

Chapter 1

Vision of Actionable Intelligence

Key Points and Questions

- For intelligence to have value it must deliver answers in time to make a difference to business outcomes.
- The availability of big data is not an immediate way to improve your business.
- Before jumping to statistical packages and hiring data scientists, make sure business leaders have visibility into the intelligence you already have in hand.
- Statistical models that are missing large sets of data and don't include influencing data never predict the future; they can be used only to neatly outline past mistakes.

According to Chinese folklore, around 170 A.D., China's Han Dynasty was very weak. As a result, lawlessness and corruption were rampant throughout the land. One man, Liu Bei, and his friends swore to bring peace to the land by unifying the country and reestablishing the emperor. This task proved to be difficult, so they turned to an adviser renowned for his wisdom, Zhuge Liang. Together, they set out on

an expedition to create an alliance with a general named Zhou Yu, who controlled one-third of China. But Zhou Yu, knowing that Zhuge Liang was critical to the success of his enemies, sought to trick him into taking on an impossible task as a way to prove loyalty to the proposed alliance. The true purpose was to trick Zhuge Liang into unwillingly signing up for his own death.

The task was to create 100,000 arrows in 10 days or face execution by General Zhou Yu. One hundred thousand arrows in 10 days sounds like an absolutely impossible task for any ordinary man. Zhuge Liang would surely face death, right?

But he was a resourceful and wise hero. Here's what he did: He prepared 20 boats with straw puppets and straw bales on the sides, and a few men inside. He knew the night he sailed his ships into battle would be particularly foggy. Zhuge Liang made his men sail just close enough to be heard but remain unseen. Then he had his men light some torches, beat the drums, and shout orders to the few men actually on board the 20 ships to sound like a large force coming for attack.

Zhuce Liang foresaw the warlord Cao Cao's response: Cao Cao quickly ordered his archers to move out and start shooting toward the drum sounds and torches. Volley upon volley, he and his men fired away. The arrows from the archers got stuck in the straw figures on the boat and the straw bales on the sides. When Zhuge Liang's boats were loaded on one side with arrows and threatened to tilt under the weight, he ordered the ships turned 180 degrees to catch arrows with the straw bales on the other side of the boat.

With more than enough arrows and dawn beginning to break, he ordered the ships to sail back to Zhou Yu.

So what did Zhuge Liang end up with? One hundred thousand arrows and his life, and all the while he sat drinking wine in his cabin on the ship. And Cao Cao? He hadn't really been attacked, but he was outsmarted nonetheless.

Zhou Yu's plan to kill Zhuge Liang through trickery had failed, and this later resulted in his own downfall.

The difference among the three men was their use of information—intelligence, to be more precise.

Zhuce Liang knew what was going on. He knew it was going to be foggy. He knew what his task was, and knew what Cao Cao's reaction would be when he was confronted with Zhuge Liang's trap. He combined this knowledge and performed extraordinarily, against all odds.

Zhugé Liang had a 360-degree view of both the internal and external environment. And he acted accordingly. By contrast, Cao Cao was literally left in the dark throughout the supposed attack, and Zhou Yu had taken a gamble on Zhugé Liang's knowledge without knowing the facts about Zhugé Liang's capabilities.

Most businesses nowadays are in the position of Cao Cao: They lack visibility into what is truly happening in the business environment and make quick, snap reactions to what is happening around them. They are not at all proactive; they are not leveraging the environment. Instead, they are manipulated by the environment.

The Challenge at Hand

Today, more than ever, information is everywhere around us. Indeed, we are bombarded with information. We all know, for example, that Facebook, Twitter, and LinkedIn are sources of information about our social lives. Though the different apps and sites in this field all offer different forms of social media, they have one thing in common: They let people create information and allow them to read everyone else's information.

For example, by participating on Facebook, you always know what is happening in your social circle via posts on your Facebook wall and updates from others. Some information is useful; some is useless. However, in the end, you always know what is going on because everything is conveniently posted in a single spot: the Facebook wall.

Businesses operate by receiving a tremendous amount of information but usually lack the central, company-wide "Facebook wall" to see it all at any one time.

The process of gathering information from others is often long and painstaking instead of instant and easy. Where businesses would benefit significantly from having all the information they need at their fingertips to provide answers, most are still struggling to pull together the most basic data. Some even lack common definitions and use data sets requiring cumbersome translations to see a global result.

However, if employees know all the latest social updates, why can the same employees not know all the latest information about their own companies?

There is a similar disconnect with mobile.



Figure 1.1 How Consumers Shop

What data do you need to respond quickly to your customers or leaders? How quickly can you access it? Is it accessible on a secure mobile device?

When customers walk into retail stores they have a wealth of knowledge about the products they are considering purchasing. In Figure 1.1, 63 percent of smartphone owners are checking the prices of the products while they browse, a process called “showrooming.” The data they get from their mobile devices helps them to decide where and when to buy products.

