way around. Customers need to be apprised of anything that affects them directly, and certainly provided with feedback for any issues they raised.

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Sam is an experienced thought leader in service strategy and marketing. Sam led several world-class service organizations and has more than 30 years of service and support experience and led several organizations to become recognized for Customer Service Excellence. Sam is the author of many articles in various technical journals and is a frequent speaker at local and national technical meetings and conferences. Sam served on the Board of Directors of both an analytical and a nuclear measurement instrument company. Today, Sam works with SMBs to improve customer retention, revenue and profits, and also Customer Loyalty by focusing on the Customer interactions and Service aspects of his client's business.

Claire Tinker, Principal, Tinker Centric Consulting and ESL Insights... tinkercentric@gmail.com
Claire brings a wealth of real world experience in the technology services industry, stemming from a long career at Xerox Corporation where much of her focus was on improving organizational productivity and building customer loyalty. More recently she has taken her experience with organizational metrics and how they relate to business decision making, to the broader arena of market research where her she applies her “in the trenches” experience to solving business problems. Claire is a member of TSIA, and a former Chapter President of AFSMI.

Dennis Gershowitz, Principal, DG Associates... dennisg@dgassociates.net
As an accomplished senior executive, Dennis is recognized for successful leadership roles and aligning business and development strategy. Currently, Dennis is Vice President, Client Services, for Anthony & Alexander and Principal of his own consulting firm, DG Associates. Dennis provides a variety of consulting services to companies seeking to enhance their Customer Loyalty Programs, understand more about their customers and help organizations develop or further their CEM (Customer Experience Management) strategy. Dennis has received awards in Services leadership including Service Professional of the Year from AFSMI for which he had also been a Board member for many years, is a member of the AFSMI Presidents Team, is a founding member of the TSIA Partner Advisory Board, is a fellow at UNCW’s Cameron School of Business and is an accomplished speaker and writer in the areas of Customer Support and Leadership.