

Analytics in Days White Paper and Business Case

Analytics – Navigating the Maze

Analytics is hot. It seems virtually everyone needs or wants it, but many still aren't sure what the business case is or how it will *really* help them. And while analytics can be powerful and drive compelling business results, getting results with analytics can be fraught with issues.

This can be especially true for medium-sized firms which have limited experience with analytics and few of the skills in-house.

This White Paper is intended to help executives focus on realistic expectations. It will ground an analytics program with both industry best practices, and a few key concepts that can help set out realistic steps and expectations and a way to fast-track results.

Analytics 101 – What to Expect...

One of the difficulties with “analytics” is that many people use the term to mean quite different things.

For some “reporting tools” are now “analytics tools.” For others analytics are about analyzing website traffic. In fact if you google the term “analytics,” many of the top hits on the first few pages will be about web traffic analysis. (Many of the rest of the hits are from vendors with something to sell.) Web traffic analysis may be important to you, or at least to someone, but it's probably not what you're looking for.

For others, analytics has become synonymous with “big data.” Big data is another term whose meaning has become obscured by wide and varied use. See the box later in the article. For others, it's about social media. No wonder it's a bit muddled.

Defining Analytics

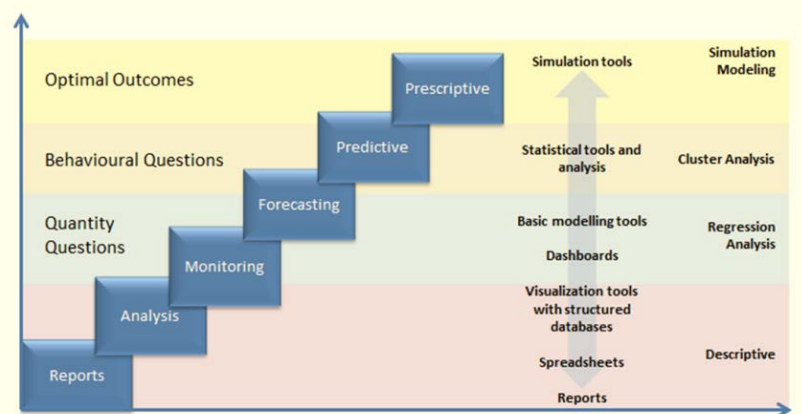
In this paper, when we talk of Analytics we mean it as short form for the following:

Business data, in databases designed for analysis, to develop the deeper understanding and insight that you can use to inform and drive meaningful business actions.

At a practical level this covers three kinds of analytic approaches:

Descriptive Analytics – ranges from reports to spreadsheets to complex analyses that can articulate “what happened,” and to some degree maybe, “why it happened.” Even this often requires a little more than your internal data. By the time you can answer “why,” you're likely using external data sources.

Analytics Tools



Predictive Analytics – this is about models, some simpler, some more complex, and prediction. With *these* assumptions, *this* should happen. This usually requires not only advanced statistics and methods, but also requires modelling tools.

Prescriptive Analytics – Understanding how to pick an optimal path through a range of possible scenarios.

Examples from Industry

Consider two examples, one in retail, and one from insurance. (All are analytics, but, as you'll see, at quite different levels).

Looking at a chart of retail same store sales that identifies the fastest and slowest growing stores is *descriptive* analytics. Where they are, what they sold – all descriptive. Placing an overlay to predict seasonal variation over the next six months and linking that with targeted promotions that may raise sales is both *predictive* and action-oriented. Linking that with a multi-store strategy to manage HR costs and staffing levels in sync with your expected sales is more *prescriptive*.

Now consider an insurance example. Looking at tables and charts of claims by policy and type of claim is a bread-and-butter activity in Insurance. This is classic historical data reporting – very helpful, and very *descriptive*. This is informative on a number of levels, but not for predicting the future. (It is useful for other things, including validating the actual experience with the actuarial estimates, but that still isn't very predictive.) A *predictive* example might be modelling forecast claim levels by deductible amount in a way that can provide you with greater insight into claims patterns in your actual portfolio. Taking this one step further, a *prescriptive* solution might lead you to price policies with different deductibles to drive to a different, more optimized balance in your overall portfolio.

These are just small (and to some, evident) examples – but they are meant to highlight two key points: 1) the difference between descriptive, predictive and prescriptive analytics; and 2) the difference between “pure knowledge” and action-oriented insights, or “information you can use.”