Think about this process and how people shopped just a couple of years ago. It is a huge change. Why should corporate employees not expect the same level of change in their own organizations?

If consumers can go through a significant process change to adapt to the latest big data technology to use actionable intelligence without any formal training, why can these consumers not do the same when they arrive at work?

For today’s businesses that is the challenge: change. Think about the difference honestly. Is it:

- Complacency to accept the current situation, even though that situation could be improved massively?
- That your company is using systems that just are not as fast and easy as using Facebook?
- That your company has implemented processes and incentives that are inadequate for driving a change in behavior?

Let us start by illustrating just how painful and dire the current situation is for modern-day companies, especially those that are larger in size.

Typically, supply chain senior management needs to go several levels down the chain and interact with a team of people just to figure out if and when a market will receive its shipments. This is due to how widely dispersed the information is.

Figure 1.2 is a sample e-mail chain—one that you might find in any supply chain organization. (Any resemblance to actual emails is purely coincidental.)

Some of the details of Figure 1.2 follow.

—Original Message—

From: Singapore Sales

Sent: October 15, 2009

To: APAC Regional Forecaster

Cc:

Subject: Takashimiya Wants Additional 30% for Valentine’s Day

Exciting news! Our customer wants 30% more than the original order. Can we have it?

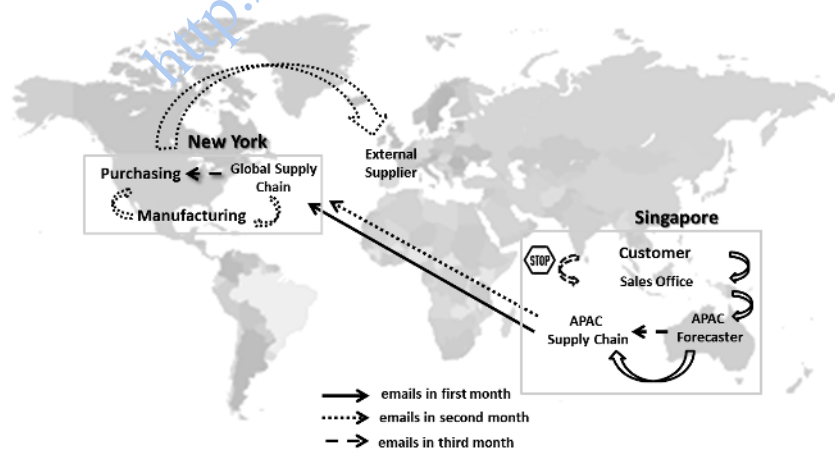


Figure 1.2 E-mails around the World in 90 Days

—Original Message—

From: APAC Sales

Sent: October 15, 2009

To: APAC Regional Forecaster, APAC Supply Chain

Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Can you help get more products for this customer?

—Original Message—

From: APAC Supply Chain

Sent: October 18, 2009

To: NY Supply Chain

Cc: APAC Forecaster

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Let me check with NY Supply chain. NY can you provide an answer to this request?

—Original Message—

From: NY Supply Chain

Sent: November 3, 2009

To: APAC Supply Chain

Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Let me check who makes it and follow up with them.

—Original Message—

From: APAC Supply Chain

Sent: November 10, 2009

To: NY Supply Chain

Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Please respond? The customer really wants to know.

—Original Message—

From: NY Supply Chain
Sent: November 28, 2009
To: APAC Supply Chain
Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day
I found out the product is made in Long Island. [This would have required checking at least four systems or contacting four people in each major manufacturing location.]

—Original Message—

From: NY Supply Chain
Sent: November 28, 2009
To: NY Manufacturing
Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day
Can you support making a quantity of this much for this item code?

—Original Message—

From: NY Manufacturing
Sent: December 2, 2009
To: NY Supply Chain
Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day
We don't have enough components. Let me check with the supplier, but I have to go through the purchasing group.

—Original Message—

From: NY Manufacturing
Sent: December 3, 2009
To: NY Purchasing
Cc: NY Supply Chain

Subject: Takashimiya Wants Additional 30% for Valentine's Day
Can the supplier provide additional XYZ components?

—Original Message—

From: NY Supply Chain

Sent: December 15, 2009

To: NY Purchasing,

Cc: NY Manufacturing

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Purchasing, please respond

—Original Message—

From: APAC Supply Chain

Sent: January 3, 2010

To: NY Supply Chain

Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Do you have a response yet?

—Original Message—

From: NY Supply Chain

Sent: January 5, 2010

To: APAC Supply Chain

Cc:

Subject: Takashimiya Wants Additional 30% for Valentine's Day

No, still waiting for Long Island Manufacturing who is waiting for purchasing, who is waiting for the supplier.

—Original Message—

From: APAC Supply Chain

Sent: February 10, 2010 5:15 PM

To: NY Supply Chain

Cc: APAC Forecasting, Singapore Sales

Subject: Takashimiya Wants Additional 30% for Valentine's Day

Please cancel this request. The retailer had to fill the spot with other products.

Painful to read, isn't it?

All of these e-mails might suggest a highly complicated issue, but the problem is quite simple: lack of answers.

It was really difficult to determine:

- Who made the product
- The product's status
- Which suppliers provided components
- Who was responsible for delivering results

Worst of all, there was no performance benchmark that would incent all involved to provide better service in the future.

All over the world, customers and sales teams desperately ask when they will receive their shipments. All the while, the supply chain struggles to provide the needed answers. Sales and operations battle over the right numbers for forecasts, inventory, and customer service.

These meetings can sometimes become emotional and demoralizing.

Luckily, some companies have recognized the situation and agreed they need to do something about it. These companies realize that they need information that can be trusted. Information that is aggregated, ready to access, and easy to comprehend. Information they can act on—in other words, actionable intelligence.

The Big Data Lie

Business leaders and employees hear that moving from an organization that is completely opaque to one in which information is readily available undergo a world of change. Decision making will no longer be based on guesswork, hunches, or random facts. Instead, it will be based on good, clean, valuable pieces of information that are ready for action. That is what companies nowadays are striving for.

Armed with this knowledge, companies jump in and start collecting big data—extremely large and comprehensive data sets—to investigate and draw conclusions from. However, this is the wrong first step because raw data says nothing by itself, and placing even more data into bigger databases or copying data into spreadsheets provides no value. This is simply more of the same. Leaders and employees still won't have answers; instead, they will have data—more data than they had before, but not the kind of data or the approach to data that would make their lives easier.

Another mistake is to start by cleaning up the data and categorizing every bit of it. There is value to cleaning up data. Indeed, there is benefit to normalizing data by centralizing, classifying, and structuring it. However, it's hard to make a business case to do this because when the cleaning and organizing is done, the data does not provide answers to business questions. This is especially true when it turns into an IT-focused project that doesn't gain the assurance from users that the data has been validated and is usable.

The right approach is to start with a strategic business question and acquire the data to answer that question. Only then can you quickly start visualizing your business, performing business discovery, and delivering actionable intelligence. You will provide information that people can act on because it is complete, true, and readily available. The actionable intelligence approach works iteratively, starts small, and grows. All the while, it delivers answers to the strategic business questions.

Actionable Intelligence: The Road and the Destination

Today, the benefits from the massive quantities of data we generate are only realized when that data is processed using a growing array of visualization tools. Simple spreadsheets and software such as QlikView, SAP Visual Intelligence, and SAS provide a dynamic visualization of big data, uncovering the myriad links and interconnections behind the information.

It is also helpful when data is stored in well-understood systems like Microsoft SQL Server. However, with big data, performance can become an issue that necessitates making a move to Hadoop, Google Big Query, or SAP HANA.

With the right tools for the job, sometimes just as pilots to show return on investment, we can move on to the more interesting part of the work—achieving real business results.

Business Discovery

Business discovery is the critical step in transforming the unstructured mass of big data into actionable intelligence. The tools mentioned above enable companies to drill into the many levels of data, understand the connections among them, and open up new understanding

and opportunities. They also take a complex, real-time, constantly evolving picture of a business and translate it into easily understood visuals. This process of business discovery enables businesses to see a new, more complete and more encompassing business model.

And, as technology develops and more data is created, the potential for generating actionable intelligence across more and more areas is set to grow.

Retailers, for example, can gather data from customer loyalty cards and link them to other data from their customers' social networks. Such intelligence will allow them to better understand who their customers are and their influence upon other existing or potential customers. Companies can then more effectively target their marketing and make better predictions of purchasing behavior.

Let us take another hypothetical example of actionable intelligence: A man is walking down the street in Singapore and he faints because his pacemaker has stopped. An ambulance is called to the scene.

A few minutes earlier a woman had tweeted about seeing a man who appeared dazed. Fifteen minutes before that security cameras had captured this man looking confused because the pacemaker was failing, and for the past few hours the pacemaker status had indicated failure. If all of that data had been correlated, the man's pacemaker malfunction could have been prevented. At the very least, the data would have enabled the ambulance drivers to get to the location earlier and react faster based on facts to improve the outcome for the man.

The scenario just described might sound far-fetched, but think about how what we take for granted today sounded equally far-fetched just a few years ago:

- Investors keeping track of thousands of stocks at once without the aid of a massive computer system, something we can now do on the move in the palm of our hands.
- Manufacturing companies able to view the real-time performance of every manufacturing line in every plant in every location around the world by computer. Today, this is expected in any enterprise resource planning (ERP) system.