Why You Need Analytics

The examples above are relatively simpler ones in two different industries. In those two industries larger players are already using analytics in many different ways to tilt the playing field in their favour. Large retailers know what kinds of promotions “perform.” Large insurers know where to target new products and new markets.

Airlines are also using analytics to price seats and manage reward program benefits. So are loyalty programs that use analytics and points redemptions to amass huge consumer behaviour databases that they can turn to further advantages. So do credit card companies who are trying to root out fraud. As do banks who must manage risk and protect against fraud and money laundering.

And the list goes on. Almost every big company and a lot of medium sized ones are using data to make themselves ever-more effective competitors.

The chart shows the many different kinds of analytics, the different ways you can use data, and the relationship among the many different methods.

Avoid the “Voyage of Discovery”

Whether you are just beginning or are launching a new initiative, getting started in analytics can present some daunting challenges.

Too many analytics initiatives get started when an Executive or VP needs something done, and calls someone into their office and says “go figure this out.” (Sound familiar?)

Then after a few weeks of researching “analytics” you discover all the dimensions – software, hardware, skills, priorities, project plans – it can be a little overwhelming. You have more questions than answers. Do we need predictive analytics? Do we need real time or



data warehouses? What infrastructure? Where will our data come from? Do we need data governance? What's our plan?

You go back and discuss what you've learned. You decide on some project priorities.

Then, after a little more research and a few more weeks you pick an approach and some tools, often a software product. Then you start to work on the hardware you need. Maybe you do that too, or you get info from the software vendor, or you call your IT folks or a consultant.

Much has been made recently of "big data." But what is Big Data, exactly?

Big Data refers to a set of situations where truly vast databases are developed which are then mined for information. Imagine a database where every single credit card transaction is available for fraud analysis. It's big and it grows daily. Or take a very popular website – say Facebook or LinkedIn. Now ask the question what pages were the last ones before people left the site? To mine that data to find which pages caused people to leave the site, and then to ask "why?" requires a very large database.

It is databases like these (which are so large they may need their own "server farms") and their corresponding tools that we refer to when we speak of "big data."

Most companies' data challenges are, by contrast, quite a bit smaller.

For many firms this path can take from 8-10 weeks to over six months. You can invest anywhere from twenty to fifty thousand dollars, and sometimes as much as a few hundred thousand dollars. Depending on what you *think* you need.

And now you have software and hardware. You go "get your data" to load it. Your first real challenge, you quickly discover, is "cleaning" it. Not everyone filled out that field you were expecting. Dates are wrong. Some fields you wanted to analyze are coded "Other." You get your data cleaned. That turns out to be a project, too, taking more time.

Now you're ready. It's been a few months, maybe four or six, and yes, it cost a pile of money but you're good now.

And then you discover that to really exploit the new tools, you need new skills. While some tools and some questions are easy and will seem very accessible, the more interesting questions require you to understand the intricacies of correlation. Or more advanced statistics. Predictive analytics requires you to understand clustering techniques or other data analytic methods. And then you'll ask – how good are these predictions, anyways?

Firms that start this way may conquer those challenges too, but many falter on the voyage of discovery. For those who stick with it, after a few months and a chunk of upfront investment, they're ready to turn to the analytics issues that got them started in the first place.

Success in Analytics

Almost all successful launches of analytics have a few key characteristics in common:

- They start small – with a few key wins that are not just "insight" but "insight people know how to use."
- They contain the start-up cost in all of hardware and software, until the business case for a large analytics initiative is crystal clear.
- They put the right people on the analytic team. A mix of both business and mathematically-oriented skills are critical underpinnings of success.

- They line up with the business units that are leading the charge, not a distinct shared service unit.
- The champions are going to stick around for a while.
- When the results start to come in, they get rolled into key business processes, ensuring the tools are entrenched.

The End-Game in Analytics

Many firms which adopt Analytics successfully will end up with some operational and cultural changes, and one or more “analytics departments.” The larger the firm, the larger the function.

A major grocery retailer has an analytics department embedded in merchandising in every province. A major US insurer has recently undertaken to add 100+ “data scientists” to its analytics team, recognizing the value they bring to the various lines of business.

The tools and methods and skills at these companies have become fundamentally entrenched in a new set of business processes. A small (depending on your point of view) team supports the business. It facilitates experimentation. Models become a way of thinking about programs and products and launches.