What we considered big data 30 years ago is not complex and challenging now. Looking three decades into the future, today's big data will also be simple.

Improving Outcomes

The key to improving outcomes is the combination of tools, people, and processes—the “capability set” that allows us to capture and process this data to deliver actionable intelligence *in time* to improve business outcomes.

Speed is of the essence. Intelligence, after all, is only of real value if you receive it quickly enough to make use of it.

Already, next-generation leaders are leveraging big data and developing capabilities for delivering greater levels of actionable intelligence. By pulling in data from complex, high-volume sources like social media sentiment, customer movements tracked via cell phone apps, and real-time resource location, businesses can determine instantly what the optimum future outcome can be, improving the accuracy of business planning and overall corporate performance.

These capabilities enable companies to seize opportunities that others cannot. Meanwhile, companies that fail to leverage their own big data to extract actionable intelligence may miss out on potentially massive savings and could succumb to their competitors and current market-place forces.

To take one recent example, industrial giant General Electric (GE) says it believes the utility industry can extract about \$150 billion of unrealized efficiencies by using already existing data in smarter ways.

Using what it calls “immersive” data visualization, GE’s Grid IQ software allows utility firms to better monitor their infrastructure, applying data streams to deliver intelligence that enables them to respond to business changes at high speed and, critically, in time to make a difference.

The message to any business is clear: Smart use of data to answer key questions about your business is essential to building a more encompassing business model and giving you the edge on your competitors.

Businesses that have yet to start developing actionable intelligence capabilities are at risk of becoming obsolete. Figure 1.3 illustrates the actionable intelligence goal companies should be reaching for.

So how can a company organize itself and what process should it follow to deliver actionable intelligence?

I recommend that businesses establish an actionable intelligence shared service group as shown in Figure 1.3 that reports into a senior leader in the business unit that needs the most performance improvement.

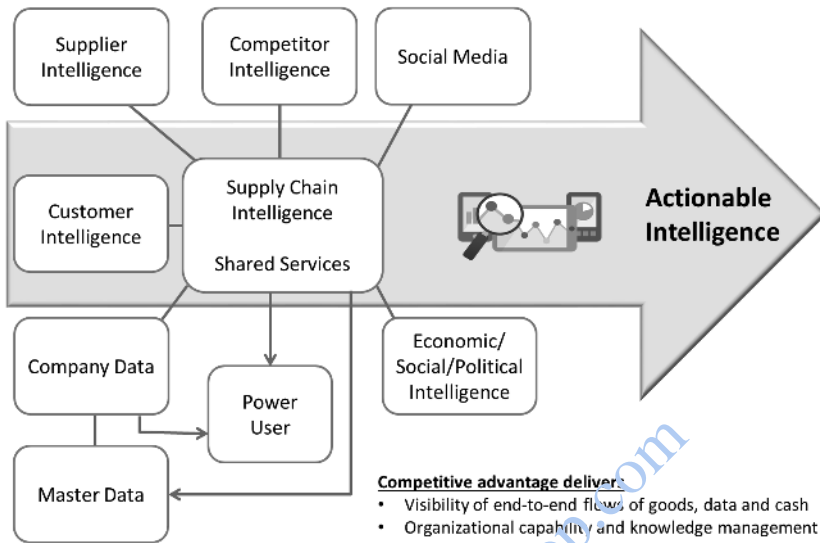


Figure 1.3 Actionable Intelligence from Big Data

At Estée Lauder, my department reported into the supply chain to try to reduce inventory and improve customer service. Your organization may need help in other areas, such as sales or marketing or finance. To determine which area to focus on, look at the departments that will likely have the highest chance of success. Choose the area with the following characteristics:

- Leaders have a vision for actionable intelligence.
- Critical business needs are clear, but the facts to improve the situation are lacking.
- There are resources and time to establish an organization to deliver the capabilities.

Businesses that have jumped onto the big data bandwagon without giving it much thought are finding themselves in a big mess. A 2012 study from International Data Corp. found that just 0.05 percent of available data in 2012 was analyzed. Gartner also estimates that, through 2015, 85 percent of the Fortune 500 companies will fail to exploit big data opportunities for a competitive advantage.

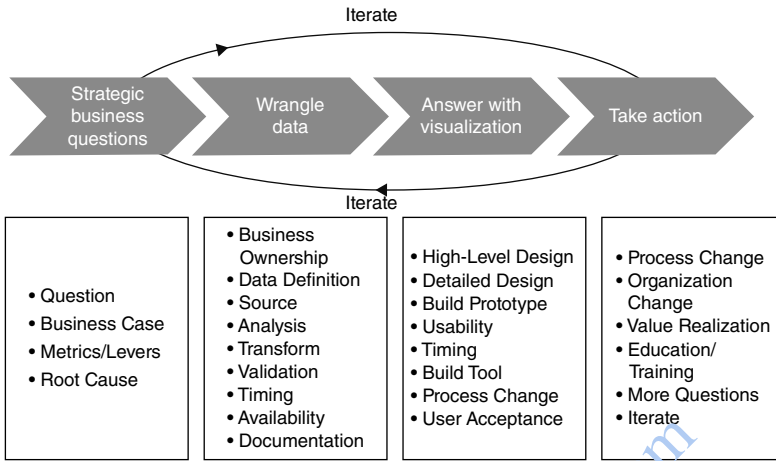


Figure 1.4 SWAT Iteration Framework

Business leaders around the world recognize the strategic edge that big data brings. At the recent Big Data World conference in Singapore, many of the executives that I spoke with see the value of big data, but they are not quite sure how to get there. Figure 1.4 provides a simple yet effective SWAT framework to help business leaders translate big data into actionable intelligence.

S—Strategic Business Questions Every business has its priorities and overall strategy. As business leaders, it is important to understand that big data is intertwined with your overall strategy. Direct your big data efforts depending on the strategic priorities of your company. And, do not try to source all the data—focus just on the “burning platform.” The strategic business question should be a guide.

This critical first step focuses the effort, gains sponsorship, and ensures the priority of the project remains high. The results at the end will also garner the right amount of visibility when the answers are delivered. After years of implementing business intelligence without tangible results, it’s time to focus on the real business questions.

I was asked, “Do companies know the critical questions?” Emphatically, yes. There are common questions senior management asks including:

- How can we increase sales and customer service?
- Why do we have so much inventory?

- How can we reduce returns and quality issues?
- How can we increase profitable sales and net profit overall?
- Who are our customers and how can we answer their needs best?

Selecting one question to focus on allows for the rapid, iterative development to occur as the business and technology teams can focus. The narrative to describe the project becomes easier as well. Clarity of purpose allows sponsors and supporters to get behind the project because they'll clearly see the opportunity to deliver tangible results.

Comparatively, if the technology team is tasked with establishing a technology foundation for Big Data with the general reason to enable the business to answer these questions, the task can be so overwhelming to try to collect the data. Sponsors and supporters will be disappointed as usual as the project extends beyond the time when the answers were important.

Sponsors want quick results with low cost. This isn't possible unless the project is focused and purpose driven.

W—Wrangle Data While many people have been advocating the mass collection of data, you should follow a different approach. The data needs to be focused solely on the strategic question. This enables the acquisition team to collect and review data quality. The quality of your insights is only as good as the quality of your data sets. So, before you head out to collect any data that you can lay your hands on, pause for a moment to consider the following:

- What kind of data do you really need to answer the strategic business questions?
- Where can you find it?
- What are the IT infrastructure, tools, and policies needed?
- Who are the people on your team with the required skillset to analyze the data?
- How can you do all these things in a cost-effective manner?

By focusing on the required data you'll have solid business sponsorship to access data which can normally be blocked by politics, siloed mentality, or lack of resources to gather the data. The difficulty of pulling together data from all parts of the organization, business units, and geographies can stop an Actionable Intelligence project in its tracks.

This work should be done with an rapid and iterative framework like this:

- A quick blast out to all parties to request the data
- Focus on working with those who provide positive responses and results
- Verify the data and if right incorporate into the data repository
- Repeat steps to gather more data

A—Answer with Visualization According to Napoleon Bonaparte, “A good sketch is better than a long speech.” Raw data displayed in Excel is difficult to use to garner insights. Fortunately, innovation in the field of data visualization has created business discovery tools that make things easier and more effective. For example, QlikTech (NASDAQ:QLIK) has created a tool called Qlikview that provides user-friendly yet concise executive dashboard and report capabilities.

However, while tools such as QlikView enable results, the process of developing a framework for that visualization is critical to success. Typical intelligence tools visualize data after you select a specific filter. But Qlikview goes the other way around. The data and relationships are all visible to you to discover new opportunities. You have to see the difference to believe it.

To gain the most benefits at this stage someone on the team needs to have a vision for how the answers will be used. For that vision to come alive you should hold regular (weekly or at least monthly) design sessions with business users, asking:

- How will the answer be used?
- How can we best show “Where We Are Today?”
- How can we show “How to Win Tomorrow?”
- How do we embed intelligence into the business?
- How will the standard operating procedures change?
- Are the right critical issues being highlighted for review?

T—Take Action With a visual answer supported by good data, we move into the “take action” phase. Review the answer with the sponsor, and determine the actions to be taken in the short term and the long term, including:

- What actions can we take right now?
- Can we capture the value saved or earned?

- Does the current process and organization need to change to start making fact-based decisions?

Inevitably, the first answers will generate more and deeper questions. Start the SWAT framework again and quickly provide answers again . . . fast.