Embedded, entrenched and exploited. These are the hallmarks a number of years out of a well-established analytics function.

How to get to that outcome is the key question.

And it is a critical question because new products are emerging that have a built-in “data dimension.” In auto insurance, Telematics is a big deal. Online retailers are getting good at saying “if you liked that, then you should try this...” Airplanes with built in diagnostics and on-line in-flight telemetry are able to advise of impending maintenance needs. Couriers are already good at package tracking and getting better. There are few areas of business that will

be untouched by being better informed through data.

So how to get started and program it for success is a key question.

Analytics in Days - The Fast-Track to Results

Go back to that VP we discussed earlier who wanted to launch some “Analytics.”

Consider Analytics in Days¹ as a solution. Analytics in Days is a cloud-based offering from Adante that is supported by our analytics team. It removes the obstacles and gets you started with your data. Fast.

Analytics in Days provides you with:

- No hardware to buy. We have it.
- No software to choose. We have more than enough to get you started.
- People you can talk to immediately to:
 - help you get your data ready to analyze
 - help you focus on key business questions
 - leverage their skills and external access to key data sources to help you get geographic, statistical and other third party information
 - work with you as you grow your skills
 - fast-track you through the descriptive phases to the more predictive and prescriptive when you are ready.
- All for a flat monthly fee, with an ability to launch special projects at will.

Side-step the landmines, and progress quickly from walk to run.

Wouldn't that have helped our VP to get the answers when the questions were being asked?

How we do this is pretty straight-forward.

¹ IBS Analytics (IBSA) is the joint version of “Analytics in Days” designed for MCCG clients.

Leveraging secure cloud and desktop-based technologies and software licensing, you can rent instead of buy hardware and software you need. You use tools we have pre-selected, and can put to work for you fast. Our approach is open and collaborative. If you want a different toolset, we can work with that to make it cost-effective for you too.

You develop the skills gradually, and can work with the data as much as you want, or we can do it for you. It can shift from more “us helping” at the beginning to more “you doing and us advising” in later stages. Or maybe you grow to like the “you use / we do” model and keep it.

Either way we structure it so you get deliverables you can use – dashboards that expose your data and can provide interactive drilldown into the details. Information that can facilitate meetings and decisions.

The first deliverables are information, and tools to deeply probe your data. At your speed, the focus shifts from information to actionable insight, and can be connected to your live systems.

We help you contain the costs. Often you can use the service for a year for less than the cost of any new specialist you’d hire to do the work (never mind the hardware and software and IT costs and issues). We make you more productive with less.

The Business Case

So consider the following alternatives in the table below:

<i>Element</i>	<i>Build It Yourself</i>	<i>Analytics In Days</i>
Hardware	You need some. You have to figure that out.	Included in our standard fee. Pay for more if you need it (which we doubt).
Software	You need some. Choose your tools. That may drive the hardware. Or	Included in our standard fee for the first four users. Start with our tools.

<i>Element</i>	<i>Build It Yourself</i>	<i>Analytics In Days</i>
	start with a different division’s tool and try to make it fit.	Add on other tools or users when and if you want.
Skills	You likely will discover you need some skills you don’t have. You may hire consultants, or you may hire new staff.	Start with ours. Grow your own. Transition when you’re ready. Gradually, if you like.
Costs	Hardware + Software + Hiring some experts + data related expenses. Plus time.	Fixed monthly fee, based on our standard program. Or add some custom projects to fast track some critical projects. You’re in control.
Time to Results	Measured in months. Maybe 3-6 months, if you’re fast. Maybe longer.	We focus on critical results. We can help you get answers in days and weeks. You’ll find yourself delighted with the richness of the data you suddenly have.
Risk and Commitment	Once you’ve got hardware and software and staff who are paid for, the inclination is to make more investments to “make it go.”	Minimum commitment ² period is six months, but you can stop any time after that with 60 days’ notice.
Benefits	The benefits start accruing when you start analyzing data. There are no benefits for the first 6-12 months.	Benefits start almost immediately.

Get Started Today

Lower costs, faster results, less uncertainty, expertise focused on your issues. These all

² Minimum Commitment period may vary.



make Analytics in Days the right answer for many, many firms.

To learn more about Analytics in Days, Adante's hosted analytics platform that leaves you in control but exploits our skills, call us at the number below.

For more information on Analytics in Days, see our website www.adante.ca/aid, or call us at 647 494 5455 x 101.