The SWAT framework enables fast, continuous delivery of actionable intelligence.

Take the following example: Imagine you work on the intelligence team of a company that manufactures toy cars in different shapes and sizes. Things were going great with your toys—the kids loved them. But, recently, kids have been more interested in tablet PCs than cars.

So, here's a new challenge to keeping the company profitable. The strategic question left unanswered is: Are we maximizing our profit?

One day, your boss asks you to visualize the revenues and costs of each business unit. Your team gathers the right revenue and cost data for each business unit. You then visualize that data to show how different business units are doing.

You show your visualization to your boss to answer his question. But your boss notices one unit—say, the toy fire truck department—performing particularly badly. He delves into the individual costs in his tool and discover where the money went. Apparently, the toy fire trucks cost double the manpower of toy police cars but are sold for the same price. Now your boss has some information that suggests all production should be switched to toy cars. But to get a full picture of whether he should do that, you might need to deliver more information about the product lines including:

- What is the historic demand for fire trucks and police cars?
- How is it changing?
- What social media chatter is going on about the products?
- Who is the customer and what are we doing to attract more of the same?

Now you've sparked something—a bit of actionable intelligence. Of course, the entire process is slightly more complicated.

Throughout this process there are some goals you should strive for. I call these goals the Vision of Actionable Intelligence:

- Easy-to-access internal and external information that enables decision makers at all levels to quickly answer questions with facts
- Good data quality (on time and accurate)

- Ability to access answers during meetings, walking down the hallway, on the way to the airport, or while talking to a customer without ever having to send an e-mail to a colleague in a different information silo

Actionable intelligence stands for more than just visualizing your data. It requires you to break down the silo structure of different departments and their data to equip the people in a company with the full picture of the situation.

Here is where the major ERP systems fall dramatically short. Companies rarely connect these systems to all internal and external functions, so the reports and data warehouses run short of the information needed to fully provide actionable intelligence.

In such an environment with data silos and shortfalls, users need to cobble together data from many different sources into some sort of spreadsheet. This situation is so common that I have found in speaking to large companies around the world that Microsoft Excel seems to be the most used tool for performing business analysis.

Indeed, in the fall of 2012, I spoke at a conference on end-to-end visibility and asked the 300-plus participants whether they use Excel along with a business intelligence (BI) tool to get a full picture of data. One hundred percent said yes.

When I asked how many use more than one BI tool, 90 percent said they did. So, big companies with big budgets—enough to pay \$2,200 per head to attend a conference—still don't have a BI tool that meets their complete needs. Why?

In addition to breaking down silos, actionable intelligence creates massive benefits for companies—often bigger than you could even imagine.

Stages of Actionable Intelligence: Getting Ready for the Journey by Knowing Where You Are and Where to Go

Before you start off on your journey of actionable intelligence and big data, take a moment to assess where you are on the maturity curve. (See Table 1.1.)

Table 1.1 Stages of Actionable Intelligence

Stage	Description	Visibility	Data Quality	Method of Collecting Data
No facts	<ul style="list-style-type: none"> • “I’m right! Believe me! Let me tell you.” • “I know that this is going to work! I can feel it!” <p>Individuals who rely on their gut feelings and make decisions based on feelings instead of facts</p>	Backward looking	Unknown	Inconsistent
Invested, but no benefits yet	<p>“IT will let us know.”</p> <ul style="list-style-type: none"> • Getting conned by the consultant • Stage of wasting a lot of money 	Backward looking, but copies of manual reports are automated	Straight copies from unverified sources	Extract Transform Load (ETL)/slow
Local hero	<p>“Let me show you.”</p>	Customized results making it easier to make business decisions	Attested to by power users	ETL and guerrilla acquisition for speed
Intelligence leader	<p>Fact-based decision-making practitioner for strategic business questions</p> <ul style="list-style-type: none"> • Here is my potential outcome. • This is the band of optimal outcome. 	<ul style="list-style-type: none"> • Forward looking • Potential opportunities and risks • End-to-end visibility optimized 	<ul style="list-style-type: none"> • Known catalogued • Data KPIs accompany senior management dashboards 	Planned and executed with excellence

No Facts . . . So, Use Your Gut?

In the traditional decision making process, leaders rely on their gut feelings and their intuition to tell them what is right and where they should go. However, it is a backward-looking approach that reacts without any supporting evidence.

Despite the advances in technologies and a whole bookshelf of business intelligence tomes, some companies still choose to remain in this stage. According to an SAS Institute survey conducted among data management professionals, about 32 percent of the companies are in this stage.¹

This could be because they tend to have a more traditional culture and they are resistant to change. Thus, it is not surprising that most of them are not the dominating market leaders or big players.

Invested Money and Time but Not Yet Receiving Tangible Benefits

Companies that are willing to take the first steps to overcoming resistance to change and start exploring the realm of intelligence may soon find themselves stuck in a situation where they are spending lots of money and feeling like they are not getting the most out of the engagement of their consultants. This is because improving the data quality and acquisition process will take significant time and effort. As such, most people who don't understand the proper sequence for incorporating intelligence into the culture will conclude their strategy is not working and will, thus, remain stuck in the situation. The SAS Institute survey shows that 39 percent of professionals who are exploring big data are in this stage.

Local Hero

Leaders who have maintained good-quality data in a central location, have worked with an extremely good consultant, or have read a good book about leveraging actionable intelligence and big data will probably find themselves at this stage—localized success. They have enjoyed quick wins that are impressive enough to convince top management or the rest of the team to sponsor the exploration of the project. According to the SAS survey, 16 percent of data management professionals are at this stage.

Intelligence Leader (Enterprise Actionable intelligence Capabilities)

With more funds, resources, and support from the rest of the team—coupled with the right combination of governance and cultural management—companies will join the 12 percent that are implementing/executing decisions based on big data. They will develop into fact-based enterprises that grow further and fly higher with actionable intelligence.

At which of these stages in Table 1.1 are you?

If we look at things from the “people” perspective, we can see some of the underlying factors that influenced the results of the projects. When people rely on gut feelings, they doubt their capabilities to adopt learning and adopt intelligence into their work and businesses. There are no key performance indicators (KPIs) to do it, and they generally feel apprehensive about taking the first step and try to find excuses to delay discussion or just to change the topic.

When they have overcome that fear and become beginners, they will start off with IT-led projects and IT-created KPIs. As the company starts to get more comfortable and confident about the projects, it will become “business-engaged,” whereby business executives start to use intelligence on their own instead of demanding IT spoon-feed them the reports and information they require. They will also start to create business KPIs.

By the time the project reaches the stage shown in Table 1.1 of “local hero,” the business would have taken control of the project and the project becomes business-led. Team members start to focus on and commit themselves to answering the strategic business questions and go deeper to try to gather the answers. When the process is done right and the savings are measured, people’s capabilities reach the stage whereby they can deliver business results.

As the entire company buys into the new system, employees’ lives are made easier and the benefits start rolling into the fact-based enterprise; leaders become apostles who spread the power of actionable intelligence to everyone. This is the stage you want to be in—and the stage you want to sustain yourself in.

Growing People’s Capabilities on Actionable Intelligence

It’s up to you to determine where you are and where you want to go. Table 1.2 provides descriptions of what actionable intelligence looks like

Table 1.2 Profiles in Actionable Intelligence

Profile	Description	Measuring Results
No leadership	<ul style="list-style-type: none"> • “I don’t know what analytics is.” • “Intelligence = 007?” • “It’s impossible for us to do it.” 	No KPIs. Projects completed but original business case not reviewed.
Information Technology(IT)-led	“Hey IT, just run the report for us.”	IT created KPIs that don’t quite fit the business needs.
Business engaged	“I’ll create the report myself.”	Business created KPIs.
Business led	“Let’s focus on the strategic business questions.”	Go deeper to retrieve.
Business results	“I’ve delivered results with forward intelligence.”	Act and shine.
Apostles	“Everyone should know the power of actionable intelligence.”	Shares results with others.

in different companies and how it’s measured. You are already equipped with the roadmap and an idea, a vision of what actionable intelligence should look like for you. Time to start!

Are You Ready to Take the First Step?

In this chapter, we have seen what actionable intelligence can lead to and the world of change it creates. In the next four chapters, different steps in the process to create your own actionable intelligence program will be highlighted. All business, nothing too technical. With the help of this book you can become the next Zhuge Liang, a sage who delivers limitless value to your organization, enabling your organization to see a 360-degree view of the situation and be proactive in decision making.

It does not matter what function you perform in an organization or what kind of organization you work in. You will have the power to inspire, define a vision, and rally followers to share your beliefs. You will have the power to empower coworkers and give them actionable intelligence.

Why Is It Called Actionable Intelligence and Not Analytics or Big Data?

The words we use create feelings and pictures in our mind. It is really important to use words that provide an instant response in our audience.

For example, Bond . . . James Bond versus analyst.

Or just take the word analytics apart into its syllables and you arrive at unfortunate primary school jokes. If you are the head of analytics well, I'd change that if I were you . . . just saying. Or at a loud cocktail party try shouting, "I'm into analytics!"

Seriously, let's look at each phrase.

Big data. No one heard about it till a year ago; geeks, tech sales, and technical marketing loved it; it sounds so smart, but what does it mean to the rest of the world? Recently, I asked an audience of 150 people and five panelists at a conference on big data to define it. The panelists had six different definitions and the audience wasn't sure at all. We do not have any reference to it from growing up. It means nothing except how pundits are trying to define it.

In my view big data is a state, a situation, that defines a set of data that no one is using and may not know how to use. Thousands of years ago when the Romans did a census, they wrote down a lot of information but had no easy way to process it. Compared to today, a census is easily viewed, visualized, and used to make decisions using computers. What was big data in the Roman era is now just . . . data. Today, companies have data about their products from social media and millions of transactions in myriad interconnected systems. When a company cannot leverage this data into information to make decisions, we can call it big data.

According to Merriam-Webster, analytics is defined as: the method of logical analysis.²

So what is analysis? Again, Merriam-Webster's definition:³

- 1: separation of a whole into its component parts
- 2 **a**: the identification or separation of ingredients of a substance; **b**: a statement of the constituents of a mixture
- 3 **a**: proof of a mathematical proposition by assuming the result and deducing a valid statement by a series of reversible steps; **b** (1): a branch of mathematics concerned mainly with limits, continuity, and infinite series (2): calculus 1b

- 4 a:** an examination of a complex, its elements, and their relations; **b:** a statement of such an analysis
- 5 a:** a method in philosophy of resolving complex expressions into simpler or more basic ones; **b:** clarification of an expression by an elucidation of its use in discourse

Do we have all year to create a discourse on the opportunities we need to seize because our competitor stumbled or a new trend just emerged? No. Businesses need to be agile, responsive, and when a customer comes yelling, “Where’s my stuff?” we can’t turn to our helpful discourse on analytics. Nor would it help in the exceptional cases when the “stuff” went missing or had a quality problem or the government of XYZ country just collapsed. After all, those events were not in the model.

Actionable Intelligence: Merriam Webster’s definition of both words:

Actionable: synonyms: useful, applicable, functional, usable, workable.⁴

Here’s the definition:

- 1:** subject to or affording ground for an action or suit at law
2: capable of being acted on <actionable information>

Intelligence definition (*Merriam-Webster Dictionary*, 2014):

- 1a** (1): the ability to learn or understand or to deal with new or trying situations; reason; also: the skilled use of reason (2): the ability to apply knowledge to manipulate one’s environment or to think abstractly as measured by objective criteria (as tests)
2a: information, news; **b:** information concerning an enemy or possible enemy or an area; also: an agency engaged in obtaining such information

Now, we can see by definition that actionable intelligence is the right phrase for business. Do not follow the crowd and use what the pundits are saying; it simply does not apply to business. This book is about taking action, being practical, and being smart! Enable your organization with actionable intelligence capabilities, and you will win again and again.

And one more thing: Figure 1.5 provides some statistics to get you excited. Industries of all type are gaining from leveraging big data into actionable intelligence to achieve better results in sales and cost reductions.

Benefits of Effective Data

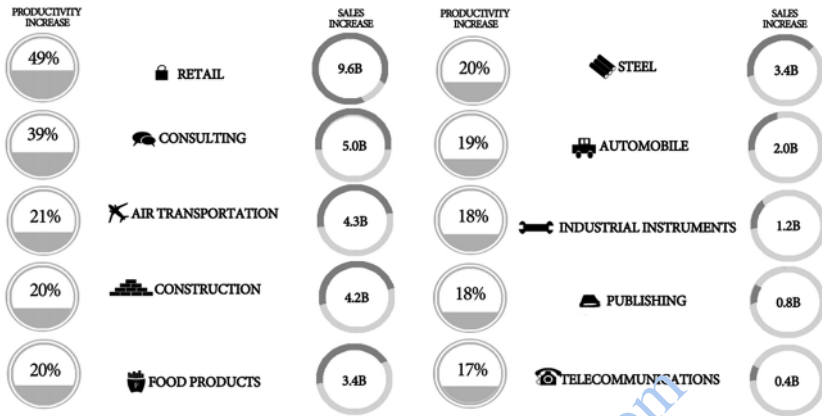


Figure 1.5 Benefits of Effective Data
 SOURCE: “Business Benefits of Effective Data” from University of Austin, study, 2010.

Summary and Considerations

Point to Ponder: Define the vision, make it great!

Quote to Remember: “As the entire company buys into the new system, employees’ lives are made easier and the benefits start rolling into the fact-based enterprise; leaders become apostles who spread the power of actionable intelligence to everyone. This is the stage you want to be in—and the stage you want to sustain yourself in.”

Question to Consider: What is the question our organization is passionate about, and is there interest in answering it?

Notes

1. 2013 Big Data Survey Research Brief, www.sas.com/resources/whitepaper/wp_58466.pdf.
2. *Merriam-Webster Dictionary*, an Encyclopedia Britannica Company, www.merriam-webster.com/dictionary/analytics.
3. *Ibid.*, www.merriam-webster.com/dictionary/analysis.
4. *Ibid.*, www.merriam-webster.com/dictionary/actionable.

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